

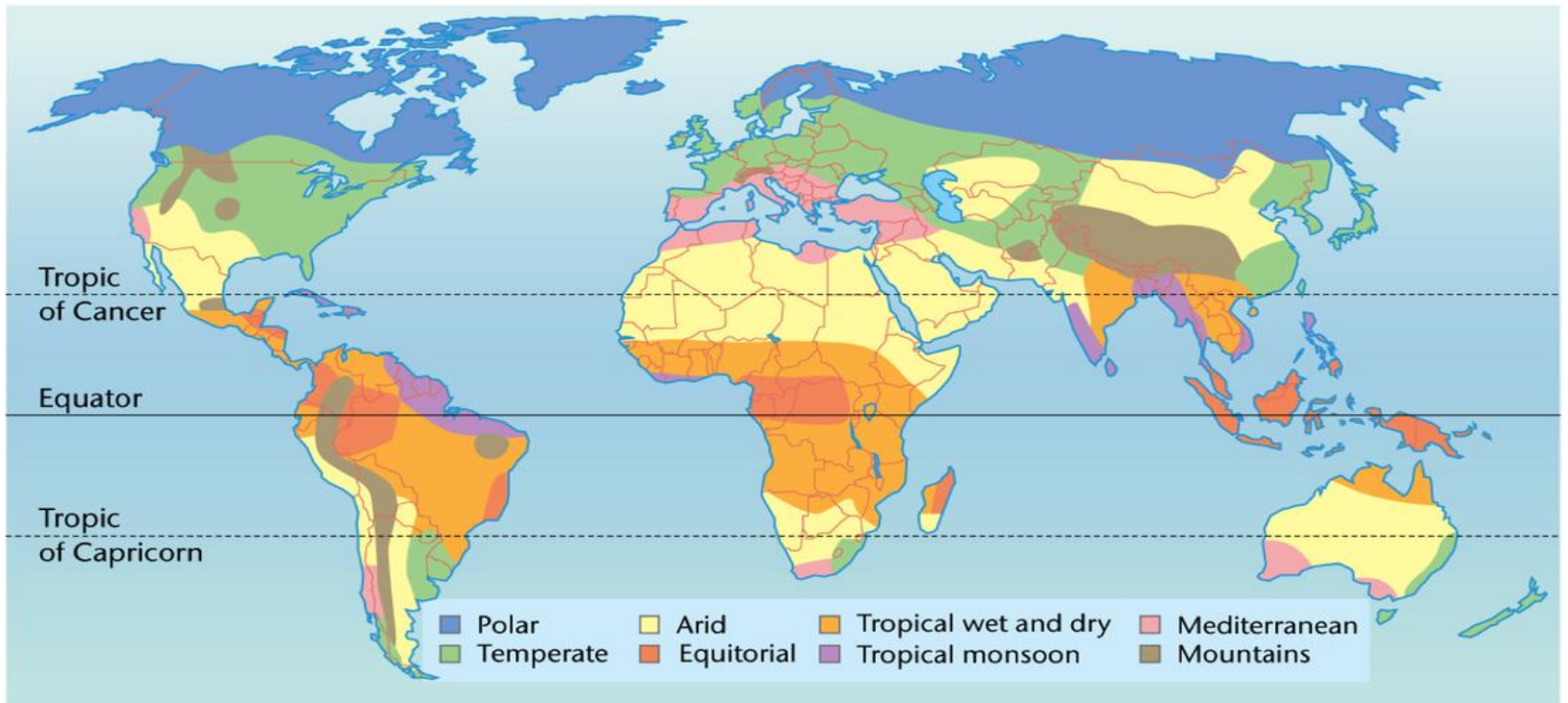
Climate as a factor of economic development

Climate depends on

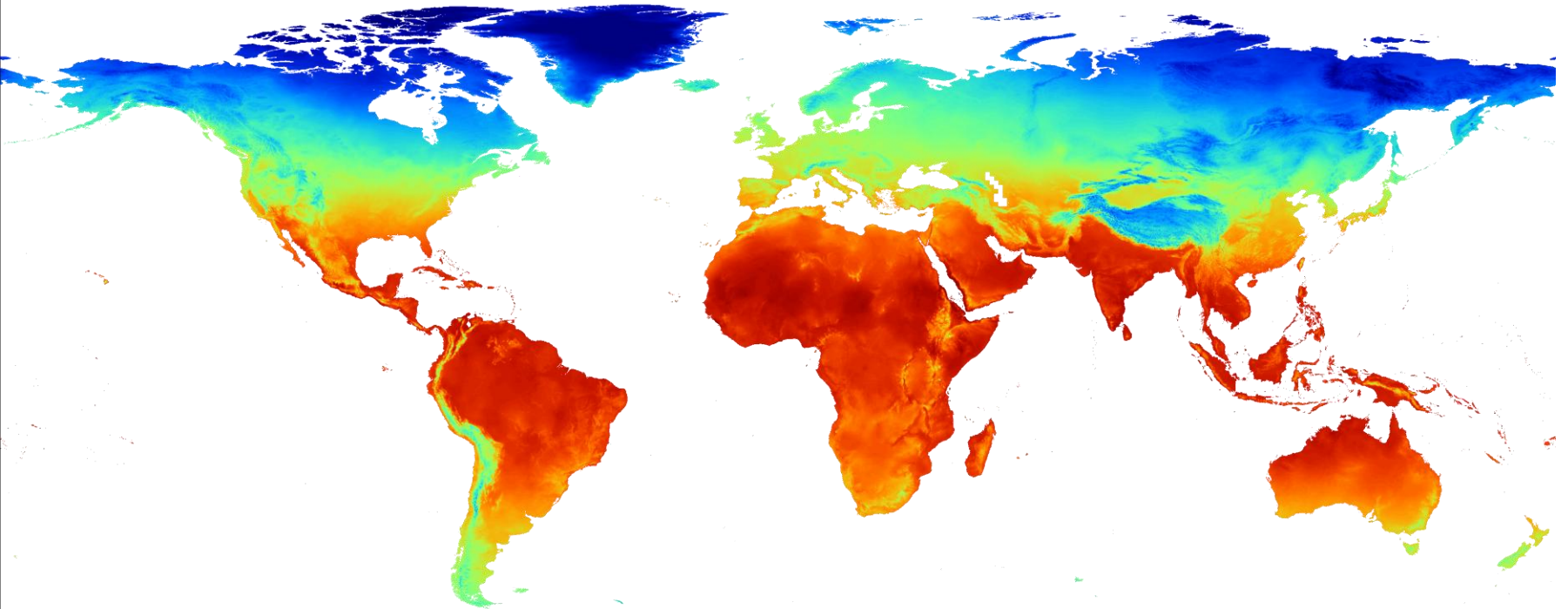
- Latitude
- Height (over the sea level)
- Proximity to the oceans
- Air mass movement

Climate impacts on

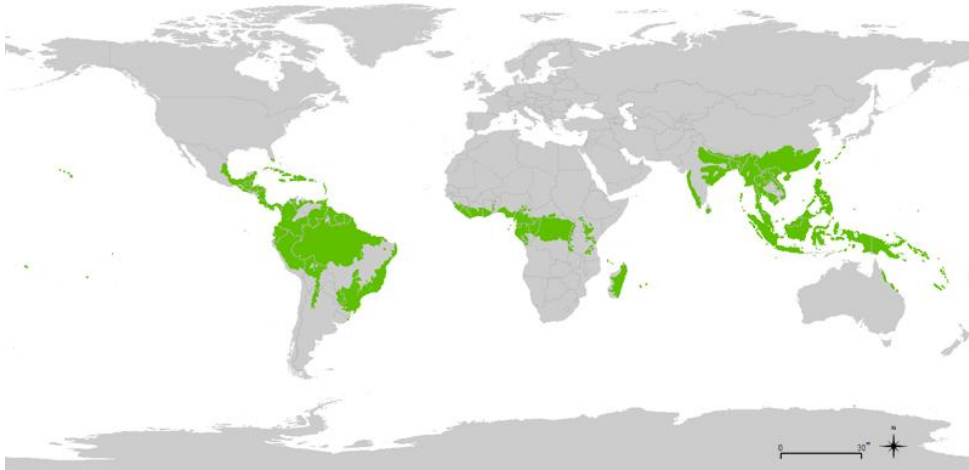
- Agriculture
- Conditions for constructions
- Conditions of living, local culture, locals' attitude to resources and material values
- Local competitiveness and business spends



Temperature map



Climate zones and landscapes



Equatorial - Tropical Moist Climates

The wet tropics lie in a band around the equator, covering about 10% of the Earth's land.

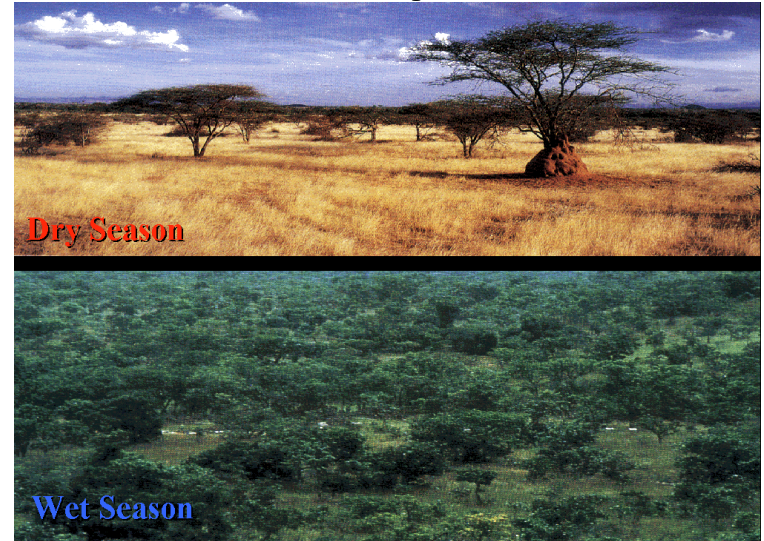
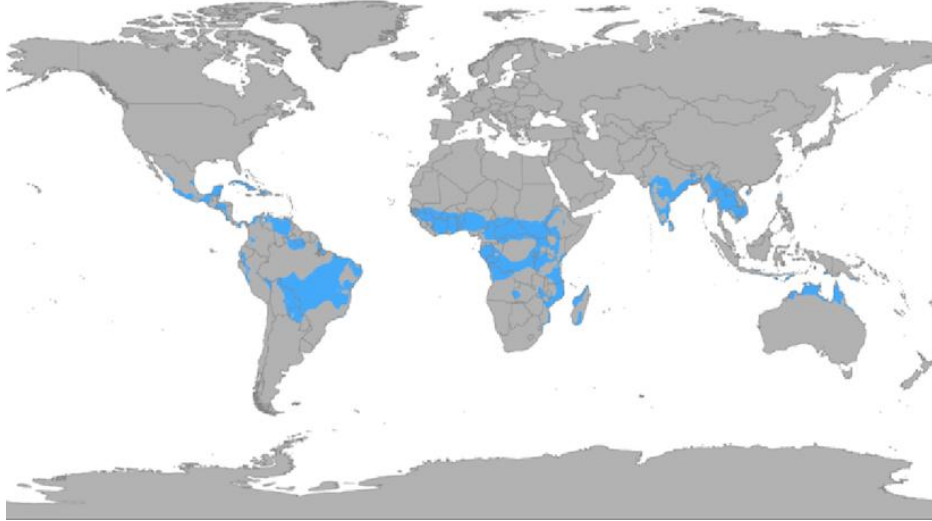
The wet tropics are consistently warm, with almost no annual temperature variation. Great amounts of rain fall year-round, between 175 and 250 cm (65 and 100 inches) per year.

These conditions support the **tropical rainforest** biome (Figure 17.9). The forest is dominated by densely packed, broadleaf evergreen trees.

Many habitats are found in rainforests, as a result of the high number of plant types and the different environments within the layers of the forest. Rainforests have the highest number of species or **biodiversity** of any ecosystem.

Very wet, hot,
1 season

Climate zones and landscapes

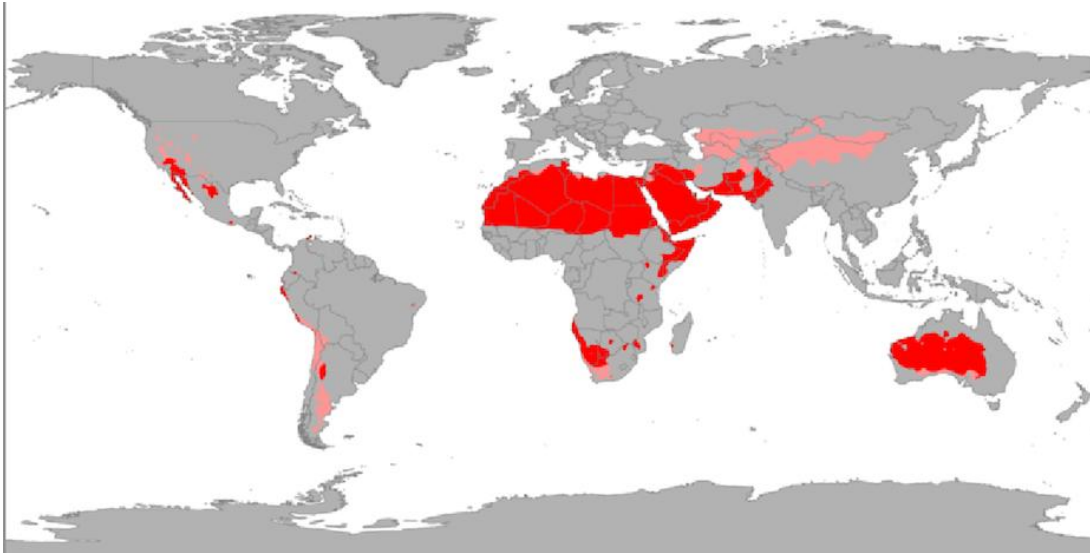


Tropical Wet and Dry

- The *tropical wet* and dry climate lies north and south of the tropical wet climate, between about 5° and 10° latitude to around 15° to 20° latitude.
- The average annual temperature is similar to the wet tropics, but the temperature range is greater. This climate zone receives less rain than the wet tropics, about 100 to 150 cm (40 to 60 inches).
- For more than two months each year, rainfall is less than 6 cm (2.4 inches). Wet and dry seasons are related to the location of the ITCZ. In the summer, when the ITCZ drifts northward, the zone is wet. In the winter, when the ITCZ moves back toward the equator, the region is dry. This climate exists where strong monsoon winds blow from land to sea, such as in India.
- Rain forests cannot survive the months of low rainfall, so the typical vegetation is **savanna**. This biome consists mostly of grasses, with widely scattered deciduous trees and rare areas of denser forests. Central Africa is famous for its savanna and the unique animals that live there.

Very hot,
2 seasons wet
and dry

Climate zones and landscapes



Very dry, hot,
1 season

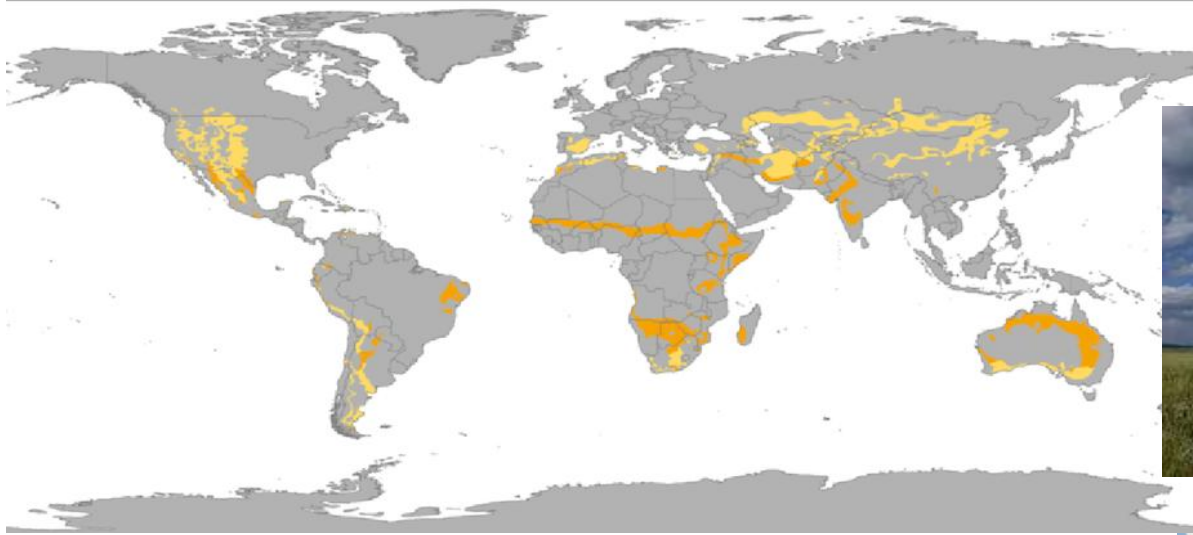
Arid – Tropical dry

True deserts make up around 12% of the world's lands. Deserts are found in southwestern North America, Africa, Australia and central Asia. Humidity is low, and as a result there are few clouds in the sky.

Vegetation is limited, since water is scarce. Desert plants are adapted to surviving long periods of drought



Climate zones and landscapes



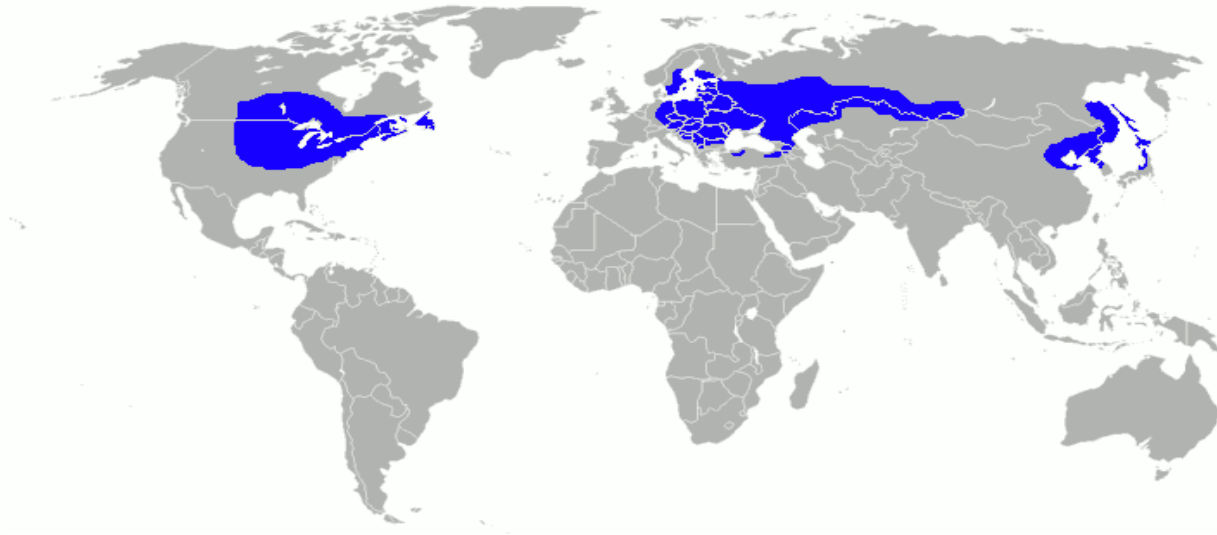
Semi Arid Climates (Steppes)

The seasonal changes depend on the latitude, but it is safe to say most places experience a summer and winter. Usually the winter produces more rain. When the cooler winter air meets the warmer land rain sometimes falls.



2 seasons –
cold&wet and hot
&dry

Climate zones and landscapes



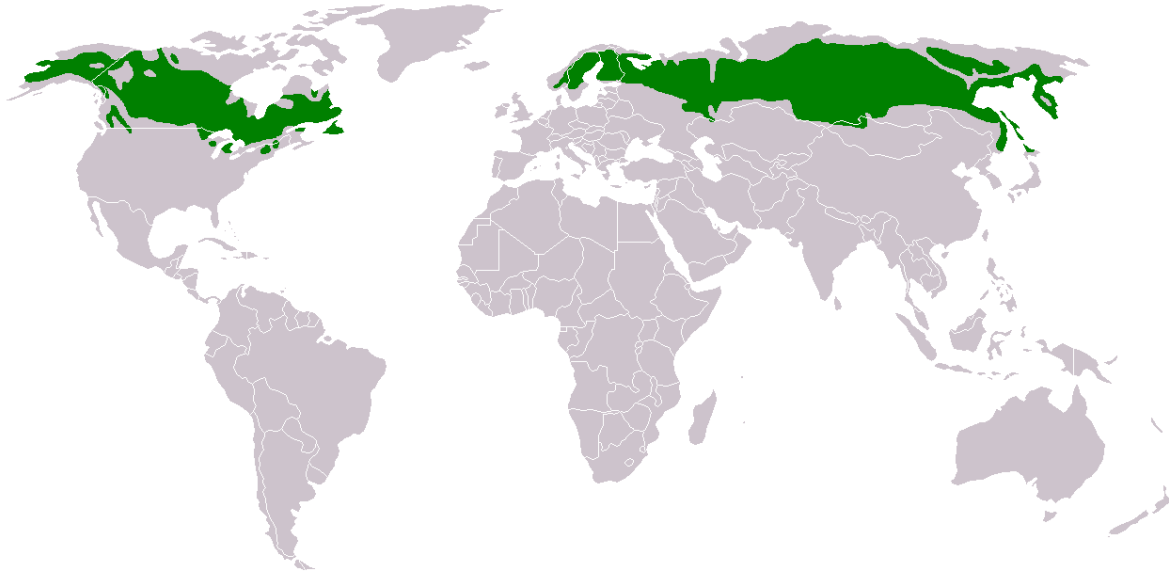
Humid Continental

Humid Continental climate is one of the few climates with 4 different seasons. Warm and humid summer, cool and dry autumn (fall), cold and harsh winter, and a warm and wet spring makes living in Humid Continental a unique experience of weather that will keep you guessing.



4 seasons
Very cold winter
Very hot summer

Climate zones and landscapes



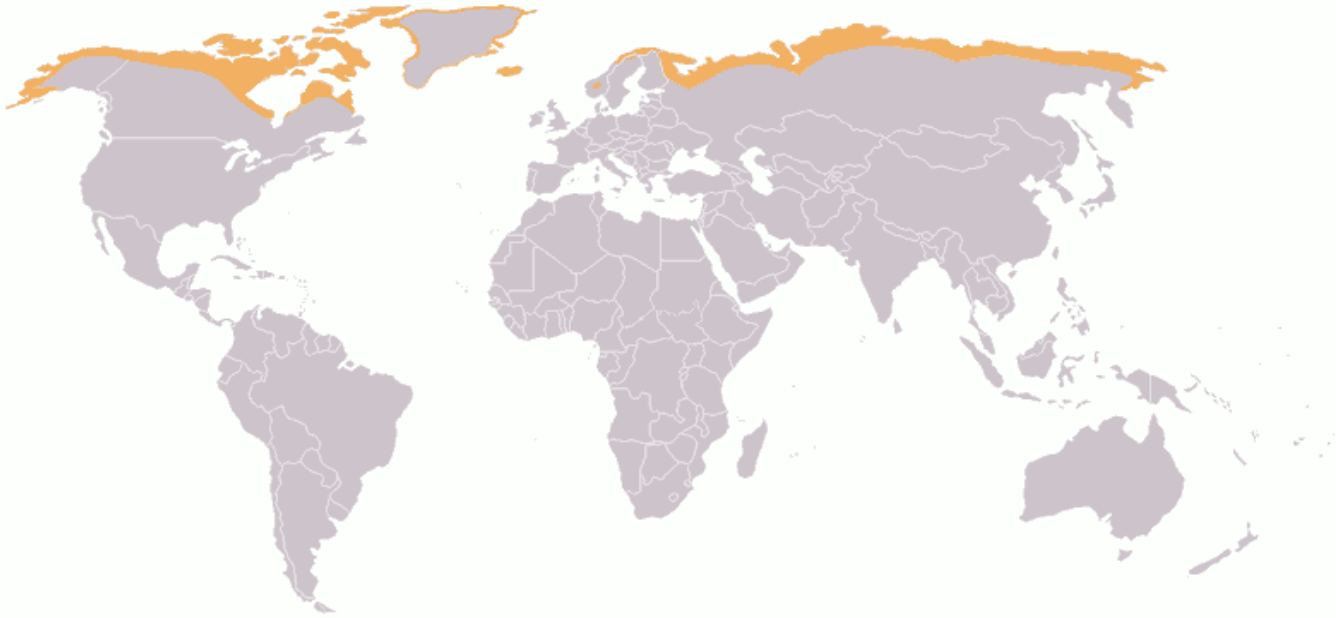
Subpolar

- This climate is dominated by long, very cold winters with very little precipitation. Continental polar air masses form when air stagnates in this zone. Snowfall is light, but temperatures are so cold that snowfall remains on the ground for months.



Very cold dry winter
Short cool summer

Climate zones and landscapes

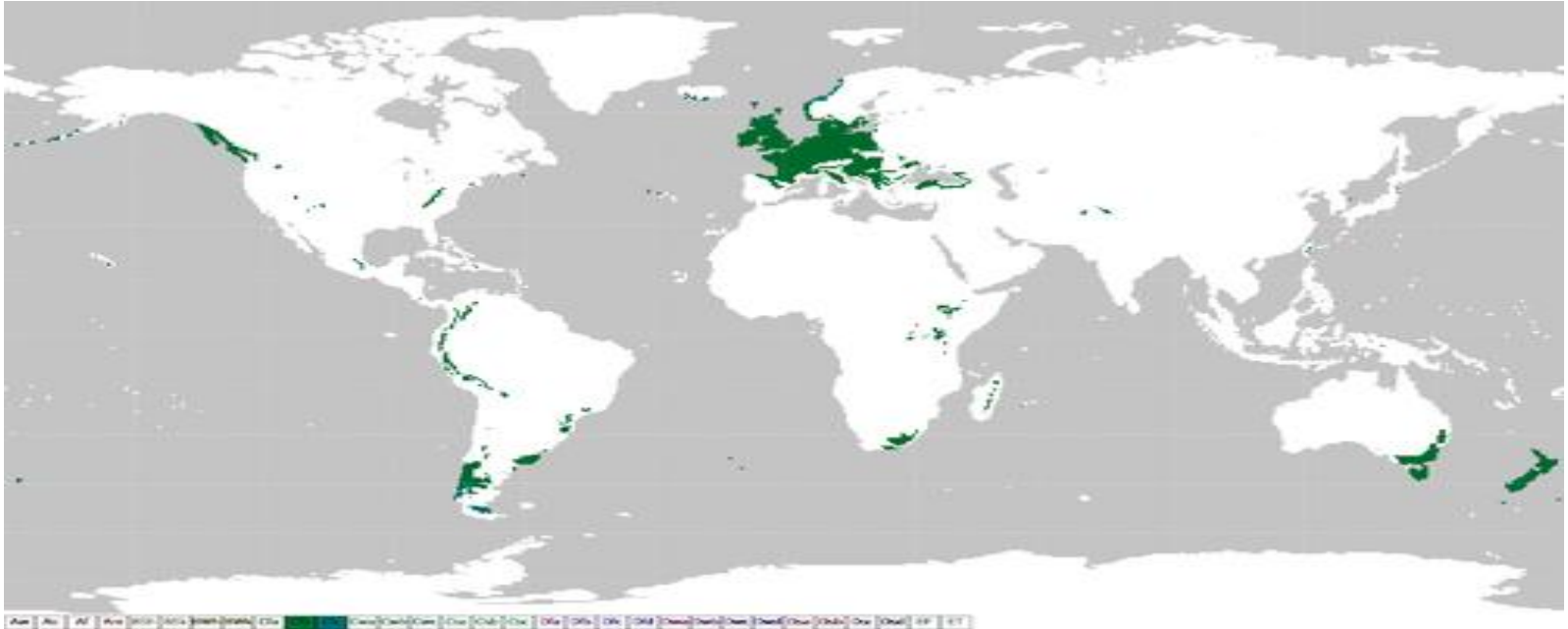


Polar

- In the polar regions, winters are entirely dark and bitterly cold. In the summer, days are long, but the sun is low on the horizon. Summers are cool with the average temperature of the warmest month at less than 10°C (50°F). Winters are extremely cold, so the annual temperature range is large.

Very long, cold, dry
winter
Short cool summer

Special climate zones



Marine West Coast Climate

- Ocean winds bring mild winters and cool summers. The temperature range between seasons and between day and night is fairly small. Rain falls year-round, although summers are drier as the jet stream moves northward. Low clouds, fog, and drizzle are typical. Snowfall is infrequent and short-lived. The mountain ranges that line the western U.S. keep this climate from extending far inland.

Warm, cloudy and
wet winters
Cool, wet summers

Special climate zones



Mediterranean

Mediterranean climate is very mild (few extreme temperatures), so it really only has 2 seasons: summer and winter. Summers are longer than winter, and the winter is very mild. Very few places experience snow in a Mediterranean climate. The seasonal changes are due to changes in ocean currents and water temperature.

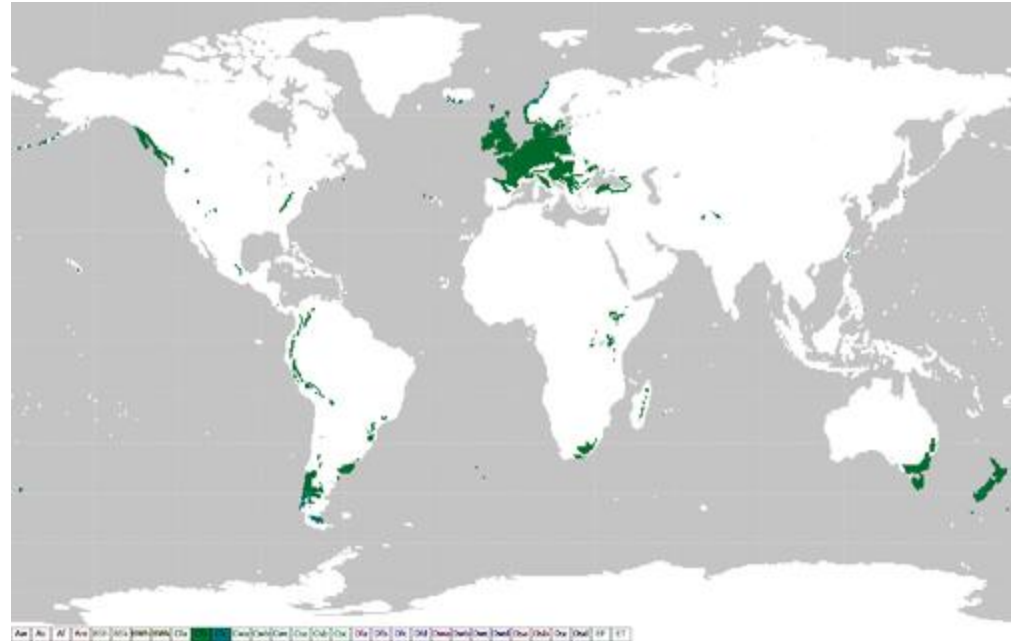
Warm and wet
winters
Hot, dry summers

Special climate zones

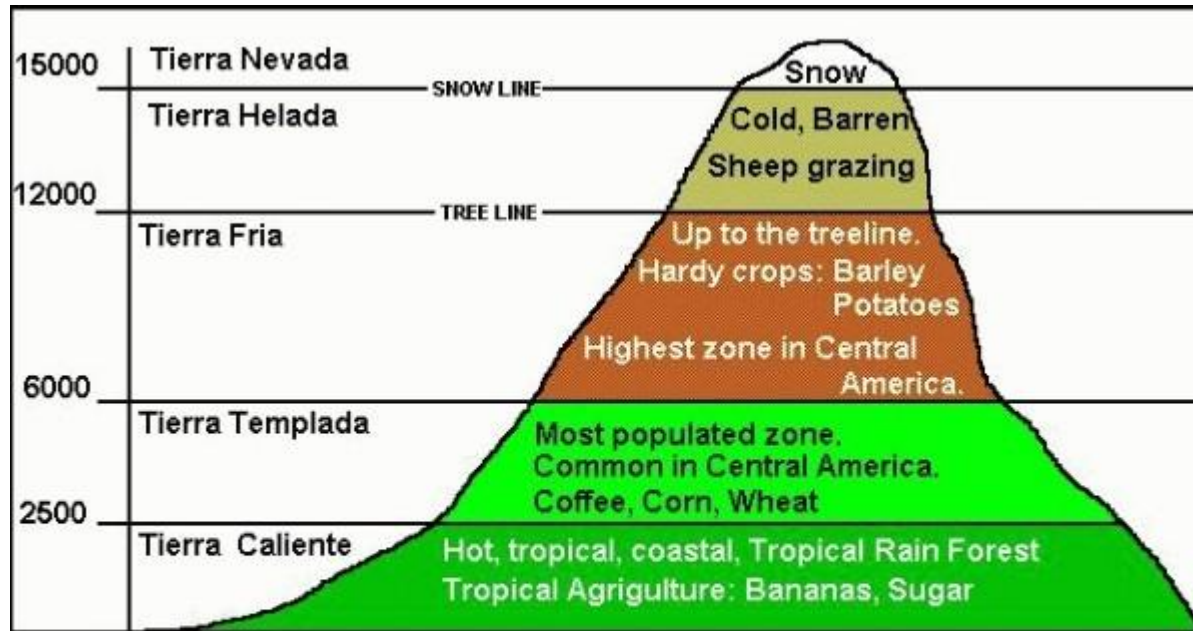
Monsoon climate

Less pronounced dry seasons. Regions with this variation of the tropical monsoon climate typically see copious amounts of rain during the wet season(s), usually in the form of frequent thunderstorms. However, unlike most tropical savanna climates, a sizeable amount of precipitation also falls during the dry season(s). In essence, this version of the tropical monsoon climate generally has less pronounced dry seasons than tropical savanna climates.

Extraordinarily rainy wet seasons and pronounced dry seasons. This variation features pronounced dry seasons similar in length and character to dry seasons observed in tropical savanna climates. However, this is followed by a sustained period (or sustained periods) of extraordinary rainfall. In some instances, up to (and sometimes in excess of) 1,000 mm of precipitation is observed per month for two or more consecutive months. Tropical savanna climates generally do not see this level of sustained rainfall.

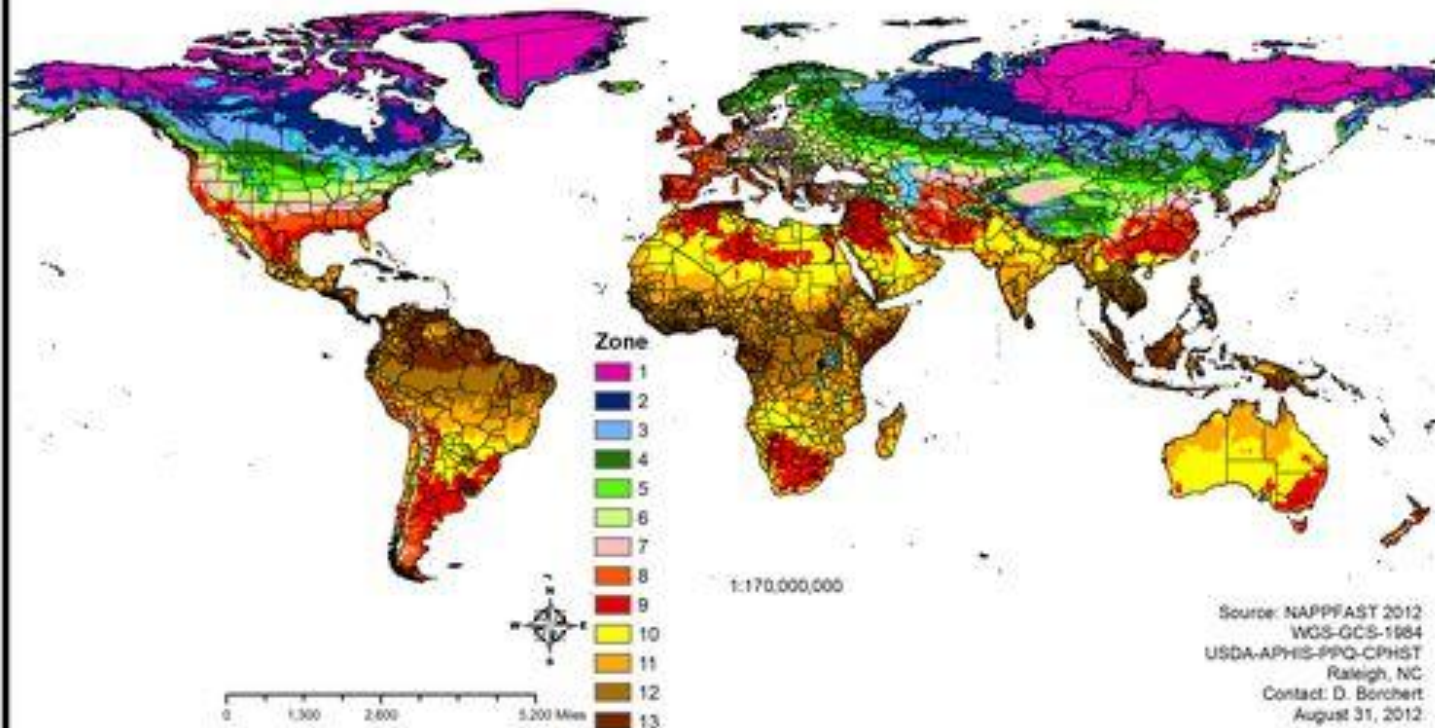


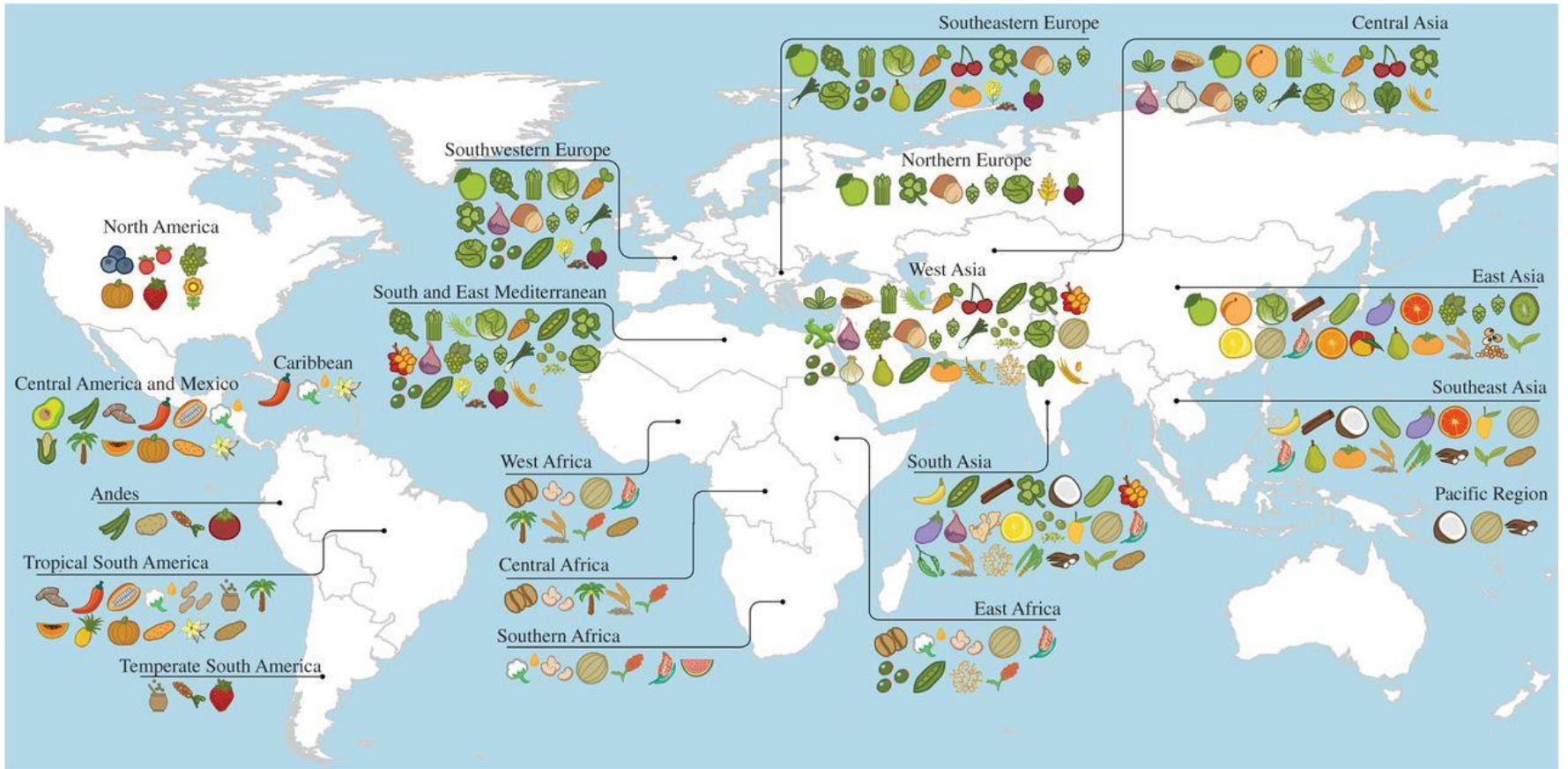
Mountain climate



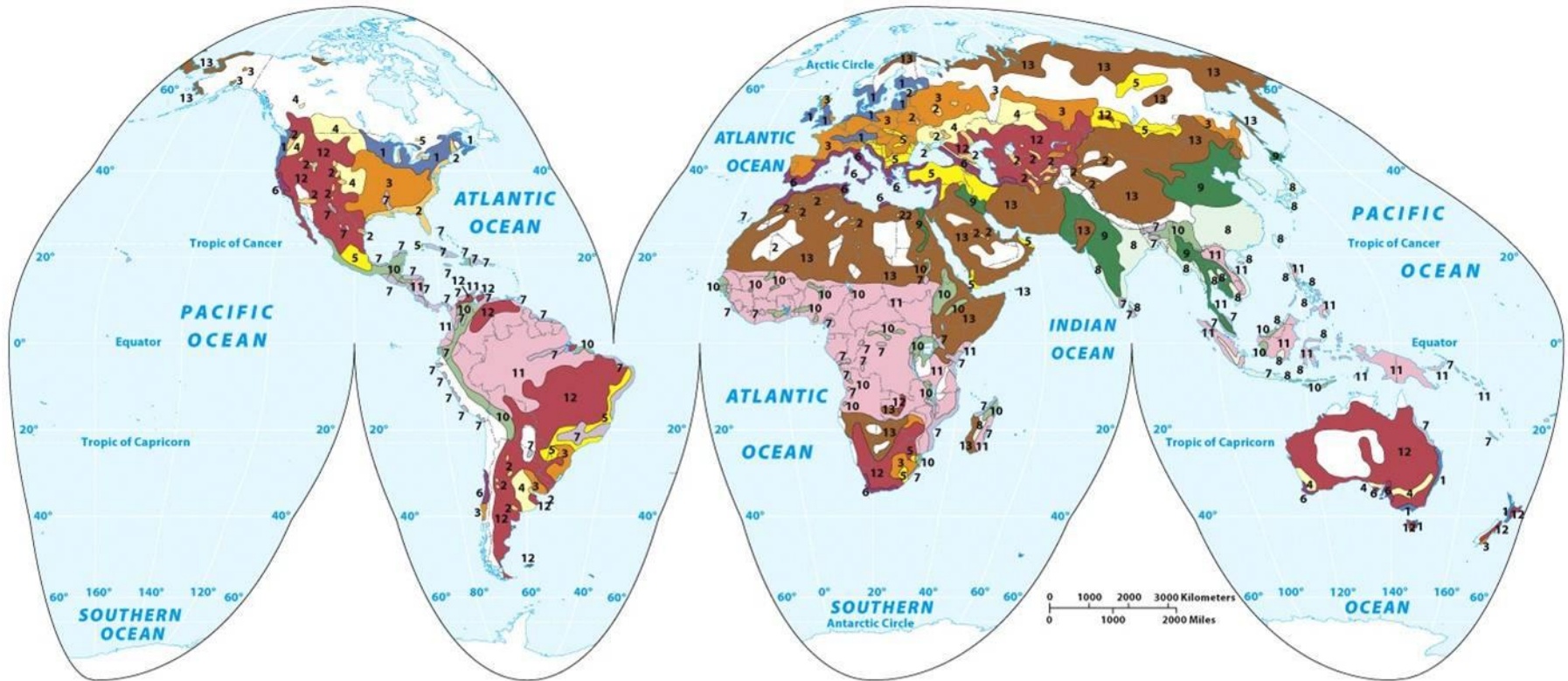
ALTITUDINAL ZONATION

Global Plant Hardiness Zones 30 year (1982-2011).





- | | | | | | | | | |
|-----------------------|----------------------|----------------|------------|------------------|------------------------|-----------------------|--------------|----------------|
| alfalfa | beans | clover | eggplants | hops | melons | pears | rice | sunflower |
| almonds | blueberries | cocoa beans | faba beans | kiwi | millets | peas | rye | sweet potatoes |
| apples | cabbages | coconuts | figs | leeks | oats | pigeonpeas | sesame | taro |
| apricots | carrots | coffee | garlic | lemons and limes | olives | pineapples | sorghum | tea |
| artichokes | cassava | cottonseed oil | ginger | lentils | onions | plums | soyabean | tomatoes |
| asparagus | cherries | cowpeas | grapefruit | lettuce | oranges | potatoes | spinach | vanilla |
| avocados | chickpeas | cranberries | grapes | maize | palm oil | pumpkins | strawberries | watermelons |
| bananas and plantains | chillies and peppers | cucumbers | groundnut | mangoes | papayas | quinoa | sugar beet | wheat |
| barley | cinnamon | dates | hazelnuts | mate | peaches and nectarines | rape and mustard seed | sugarcane | yams |

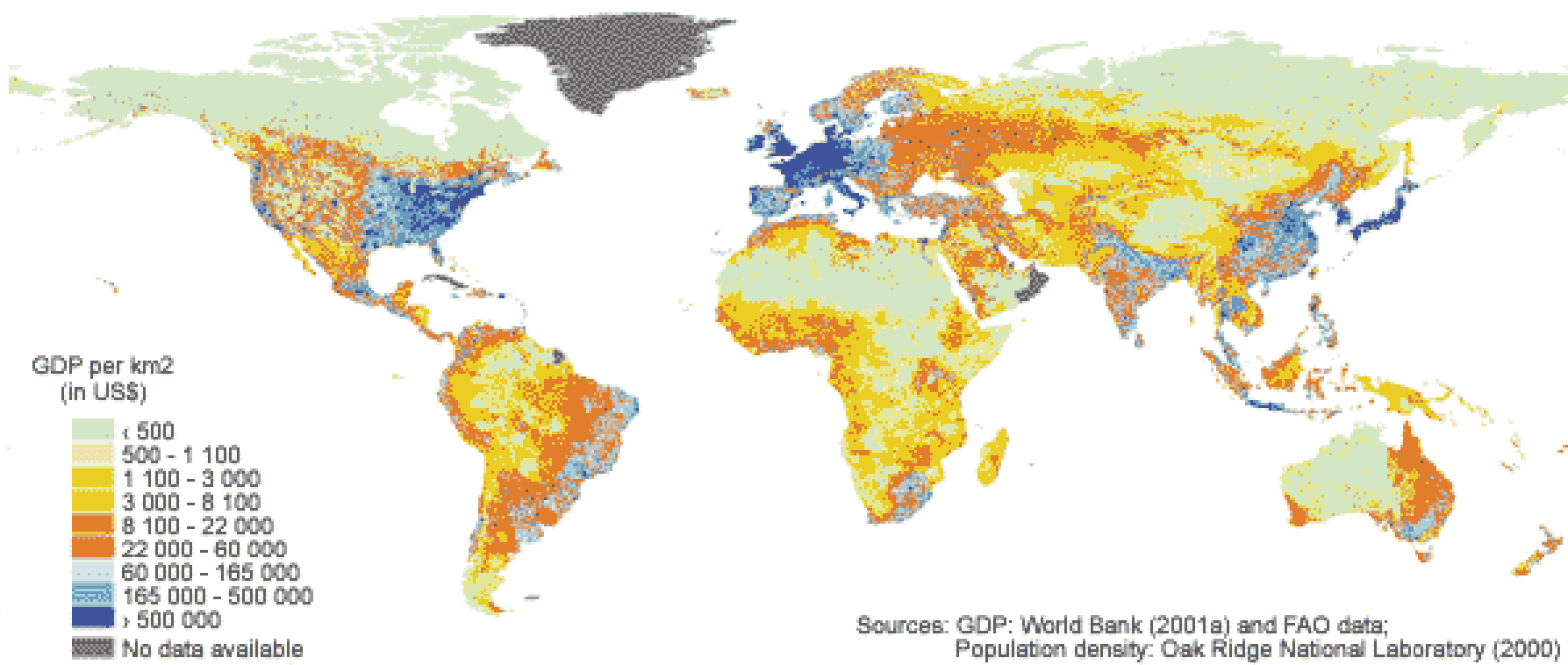


WORLD AGRICULTURE

- | | | |
|---|---|--|
| 1 Dairying | 6 Mediterranean Agriculture | 11 Shifting Cultivation |
| 2 Fruit, Truck and Specialized Crops | 7 Diversified Tropical Agriculture
- chiefly plantation | 12 Livestock Ranching |
| 3 Mixed Livestock and Crop Farming | 8 Intensive Subsistence Farming
- chiefly rice | 13 Nomadic and Semi-Nomadic Herding |
| 4 Commercial Grain Farming | 9 Intensive Subsistence Farming
- chiefly wheat and other crops | 14 Nonagricultural Areas |
| 5 Subsistence Crop and Livestock Farming | 10 Rudimentry Sedentary Cultivation | |

Figure 11.18

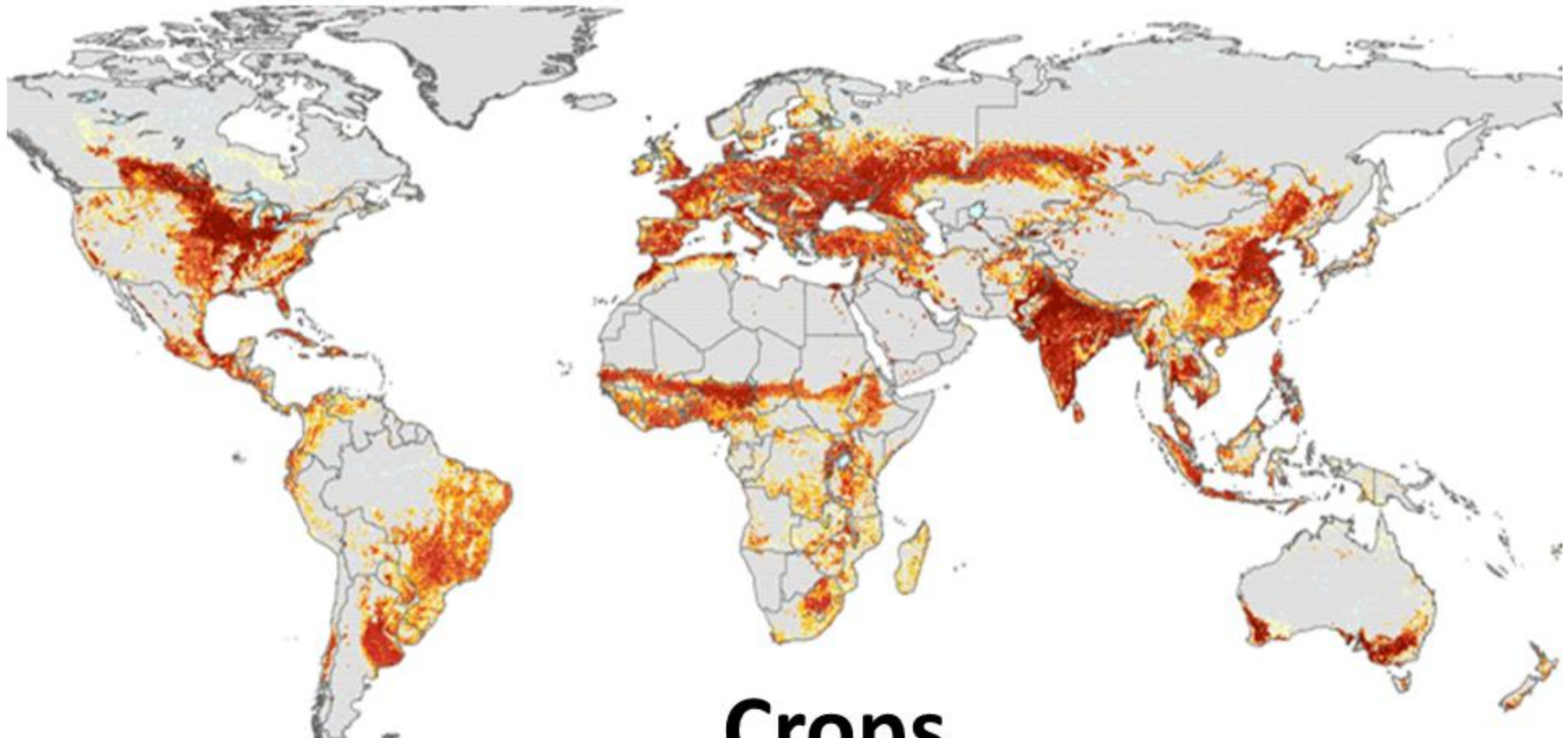
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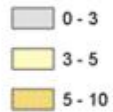
Climate and International Trade development

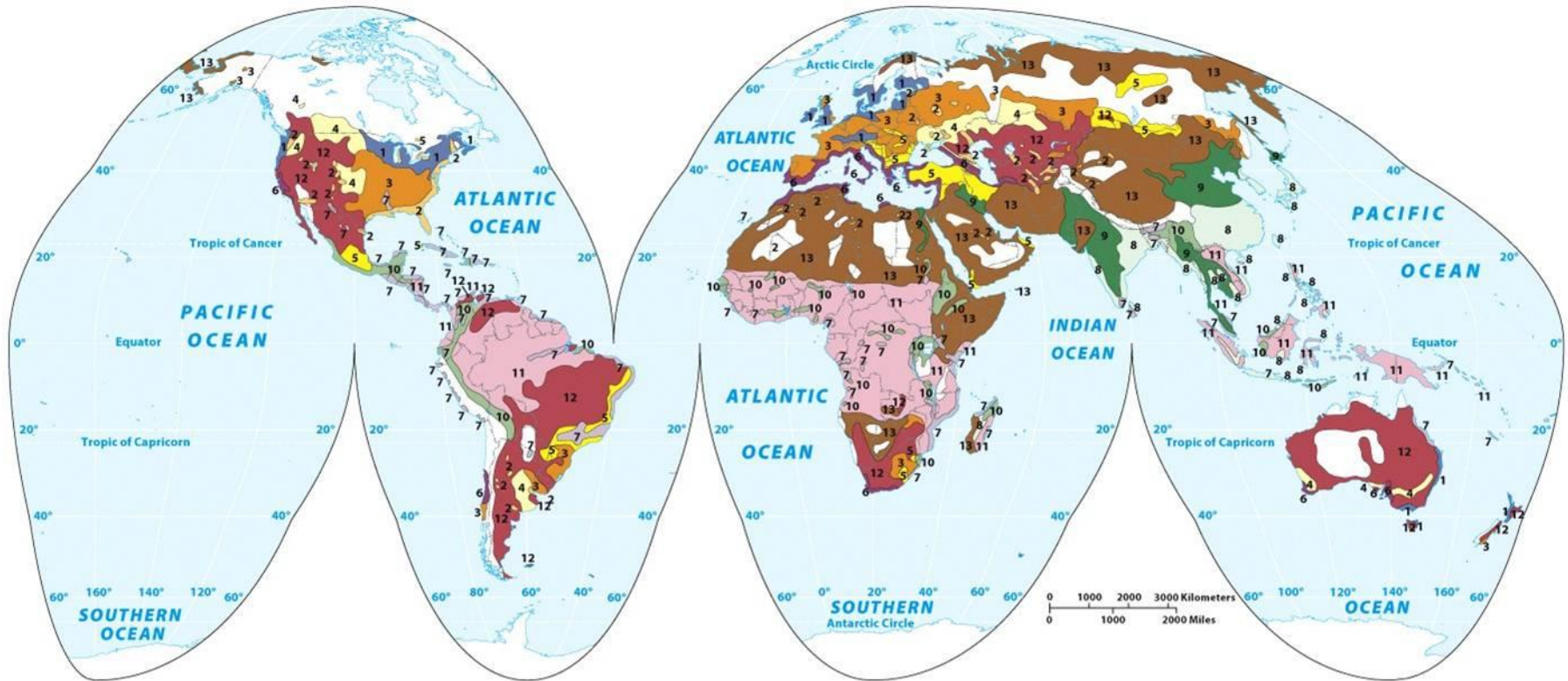


Map 5.2: Occurrence of cropland
FGGD Module 5: Land use patterns and land cover



Occurrence defined as percent area of the pixel

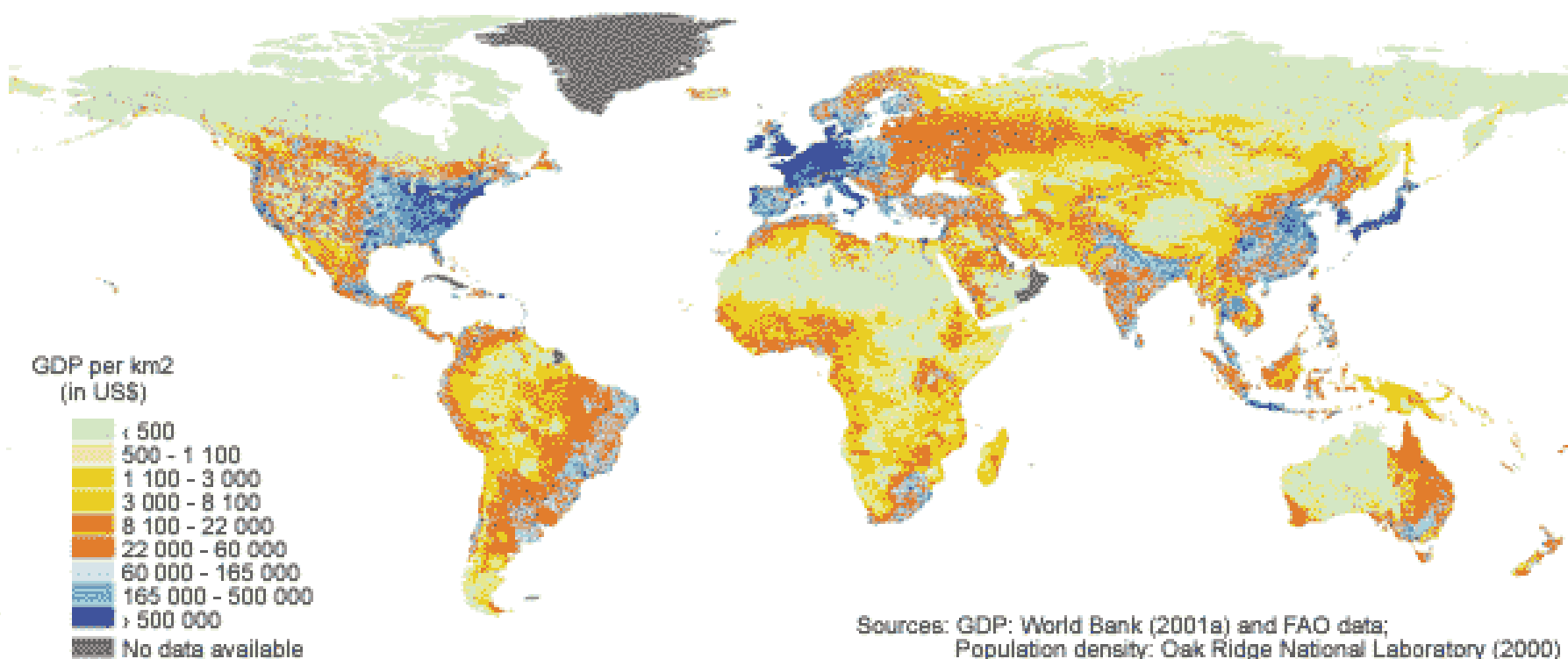




- ### WORLD AGRICULTURE
- | | | |
|---|---|--|
| <ul style="list-style-type: none"> 1 Dairying 2 Fruit, Truck and Specialized Crops 3 Mixed Livestock and Crop Farming 4 Commercial Grain Farming 5 Subsistence Crop and Livestock Farming | <ul style="list-style-type: none"> 6 Mediterranean Agriculture 7 Diversified Tropical Agriculture – chiefly plantation 8 Intensive Subsistence Farming – chiefly rice 9 Intensive Subsistence Farming – chiefly wheat and other crops 10 Rudimentry Sedentary Cultivation | <ul style="list-style-type: none"> 11 Shifting Cultivation 12 Livestock Ranching 13 Nomadic and Semi-Nomadic Herding Nonagricultural Areas |
|---|---|--|

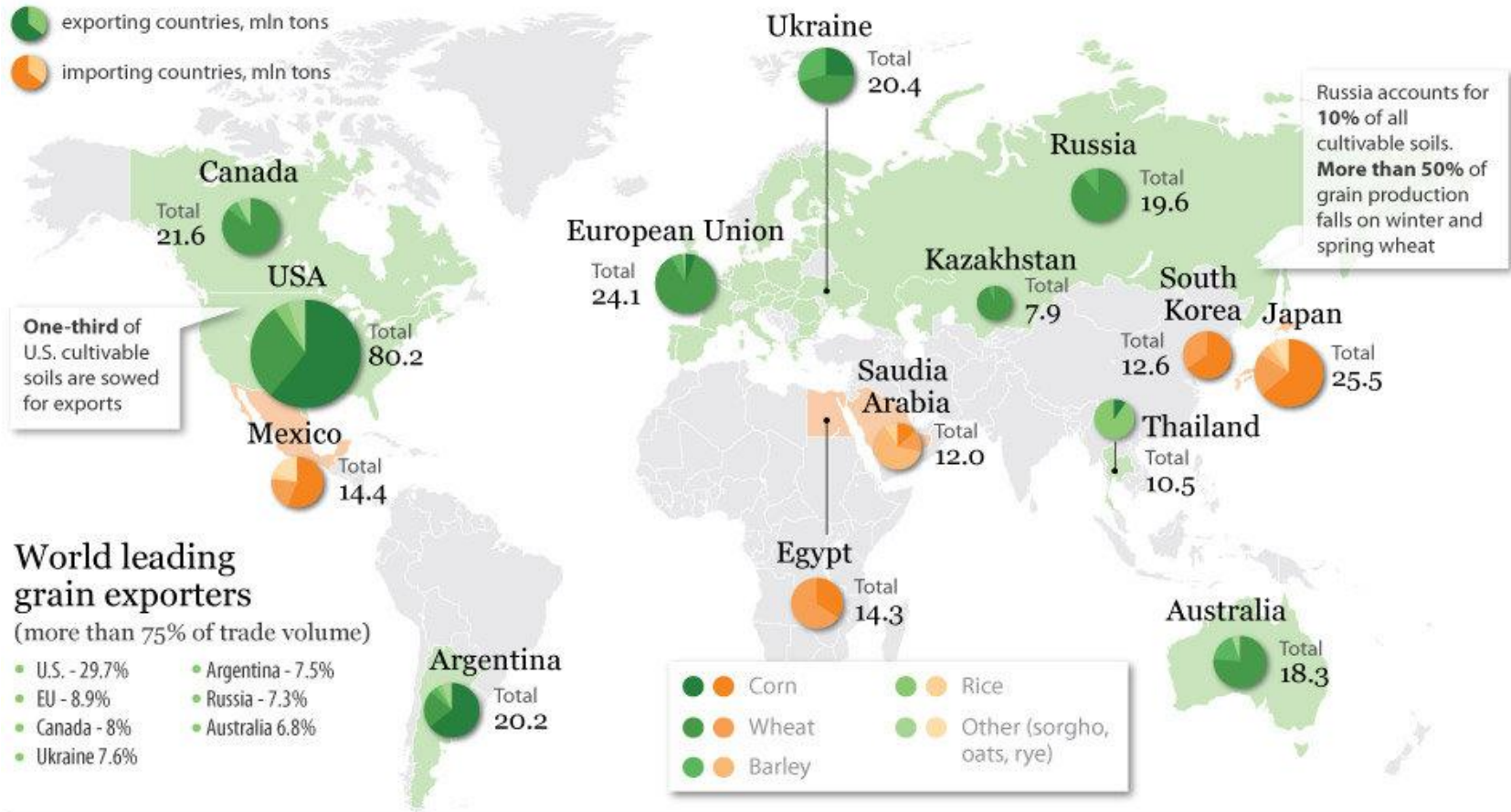
Figure 11.18

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Grain

World grain exporters and importers



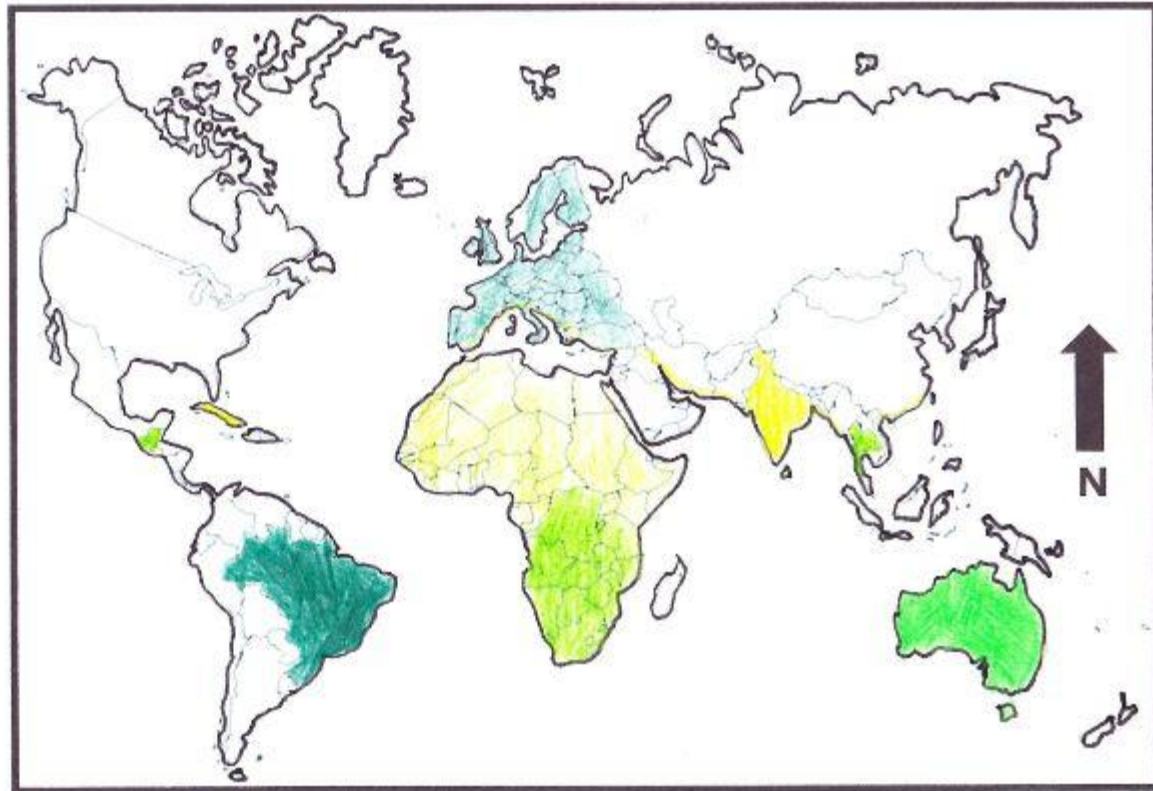
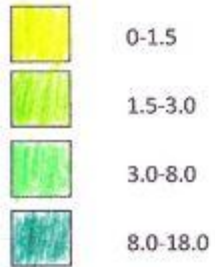
Grain

Global Trade Flows



Main Sugar Exporting Countries

Legend:
(Measured in millions of tons)



Source: Bloomberg, *World's Top 10 Sugar-Exporting Countries in 2009-2010*

World Sugar Trade (2010/2011)

www.SAVEOURSUGAR.eu



Support a Fair Deal for Cane Refiners



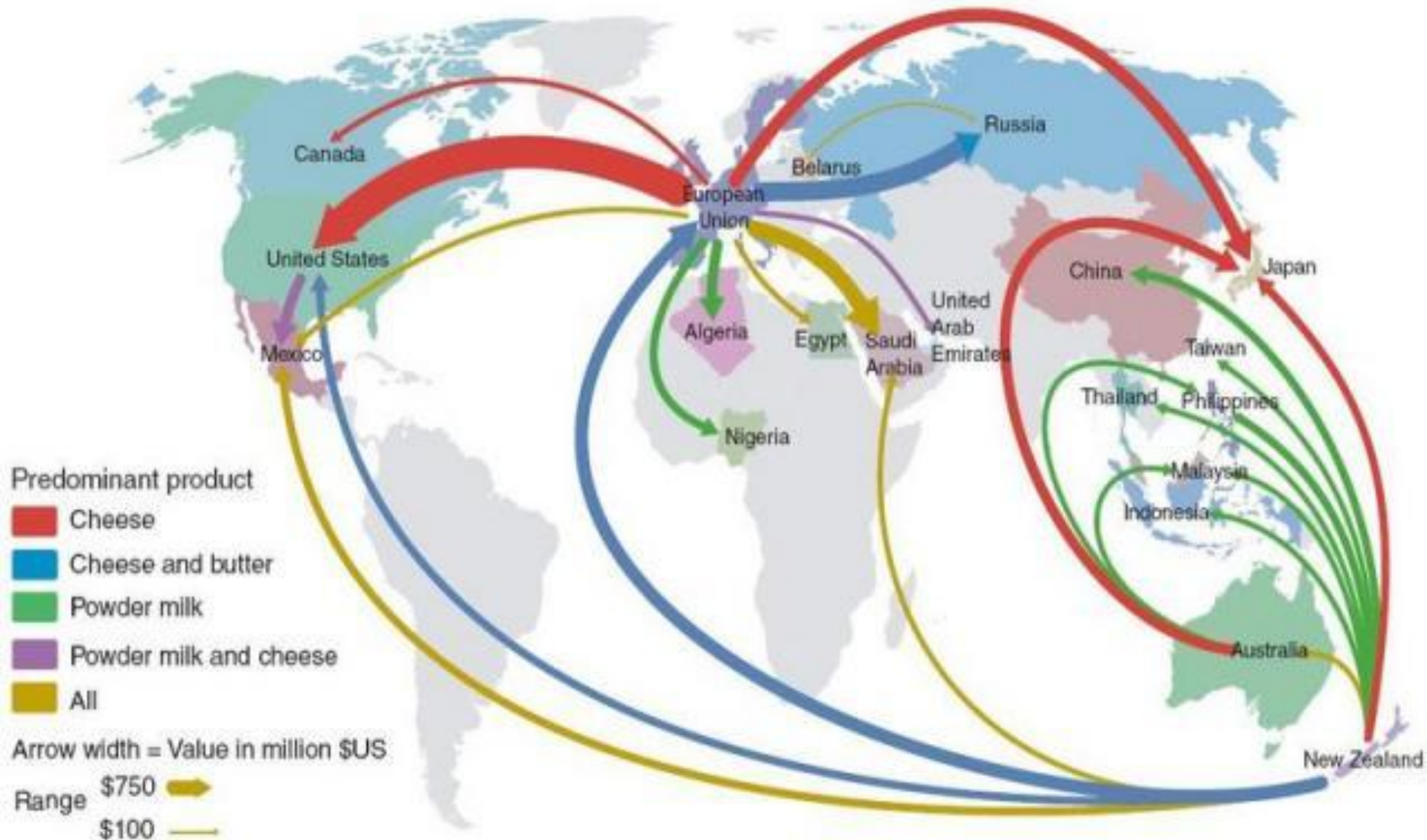
TATE & LYLE SUGARS

- 10 000 tons - 250 000 tons
- 250 000 tons - 1 000 000 tons
- 1 000 000 tons - 5 000 000 tons
- 5 000 000 tons <

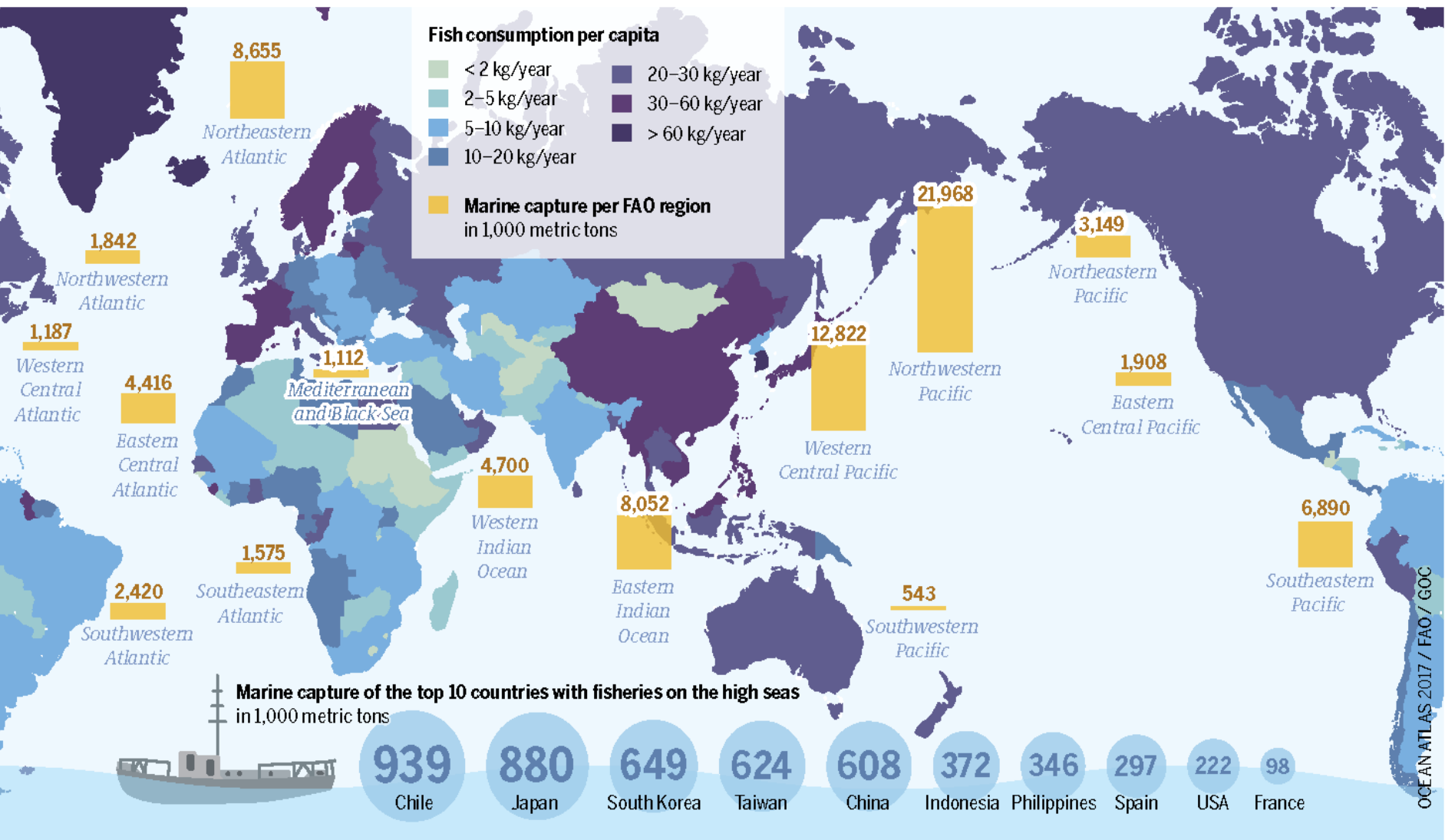
- Africa
- North America
- Asia
- Central America
- Europe 27
- Oceania
- Other Europe
- South America

Export volume
Average 2010-2011
International Sugar Organisation statistics

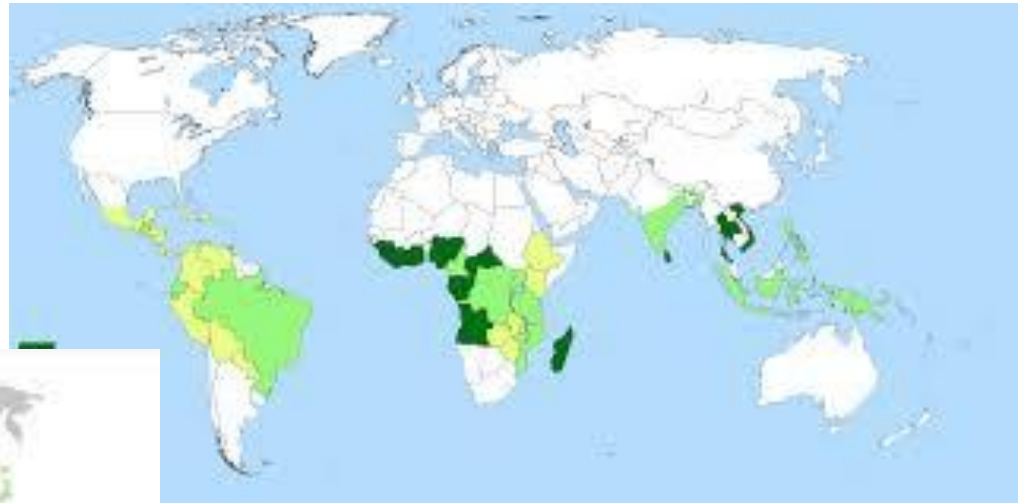
Major Global Trade Flows of Dairy Products in 2003



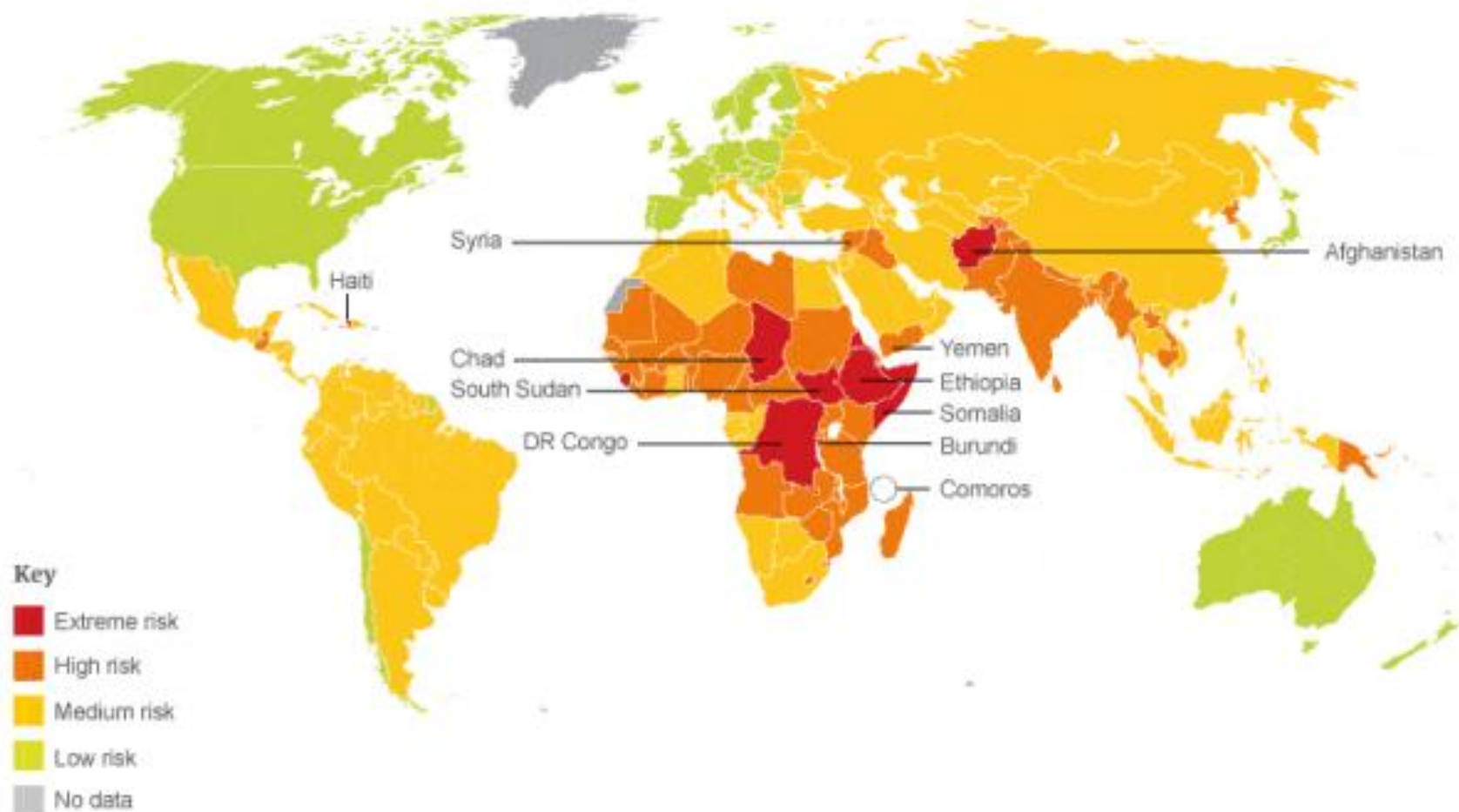
Who Catches the Fish—and Who Eats Them?



Cacao - Coffee & Tea

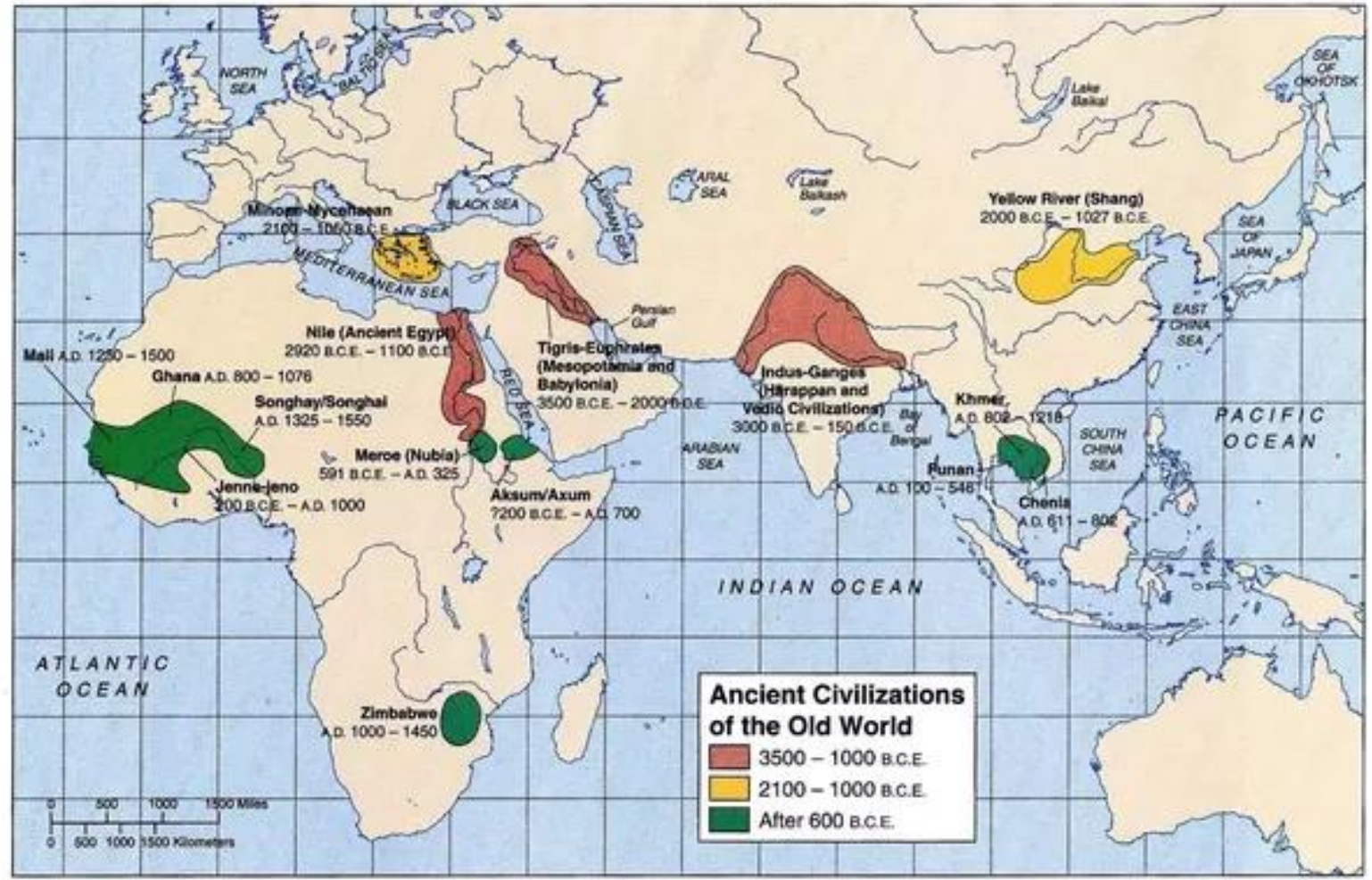


Food Security Risk Index 2013

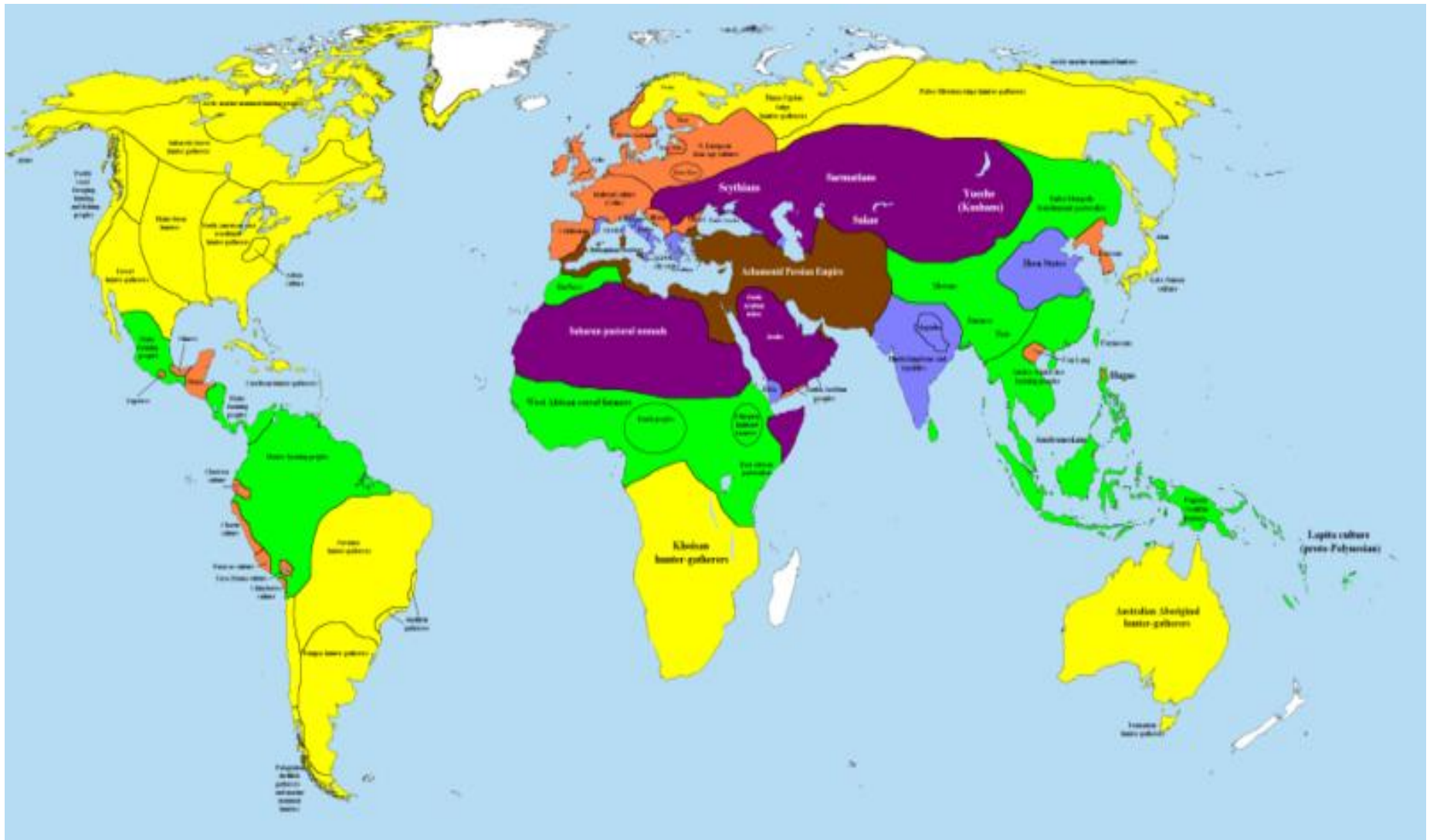


Political map of the world

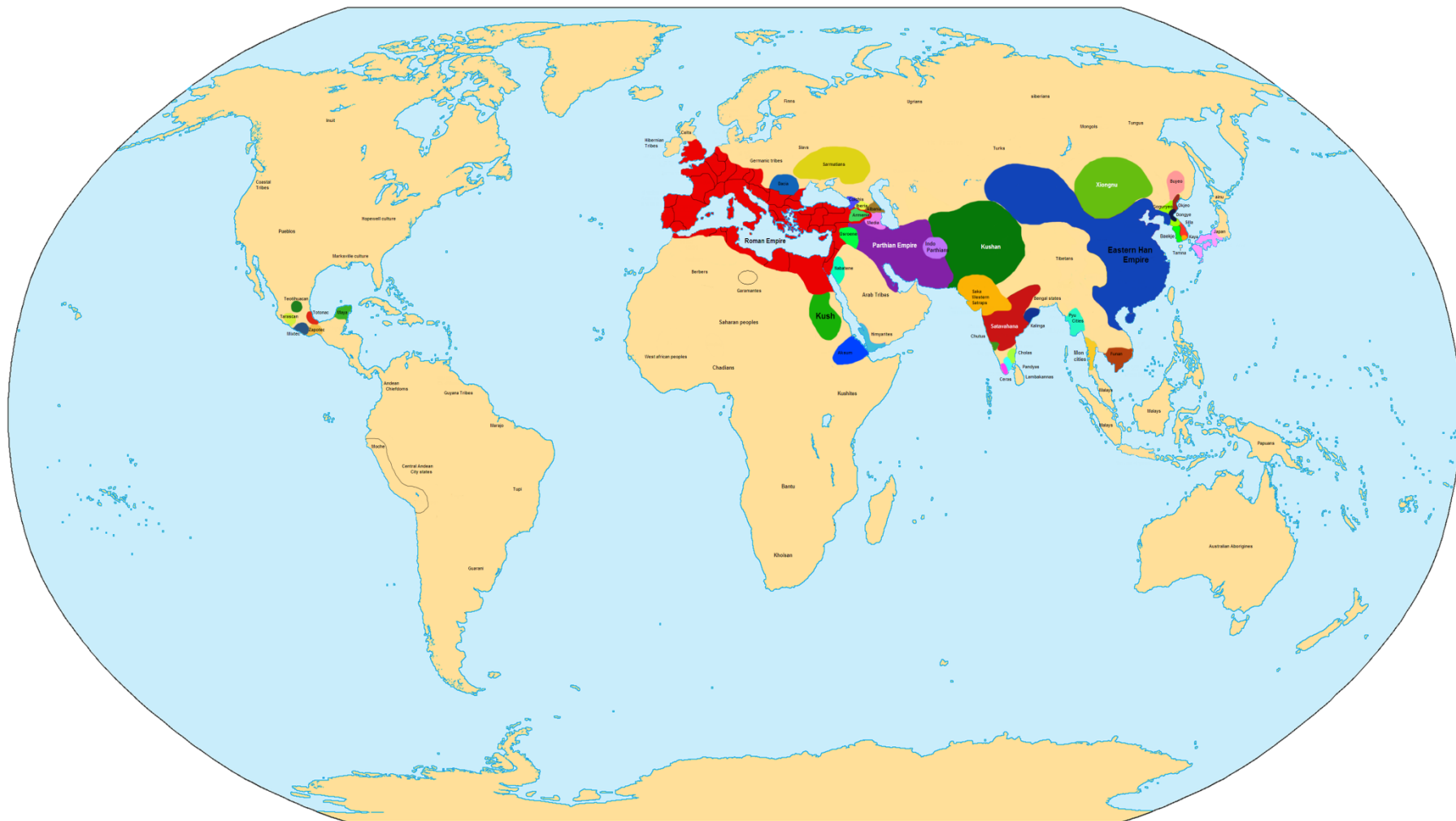
Ancient Civilizations of the Old World



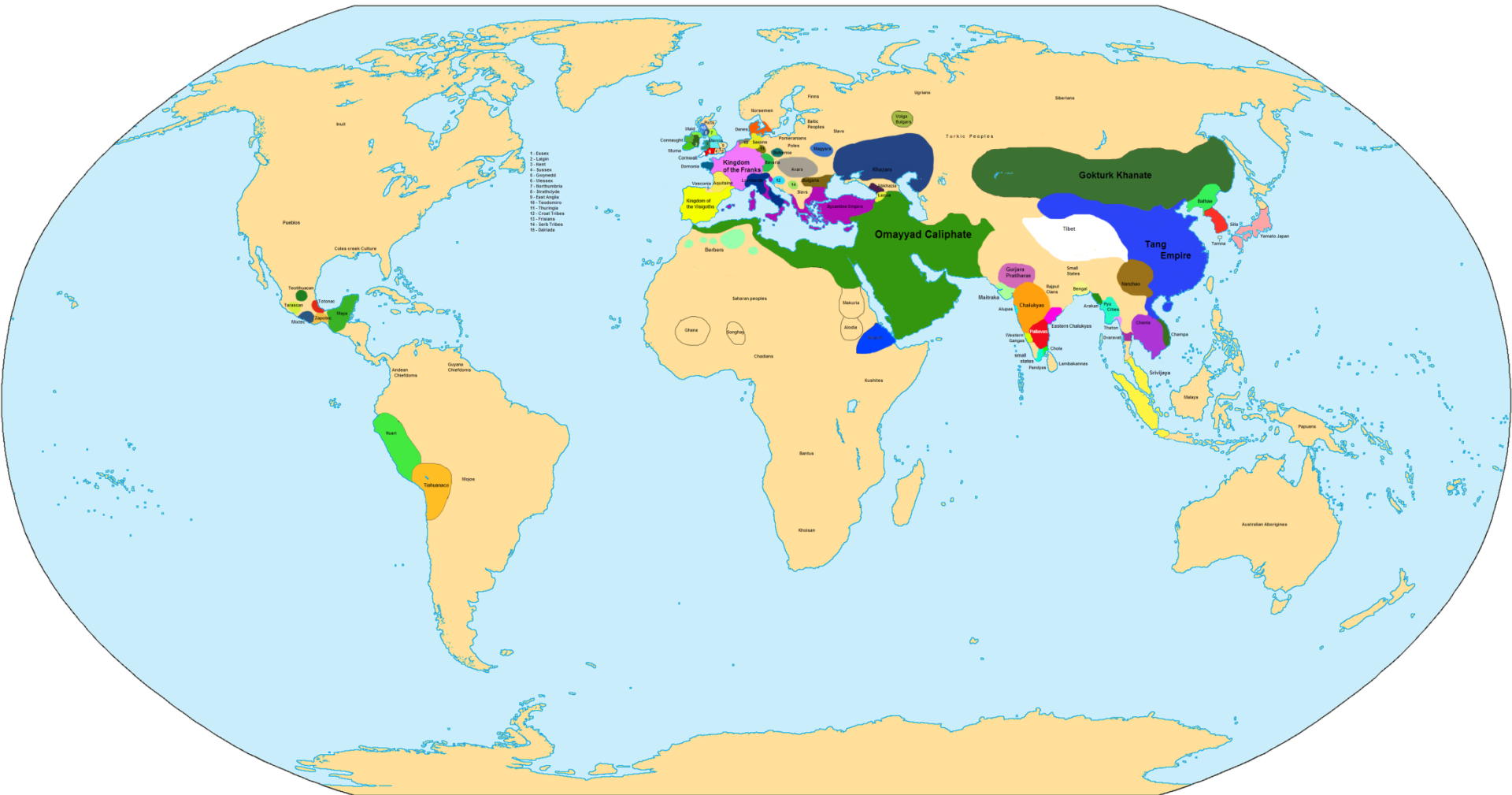
-500



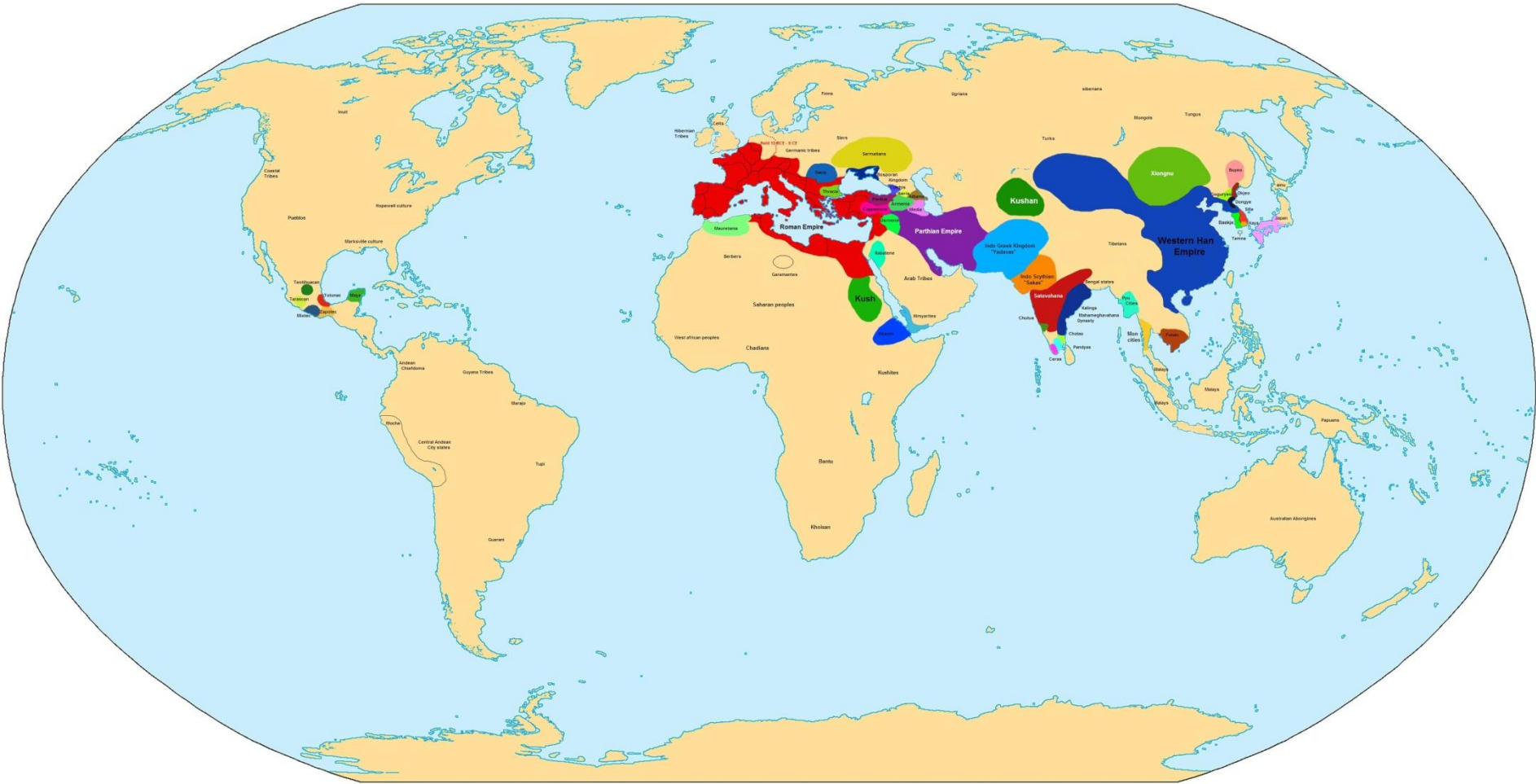
In 100



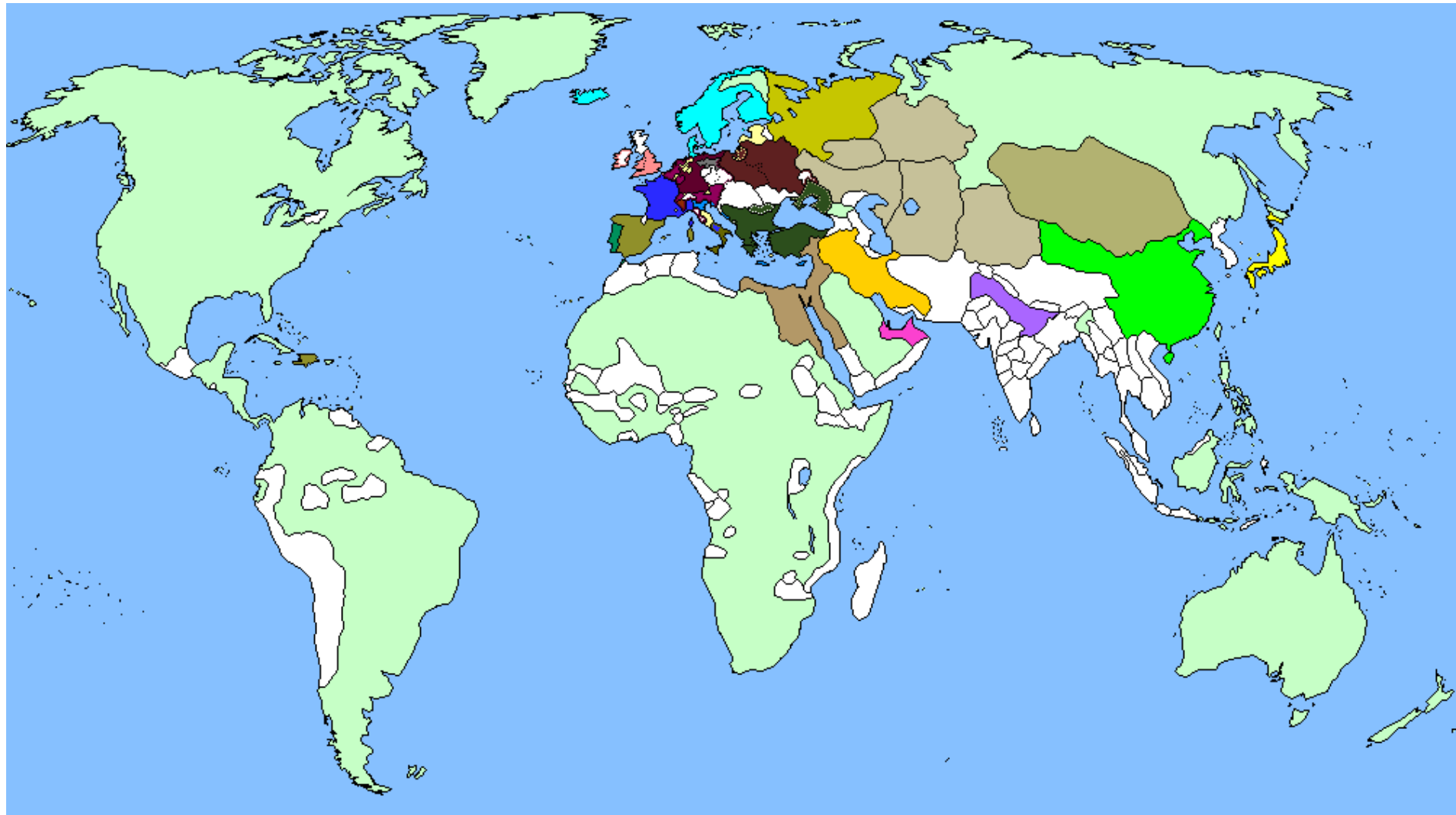
In 700



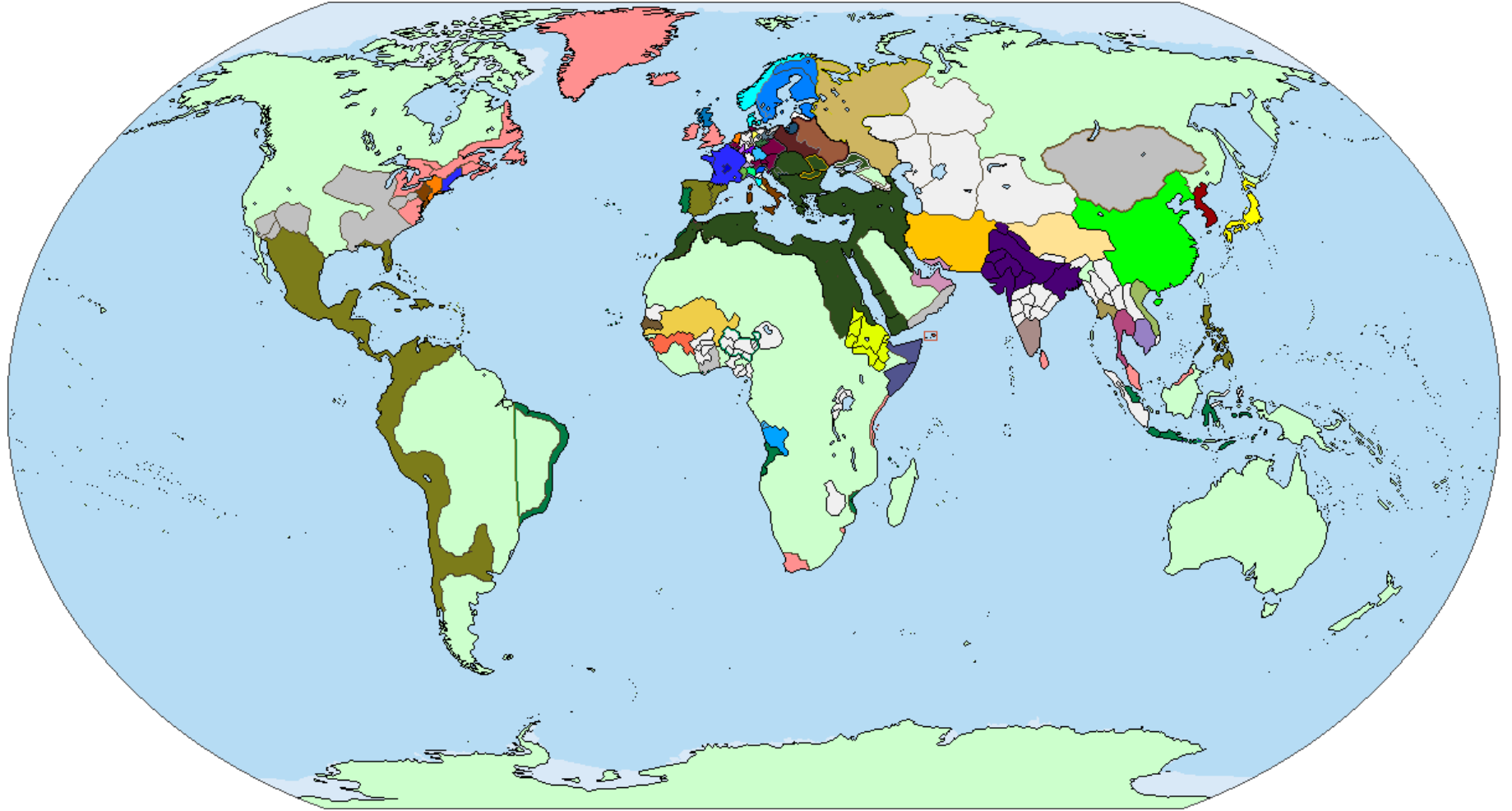
In 1100



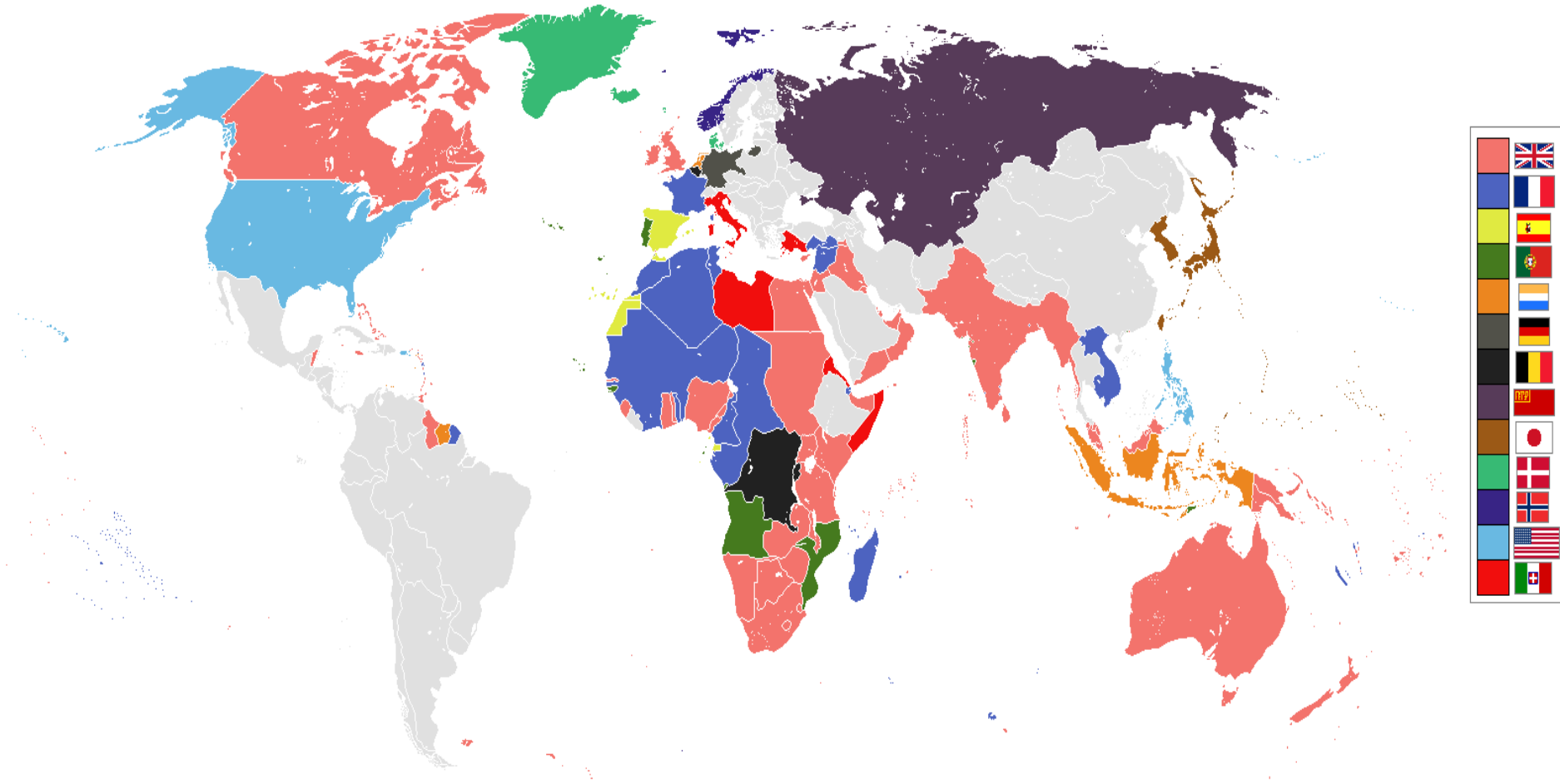
In 1500



In 1600

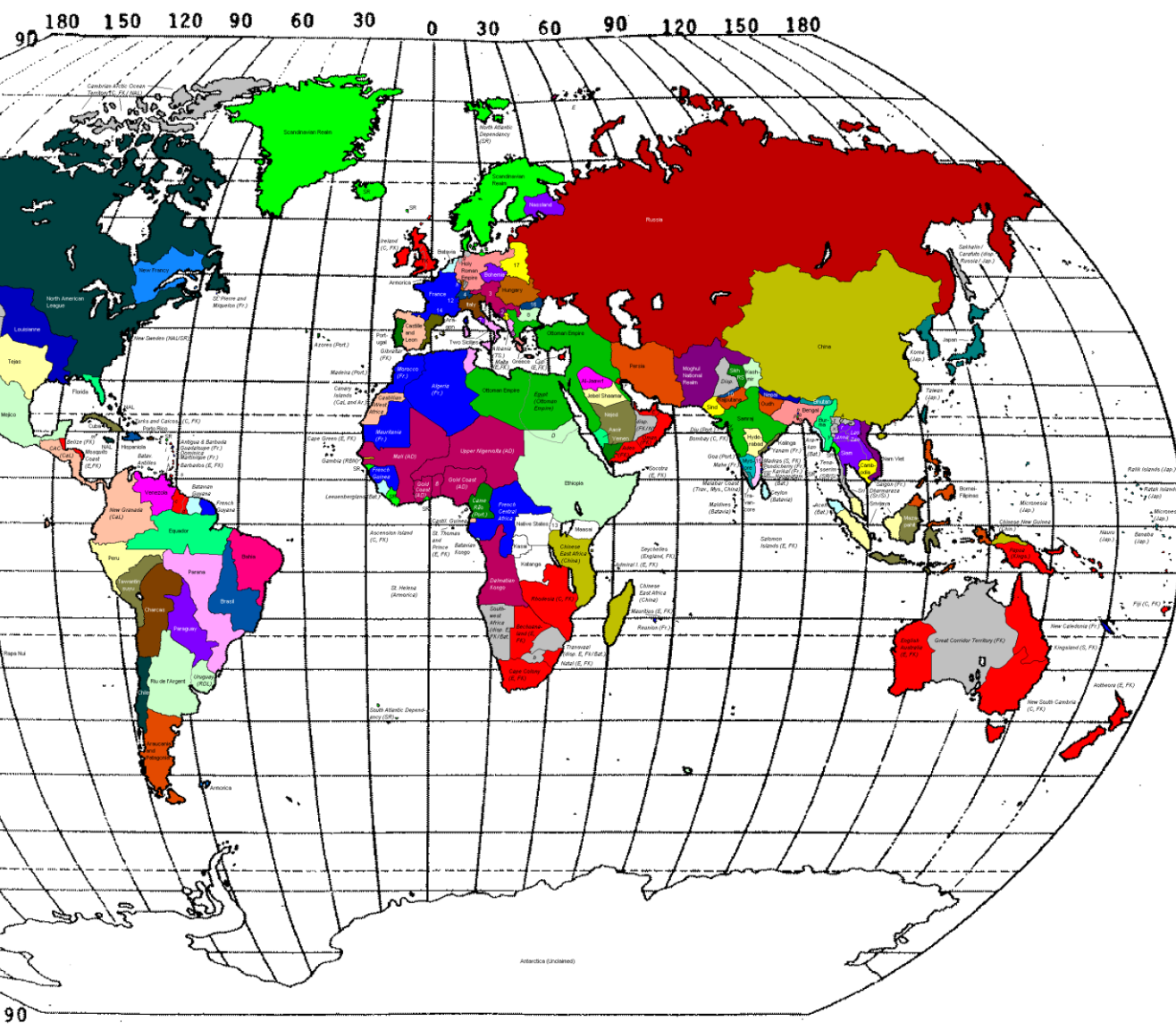


In 1800 (colonial system)



In 1900

- 1. Jamaica
 - 2. Madagascar
 - 3. Austria-Danubia
 - 4. Austria
 - 5. San Marino
 - 6. Monaco
 - 7. Holy See
 - 8. Bulgaria
 - 9. Vatican
 - 10. Switzerland
 - 11. Luxembourg
 - 12. Duchy of Grand-Ferret
 - 13. Republic of Both Nations
- Abbreviations used:
- FR - Federated Kingdoms
 - E, FR - England, Federated Kingdoms
 - C, FR - Canada, Federated Kingdoms
 - S, FR - Scotland, Federated Kingdoms
 - SR - Scandinavian States
 - F - France
 - PR - Prussia
 - OK - Austria and Lombardy
 - AV - Austria
 - AC - Alta California
 - NA - North American League
 - CAC - Central American Community
 - AD - Andean-Andean
 - RR - Republic of Both Nations
 - NS - New Spain
 - OS - Occupied area
 - CS - Constantinople
 - MS - Midway Island
 - SM - San Marino
 - MC - Monaco
 - BY - Byzantium
 - BY - Bulgaria
 - BY - Serbia
 - BY - Spain
 - BY - China
 - BY - Indian Kingdoms
 - BY - Kingdom (E, FR)
- a - Pacific Islands (Cap)
 - b - Congo Free State (Cap, E, FR, Ital)
 - c - English (Cap)
 - d - Canadian (Cap)
 - e - Federalist (Cap) (Cap, and a)
 - f - German and Holy Roman Empire
 - g - Holy Roman Empire and SR
 - h - SR (Cap)
 - i - SR (Cap)
 - j - SR (Cap)
 - k - SR (Cap)
 - l - SR (Cap)
 - m - SR (Cap)
 - n - SR (Cap)
 - o - SR (Cap)
 - p - SR (Cap)
 - q - SR (Cap)
 - r - SR (Cap)
 - s - SR (Cap)
 - t - SR (Cap)
 - u - SR (Cap)
 - v - SR (Cap)
 - w - SR (Cap)
 - x - SR (Cap)
 - y - SR (Cap)
 - z - SR (Cap)



In 1980



World energy resources

Energy resources

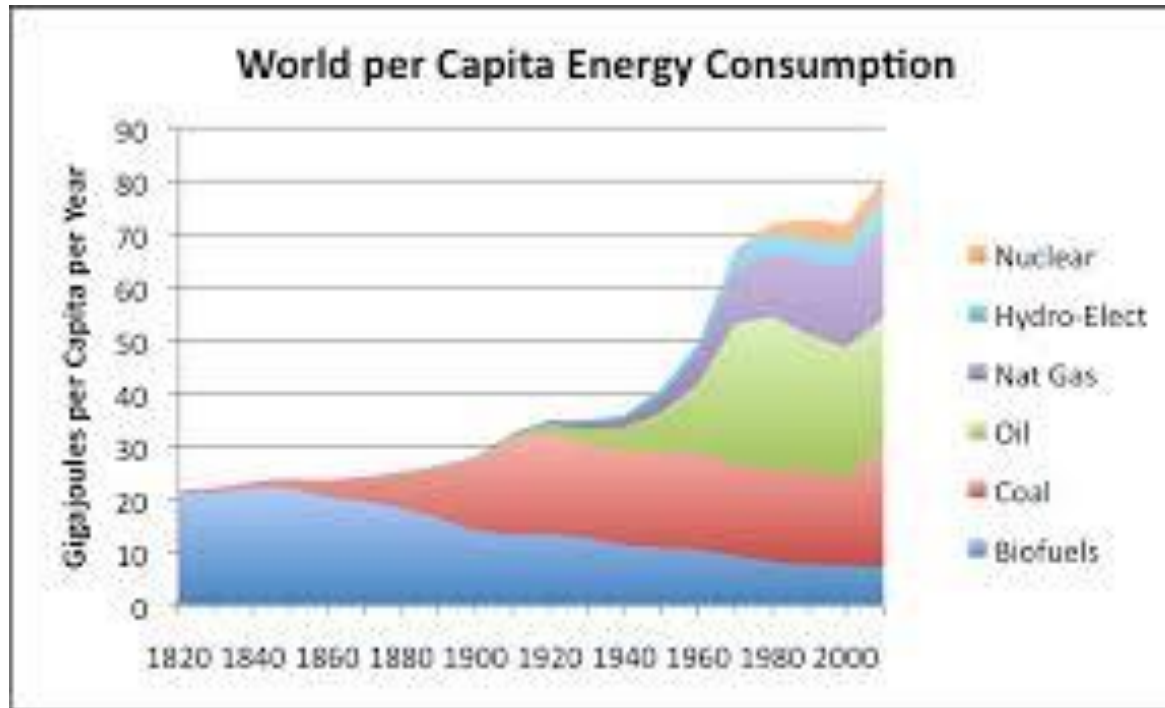
- Wood
- Coal
- Oil / gas
- Hydro
- Nuclear
- Alternative



Comparison

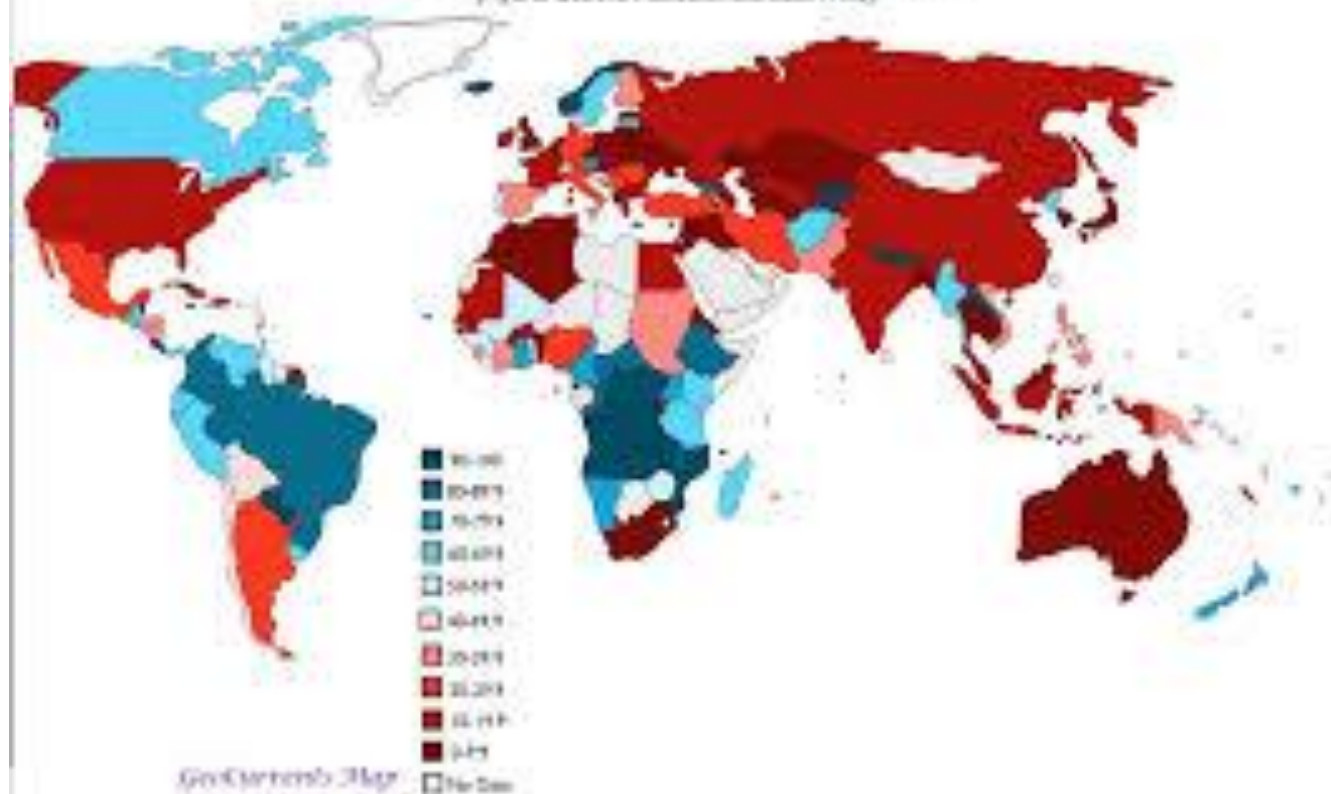
Resource	Initial Costs	Costs of exploitation	Price of 1 energy unit	Prospects
Wood	+	+++	+++	Non renewable, high air pollution
Coal	+	+	+++	Non renewable, high air pollution
Oil / gas	+	++	++	Non renewable, high air pollution
Hydro	+++	+	++	Renewable, high impact on environment, needs land, climate changes
Nuclear	++	+	+	Renewable, non limited, geopolitical
Alternative	+	++	+++	Renewable, expensive, small pollution

Energy consumption

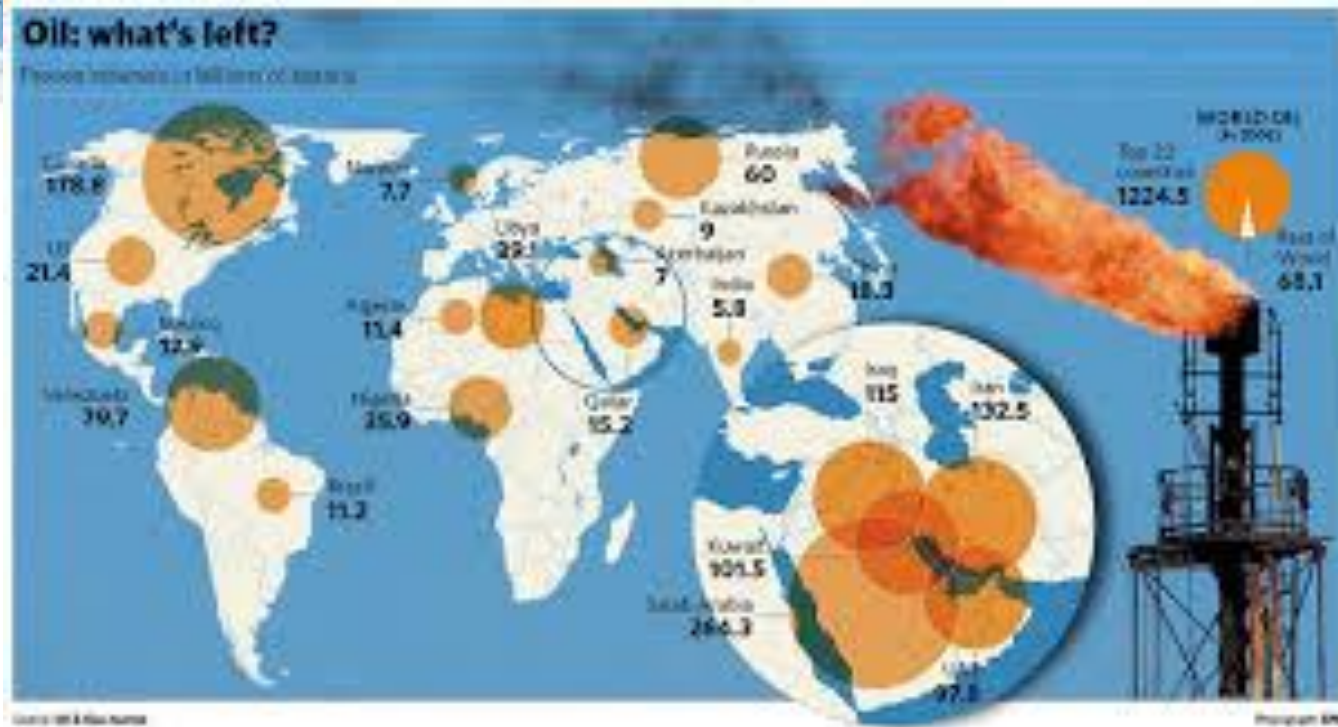


Percentage of Electricity Generation from Renewable Sources

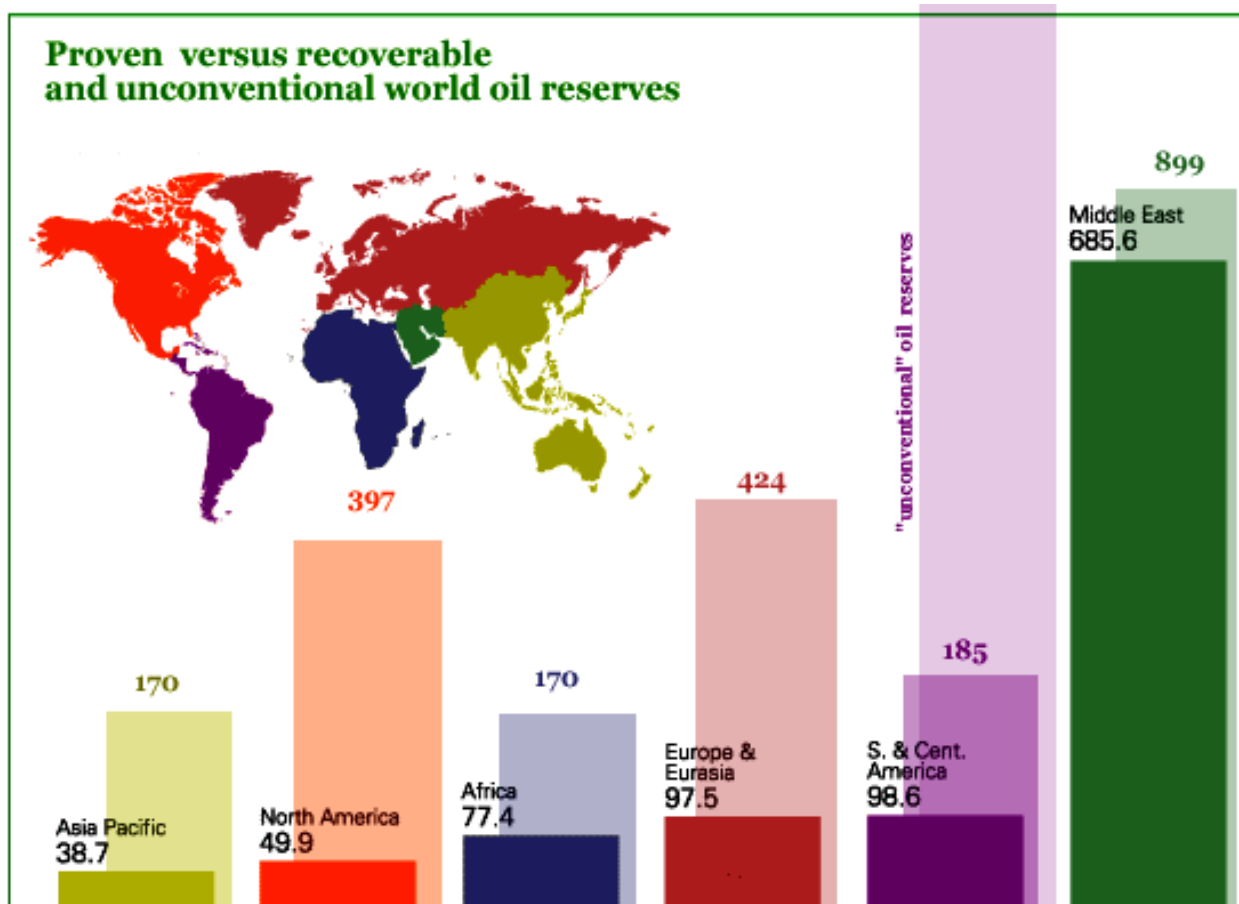
(Hydro, Geothermal, Solar, Biomass, Wind)



Data Source: http://en.wikipedia.org/wiki/List_of_countries_by_electricity_production_from_renewable_sources

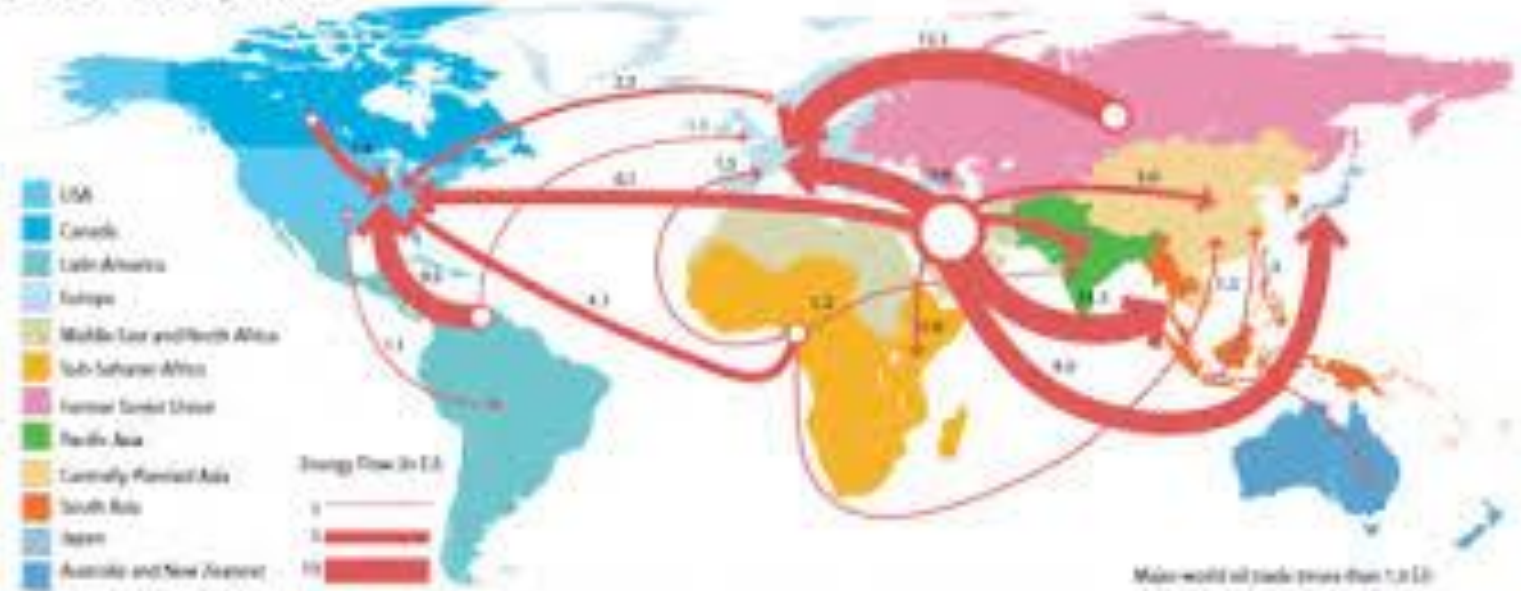


Proven versus recoverable and unconventional world oil reserves



Oil Trade

Crude oil and oil products



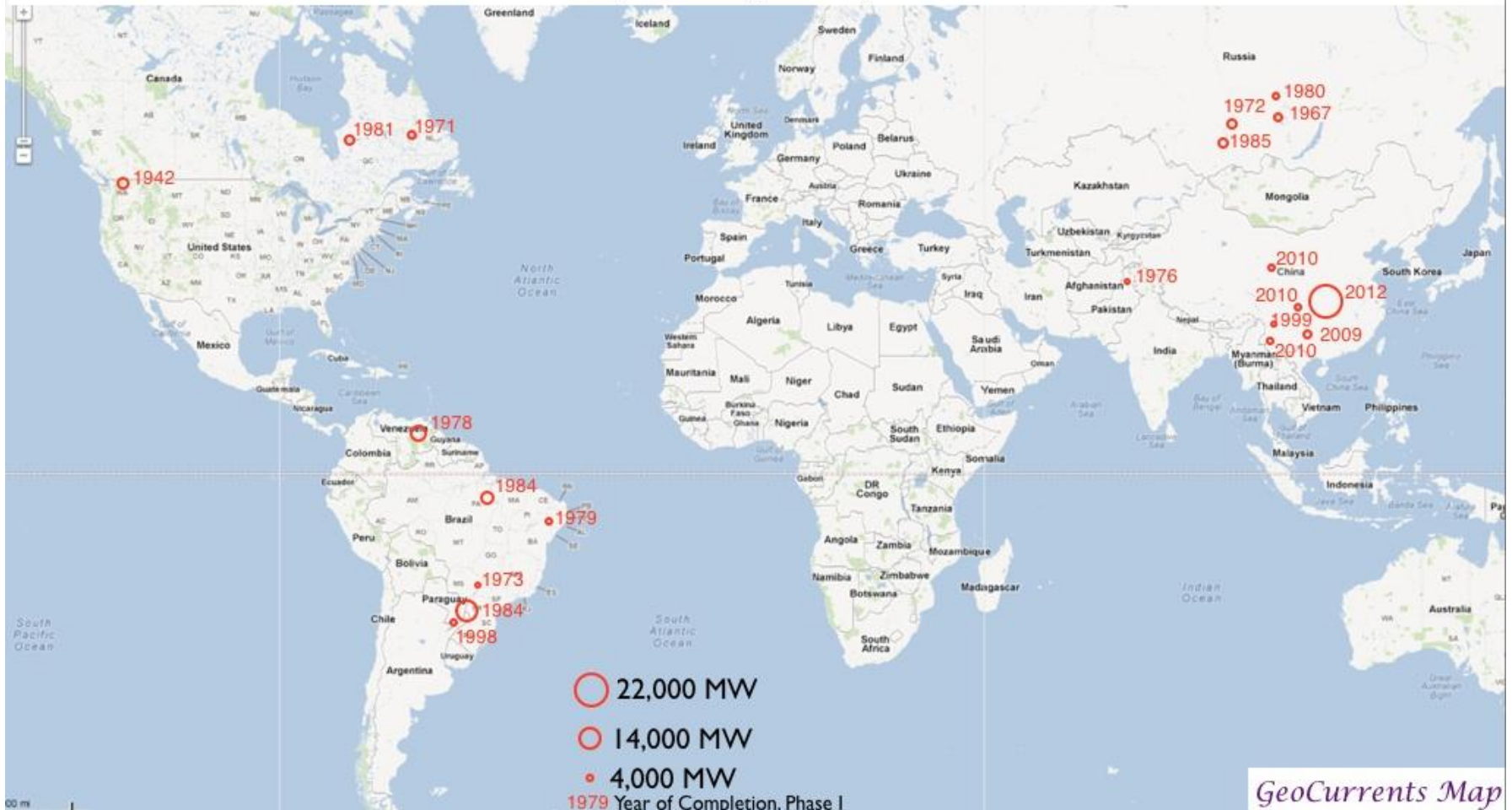
Largest Reservoirs in the World

By Surface Area



The World's Largest Hydroelectric Power Stations

(Locations Approximate)



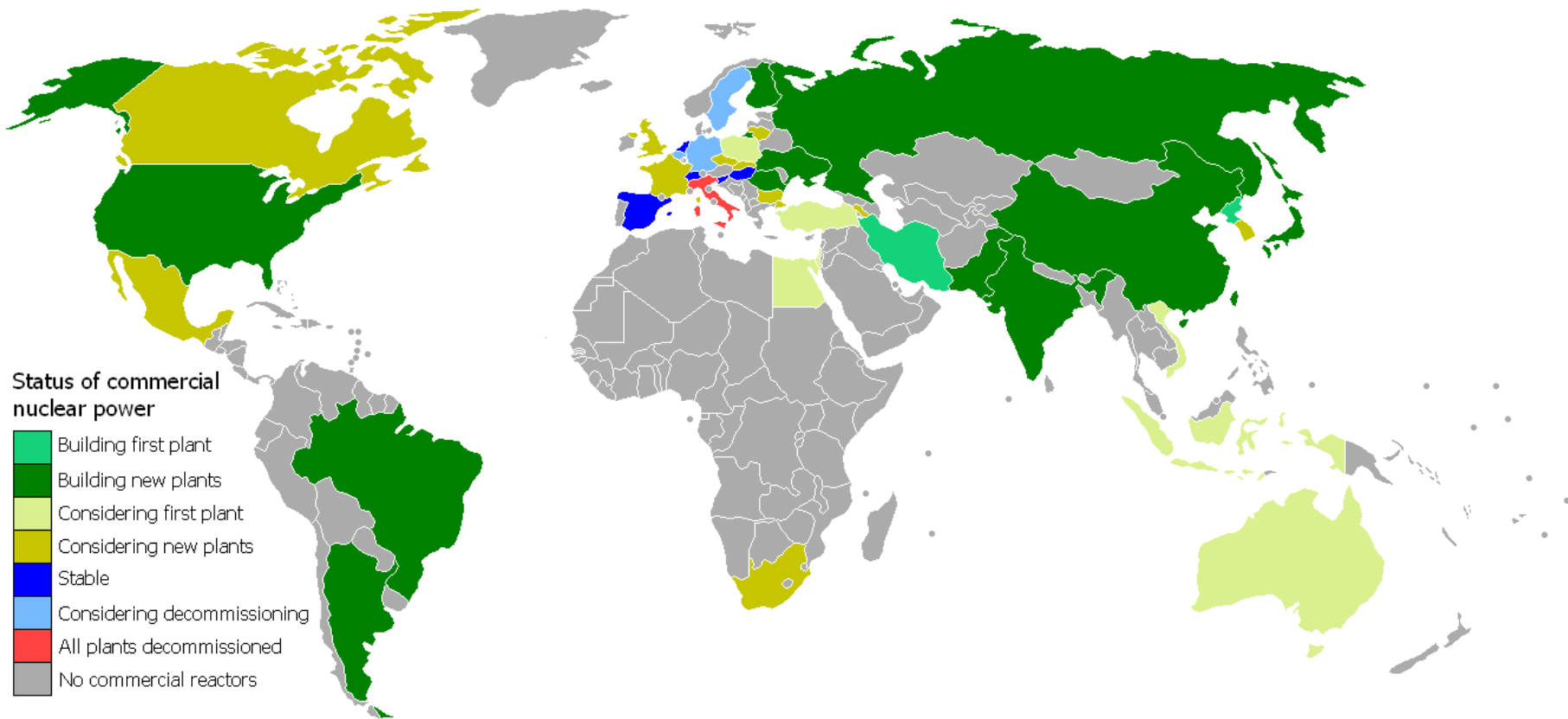
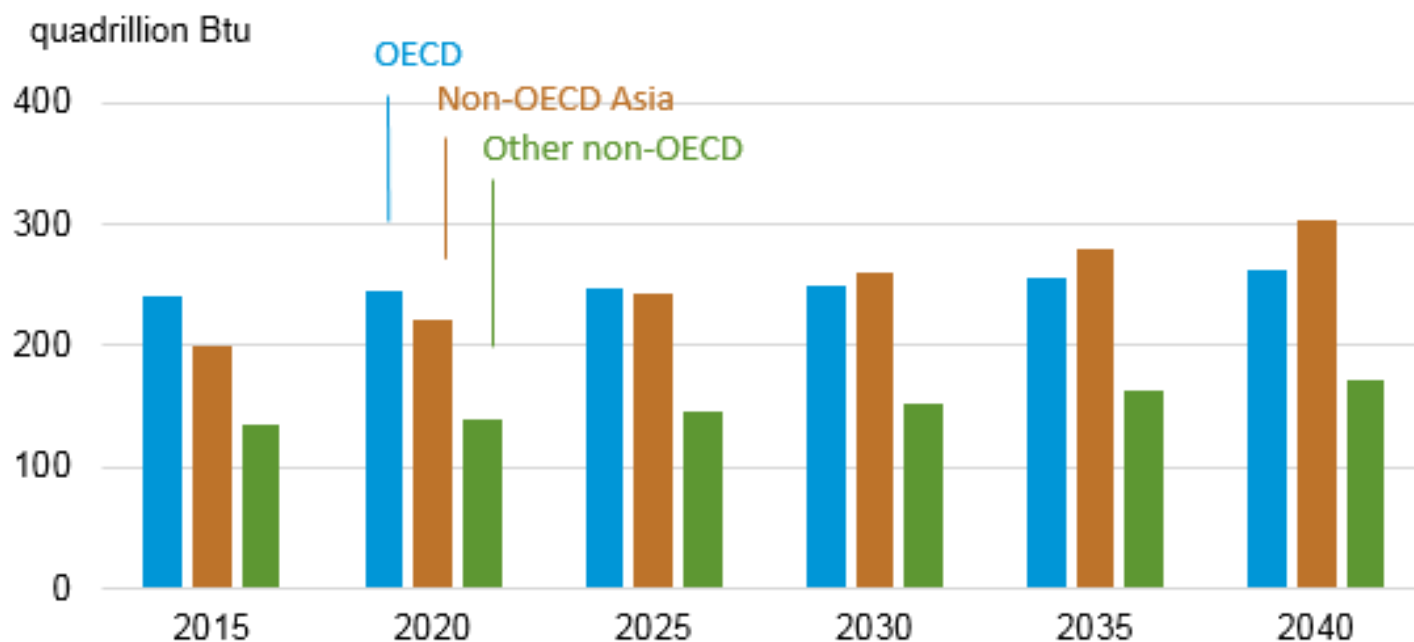
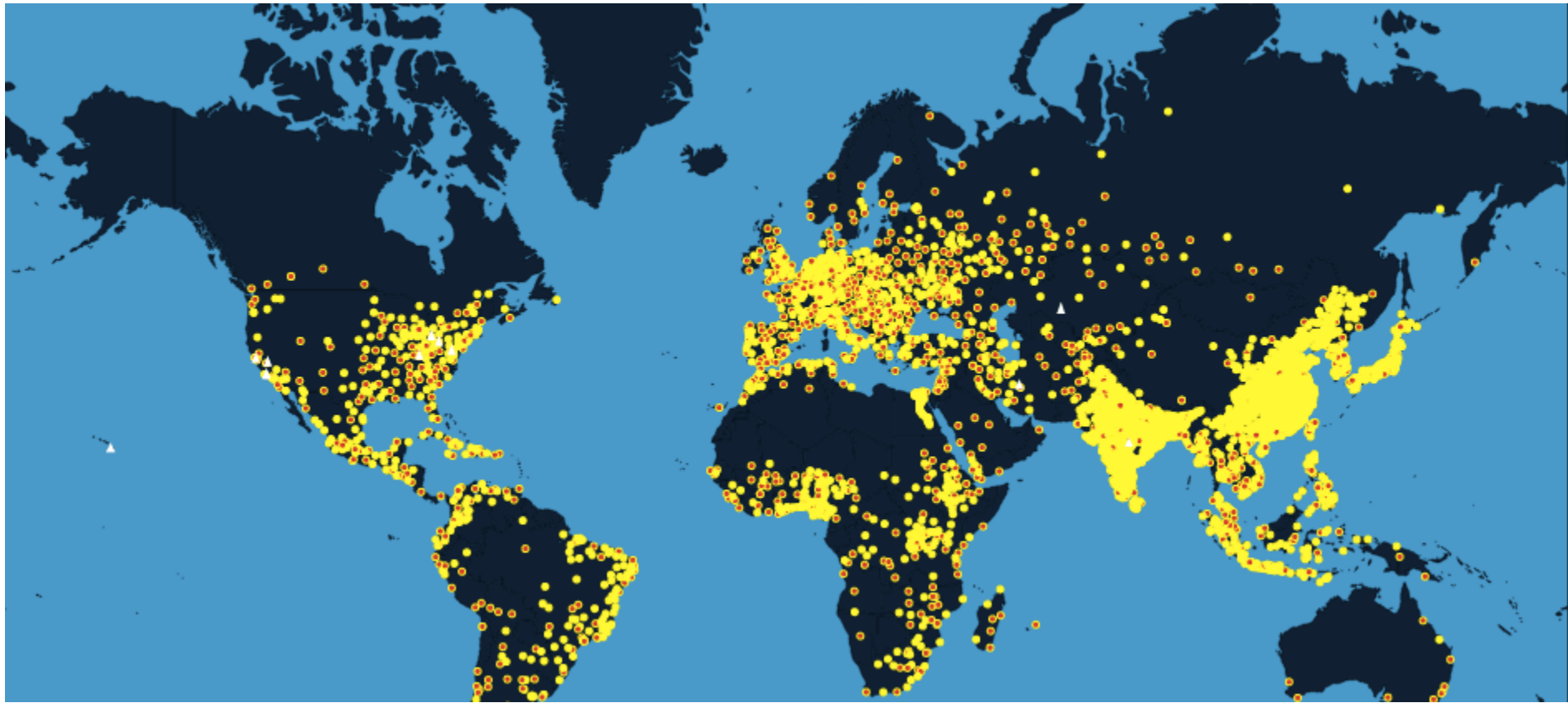


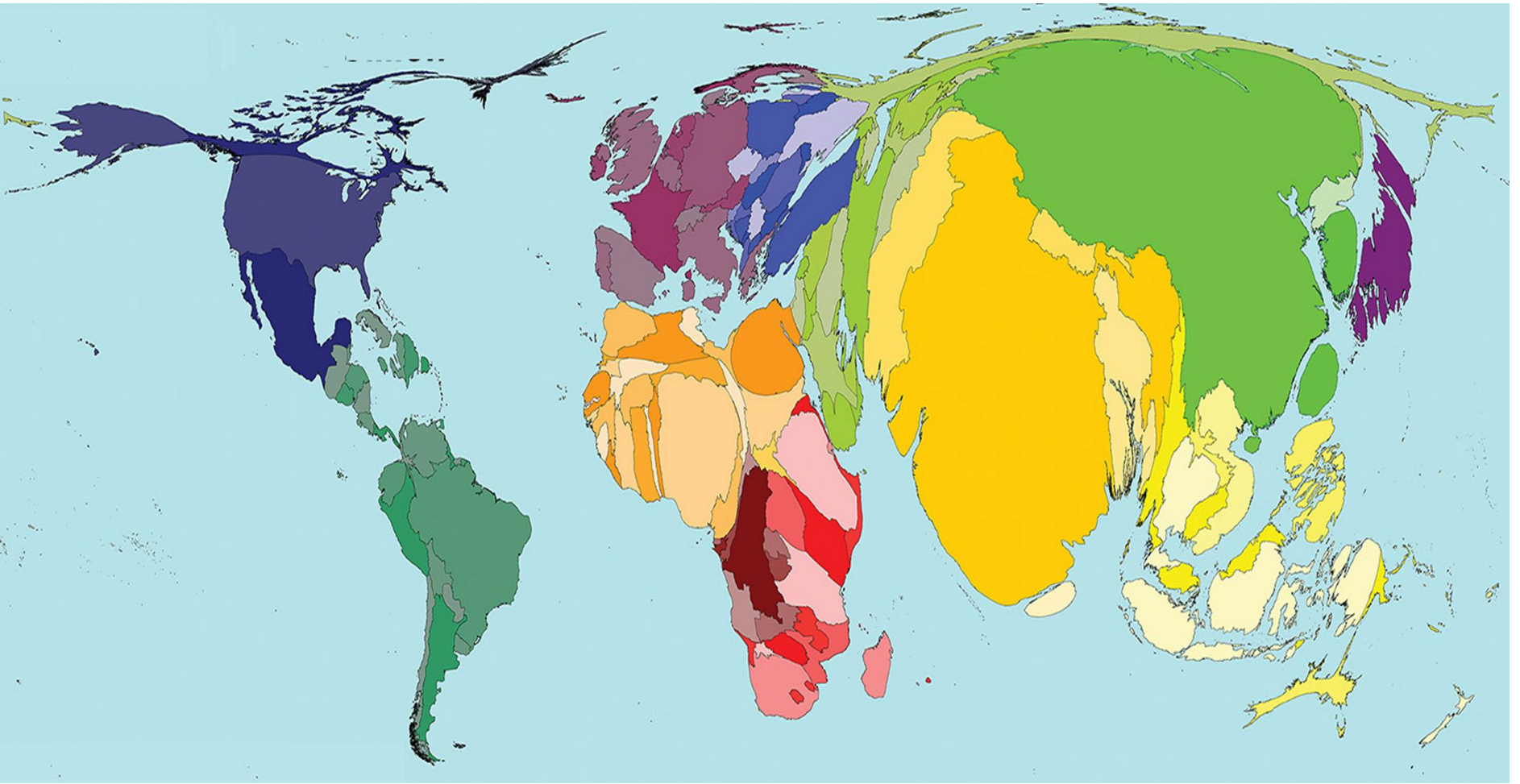


Figure 1. World energy consumption by country grouping



Population of the world





World Population Distribution

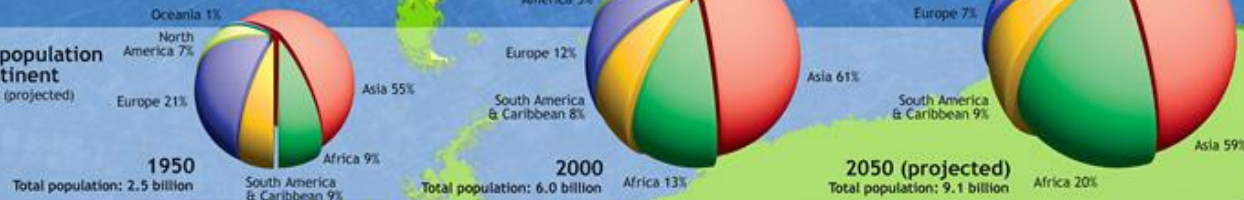
Largest countries by population 2006

1. China	1.32 billion
2. India	1.12 billion
3. United States of America	300 million
4. Indonesia	225 million
5. Brazil	186 million
6. Pakistan	165 million
7. Bangladesh	147 million
8. Russia	143 million
9. Nigeria	135 million
10. Japan	128 million

Largest countries by population density Inhabitants per square kilometre (2005) Countries with populations over 10 million

1. Bangladesh	1,045
2. Taiwan	636
3. South Korea	480
4. Netherlands	392
5. Belgium	341
6. Japan	339
7. India	336
8. Sri Lanka	316
9. Philippines	277
10. Vietnam	254

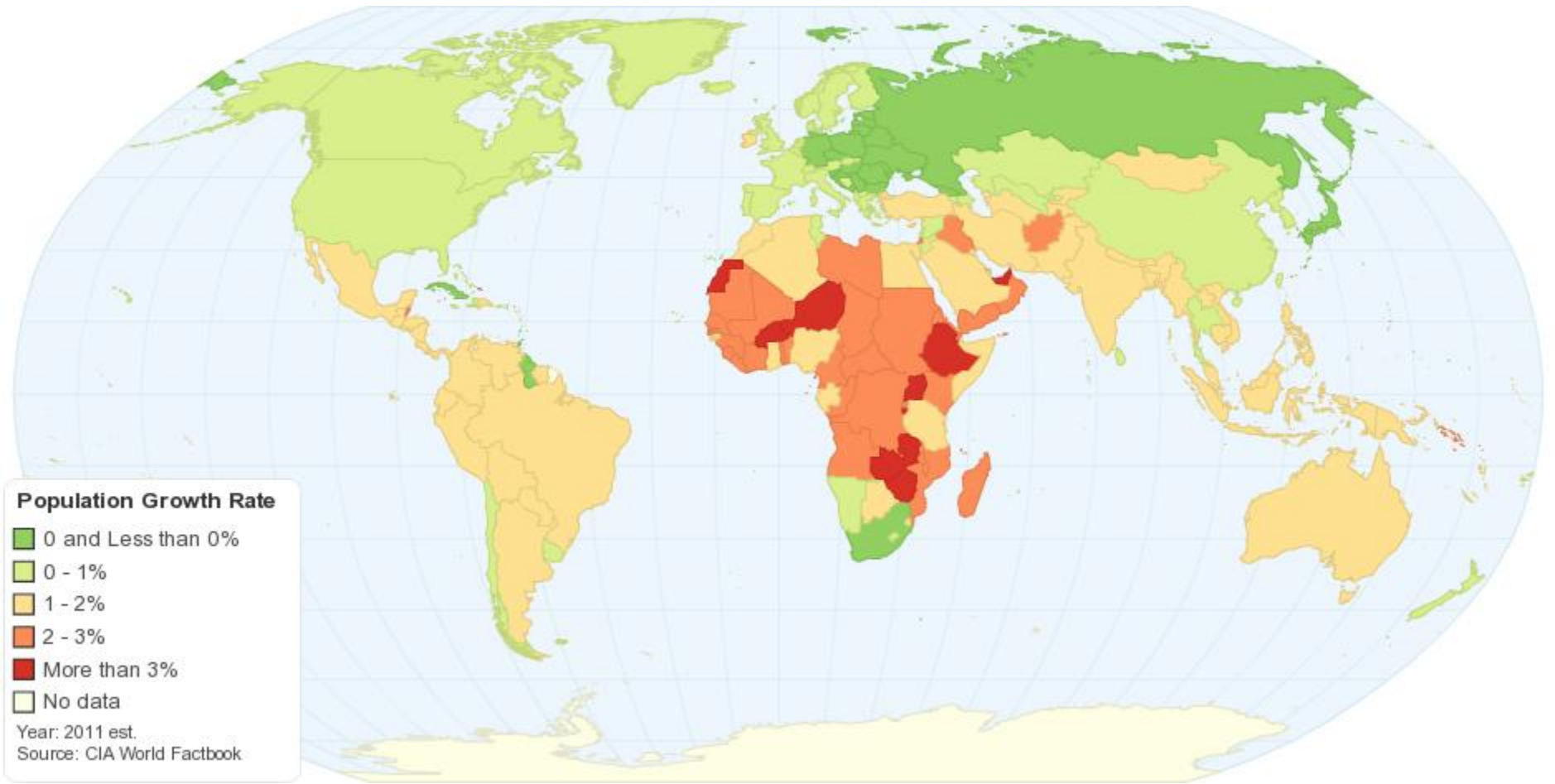
World population by continent 1950-2050 (projected)



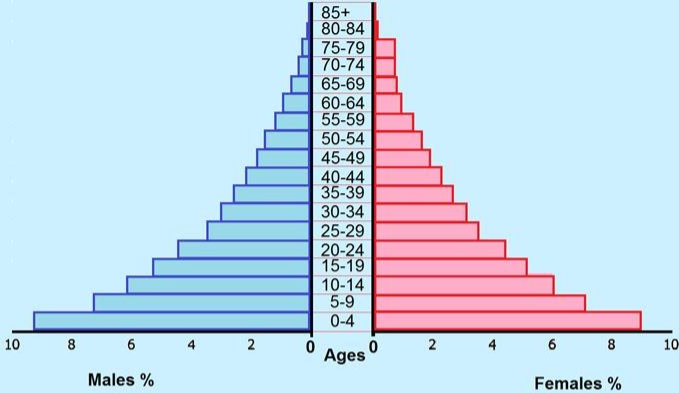
Population density

Inhabitants per square kilometre

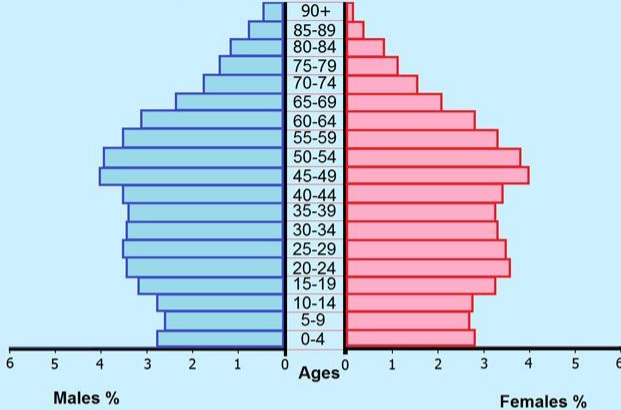




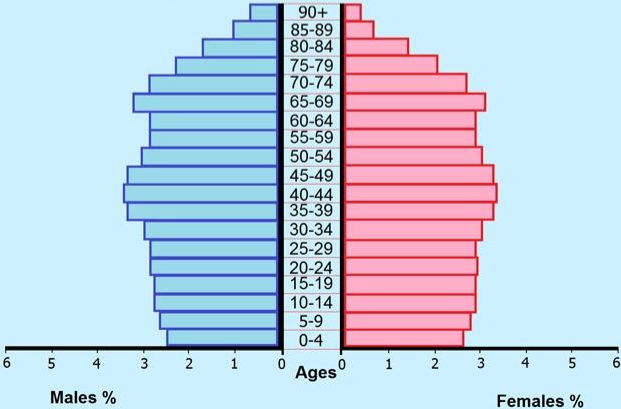
Youthful Population

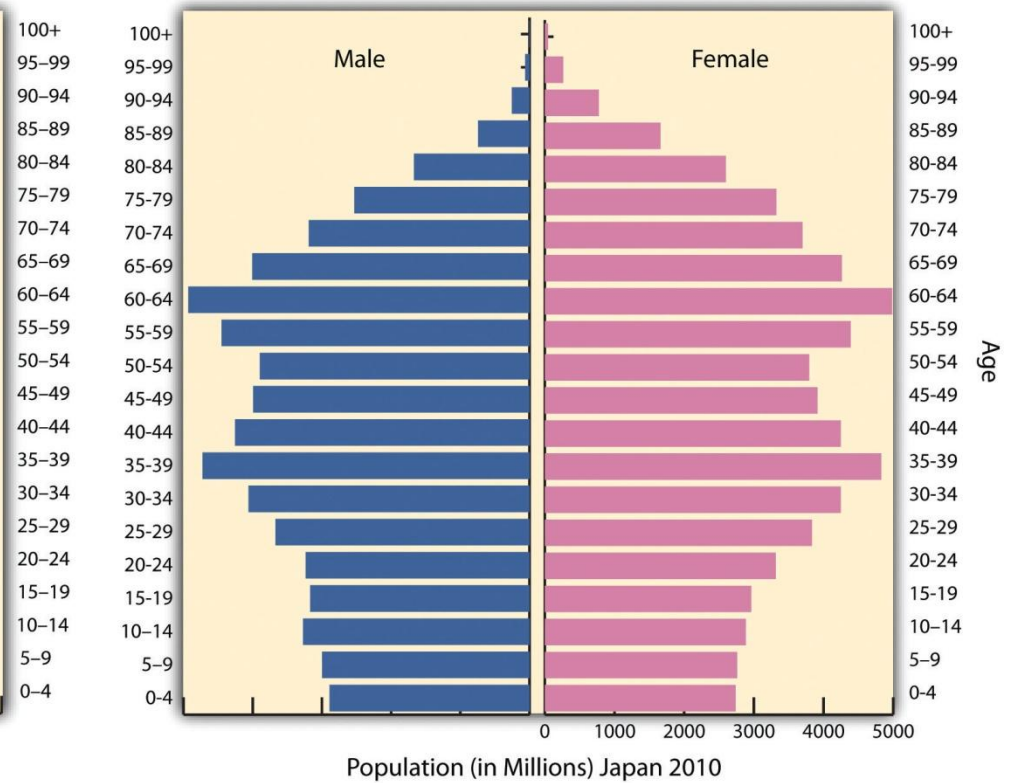
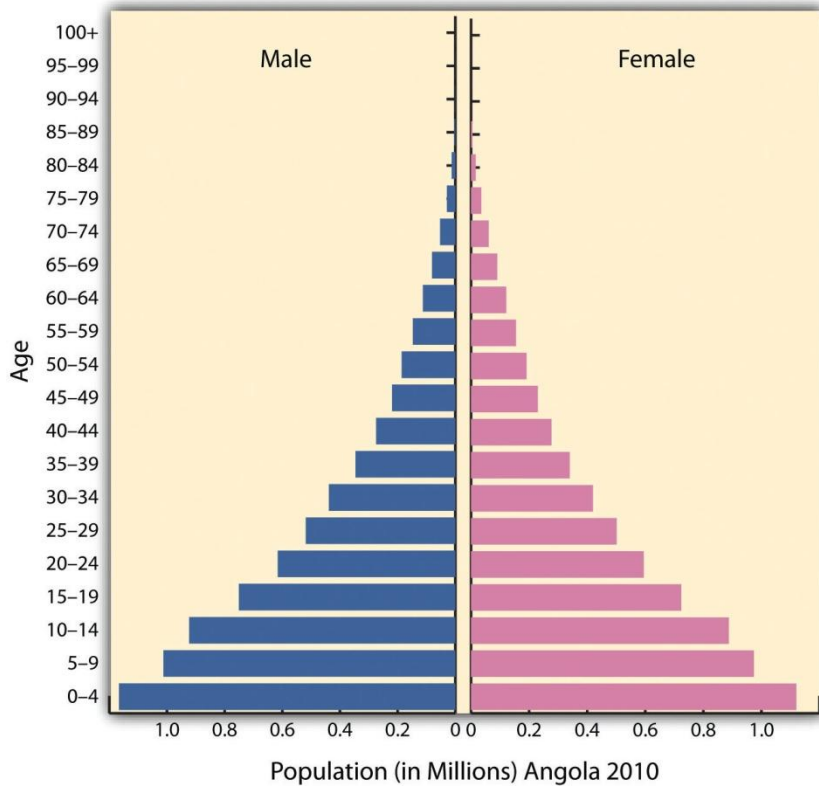
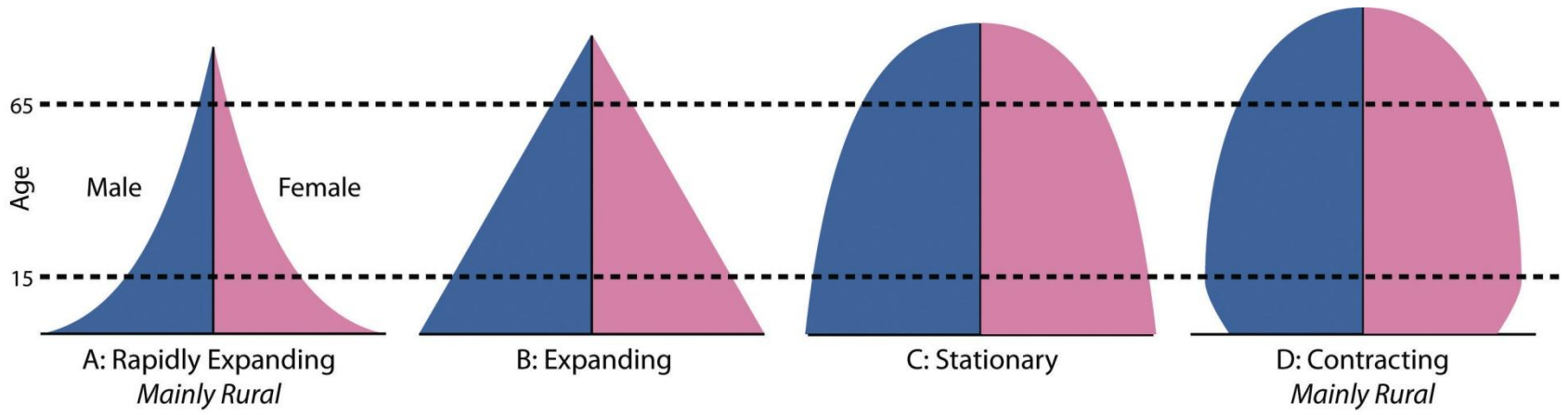


Ageing Population

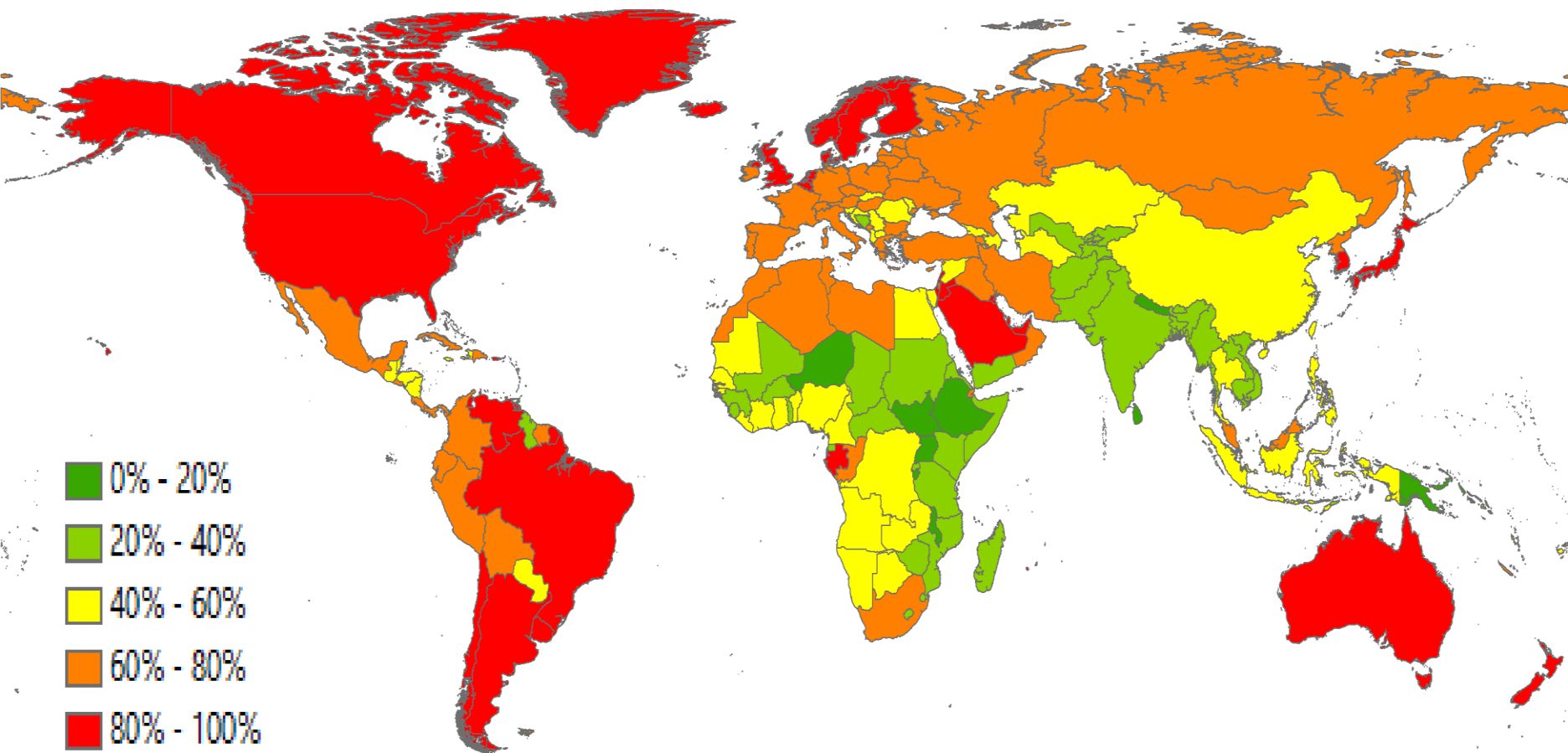


Aged Population

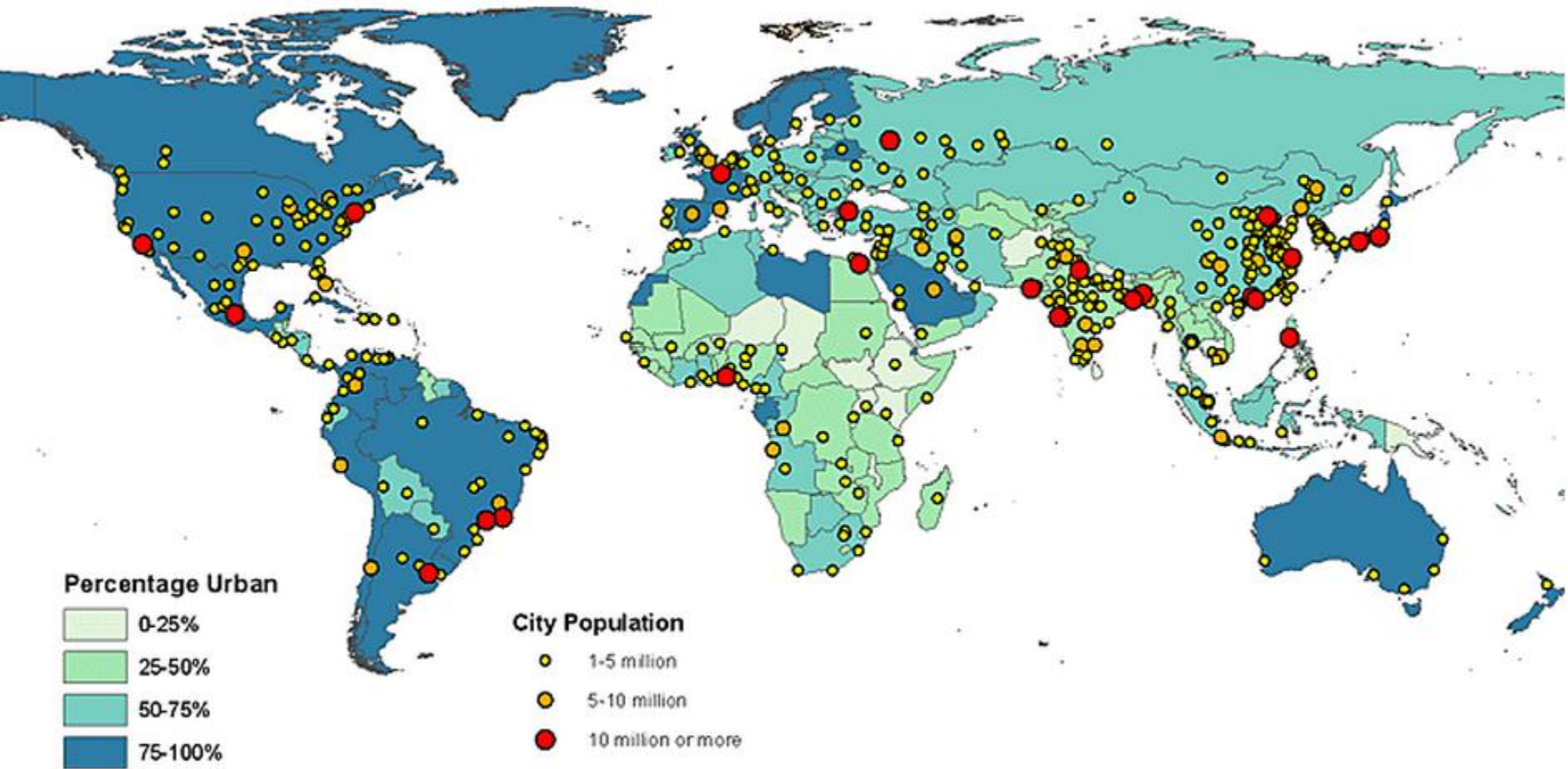




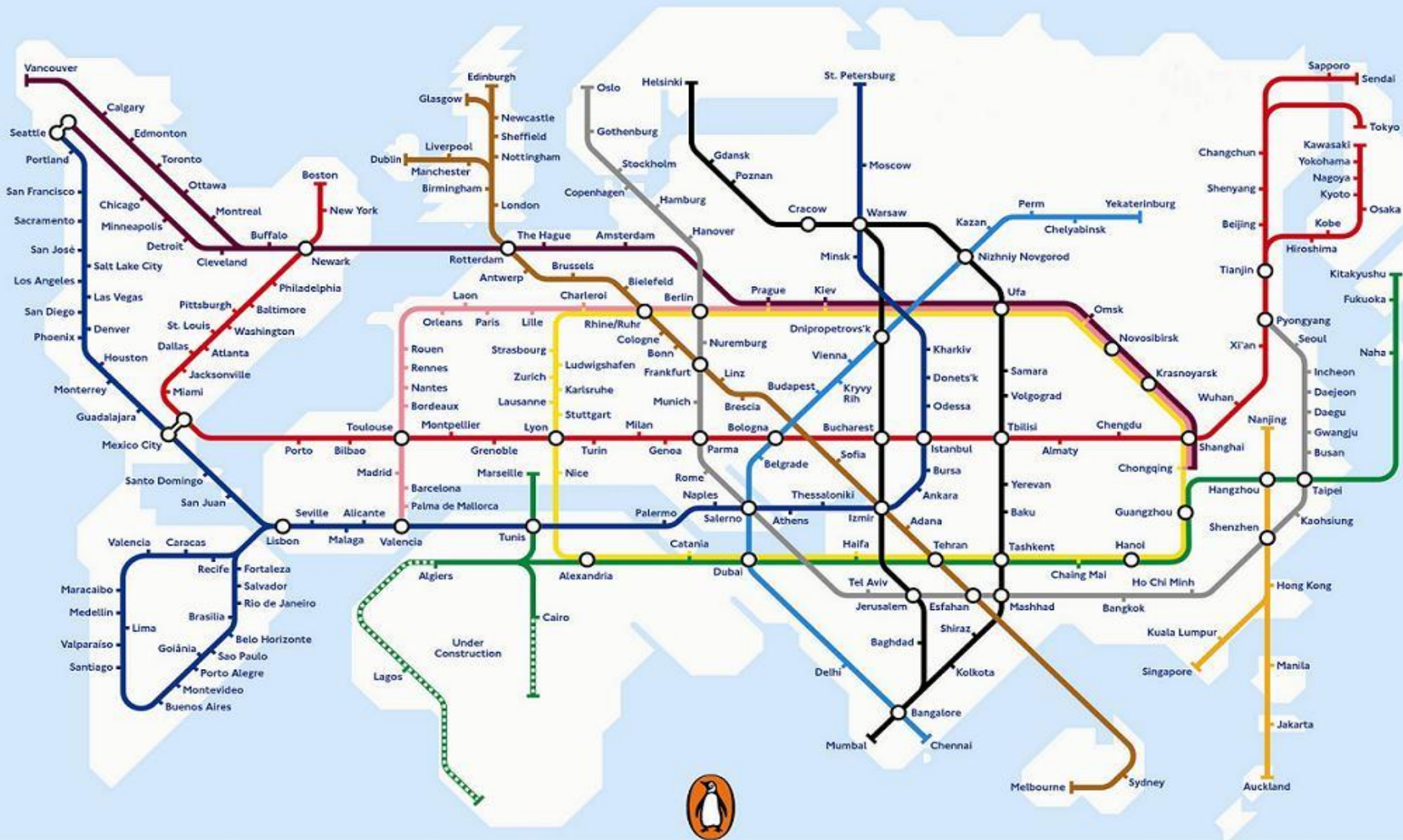
Urbanization



Percentage of urban population and agglomerations by size class



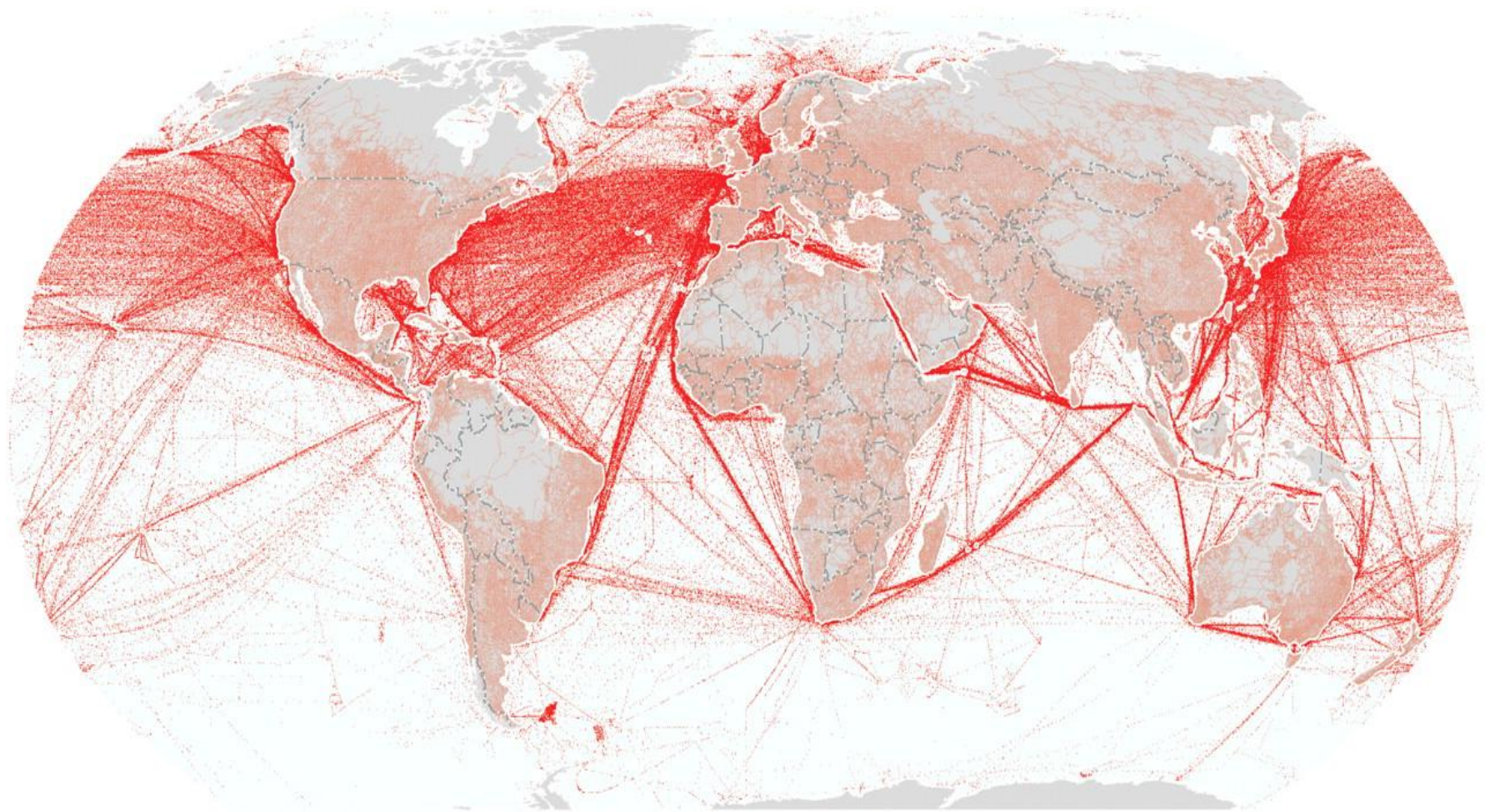
World transport



TRANSIT MAPS OF THE WORLD

This playful diagram shows all the cities which have, are building or planning to construct an urban rail system. It is the opening page of a new book about the graphic design of subway, metro, underground and U-Bahn system maps and diagrams. Published by Penguin on 30th October 2007, this beautiful coffee-table book could be the ideal quirky gift for anyone who loves maps, travel, design or transit.

Order online or visit <http://us.penguin.com/> Price: \$25. First 100 orders on www.metromapsoftheworld.com receive FREE giant wall poster of this E-Card!



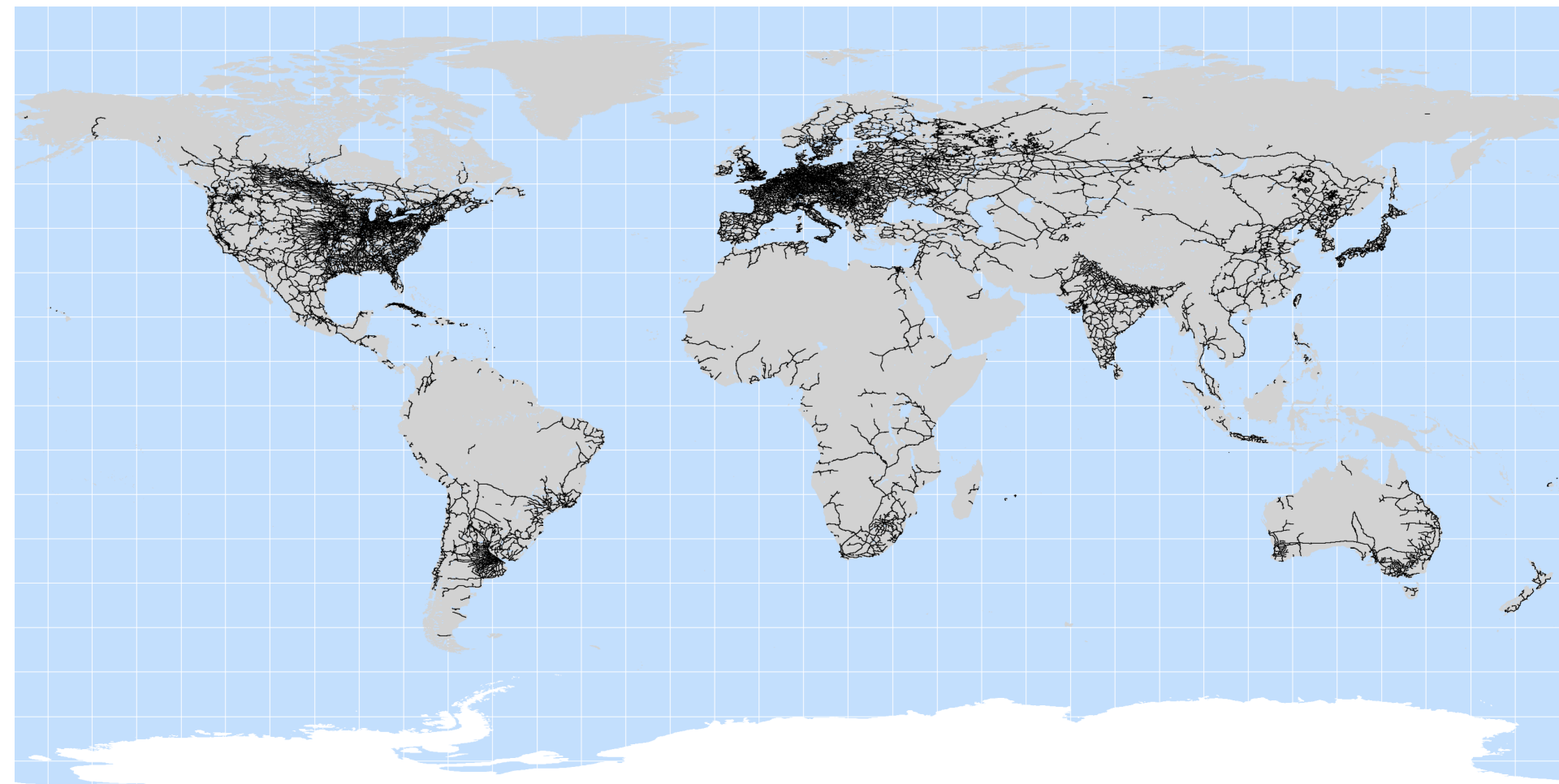
Shipping Lanes



Road Networks

The World's 50 Busiest Container-Shipping Seaports in 2012







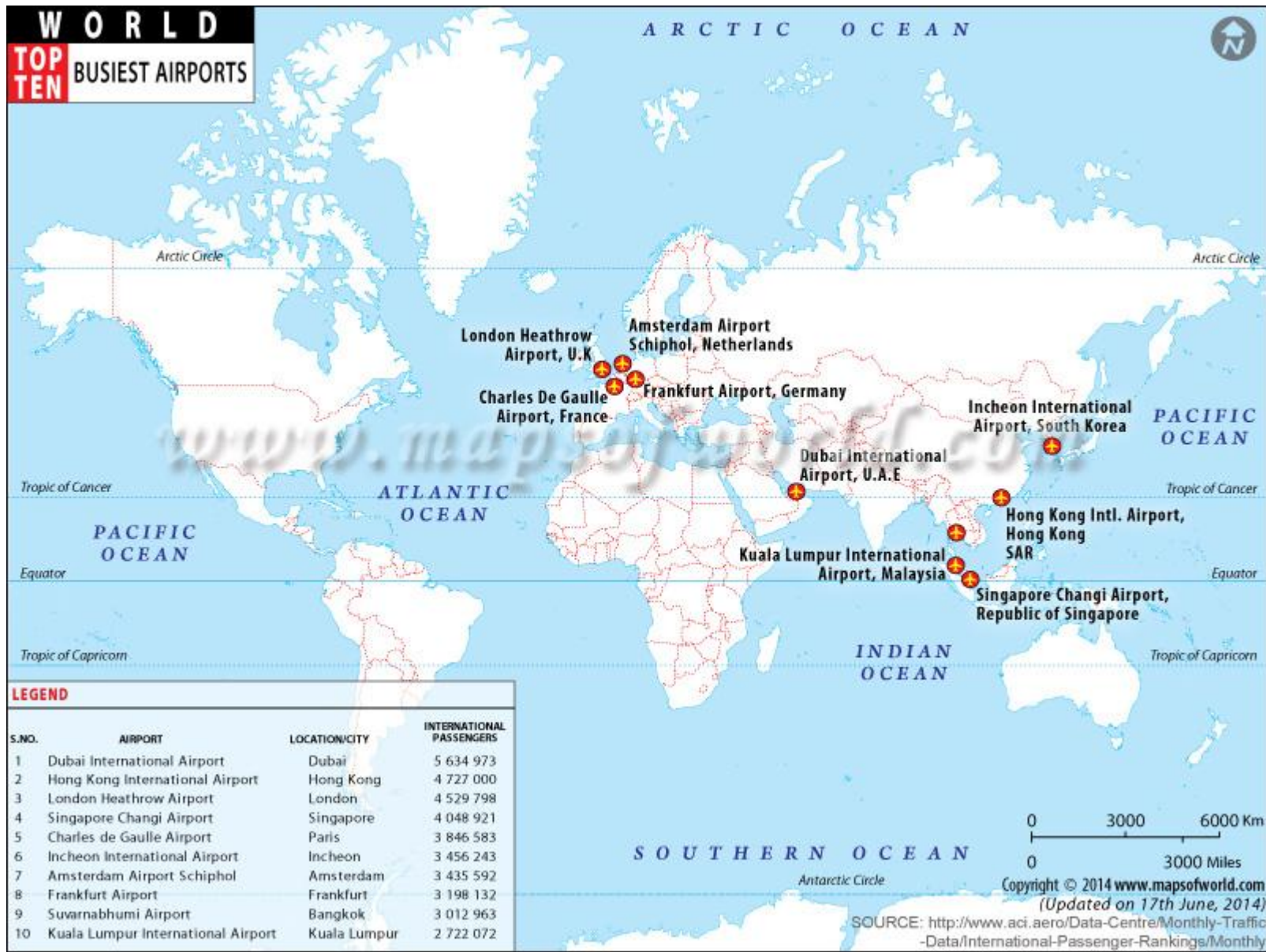
Major Air Route of the WORLD



WORLD

TOP TEN

BUSIEST AIRPORTS



LEGEND

S.NO.	AIRPORT	LOCATION/CITY	INTERNATIONAL PASSENGERS
1	Dubai International Airport	Dubai	5 634 973
2	Hong Kong International Airport	Hong Kong	4 727 000
3	London Heathrow Airport	London	4 529 798
4	Singapore Changi Airport	Singapore	4 048 921
5	Charles de Gaulle Airport	Paris	3 846 583
6	Incheon International Airport	Incheon	3 456 243
7	Amsterdam Airport Schiphol	Amsterdam	3 435 592
8	Frankfurt Airport	Frankfurt	3 198 132
9	Suvarnabhumi Airport	Bangkok	3 012 963
10	Kuala Lumpur International Airport	Kuala Lumpur	2 722 072

0 3000 6000 Km
0 3000 Miles

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(Updated on 17th June, 2014)

SOURCE: <http://www.aci.aero/Data-Centre/Monthly-Traffic-Data/International-Passenger-Rankings/Monthly>

World service markets

World finance. Capitalization

Pax Americana

The world according to free-float equity market capitalization (\$bn)

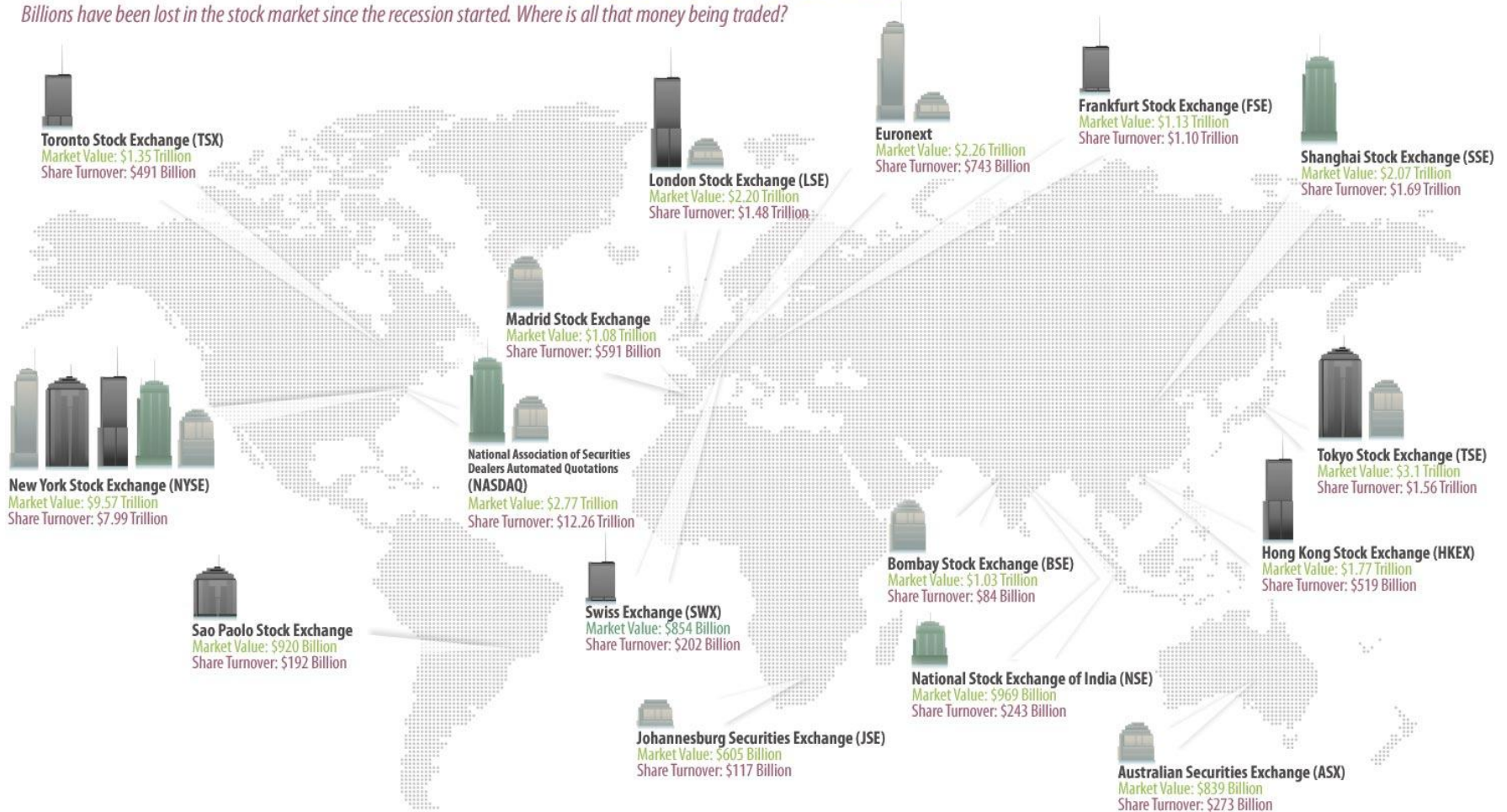


Source: Mapping Worlds, Bloomberg

WORLD STOCK EXCHANGES

Billions have been lost in the stock market since the recession started. Where is all that money being traded?

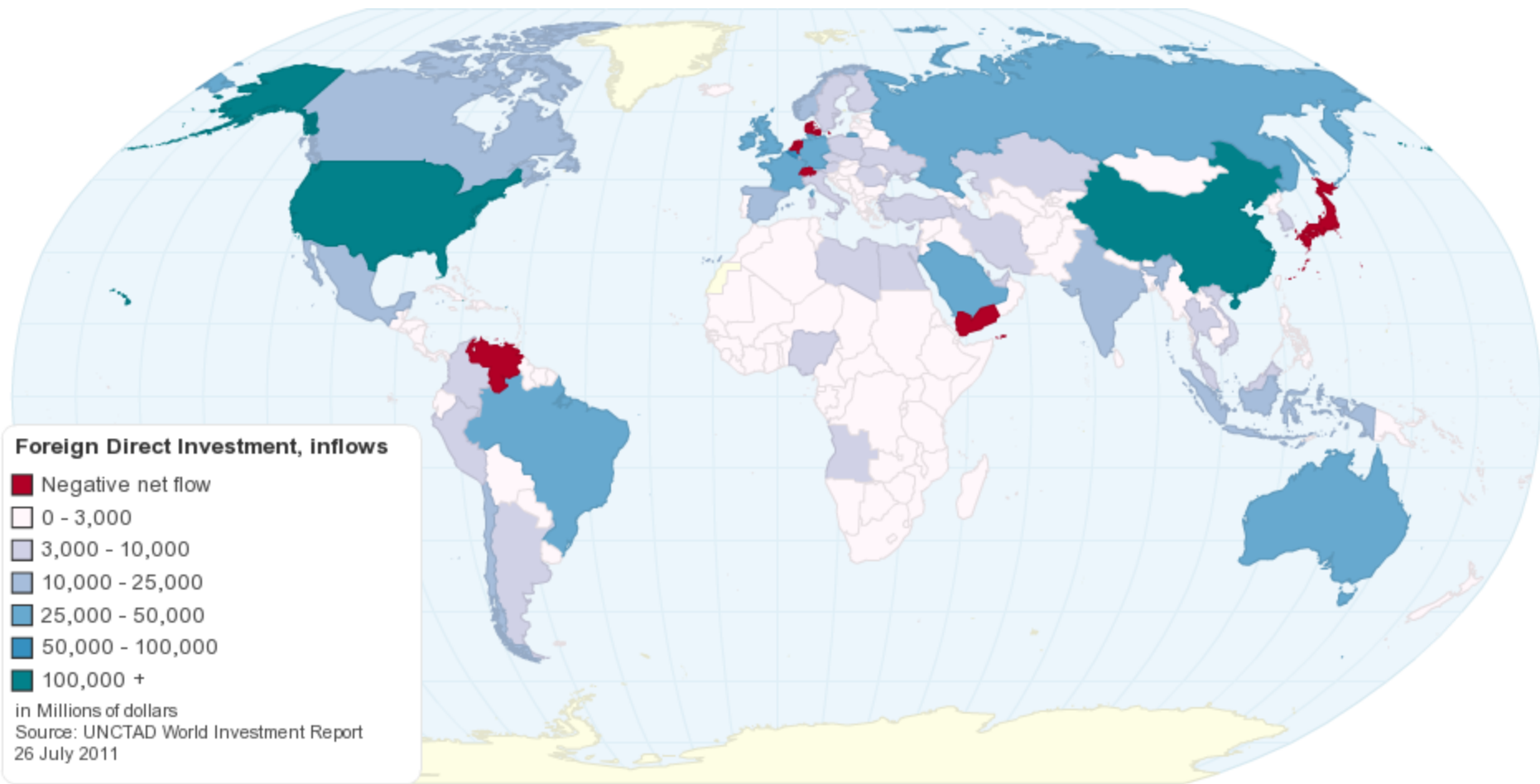
Large Buildings Represent Approximately \$2 Trillion



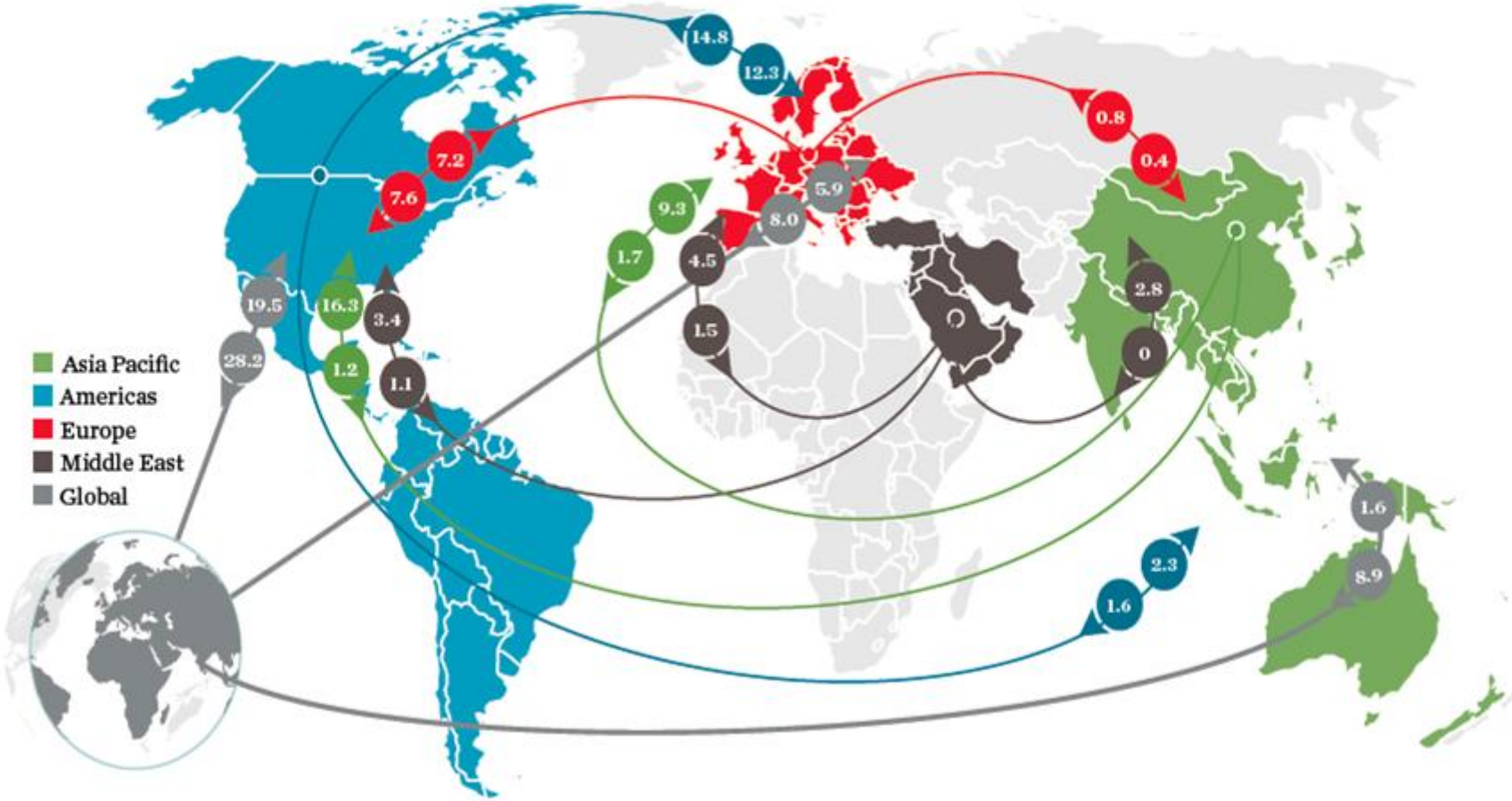
This infographic depicts 16 of the world's largest stock exchanges. There are approximately 100 major exchanges in the world in total. The data in this graphic is current as of May 2009. Sources include world-exchanges.org and sec.gov.

World biggest banks

Rank	Bank Name	Country	Total Assets (US\$ billion)
1	Industrial and Commercial Bank of China	China	2811
2	HSBC	UK	2693
3	Deutsche Bank	Germany	2665
4	Crédit Agricole	France	2661
5	Mitsubishi UFJ Financial Group	Japan	2595
6	BNP Paribas	France	2527
7	Barclays	UK	2402
8	United States JPMorgan Chase	USA	2359
9	Japan Post Bank	Japan	2291
10	China Construction Bank	China	2239



Global sources of funds in \$bn, 2016 YTD

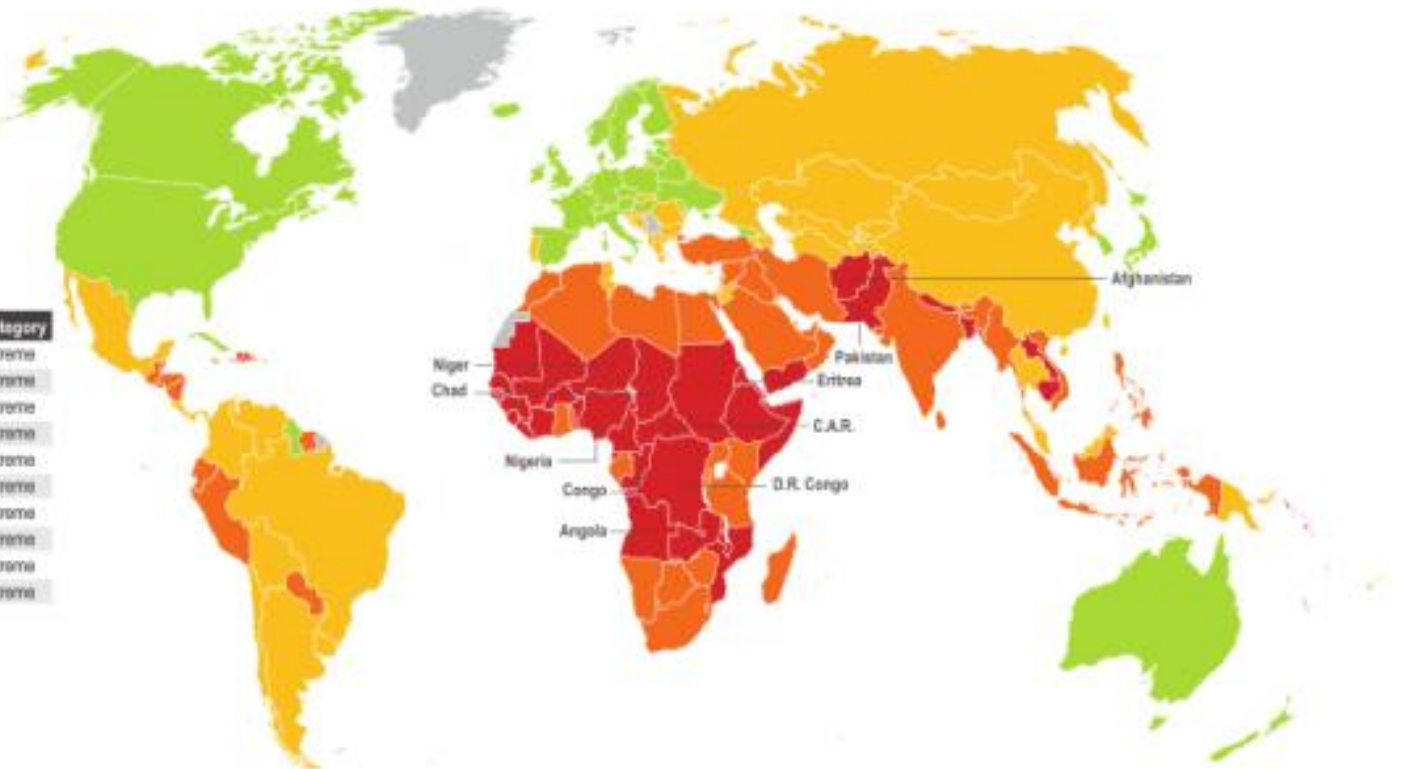


Source: JLL

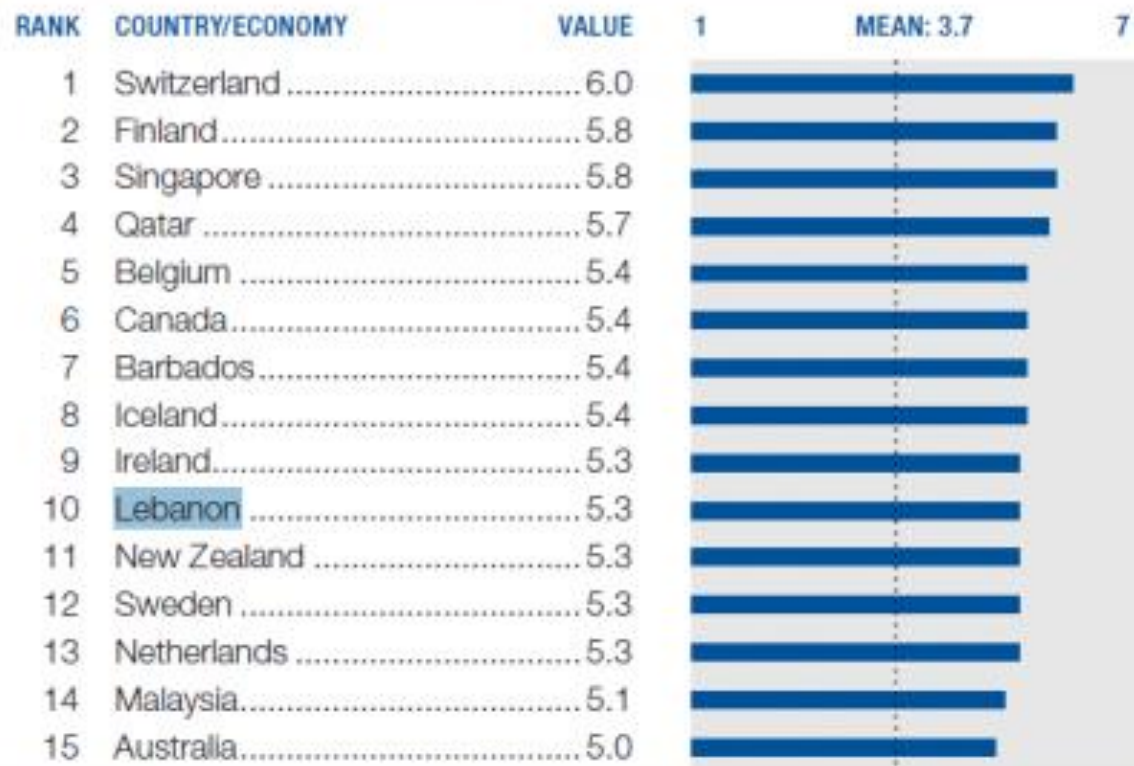
Education Index



Rank	Country	Category
1	Eritrea	extreme
2	C.A.R.	extreme
3	Angola	extreme
4	D.R Congo	extreme
5	Chad	extreme
6	Afghanistan	extreme
7	Niger	extreme
8	Nigeria	extreme
9	Pakistan	extreme
10	Congo	extreme



5.01 Quality of the educational system



Where we do our thinking

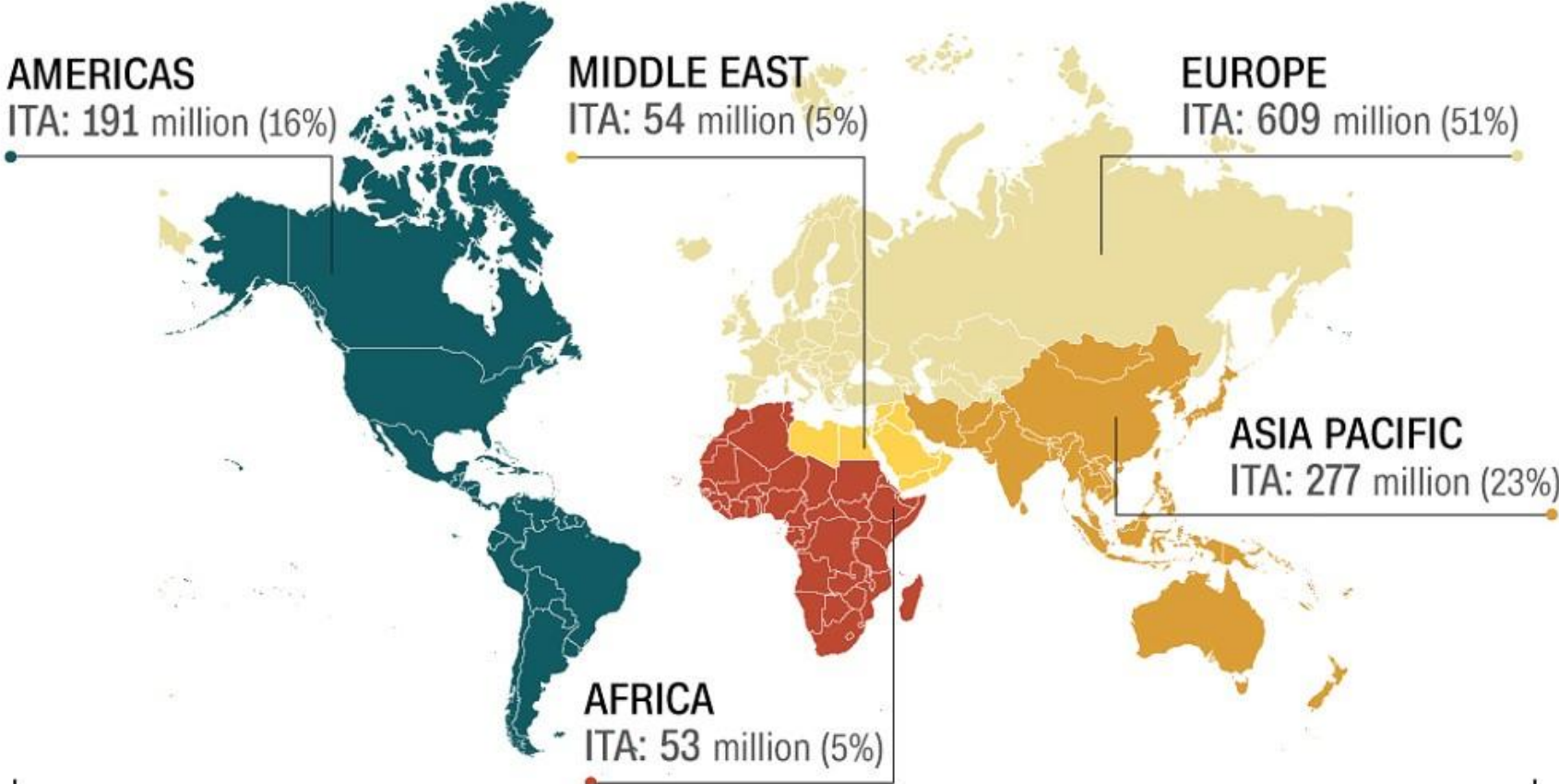
The World University Rankings are a global affair, but as with so many things, some parts of the planet are more equal than others. This image maps the positions of all the institutions in this year's analysis. Despite globalisation, it shows how North America and Western Europe still dominate international HE.



Countries listed in the *THE* top 800

Argentina	2	Italy	12	Qatar	1
Australia	31	Indonesia	2	Republic of Korea	3
Austria	7	Iran	8	Romania	4
Bangladesh	1	Israel	8	Russia Federation	13
Belgium	1	Italy	24	South Africa	3
Belgium	1	Japan	43	Sweden	1
Brazil	17	Korea	2	Switzerland	2
Canada	20	Korea	3	Sri Lanka	2
China	8	Latvia	3	Sri Lanka	2
China	37	Latvia	3	South Africa	8
Colombia	2	Lithuania	1	South Korea	24
Cyprus	1	Luxembourg	3	Spain	26
Czech Republic	8	Macau	3	Sweden	11
Denmark	8	Malaysia	9	Sri Lanka	12
Egypt	1	Mexico	2	Taiwan	24
Ecuador	2	Mexico	2	Thailand	1
Finland	8	Netherlands	13	Turkey	11
France	27	New Zealand	2	Uganda	1
Germany	37	Nigeria	1	UK	18
Ghana	1	Qatar	4	Ukraine	2
Hong Kong	8	Saudi	2	United Arab Emirates	3
Hungary	6	Taiwan	2	US	147
		Taiwan	2		

2015 International Tourist Arrivals



SOURCE: UNWTO World Tourism Barometer

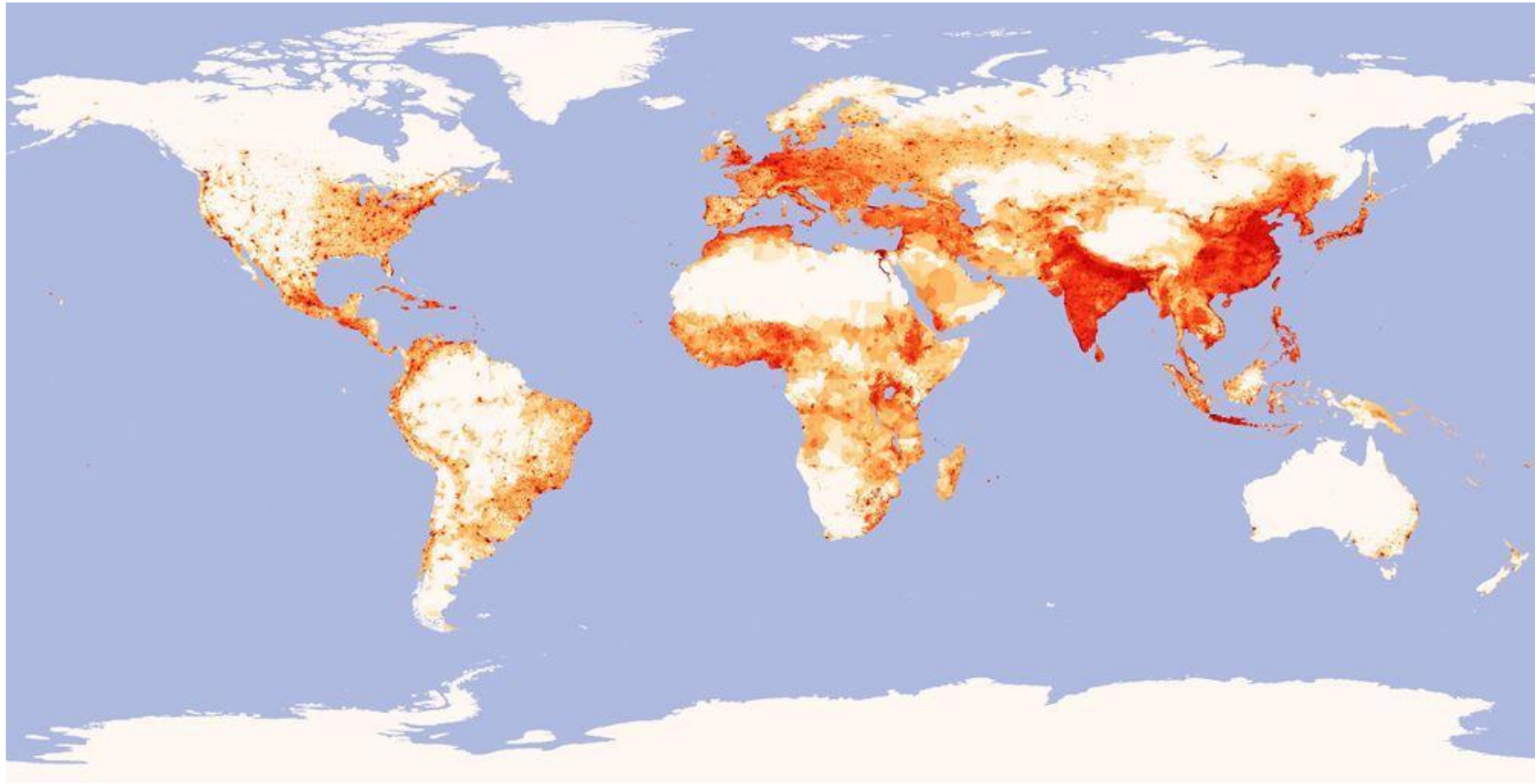
WORLD: 1,184 MILLION

Six countries make up half the world's population

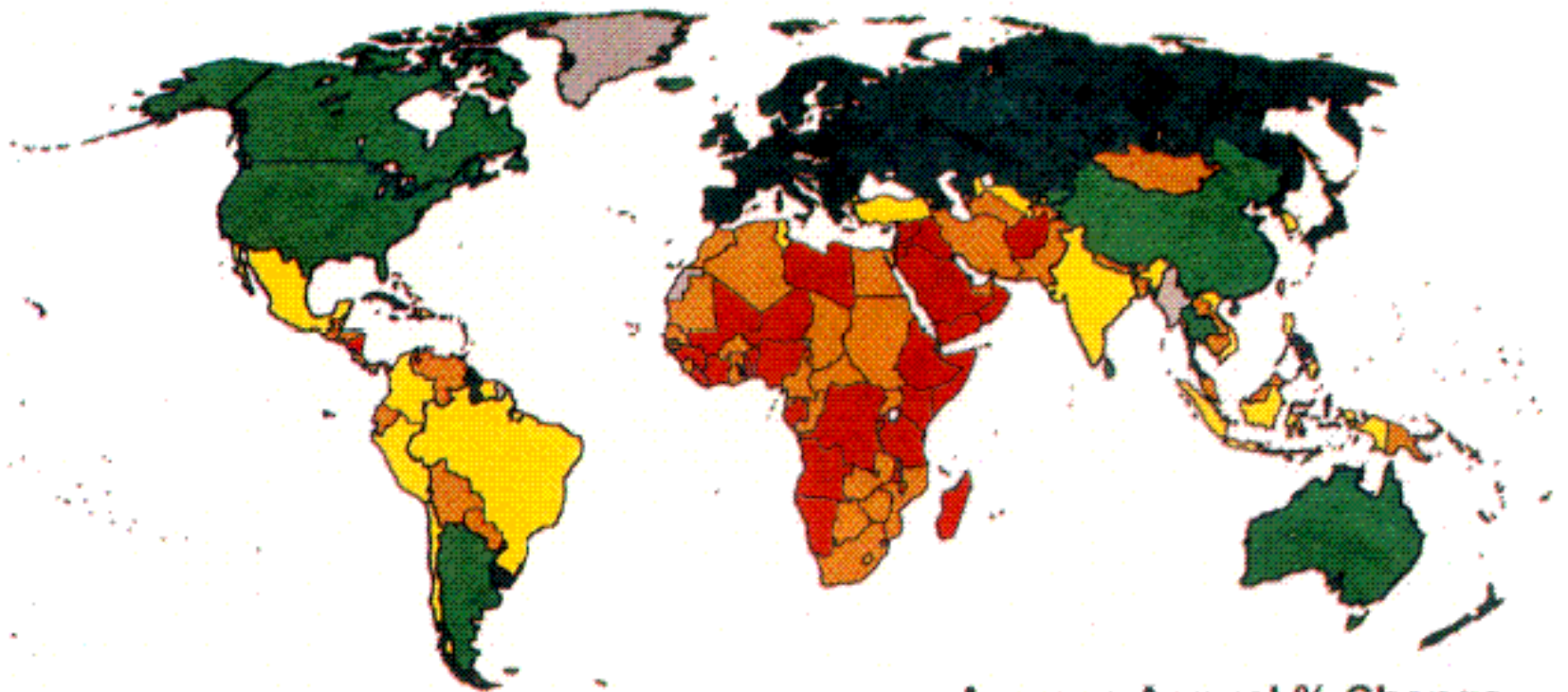
World population: 7.2 billion



Source: United Nations: Population, Development and the Environment 2013



Population Growth Rate

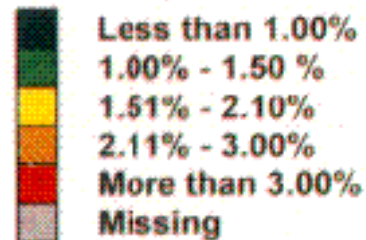


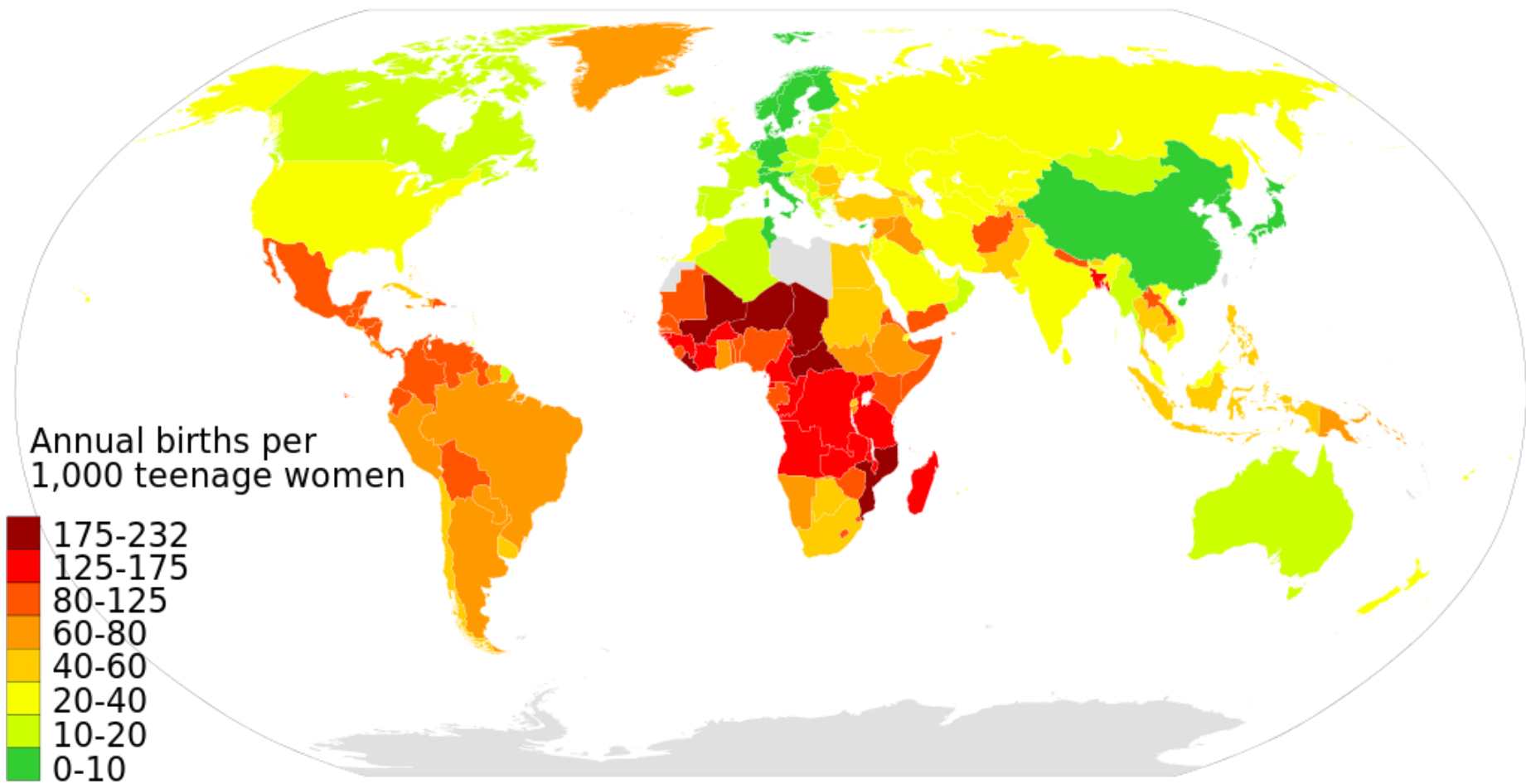
Source: United Nations Population Division, 1993.
Note: Data refer to 1990-95.

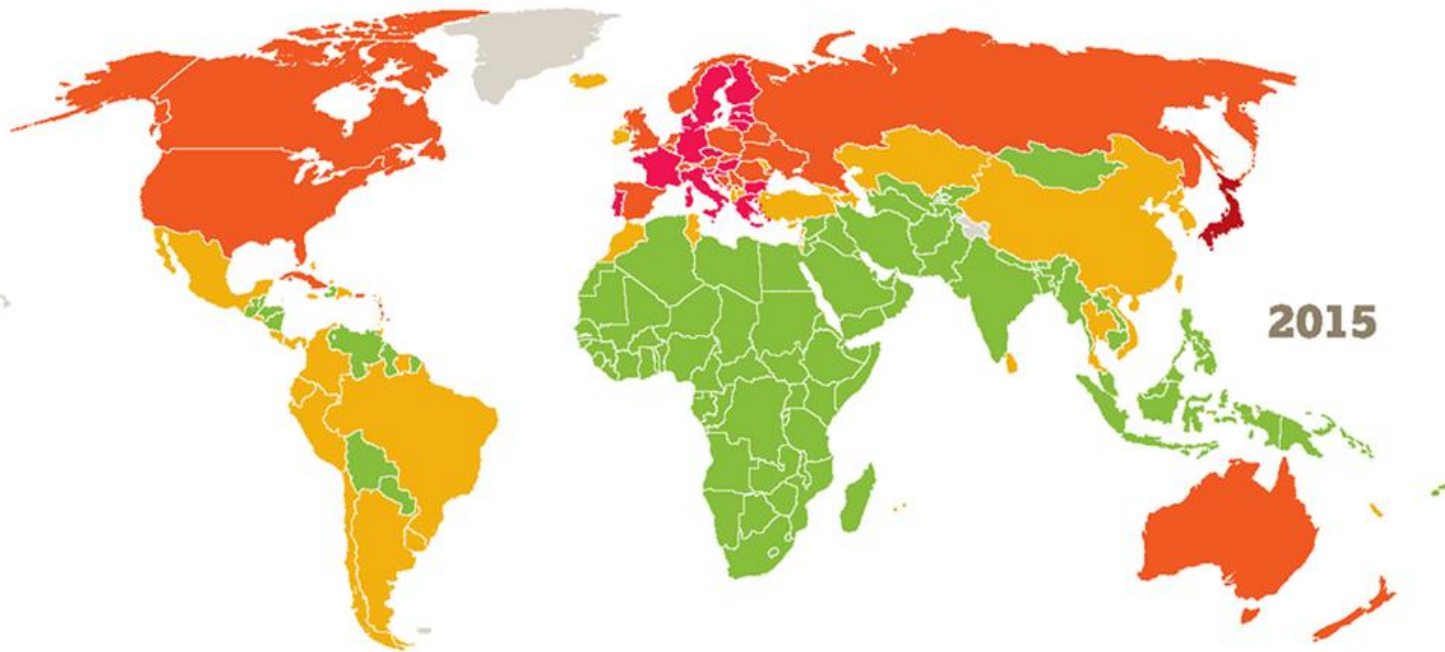


World Resources Institute

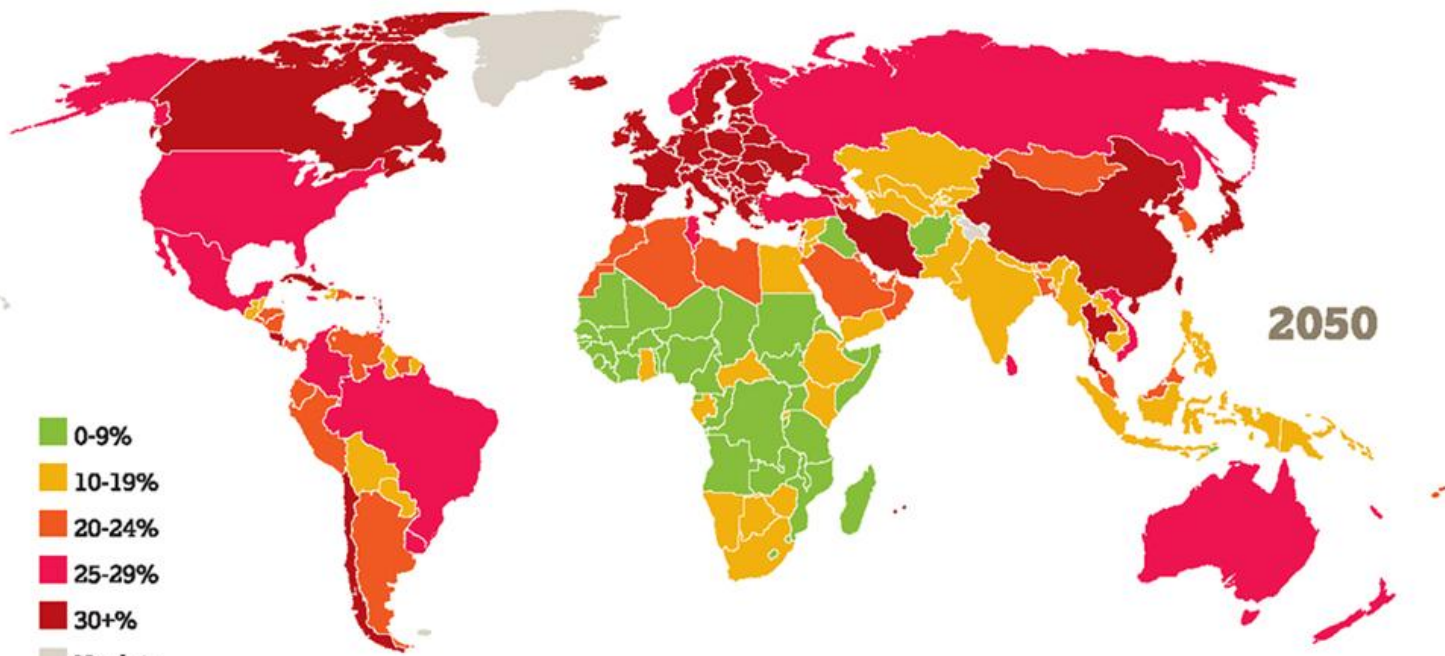
Average Annual % Change







2015



2050

- 0-9%
- 10-19%
- 20-24%
- 25-29%
- 30+%
- No data

Median age by Country



Teens
15-19



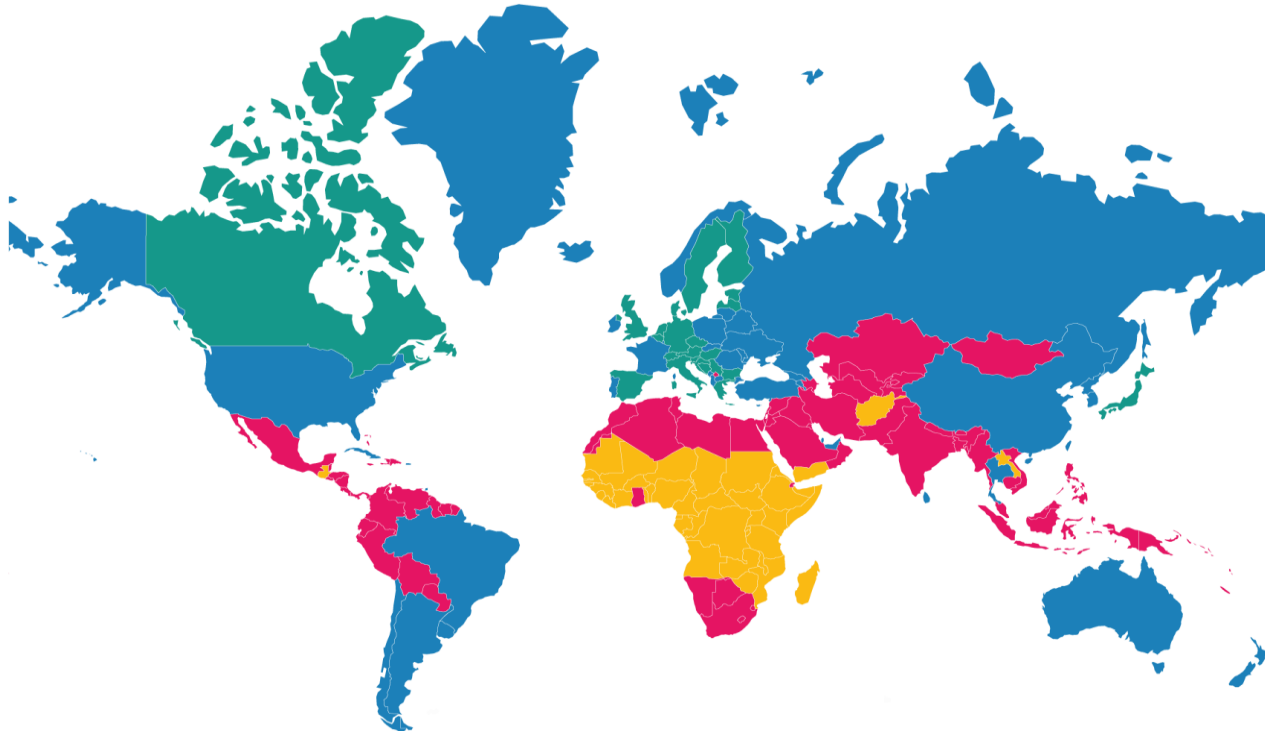
Twenties
20-29

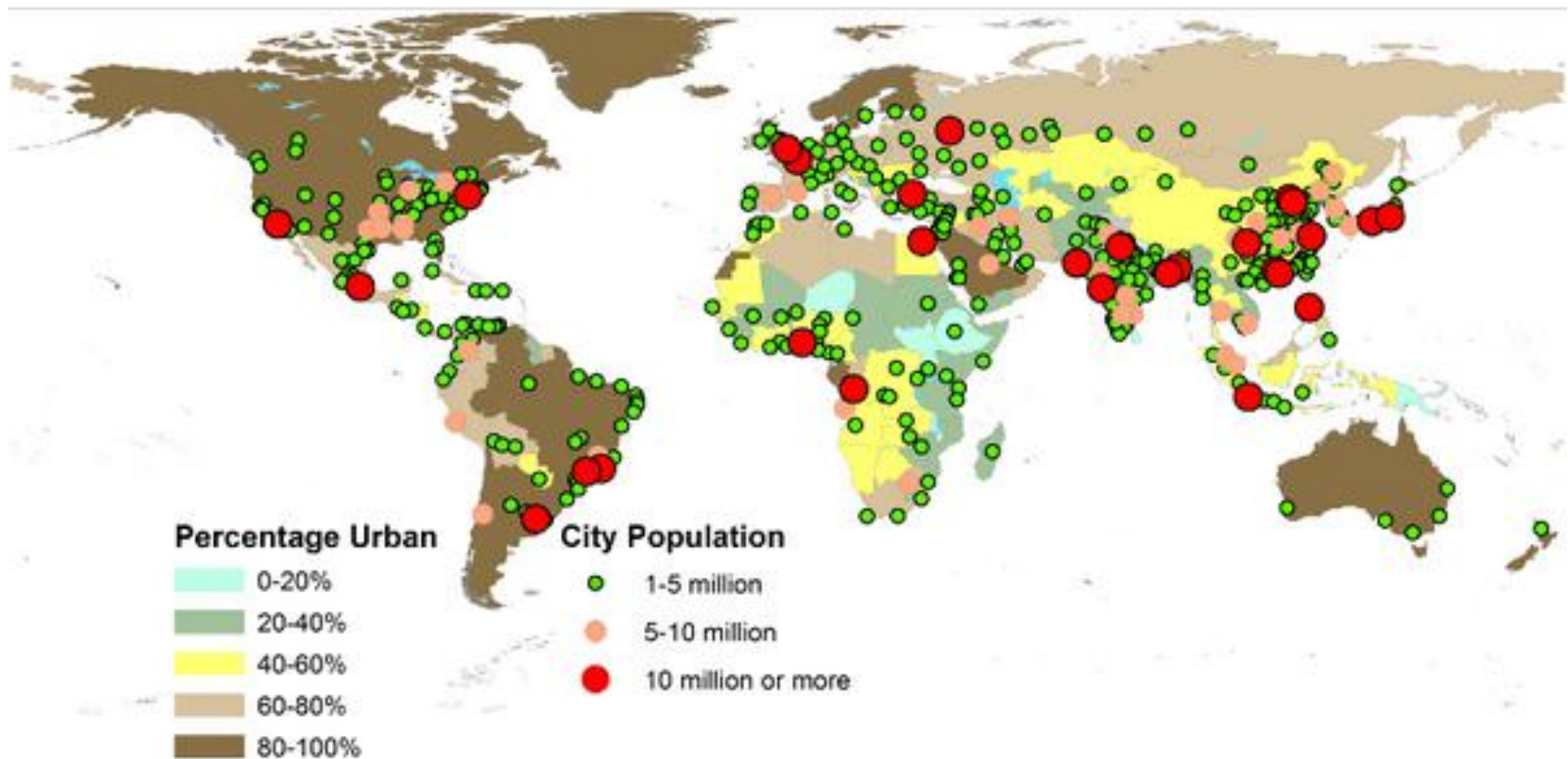


Thirties
30-39

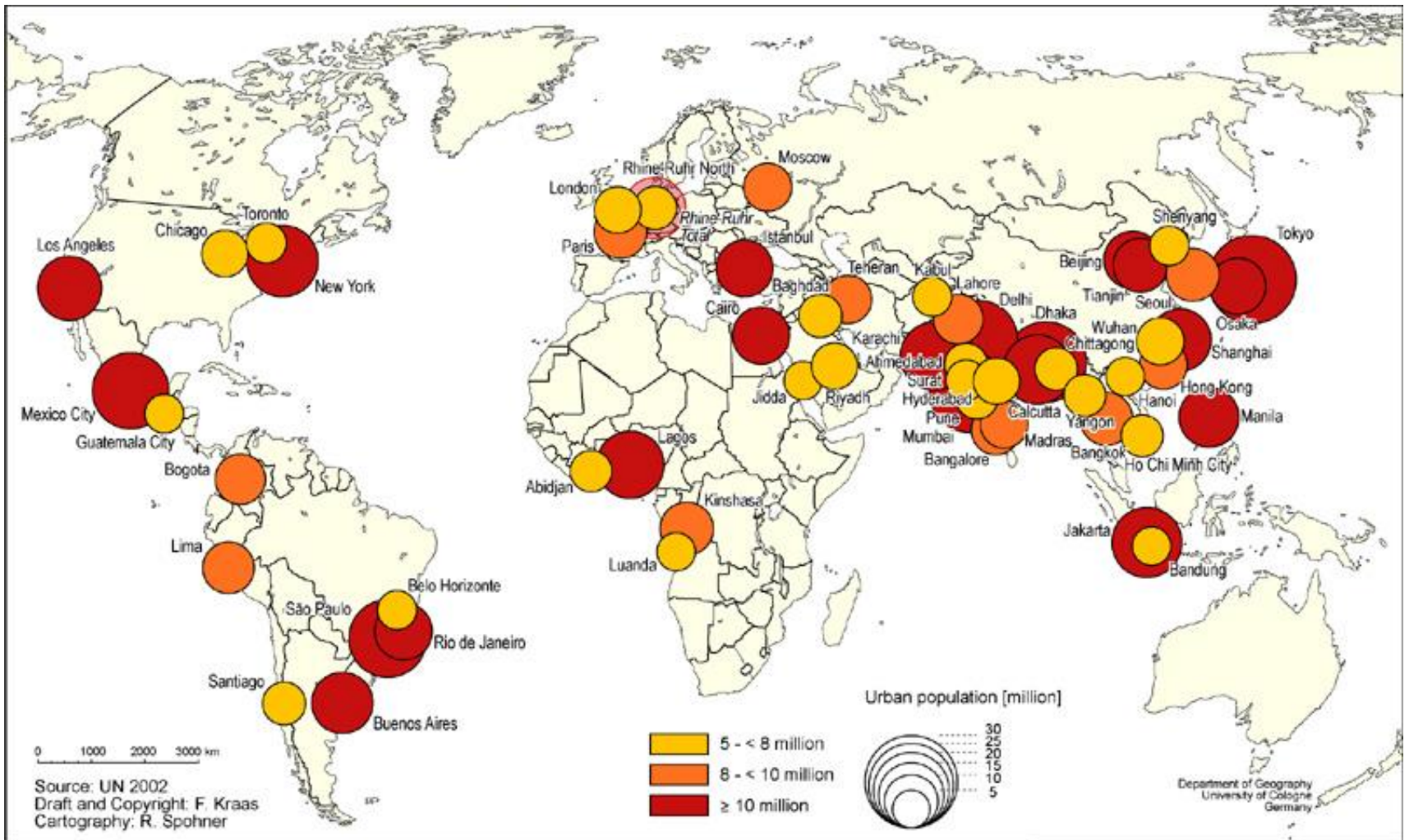


Forties
40-49



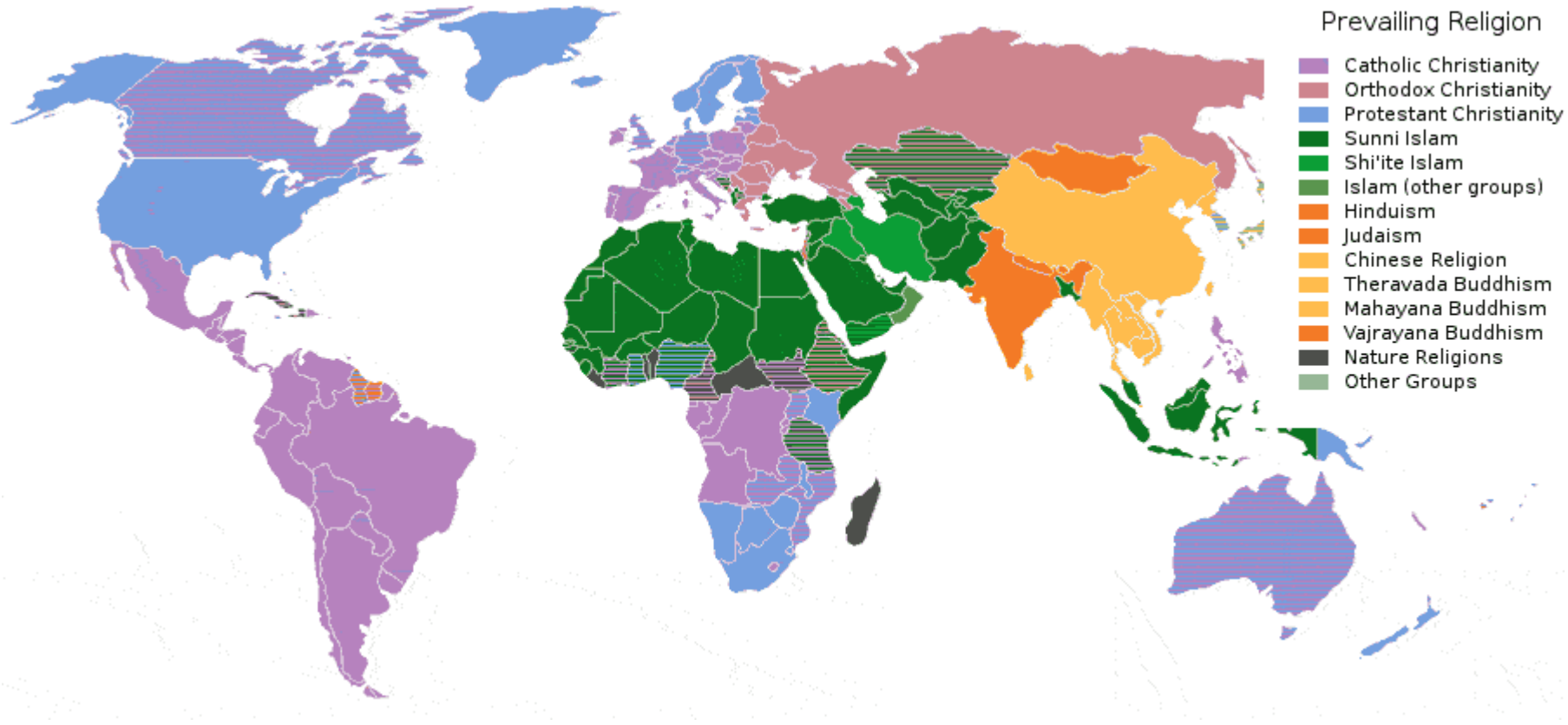


Note: Designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.



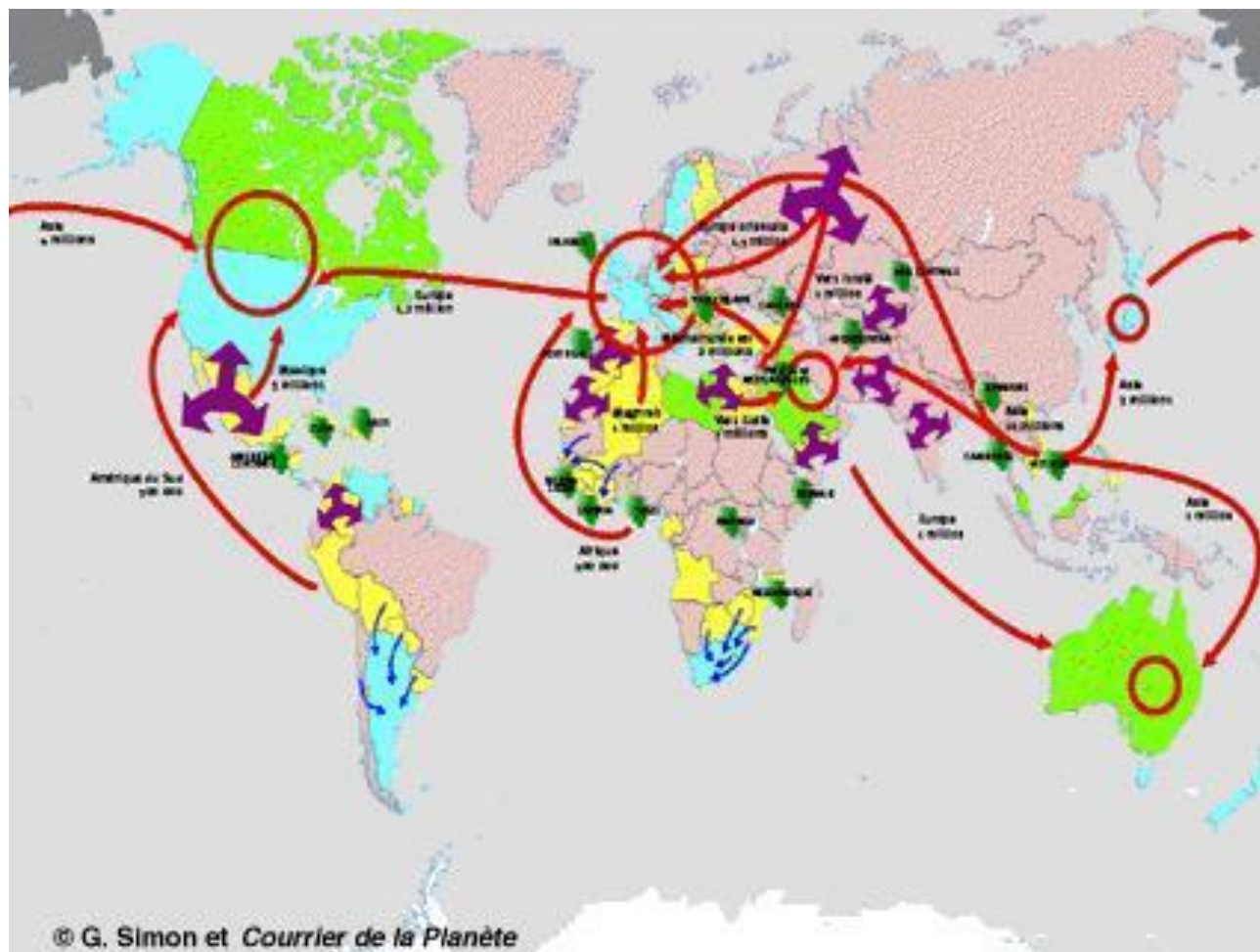
Los Angeles
 Chicago
 Toronto
 New York
 Mexico City
 Guatemala City
 Bogota
 Lima
 São Paulo
 Belo Horizonte
 Rio de Janeiro
 Santiago
 Buenos Aires









London
 Paris
 Rhine-Ruhr North
 Rhine-Ruhr Total
 Moscow
 Istanbul
 Teheran
 Cairo
 Baghdad
 Jeddah
 Riyadh
 Abidjan
 Lagos
 Kinshasa
 Luanda
 Kabul
 Lahore
 Delhi
 Dhaka
 Wuhan
 Chittagong
 Alameda
 Surat
 Hyderabad
 Pune
 Mumbai
 Bangalore
 Madras
 Yangon
 Bangkok
 Ho Chi Minh City
 Jakarta
 Bandung
 Shenyang
 Beijing
 Tianjin
 Seoul
 Osaka
 Shanghai
 Hong Kong
 Manila



Prevailing Religion

- Catholic Christianity
- Orthodox Christianity
- Protestant Christianity
- Sunni Islam
- Shi'ite Islam
- Islam (other groups)
- Hinduism
- Judaism
- Chinese Religion
- Theravada Buddhism
- Mahayana Buddhism
- Vajrayana Buddhism
- Nature Religions
- Other Groups



-  Flows of legal migrants (all categories, 1980-1990)
-  Regional flows
-  Important pole of departure (1 to 8 million emigrants per country)
-  Country of large-scale emigration (over 15% of the population abroad)
-  Major crossroads of migratory flows
-  High emigration countries (5 to 15% of the population abroad)
-  High immigration countries (5 to 15% of immigrants in the total population)
-  Countries of very large-scale immigration (over 15% of immigrants in the total population)

Distance no object

Some of the world's more important current migration routes

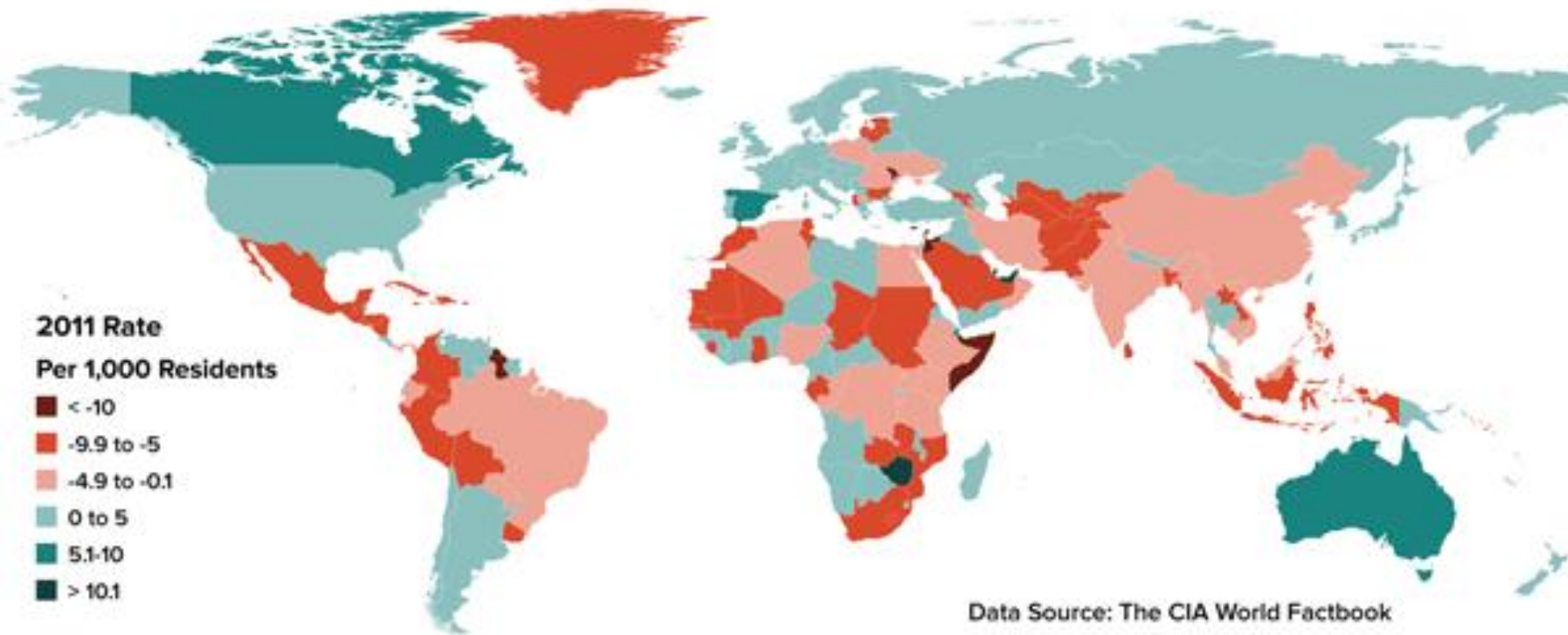


Sources: National Public Radio;
The Economist

Net Migration Rate By Country

2011 Rate
Per 1,000 Residents

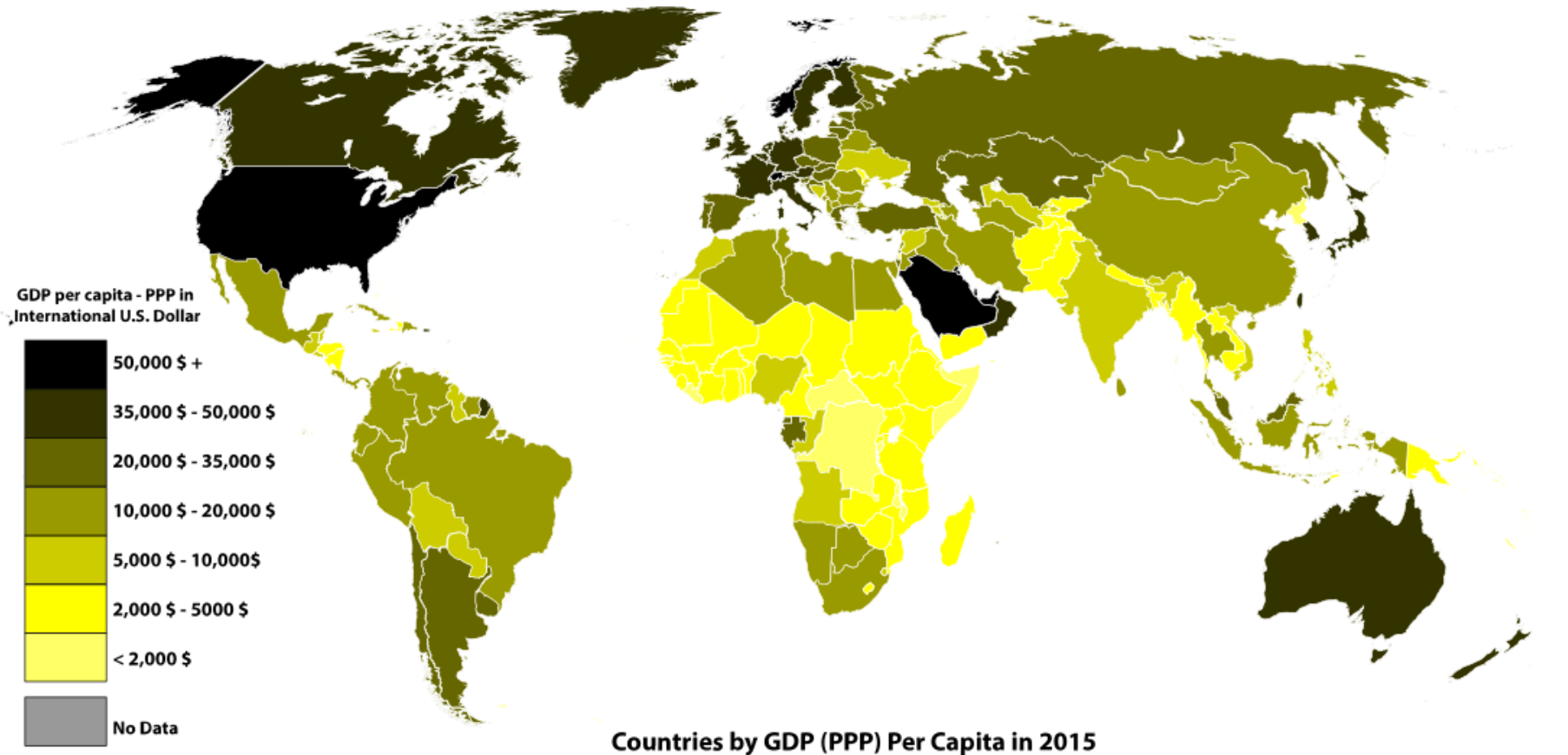
- < -10
- 9.9 to -5
- 4.9 to -0.1
- 0 to 5
- 5.1-10
- > 10.1



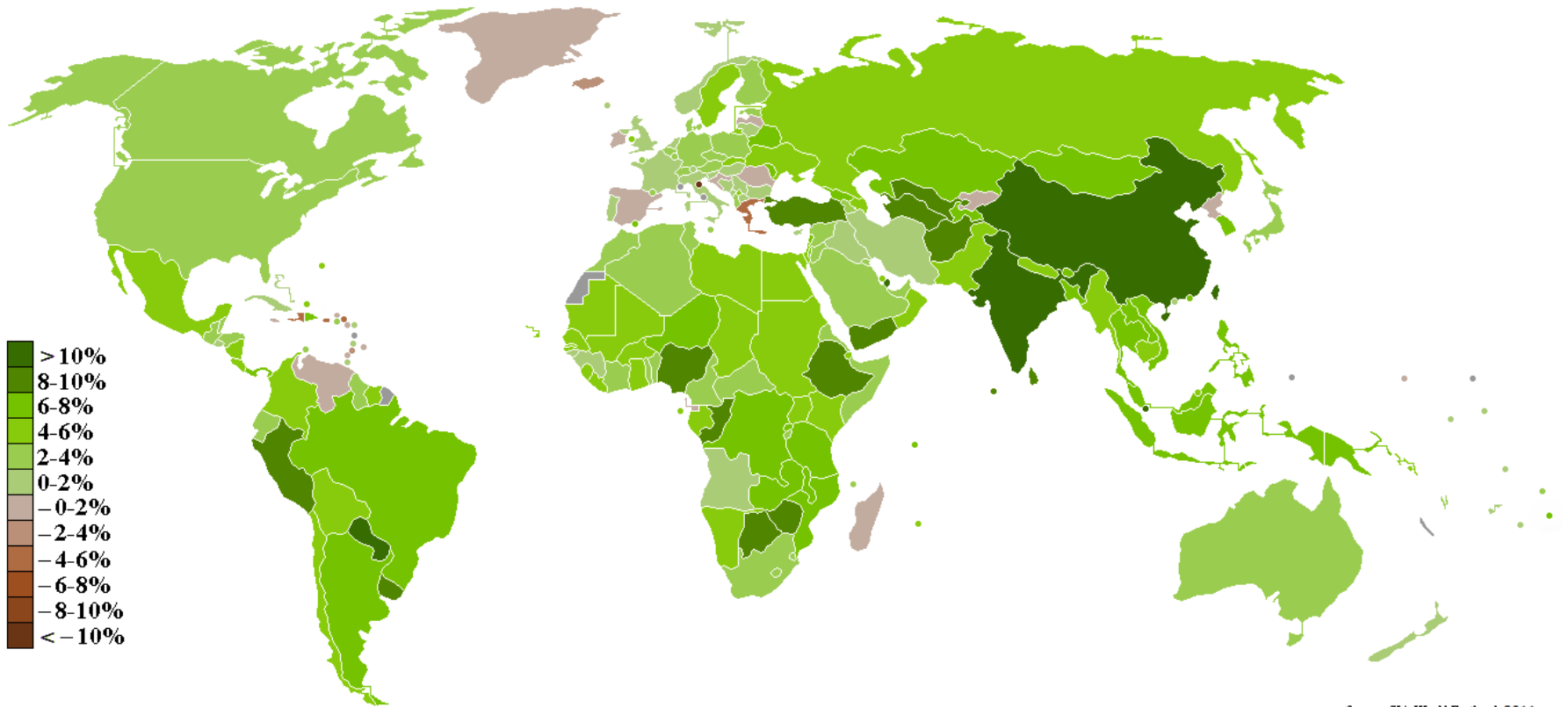
Data Source: The CIA World Factbook

Countries of the world

Rich and poor

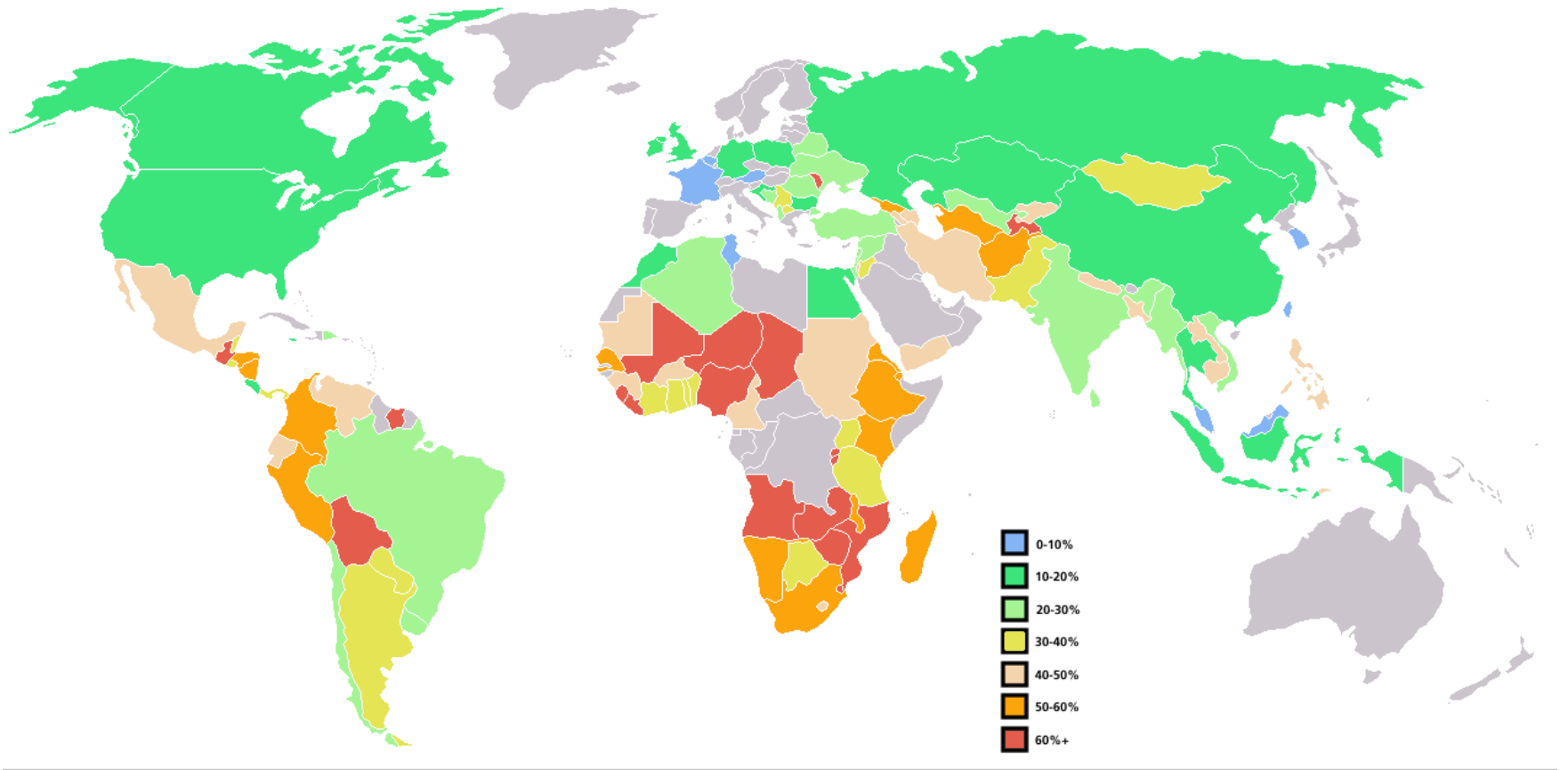


GDP growth rate

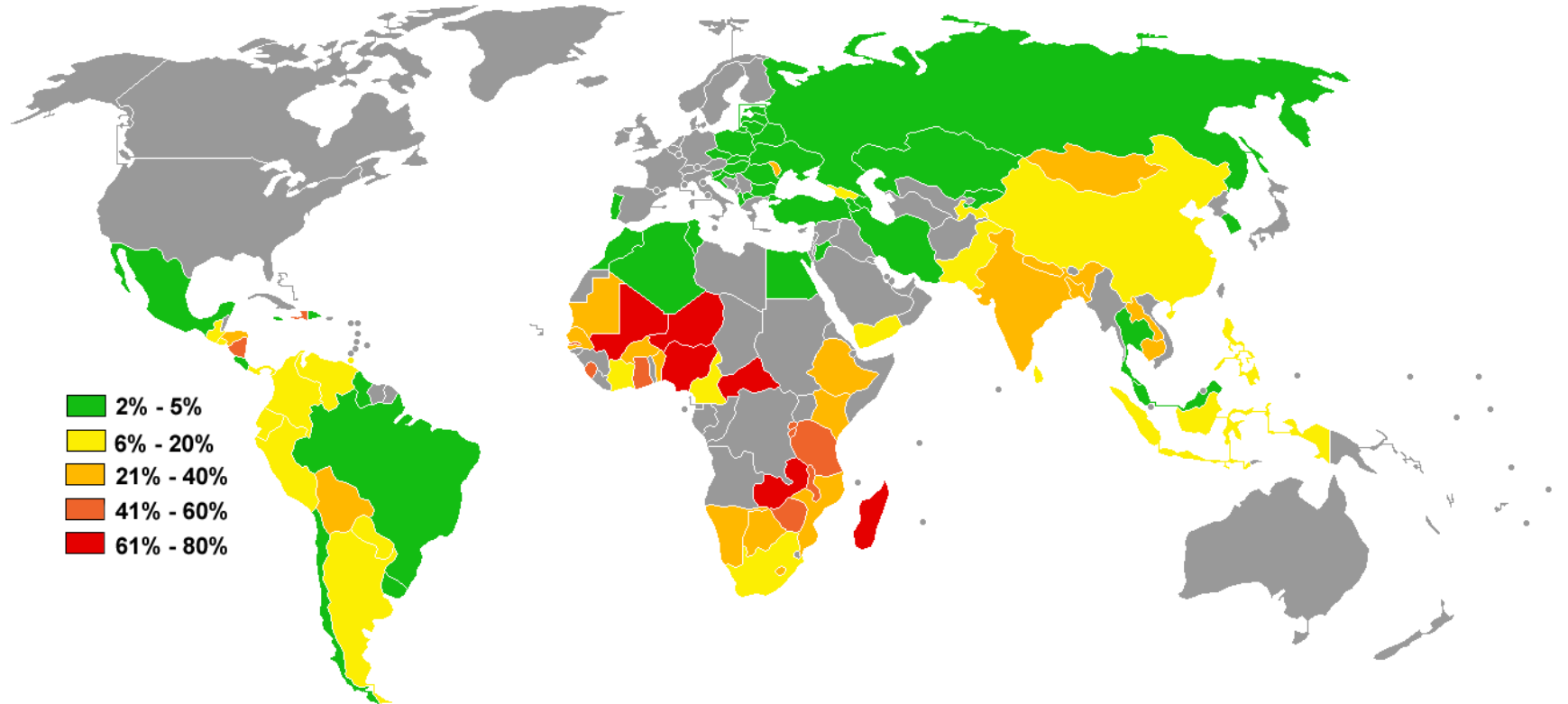


Source: CIA World Factbook 2011

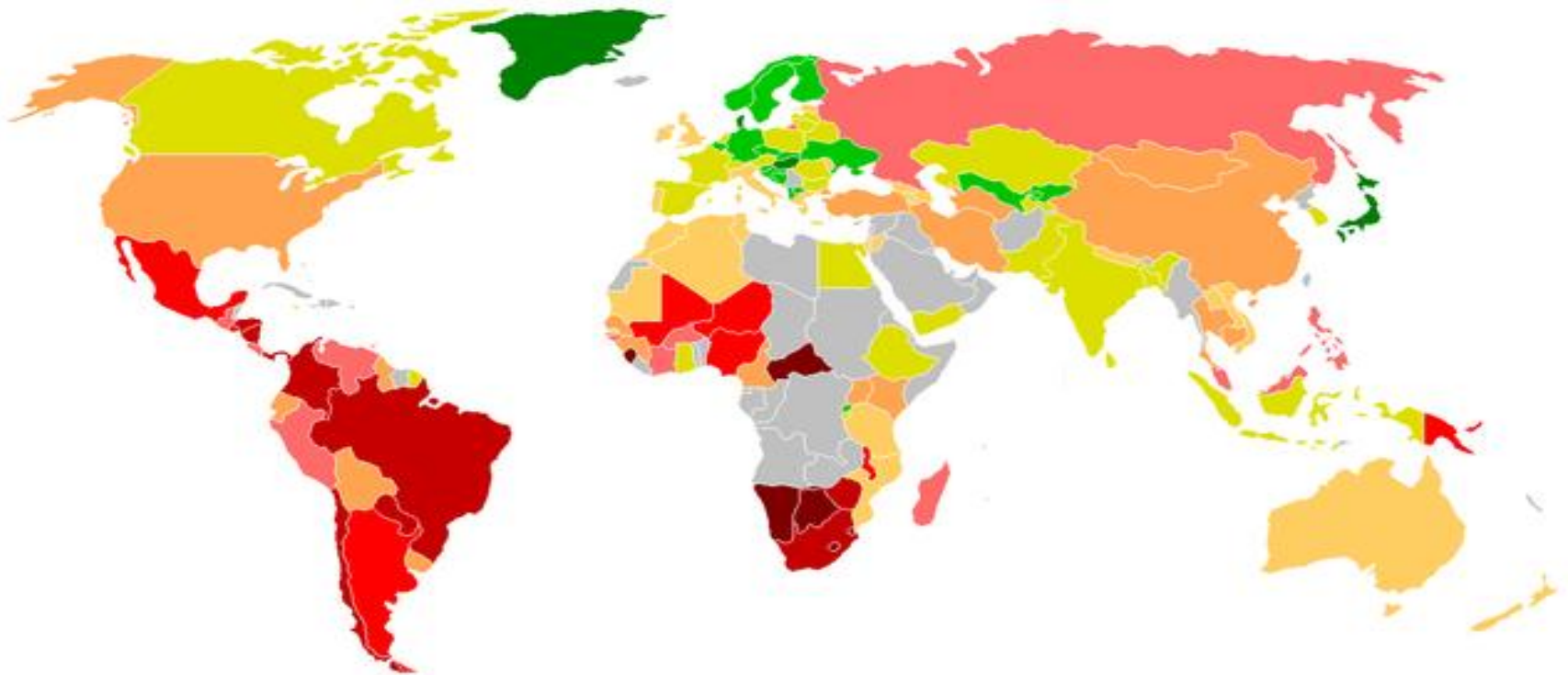
World poverty













Percentage of people living for less than 2 USD / day

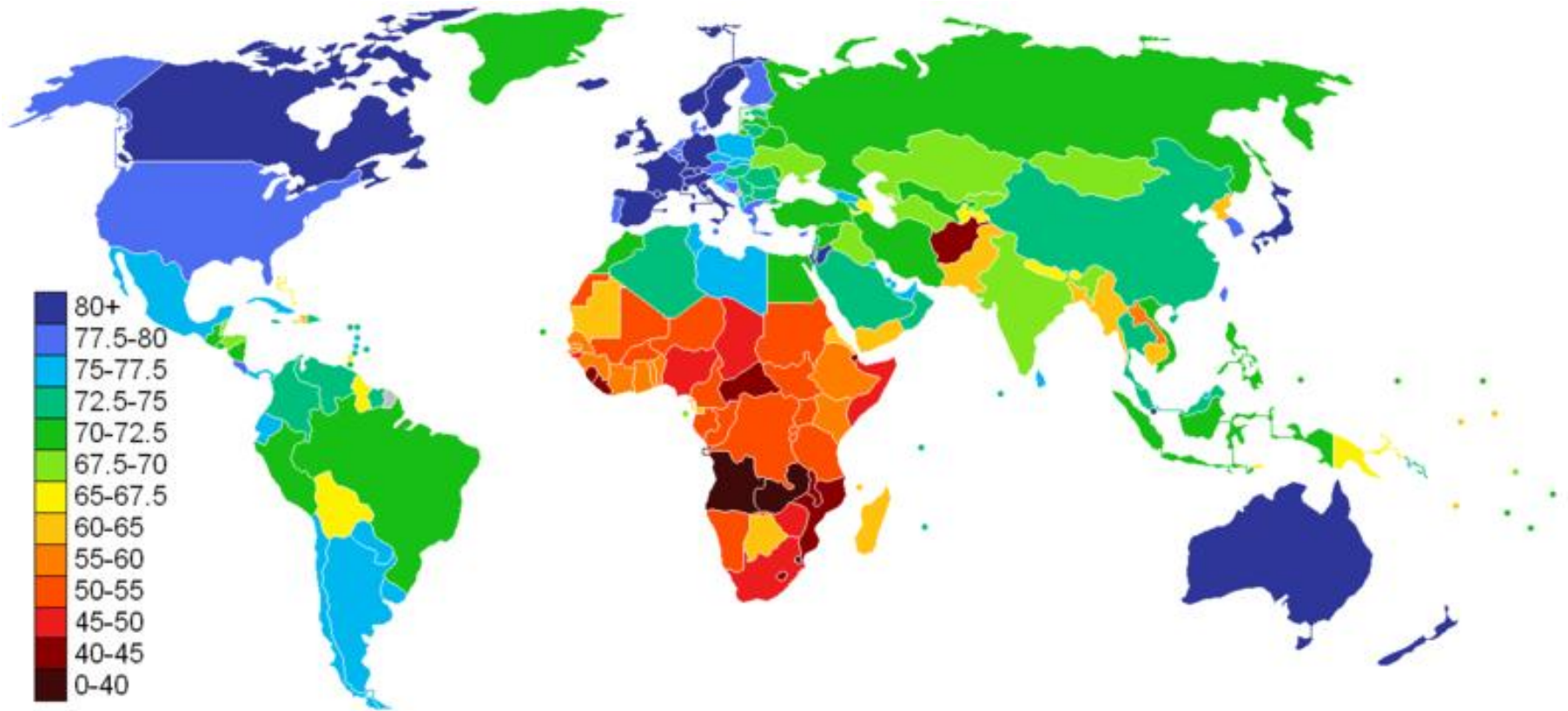


Ginny index



Color	Gini coefficient		0,35 - 0,39		0,55 - 0,59
	< 0,25		0,40 - 0,44		> 0,60
	0,25 - 0,29		0,45 - 0,49		NA
	0,30 - 0,34		0,50 - 0,54		

Life Expectancy



Human development index

