

A world map centered on the Atlantic Ocean, showing North and South America on the left and Europe and Africa on the right. A circular inset in the upper right quadrant shows a close-up of East Asia, specifically China and surrounding regions, with a yellow background. The text "There are more people living inside this circle than outside of it." is overlaid on the right side of the map.

There are more people living inside
this circle than outside of it.

UNIT 2

POPULATION

KEY ISSUES IN THIS UNIT

- 1) Where is the world's population distributed?
- 2) Where has the world's population increased?
- 3) Why is population increasing at different rates in different countries?

**WITH YOUR
NEIGHBORS...**

**DISCUSS WHAT AN
AVERAGE PERSON IS LIKE**

- AGE?
- RACE?
- SEX?
- RELIGION?



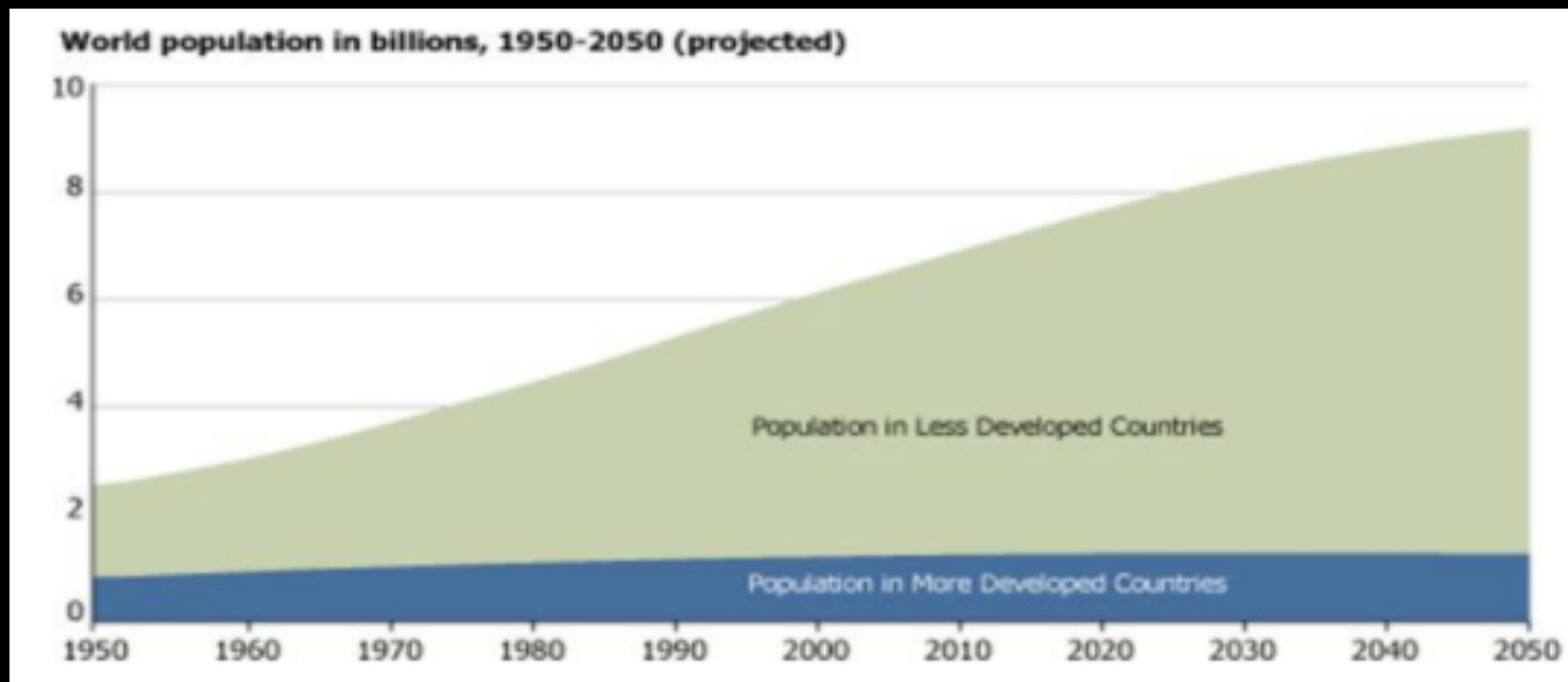
WHAT WWE
SUPERSTAR JOHN
CENA HAS TO SAY
ON THE MATTER

[NO LABELS](#)

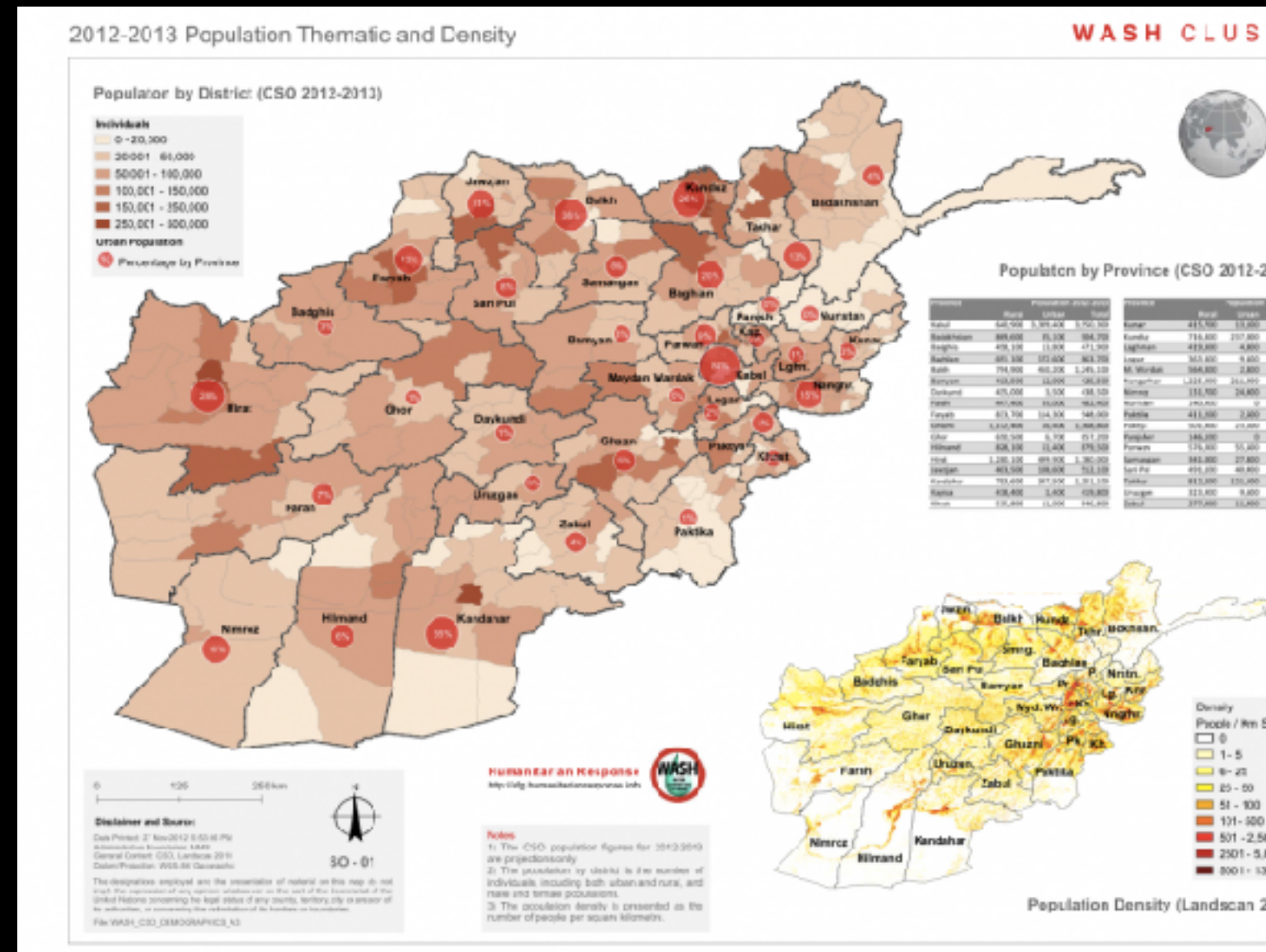


WHY THIS UNIT MATTERS

- At this very second, there are more people alive today than in any other point in human history
- The world's population is increasing at a rapidity never before seen
- Virtually **all** significant population growth occurs in LDCs
 - the ability of LDCs to provide crucial services to their people is severely limited by rapid population growth



- FACTORS THAT EXPLAIN PATTERNS OF POPULATION DISTRIBUTION VARY ACCORDING TO SCALE OF ANALYSIS (IE, LOCAL TO GLOBAL)
- HUMAN FACTORS AND PHYSICAL FACTORS INFLUENCE POPULATION DISTRIBUTION



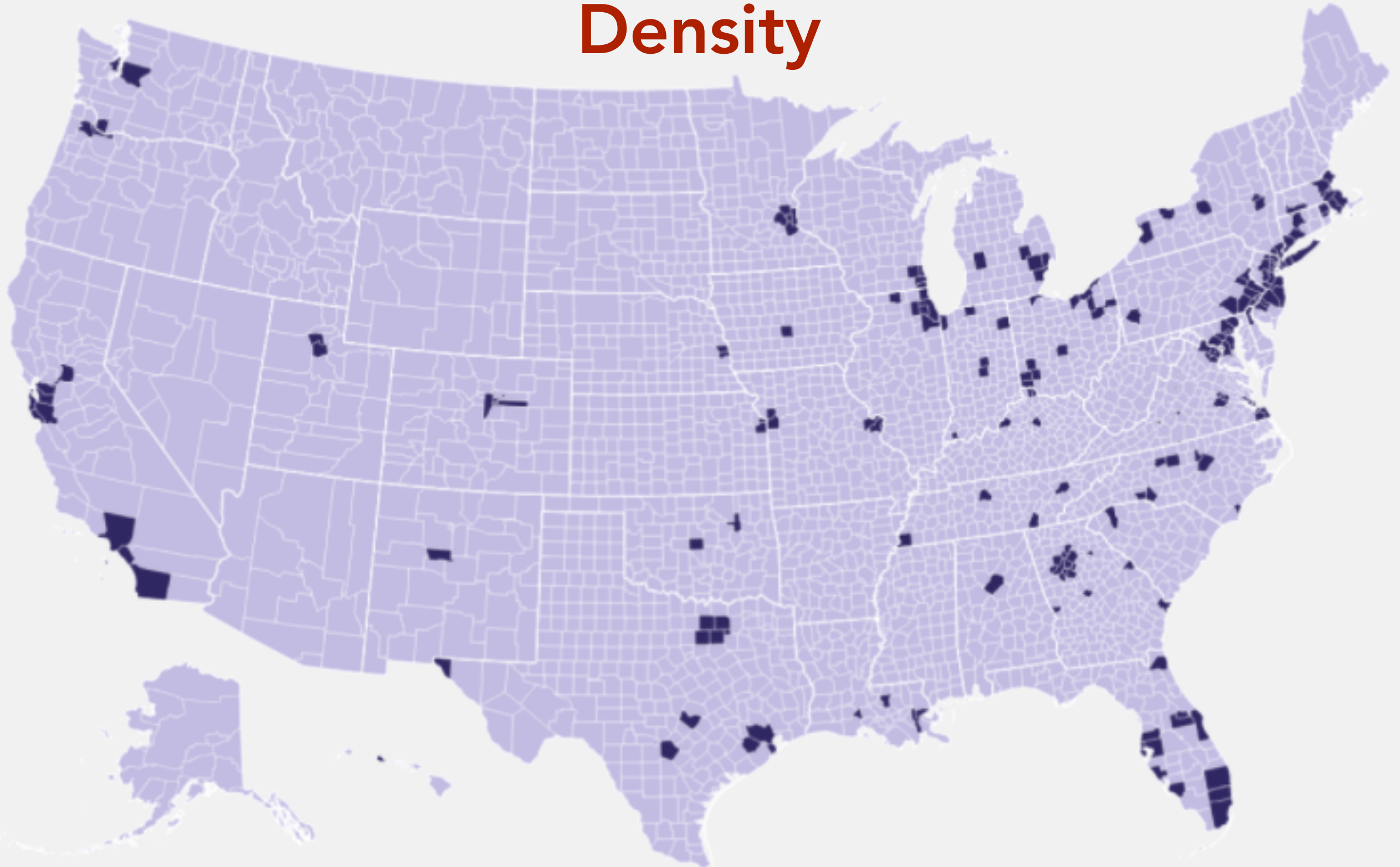
POPULATION DISTRIBUTION

- Demography is the scientific study of population
- Demographers ask:
 - 1) where people are (concentration/density)
 - 2) where populations are growing

RANK	COUNTRY	POPULATION
1	<u>CHINA</u>	1,373,541,278
2	<u>INDIA</u>	1,266,883,598
3	<u>EUROPEAN UNION</u>	513,949,445
4	UNITED STATES	323,995,528
5	<u>INDONESIA</u>	258,316,051
6	<u>BRAZIL</u>	205,823,665
7	<u>PAKISTAN</u>	201,995,540
8	<u>NIGERIA</u>	186,053,386
9	<u>BANGLADESH</u>	156,186,882
10	<u>RUSSIA</u>	142,355,415
11	<u>JAPAN</u>	126,702,133
12	<u>MEXICO</u>	123,166,749
13	<u>PHILIPPINES</u>	102,624,209
14	<u>ETHIOPIA</u>	102,374,044
15	VIETNAM	95,261,021
16	<u>EGYPT</u>	94,666,993
17	<u>IRAN</u>	82,801,633
18	<u>CONGO, DEMOCRATIC REPUBLIC OF THE</u>	81,331,050
19	<u>GERMANY</u>	80,722,792

HALF OF THE US POPULATION LIVES IN THE SHADED COUNTIES

Density



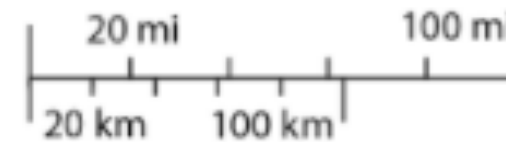
Global Metropolitan Urban Area Footprints*

*Areas are drawn to reflect total urban built up area, including suburbs, and do not reflect municipal boundaries

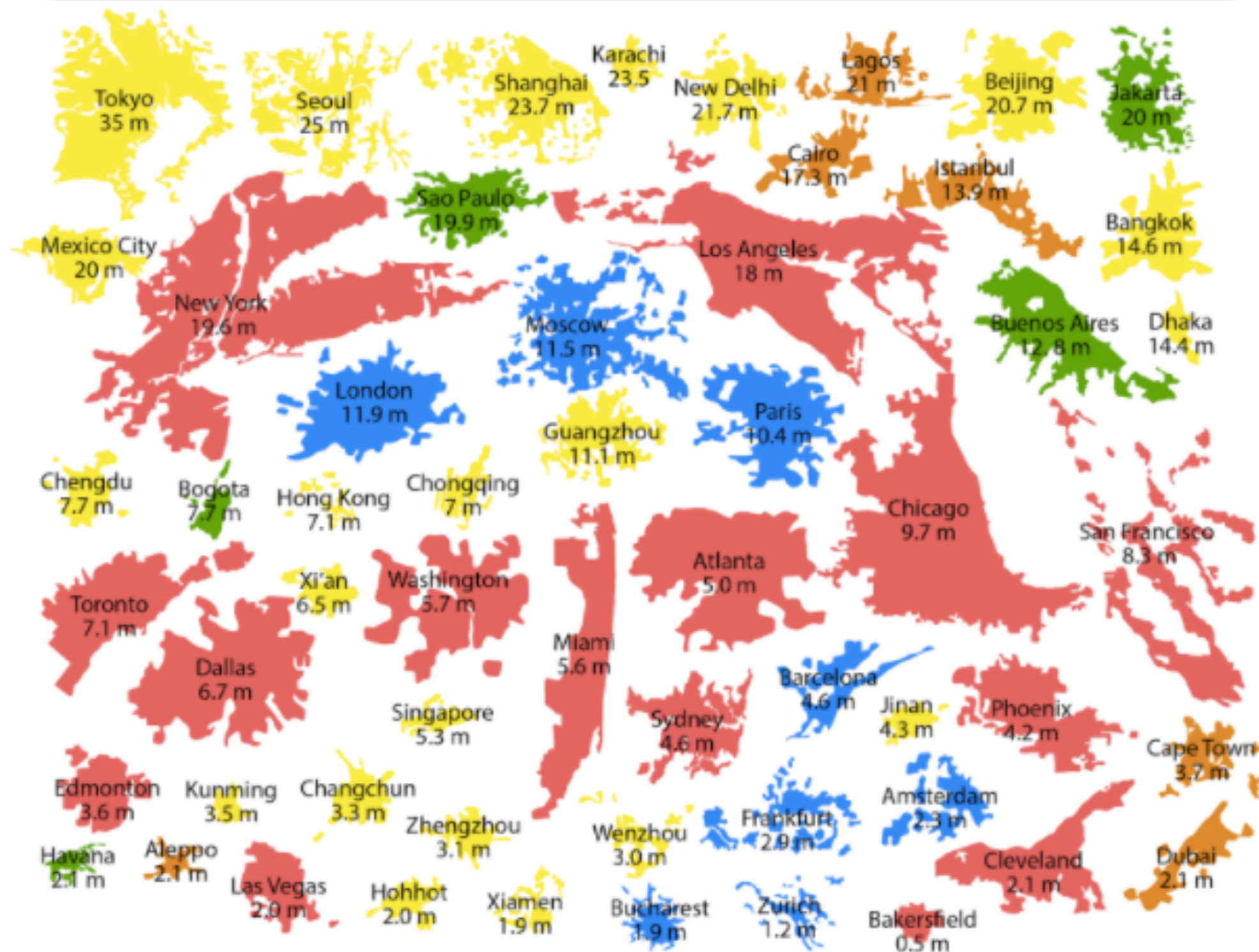
Where one metropolitan region bleeds into another as part of a megaregion, as with New York and Tokyo, the area limits are drawn subjectively

Populations are mean to reflect cities' metropolitan regions. Again, as with areas, results vary with sampling methods.

All populations and areas below are approximate and intended for basic comparison purposes only.

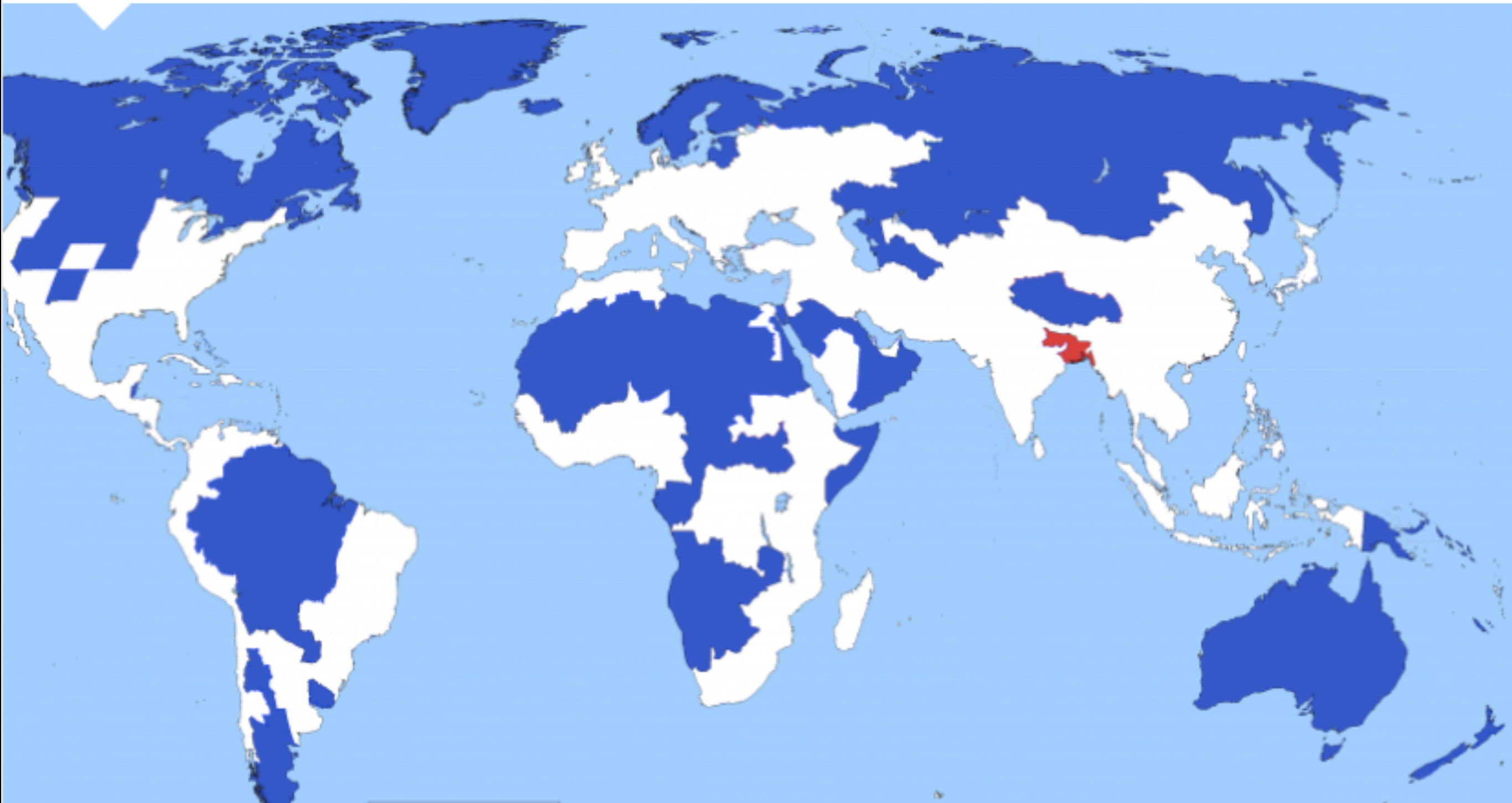


©2014 Matthew Hartzell



The area of this map coloured red has the same population as the area coloured blue

By [CityMetric staff](#)



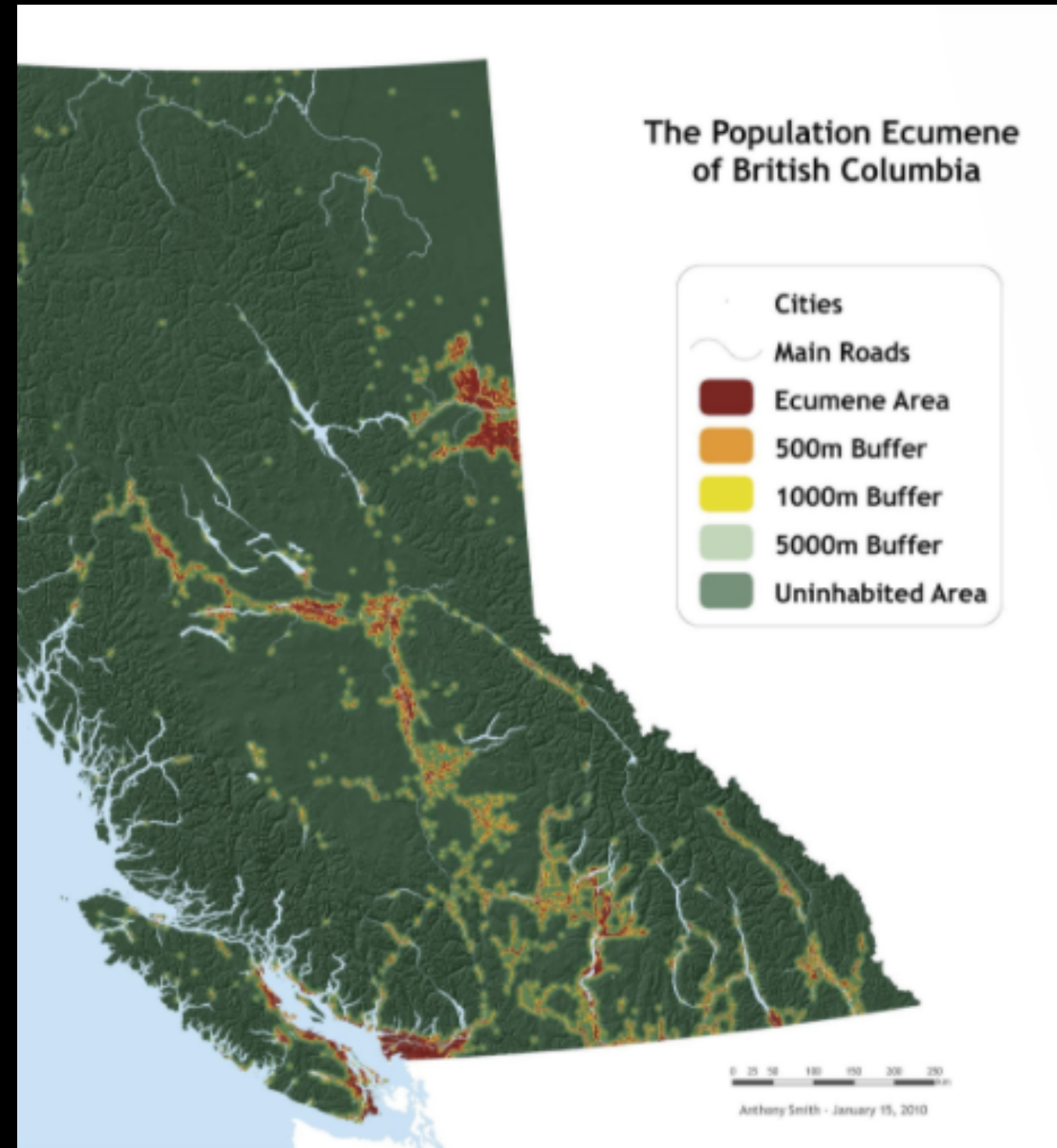
Concentration



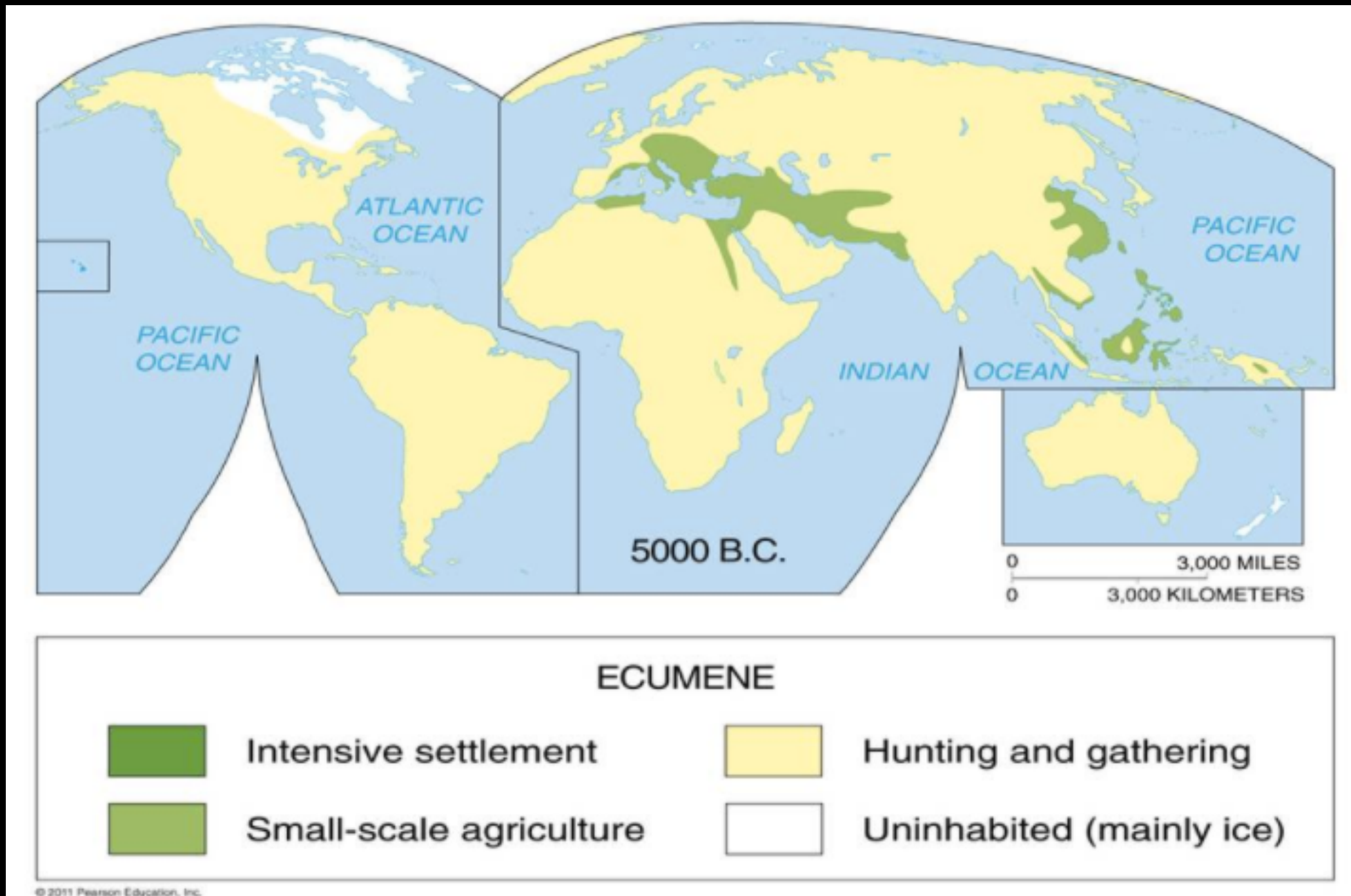


POPULATION DISTRIBUTION

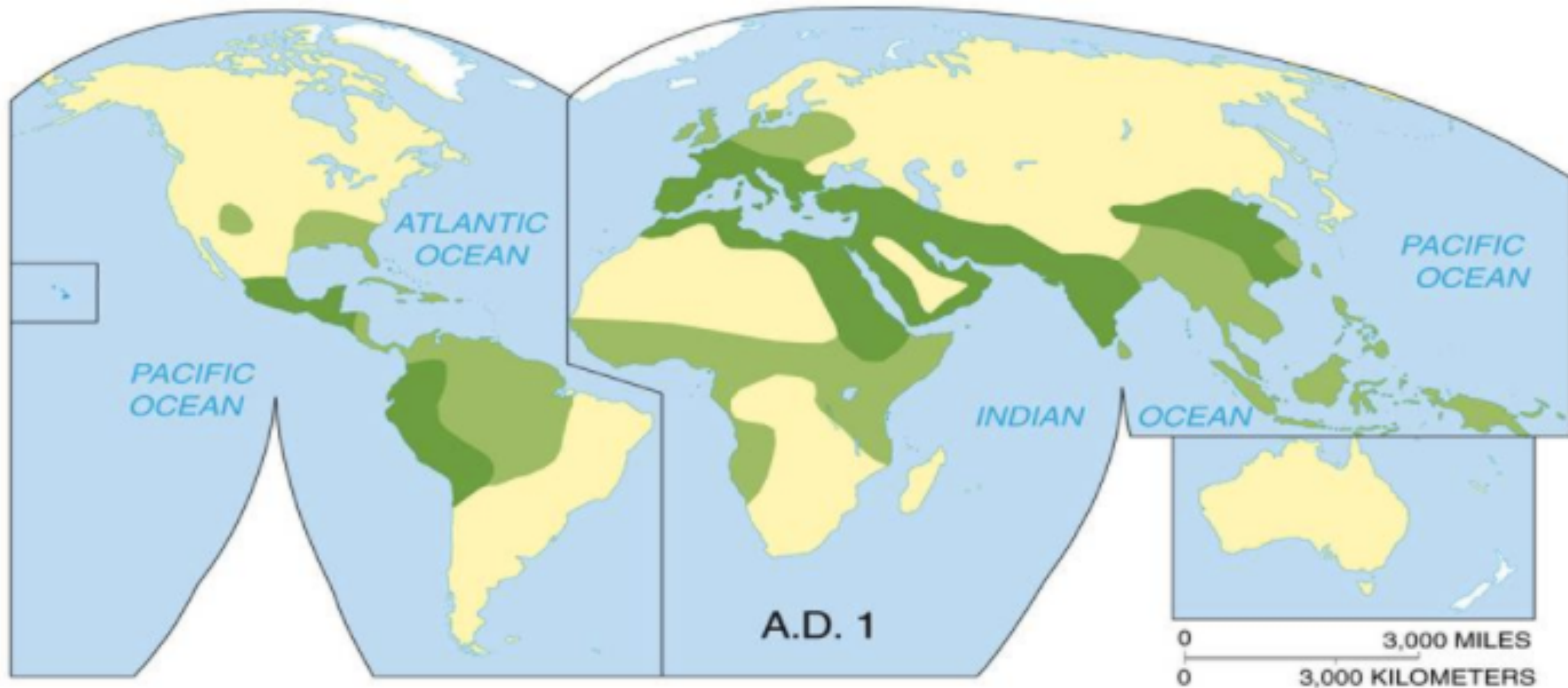
- Where people are. Patterns of human ecumene:
 - 1) *Nearly 90% of people live north of the equator*
 - 2) *About 2/3 of world population is concentrated within 300 miles of the ocean.*
 - 3) *More than half of all people live on about 5% of the land, and almost nine-tenths on less than 20%.*
 - 4) *Most people live in areas close to sea level.*



ECUMENE CHANGES OVER TIME



ECUMENE CHANGES OVER TIME



ECUMENE



Intensive settlement



Hunting and gathering

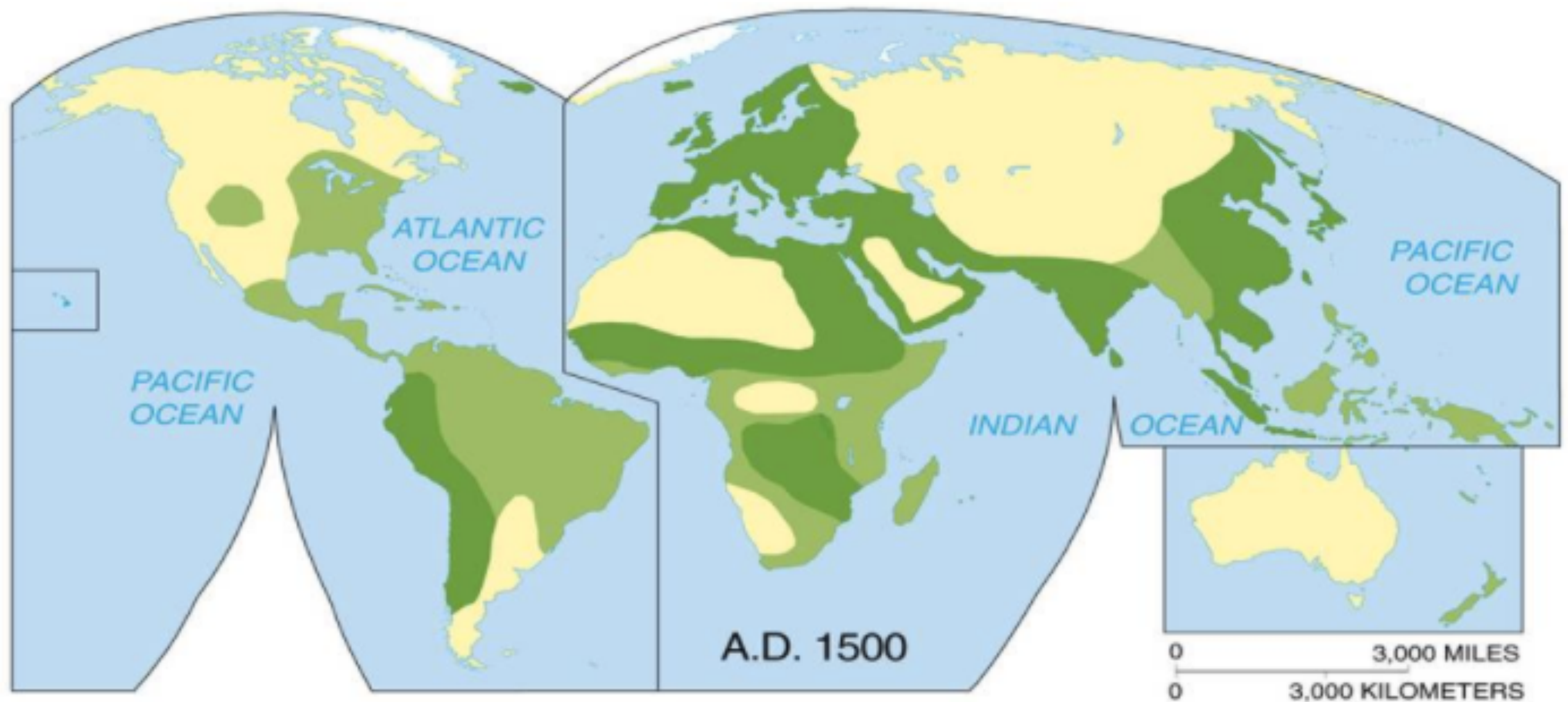


Small-scale agriculture



Uninhabited (mainly ice)

ECUMENE CHANGES OVER TIME



ECUMENE



Intensive settlement



Hunting and gathering

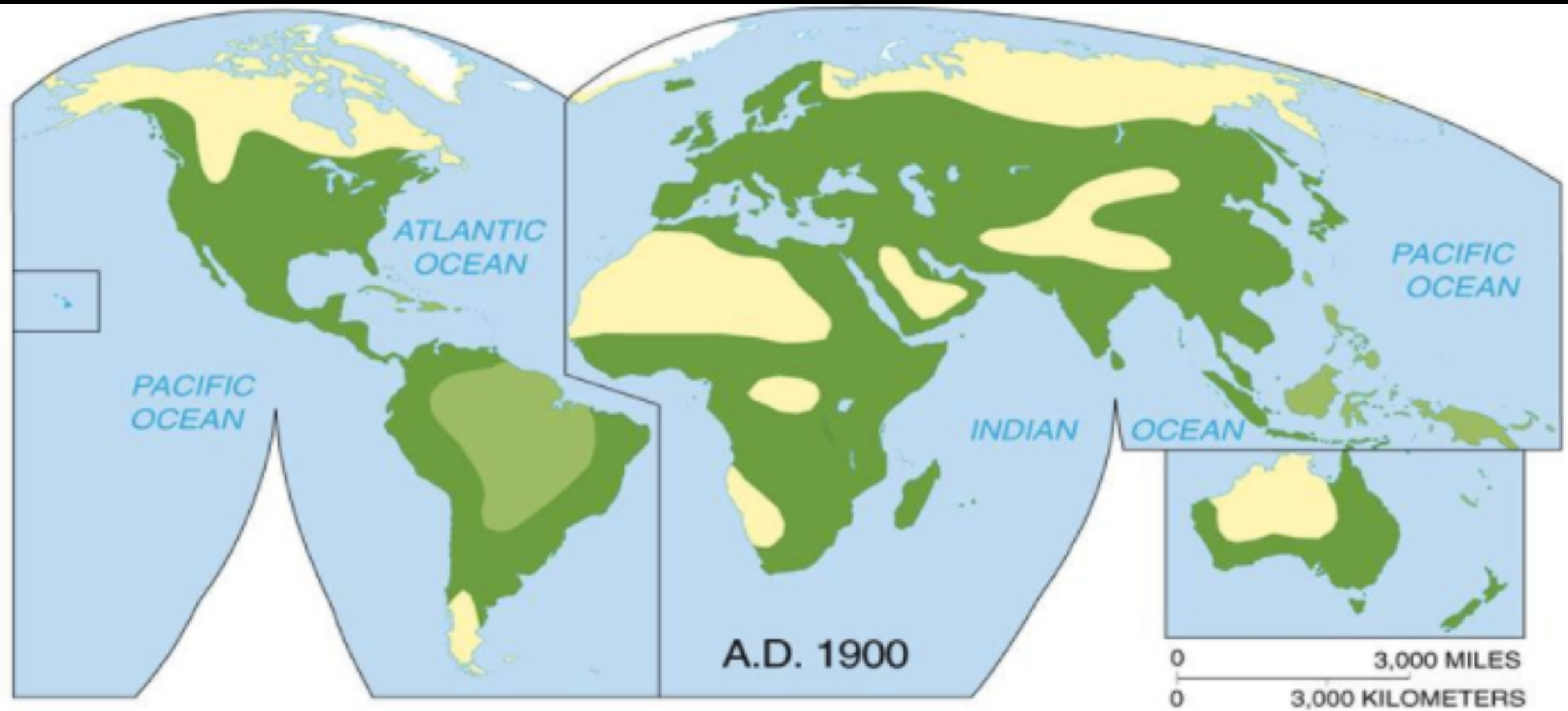


Small-scale agriculture



Uninhabited (mainly ice)

ECUMENE CHANGES OVER TIME



ECUMENE



Intensive settlement



Hunting and gathering



Small-scale agriculture



Uninhabited (mainly ice)

ARAL SEA, KAZAKHSTAN

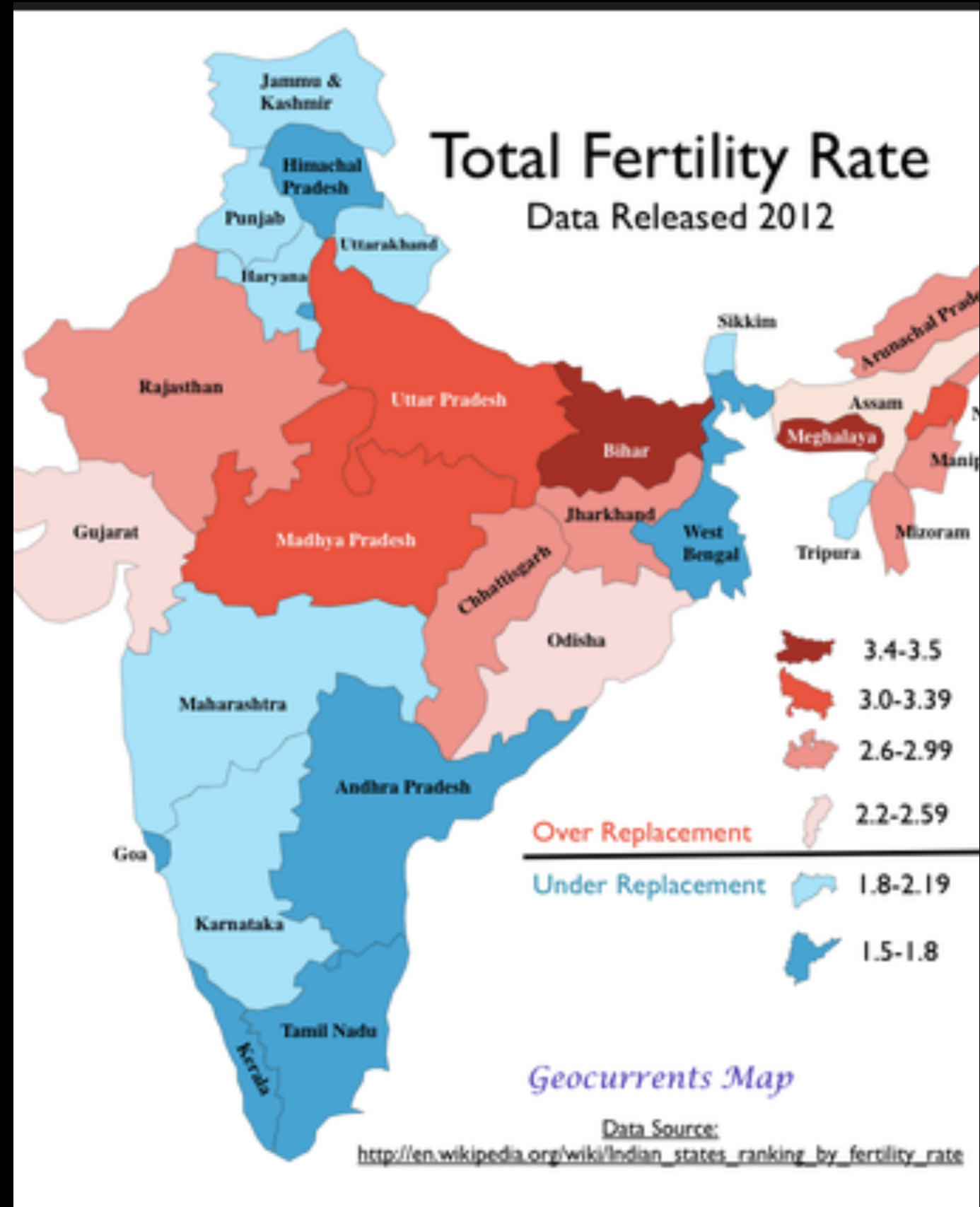


POPULATION DISTRIBUTION

- **Why it matters:**
- Population grows at different rates in different places
- **Overpopulation** - occurs when there are too many people for the amount of available resources
- Problems result when an area exceeds its **carrying capacity** the # of people an area can support

SCALE

- On a local scale, overpopulation currently threatens some regions much more than others, but the number of overpopulated regions continues to grow
- On a global scale most geographers agree that the world's resources will become overtaxed in the future



POPULATION DISTRIBUTION

- Humans are NOT uniformly distributed across the Earth
- We can understand the nature of its distribution by studying their **concentration** and **density**
- **Concentration** - 2/3 of Earth's population is concentrated in 4 regions:
 - East Asia
 - South Asia
 - Europe
 - Southeast Asia



ADD THIS MAP TO YOUR NOTES



**LABEL THE FOLLOWING COUNTRIES & SHADE
THE FOLLOWING REGIONS...**

EAST ASIA



- The region, bordering the Pacific Ocean, includes China, the islands of Japan, the Korean peninsula, and the island of Taiwan
- 1/5 of the world's people live in East Asia.



CHINA



- 5/6 of the people in this concentration live in the People's Republic of China (the world's most populous country).
- China is the world's third-largest country in land area, but much of its interior is sparsely inhabited mountains and deserts.
- The population is clustered near the Pacific Coast and in several fertile river valleys that extend inland, such as the Huang and the Yangtze.
- Although China has 26 urban areas with more than 2 million inhabitants and 52 with more than 1 million, 2/3 of the people live in rural areas where they work as farmers.



JAPAN AND KOREA



- In Japan and Korea, population is not distributed uniformly either.
- More than 1/3 of the people live in three large metropolitan areas: Tokyo and Osaka in Japan, and Seoul in South Korea—that cover less than 3 percent of the two countries' land area.
- In sharp contrast to China, more than $\frac{3}{4}$ of all Japanese and Koreans live in urban areas and work at industrial or service jobs.



SOUTH ASIA



- Another 1/5 of the world's people live in South Asia, which includes India, Pakistan, Bangladesh, and the island of Sri Lanka.
- India, the world's second most populous country, contains more than $\frac{3}{4}$ of the South Asia population concentration.
- The most important concentration of people within South Asia lives along a 900 mile corridor from Lahore, Pakistan through Indian and Bangladesh to the Bay of Bengal.



SOUTH ASIA



- Much of this area's population is concentrated along the plains of the Indus and Ganges rivers.
- Population is also heavily concentrated near India's two long coastlines—the Arabian Sea to the west and the Bay of Bengal to the east.
- Like the Chinese, most people in South Asia are farmers living in rural areas.
- The region contains 21 urban areas with more than 2 million inhabitants and 55 with more than 1 million, but only $\frac{1}{4}$ of the total population lives in an urban area.



SOUTHEAST ASIA



- A half billion people live in Southeast Asia, mostly on a series of islands that lie between the Indian and Pacific oceans.
- The largest concentration is on the island of Java, inhabited by more than 100 million people.
- Indonesia, which consists of 13,677 islands, including Java, is the world's fourth most populous country.
- Several islands that belong to the Philippines contain high population concentrations, and population is also clustered along several river valleys and deltas at the southeastern tip of the Asian mainland, known as Indochina.



SOUTHEAST ASIA



- Like China and South Asia, the Southeast Asia concentration is characterized by a high percentage of people working as farmer in rural areas.
- The three Asian population concentrations together comprise more than half of the world's total population, but together they live on less than 10 percent of Earth's land area (the same held true 2,000 years ago).



EUROPE



- Combining the populations of Western Europe, Eastern Europe, and the European portion of Russia forms the world's third-largest population cluster, one-ninth of the world's people.
- The region includes four dozen countries, ranging from Monaco, with .7 miles and a population of 32,000, to Russia, the world's largest country in land area when its Asian part is included.
- In contrast to the three Asian concentrations, $\frac{3}{4}$ of Europe's inhabitants live in cities, and less than 20 percent are farmers.
- A dense network of road and rail lines link settlements.



EUROPE



- The highest population concentration in Europe are near the coalfields of England, Germany, and Belgium, historically the major source of energy for industry.
- Although the region's temperate climate permits cultivation of a variety of crops, Europeans do not produce enough food for themselves; instead they import them.
- The search for additional resources was a major incentive for Europeans to explore and colonize other parts of the world during the previous centuries.
- Today, Europeans turn many of these resources into manufactured products.



OTHER POPULATION CLUSTERS

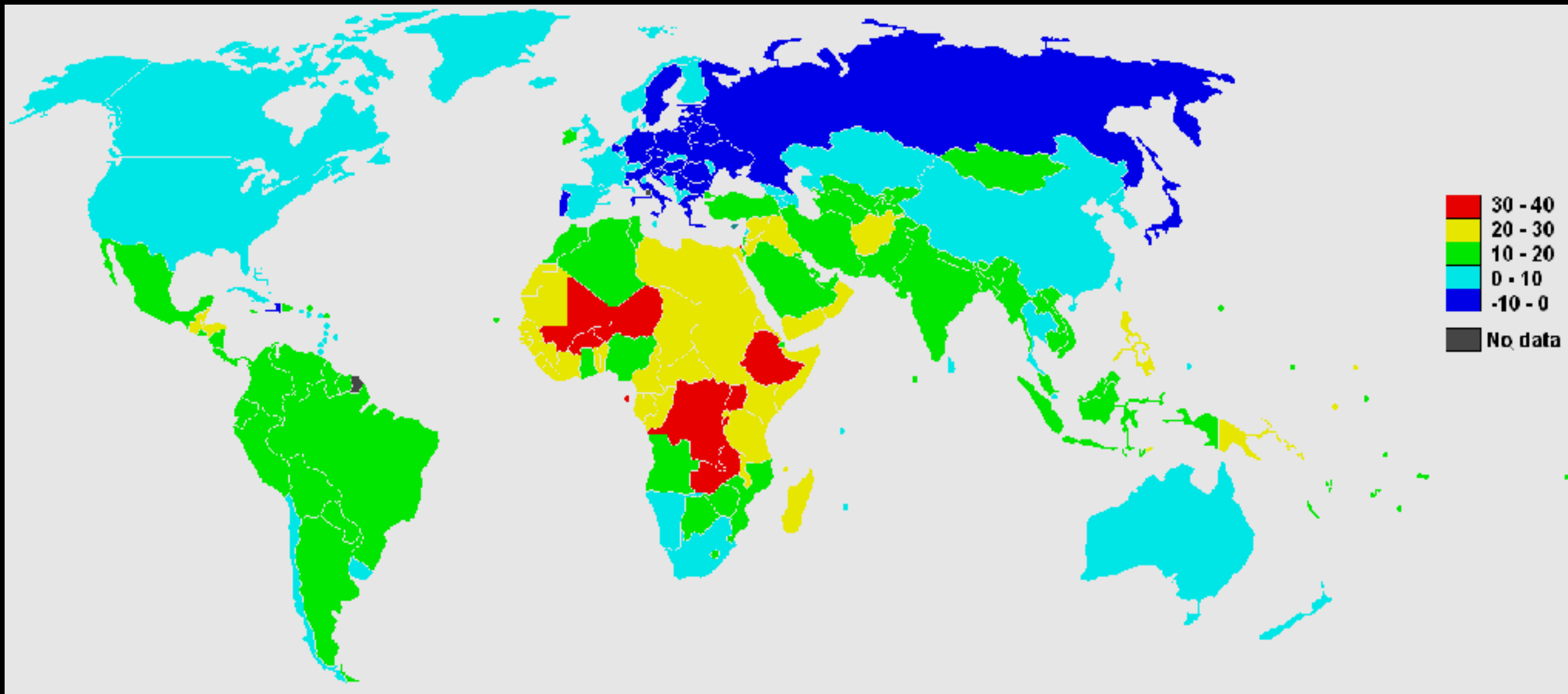
- The largest population concentration in the Western Hemisphere is in the northeastern United States and southeastern Canada.
 - This cluster extends along the Atlantic Coast from Boston to Newport News, Virginia, and westward along the Great Lakes to Chicago.
 - About 2 percent of the world's population live in the area.
- Another 2 percent of the world's population is clustered in West Africa, especially along the south-facing Atlantic Coast.
 - Approximately half of the West Africa concentration is found in Nigeria, the most populous country in Africa, and the other half is divided among several small countries west of Nigeria.
 - Most Africans work in agriculture, although the region has 6 urban areas with more than 2 million inhabitants and 16 with more than 1 million.



SECTION 2

WHERE IS POPULATION CHANGING? WHY?

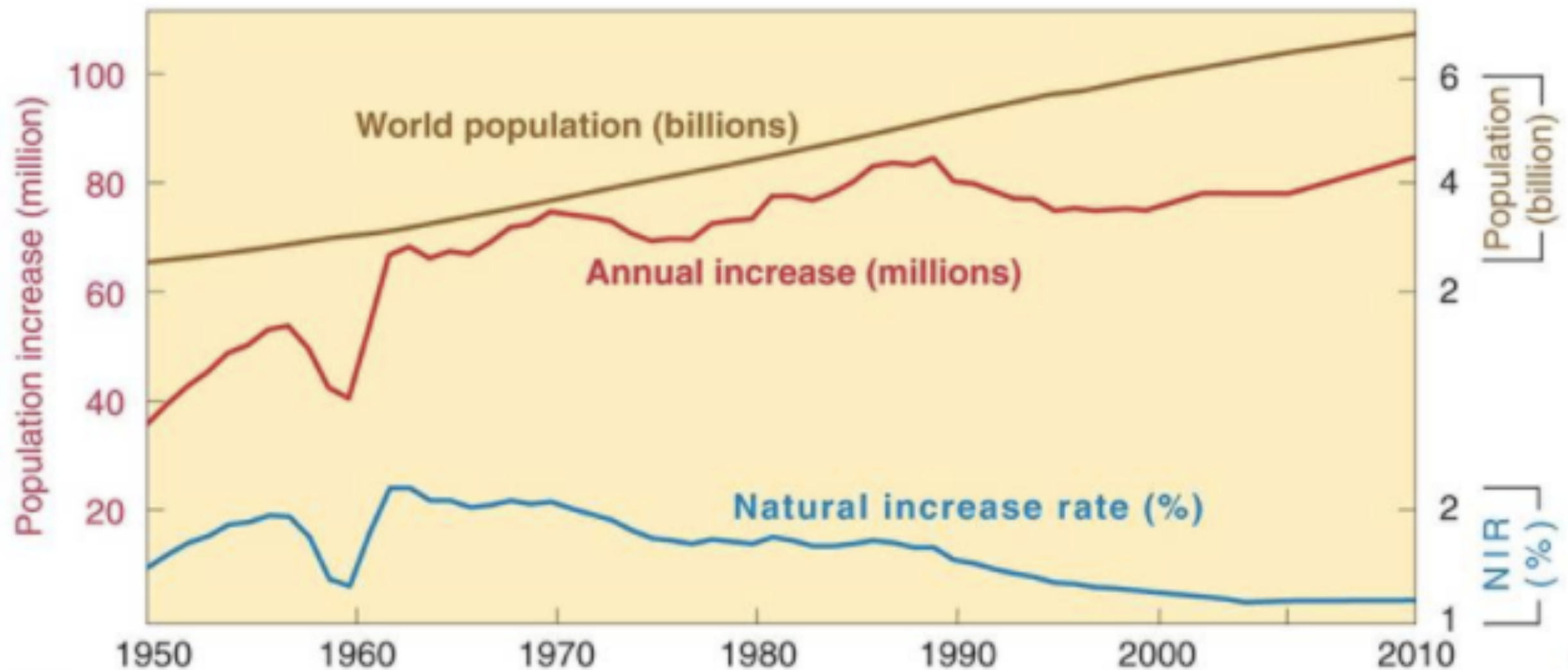




The **Natural Increase Rate (NIR)** is the percentage by which a population grows in a year.

HISTORICAL INCREASES

- The world NIR during the first decade of the twenty-first century is 1.2, meaning that the population of the world was growing each year by 1.2 percent.
- The world NIR is lower today than its all-time peak of 2.2 percent in 1963, and it has declined sharply during the past decade.

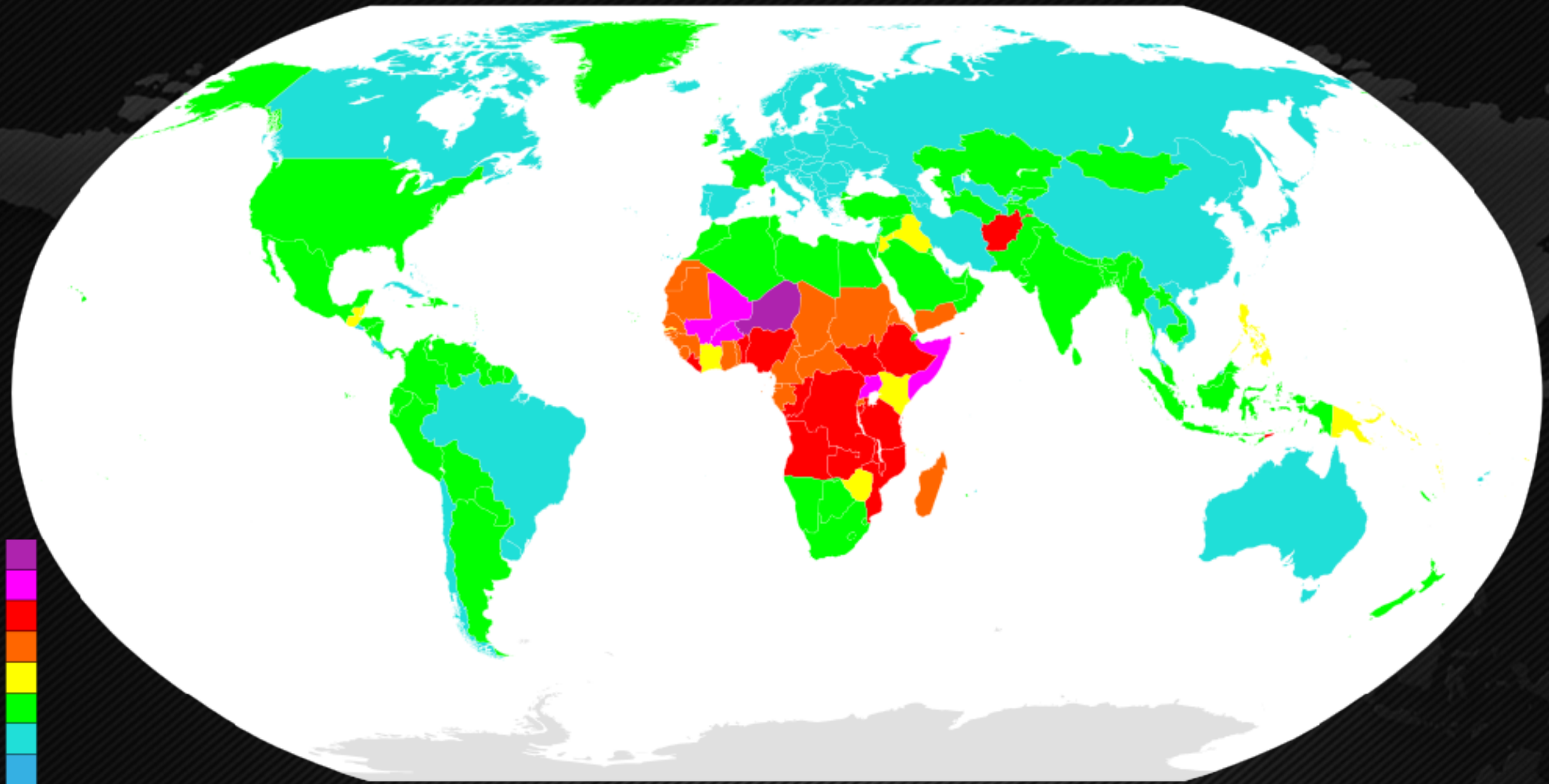


HISTORICAL INCREASES

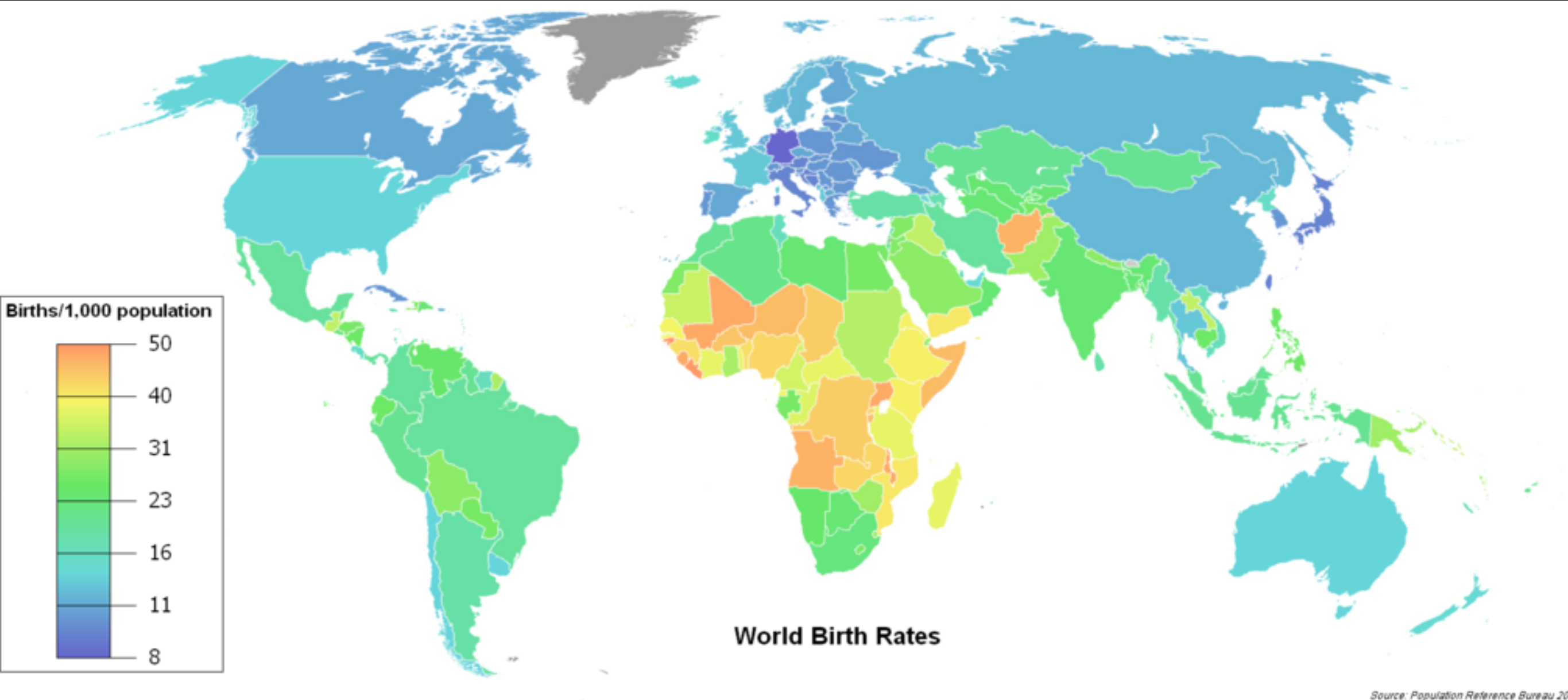
- About 80 million people are being added to the population of the world annually.
- That number represents a decline from the historic high of 87 million in 1989.
- The number of people added each year has dropped much more slowly than the NIR because the population base is much higher now than in the past.
- Very small changes in the NIR dramatically affect the size of the population, because the base population from which we drive the percentage is so high.

HISTORICAL INCREASES

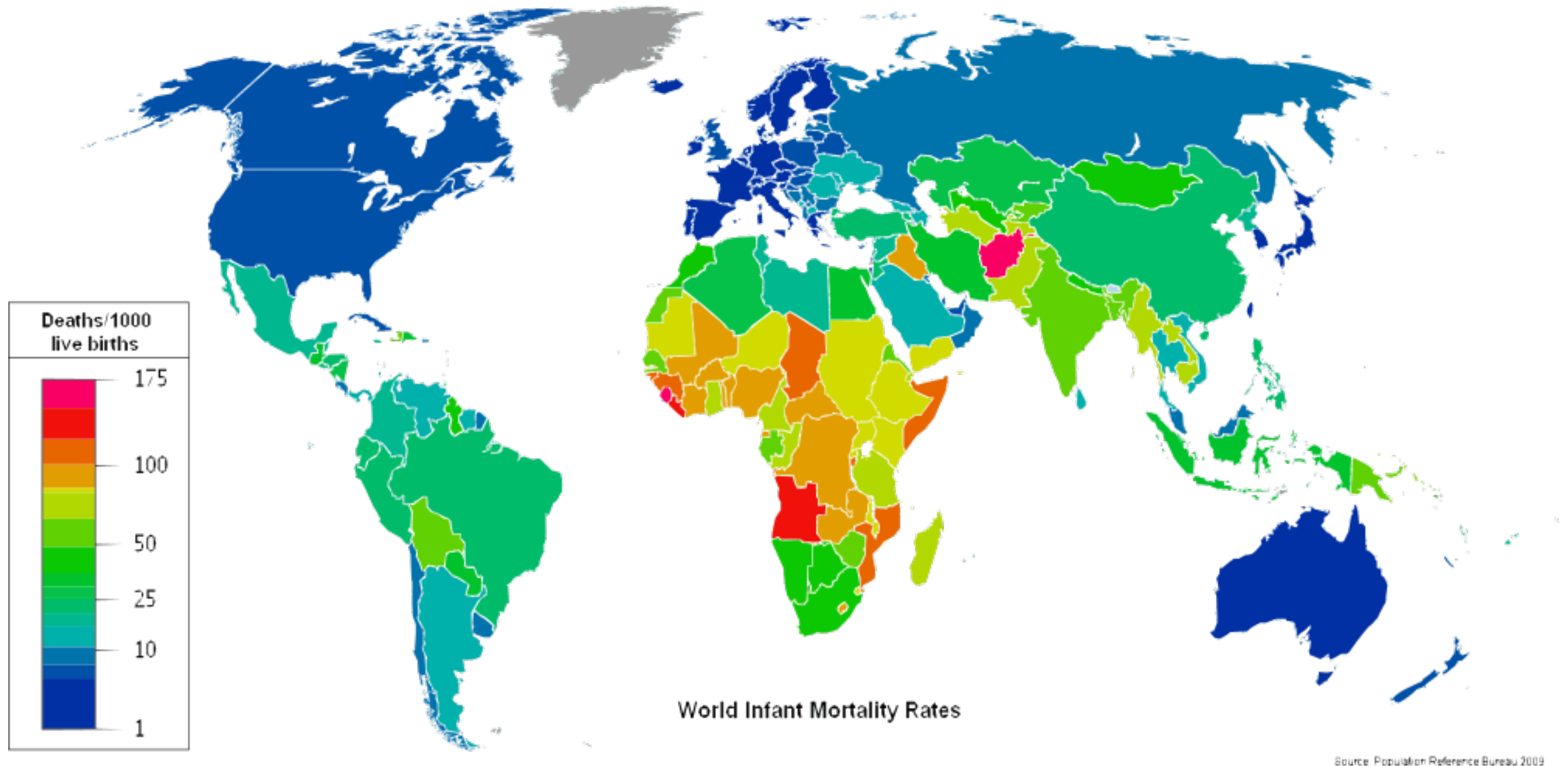
- Virtually 100 percent of the natural increase is clustered in LDCs.
 - The NIR exceeds 2.0 percent in most countries of Africa, Asia, Latin America, and the Middle East; whereas it is negative in Europe, meaning that the population is declining in this region.
- About 2/3 of the world's population growth during the past decade has been Asia, with the remaining 1/3 divided about equally among sub-Saharan Africa, Latin America, and the Middle East.
- Regional differences in NIRs mean that most of the world's additional people live in the countries that are least able to maintain them.
- To explain the differences in growth rates, geographers examine regional differences in fertility and mortality rates.



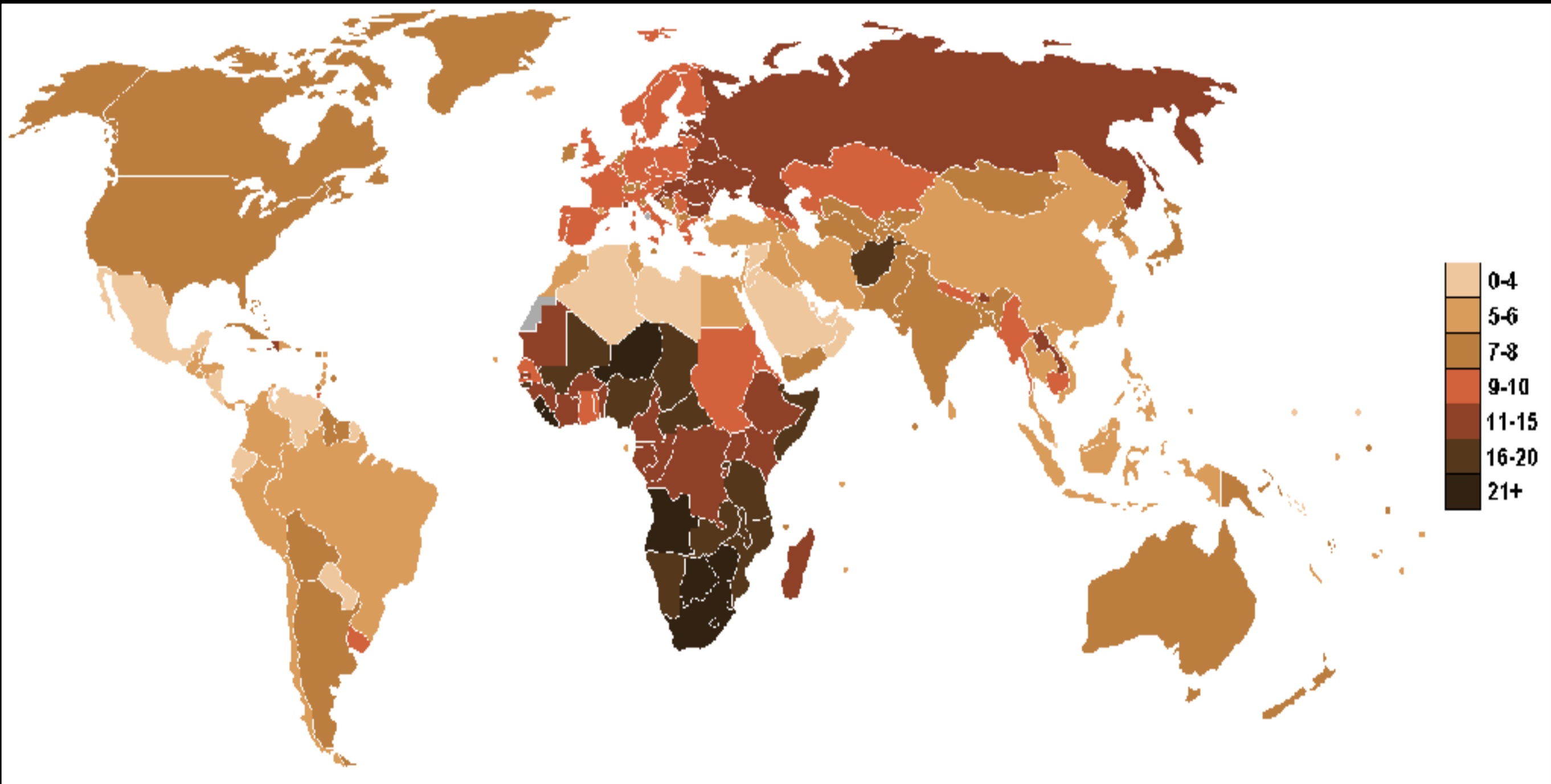
The **Total Fertility Rate (TFR)** is the average number of children a woman will have during her childbearing years.



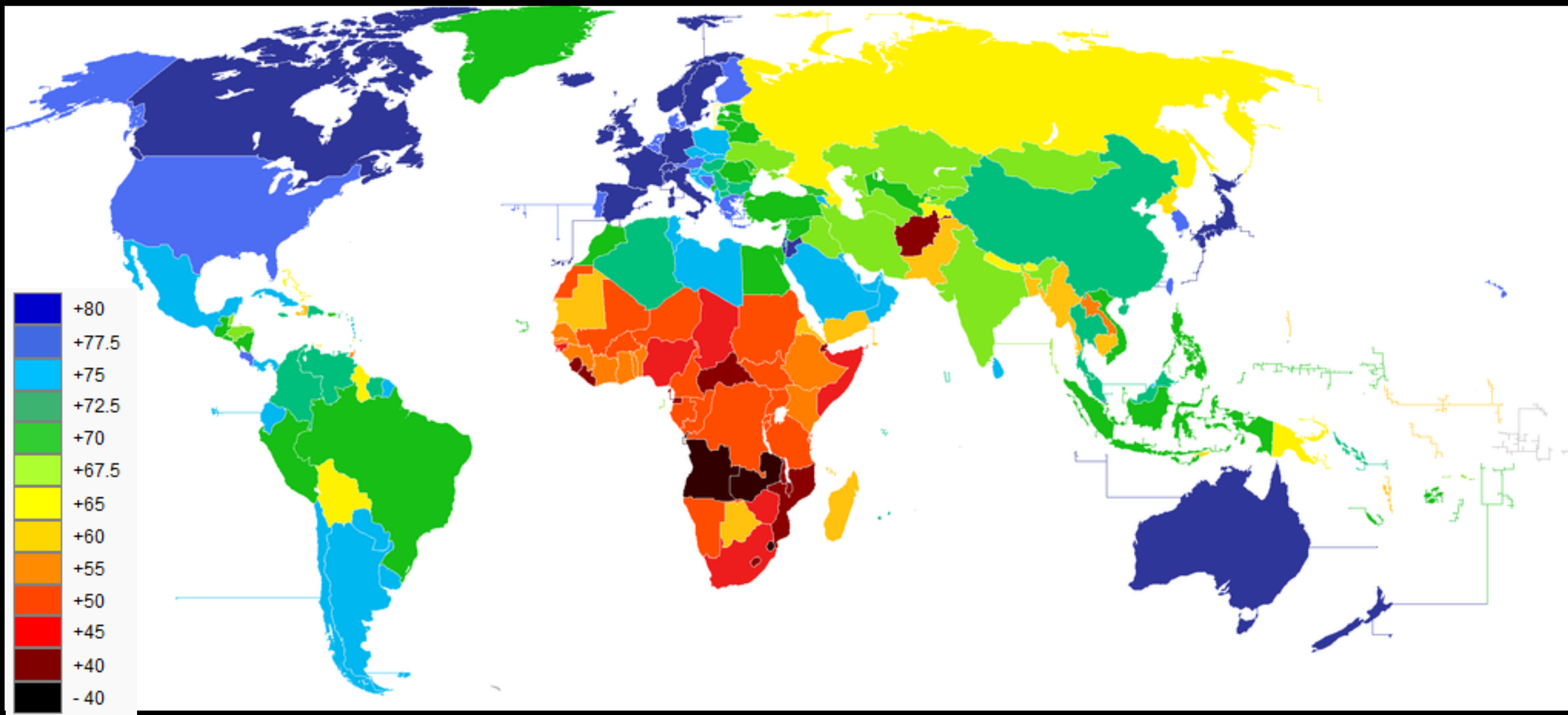
The Crude Birth Rate (CBR) is the total number of live births a year for every 1,000 people alive in the society.



The **Infant Mortality Rate (IMR)** is the annual number of deaths of infants under 1 year compared with total live births.

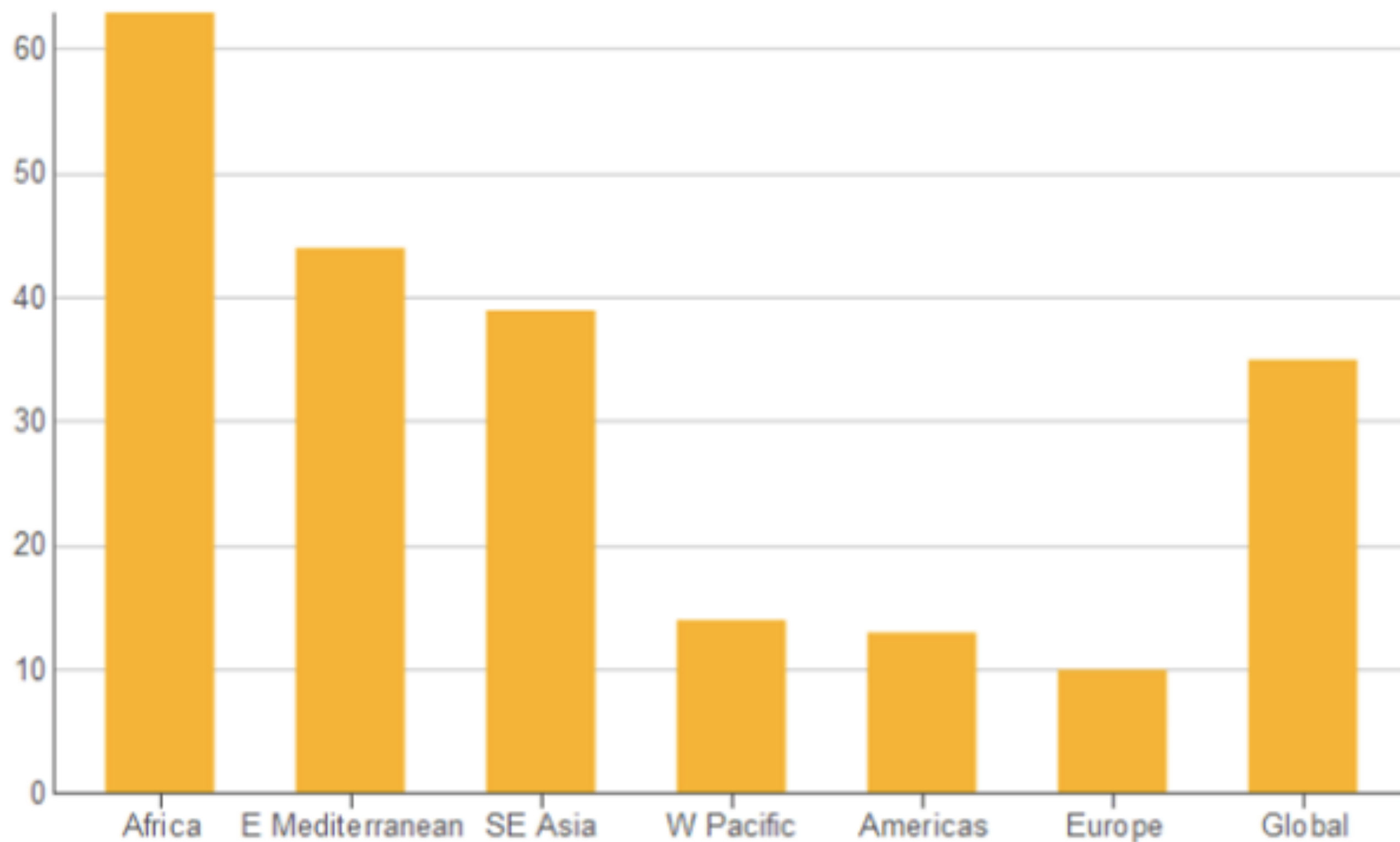


The **Crude Death Rate (CDR)** is the total number of deaths a year for every 1,000 people alive in the society.



Life Expectancy measures the average number of years a newborn can expect to live at current morbidity levels.

Probability of dying between birth and age 1 (per 1000 live births)



Source: WHO, 2012

Child Mortality Rate

the number of children who die by the age of five, per thousand live births per year.

Global child mortality

2.9 million

babies died within 28 days in 2012

1 million

babies lived for only one day in 2012

51% of births in sub-Saharan Africa not attended by a midwife

6.6 million children died before age 5 from preventable causes

Just **2%** of children aged 1-2 are immunised in South Sudan

Save the Children / Unicef



**What affect do high rates of mortality
have on population?**



Percent of Population under 15

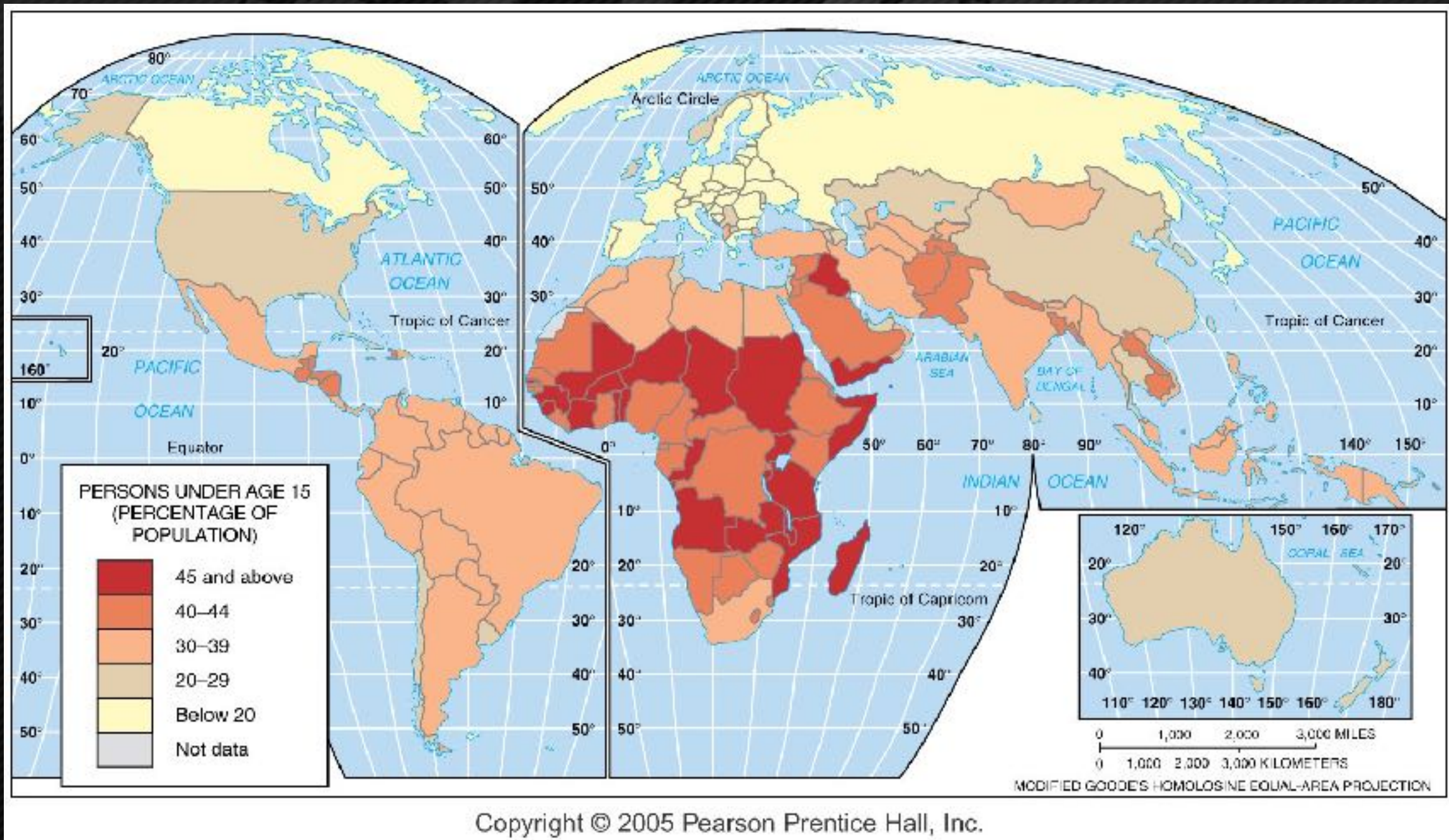
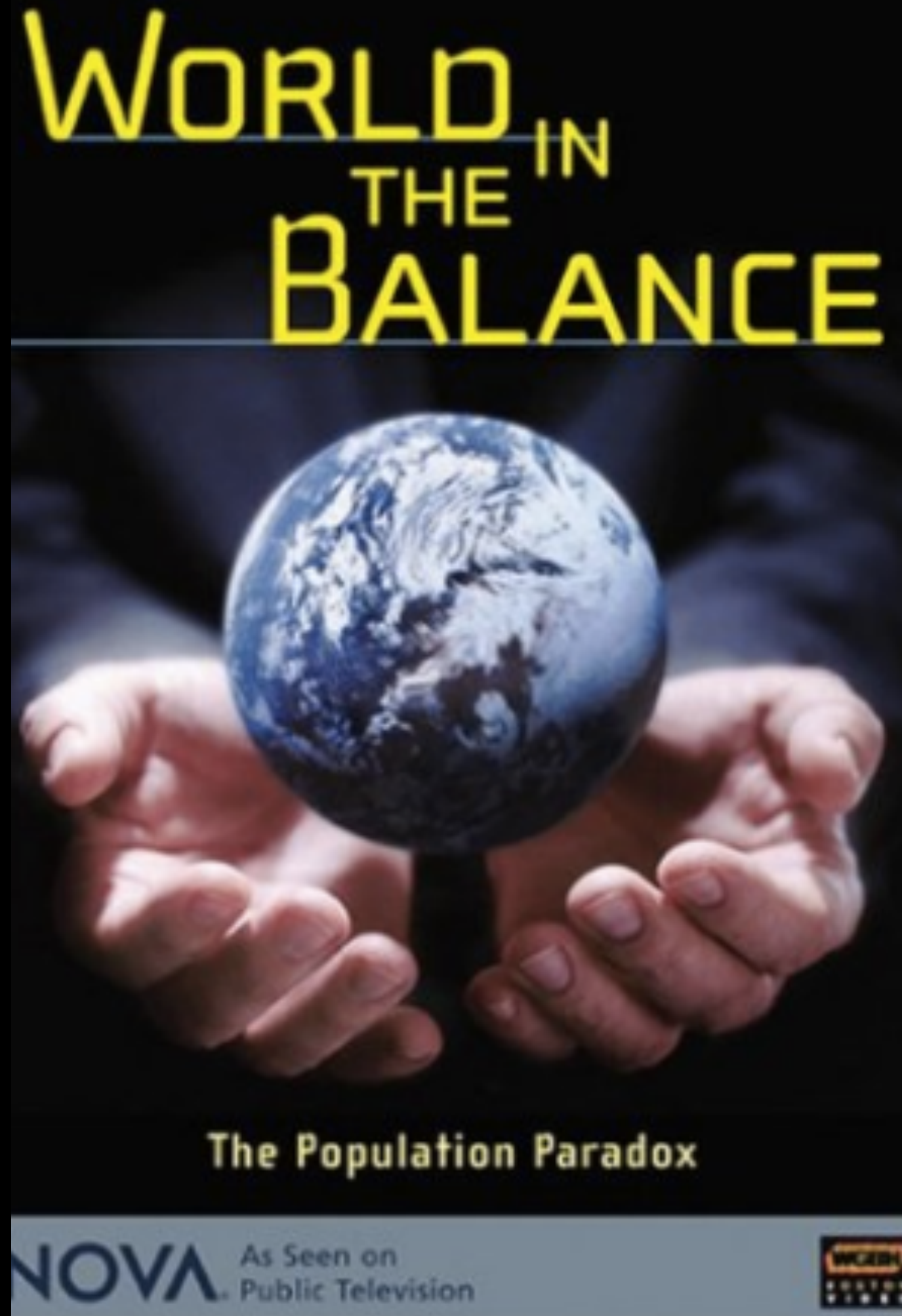


Fig. 2-15: About one-third of world population is under 15, but the percentage by country varies from over 40% in most of Africa and some Asian countries, to under 20% in much of Europe.

PBS NOVA WORLD IN THE BALANCE

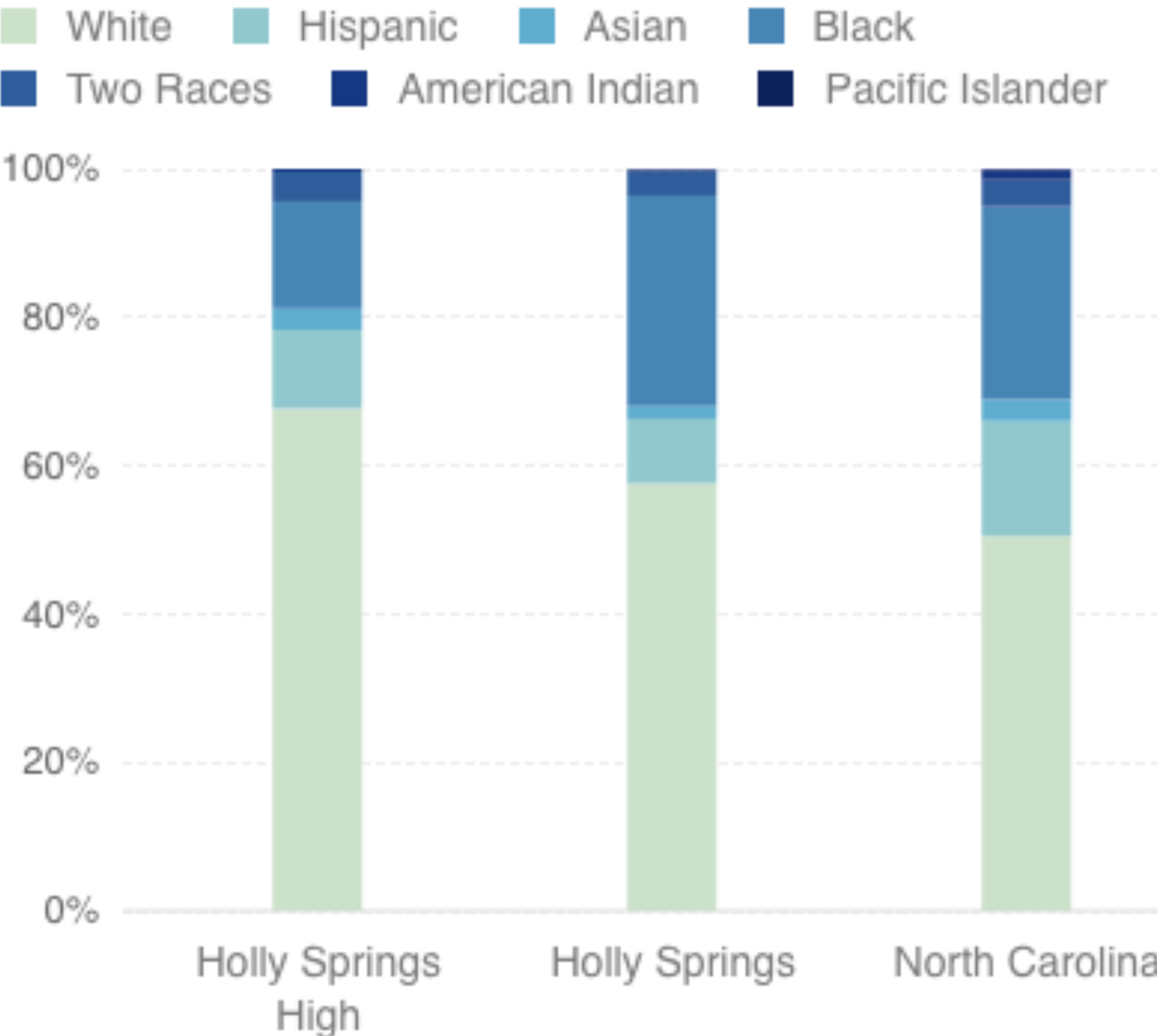
- Take the [global trends quiz](#)
- Watch the [documentary](#)
- Turn in the accompanying worksheet



Population Composition

- A “composite” is something made of different parts.
- Populations of different places are composed of different ethnicities, sexes, ages, etc. No two places have identical compositions.
- Sometimes these characteristics are called “demographics”.
- (Notice how that sounds similar to demography)

Ethnic Distribution

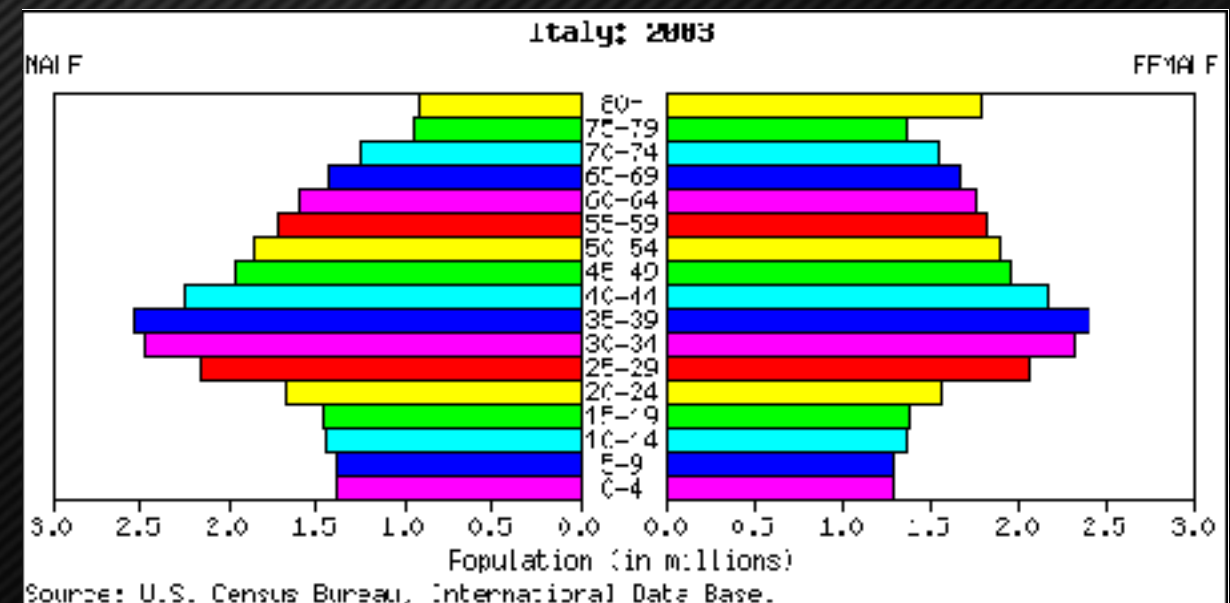
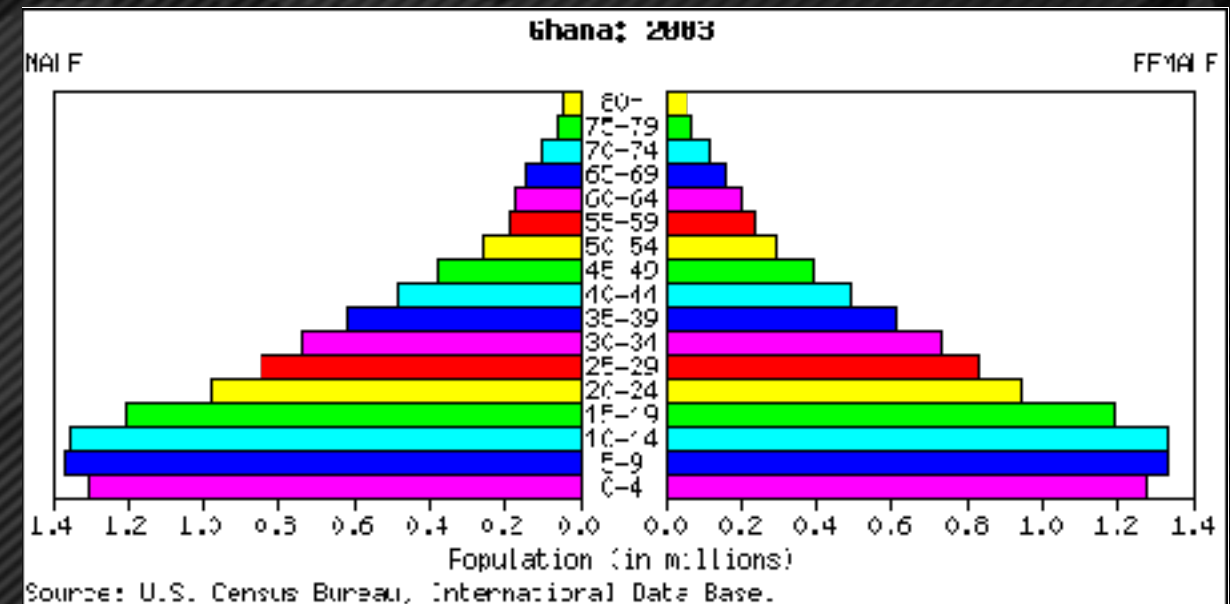


**Demographers use population pyramids to display
key demographics about a society**

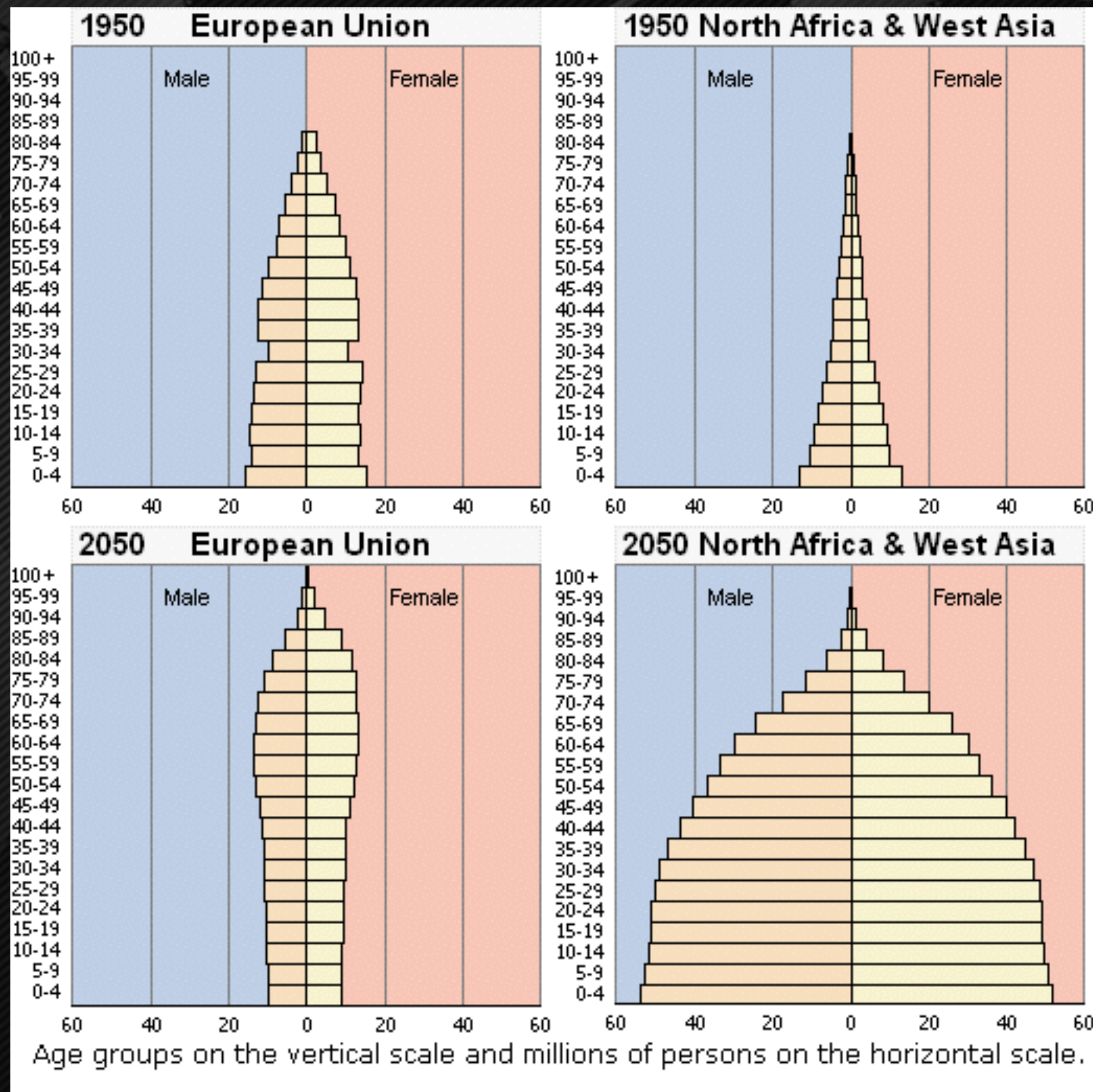
You'll need a blank population pyramid template and slip of
paper with the age/sex demographics of Japan, South
Sudan, and USA

Age Distribution and Dependency Ratio

- **Dependency Ratio**- # of Dependents (children or elderly): # of workers
- Young dependents outnumber elderly ones by 10:1 in stage 2 countries, but the numbers of young and elderly dependents are roughly equal in stage 4 countries.
- The large percentage of children in Sub-Saharan Africa and other stage 2 countries strains the ability of poorer countries to provide needed services.



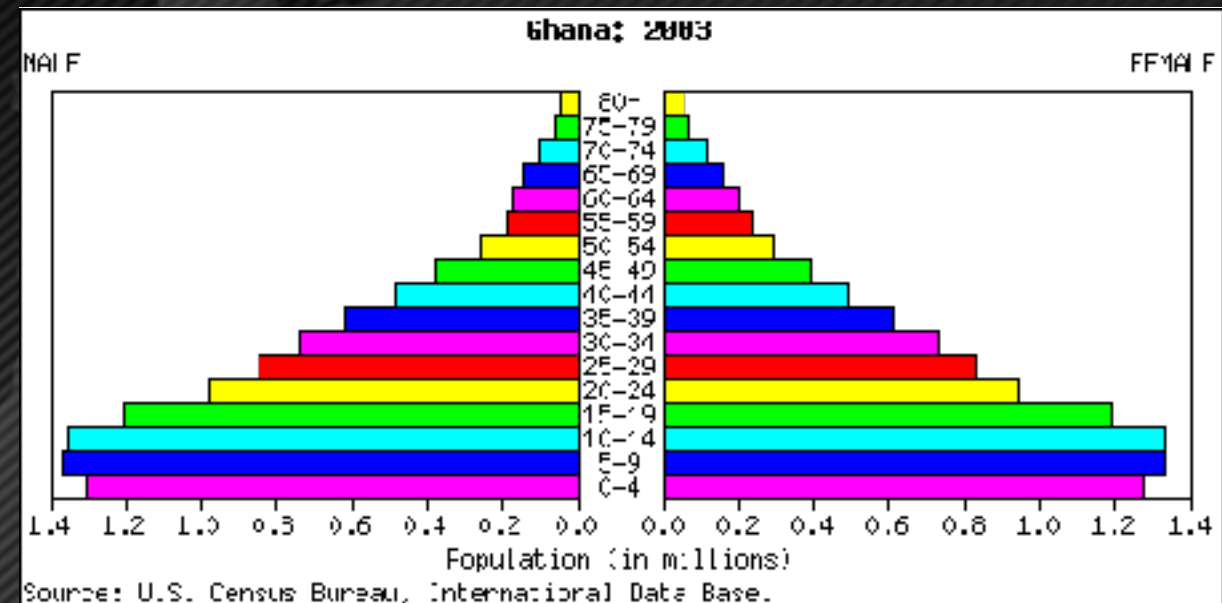
- What are some observations about the regions reflected in these population pyramids?



How Pyramids Affect Societies

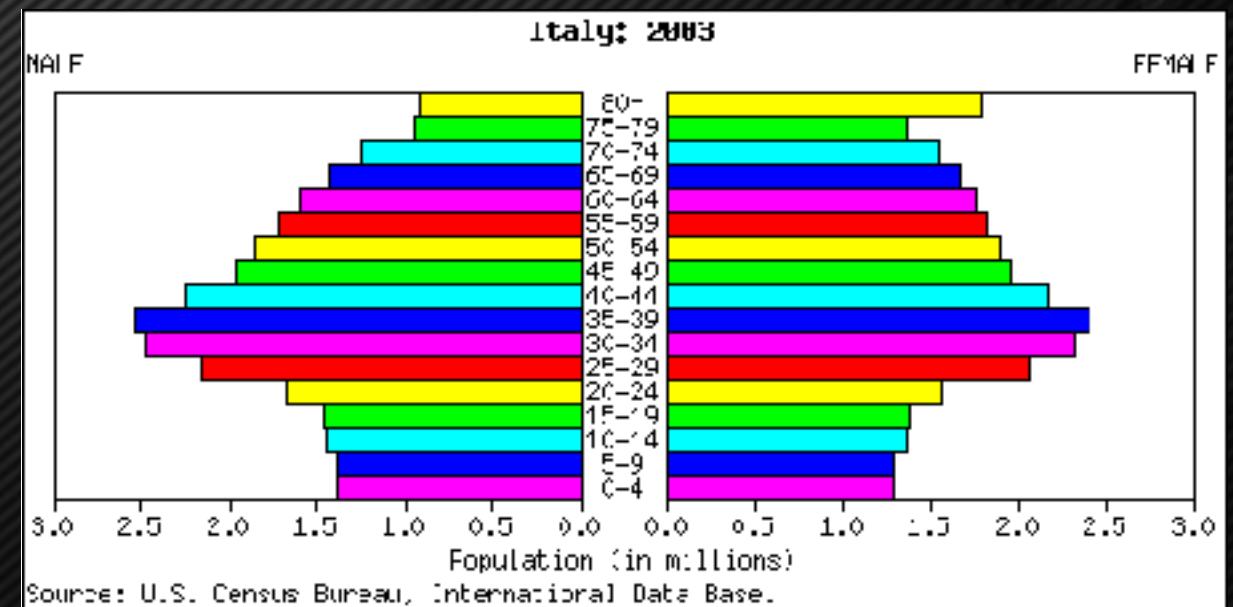
- **High Growth**

- Expanding Work Force
- Youthful and Creative
- Government Expenditures for youth (ex. Schools)



- **Low Growth**

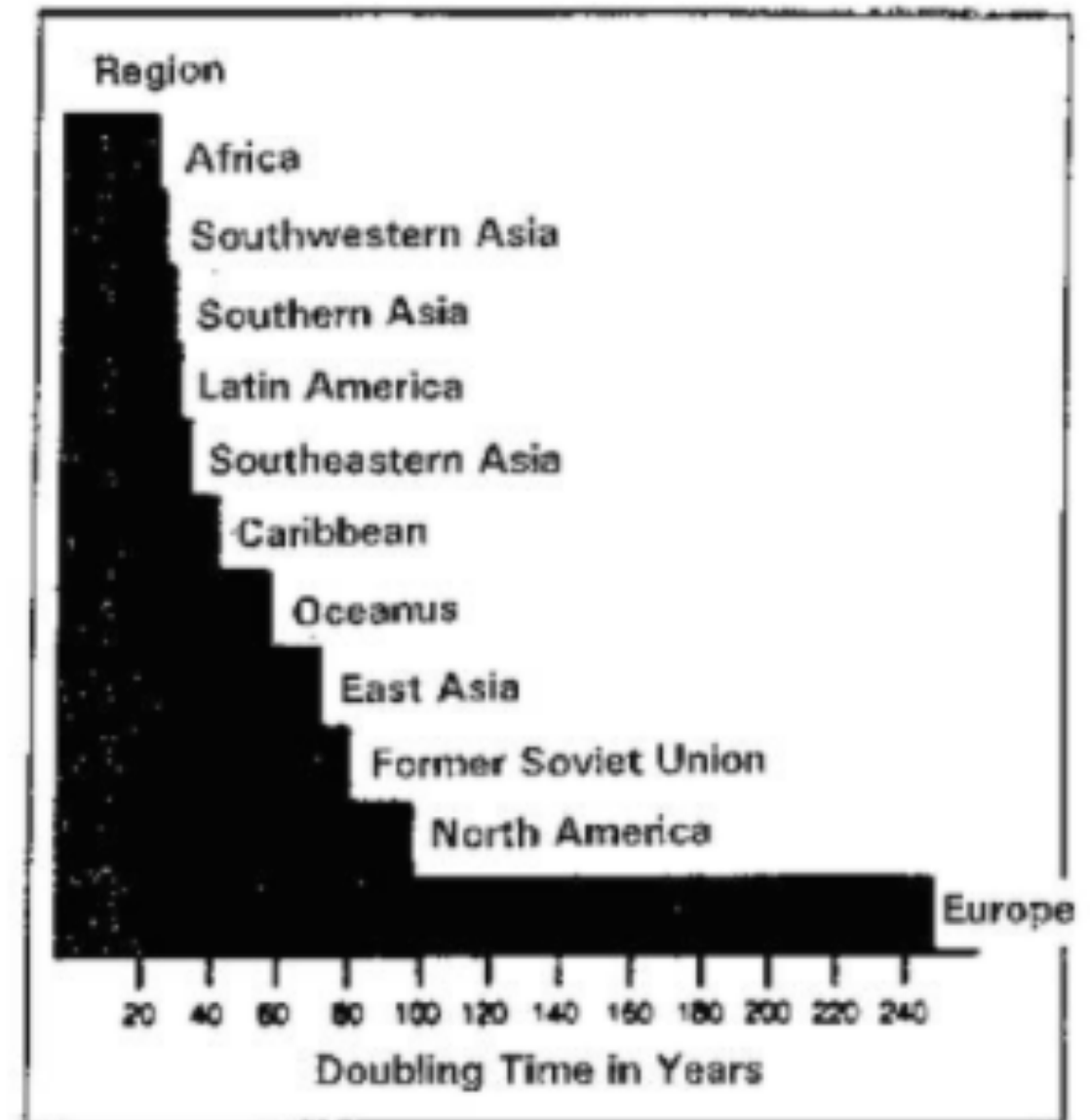
- Educated Workforce
- May need immigrant labor
- More Women in workforce
- Government expenditures on elderly (ex. Social Security)
- Extra income



HISTORICAL INCREASES

- The rate of natural increase affects the **doubling time**, which is the number of years needed to double a population, assuming a constant rate of natural increase.
 - For example, if the 1963 NIR of 2.2 continued through the twenty-first century, it would have produced a total population of more than 50 billion in 2100. On the other hand, should the NIR immediately decline to 1.0, doubling time would stretch out to 70 years, and world population in 2100 would be 15 billion.

POPULATION DOUBLING TIMES BY REGION



POPULATION GROWTH OVER TWO MILLENNIA

WHY DOES POPULATION INCREASE AT DIFFERENT RATES?

DEMOGRAPHIC TRANSITION

WHY IS POPULATION INCREASING AT DIFFERENT RATES?

- Demographic transition

- * A process with several stages, and every country is in one of them; the process has a beginning, a middle, and an end.

- Four stages

- Stage 1: Low growth

- Agricultural revolution

- Stage 2: High growth

- Industrial Revolution

- Stage 3: Moderate growth

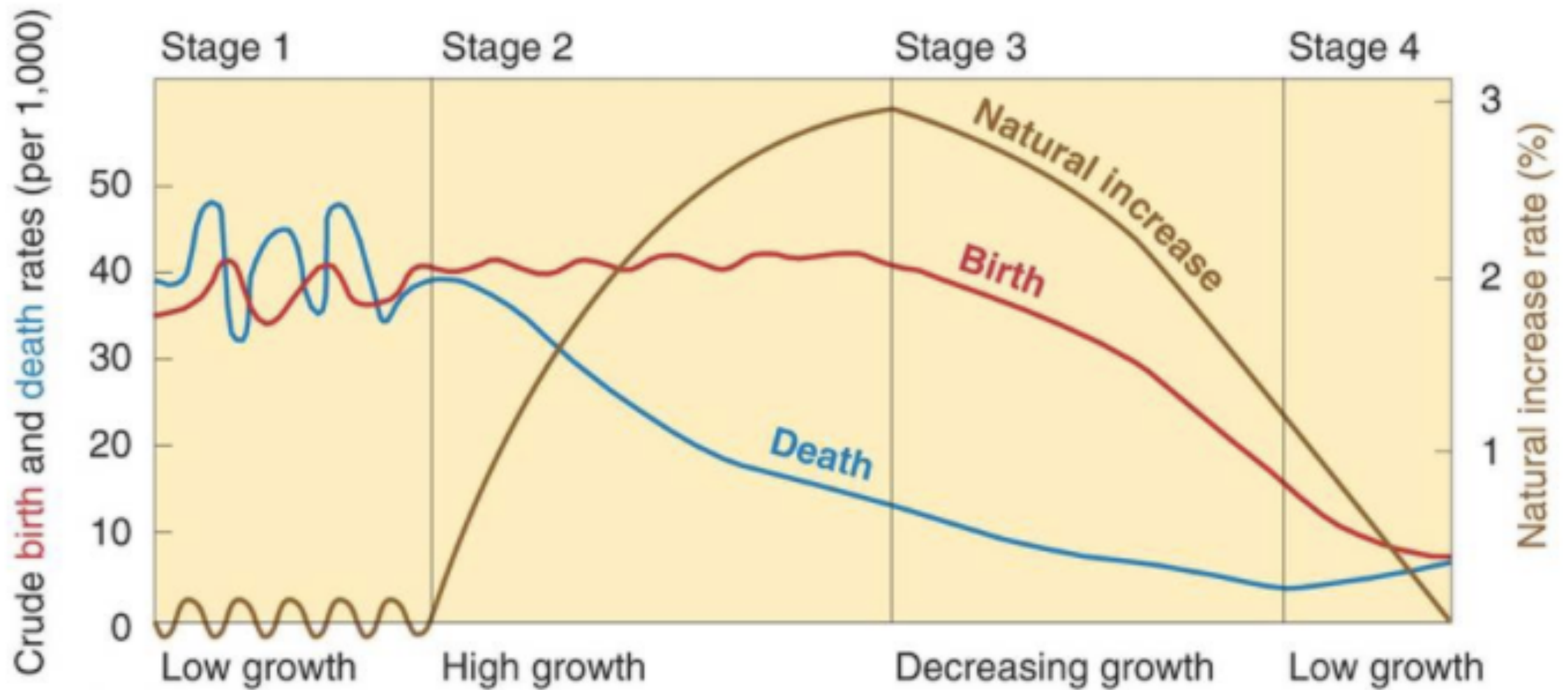
- Stage 4: Low growth

- Zero population growth (ZPG)

- Once a country moves from one stage of the process to the next, it does not revert to an earlier stage.



DEMOGRAPHIC TRANSITION

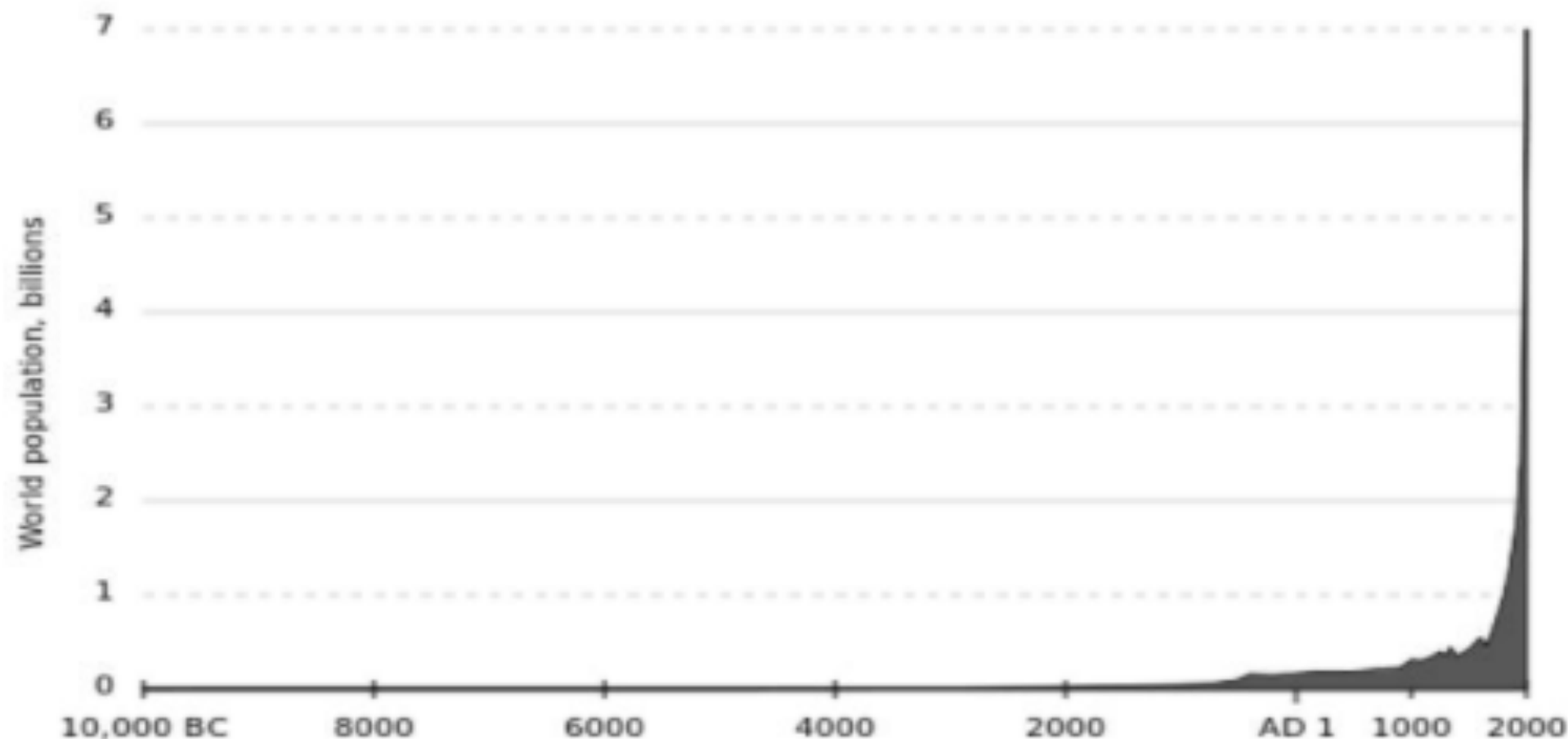


What is happening in each of the four stages?



STAGE 1. LOW GROWTH

- Most of humanity's past occupancy on the earth was characterized by stage 1.
 - Crude birth and death rates varied considerably from one year to the next and from one region to another, but over the long term they were roughly comparable, at very high levels.
 - The NIR was essentially zero.
 - The earth's population was relatively unchanged.



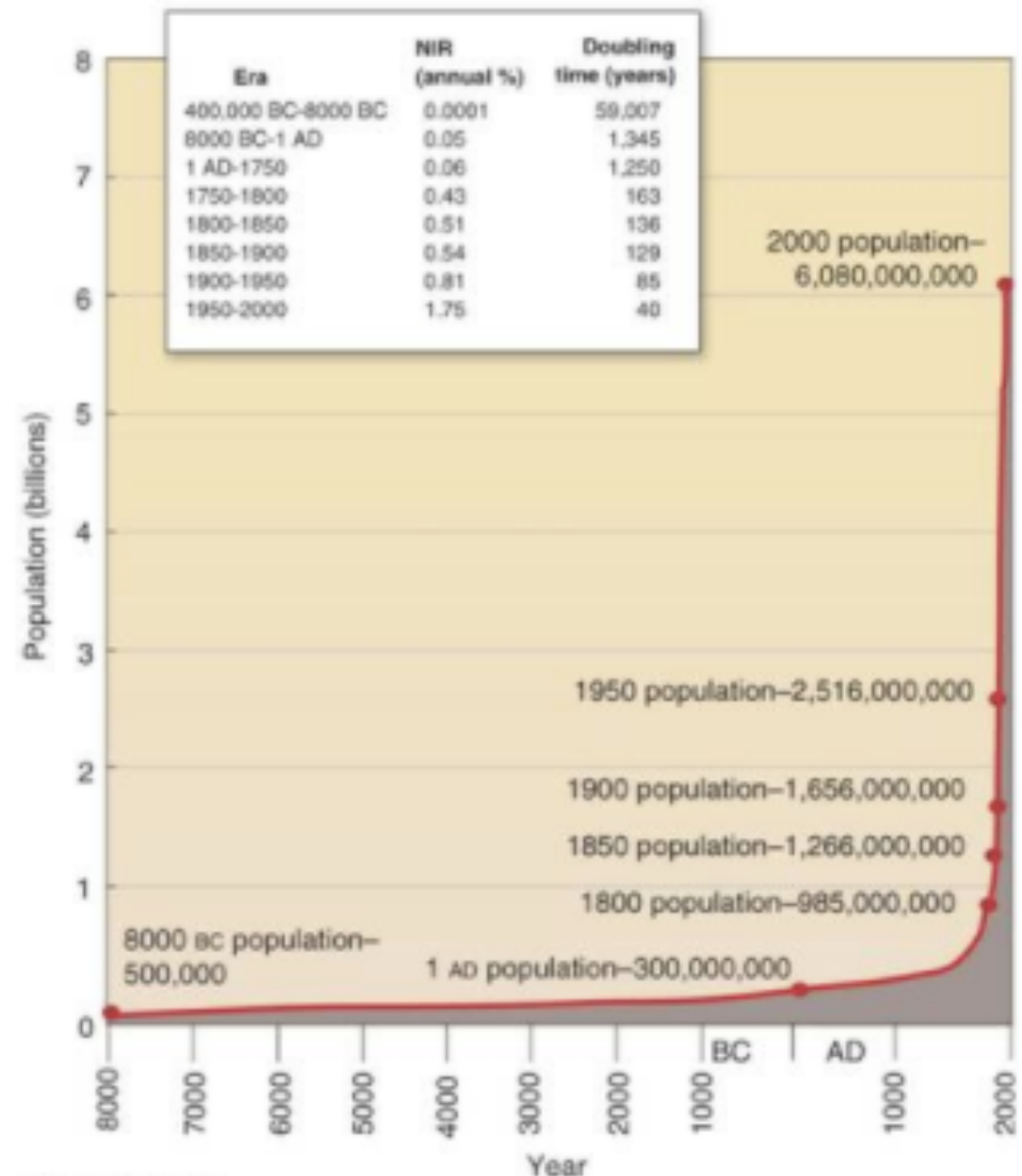
STAGE 2: HIGH GROWTH

- Countries entered stage 2 after 1750 as a result of the **Industrial Revolution**, which began in the late eighteenth century and spread to the European continent and then to North America during the nineteenth century.
 - During this time, the process of manufacturing goods and delivering them to market was transformed.
 - Results:
 - An unprecedented increase in the level of wealth; some of which was used to make communities healthier places to live by improving sanitation and personal hygiene.
 - New machines helped farmers increase agricultural production and feed the rapidly growing population.
 - More efficient agriculture freed people to work in factories, producing more goods and foods.



STAGE 2: HIGH GROWTH

- Countries in Europe and North America entered stage 2 about 1800, but stage 2 did not diffuse to most countries in Africa, Asia, and Latin America until around 1950.
- With the diffusion of stage 2, world population grew by 1.7 percent per year during the second half of the twentieth century, compared to 0.5 percent per year during the nineteenth century (this is a comparison of adding 80 million people in 2000, compared to 8 million in 1900).



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STAGE 2: HIGH GROWTH



- The late twentieth century push of countries (Africa, Asia, and Latin America) into stage 2 was caused by the **medical revolution**.
 - Medical technology invented in Europe and North America diffused to less developed countries in Africa, Asia, and Latin America.
 - Immunizations, penicillin, vaccines, and insecticides effectively and inexpensively controlled other infectious diseases.
- Improved medical practices suddenly eliminated many of the traditional causes of death in LDCs and enabled more people to experience longer and healthier lives.



STAGE 3: MODERATE GROWTH

- A country moves from stage 2 to stage 3 when the CBR begins to drop sharply.
- The CDR continues to fall in stage 3 but at a much slower rate than in stage 2.
- The population continues to grow because the CBR is still greater than the CDR.
- However, the rate of natural increase is more modest in countries in stage 3 than in those in stage 2 because the gap between the CBR and CDR narrows.

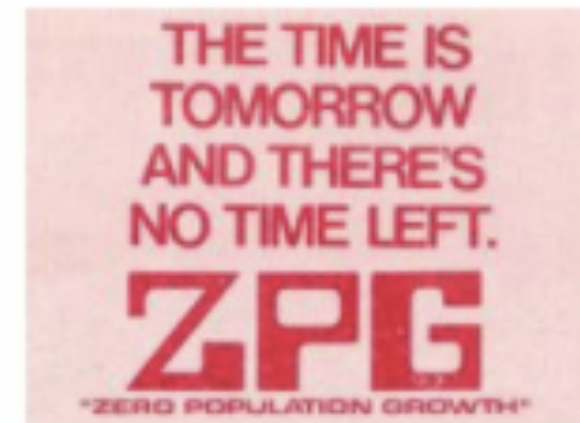


STAGE 3: MODERATE GROWTH

- European and North American countries generally moved from stage 2 to 3 during the first half of the twentieth century.
- Most countries in Asia and Latin America have moved to stage 3 in recent years, while most African countries remain in stage 2.
- The sudden drop in the CBR during stage 3 occurs because of changes in social customs.
- A society enters stage 2 when people choose to have fewer children.
 - Partly due to a decline in the IMR
 - Economic changes also induce people to have fewer children



STAGE 4: LOW GROWTH

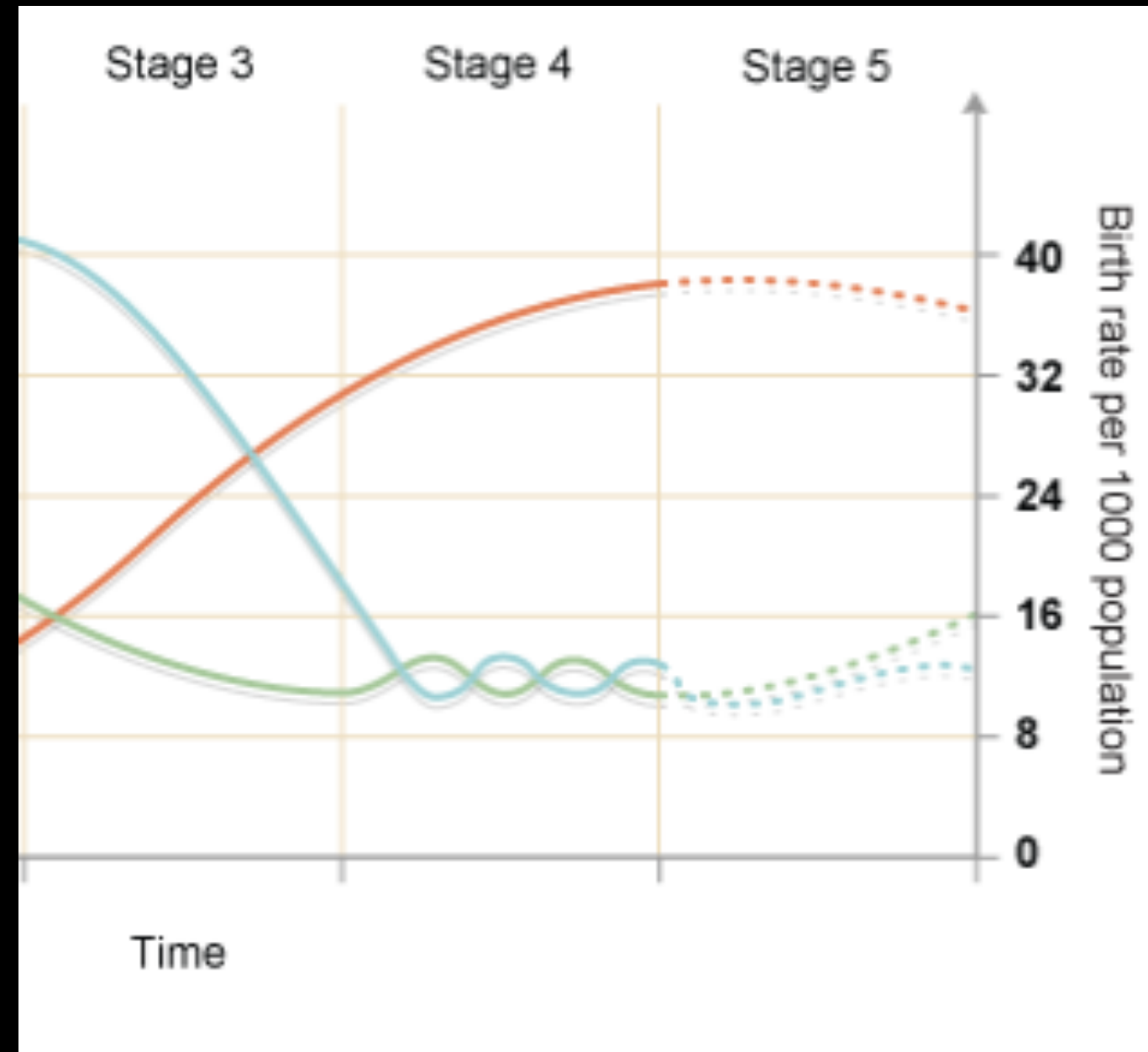


- A country reaches stage 4 when the CBR declines to the point where it equals the CDR, and the NIR approaches zero.
 - **Zero population growth**: demographers define ZPG as the TFT that results in a lack of change in the total population over a long term.
 - How does one factor in immigration?
- Countries in stage 4 can be indentified on the map of TFR.
- Social customs again explain the movement from one stage to the next.
 - Increasingly in stage 4, women work outside of the home; childcare needs often result in fewer children.
 - Family planning, increased income and leisure time, also account for few children.
- What about Eastern Europe and Russia?



STAGE 5

- Birth rates fall below death rates, leading to negative growth and eventual decline
- population *will continue to grow* for sometime after the birth rate falls below the death rate. After all, all of those children that were born before the fall are going to be having children in the next generation. This is the concept of **demographic momentum**.



LEARNING OBJECTIVE

INTERPRET AND APPLY THEORIES OF
POPULATION GROWTH AND DECLINE

MALTHUS

MALTHUS ON OVERPOPULATION

- Who is Malthus?
 - An English economist, Thomas Malthus (1766-1834) was one of the first to argue that the world's rate of population increase was far outrunning the development of food supplies.



POPULATION GROWTH VERSUS FOOD SUPPLY

- *An Essay on the Principle of Population* (1798): Population grows geometrically while food supply grows arithmetically.
- According to Malthus, these growth rates would produce the following relationships between people and food in the future:
 - Today: 1 person, 1 unit of food
 - 25 years from now: 2 persons, 2 units of food
 - 50 years from now: 4 persons, 3 units of food
 - 75 years from now: 8 persons, 4 units of food
 - 100 years from now, 16 persons, 6 units of food
- He concluded that population growth would press against available resources in every country, unless "moral restraint" produced lower CBRs or unless disease, famine, war, or other disasters produced CDRs.



NEO-MALTHUSIANS

- Neo-Malthusians argue that two characteristics of recent population growth make Malthus's thesis more frightening:
 - Malthus failed to anticipate that relatively poor countries would have the most rapid population growth because of transfer of medical technology (but not wealth) from MDCs.
 - Therefore, the gap between population growth and resources in some countries has widened.
 - The world population growth is outstripping a wide variety of resources, not just food production.
 - Could wars and civil violence increase in the coming years because of the scarcities of food and resources?

??



MALTHUS'S CRITICS

- Many geographers consider Malthusian beliefs unrealistically pessimistic because they are based on a belief that the world's supply of resources is fixed rather than expanding.
 - According to the theory of possibilism, technology will provide alternatives.
- Contemporary analysts criticize Malthus's theory that population growth produces problems.
 - They say a larger population could stimulate economic growth and, therefore, production of more food.
- Marxists maintain that no cause-and-effect relationship exists between population growth and economic development.
 - Poverty, hunger, and other social welfare problems are a result of unjust social and economic institutions.
- Some political leaders, especially in Africa, argue that high population growth is good for a country because more people result in greater power.

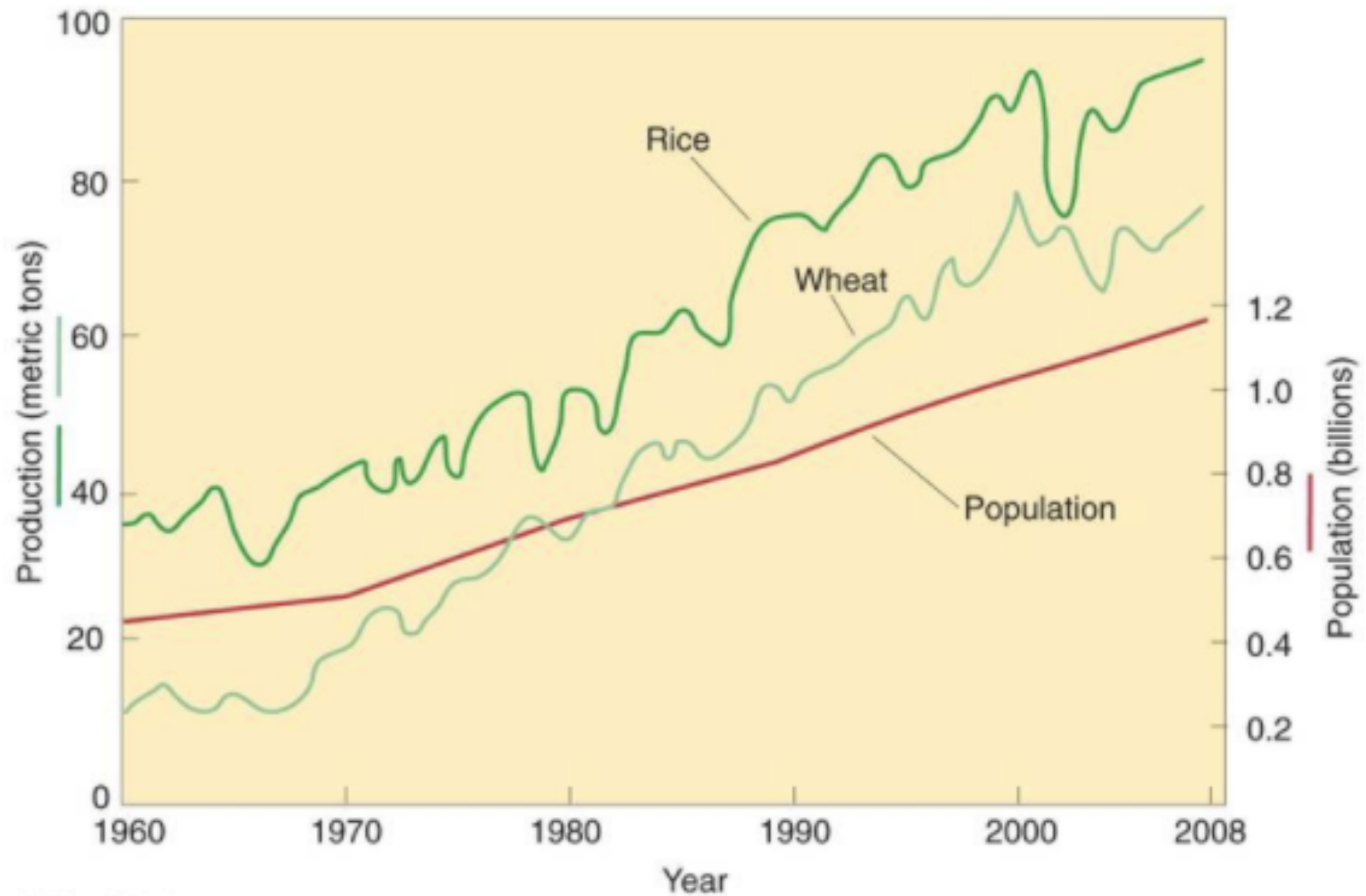


MALTHUS THEORY AND REALITY

- On a global scale, conditions during the past half-century have not supported Malthus's theory.
- Food production increased during the last half of the twentieth century somewhat more rapidly than Malthus predicted due to technological advances.
- Malthus's model expected world population to quadruple between 1950 and 2000, from 2.5 billion to 10 billion people, but world population actually grew to only 6 billion.
 - He did not foresee the technological changes that would induce societies to move sooner into stage 3 or 4.
- Population has been increasing at a much slower rate during the past quarter-century than it was during the previous half-century.
- However, neo-Malthusians point out that despite the lower NIR during the 1990s, the world added just as many people as during the 1980s.



MALTHUS: THEORY & REALITY



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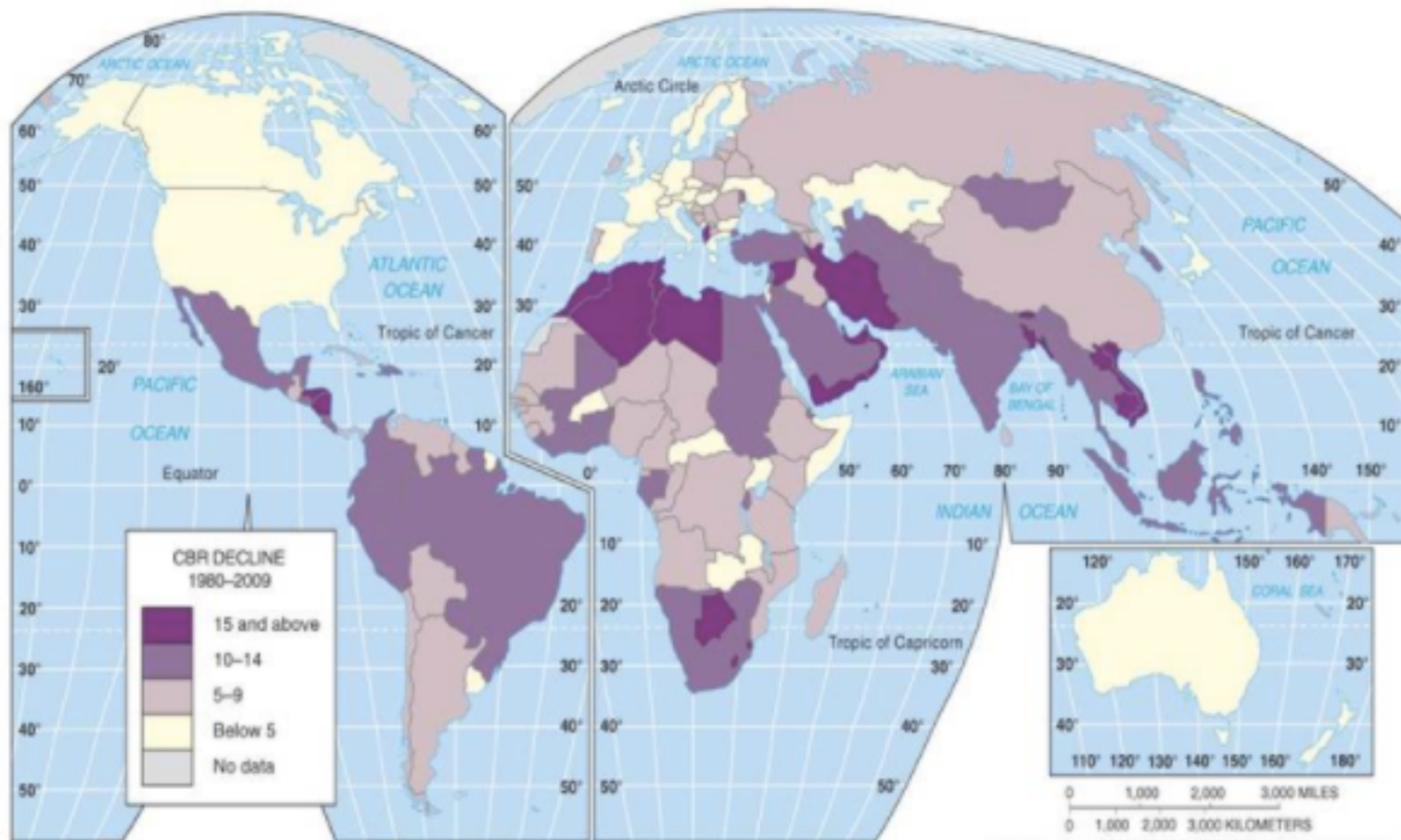
[HTTPS://WWW.YOUTUBE.COM/
WATCH?V=QAKW_I0BDPQ](https://www.youtube.com/watch?v=QAKW_I0BDPQ)

REASONS FOR DECLINING BIRTH RATES

- There are only two ways to decrease the NIR: lower birth rates or higher death rates.
- In most countries, the decline in the NIR has occurred because of a lower birth rates, but in some countries of sub-Saharan Africa, the CDR is increasing.
- The CBR has declined rapidly since 1990 from 27 to 21 in the world as a whole
- Two strategies have been successful in reducing birth rates.
 - One alternative emphasizes reliance on economic development
 - The other on distribution of contraceptives



CBR DECLINE



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ECONOMIC DEVELOPMENT

- One approach to lowering the birth rates emphasizes the importance of improving local economic conditions
- A wealthier community has more money to spend on education and health-care programs that would promote lower birth rates
- According to this approach, if women are able to attend school and remain in school longer, they are more likely to learn employment skills and gain more economic control over their lives
- With improvement of health-care programs there would be an improvement in prenatal care, counseling about sexual transmitted diseases, and child immunization
- With the survival of more infants ensured, women would be more likely to chose to make more effective use of contraceptives to limit the number of children

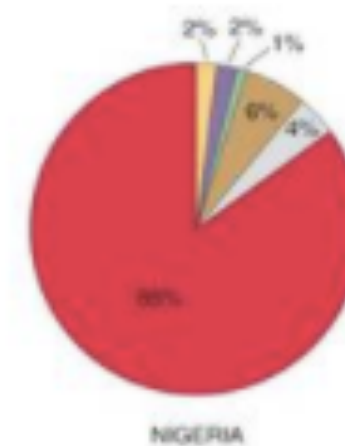
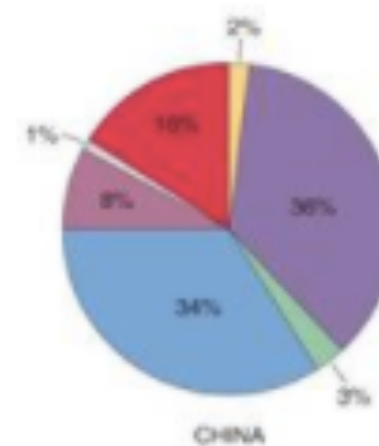
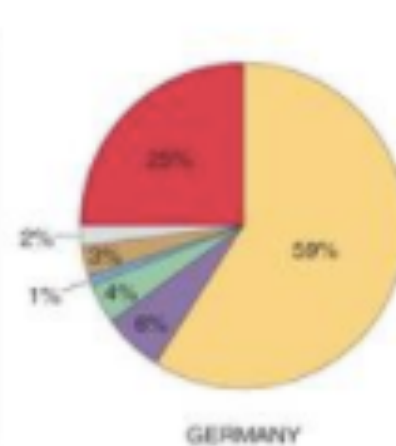
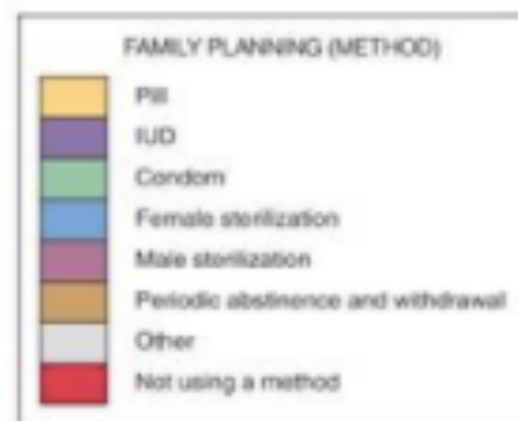
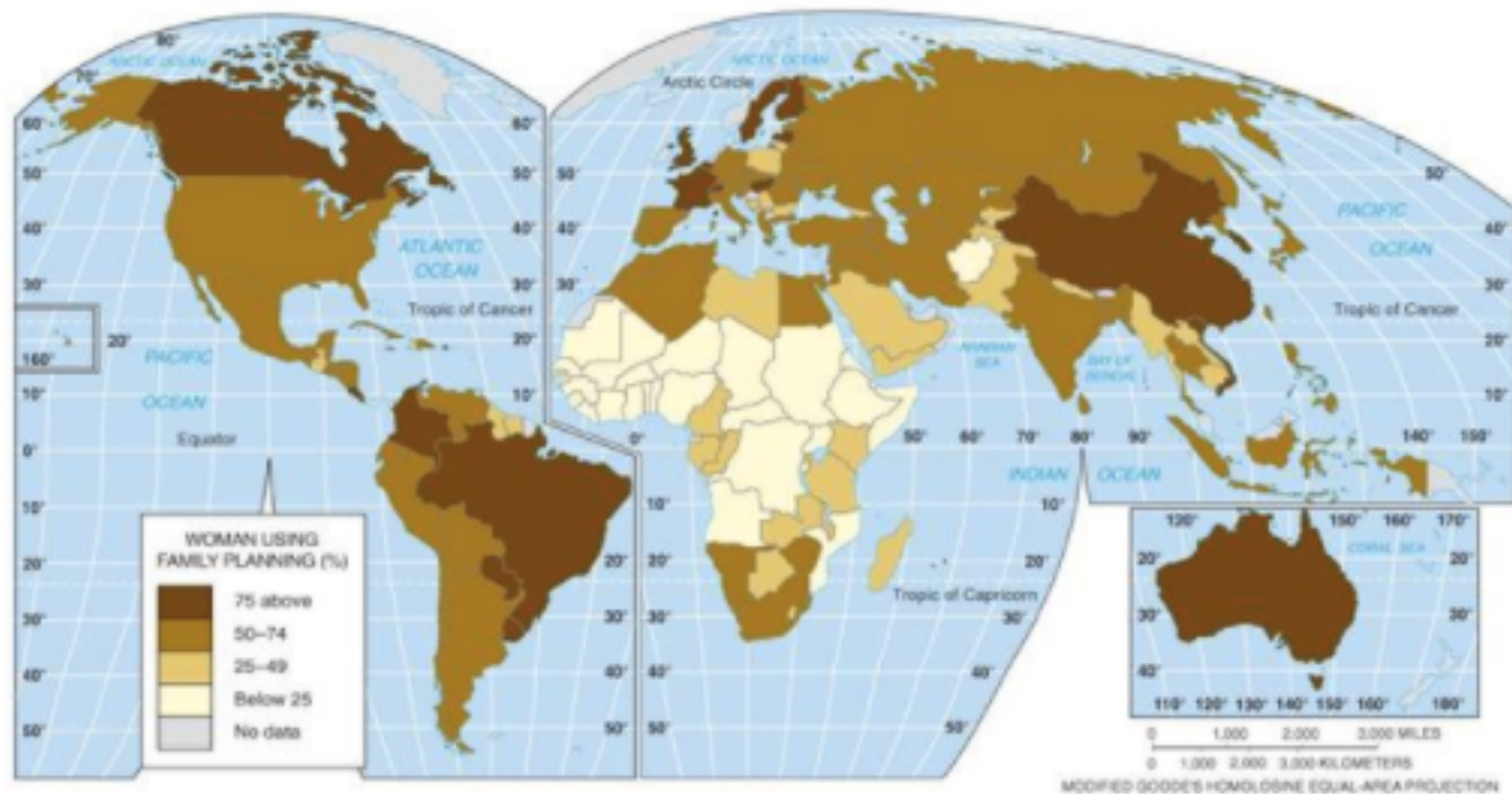


DISTRIBUTION OF CONTRACEPTIVES

- This emphasizes the importance of rapidly diffusing modern contraceptive methods
- Economic Development may promote lower birth rates in the long run, but the world cannot wait around for the alternative to take effect
- According to this method contraceptives are the best method for lowering the birth rate
- Regardless of which alternative is more successful, many oppose birth-control programs for religious and political reasons
- Opposition is strong in the U.S to terminating pregnancy by abortion, and the U.S government has at times withheld aid to countries and family-planning organizations that advise abortion.
- Analysts agree that the most effective means of reducing births would employ both alternatives.



FAMILY PLANNING

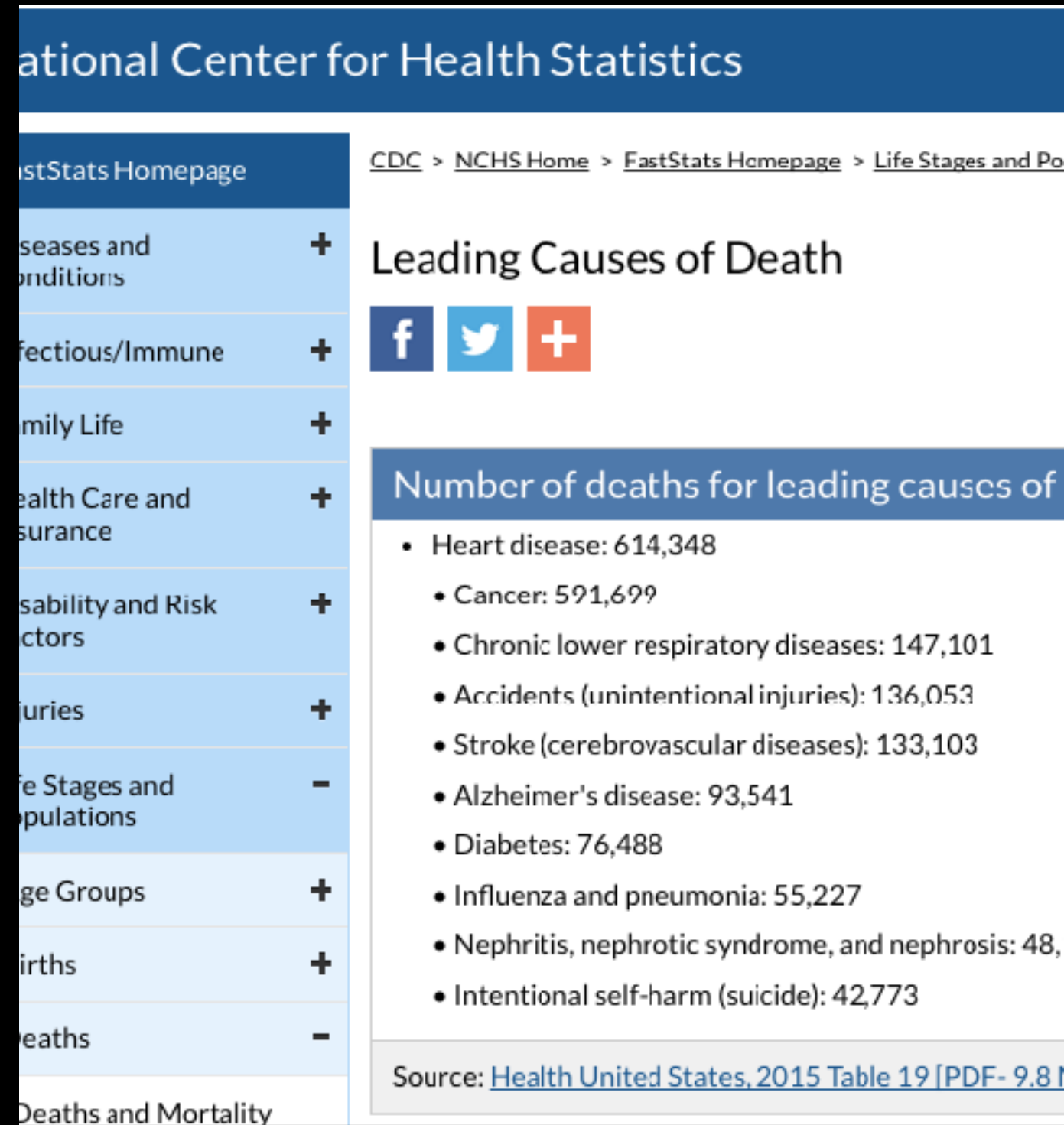


HOW WE DIE

EPIDEMIOLOGICAL TRANSITION STAGES

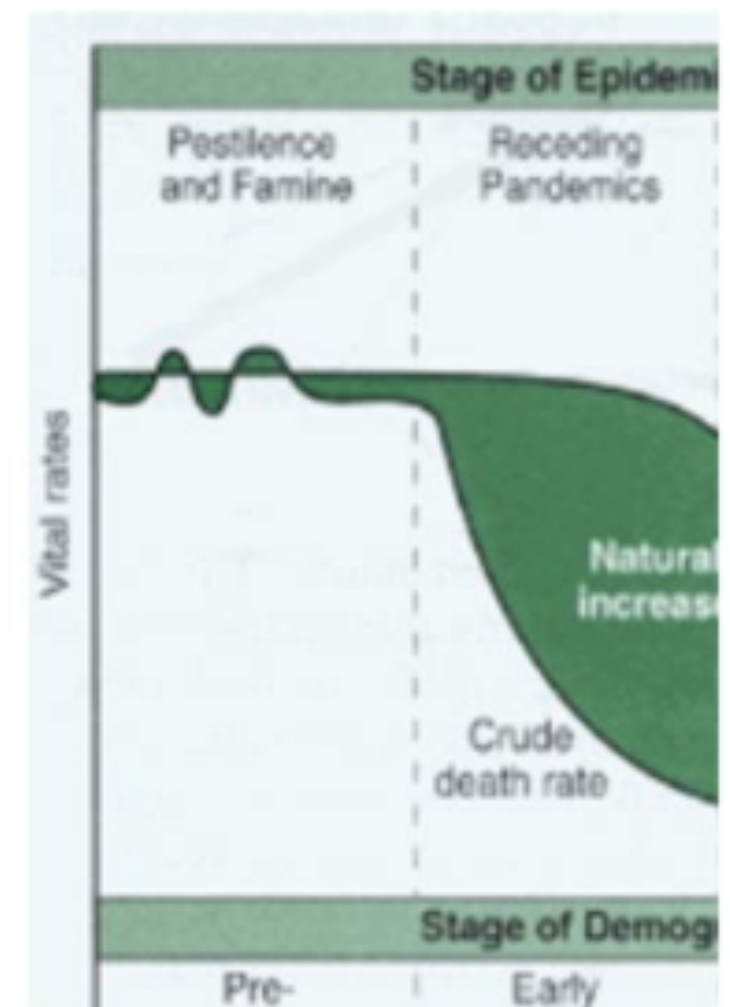
EPIDEMIOLOGIC MODEL

- Leading causes of death vary from country to country due to conditions present in different levels of development
- Common causes of death in MDCs differs from those in LDCs



EPIDEMIOLOGIC TRANSITION STAGES 1 & 2

- Stage 1 of the epidemiological transition, as originally formulated by epidemiologist Abdel Omran in 1971, has been called the stage of pestilence and famine.
- Infections and parasitic diseases were principal causes of human deaths, along with accidents and attacks by animals and other humans.
- Malthus called these causes of death “Natural Checks” on the growth of the human population in stage 1 of the demographic transition.



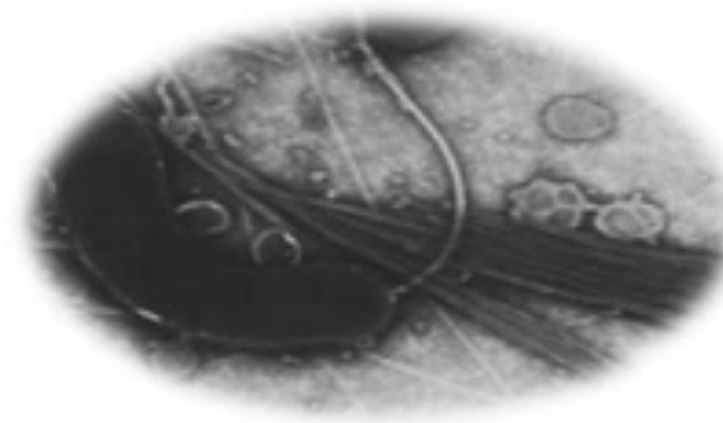
BLACK PLAGUE



- The origin and diffusion of history's most violent stage 1 epidemic- the Black Plague, or bubonic plague, which was probably transmitted to humans by fleas from migrating infected rats.
- The plague originated in present-day Kyrgyzstan and was brought there by a Tatar army when it attacked an Italian trading post on the black sea in present-day Ukraine.
- Italians fleeing the trading post then carried the rats on ships west to the major coastal cities of southeastern Europe in 1347.
- The plague spread to Western Europe in 1348 and Northern Europe in 1349.
- About 25 million Europeans died between 1347 and 1350, at least one-half of the continent's population.



CHOLERA



- Stage 2 of the epidemiologic transition has been called the stage of receding pandemics.
- A **pandemic** is a disease that occurs over a wide geographic area and affects a very high proportion of the population.
- Improved sanitation, nutrition, and medicine during the Industrial Revolution reduced the spread of infectious diseases.
- However, areas typically dominated by those living in poverty brought large groups of people crowded together in growing industrial cities.
- Cholera—unknown in rural areas became an especially virulent epidemic in urban areas during the Industrial Revolution.

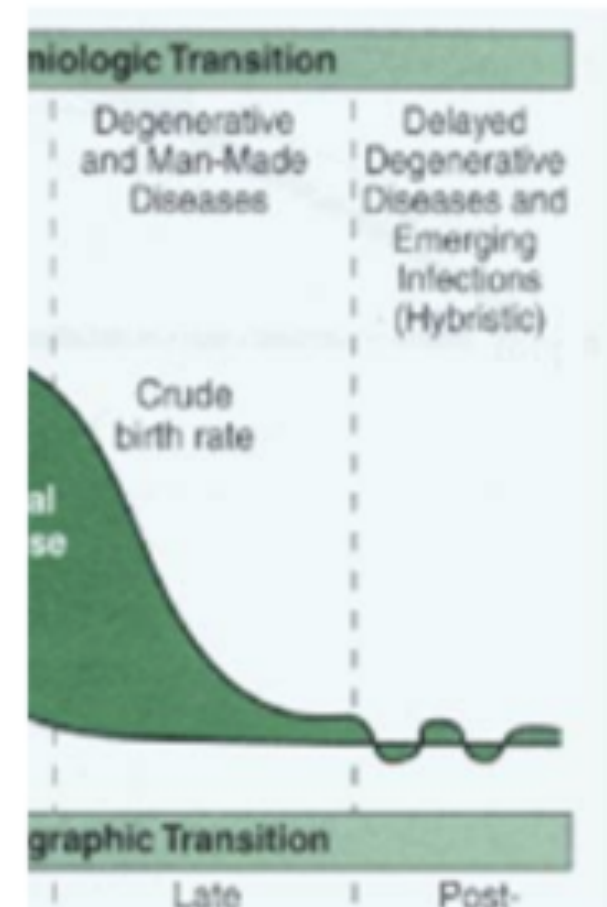


2010 CHOLERA
OUTBREAK IN
HAITI
United Nations to blame?



EPIDEMIOLOGIC TRANSITION STAGES 3 & 4

- Stage 3: Degenerative diseases and human-created diseases
 - Less infectious diseases and more chronic disorders associated with aging
 - Decline of polio (14,000 in 1954 to 0 in the 1990s)
 - Decline of measles (760,000 in 1958 to 1,000 in the 1990s)
 - Most significant diseases: Heart disease and cancer
 - As LDCs moved recently from stage 2 to stage 3, infectious diseases also declined.
- Stage 4: Delayed degenerative diseases
 - Major degenerative causes of death are cardiovascular diseases and cancers.
 - Medical advances prolong life



STAGE 5?



- A possible stage 5: Reemergence of infectious and parasitic diseases?
 - Three reasons why it might be happening:
 - Evolution
 - Infectious disease microbes have continuously evolved and become resistance to drugs and insecticides.
 - For example, DDT-resistant mosquitoes and malaria
 - Poverty
 - Infectious diseases are more prevalent in poor areas as expensive treatment poses an economic burden.
 - This is why we see a rise in infectious diseases in LDCs
 - Improved travel
 - Airplanes allow residents of one country to easily reach another, and their diseases!
 - For example, the avian flu of 2006



County (Raleigh), N.C.

Population (2010): 900,993

Population (2005): 746,048

Median income per cap. (2010): \$25,800

Median income per cap. (2010): \$25,600

Median income per cap. (2010): \$25,600

Hide
Lines

Inbound migration 18,600

Outbound migration 9,300

Select year (April-April):

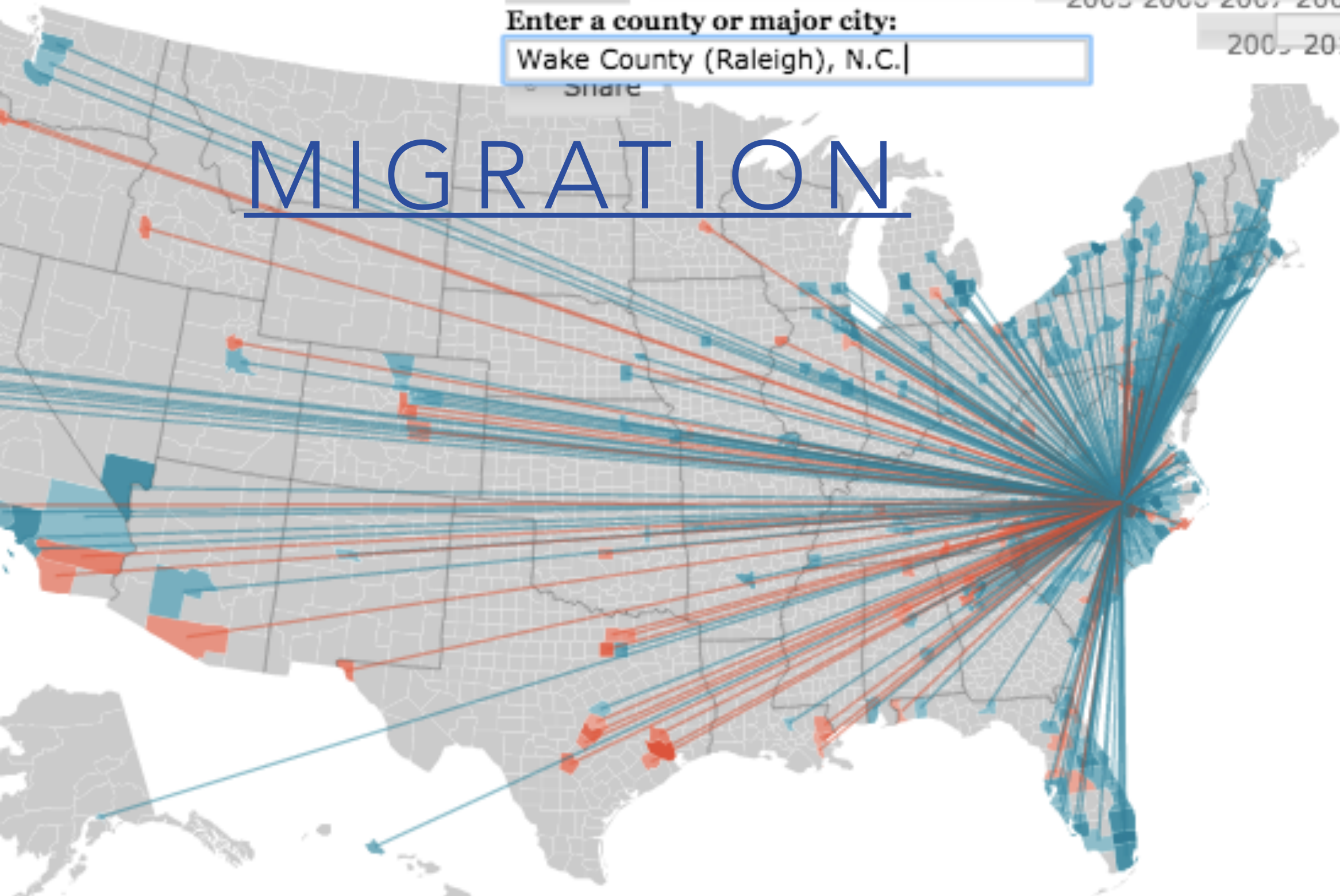
2005 2006 2007 2008

2009 2010

Enter a county or major city:

Wake County (Raleigh), N.C.

MIGRATION



WHY DO PEOPLE MIGRATE?

- **migration** is a permanent move to a new place
- geographers study from where people migrate, to where they migrate and why
- **3 main motivations for migration**
 - economic opportunity
 - cultural freedom
 - environmental comfort



MIGRATION IS A TYPE OF *MOBILITY*

- it is relocation diffusion
- the flow of migration always involves a two-way connection
 - **emigration** - migration *from* a location
 - **immigration** - migration *to* a location



Migration

- The difference between the number of immigrants and the number of emigrants is the **net migration**.
 - ▣ Net in-migration: when the number of immigrants exceeds the number of emigrants.
 - ▣ Net out-migration: when the number of emigrants exceeds the number of immigrants.

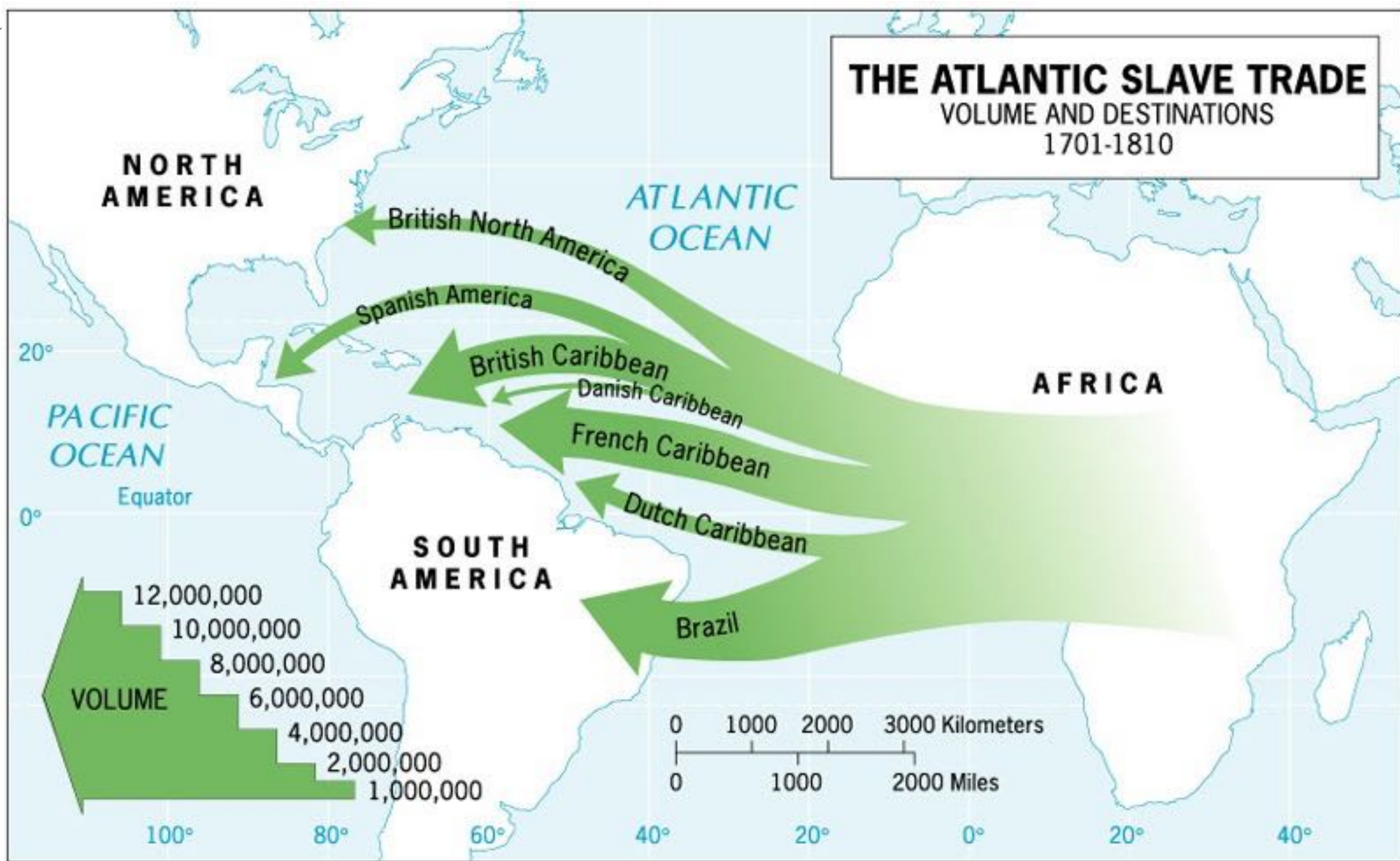




60 SECOND RESEARCH: WHAT IS THE
NET MIGRATION OF THE UNITED STATES?

Why do People Migrate?

- Forced Migration – Human migration flows in which the movers have no choice but to relocate.
- Voluntary Migration – Human migration flows in which the movers respond to perceived opportunity, not force.



Forced Migration – the Atlantic Slave Trade (after P. D. Curtin)

Forced Migration



The Trail of Tears, 1838

Voluntary African-American Migrations

Blacks moved to *The Industrial Belt* (i.e., Chicago, New York, Detroit) and California during labor shortages.



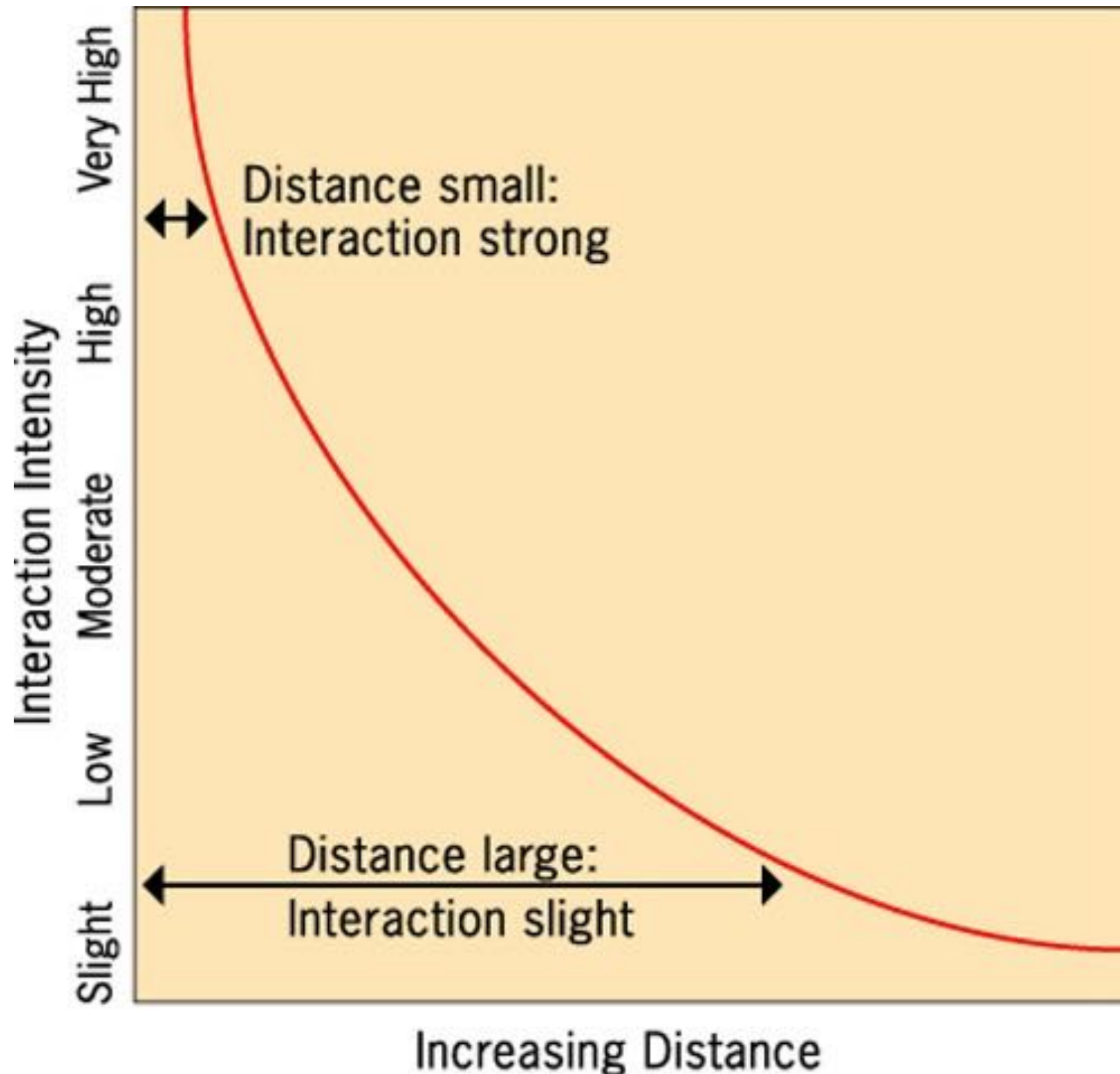
The culture of the receiving regions was affected by these changes. Can you think of specific cultural traits were added to the new regions by the arrival of large numbers of African Americans?

Kinds of Voluntary Migration

- Step Migration – When a migrant follows a path of a series of stages, or steps toward a final destination.
- Chain Migration – When a migrant communicates to family and friends at home, encouraging further migration along the same path, along kinship links.

Voluntary Migration –

Migrants weigh push and pull factors to decide first, to emigrate from the home country and second, where to go.



Distance Decay weighs into the decision to migrate, leading many migrants to move less far than they originally contemplate.

Intervening Opportunities

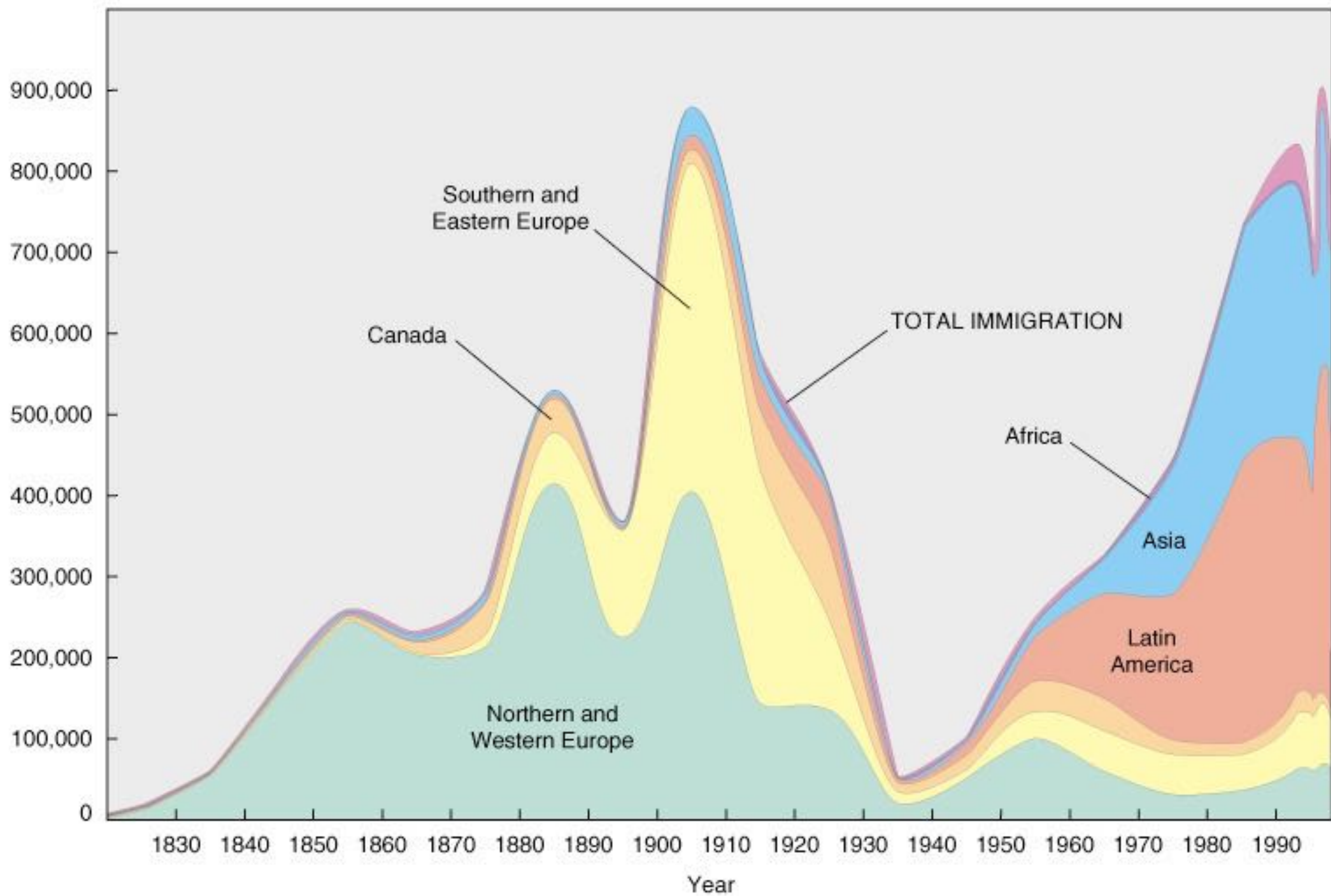
- **Law of Intervening Opportunities:**
Migration to a new location is directly proportional to the number of OPPORTUNITIES at the destination
- **intervening opportunity** –at one of the steps along the path, pull factors encourage the migrant to settle there.
- **intervening obstacle** - impediments to reaching final destination

Distance

- **The Gravity Model – Predicts movement between 2 places based on SIZE and DISTANCE**

$$\frac{\text{population}_1 \times \text{population}_2}{\text{distance}^2}$$

Annual immigration into the United States



NOT ALL MOBILITY IS MIGRATION

- short-term, repetitive, or cyclical movements that are regularly recurring are called **circulations**
 - examples?
- **seasonal mobility** is movement associated with movement that occurs because of seasonal shifts
 - ex: migrant farmers, college students



LEARNING OBJECTIVE

EXPLAIN HOW PUSH AND PULL FACTORS CONTRIBUTE TO MIGRATION



Types of Push and Pull Factors

- Economic Conditions
 - ex: people move to find work
- Political Circumstances
 - ex: people seeking asylum
- Armed Conflict and Civil War
 - ex: Syrian refugees
- Environmental Conditions
 - ex: natural disaster, draught, famine cause migration
- Culture and Traditions
 - ex: religious freedom
- Demographic
 - ex: unbalanced sex ratios, overpopulation)

Environmental Push and Pull Factors



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Hurricane Katrina: a major natural disaster represents an **environmental push factor for forced migration.**

Environmental Push and Pull Factors



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The Dust Bowl in the 1930s led to forced migration from the Great Plains to California and elsewhere. What were these people called?

WHAT IS A REFUGEE?

- According to the U.N.
 - *A refugee has a well-founded fear of persecution for reasons of race, religion, nationality, political opinion or membership in a particular social group. Most likely, they cannot return home or are afraid to do so. War and ethnic, tribal and religious violence are leading causes of refugees fleeing their countries.*
- 1951 Refugee Convention was created because of the failure to save 6 million Jews during the Holocaust
- **forced migration**



INTERNALLY DISPLACED PERSONS

- **Internally Displaced Persons** are technically free to remain in their home country, but do not have place to stay



ASYLUM SEEKERS

- a person who has applied for asylum under the 1951 Refugee Convention on the Status of Refugees on the ground that if he is returned to his country of origin he has a well-founded fear of persecution on account of race, religion, nationality, political belief or membership of a particular social group.
- by definition, a refugee is an asylum seeker whose case has been accepted by an asylum country





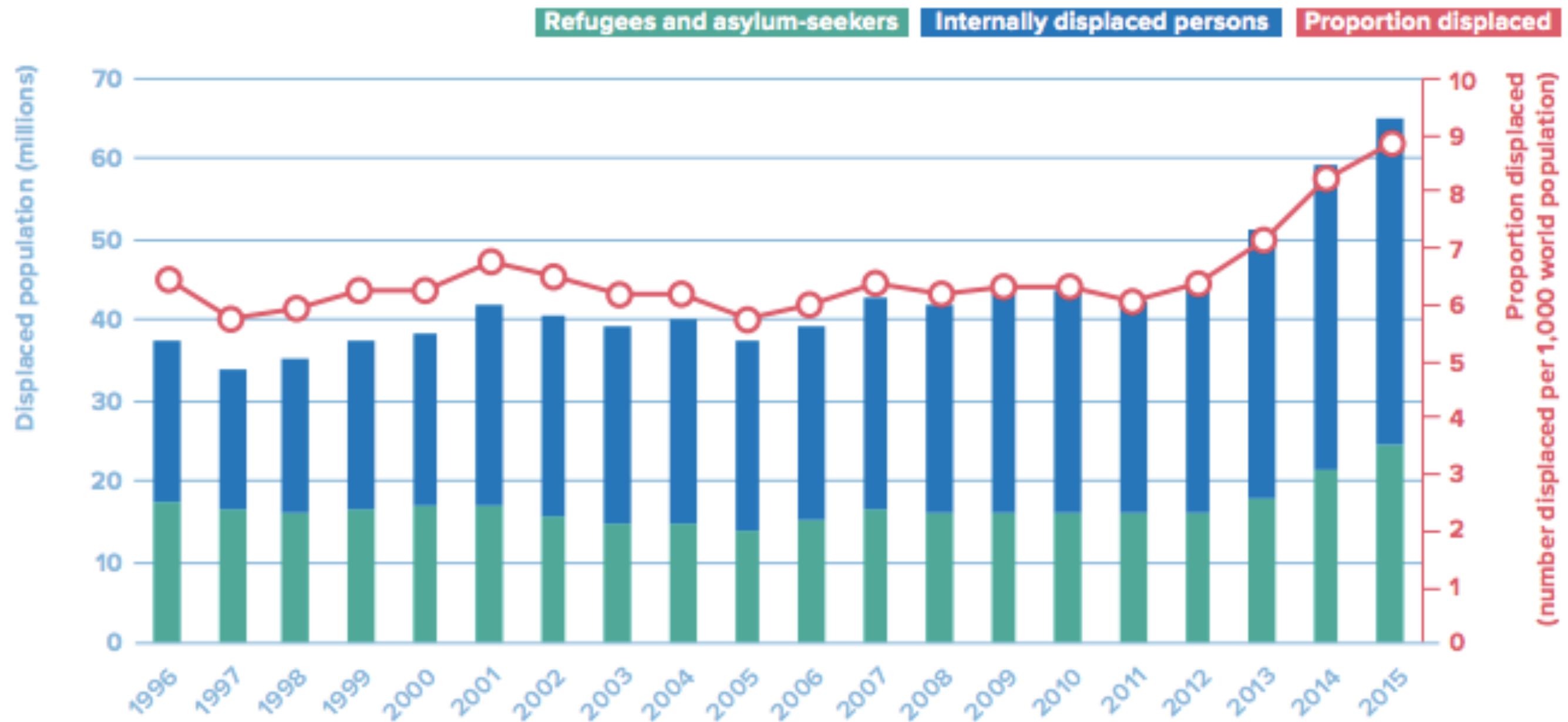
REFUGEES: SOURCES AND DESTINATIONS



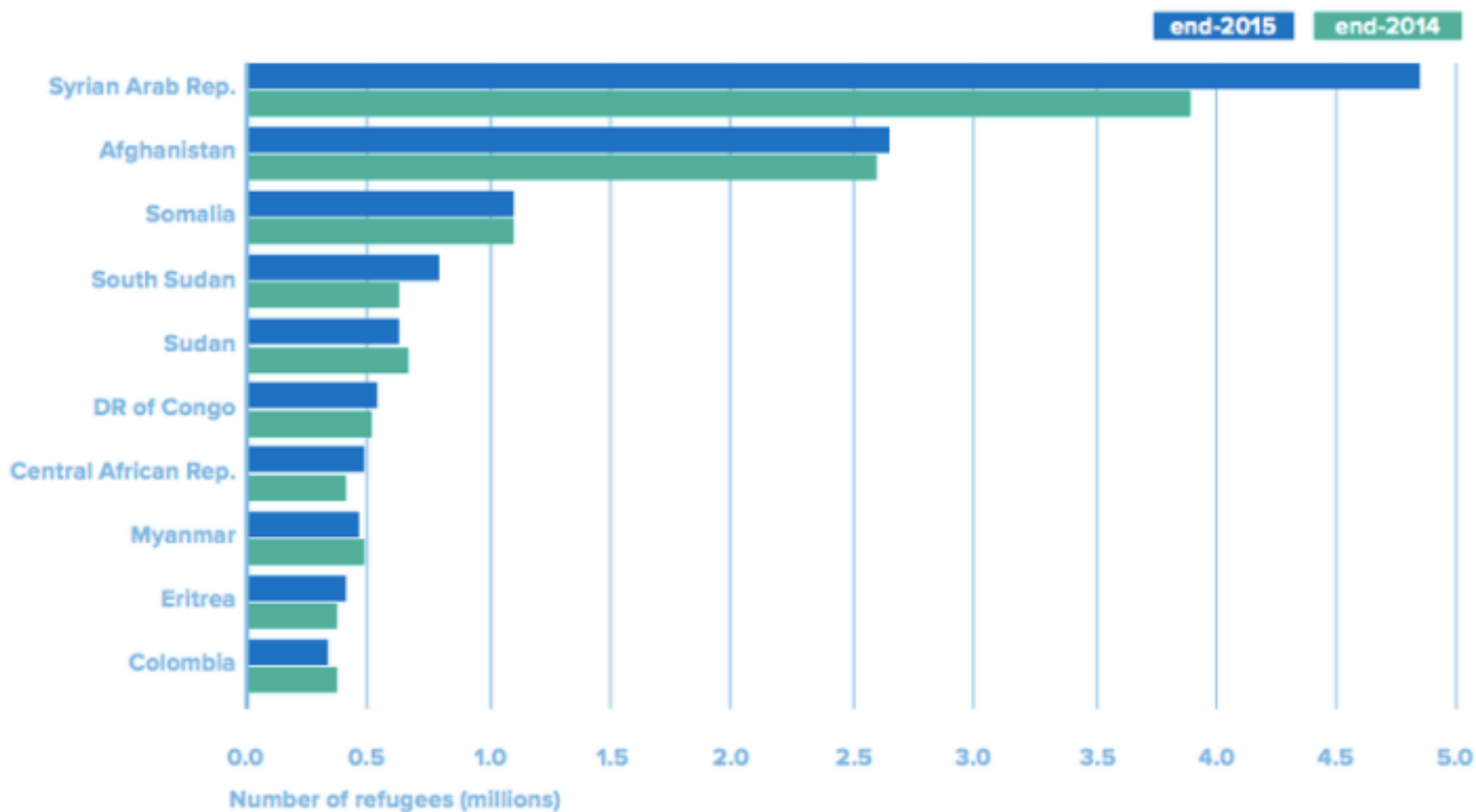


REFUGEES: BY THE NUMBERS

Fig.1 Trend of global displacement & proportion displaced | 1996 - 2015 (end-year)

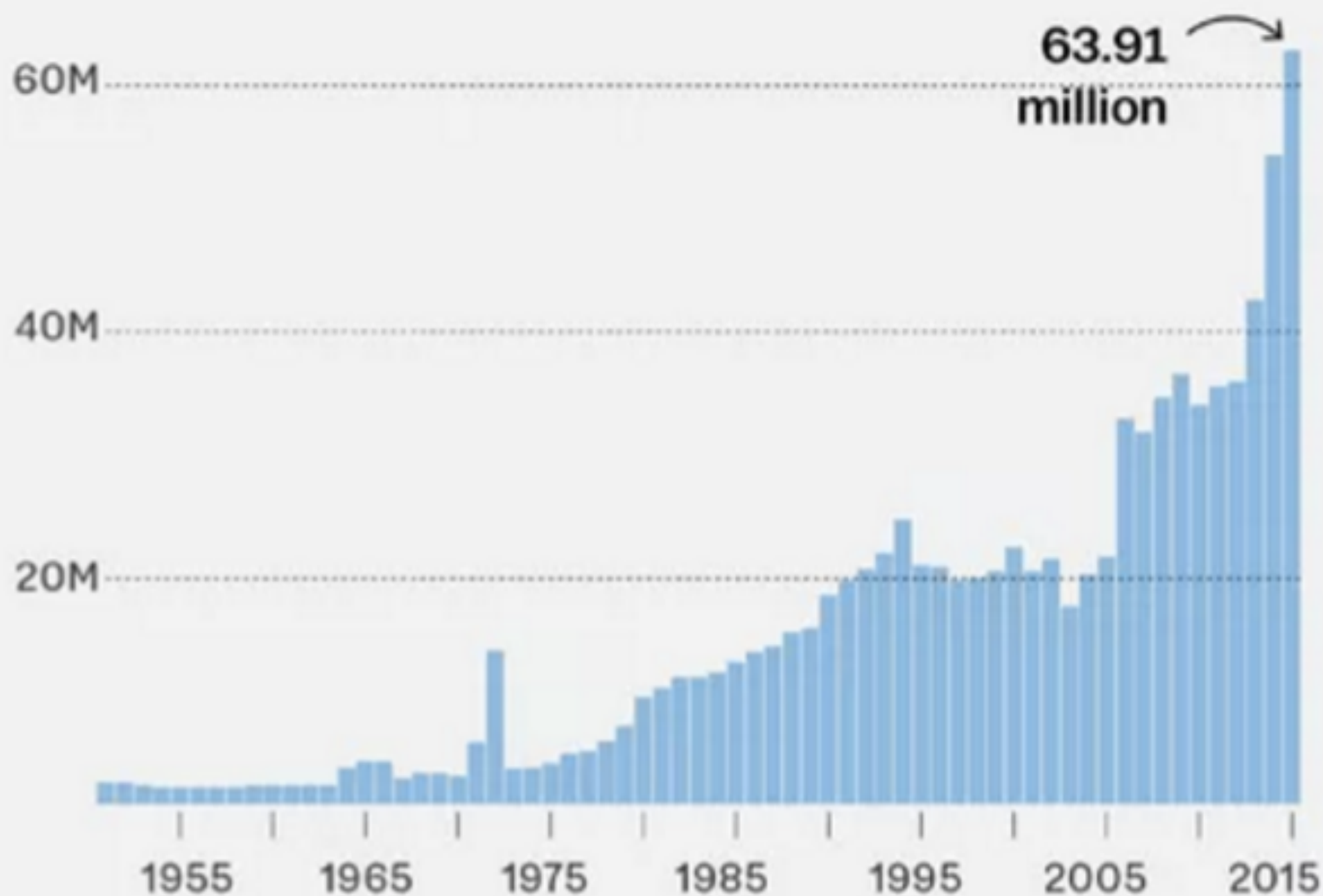


Major source countries of refugees | 2014 - 2015 (end-year)



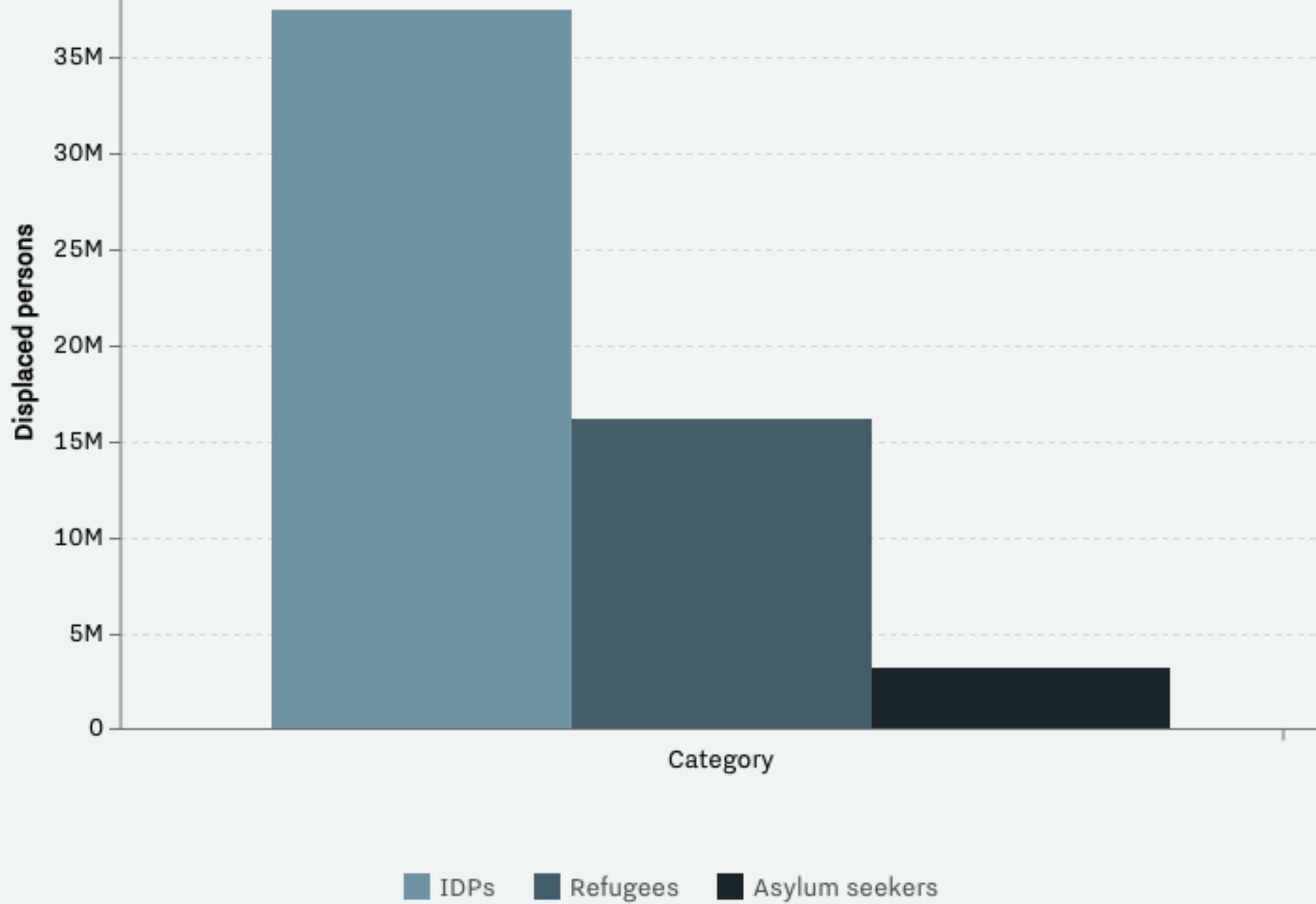
The refugee crisis is at historic proportions

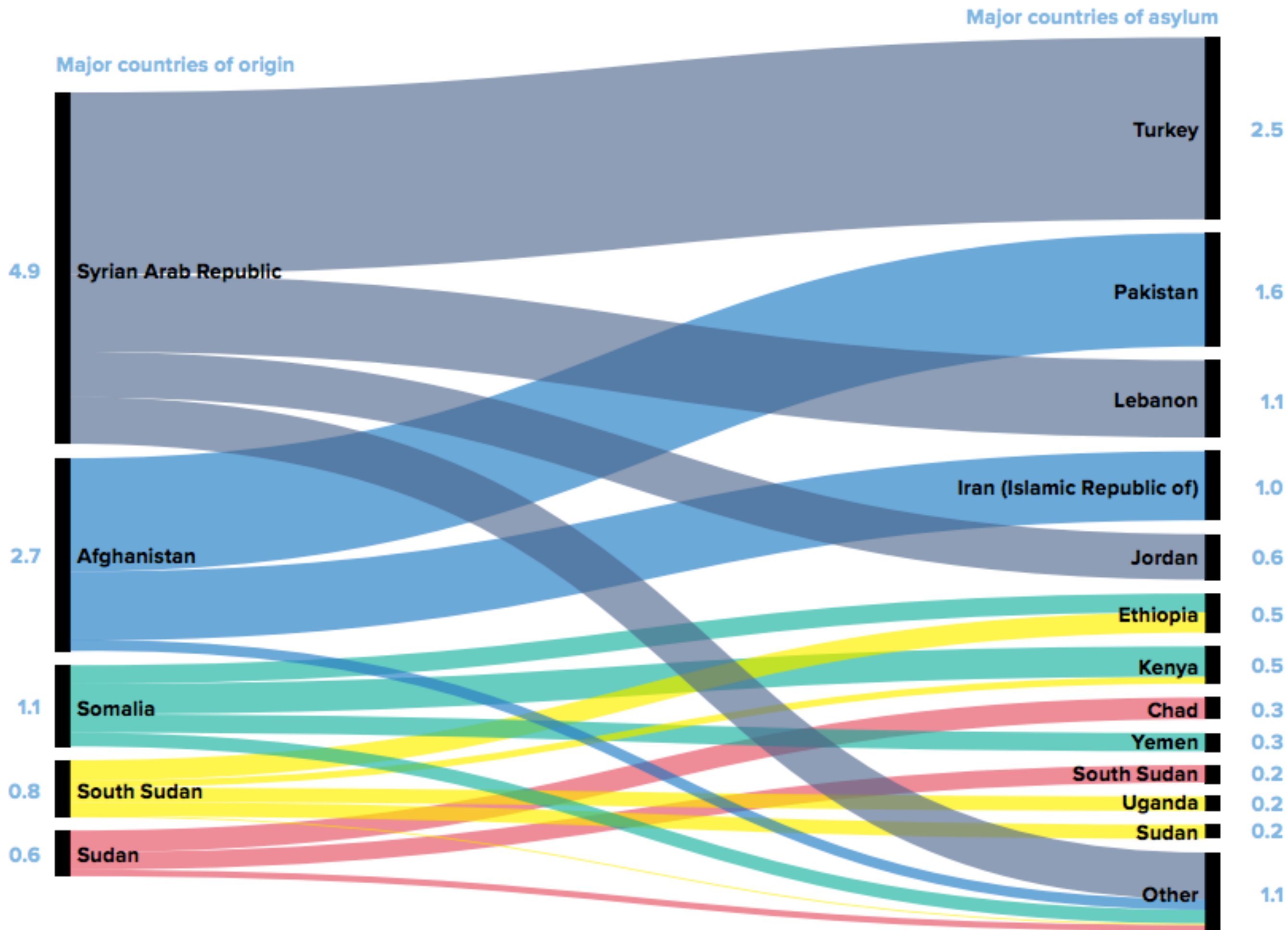
Persons of concern, including refugees, asylum seekers, internally displaced persons, and others



Source: UNHCR

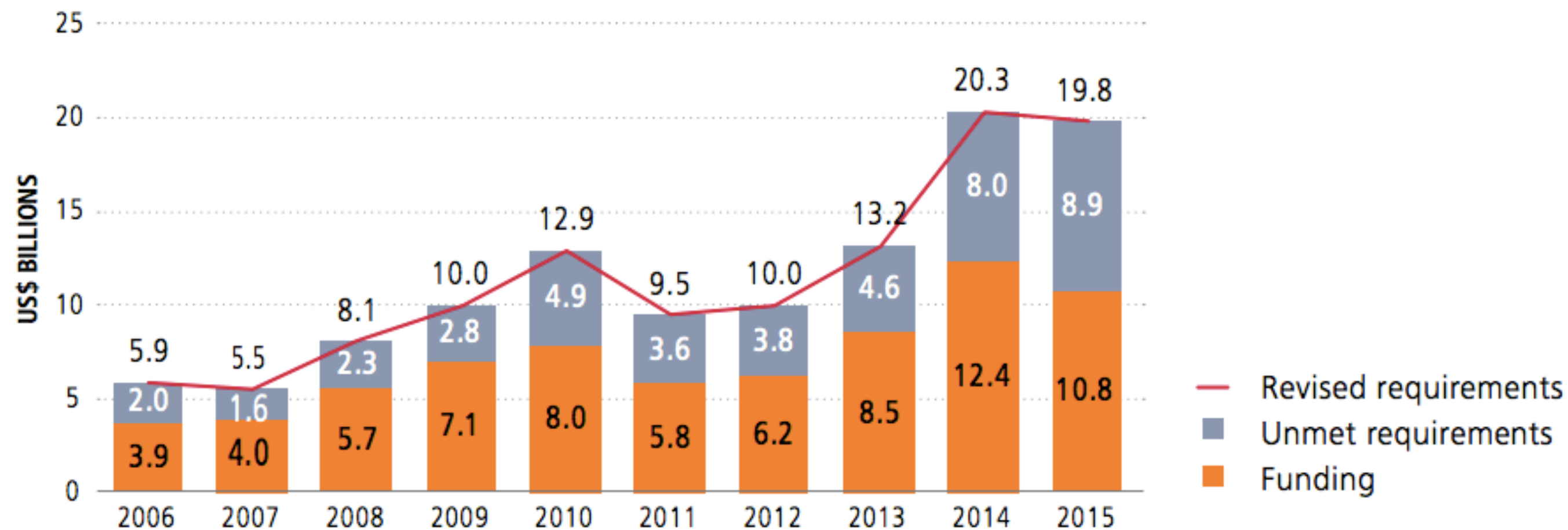
Vox



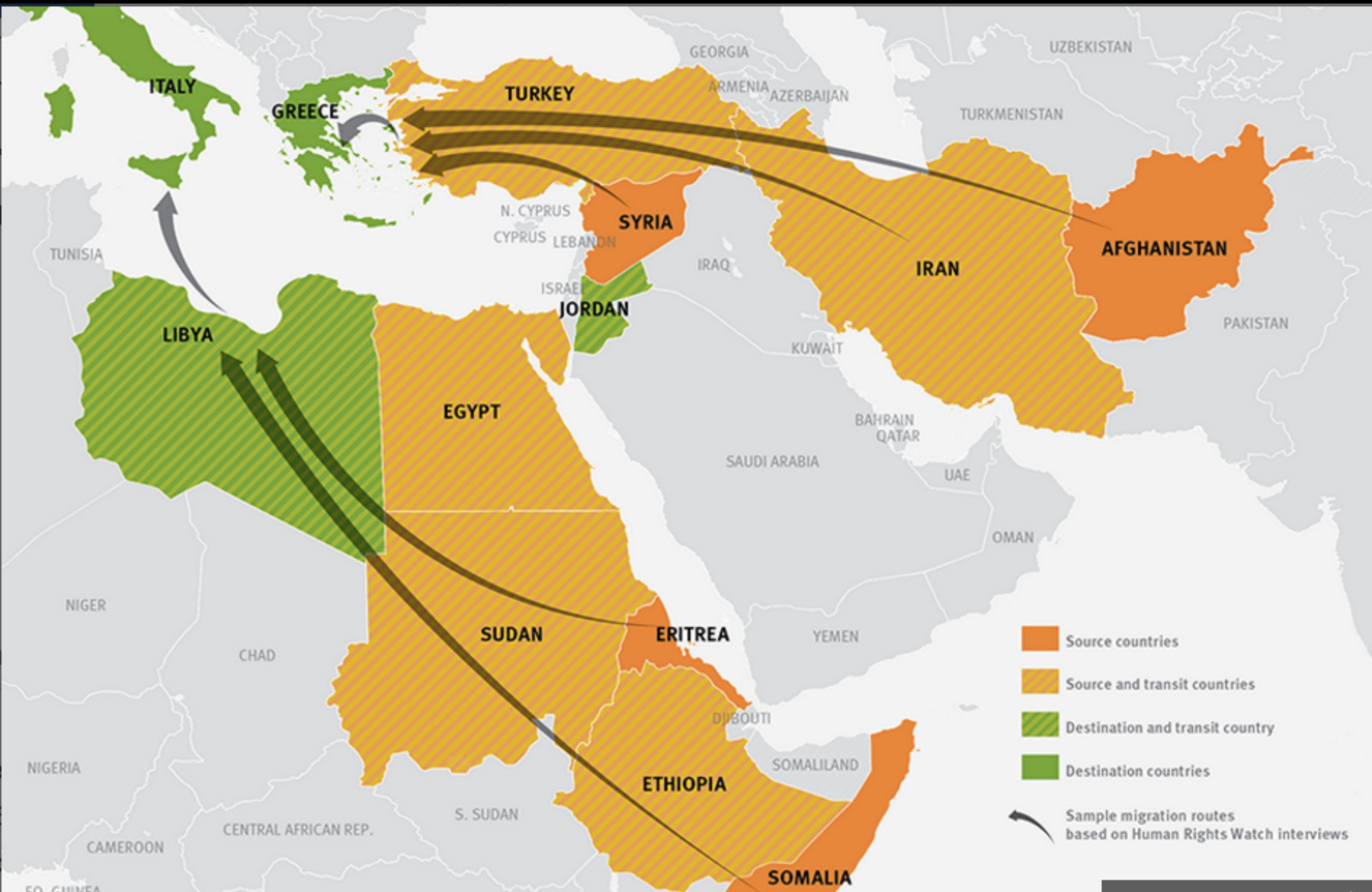


International relief efforts are chronically underfunded

Funding and unmet requirements, UN-coordinated appeals, 2006–2015



Many refugee routes are very dangerous



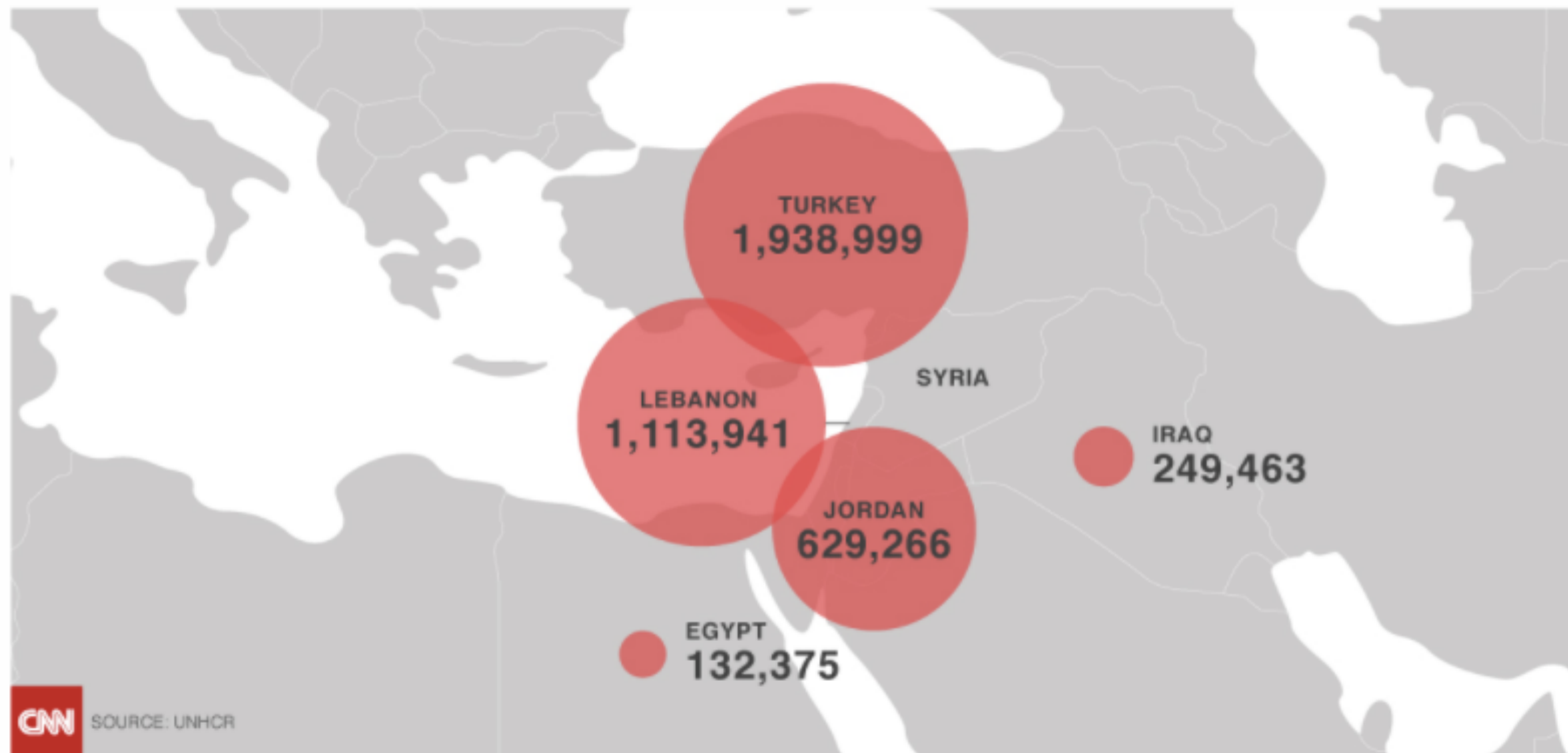


BETWEEN JANUARY AND OCTOBER, 2016, ROUGHLY,
3,800 MIGRANTS DIED CROSSING THE MEDITERRANEAN

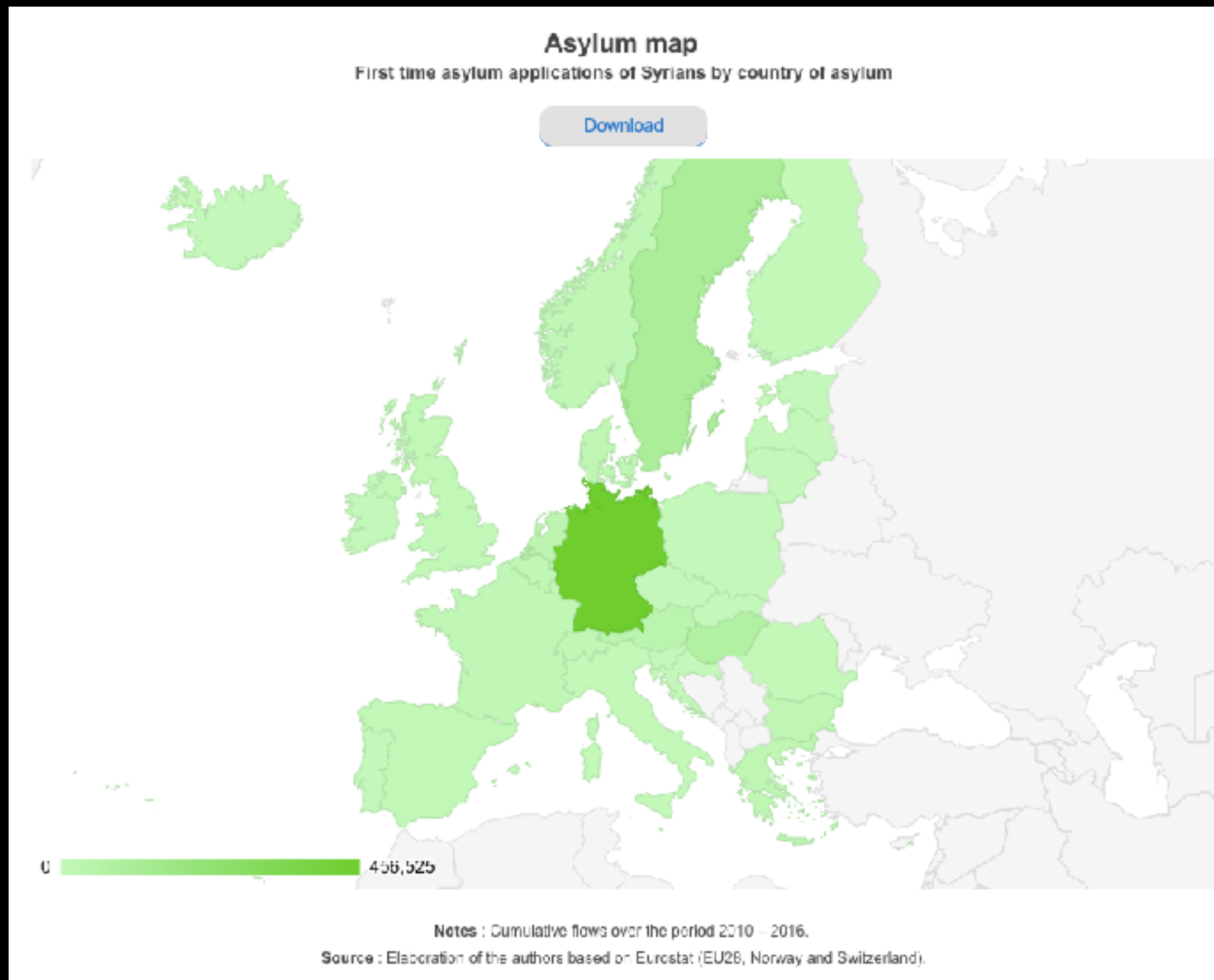
MOST SYRIAN REFUGEES SETTLE IN SMALL, NEARBY COUNTRIES

4.1 million Syrians are registered refugees

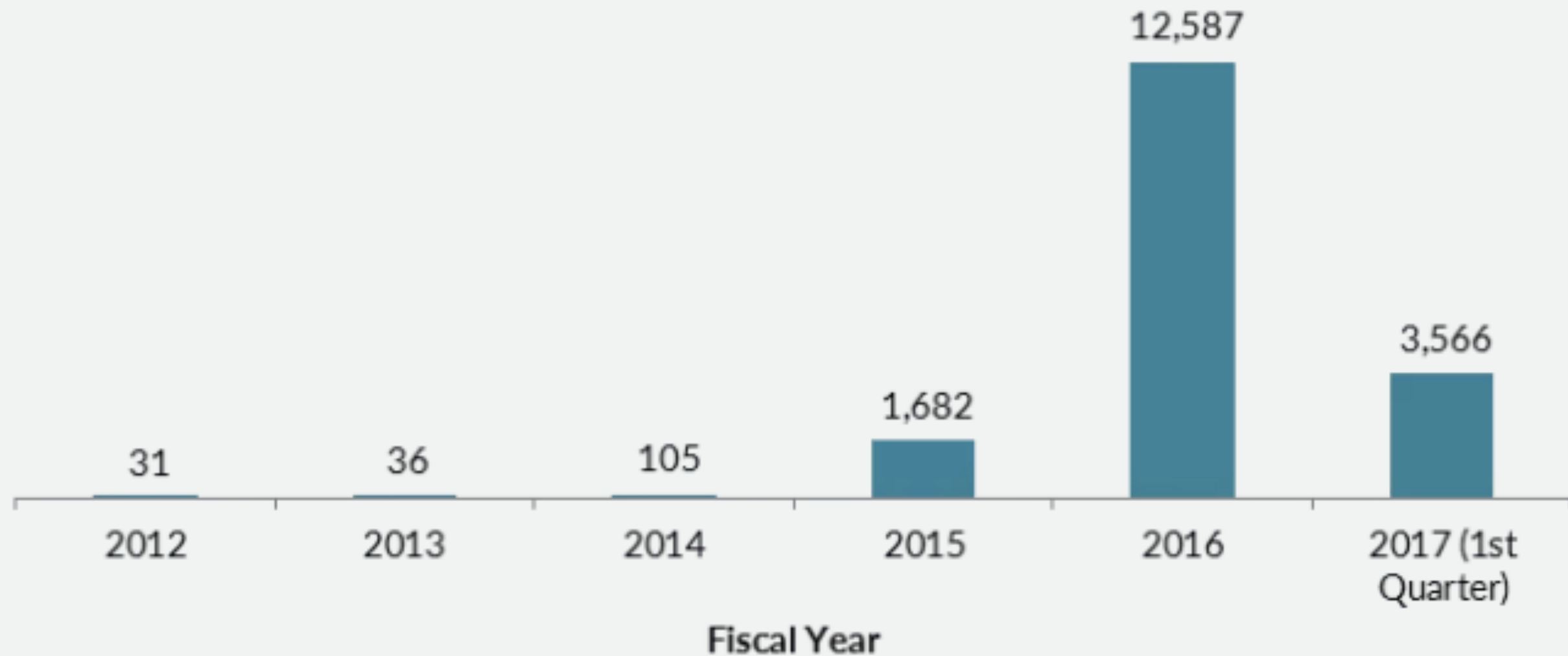
Most of them live in neighboring countries



MANY EUROPEAN STATES SEE SYRIAN REFUGEES AS A NATIONAL SECURITY LIABILITY cnn



SYRIAN REFUGEES ACCEPTED INTO THE UNITED STATES



Syrian refugees resettled by the United States. | (Migration Policy Institute)

YOU KNOW THAT AT&T GIRL?

- <https://www.youtube.com/watch?v=ZlsPcYFYaG0>



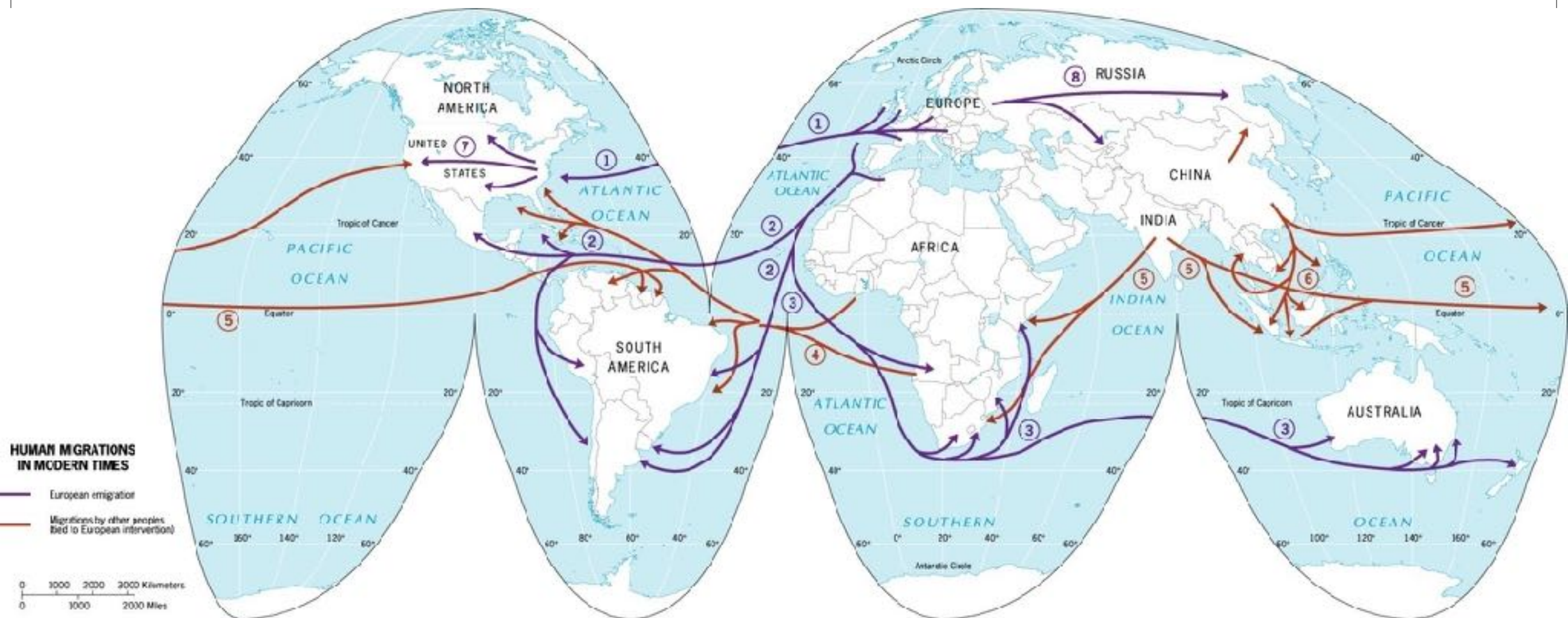
E.G. Ravenstein (1834-1913)

Laws of Migration

- Most migrants only go a short distance
- Long-distance migrants favor big cities
- Most migration is step migration
- Most is rural to urban
- Each flow has a counter flow
- Most migrants are adults
- Most migrants are young males

Ravenstein Revisions

- More migrants are female
- Most migrants are among the best educated
 - result: brain drain.
 - *when the most educated people leave their home country*



Major Global Migration Flows

From 1500 to 1950

Where Are Migrants Distributed?

- About 3 percent of the world's people are international migrants – they currently live in countries other than the ones in which they were born.
- Global migration patterns
 - ▣ Net out-migration: Asia, Africa, and Latin America
 - ▣ Net in-migration: North America, Europe, and Oceania
 - The United States has the largest foreign-born population

Global Migration Patterns

- Although the U.S. contains the largest number of immigrants, the U.S. has a smaller percentage of immigrants than several less populous countries.
 - ▣ One-fourth of the Australian population
 - ▣ One-sixth of the Canadian population
- Europe has less than the U.S. with roughly five percent
- The highest percentage of immigrants = Middle East ($1/2$ of the region's total population)

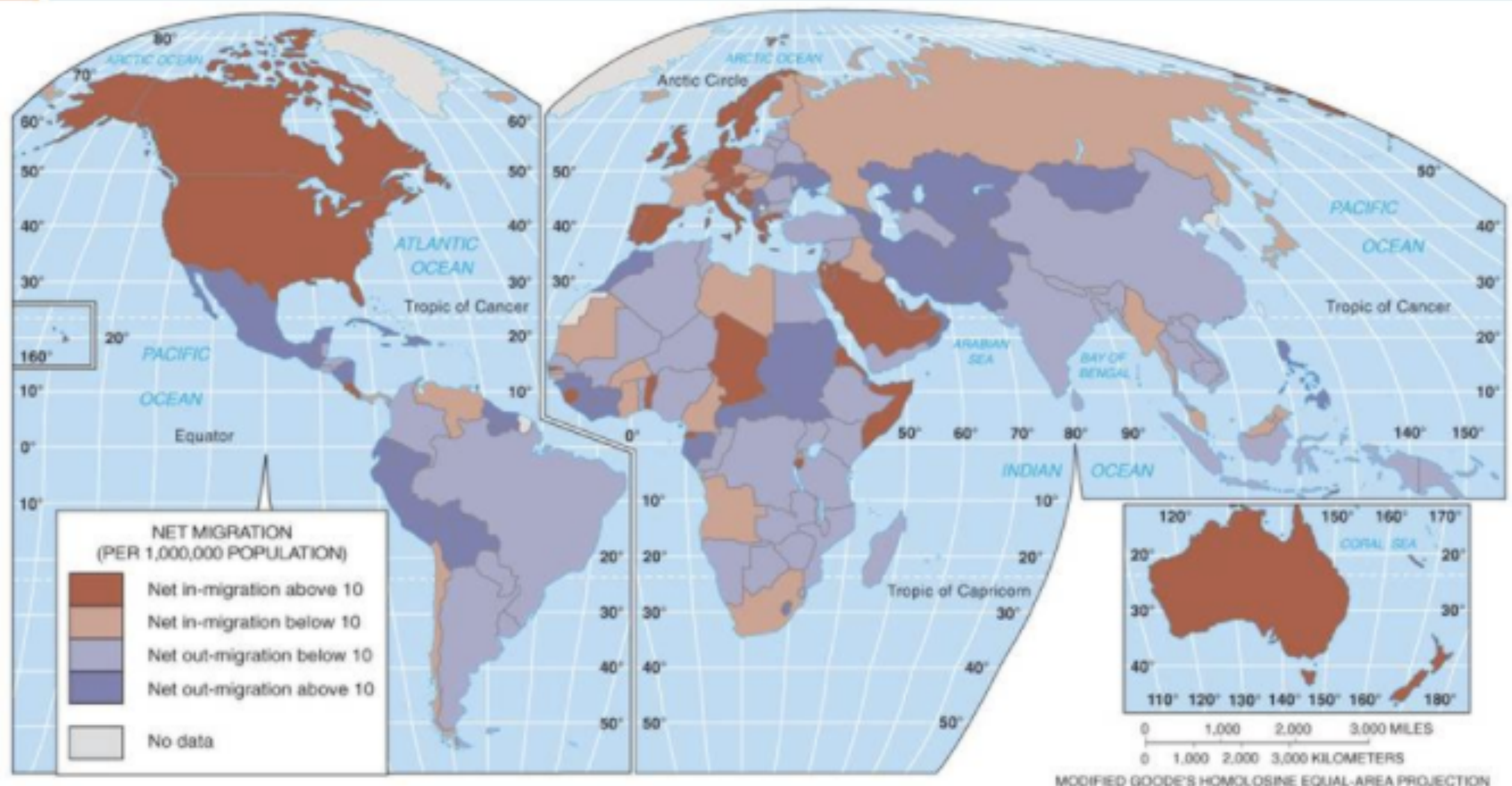
Global Migration Patterns

- The global pattern reflects the importance of migration from LDCs to MDCs.
- The population of the U.S. = 35 million born in other countries (12% of the population).
 - ▣ More than $\frac{1}{2}$ were born in Latin America
 - More than $\frac{1}{2}$ of those were born in Mexico
 - ▣ $\frac{1}{4}$ were born in Asia

Global Migration Patterns

- The highest percentage of immigrants = Middle East (1/2 of the region's total population)
 - ▣ United Arab Emirates = 74% immigrants
 - ▣ Kuwait = 68% immigrants
- These and other petroleum-exporting countries in the Middle East attract immigrants primarily from poorer Middle Eastern countries and from Asia to perform many of the dirty and dangerous functions in the oil fields.

Net Migration by Country

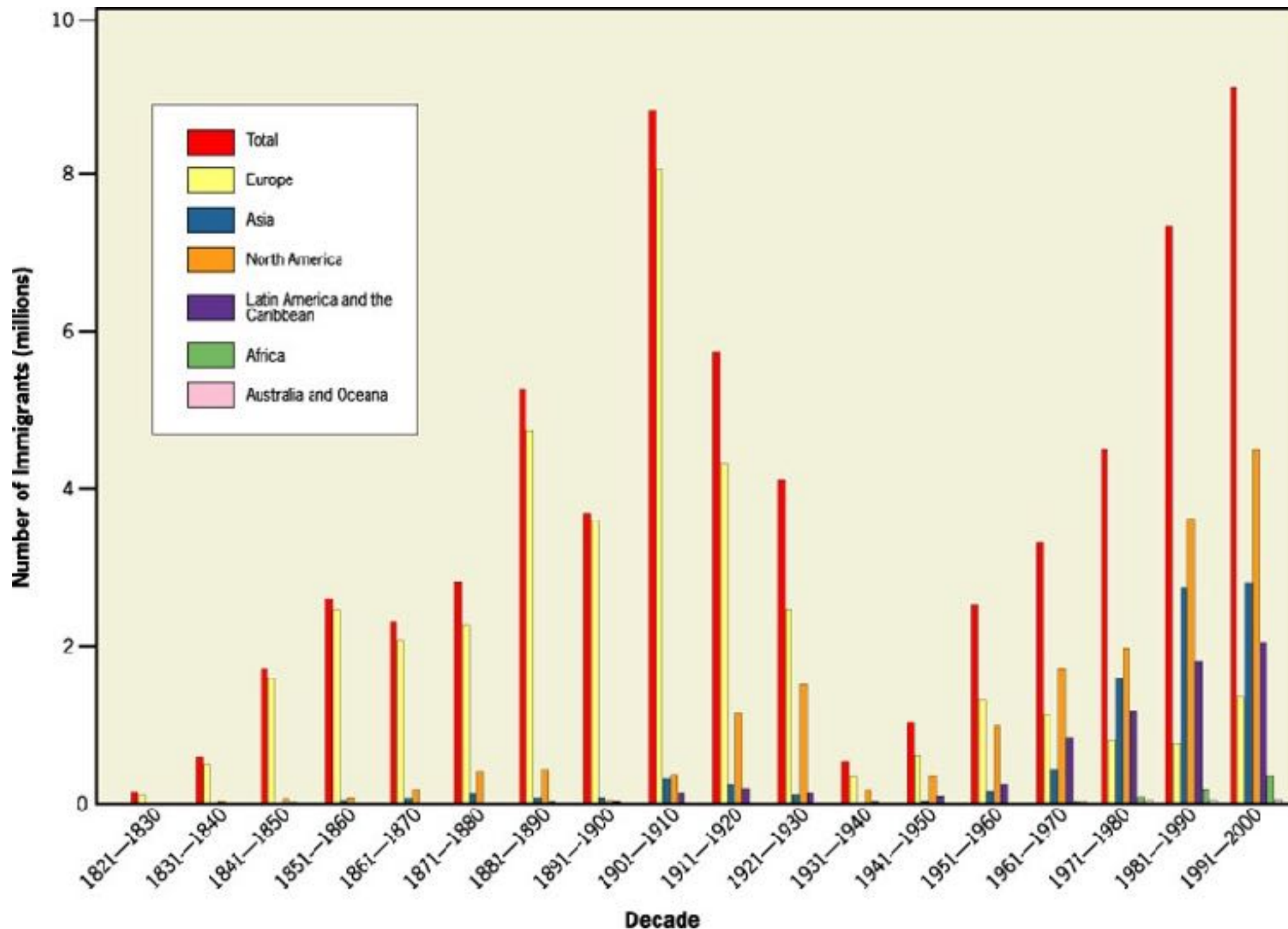


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Net migration per 1000 population. The U.S. has the largest number of immigrants, but other developed countries also have relatively large numbers.

- <http://metrocosm.com/global-immigration-map/>

Waves of Immigration



Changing immigration laws, and changing push and pull factors create waves of immigration.

U.S. Immigration Patterns

- About 70 million people have migrated to the U.S. since 1820, including the 30 million currently alive.
- Three main eras of migration
 - ▣ Colonial migration from England and Africa
 - ▣ Nineteenth-century immigration from Europe
 - ▣ Recent immigration from LDCs
- Although the origins vary, the reason for migrating has remained essentially the same: rapid population growth limited prospects for economic advancement at home.

- <https://www.youtube.com/watch?v=Fe79i1mu-mc>

Migration from Asia to the U.S.



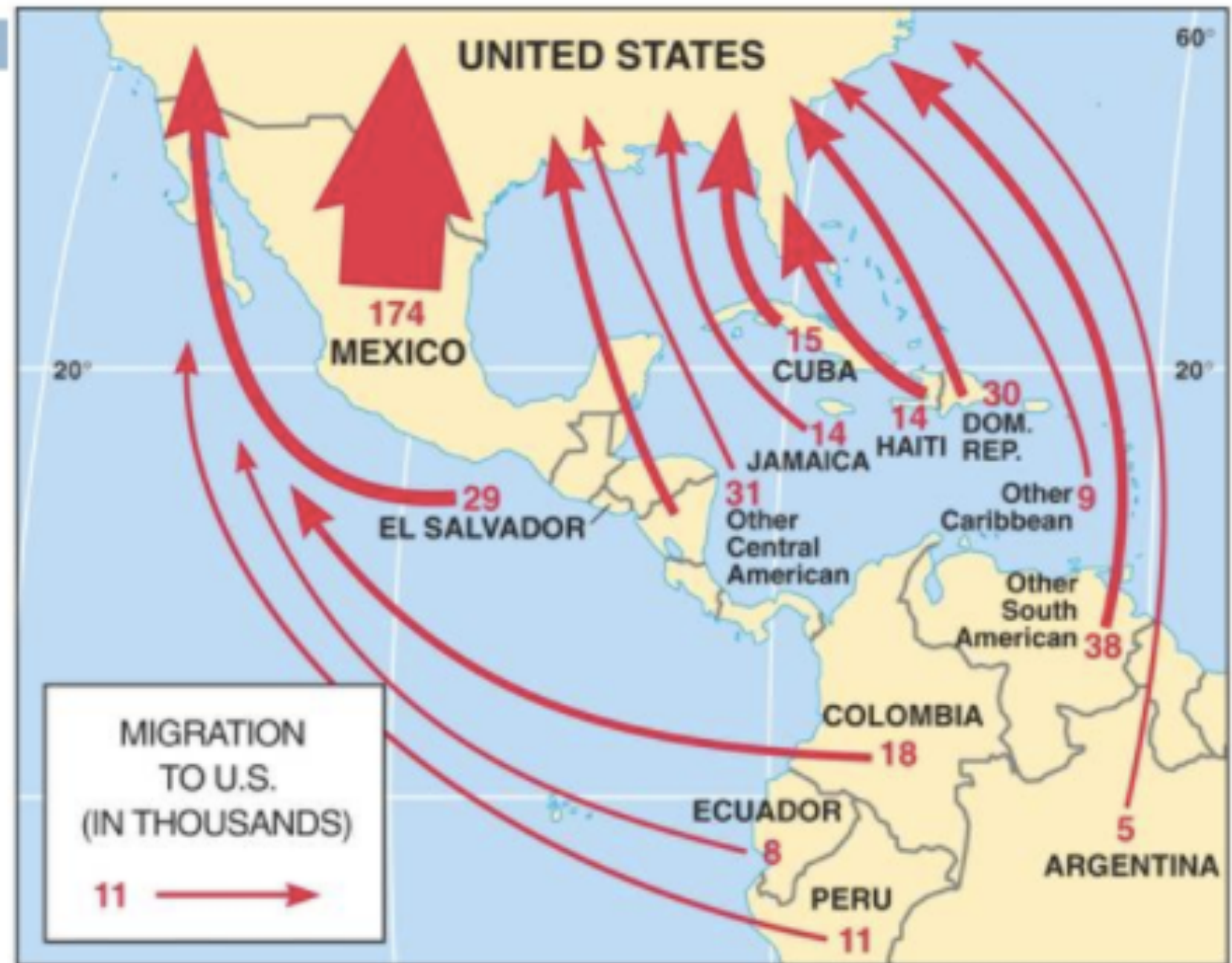
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The largest numbers of migrants from Asia come from India, China, the Philippines, and Vietnam.

Migration from Latin America to the U.S.

Mexico has been the largest source of immigrants to the U.S., but immigrants have also come from numerous other Latin American nations. Rank them in order of largest to smallest.

How have the three large periods of immigration impacted the United States?



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Legacy of European Migration

- The era of massive European migration to the U.S. ended with the start of World War I in 1914.
 - ▣ European emigration has steadily declined since that time.
 - 1/4 of all U.S. immigrants in the 1970s (European)
 - 1/7 since 1980

Europe's Demographic Transition

- Stage 2 growth pushed Europeans out (economic advancement)
 - ▣ High growth rate
 - ▣ “Enclosure movement” = consolidation of several small farms into larger units
 - ▣ Industrial movement
- The U.S. acted as a “safety valve” for Europe.

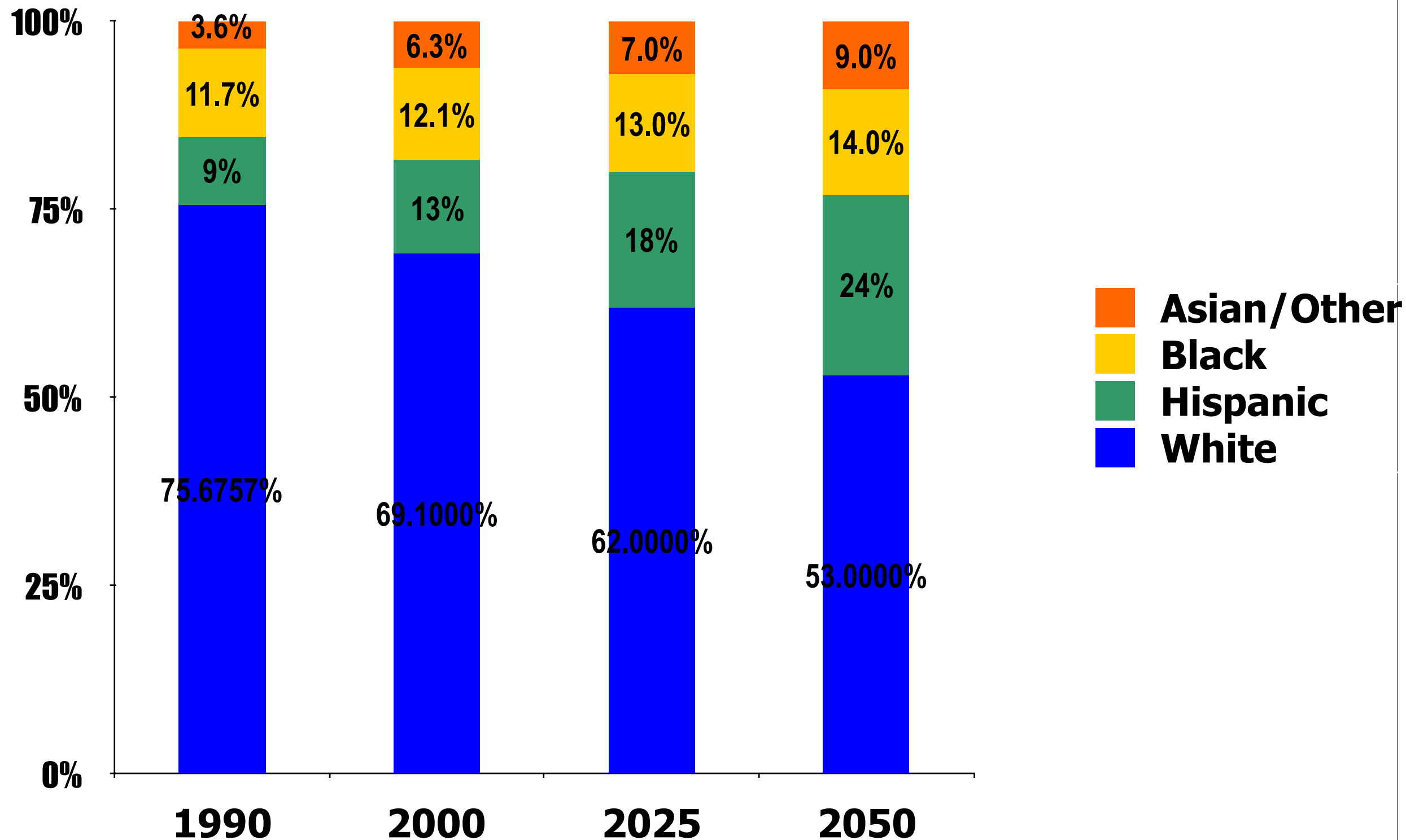
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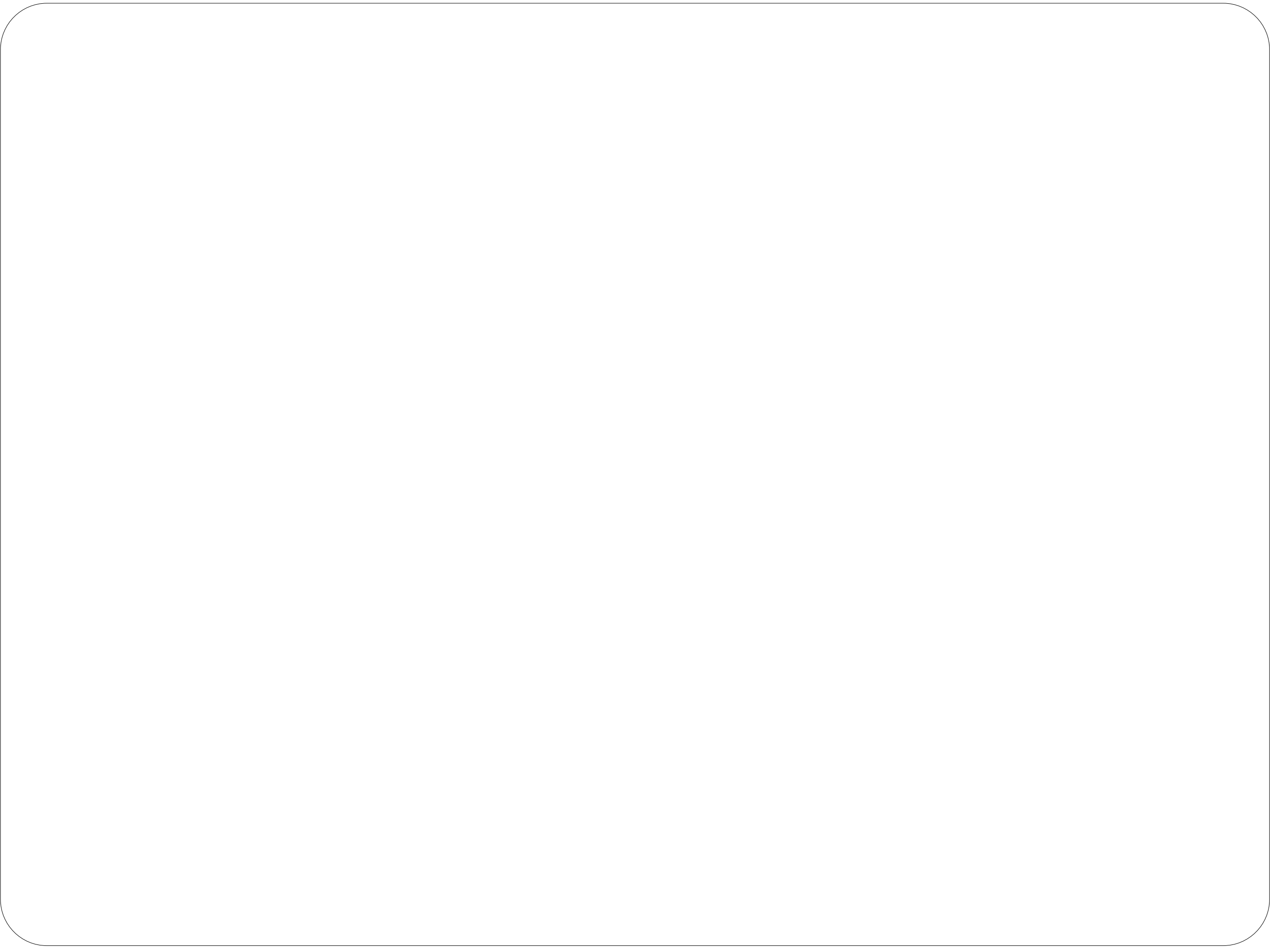
Diffusion of European Culture

- Effect was Diffusion of European culture (Global)
- 65 million Left Europe. Indo-European Languages spoken by $\frac{1}{2}$ world.
- Christianity (Europe's religion) becomes the world's largest.
- European Art, Music, philosophy affected world.
- This spread of Europe resulted in conflict for indigenous peoples and economic conflicts over resources (Africa and Asia).

[HTTPS://WWW.BUZZFEED.COM/MATTHEWTUCKER/
COLOURED-PHOTOS-OF-ELLIS-ISLAND-IMMIGRANTS-FROM-
THE-EAR?BFFB&UTM_TERM=.HTNBBNLZE#.HNVEMKNOO](https://www.buzzfeed.com/matthewtucker/coloured-photos-of-ellis-island-immigrants-from-the-ear?bffb&utm_term=.htnbbnlze#.hNVEMKNOO)

US Population by Race and Ethnicity, 1990-2050





IMMIGRATION HAS CHANGED THE DEFINITION OF "AVERAGE AMERICAN"

- <https://www.youtube.com/watch?v=RRhjqqe750A>
- The surprising 2016 election revealed that many Americans are isolated from one another culturally and socially
- Do you live in a "bubble?"

Destination of Immigrants within the U.S.

- Recent immigrants are not distributed uniformly in the U.S.
- Where do they go?
 - ▣ Documented immigrants:
 - 1/2 go to 4 states: CA, NY, FL, TX
 - CA and TX = most popular states for entry via car
 - ▣ Undocumented immigrants:
 - 1/4 CA, 1/4 TX or FL, 1/4 NY, AZ, IL, GA or NJ

2014 estimates



PEW RESEARCH CENTER

Metro areas with the most unauthorized immigrants

2014 estimates

1. New York-Newark-Jersey City, NY-NJ-PA	1,150,000
2. Los Angeles-Long Beach-Anaheim, CA	1,000,000
3. Houston-The Woodlands-Sugar Land, TX	575,000
4. Dallas-Fort Worth-Arlington, TX	475,000
5. Miami-Fort Lauderdale-West Palm Beach, FL	450,000
6. Chicago-Naperville-Elgin, IL-IN-WI	425,000
7. Washington-Arlington-Alexandria, DC-VA-MD-WV	400,000
8. Atlanta-Sandy Springs-Roswell, GA	250,000
9. Riverside-San Bernardino-Ontario, CA	250,000
10. Phoenix-Mesa-Scottsdale, AZ	250,000
11. San Francisco-Oakland-Hayward, CA	240,000
12. Boston-Cambridge-Newton, MA-NH	180,000
13. San Diego-Carlsbad, CA	170,000
14. Las Vegas-Henderson-Paradise, NV	170,000
15. Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	160,000
16. Seattle-Tacoma-Bellevue, WA	150,000
17. Denver-Aurora-Lakewood, CO	130,000
18. San Jose-Sunnyvale-Santa Clara, CA	120,000
19. Orlando-Kissimmee-Sanford, FL	110,000
20. Austin-Round Rock, TX	100,000

Note: Rankings based on unrounded numbers. Many differences are not statistically significant; only New York, Los Angeles, Houston, Washington and San Francisco differ from the area ranked immediately below. Metro areas defined using the 2013 definitions for metropolitan statistical areas (MSAs) from the U.S. Office of Management and Budget.

Source: Pew Research Center estimates based on augmented 2014 American Community Survey (IPUMS).

PEW RESEARCH CENTER

WHAT OBSTACLES DO MIGRANTS FACE?



U.S. Quota Laws

- U.S. quota laws:
 - ▣ 1921 Quota Act– Favored Europe
 - ▣ 1965 Immigration Act– hemispheric quotas
 - ▣ 1978 Global quotas-- 620,000/year, no more than 7% from one country.
- Applications exceed admissions
 - ▣ Preferences

On the go

The number of European emigrants rose from 300,000 a year in 1846 to over a million a year by the end of the century, before plummeting with the U.S. imposition of quotas.

(five-year average; thousands)



Source: I. Ferenczi and W.F. Willcox, 1929, *International Migrations*, Vol. 1 (New York: National Bureau of Economic Research).

U.S. Quota Laws

- Applications exceed admissions
 - ▣ Preferences
 - Reunify families: spouses or unmarried children, siblings
 - Average wait for a spouse = approx. 5 years
 - Visas for skilled workers
 - ▣ Exceptions
 - Refugees
 - Spouses, children, and parents of U.S. citizens



Temporary Migration for Work

- People unable to migrate permanently to a new country for employment opportunities may be allowed to migrate temporarily.
 - ▣ Traditionally guest workers in Europe and time-contract workers in Asia.



Turkish guest workers in Germany to aid with the struggling German work force

Temporary Migration for Work

- **Guest workers**: citizens of poor countries who obtain jobs in Western Europe and the Middle East.
 - ▣ In Europe, they are protected by minimum-wage laws, labor union contracts, and other support programs.
 - ▣ They take low-status and low-skilled jobs that locals won't accept.
 - ▣ Even though low pay, they earn more money than working at home.

Temporary Migration for Work

Benefits for the migrants' home countries:

- Tend to send a majority of their money back home Reduce unemployment problem
- Foreign currency stimulates the local economy

Remittances



Turkish guest workers operate many restaurants in Germany that specialize in Middle Eastern food.

Time Contract Workers

- ❑ **Time contract workers:** workers who leave home country to work for a company. (plantations, mines, building R.R)
- ❑ Historically, after work is done, they settle there.
- ❑ Indians to Burma, Malaysia, Guyana Africa, Trinidad.
- ❑ Japanese to Hawaii, Brazil, Peru
- ❑ Chinese to many places in Asia and North America



Emigration from China

U.S. Attitudes Toward Immigrants

- Historically, opposition to immigration heightened when Northern and Western European immigration dwindled.
- Racism, prejudice, fear of unknown groups, suspicion of unknown cultures, economic fears, and anti-immigration sentiment – not much has changed over time.
- Today, the same feelings still hold true and are intensified over the undocumented immigration debate.

Attitudes Toward Guest Workers

- In Europe, many guest workers suffer from poor social conditions.
 - ▣ Guest workers are there to send money back home
 - ▣ Due to a lack of knowledge about their “new” country, there is a big cultural divide
- Many Europeans dislike the guest workers, oppose government programs to improve their living conditions, and attacks by local citizens have increased.

Attitudes Toward Guest Workers

As a result of lower economic growth rates, Middle Eastern and Western European nations have reduced the number of guest workers in recent years.

Some “home” countries, however, have their own unemployment problems and sometimes refuse to take back their own nationals.

What is the solution to improving attitudes on immigrants??



HOW HAS U.S. IMMIGRATION POLICY SHIFTED IN THE TRUMP ADMINISTRATION ?

