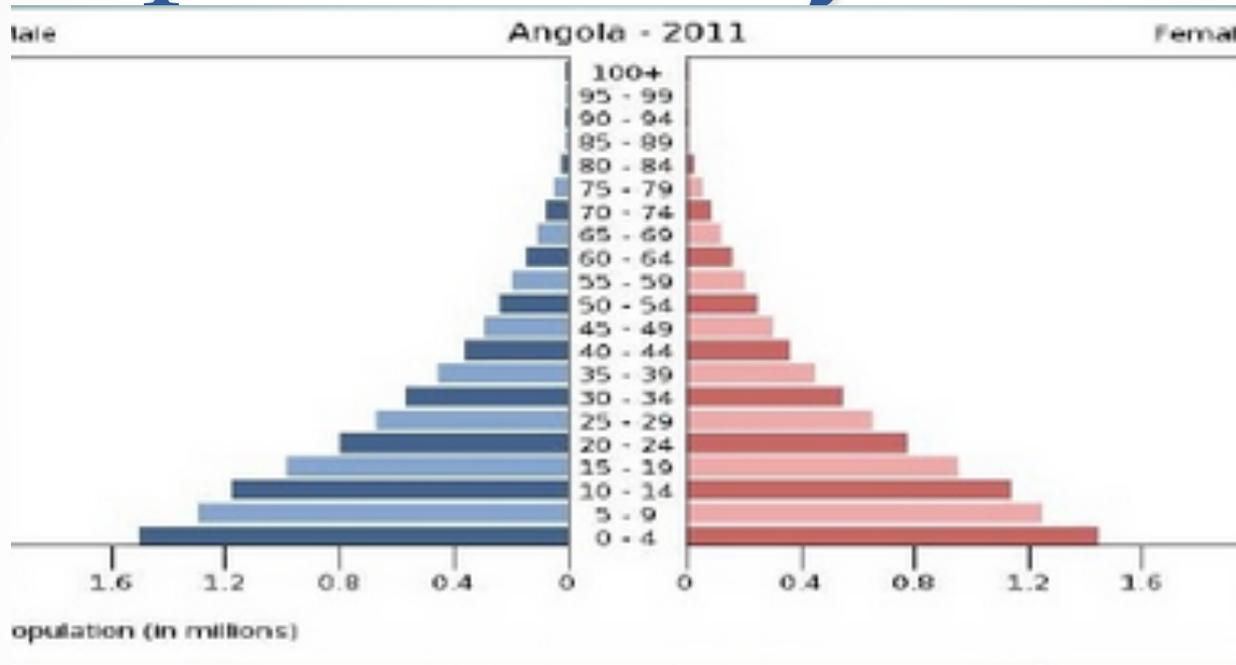


Human Geography

Part One: Population



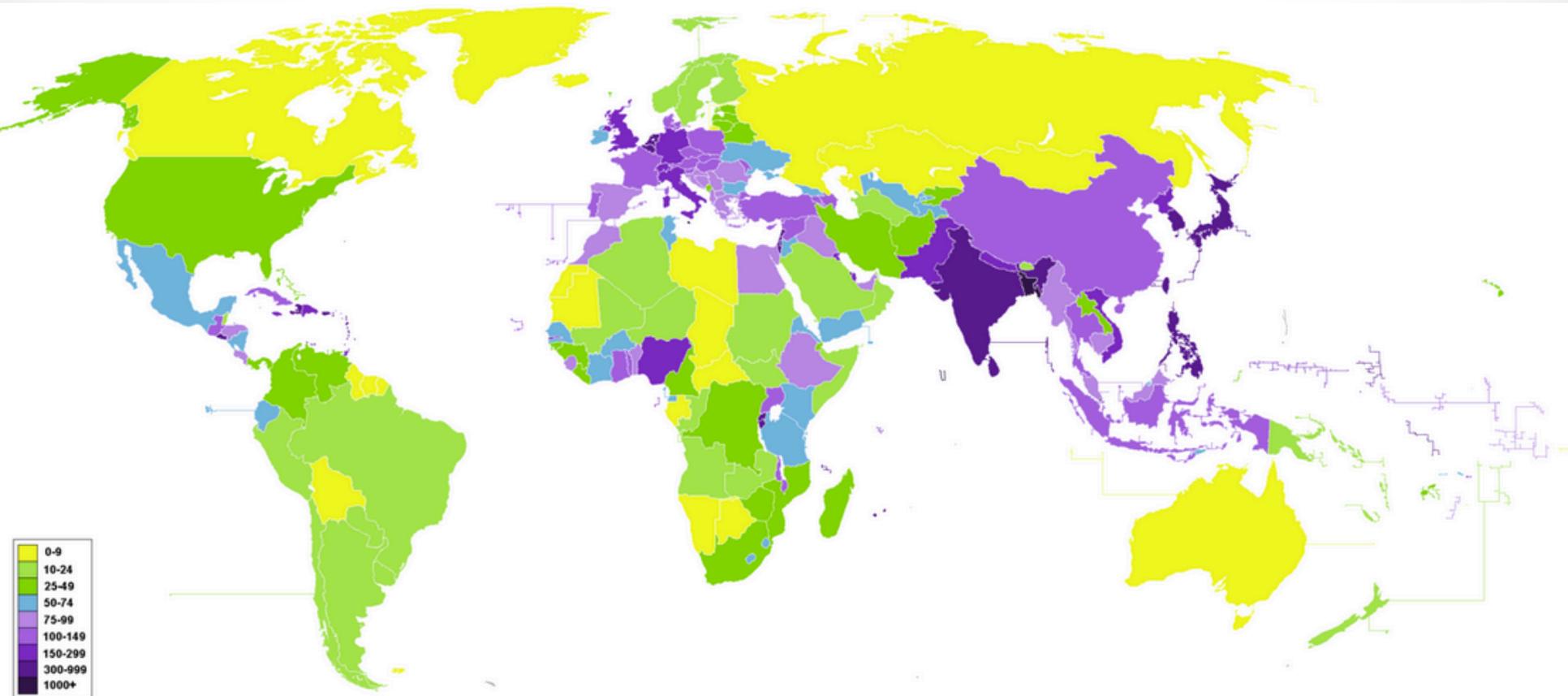
Population Pyramids



View this link to learn more about how to read them: <http://www.slideshare.net/cindipatten/types-of-population-pyramids>

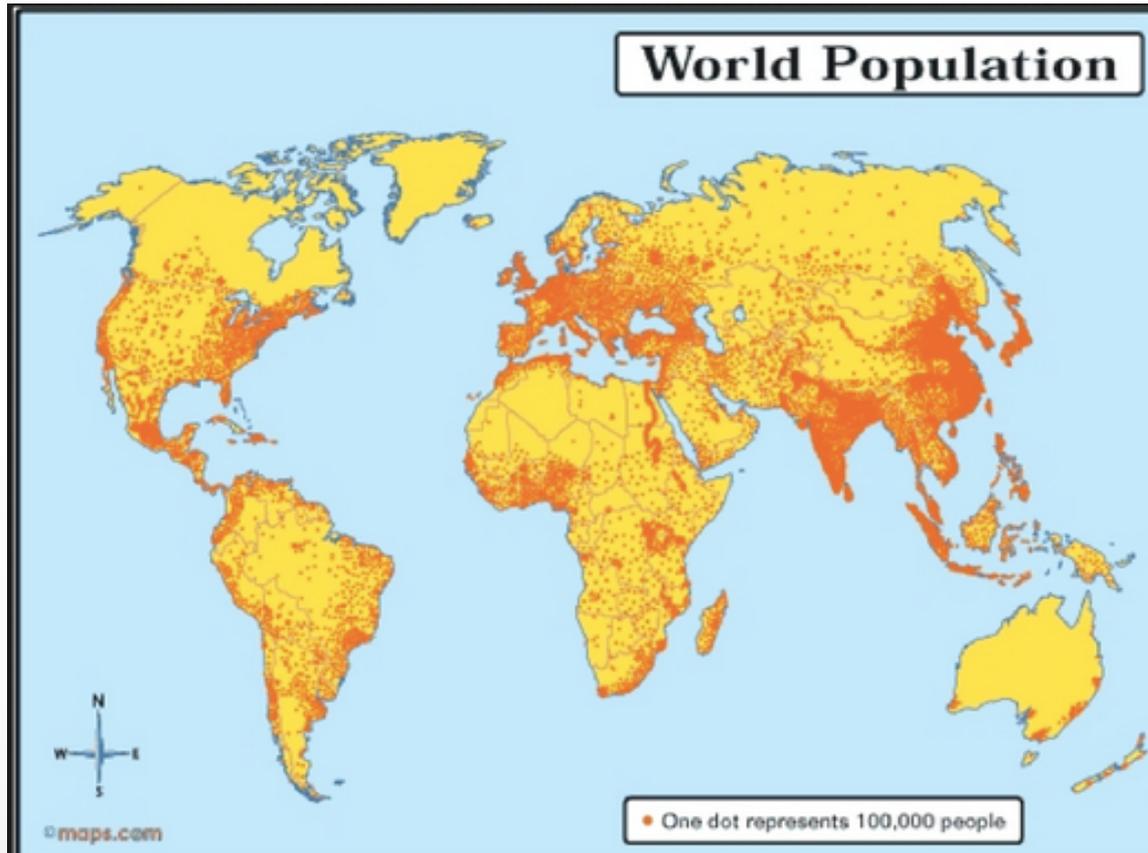
Population Density

This map shows population density (# of people per square kilometer) in 2012



Population Distribution

- This is about where people live in the world. A population distribution map looks like this:



What's the Difference?

Population Distribution

Population distribution means the pattern of where people live. World population distribution is uneven. Places which are **sparsely** populated contain few people. Places which are **densely** populated contain many people. Sparsely populated places tend to be difficult places to live. These are usually places with hostile environments e.g. Antarctica. Places which are densely populated are habitable environments e.g. Europe.

Population Density

Population density is a measurement of the number of people in an area. It is an average number. Population density is calculated by dividing the number of people by area. Population density is usually shown as the number of people per square kilometer. The map below is a choropleth (shading) map and illustrates population density. The darker the colour the greater the population density.



Factors Affecting Population

Factors Affecting Population Density

There are a range of **human** and **natural** factors that affect population density. The tables below illustrate this.

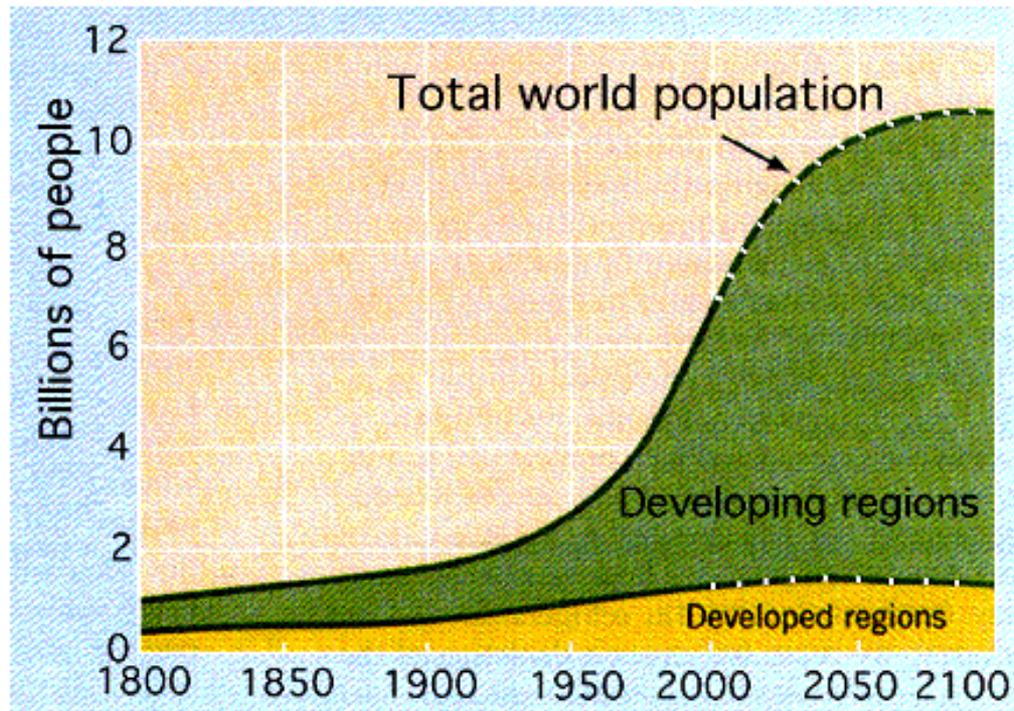
Physical Factors	High Density	Low Density
Relief (shape and height of land)	Low land which is flat e.g. Ganges Valley in India	High land that is mountainous e.g. Himalayas
Resources	Areas rich in resources (e.g. coal, oil, wood, fishing etc.) tend to be densely populated e.g. Western Europe	Areas with few resources tend to be sparsely populated e.g. The Sahel
Climate	Areas with temperate climates tend to be densely populated as there is enough rain and heat to grow crops e.g. UK	Areas with extreme climates of hot and cold tend to be sparsely populated e.g. the Sahara Desert

Human Factors	High Density	Low Density
Political	Countries with stable governments tend to have a high population density e.g. Singapore	Unstable countries tend to have lower population densities as people migrate e.g. Afghanistan.
Social	Groups of people want to live close to each other for security e.g. USA	Other groups of people prefer to be isolated e.g. Scandinavians
Economic	Good job opportunities encourage high population densities, particularly in large cities in MEDCs and LEDCs around the world.	Limited job opportunities cause some areas to be sparsely populated e.g. Amazon Rainforest

Population Growth

Population Change

The world's population is growing very rapidly. In **1820** the world's population reached **1 billion**. In **1990** it reached **6 billion** people.



Dependency Ratio

- The **dependency ratio** is an age:population ratio of those typically not in the labour force (the *dependent* part) and those typically in the labor force (the *productive* part). It is used to measure the pressure on productive population.

$$(Total) \text{ Dependency ratio} = \frac{(number \text{ of people aged } 0 - 14 \text{ and those aged } 65 \text{ and over})}{number \text{ of people aged } 15 - 64} \times 100$$

- High dependency ratio = a large proportion of a government's expenditure is on health, social security & education, which are most used by the youngest and the oldest in a population. There are less people of working age to support this spending.

Growth Rate

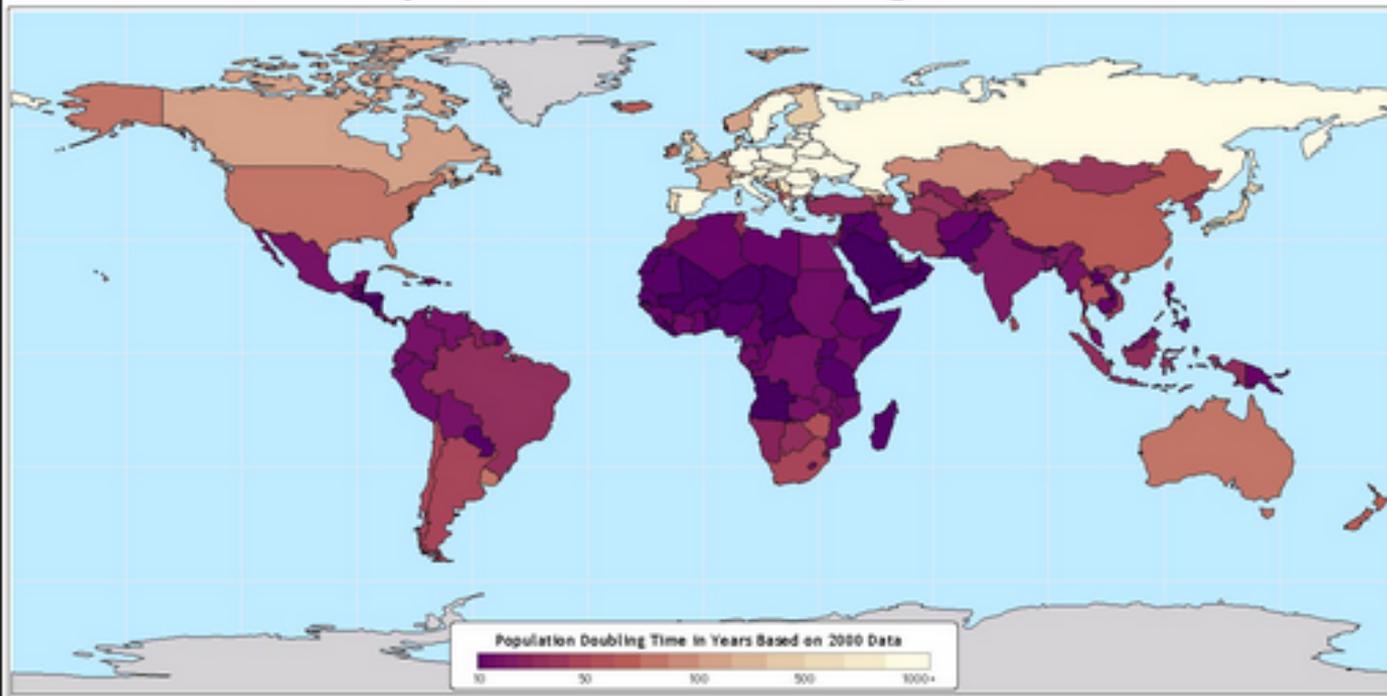
- The rate of national growth is expressed as a percentage for each country, commonly between about 0.1% and 3% annually.
- Natural growth represents the births and deaths in a country's population. Canada's natural growth rate is 0.3%.
- The overall growth rate takes migration into account. Canada's overall growth rate is 0.9%, due to Canada's fairly open immigration policies.

Doubling Time

- The growth rate can be used to determine a country or region or even the planet's "doubling time," which tells us how long it will take for a country's current population to double.
- This length of time is determined by dividing the growth rate into 70.

Doubling Time

Population Doubling Time



Data taken from: Population Reference Bureau (2000)

Atlas of the Biosphere
Center for Sustainability and the Global Environment
University of Wisconsin - Madison

Example of Doubling Time

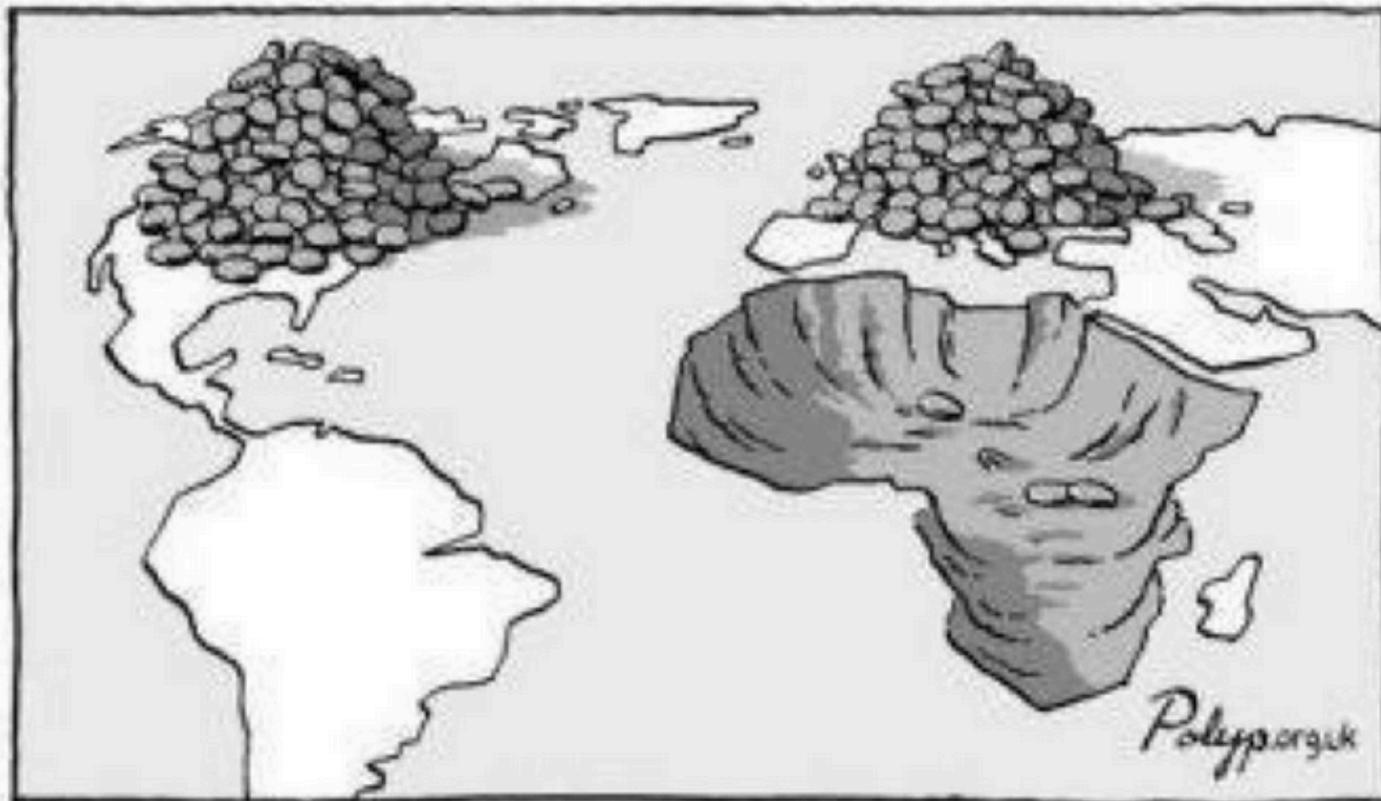
- Given Canada's overall growth of 0.9% in the year 2006, we divide 70 by .9 (from the 0.9%) and yield a value of 77.7 years.
- Thus, in 2083, if the current rate of growth remains constant, Canada's population will double from its current 33 million to 66 million.
- However, if we look at census information for Canada, we see that Canada's overall growth rate is expected to decline to 0.6% by 2025.
- With a growth rate of 0.6% in 2025, Canada's population would take about 117 years to double ($70 / 0.6 = 116.666$).

Part Two: Development

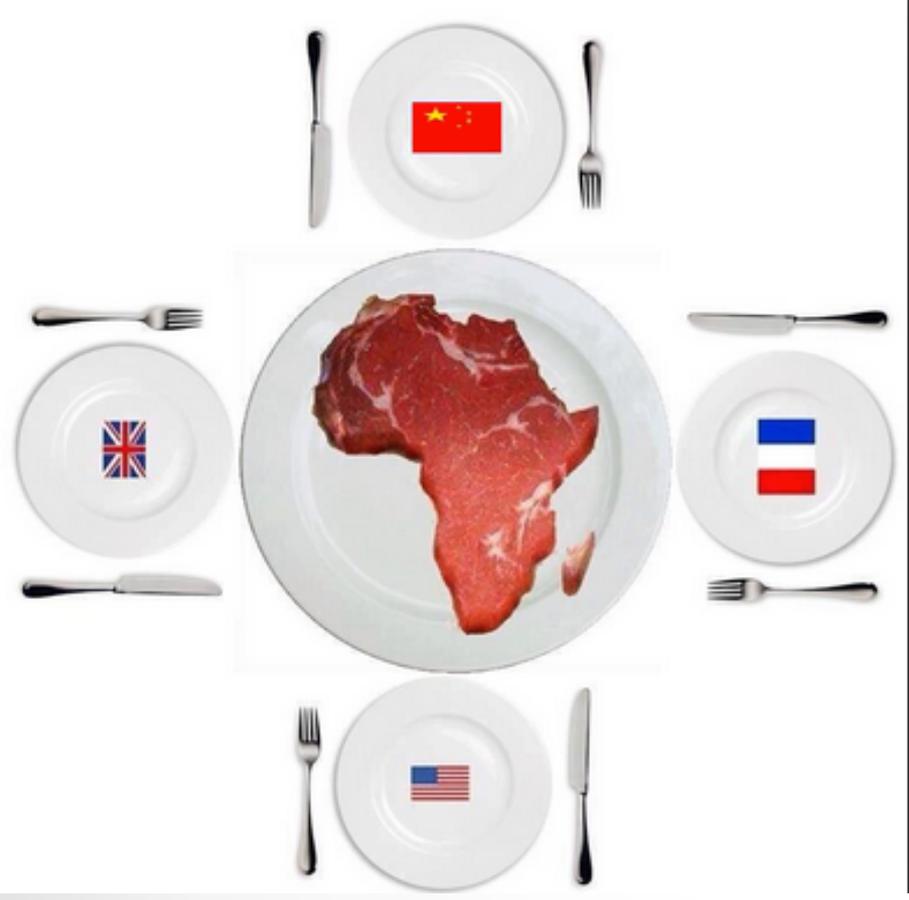


Roots of Underdevelopment

- Colonialism
- Exploitation
- Economic policies
- Lack of Industrialization



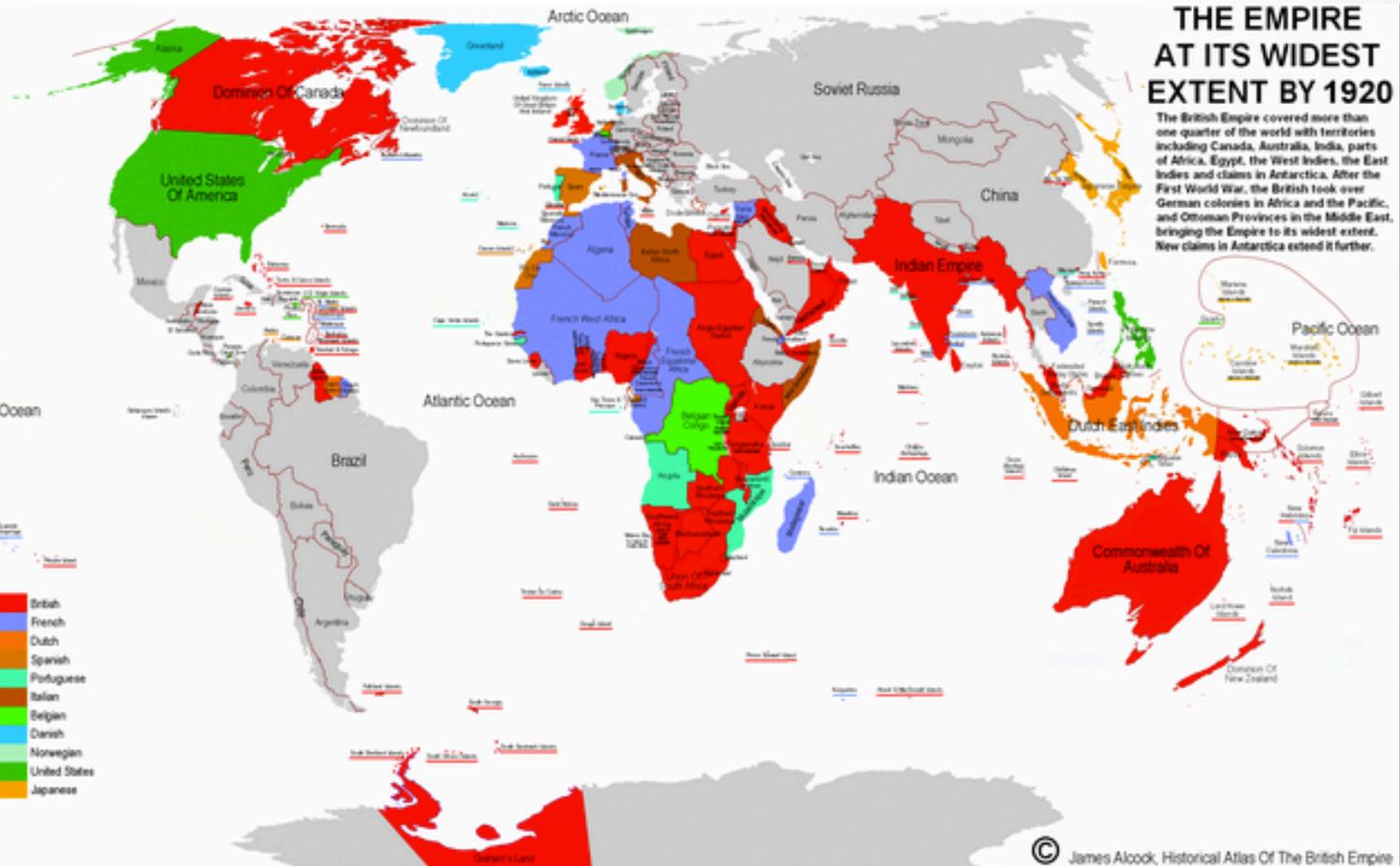
Colonization and Poverty



Colonization



King George V
of Great Britain and Ireland,
the British Dominions Beyond the Seas
and Emperor of India
G-V-R-I



Why Are Countries Poor?

The Five Ps

- Place
- Past
- People
- Peace
- Politics

Past

United States 

- British colony
- Independence 1776
- Peace and expansion across continent
- Civil War 1860s
- Great Depression 1930s
- Superpower 1940s-present

Chad 

- French colony
- Independence 1960
- Civil wars 1960-1990
- Invasions by Libya, Sudan
- Near constant civil war up to present day
- Involvement in neighbors' civil wars

Poverty is a Cycle

For individuals and for countries...

Things that make you poor in the first place create other disadvantages that keep you in poverty.



Developed and Developing Countries

Generalized characteristics of developed countries:

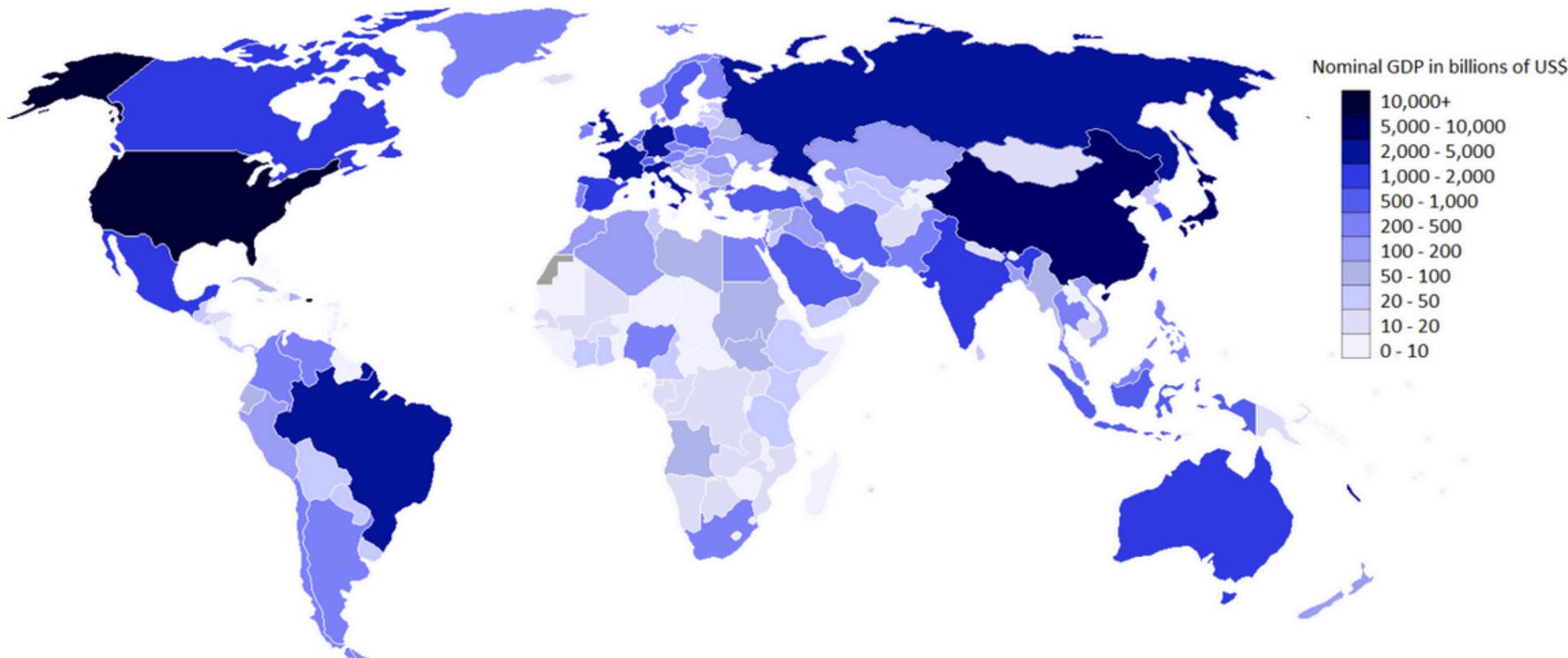
- Post-industrial economies
- High level of industrial development
- High level of affluent citizens
- Low levels of unemployment
- Higher education rates
- Technological advantages
- Better roads
- Stable governments
- Good health care
- Human and natural resources are fully utilized
- High level of per capita income
- High Human Development Index (HDI)
- Increased life expectancy
- Low birth rates
- Low death rates
- Good housing conditions
- Safe water supplies
- Abundant food supplies
- Easy to access advanced medical services

Generalized characteristics of developing countries:

- In the process of industrialization
- Low level of affluent citizens
- Higher levels of unemployment
- Lower education rates
- Often contain undeveloped rural villages
- Unstable governments
- High level of birth rates
- High level of death rates
- High infant mortality rate
- Dirty, unreliable water supplies
- Poor housing conditions
- Poor nutrition
- Diets that are short in calories and/or protein
- Poor access to medical services
- Endemic disease in some countries
- Low to medium standard of living
- Limited technological capacity
- Unequal distribution of income
- Factors of production are not fully utilized

Human Development Indicators

- Gross Domestic Product: Exports-imports+ government spending: sum total of economic activity from all forms, all buying and selling



Human Development Indicator (HDI)

- Combines indicators of life expectancy, educational attainment and income into a composite human development index, the HDI.
- Shows where each country stands in relation to others, expressed as a value between 0 and 1.

Human Development Index - Top 50 Countries with high human development in 2011								
HDI rank	Country	Human Development Index (HDI)	Life expectancy at birth	Mean years of schooling	Expected years of schooling	Gross national income (GNI) per capita	GNI per capita rank minus HDI	Nonincome HDI
1	 Norway	0.943	81.1	12.6	17.3	47,557	6	0.975
2	 Australia	0.929	81.9	12.0	18.0	34,431	16	0.979
3	 Netherlands	0.910	80.7	11.6	16.8	36,402	9	0.944
4	 United States	0.910	78.5	12.4	16.0	43,017	6	0.931
5	 New Zealand	0.908	80.7	12.5	18.0	23,737	30	0.978
6	 Canada	0.908	81.0	12.1	16.0	35,166	10	0.944
7	 Ireland	0.908	80.6	11.6	18.0	29,322	19	0.959
8	 Liechtenstein	0.905	79.6	10.3	14.7	83,717	-6	0.877
9	 Germany	0.905	80.4	12.2	15.9	34,854	8	0.940
10	 Sweden	0.904	81.4	11.7	15.7	35,837	4	0.936
11	 Switzerland	0.903	82.3	11.0	15.6	39,924	0	0.926
12	 Japan	0.901	83.4	11.6	15.1	32,295	11	0.940
13	 Hong Kong, China (SAR)	0.898	82.8	10.0	15.7	44,805	-4	0.910
14	 Iceland	0.898	81.8	10.4	18.0	29,354	11	0.943
15	 Korea, Republic of	0.897	80.6	11.6	16.9	28,230	12	0.945

Aid

- CIDA: Canadian International Development Agency (manages and distributes aid to foreign countries)
- Tied Aid: Tying aid to specific commodities and services, or to procurement in a specific country or region, can increase development project costs by as much as 20 to 30 per cent. Example: We'll help to fund a project in your country as long as you hire a company from our country to do the work.

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Countries Canada gives aid to



Aid Organizations

CIDA=Canadian International Development Association (in charge of aid to foreign countries)

Organizations of the United Nations that distribute aid:

- UNICEF: United Nations Children's Fund
- WHO: World Health Organization

Independent Organizations the deliver aid:

- NGOs: Non-governmental organizations
(Ex: Oxfam)

Debt Reduction

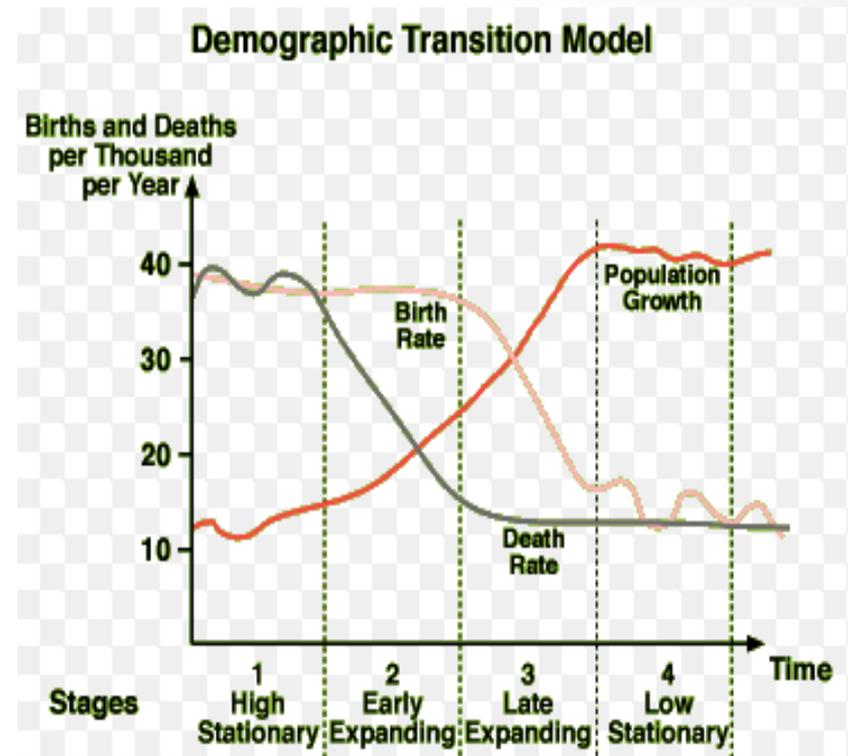
- HIPC=Heavily-indebted poor country
- These countries borrowed a lot of money from other countries and now owe more than they can possibly pay.
- Often money was borrowed during early days of independence (1950s and 60s) and built up with interest.
- Government corruption and poverty worsened debt.
- There are initiatives in place to relieve debt (allow countries to not pay back all of their debt)

Spending on food or debt?



Demographic Transition Model

- A model for how a country develops
- Not all countries follow this pattern, but many do
- Here is how to read one:
- <http://www.slideshare.net/cheergalsal/demographic-transition-model>



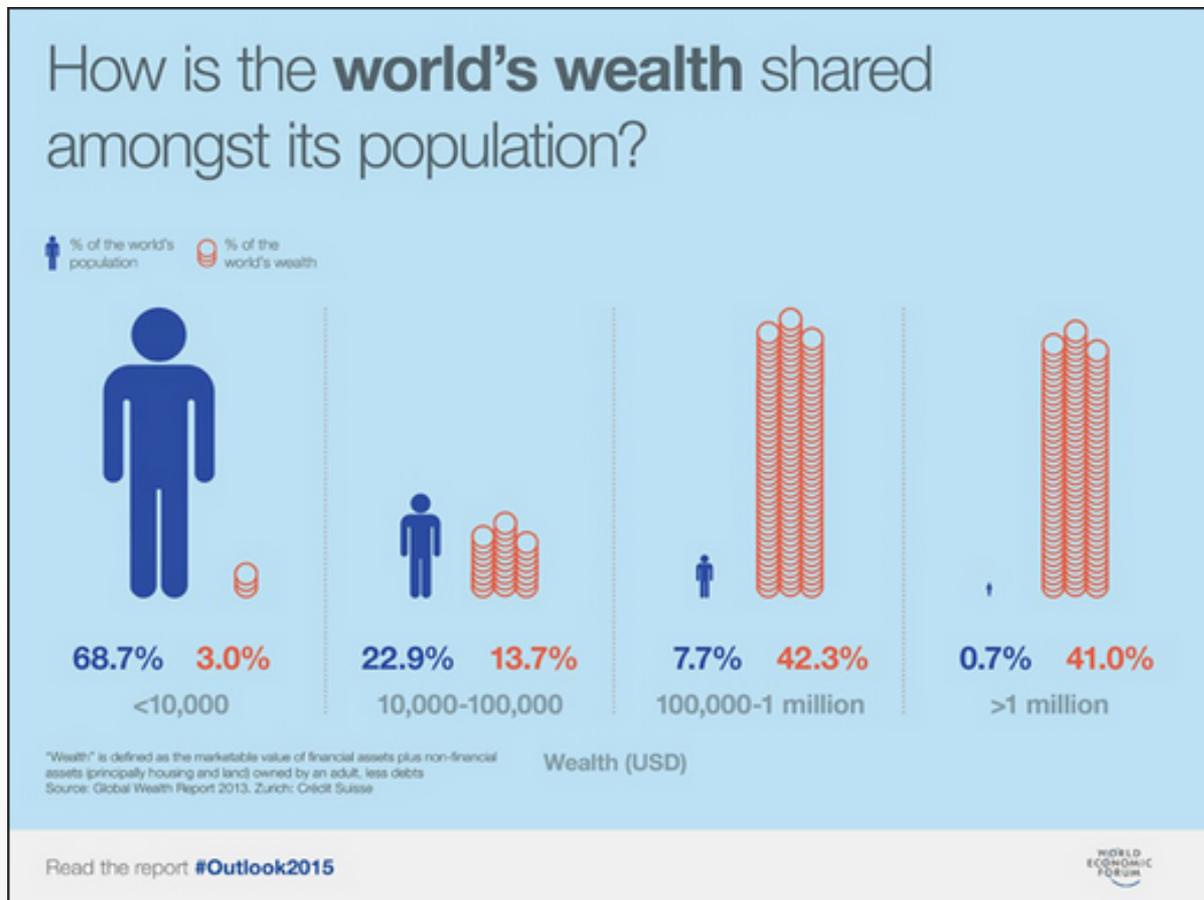
Are the poor getting richer or poorer?

- Extreme Poverty (living on less than \$1 per day) is decreasing:
- The share of people in the developing world who live in extreme poverty has been reduced from 1 in 2 in 1980 to 1 in 5 today, according to the World Bank. Now the aim is to reduce that to almost zero by 2030.
- In 1990, more than 12 million children died before the age of 5. Now that figure is down close to 6 million.



But...

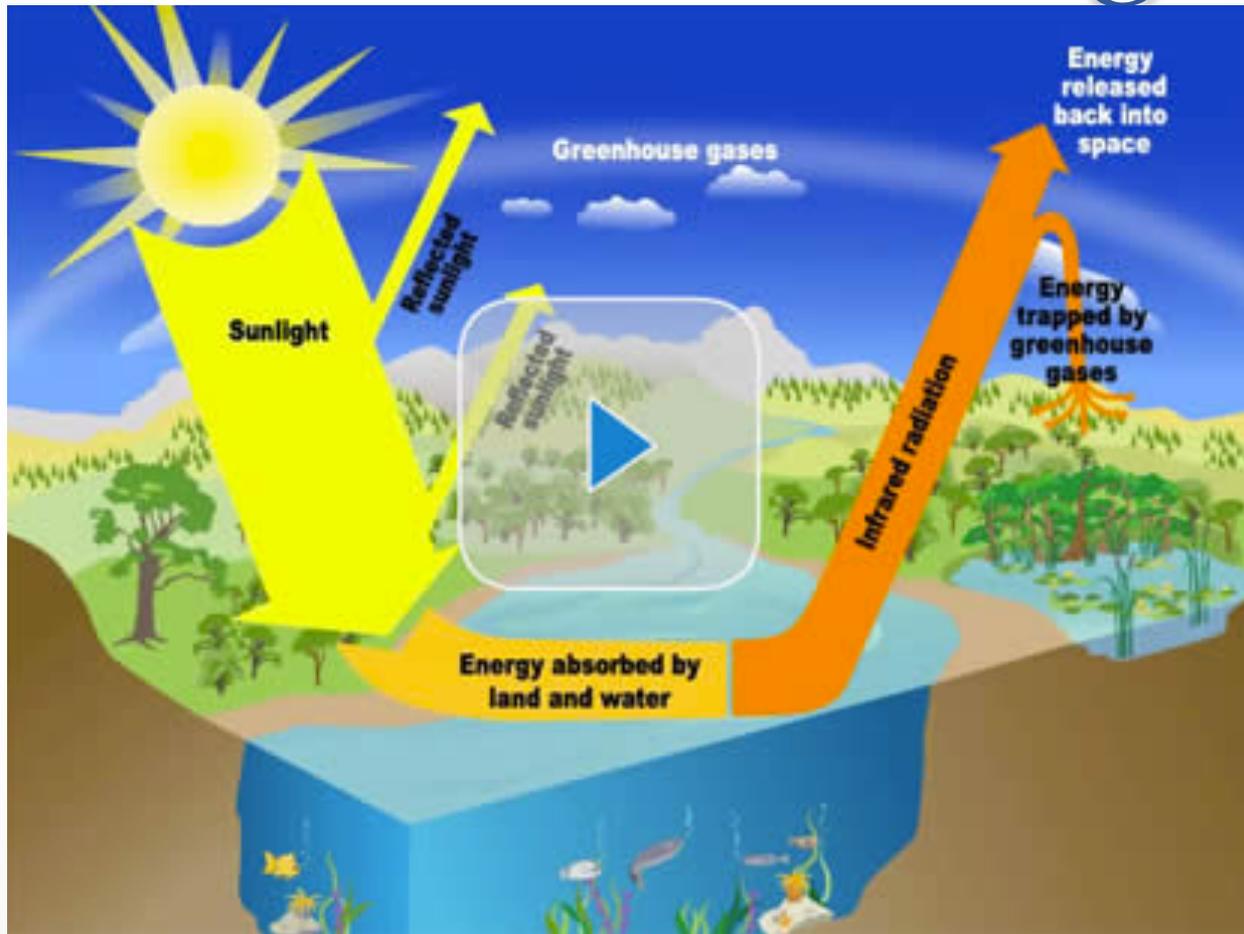
- Income inequality is increasing



Part Three: Environment



Global Warming

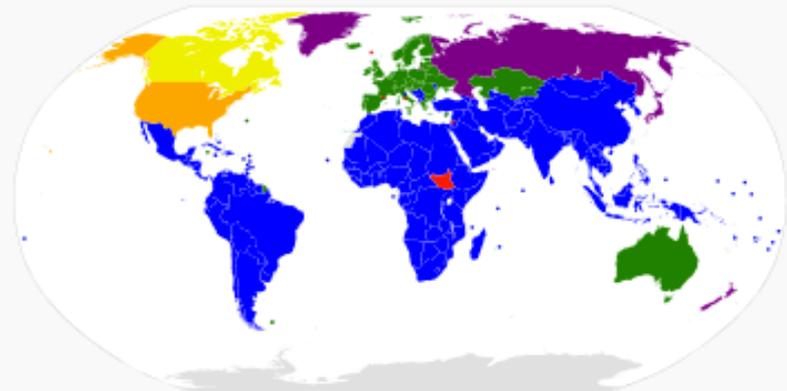


<http://www.epa.gov/climate/climatechange/kids/basics/today/greenhouse-effect.html>

International Solutions

- Kyoto protocol: international agreement to reduce emissions
- Challenges: Hard to enforce, countries can't agree, poor countries want rich countries to reduce more
- Climate conferences continue to happen
-

Kyoto Protocol to the United Nations Framework Convention on Climate Change



- Annex B parties with binding targets in the second period
- Annex B parties with binding targets in the first period but not the second
- non-Annex B parties without binding targets
- Annex B parties with binding targets in the first period but which withdrew from the Protocol
- Signatories to the Protocol that have not ratified
- Other UN member states and observers that are not party to the Protocol

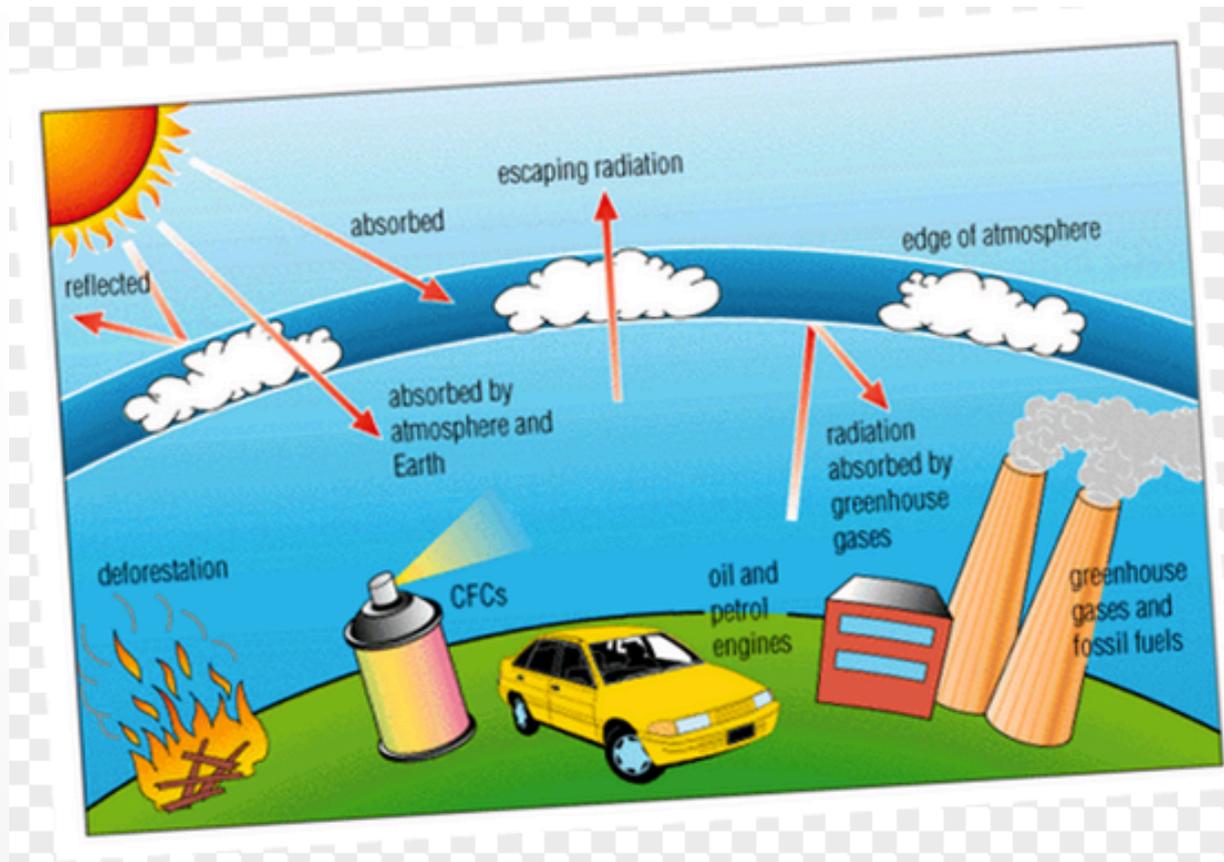
Signed 11 December 1997^[1]

Location Kyoto, Japan

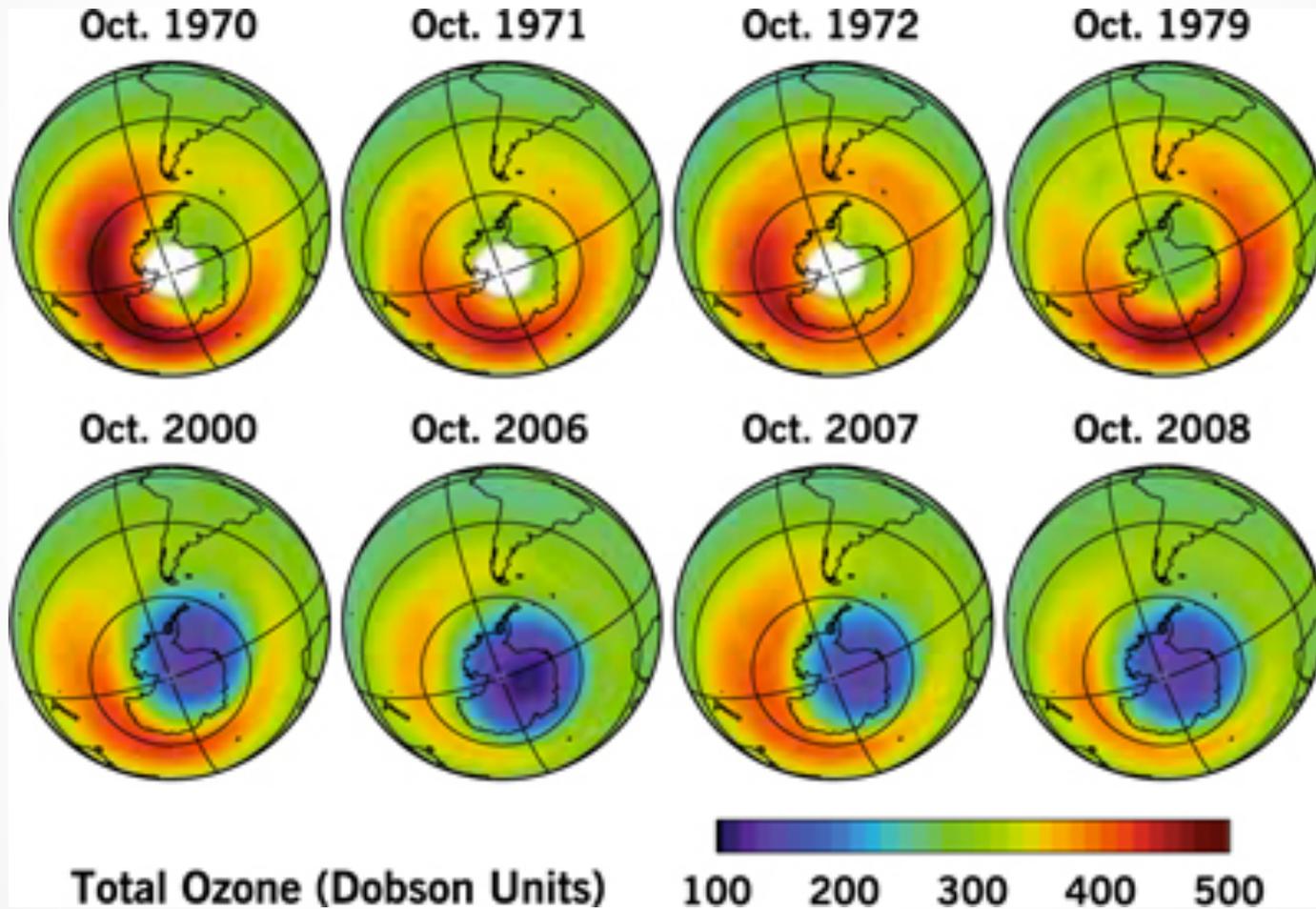
Effective 16 February 2005^[1]

Ozone Layer Depletion

Scientific evidence indicates that stratospheric ozone is being destroyed by a group of manufactured chemicals, containing chlorine and/or bromine. These chemicals are called "ozone-depleting substances" (ODS).



Hole in the Ozone



Ozone Layer Chemicals

The Main Ozone-Depleting Substances (ODS)

- Chlorofluorocarbons (CFCs)
 - The most widely used ODS, accounting for over 80% of total stratospheric ozone depletion.
 - Used as coolants in refrigerators, freezers and air conditioners in buildings and cars manufactured before 1995.
 - Found in industrial solvents, dry-cleaning agents and hospital sterilants.
 - Also used in foam products — such as soft-foam padding (e.g. cushions and mattresses) and rigid foam (e.g. home insulation).
- Halons
 - Used in some fire extinguishers, in cases where materials and equipment would be destroyed by water or other fire extinguisher chemicals. In B.C., halons cause greater damage to the ozone layer than do CFCs from automobile air conditioners.
- Methyl Chloroform
 - Used mainly in industry — for vapour degreasing, some aerosols, cold cleaning, adhesives and chemical processing.
- Carbon Tetrachloride
 - Used in solvents and some fire extinguishers.
- Hydrofluorocarbons (HCFCs)
 - HCFCs have become major, “transitional” substitutes for CFCs. They are much less harmful to stratospheric ozone than CFCs are. But HCFCs they still cause some ozone destruction and are potent greenhouse gases.

Water

- Canada has abundant fresh water supplies.
- Pollution enters water bodies in a number of ways, including industrial and municipal discharge, runoff, spills, and airborne pollutants.



Construction



Wastewater Disposal



Agriculture



Mining



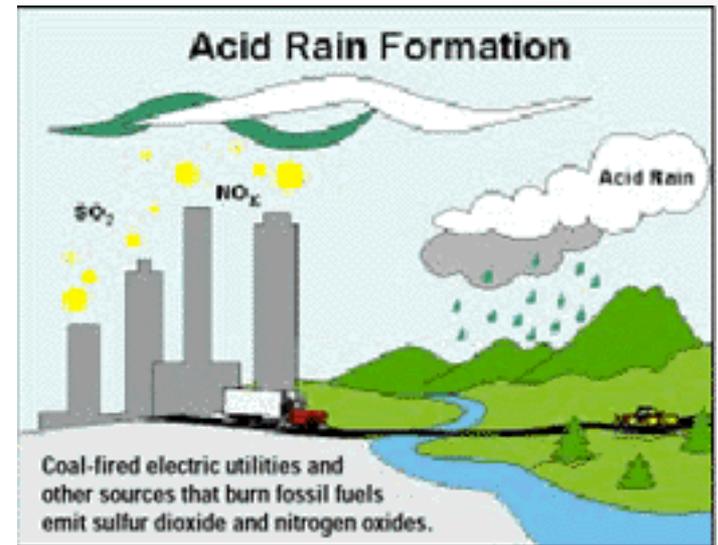
Home & Garden



Logging

Acid Rain

- Acid rain refers to rainwater that has been contaminated with chemicals introduced into the atmosphere through industrial and automobile emissions.
- When acid rain gets into water supplies, many species of fish, insects, aquatic plants and bacteria develop reproduction difficulties. Some even die.



Groundwater Contamination

- Sources of groundwater contamination: road salt, petroleum products leaking from underground storage tanks, nitrates from chemical fertilizers or manure on farmland, chemical pesticides, leaching of fluids from landfills and dumpsites, and accidental spills.

Groundwater contamination from a waste disposal site

