

# POPULATION

HOW MANY IS TOO MANY?



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WHAT IS THE IMPACT OF  
GLOBAL POPULATION  
GROWTH?

WHAT CAN BE DONE?

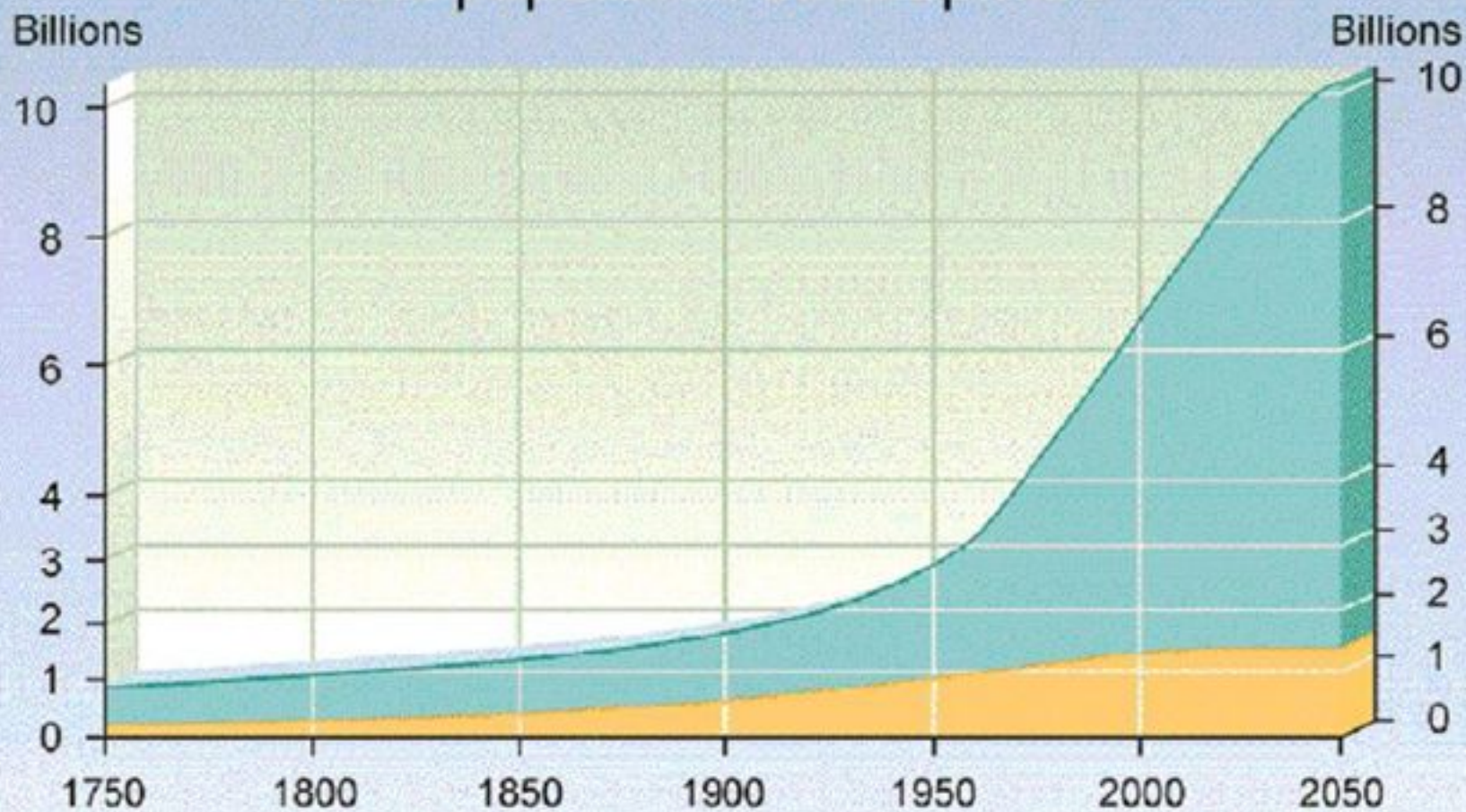
TOPIC 1.  
POPULATION AND  
DEMOGRAPHY

TOPIC 2.  
DEMOGRAPHIC  
TRANSITION MODEL

TOPIC 3.  
STAGES OF POPULATION  
DEVELOPMENT

TOPIC 4.  
GLOBAL POPULATION  
ISSUES

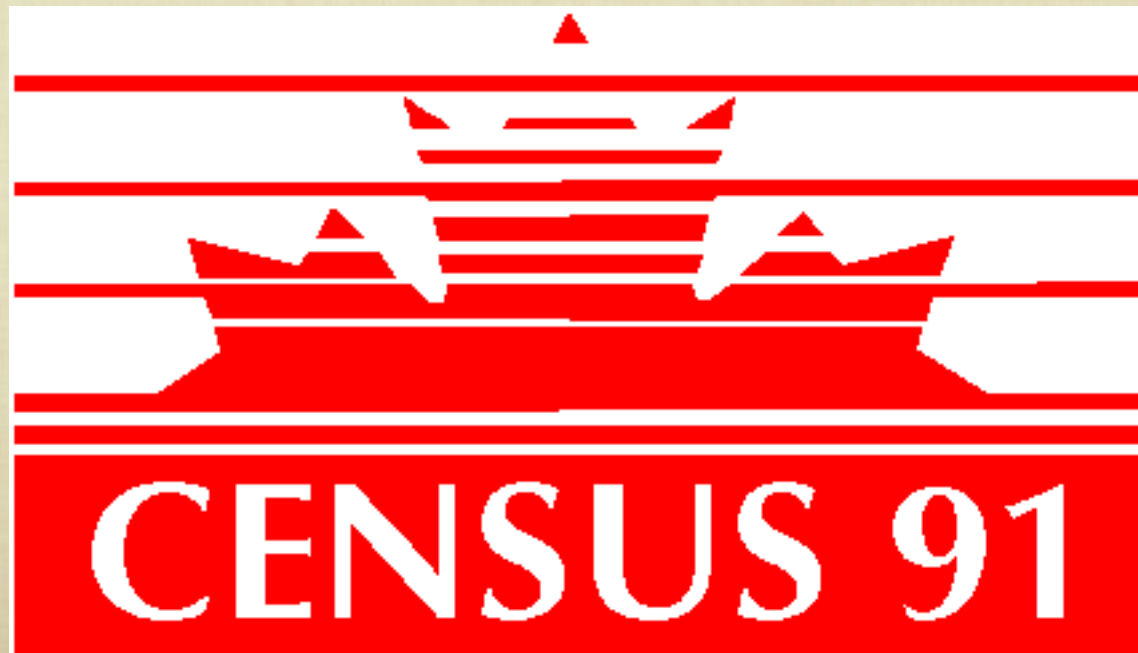
# World population development



Developing countries  
Industrialized countries

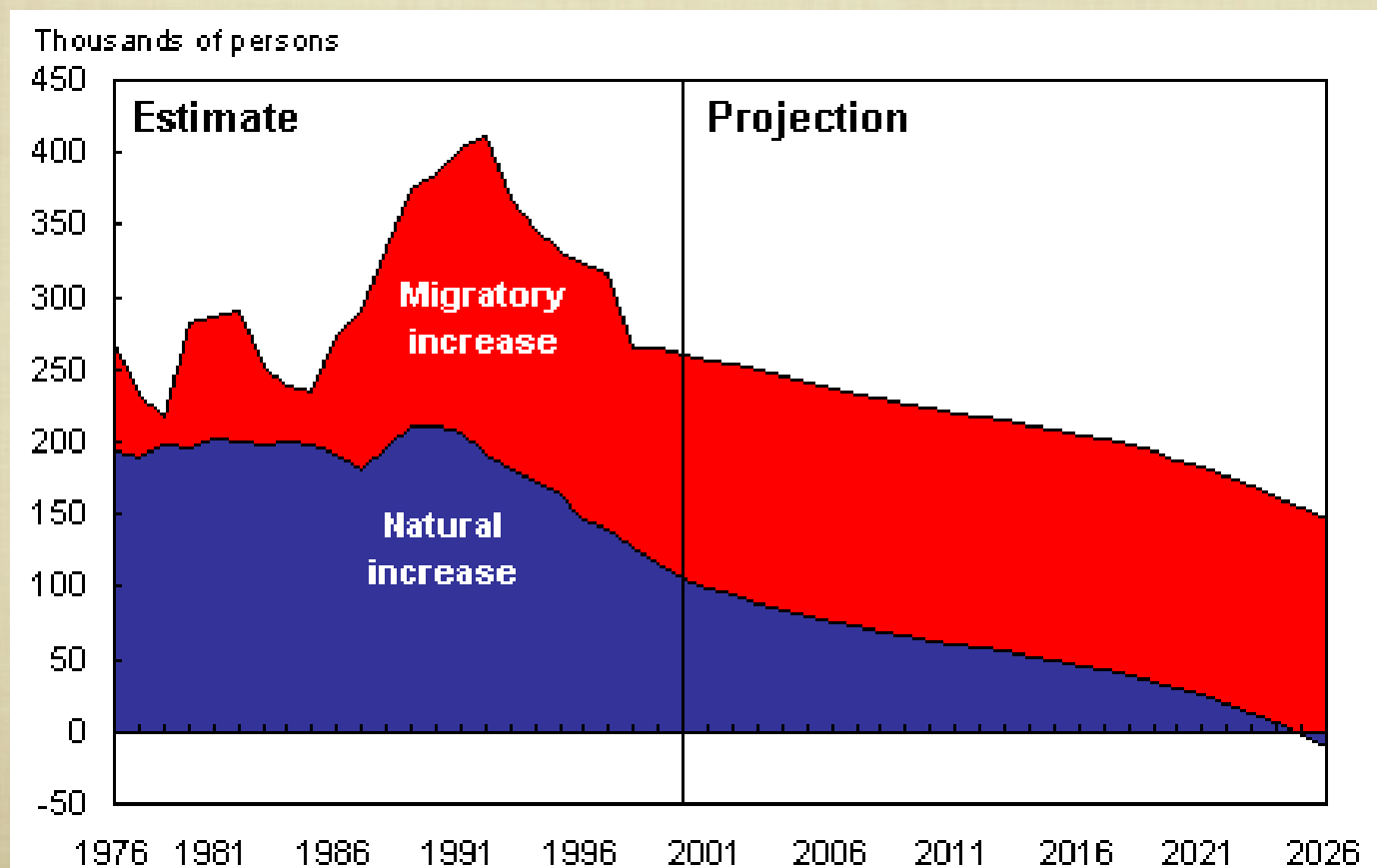
# DEMOGRAPHY

- STATISTICAL STUDY OF HUMAN POPULATIONS
- CENSUS PROVIDE DATA WITH WHICH TO STUDY IT



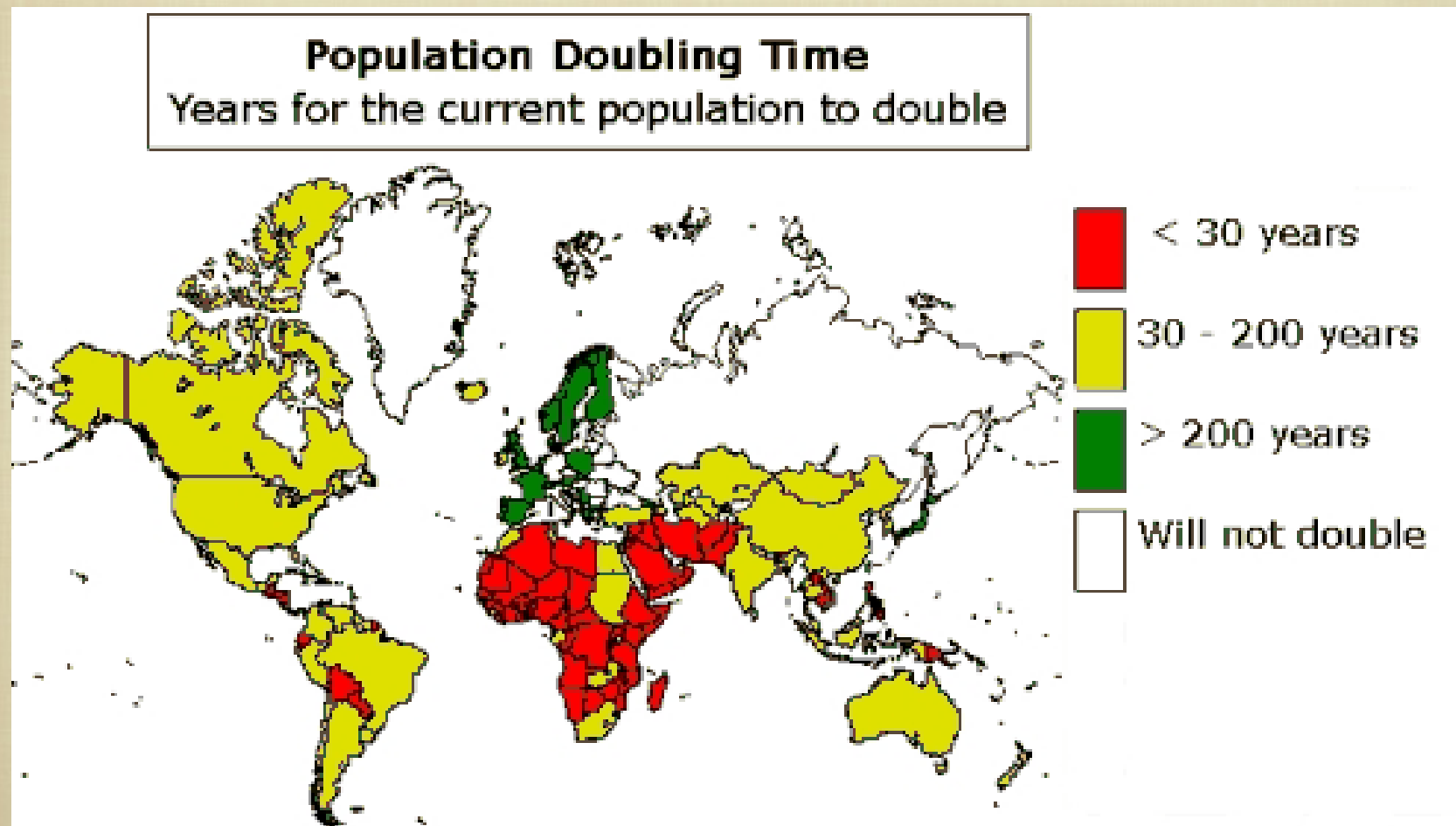
# POPULATION RATES

- $(\text{BIRTHS} - \text{DEATHS})$  (NATURAL INCREASE) +  $(\text{IMMIGRANTS} - \text{EMIGRANTS})$  (NET MIGRATION) = INCREASE OR DECREASE IN POPULATION



# RULE OF SEVENTY

- YEARS FOR THE POPULATION DOUBLES = 70 DIVIDED BY GROWTH RATE



# THE EFFECT OF MIGRATION

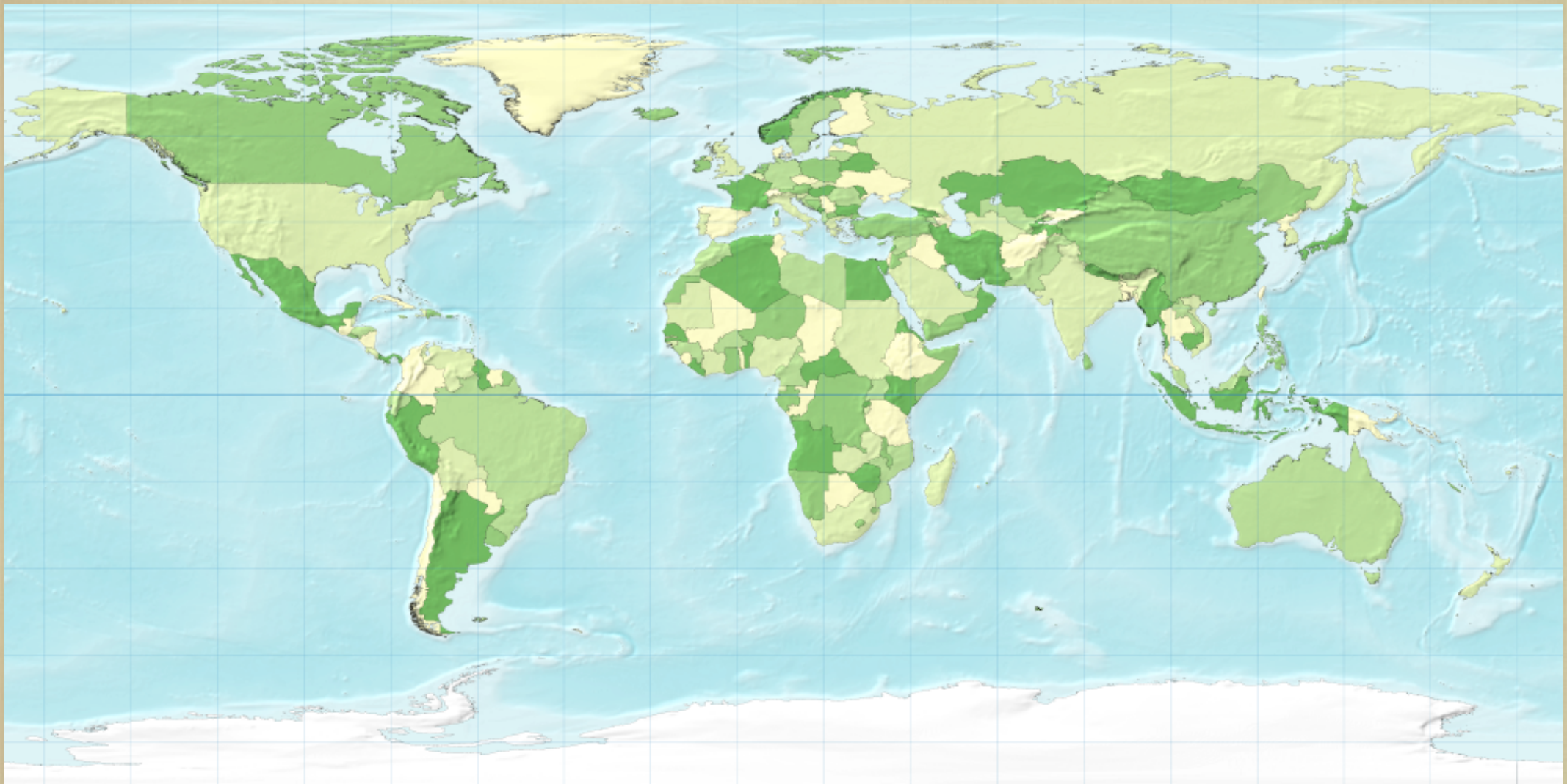
- CANADA, US AND AUSTRALIA ARE SOME OF FEW COUNTRIES WHERE IMMIGRATION IS SIGNIFICANT
- OUR MULTICULTURAL POPULATION IS THE RESULT



CARTOGRAMS...

FIRST, AN  
“ORDINARY” MAP

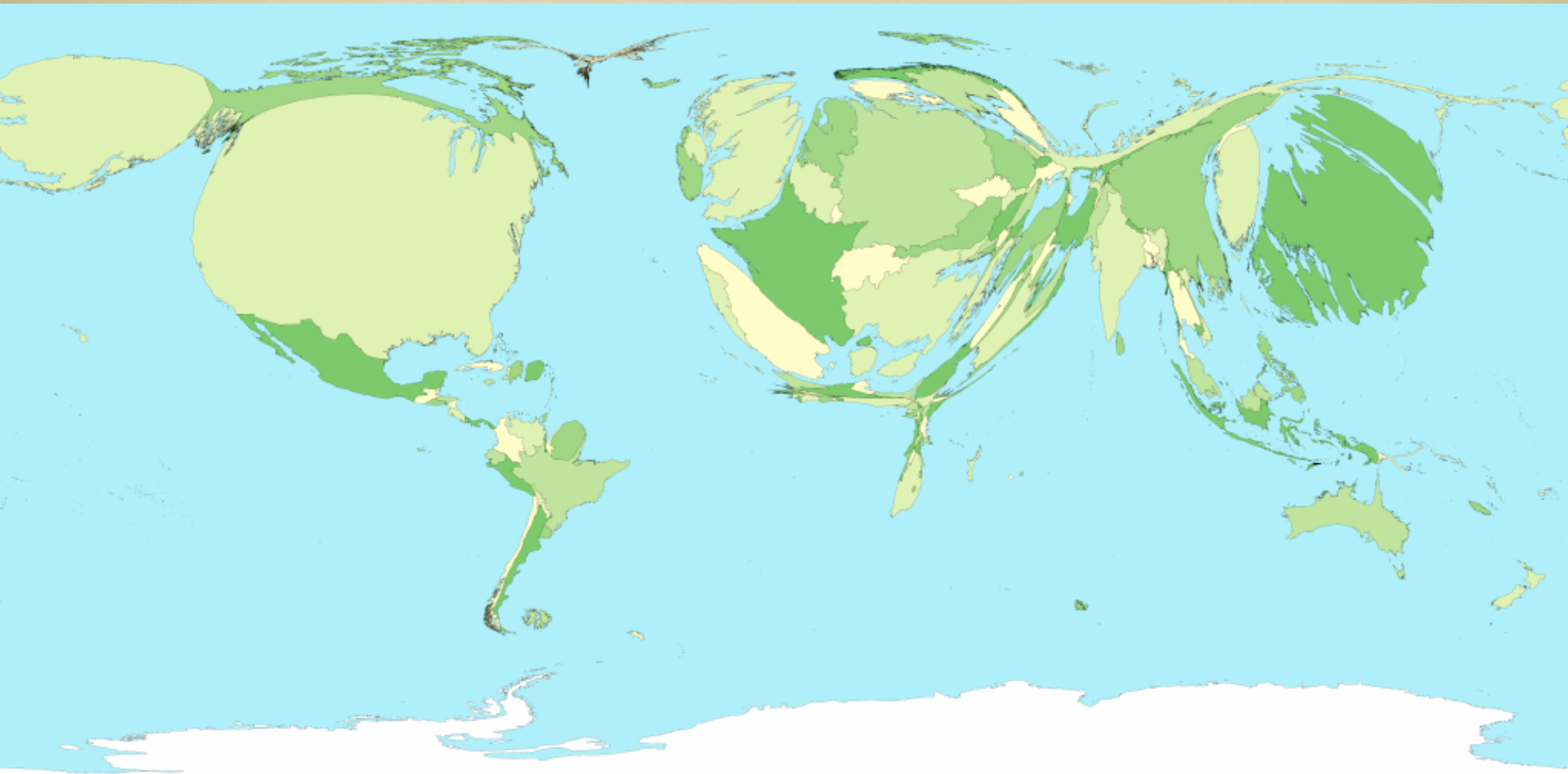




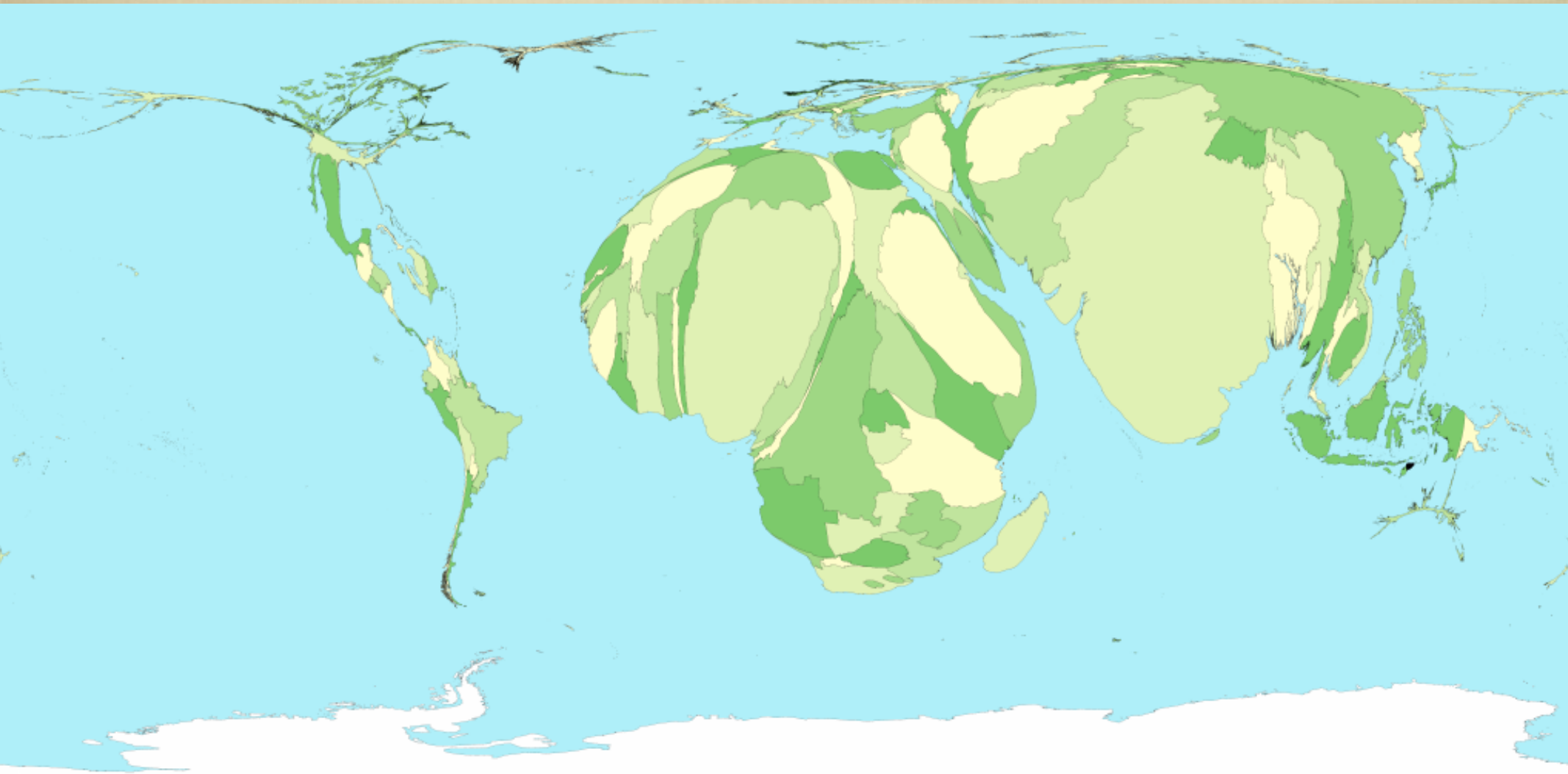
NOW WHAT DO THESE  
MAPS SHOW?



# POPULATION

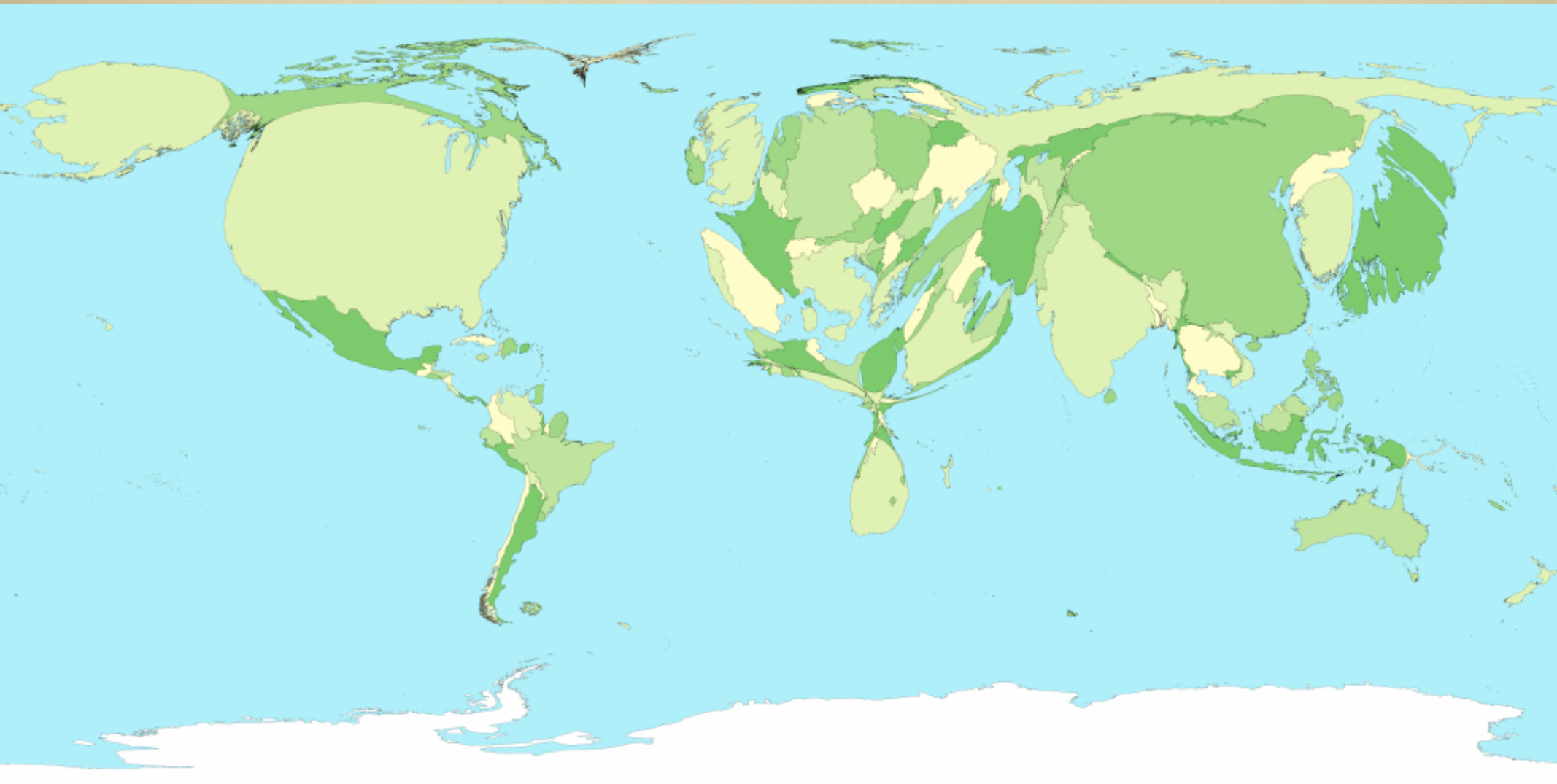


WEALTH (GDP)

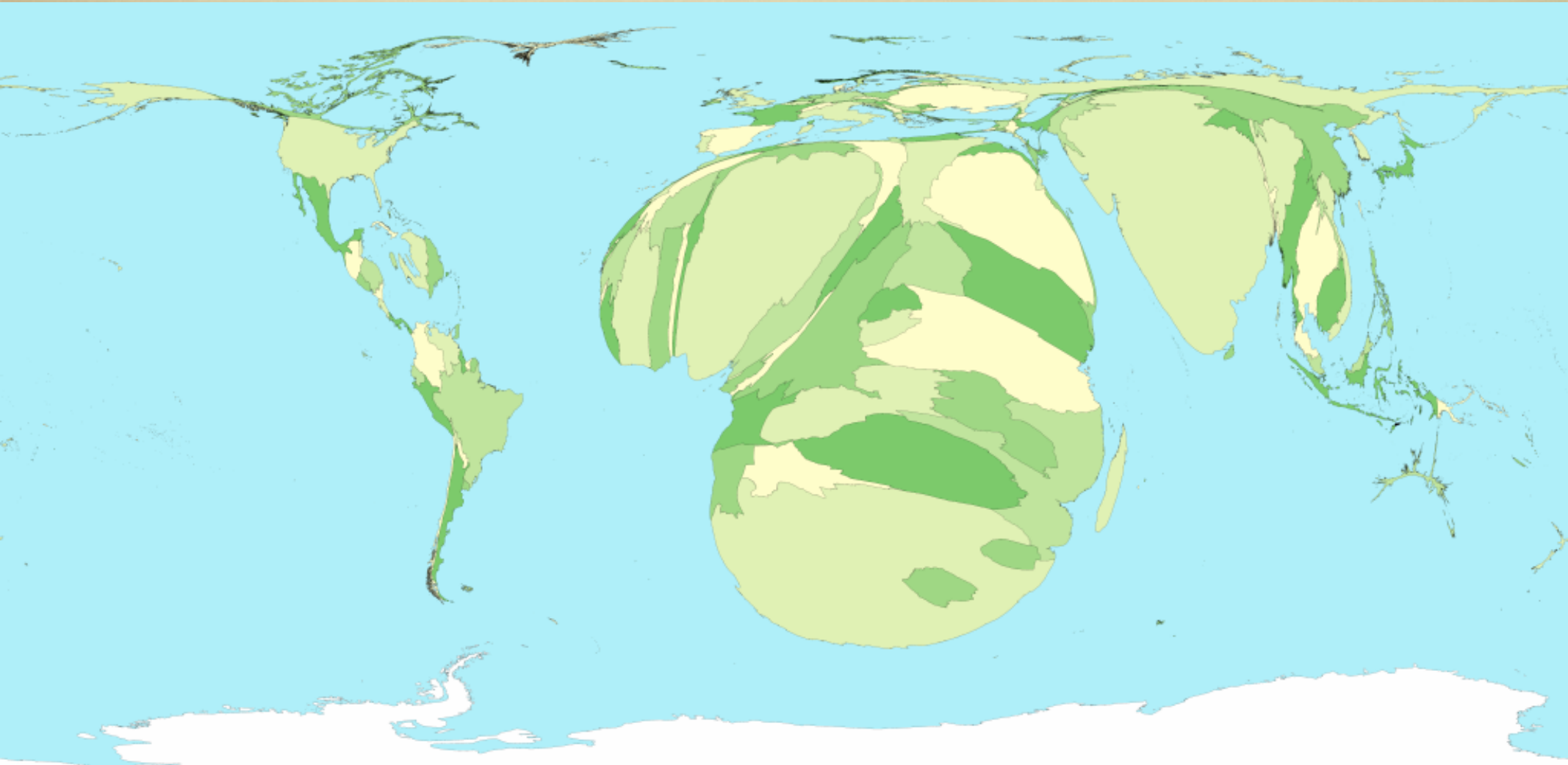


# CHILD MORTALITY





# GREENHOUSE GAS EMISSIONS



# PEOPLE LIVING WITH HIV/AIDS



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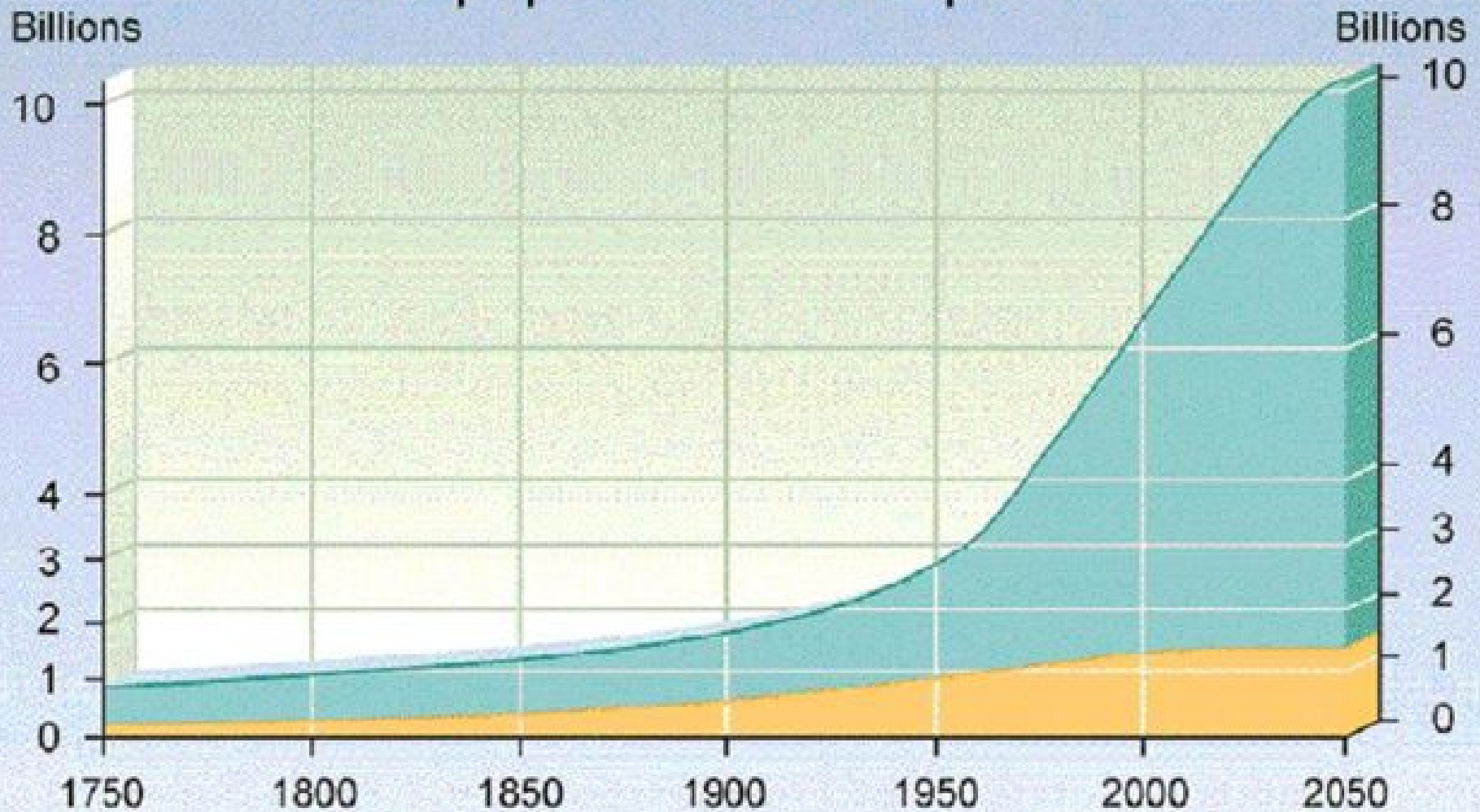
WHAT CAN BE DONE?

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# World population development



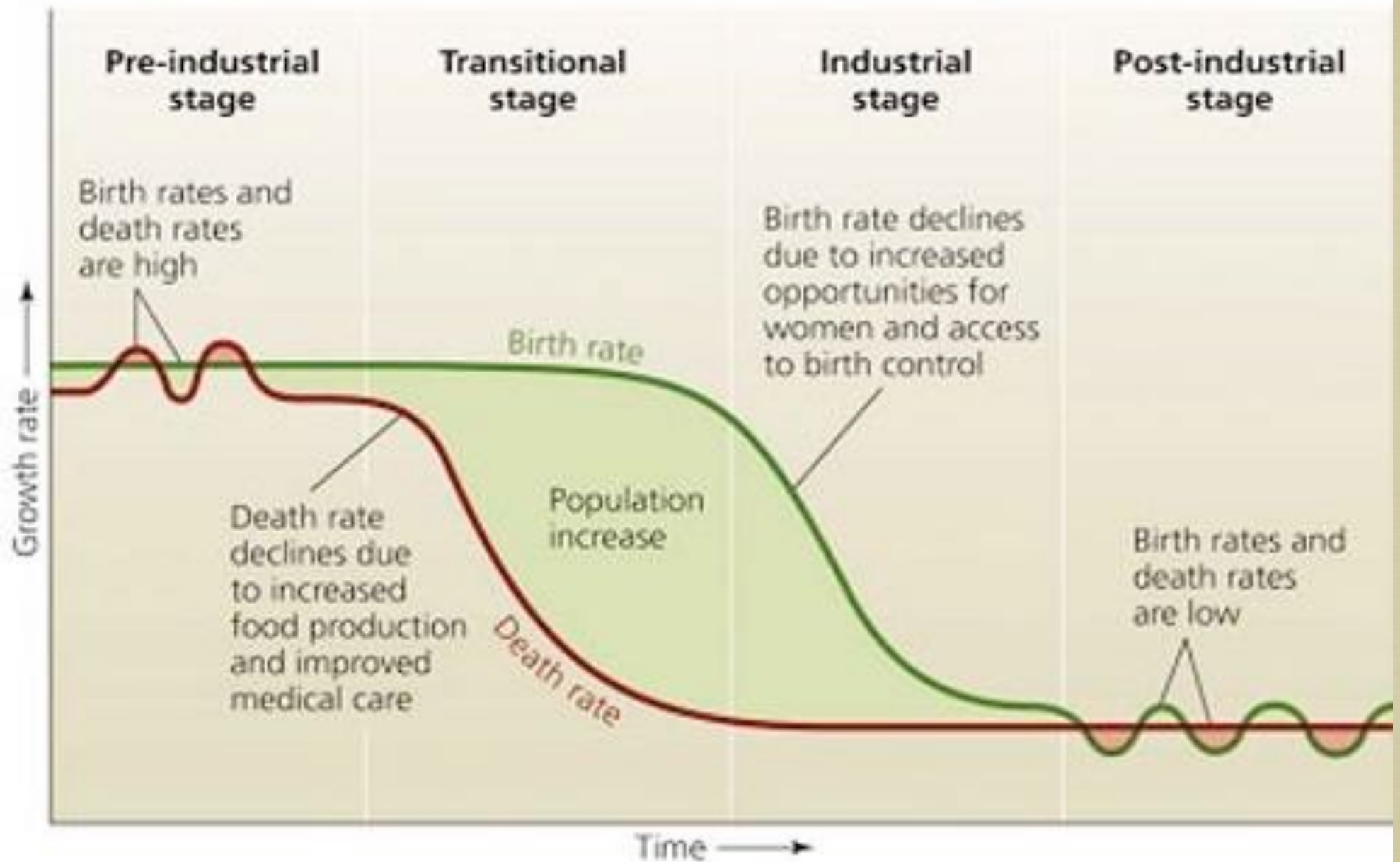
Developing countries  
Industrialized countries



GRID  
Arendal



# Demographic Transition





# TOPIC2

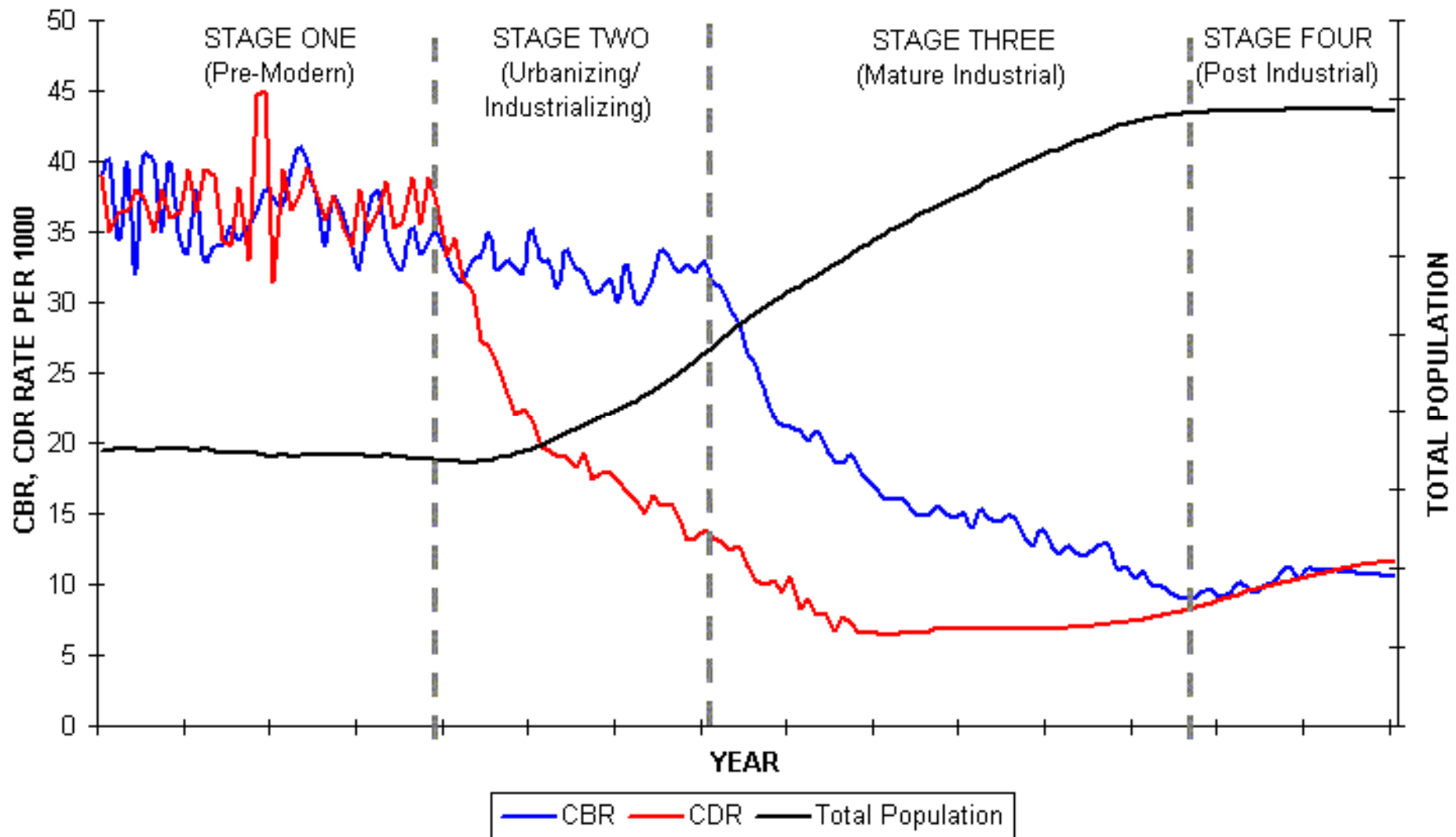
## DEMOGRAPHIC TRANSITION MODEL

**YOUR TEXT (COUNTERPOINTS P. 366)  
USES 5 STAGES FOR THE DMT...  
STAGE 3 & 4 ARE QUITE SIMILAR**

**MOST OTHER SOURCES USE FOUR  
STAGES... WE'LL USE FOUR TO KEEP  
IT SIMPLER.**

# DEMOGRAPHIC TRANSITION MODEL

THE DEMOGRAPHIC TRANSITION MODEL



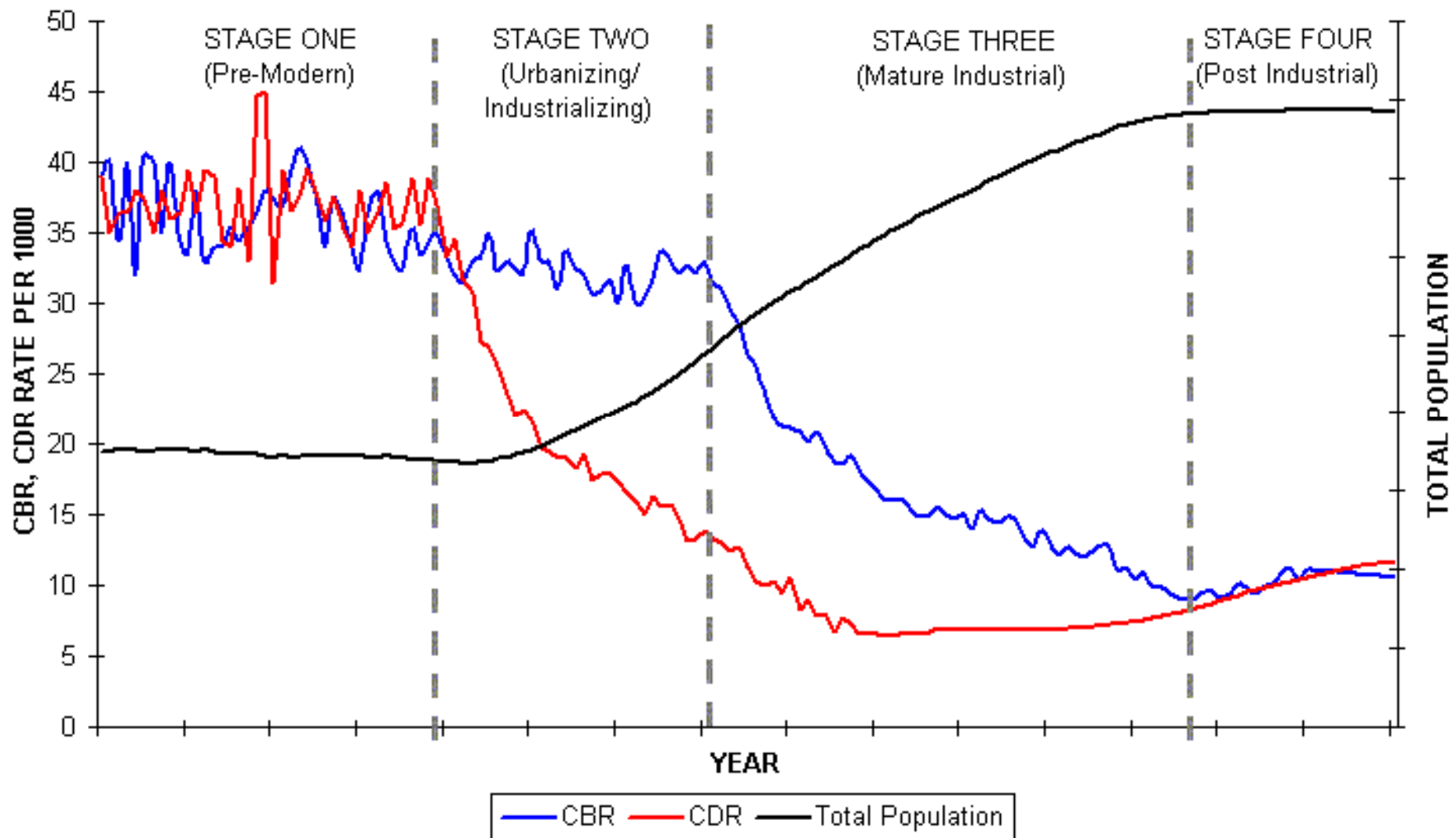
# DEMOGRAPHIC TRANSITION MODEL

## STAGE I

- LOW LIFE EXPECTANCY BECAUSE OF DISEASE, POOR MEDICAL CARE, POOR NUTRITION, UNSANITARY LIVING CONDITIONS
- LARGE FAMILIES TO SURVIVE
- RESULTS IN STABLE BUT LOW POPULATION
- PRE-DEVELOPED OR MASSIVELY UNDERDEVELOPED COUNTRIES -- PROBABLY NON LEFT IN THIS CATEGORY

# DEMOGRAPHIC TRANSITION MODEL

THE DEMOGRAPHIC TRANSITION MODEL



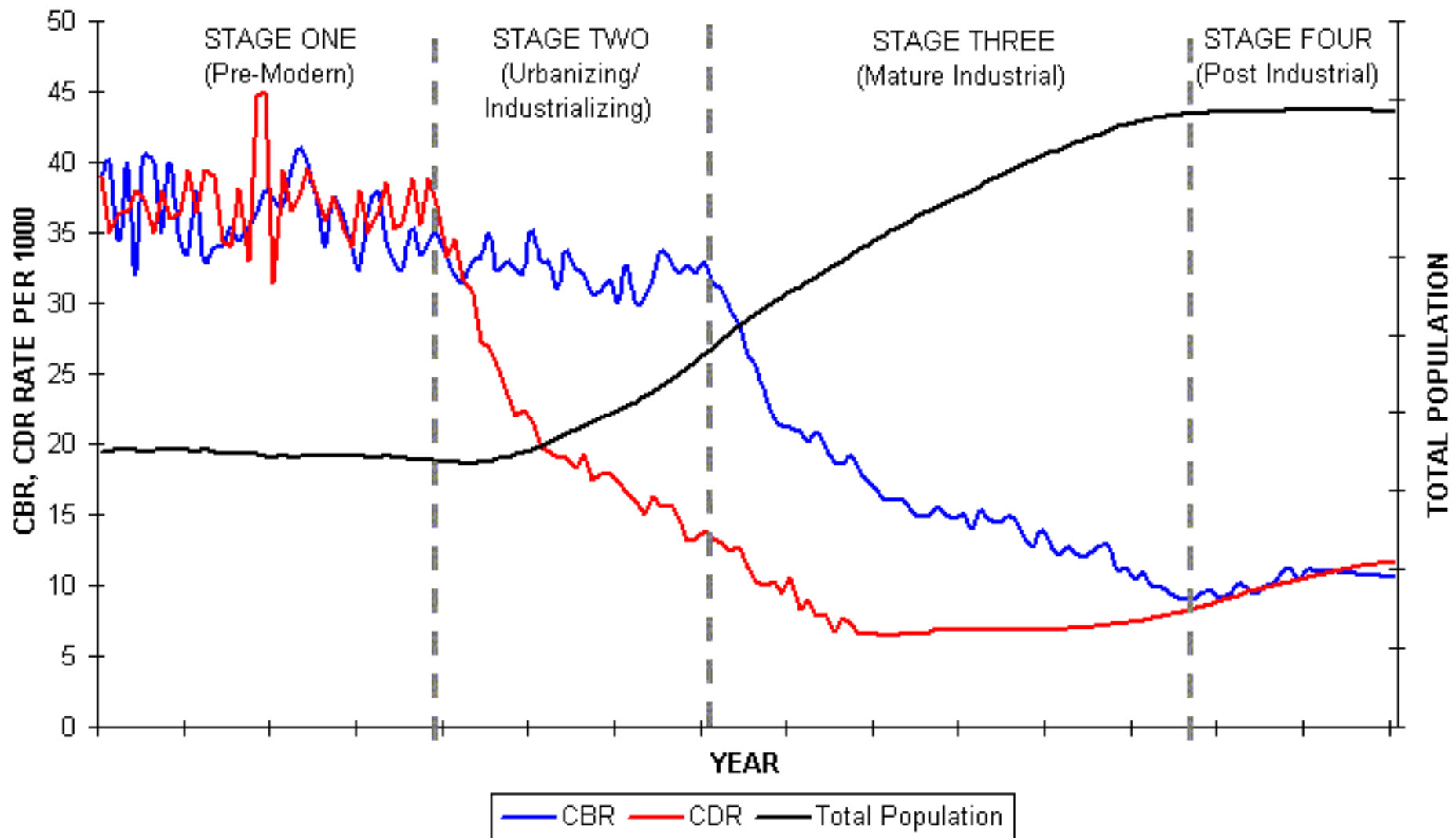
# DEMOGRAPHIC TRANSITION MODEL

## STAGE II

- DEATH RATE FELL DUE TO AGRICULTURAL REVOLUTION, IMPROVED HYGIENE AND MEDICINE
- BIRTH RATE REMAIN HIGH
- RESULTS IN RAPID INCREASE IN POPULATION
- DEVELOPING COUNTRIES -- KENYA, CHAD, HAITI, BOTSWANA, BURMA

# DEMOGRAPHIC TRANSITION MODEL

THE DEMOGRAPHIC TRANSITION MODEL



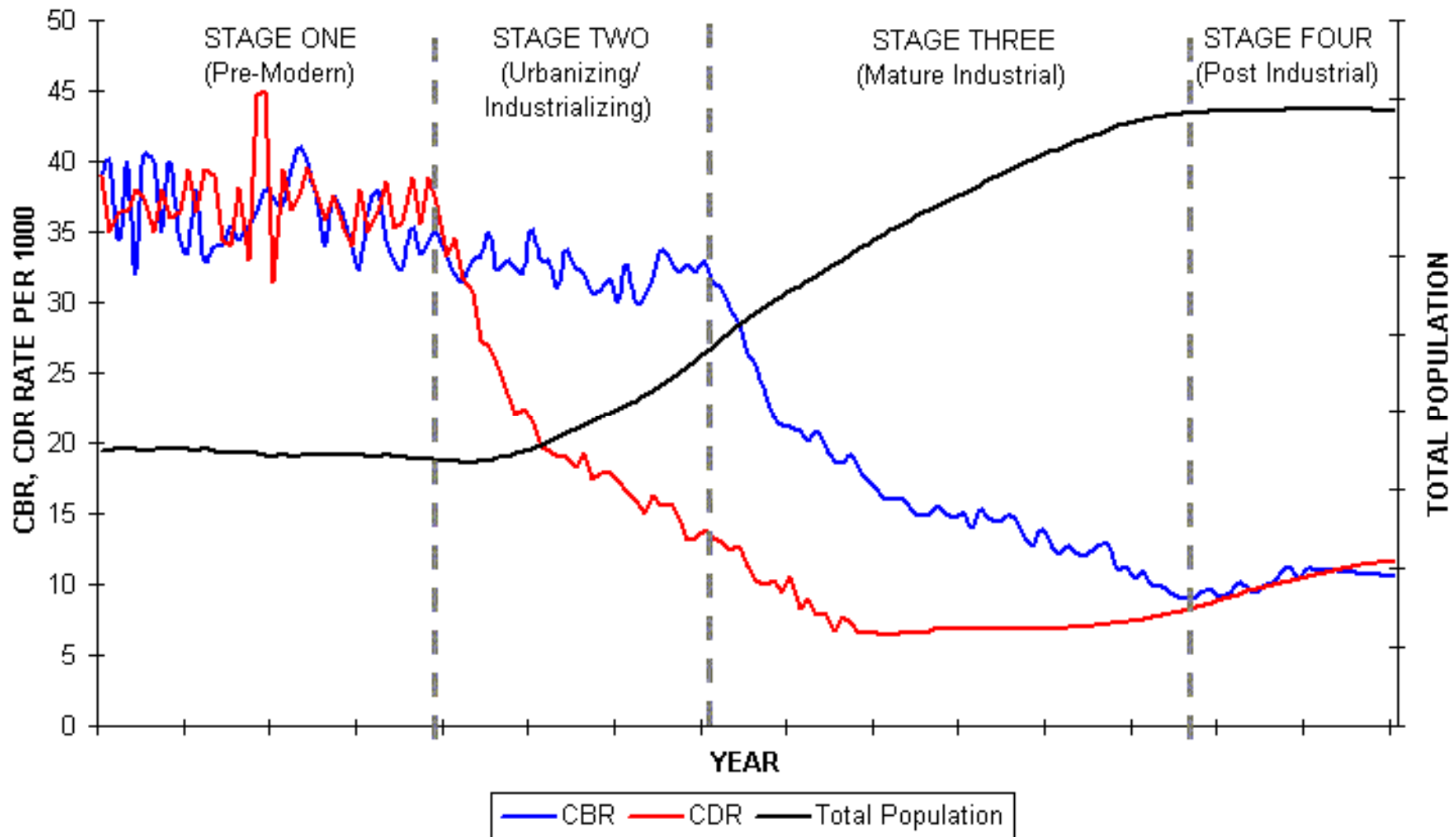
# DEMOGRAPHIC TRANSITION MODEL

## STAGE III (TEXT SPLITS IT INTO STAGE III & IV)

- FALLING DEATH RATE MATCHED BY DECLINE IN BIRTH RATE
- POPULATION GROWTH SLOWLY LEVELS OFF
- DEVELOPED COUNTRIES -- CHINA (JUST), BRAZIL, CANADA (ALMOST DONE)

# DEMOGRAPHIC TRANSITION MODEL

THE DEMOGRAPHIC TRANSITION MODEL





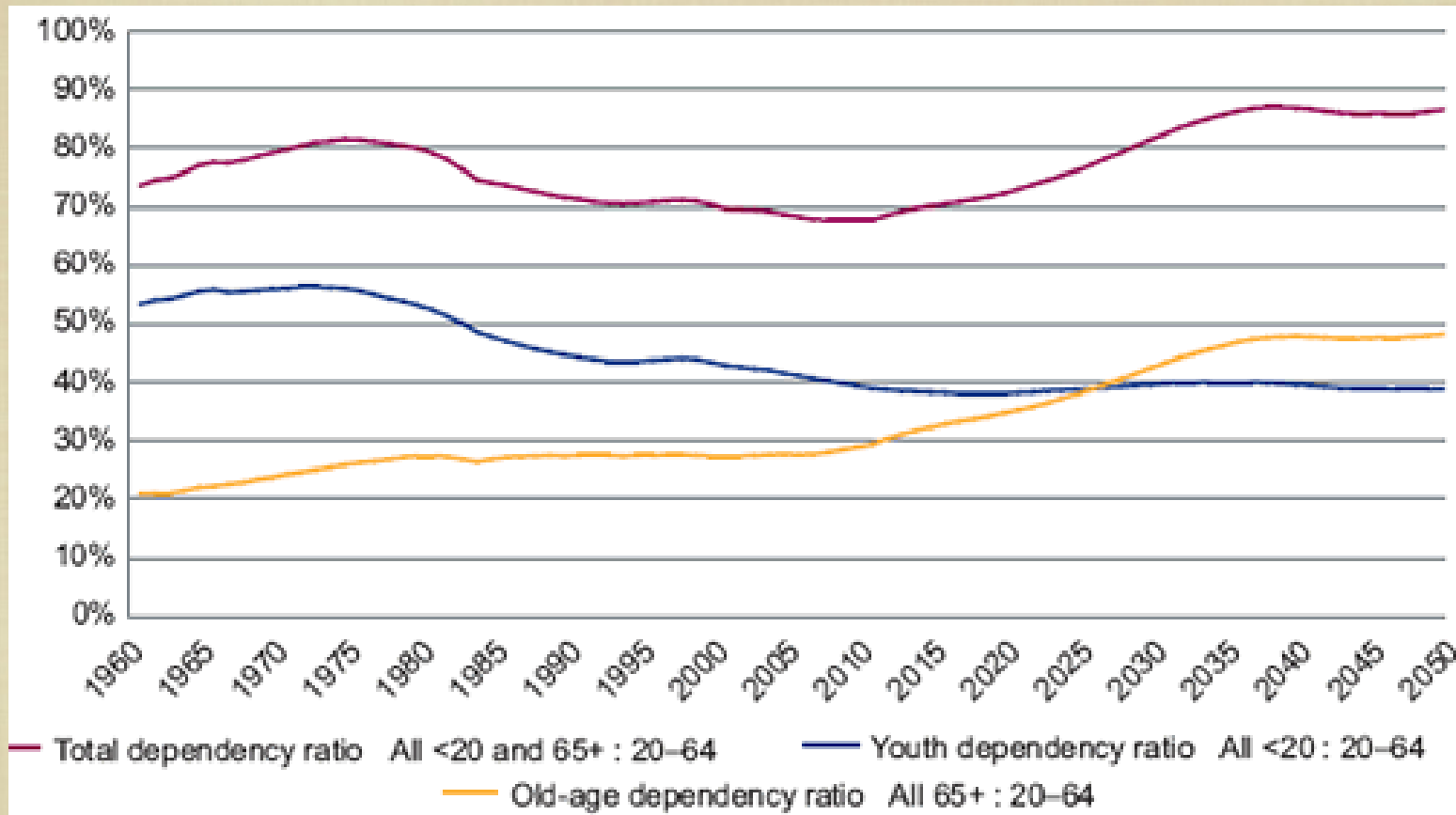
# DEMOGRAPHIC TRANSITION MODEL

## STAGE IV (TEXT CALLS IT STAGE V)

- LOW BIRTH RATE AND DEATH RATE
- STABLE TO DECLINING POPULATIONS
- HIGHLY DEVELOPED ECONOMIES (“POST-INDUSTRIAL”) -- AUSTRIA, JAPAN

# IMPACT OF DTM ON CANADA

## ...AGE STRUCTURE OF OUR POPULATION



- CHILDREN <15 (SUPPORTED)
- ADULTS 16 TO 64 (WORKING AGE)
- ADULTS >65 (SUPPORTED)

# IMPACT OF DTM ON CANADA ...THE SANDWICH GENERATION

CHILDREN AND  
OLDER PEOPLE  
NEED MEDICAL,  
EDUCATION,  
HOUSING AND  
OTHER SERVICES



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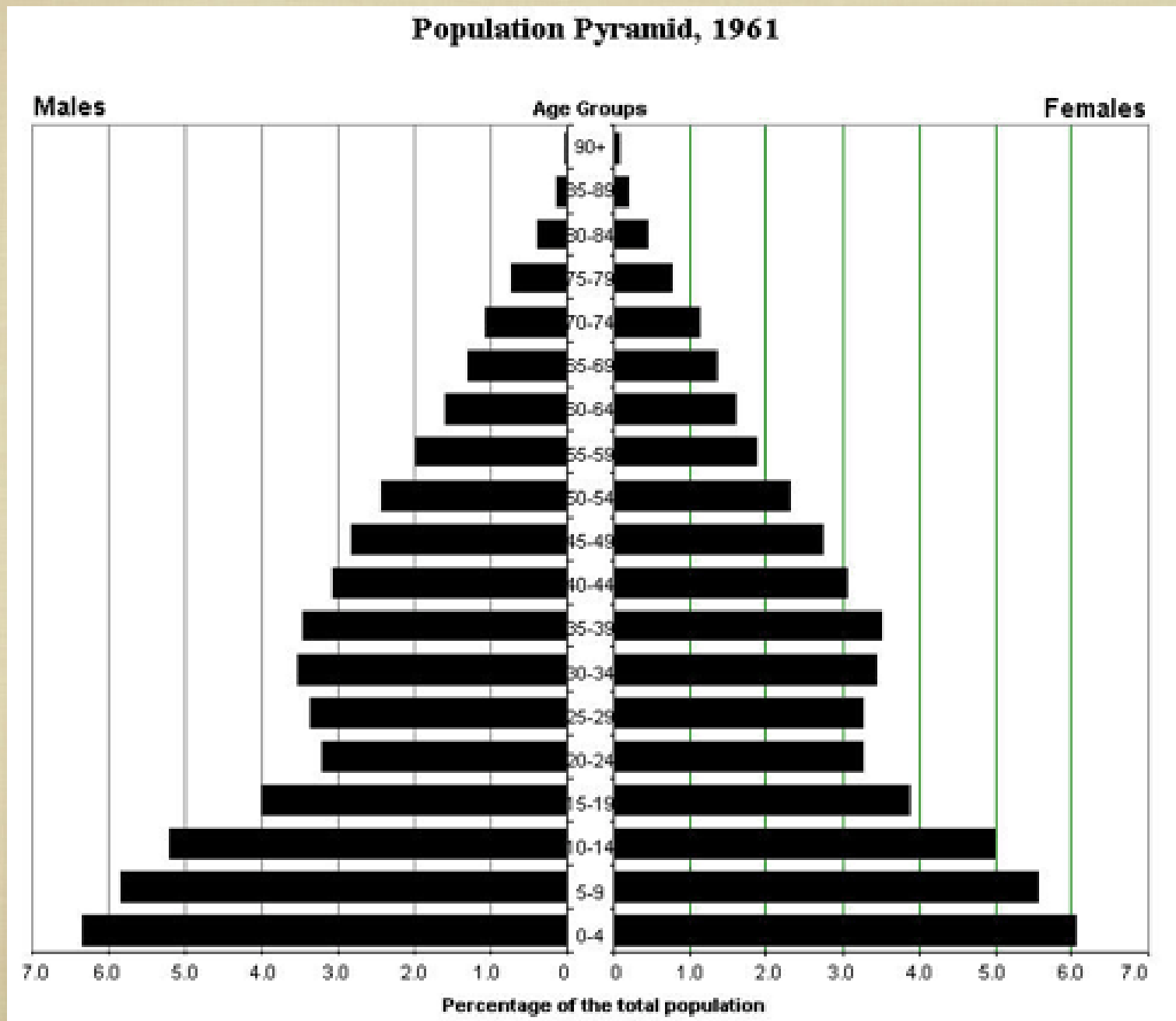
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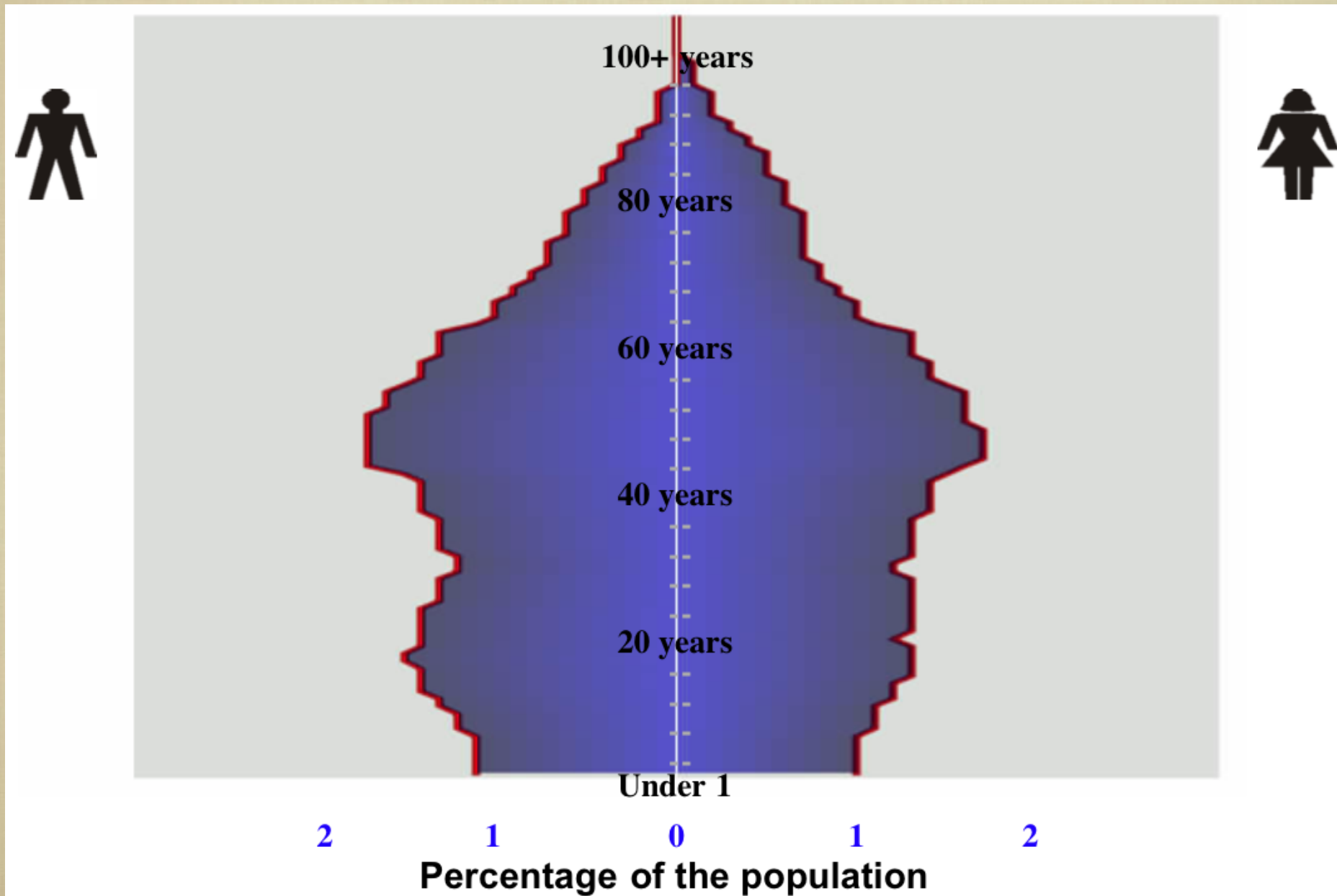
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# POPULATION PYRAMIDS

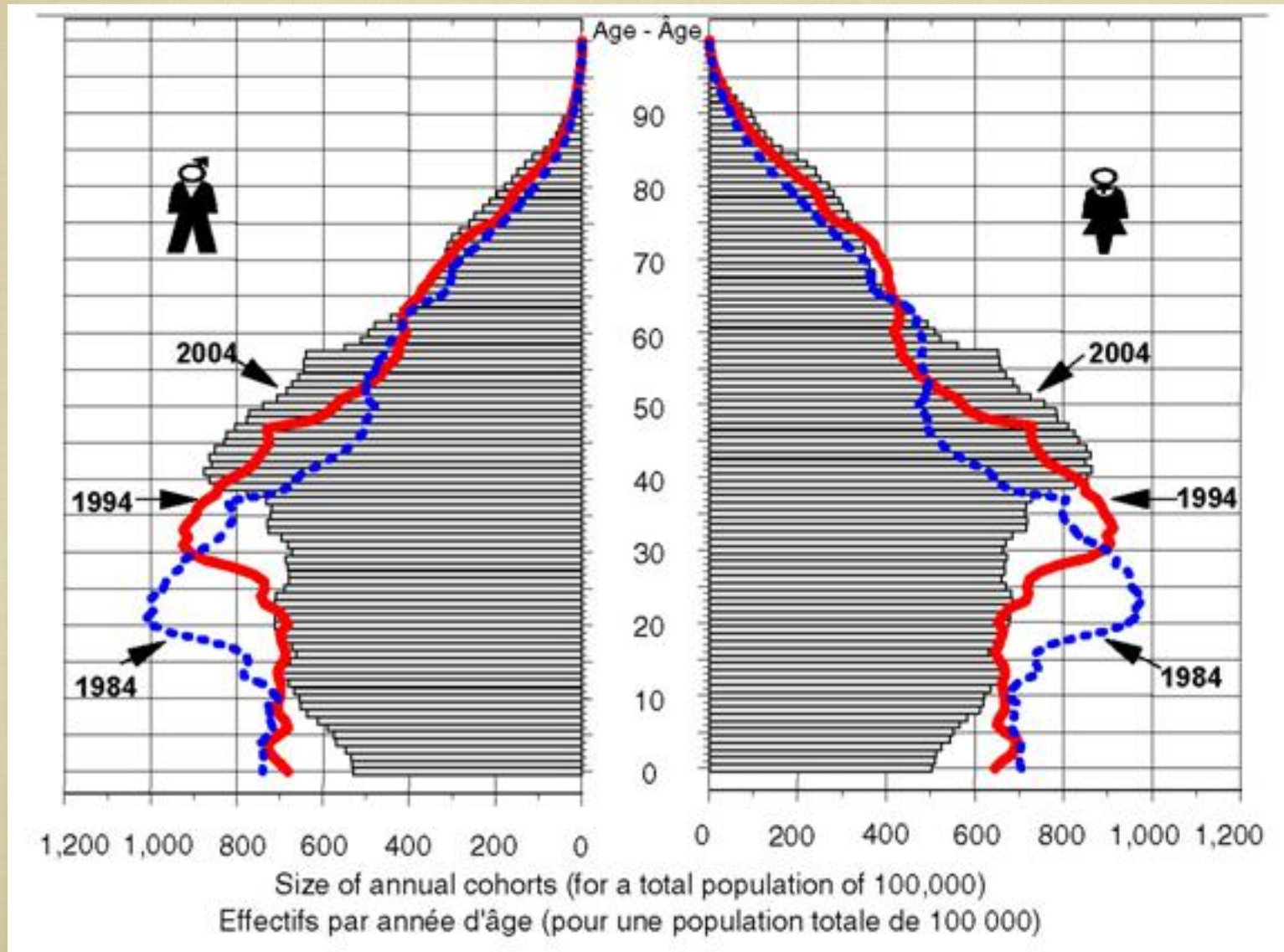


# POPULATION PYRAMIDS

2006



# CHANGES IN CANADA'S POPULATION



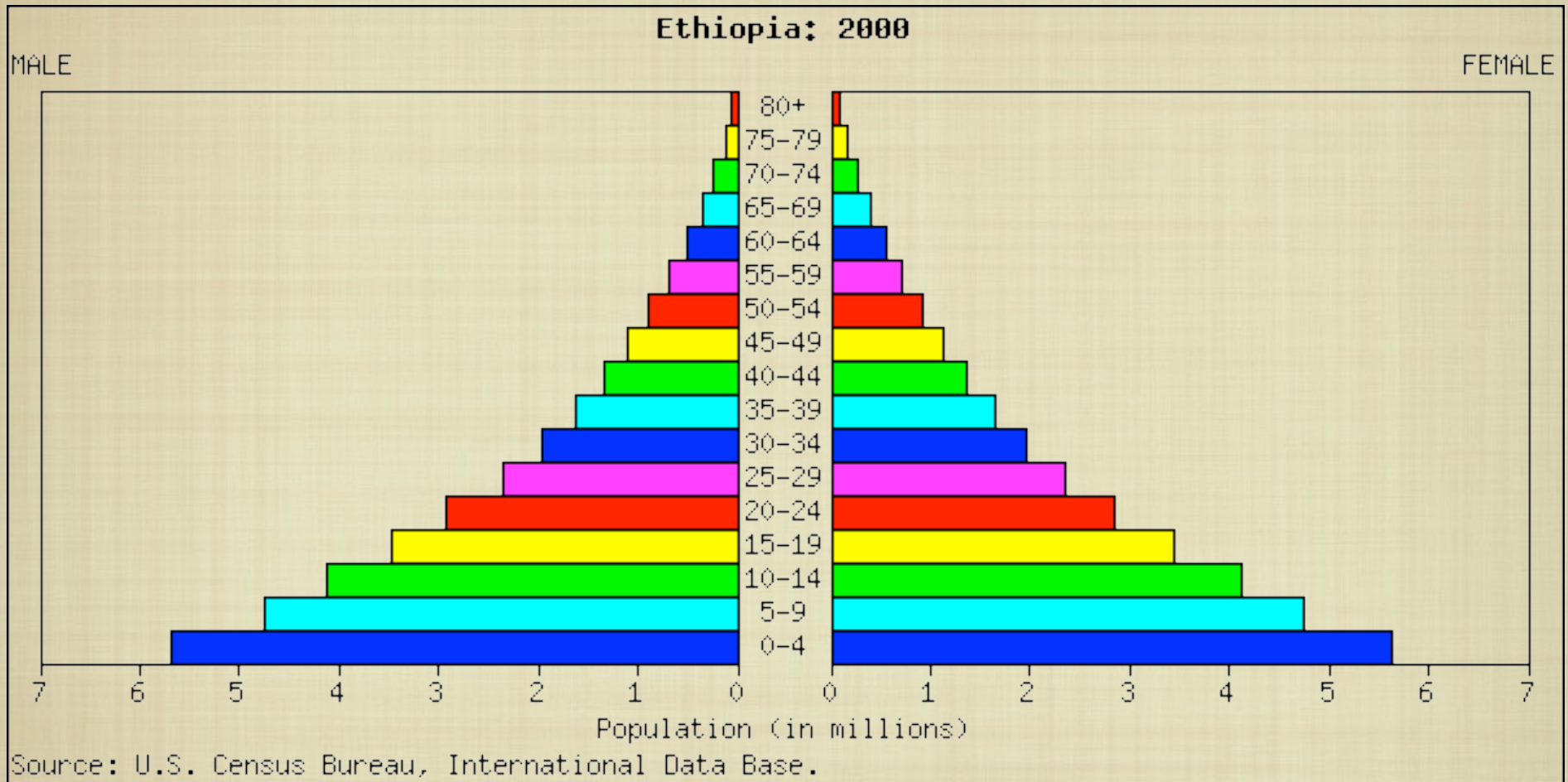
# CHARACTERISTICS

- ✦ **DECLINING BIRTH AND DEATH RATE**
- ✦ **INCREASE OLDER POPULATION**
- ✦ **FEWER CHILDREN TO LOOK AFTER THEM PUTS PRESSURE ON THE HEALTH CARE**
- ✦ **IMMIGRATION NECESSARY TO FILL GAP**



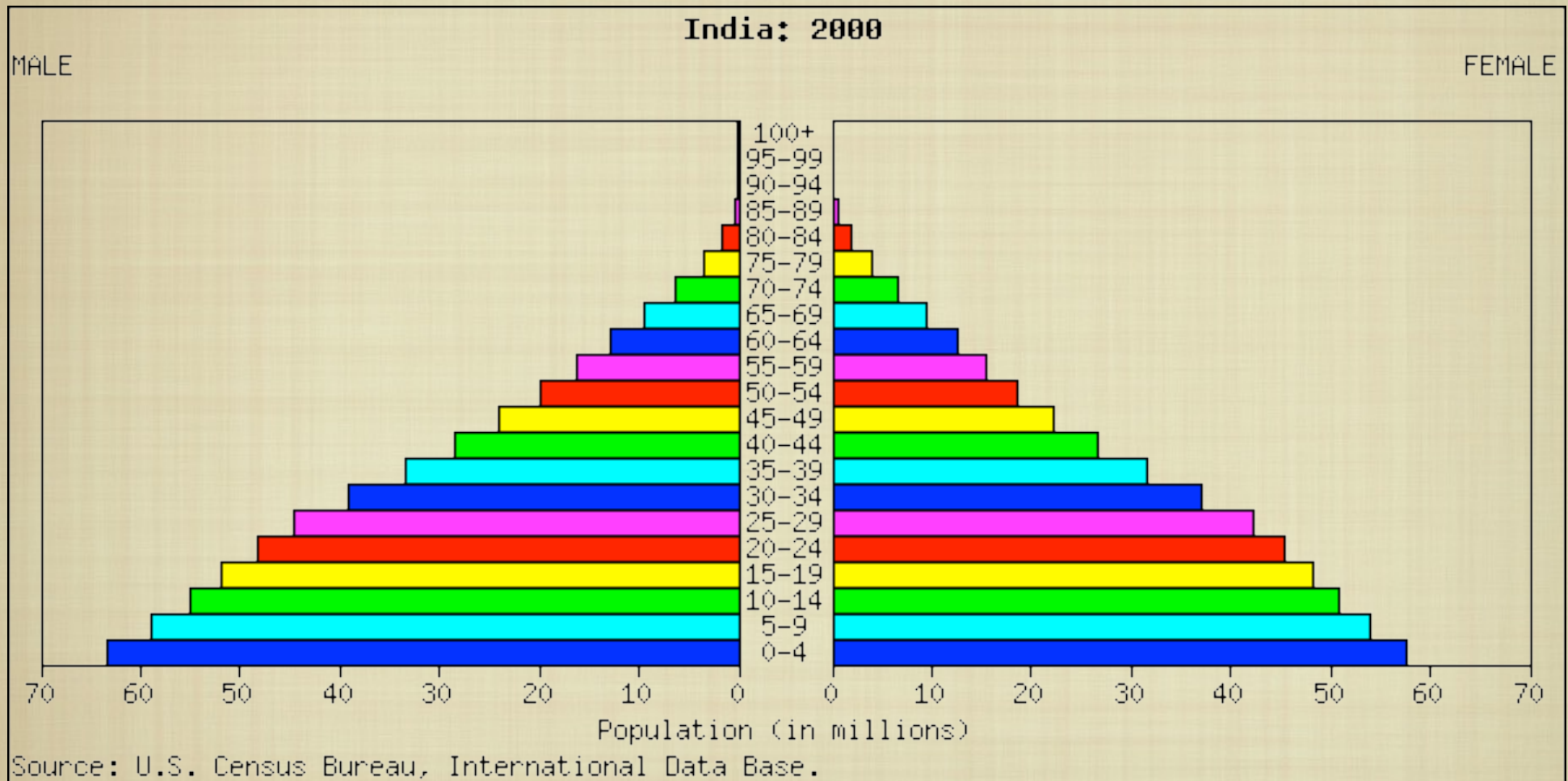


# PYRAMID TYPES



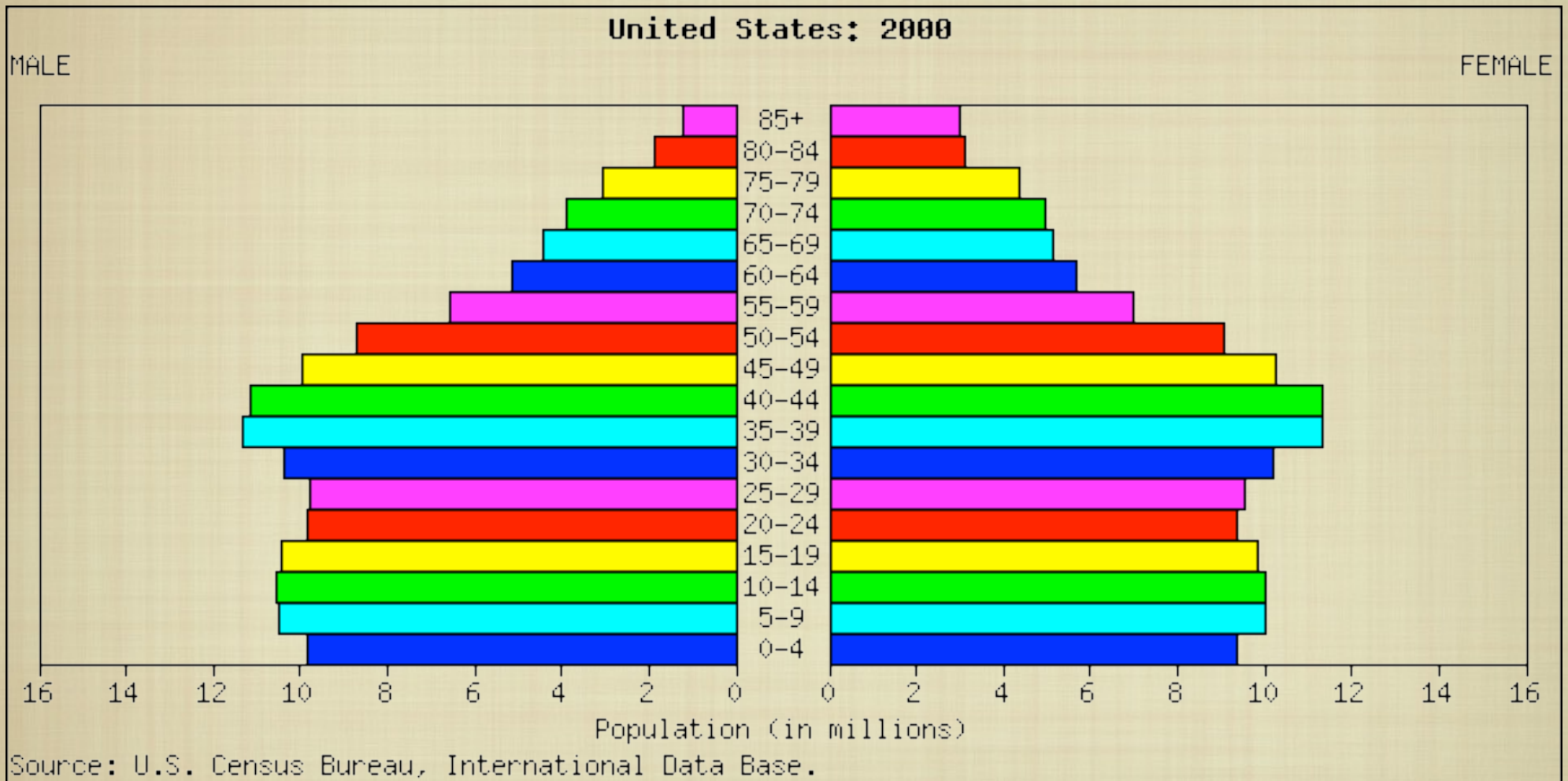
**EARLY EXPANDING**

# PYRAMID TYPES



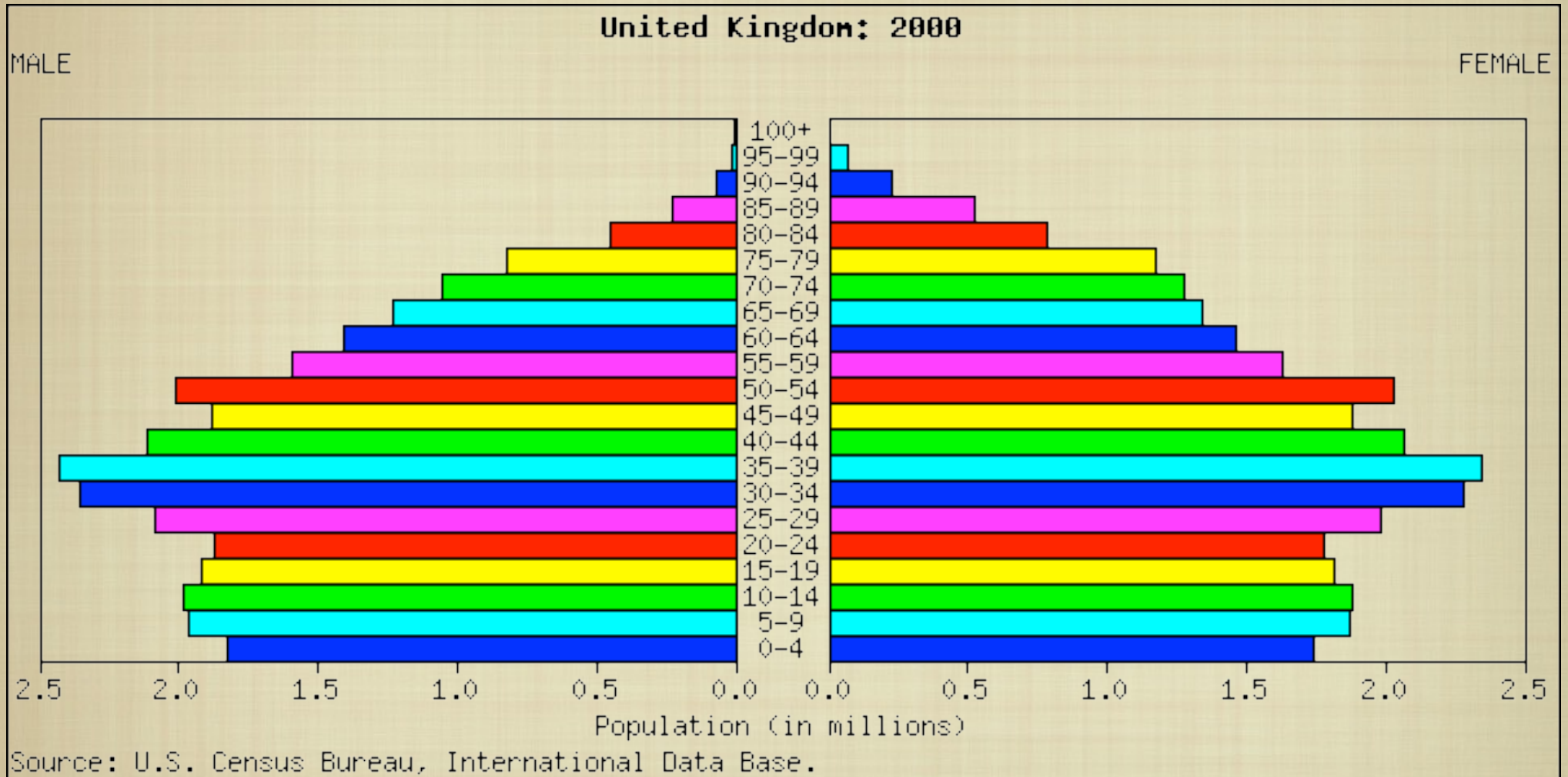
**EXPANDING**

# PYRAMID TYPES



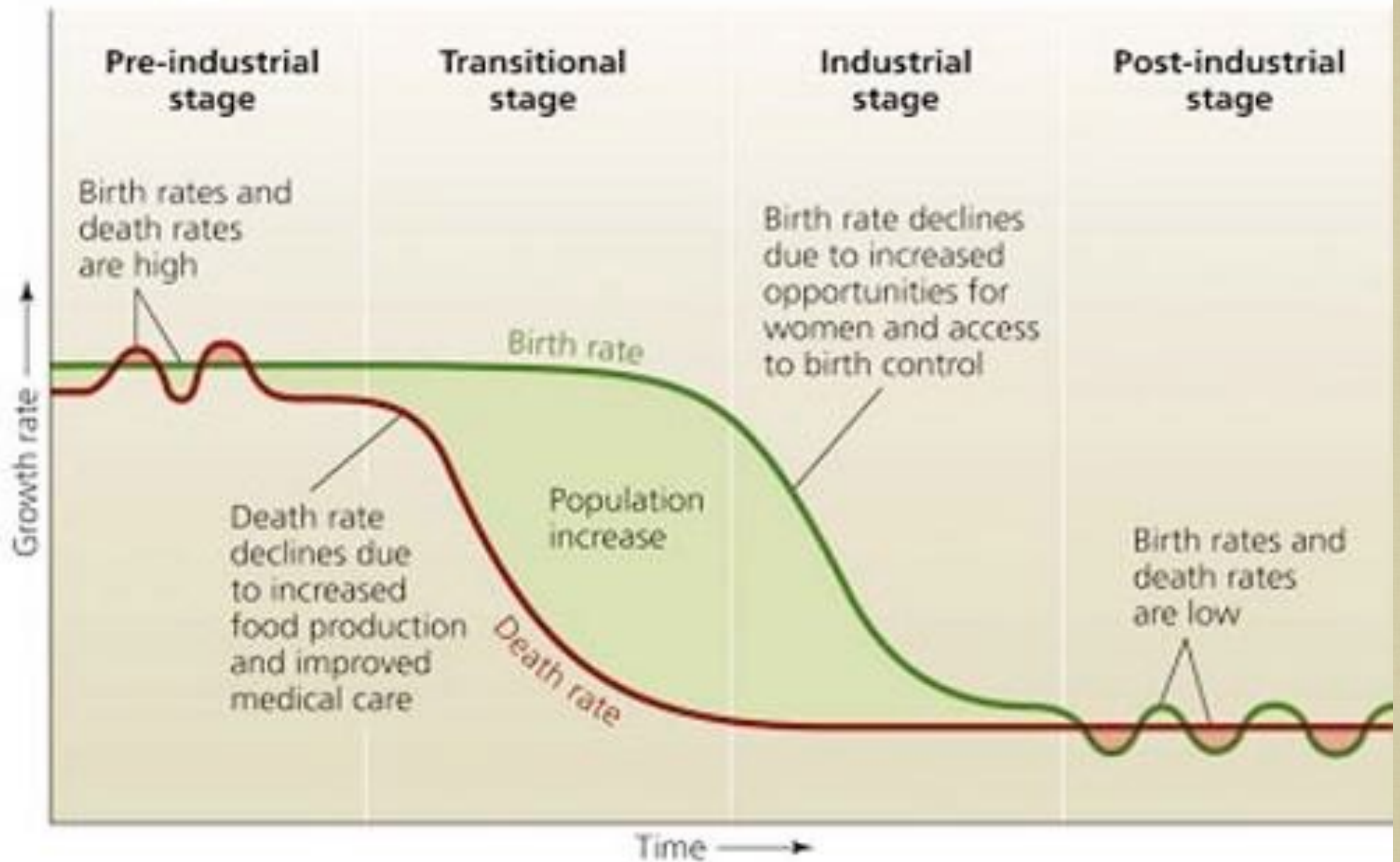
**STABLE**

# PYRAMID TYPES



**CONTRACTING**

# Demographic Transition



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# PROBLEMS OF A YOUNGER POPULATION

- **DEVELOPING COUNTRIES NEED MORE JOBS AND INCREASED ECONOMY TO AS YOUNG PEOPLE ENTER JOB MARKET TO ESCAPE POVERTY CYCLE**



# ONE CHILD POLICY: CHINA



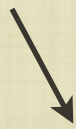
- TO CONTROL POPULATION PROBLEM, CHINA OFFERED INCENTIVES AS CASH, MEDICAL, HOUSING TO ENCOURAGE ONE CHILD
- HALVED THE BIRTH RATE



## ■ PROBLEMS

- INFANTICIDE OF GIRLS
- POLICY IGNORED IN RURAL AGRICULTURAL AREAS PUTS PRESSURE ON FARMLAND AND OUT MIGRATION TO CITIES
- “LITTLE EMPEROR SYNDROME”
- DIFFICULT TO SUPPORT AGING POPULATION
- SMUGGLING

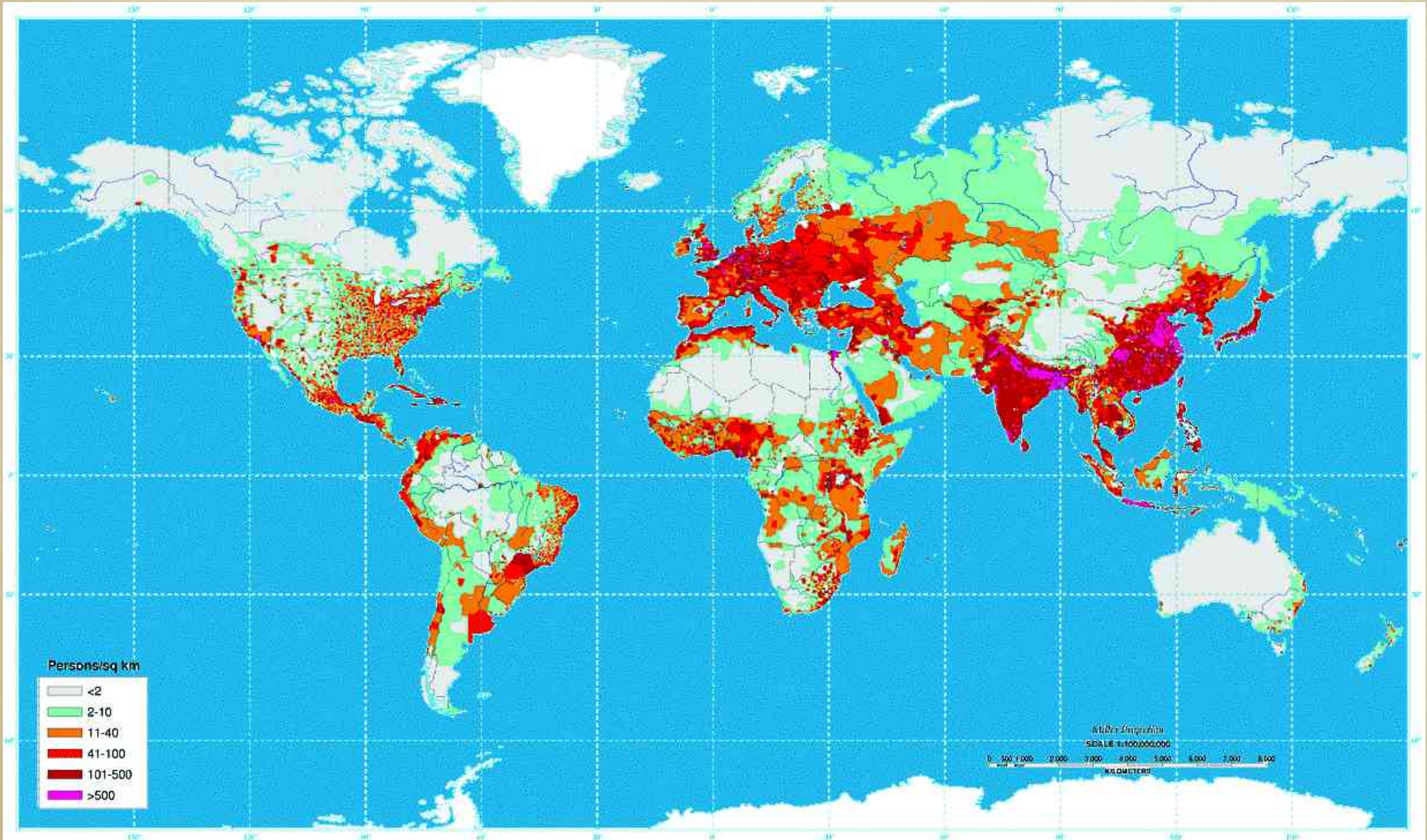




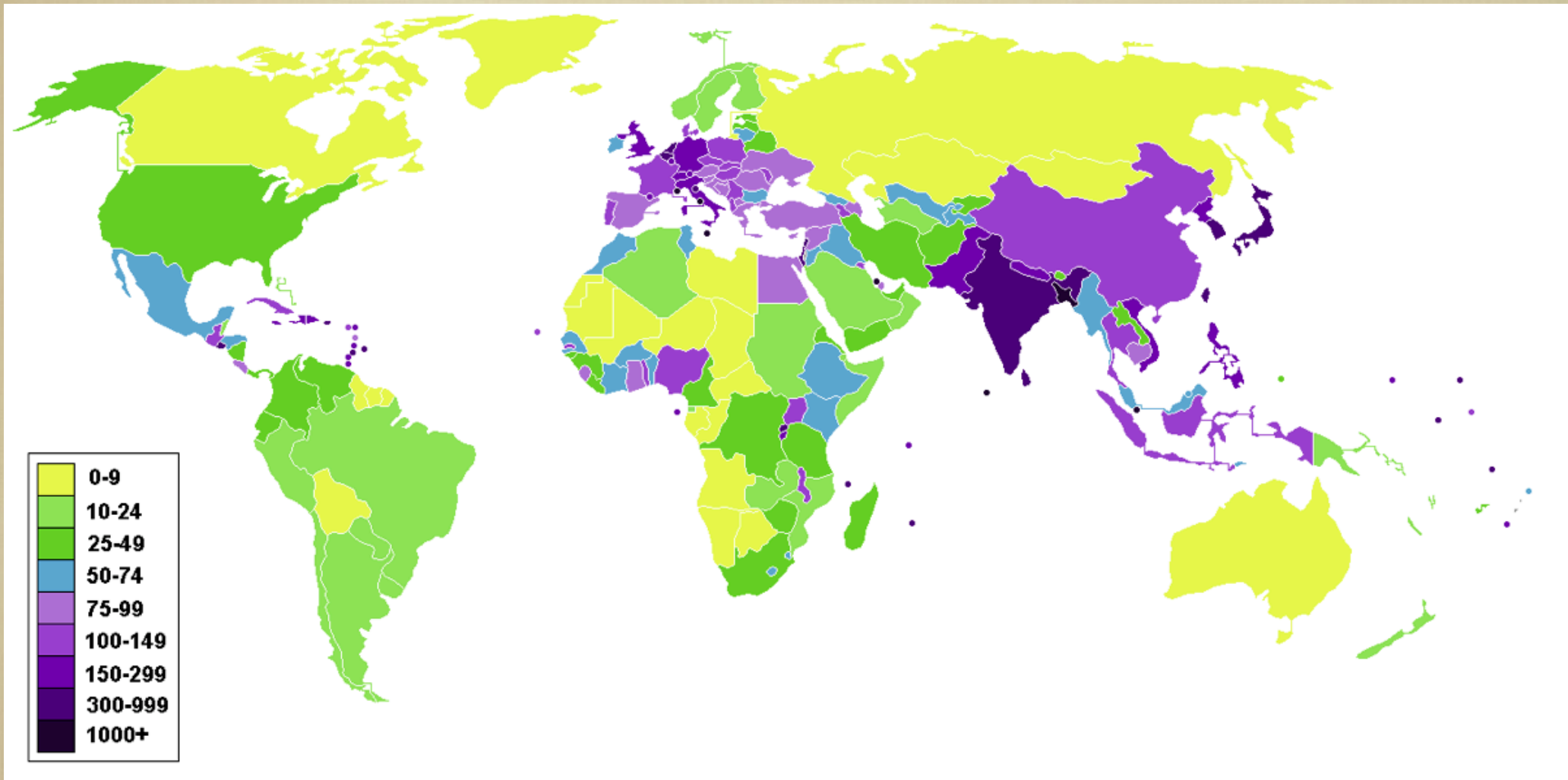
**FROM EXTENDED  
FAMILIES TO  
SMALLER UNITS**

# ECUMENE

THE SIGNIFICANTLY BUILT-UP PLACES ON EARTH



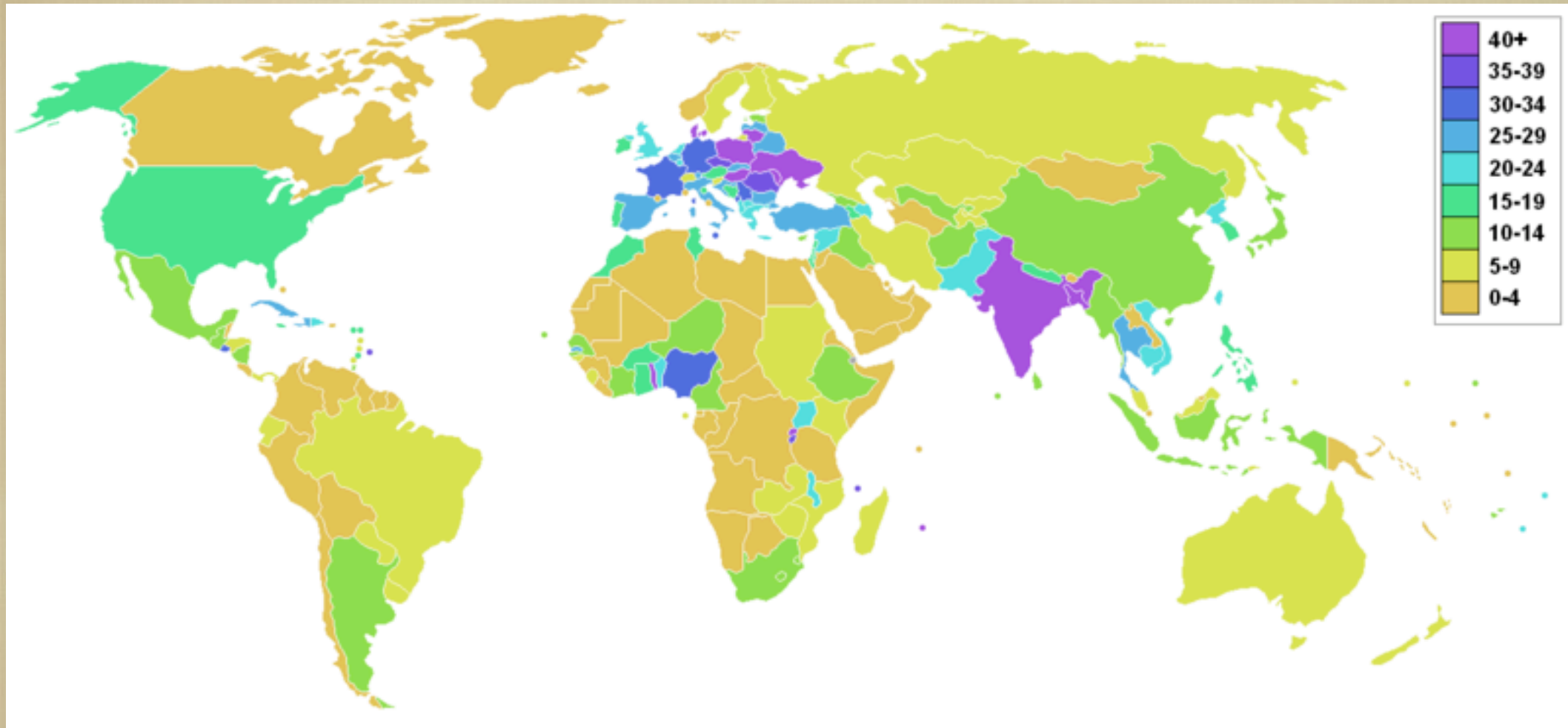
# POPULATION DENSITY



POPULATION DENSITY, WORLDWIDE BY COUNTRY, PERSONS PER KM<sup>2</sup>

[HTTP://EN.WIKIPEDIA.ORG/WIKI/IMAGE:WORLD POPULATION DENSITY MAP.PNG](http://en.wikipedia.org/wiki/Image:World_population_density_map.png)

# ARABLE LAND



ARABLE LAND , WORLDWIDE BY COUNTRY, %

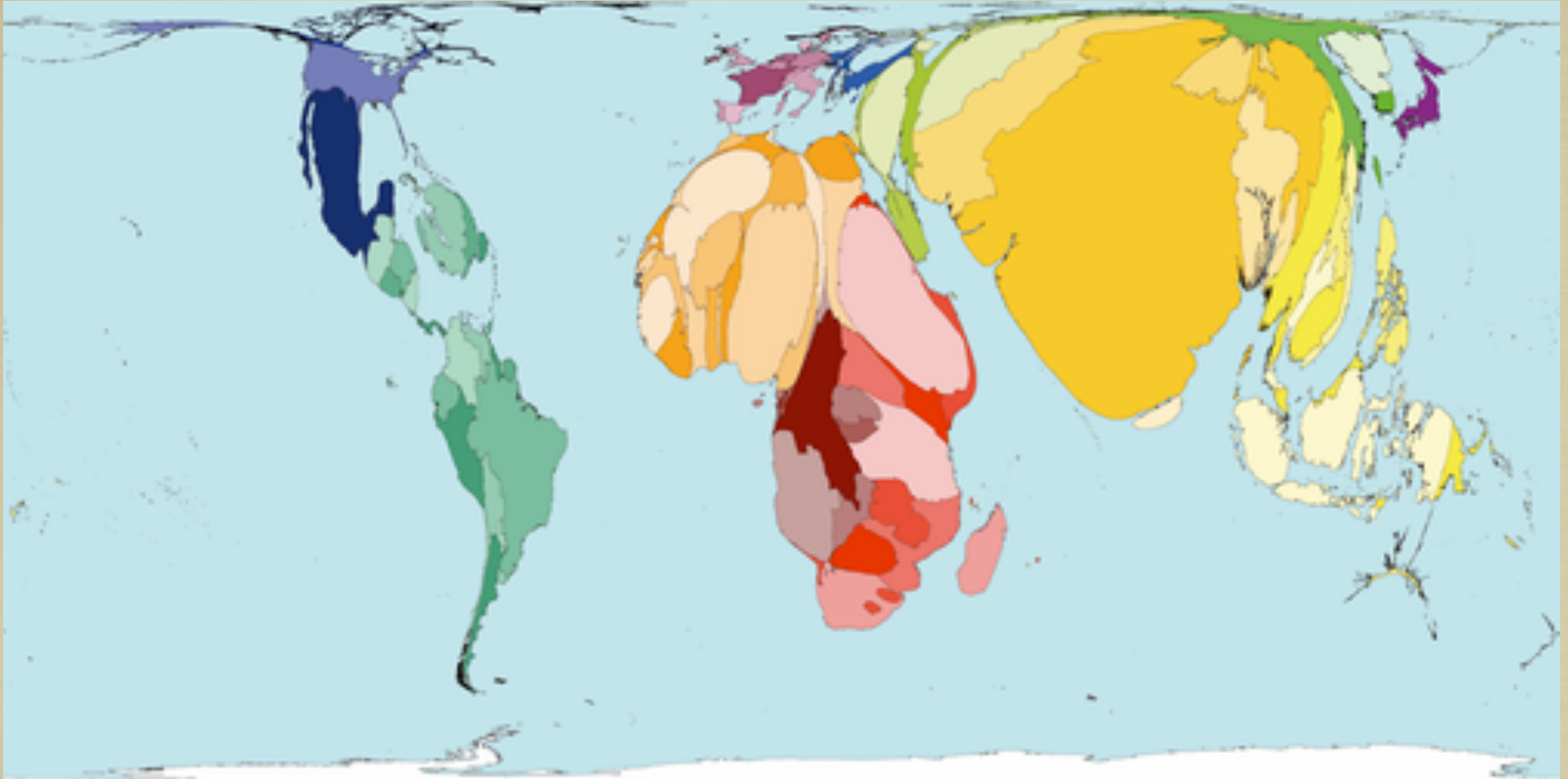
[HTTP://EN.WIKIPEDIA.ORG/WIKI/IMAGE:ARABLE\\_LAND\\_PERCENT\\_WORLD.PNG](http://en.wikipedia.org/wiki/Image:Arable_Land_Percent_World.PNG)

# CARRYING CAPACITY



**DO WE LIVE SUSTAINABLY IN NORTHERN BC?**

# NUTRITIONAL DENSITY



CARTOGRAM SHOWING DEATHS DUE TO LACK OF NUTRITION... WHAT DO YOU THINK THE RELATION IS BETWEEN NUTRITIONAL DENSITY AND MALNUTRITION?