



Demographic Transitions & Ecological Impacts

2 Views on population and the environment:

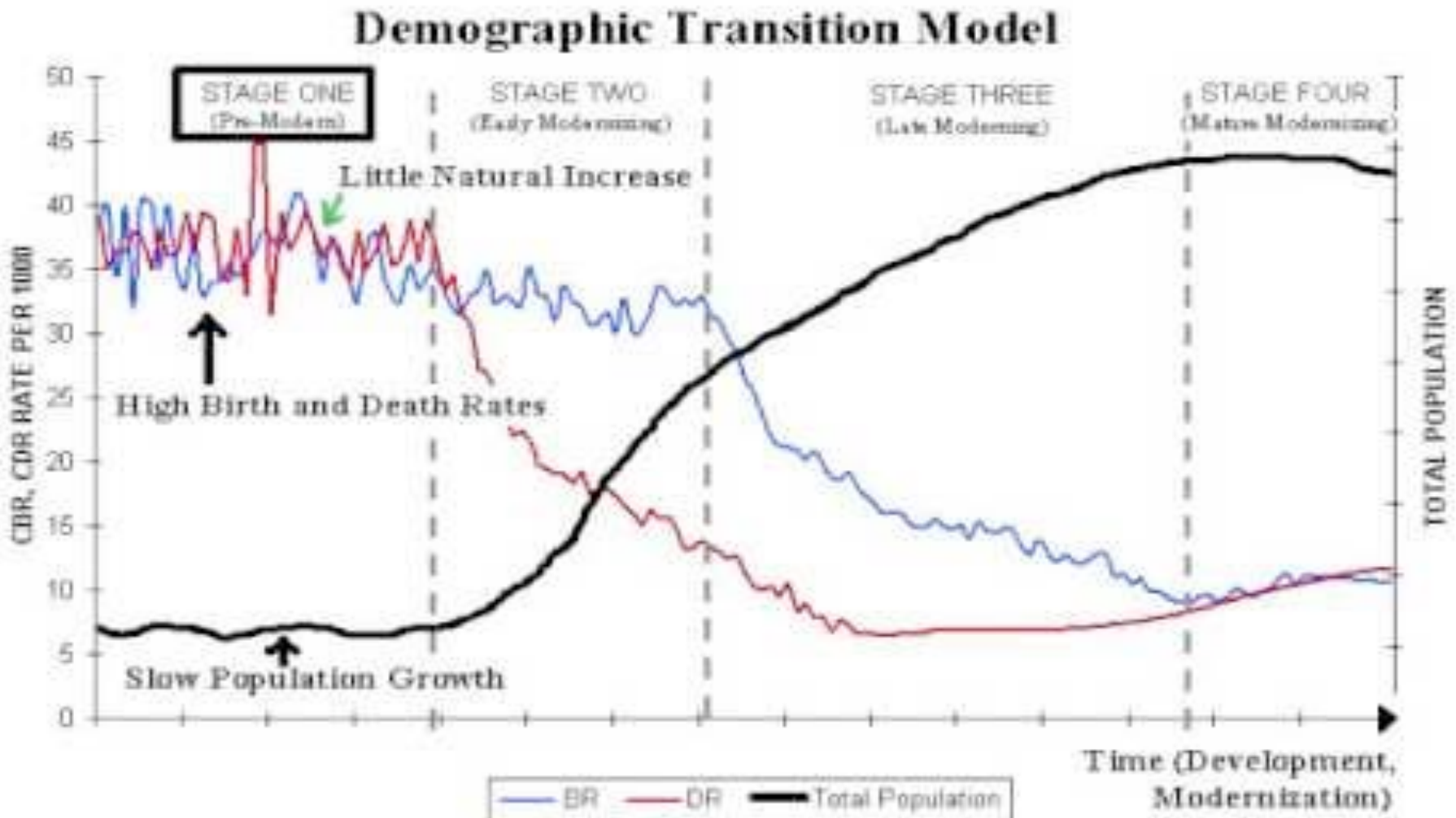
A. **Neo-Malthusianism**: A rising population outstrips our planet's 'carrying capacity'
1968: Erlich and 'The Population Bomb'

B. **Over-Consumption**:

- There are plenty of resources available:
- some people, classes, and places consume too much; others don't get enough
- Environmental degradation results from unequal distribution of resources

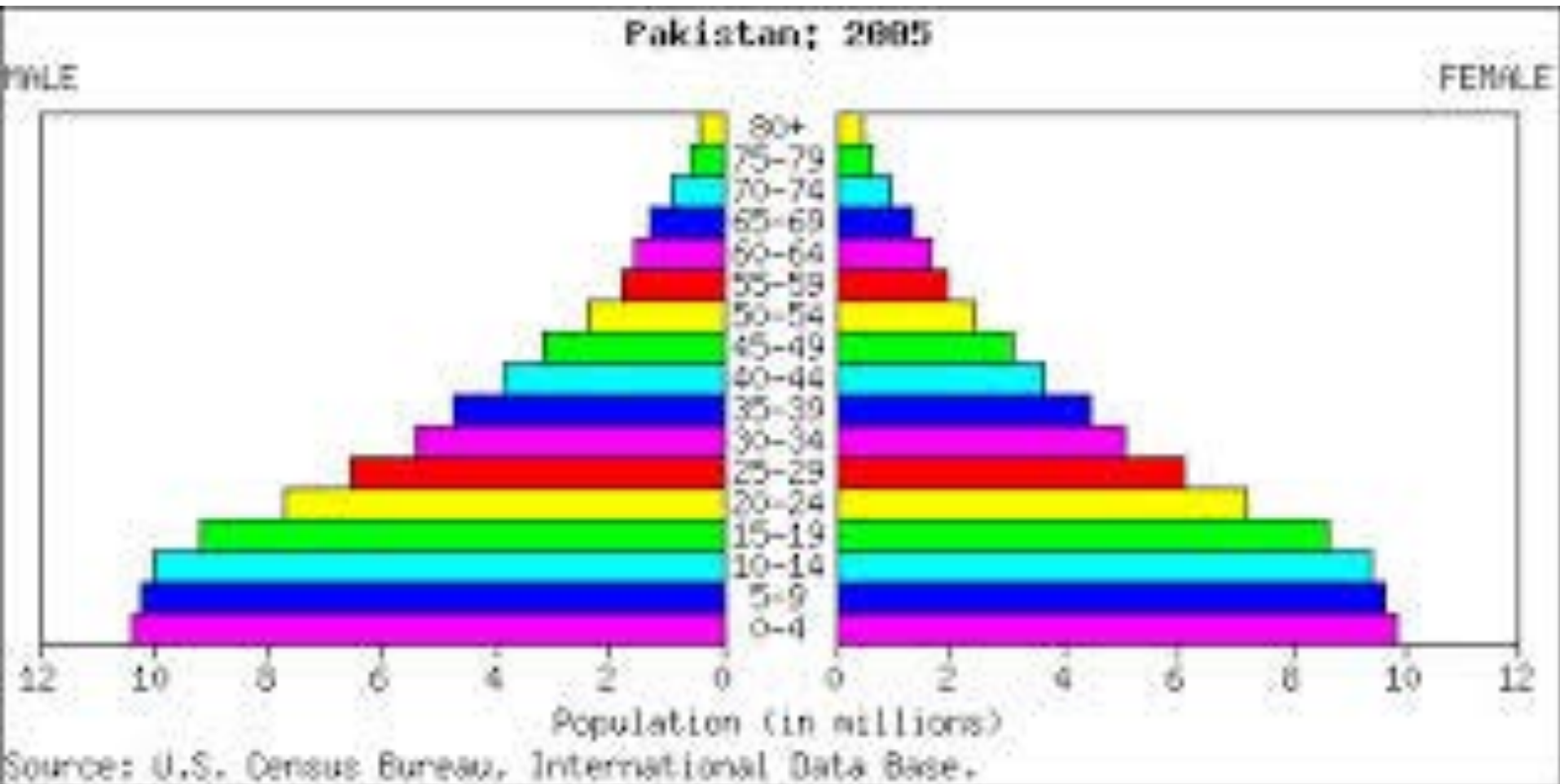
Review: Trends and Pyramids: What is a population?

Concepts #1: demographics, growth, and death rates



Population Demography **Concepts #3**: the population pyramid:
How are people distributed by age, gender?

Pakistan 2005: Lots of young people!

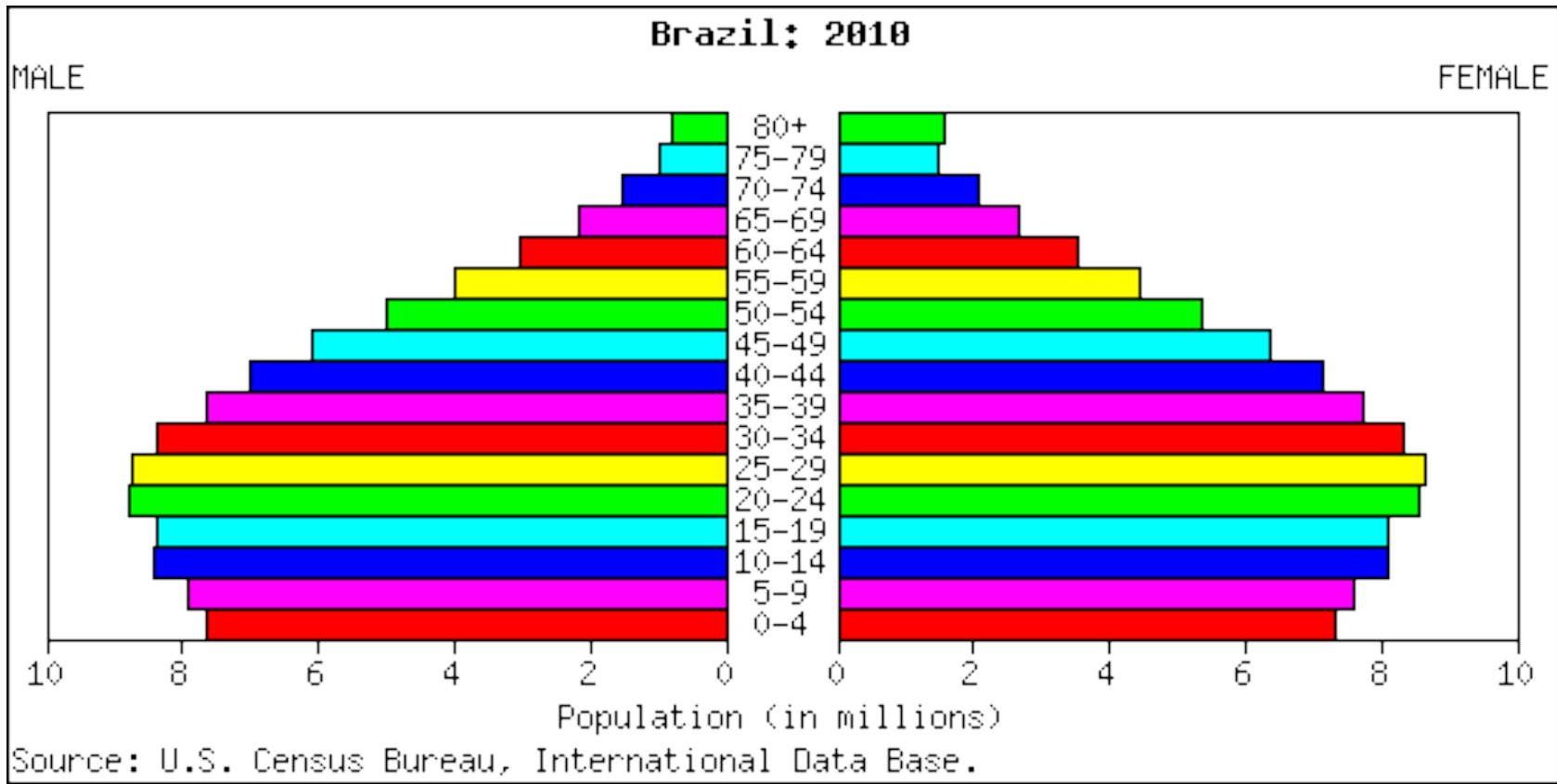


Population Demography **Concepts #3**: the population pyramid: **How are people distributed by age, gender?**

Pakistan: 2012-declining youth!



Example: Brazil, Population shifts and Deforestation



Declining Brazilian population

<http://www.youtube.com/watch?v=-ebkmo1Ygz8>

3 MIN

Brazil:

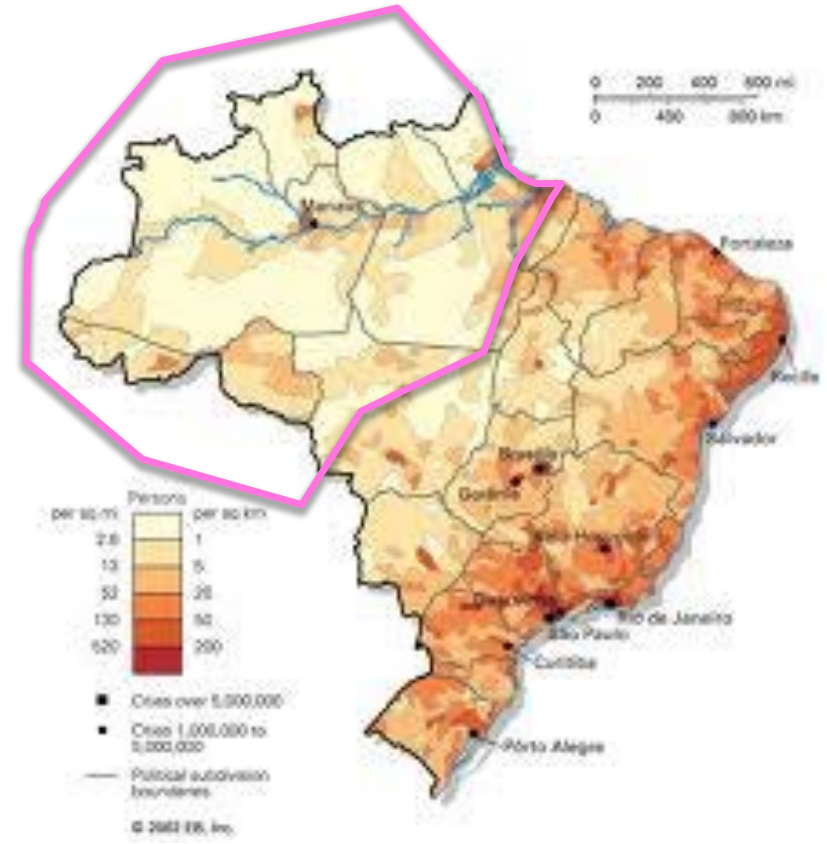
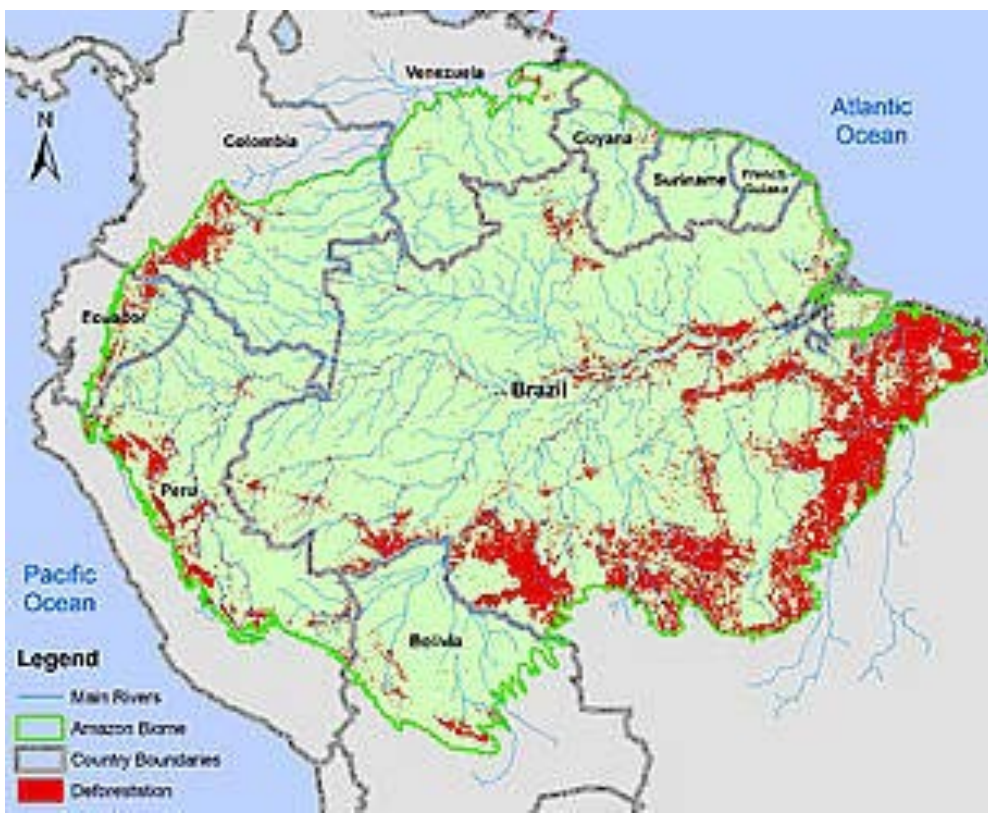
How are population and environment related?

ECONOMICS!

Deforestation despite declining birth rates:
Brazilians migrate to the Amazon for jobs

Deforestation rates

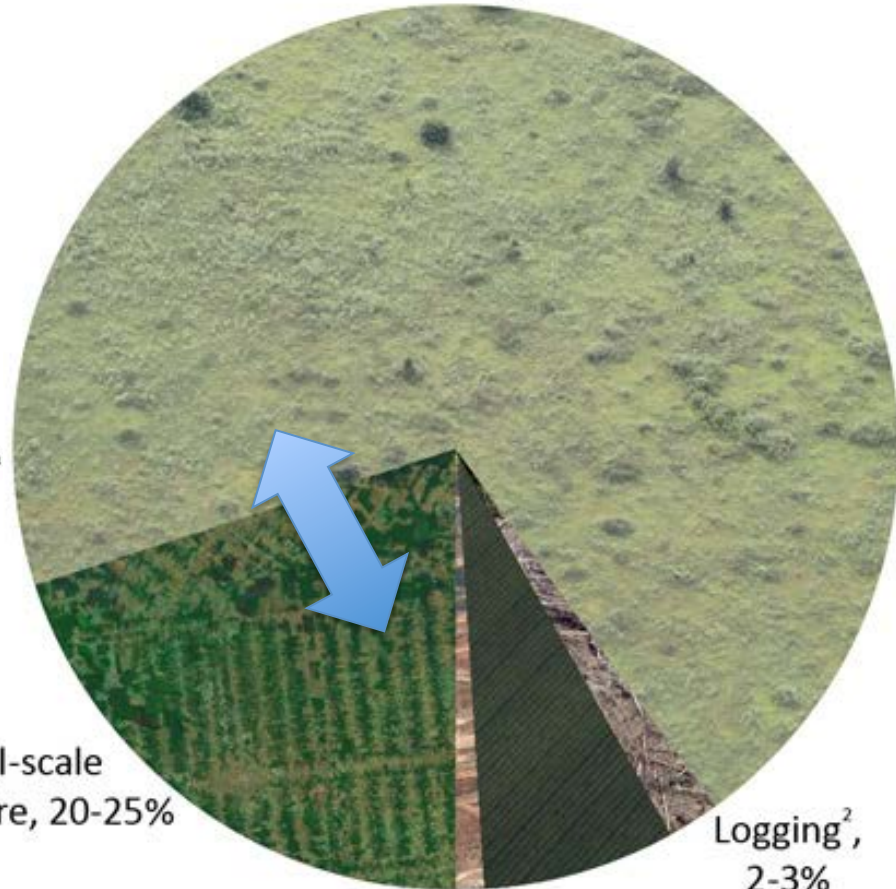
population densities



Causes of Deforestation in the Brazilian Amazon, 2000-2005

source: mongabay.com

Cattle ranching, 65-70%



Small-scale agriculture, 20-25%

Logging², 2-3%

Other¹, Large-scale agriculture, 5-10%

Rates don't match with population

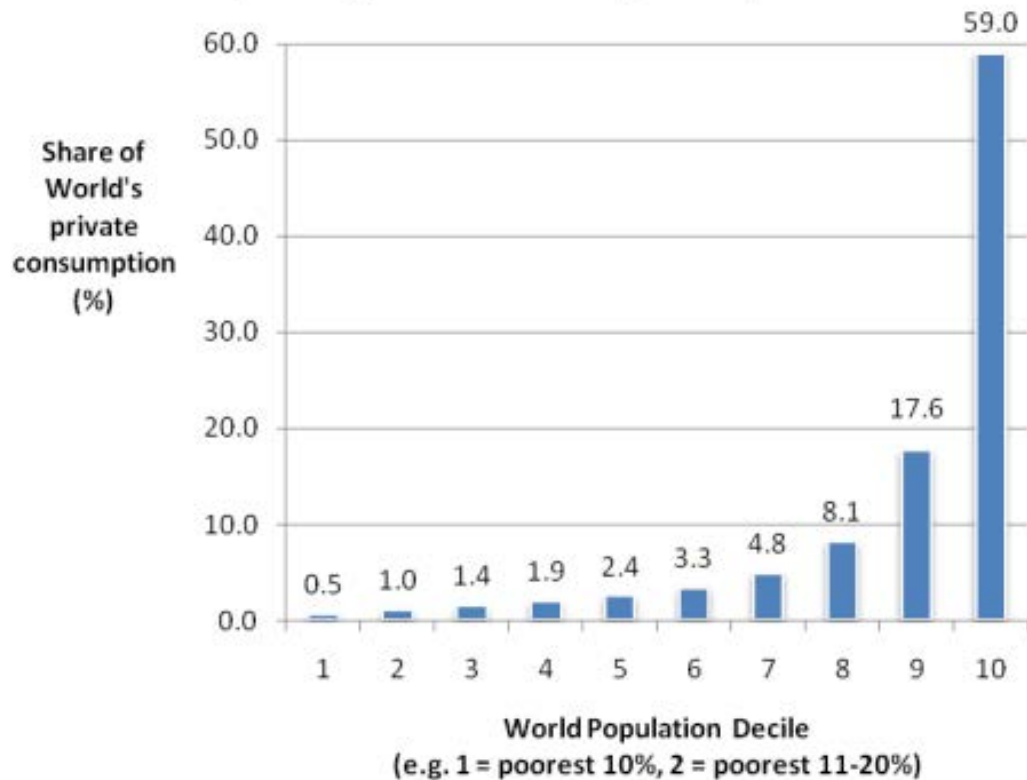
Cattle Ranching most important

Share of deforested land ultimately converted for extensive agriculture³



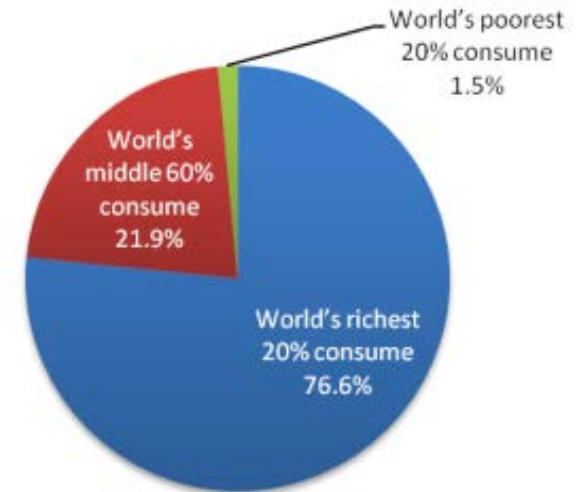
1) Other includes fires, mining, urbanization, road construction, dams; 2) Logging generally results in degradation rather than deforestation, but is often followed by clearing for agriculture; 3) Data from Holly Gibbs 2009

Inequality of Consumption, 2005



Source: World Bank Development Indicators 2008

Share of world's private consumption, 2005



Source: World Bank Development Indicators 2008

Using 2005 figures, the wealthiest 20% of the world accounted for 76.6% of total private consumption. The poorest fifth just 1.5% – Anup Shah, 2011

<http://www.globalissues.org/issue/235/consumption-and-consumerism>

What does this tell us about how best to reduce environmental impacts?

Overconsumption:

[http://www.youtube.com/watch?
v=dkqRC1Ua79Y](http://www.youtube.com/watch?v=dkqRC1Ua79Y)

Scavenger Guy in Oakland

[http://www.youtube.com/watch?
v=UkFXgg2XnI8](http://www.youtube.com/watch?v=UkFXgg2XnI8)

Home: French film 'too late to be a pessimist'

[http://www.youtube.com/watch?
v=KDlcANyFHhA](http://www.youtube.com/watch?v=KDlcANyFHhA)

Thinking through Class and consumption

1. The US

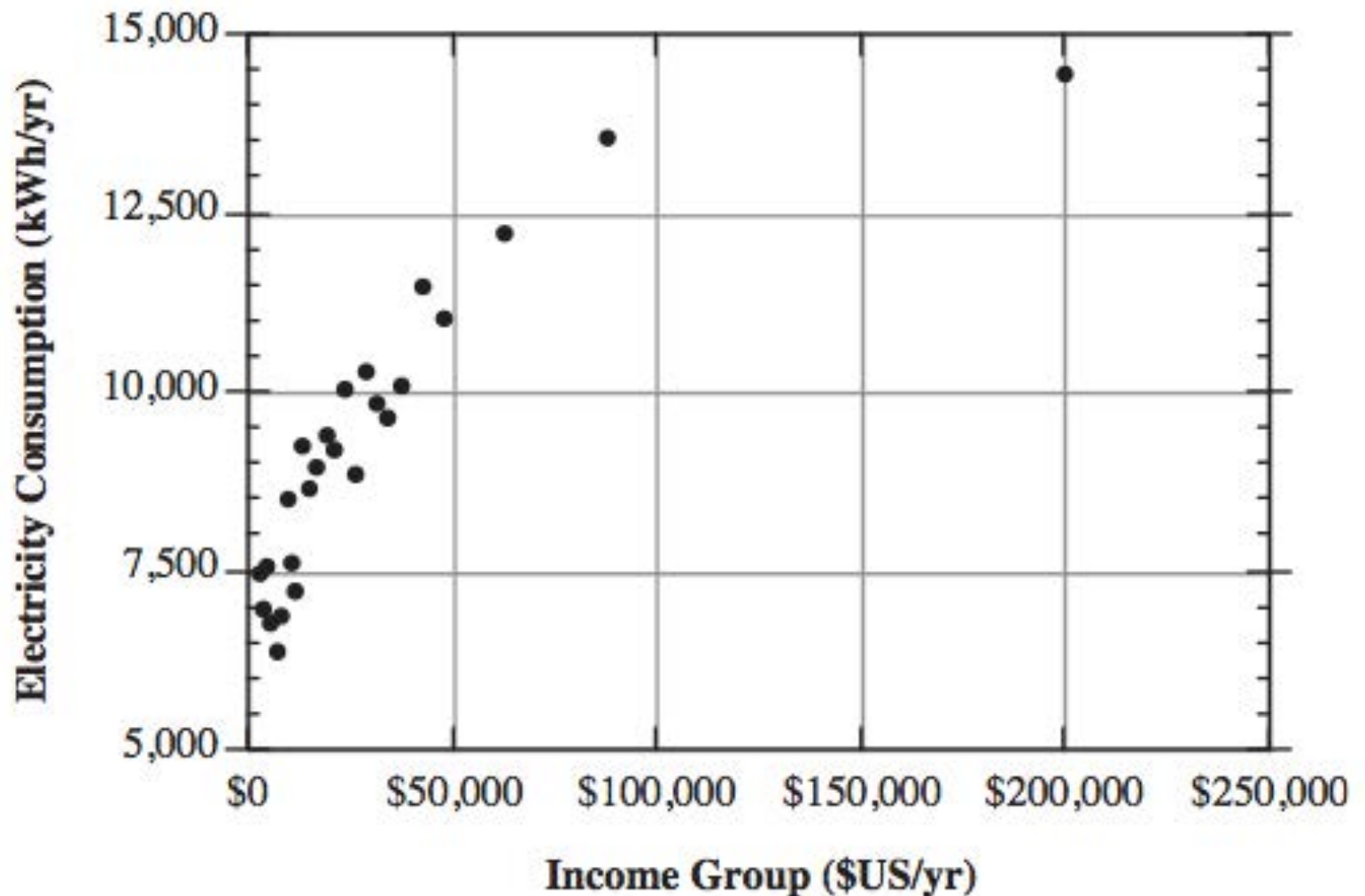


Fig. 1. Household electricity versus income for the US in 1997.

GLOBAL Class and Consumption

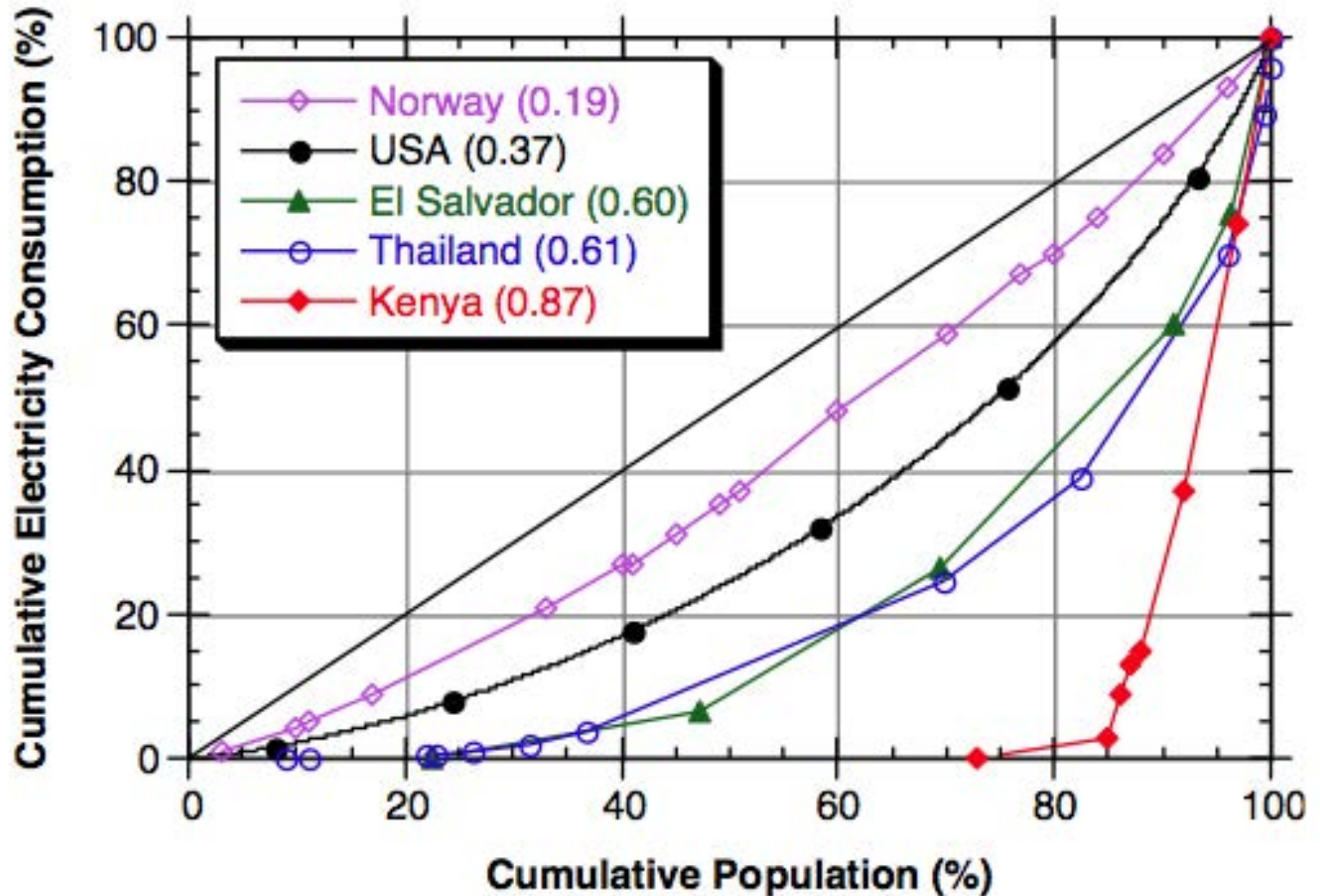


Fig. 2. Lorenz curves for residential electricity in five countries. The Gini coefficients for residential electricity consumption are presented in the legend of the graph in (parentheses).

The poorest 20% of the world's population uses what % of world energy resources?

- A. 20%
- B. 25%
- C. 1.5%
- D. 15%

Which country has the greatest
equality in energy use?

- A. Kenya
- B. Thailand
- C. Norway
- D. United States

A black square containing the letters "FIN" in a bright pink, sans-serif font.

FIN

OVERCONSUMPTION ARGUMENT:

It's the 'Wally Yachters' !

one sixth of the world's population is so poor that it produces no significant emissions at all.

the much-used formula of $I = P * A * T$ (impact relating to population, affluence and technology) should be $I = C * A * T$ when applied to global warming impacts, with C being the number of consumers, not the number of people.

– David Satterthwaite

Affluenza: http://www.youtube.com/watch?v=hPm7vl_cdbw

Zombies: Why the resurgence in the modern era?

- i. Fear of enslavement: original 1968 'night of the living dead' movie dealt pointedly with racism in the context of shared humanism
- ii. Generalized fear of nature: *I am legend, Walking Dead*
 - the wholesale destruction of the natural world is exposing us to pandemics, climate change, and ultimately to a loss of our 'way of life':
 - Loss of control OVER nature: returning full circle from Francis Bacon's 'New Atlantis', nature exerts its control over us, the infection inside
- iii. Post-9/11 trauma: another take on the loss of control, but in this case 'bio-political'; we fear a reduction to nothing but our biological self, loss of citizenship, loss of humanity. *World War Z, Walking Dead*
- iv. A reflection of contemporary capitalist consumer experience:
Dawn of the Dead, Zombieland
 - i. Fixation on consumption, e.g., black Friday stampedes, 'mindless' shopping, consumption, food, cellphone addiction
 - ii. Elusive goals and lack of satisfaction, an iteration of the 'rat race' and the stripping of individualism—the 'herding' meme on *walking dead*

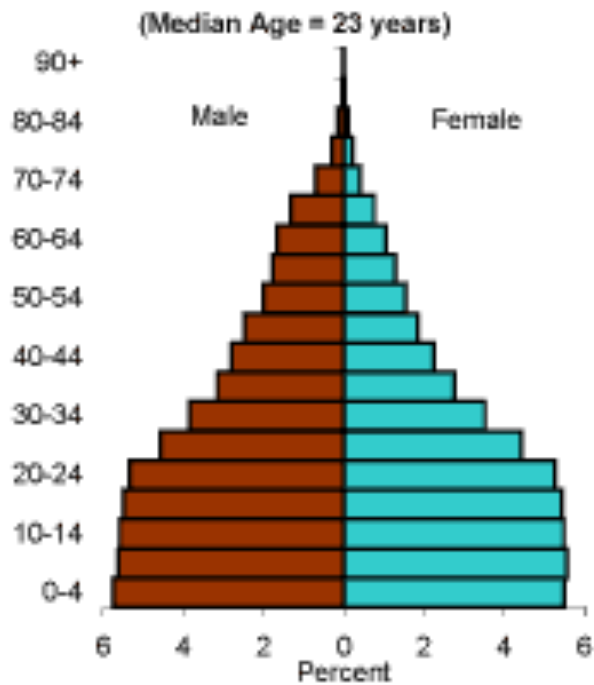
Why do we fear Zombies?

- A. Malthusian destruction?
- B. Enslavement?
- C. Uncontrollable consumption?
- D. Post-911 trauma?

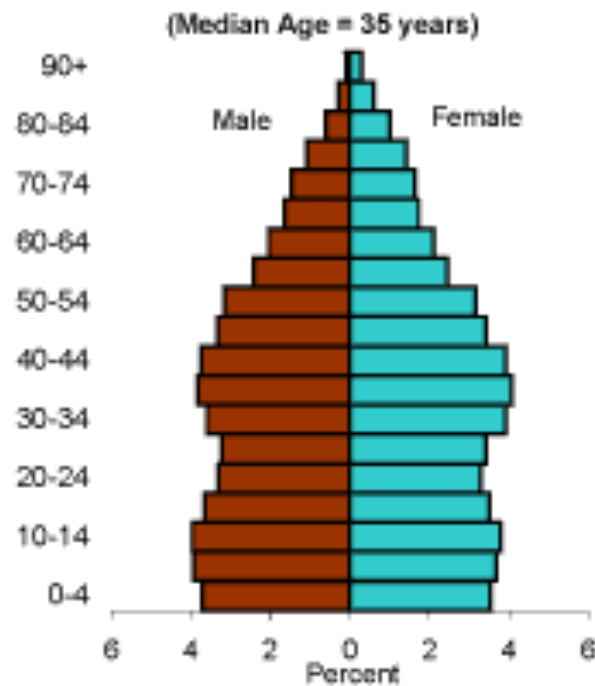
FIN

Pyramids can take many forms, however, depending on Birth rates and death rates :

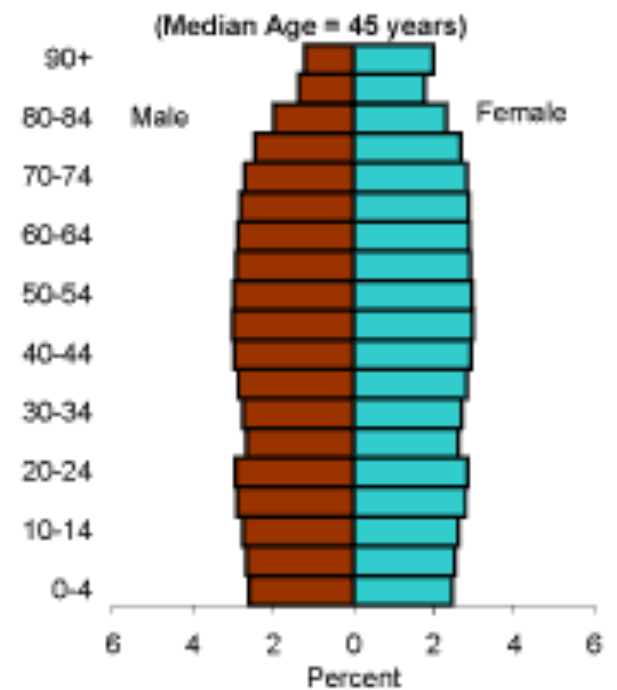
Population, 1901 Census
Median Age = 23 Years



Population, 2001(Base)
Median Age = 35 Years



Projected Population, 2101 (Series 4)
Median Age = 45 Years



New Zealand

What percentage of consumers in each country?

Table 1
Population, income, and energy data for five countries

Country	Population (millions)	GDP/capita (\$US, PPP adj.)	Income Gini coefficient	Annual electricity per capita (kWh)	Residential electricity access (%)
Norway	4	20,800	0.26	27,000	> 99
USA	284	28,600	0.41	12,000	> 99
El Salvador	6	4000	0.52	540	77
Thailand	61	6400	0.41	1,300	81
Kenya	31	1600	0.45	130	15

Declining Brazilian population

<http://www.youtube.com/watch?v=-ebkmo1Ygz8>

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