

Day 19: International Issues

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PUBPL 481

Road map

- Brief overview of the following:
 - Population Growth Issues
 - Global pollution (ozone, greenhouse gases, deforestation, ocean pollution)
 - North-South Conflict

Starter Question

Why are international environmental issues more difficult to solve than those we have discussed already?

Global Population and Carrying Capacity

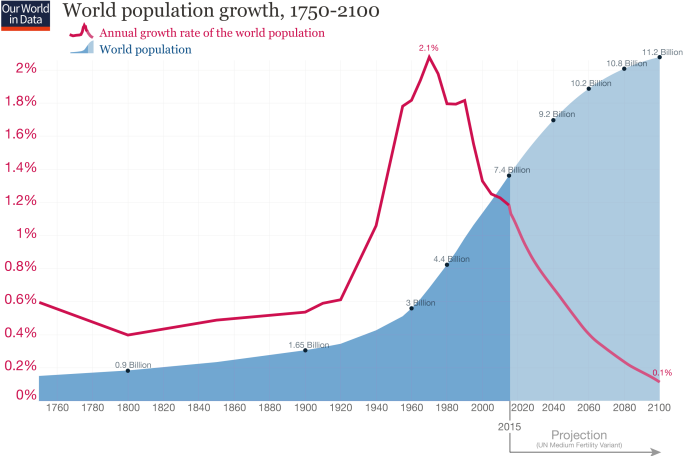
Rapid Population Growth



Figure: Population Education

Global Population and Carrying Capacity

Growth Rate



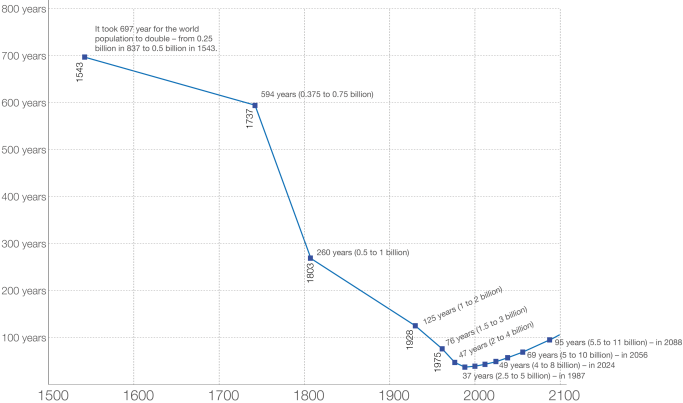
Data sources: Up to 2015 OurWorldInData series based on UN and HYDE. Projections for 2015 to 2100: UN Population Division (2015) – Medium Variant. The data visualization is taken from OurWorldInData.org. There you find the raw data and more visualizations on this topic. Licensed under CC-BY-SA by the author Max Roser.

Figure: Roser and Ortiz-Ospina 2017

Global Population and Carrying Capacity

Doubling Rate

Time it took for the world population to double
 Historical estimates of the world population until 2015 – and UN projections until 2100



Data source: OurWorldinData annual world population series (Based on HYDE and UN until 2015. And projections from the UN after 2015 (Medium Variant' 2015 Revision). The data visualization is available at OurWorldinData.org. There you find the raw data, more visualizations, and research on this topic. Licensed under CC-BY-SA by the author Max Roser.

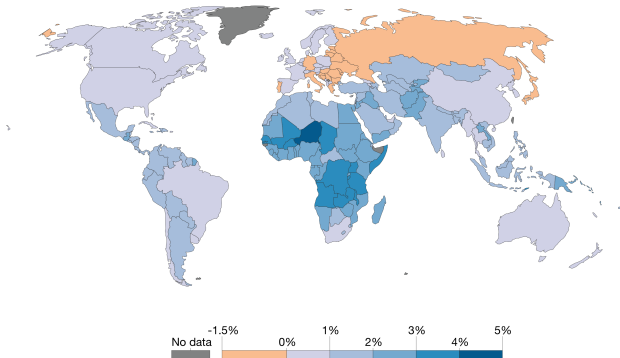
Figure: Roser and Ortiz-Ospina 2017

Global Population and Carrying Capacity

Geographical Distribution of Growth

Natural population growth, 2015

Natural population growth is the population increase determined by births and deaths. Migration flows are not taken into account.



Source: Rate of Natural Population Increase – UN Population Division (2015)

OurWorldInData.org/world-population-growth/ • CC BY-SA

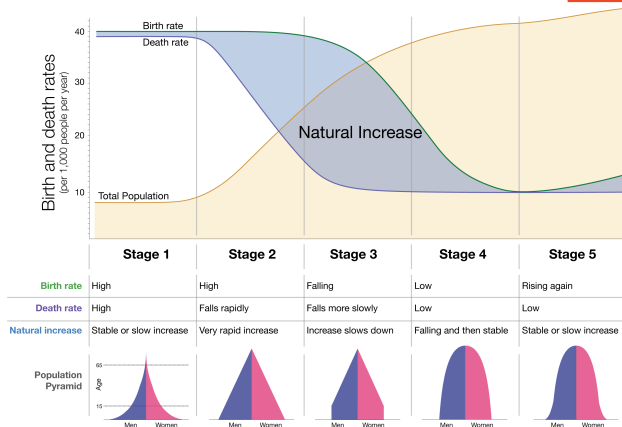
Figure: Roser and Ortiz-Ospina 2017

Demographic Transition Theory

Can this save us?

The demographic transition in 5 stages

OurWorld
in Data



The author Max Roser licensed this visualisation under a CC BY-SA license. You find more information at the source: <http://www.OurWorldInData.org/world-population-growth>

Figure: Roser and Ortiz-Ospina 2017

Malthus and Carrying Capacity

- Humans also subject to ecological carrying capacity
- Smith's options:
 - Reduce population
 - Redistribute wealth



Figure: [Iconographic Collection 727250i](#),
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Global Pollution Challenges

- 1 Ozone
- 2 Greenhouse gases
- 3 Deforestation
- 4 Ocean Pollution

What are the challenges of managing these common poll resources?
What is the potential for international conflict?

North-South Conflict

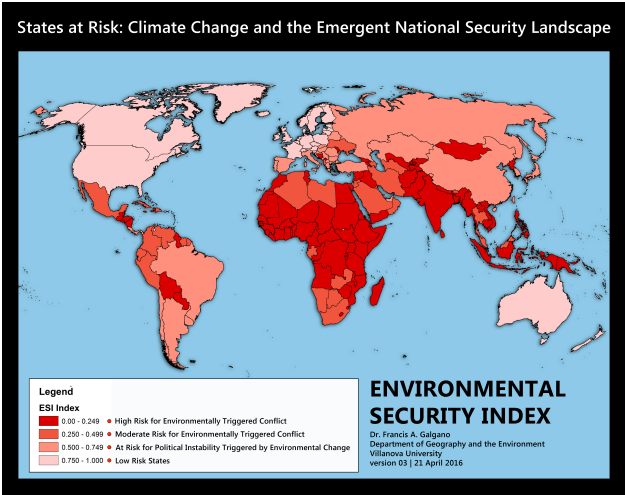


Figure: Galgano 2016

Environmental Conflict

Potential Models

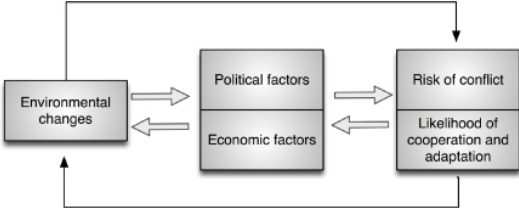
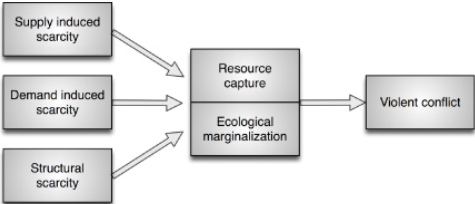


Figure: Bernauer et al. 2014

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Figure: [SUNY Geneseo](#)