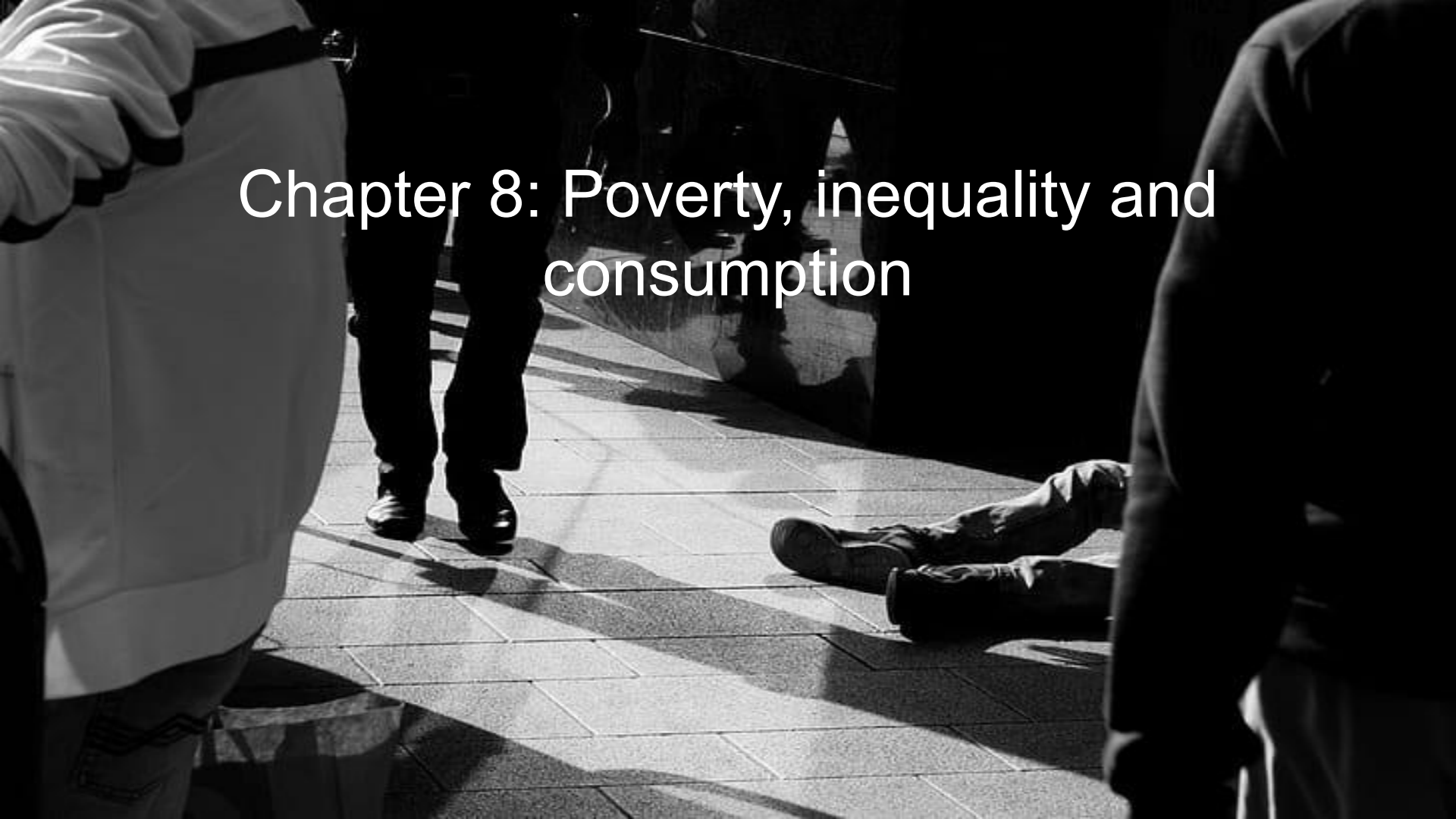


Environment economics and policies

EC 506





Chapter 8: Poverty, inequality and consumption

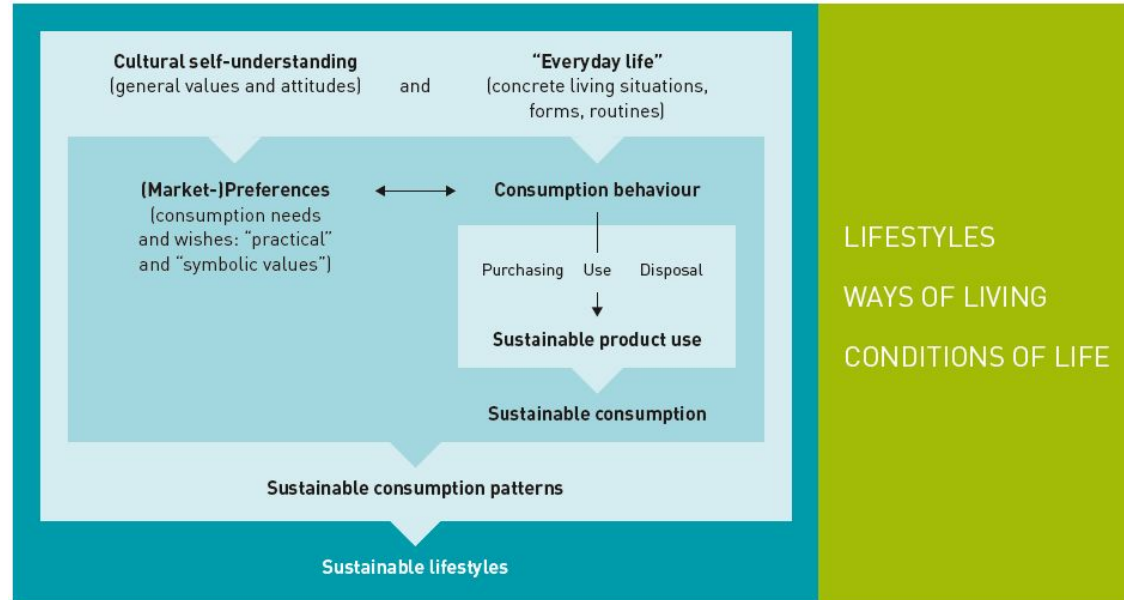
Learning objectives

- *Understand sustainable lifestyles*
- *Explain the challenge of sustainable lifestyles*
- *Examine the poverty-environment nexus*

Sustainable lifestyle

“Sustainable Lifestyles” as a holistic (analytical and strategic) approach that addresses normative, structural and cultural aspects of

- lifestyles,
- ways of living,
- conditions of life.



Sustainable lifestyle

“Sustainable Lifestyles” is a complex multi-level phenomenon which comprises the following integrated (micro-macro) perspectives of social-structural and socio-cultural transformation (including also the institutional dimension) towards sustainability:

- sustainable use of products,
- sustainable consumption (behaviour),
- sustainable consumption patterns,
- sustainable lifestyles.

Consumption trend

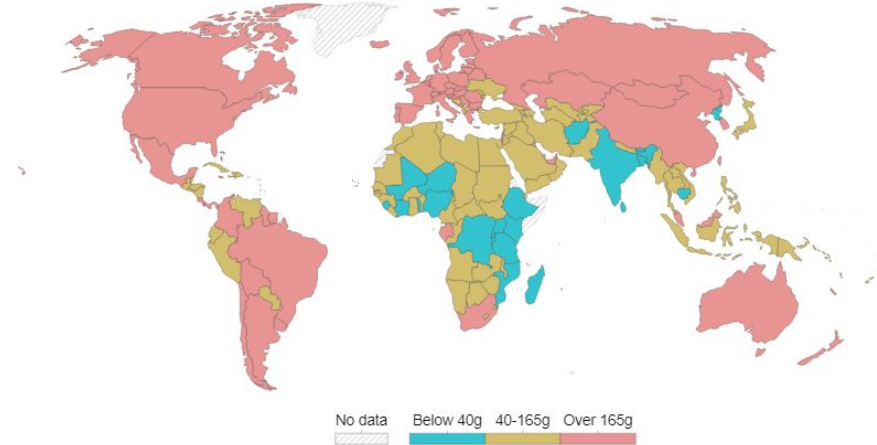
Consumption is a primary driver of demand for energy and resources. A thorough analysis of consumption patterns and the forces that influences it is therefore important for discovering opportunities to stay within the earth's carrying capacity.

Trend 1: *global increase in meat consumption, arising from constantly high consumption levels in developed and rising consumption levels in emerging nations*

Daily meat consumption per person, 2021

Daily meat consumption is shown relative to the expected EU average of 165g per person in 2030. This projection comes from the livestock antibiotic scenarios from Van Boeckel et al. (2017).

Our World
in Data



Data source: Food and Agriculture Organization of the United Nations (2023)

Note: Data shows per capita meat supply, which does not subtract consumer waste. Actual meat consumption will be lower than these figures.

OurWorldinData.org/antibiotic-resistance-from-livestock | CC BY

Consumption trend

Beef consumption requires about 87 times more land and 36 times more water than does a calorie derived from consuming wheat.

It also emits about 38 times more GHGs.

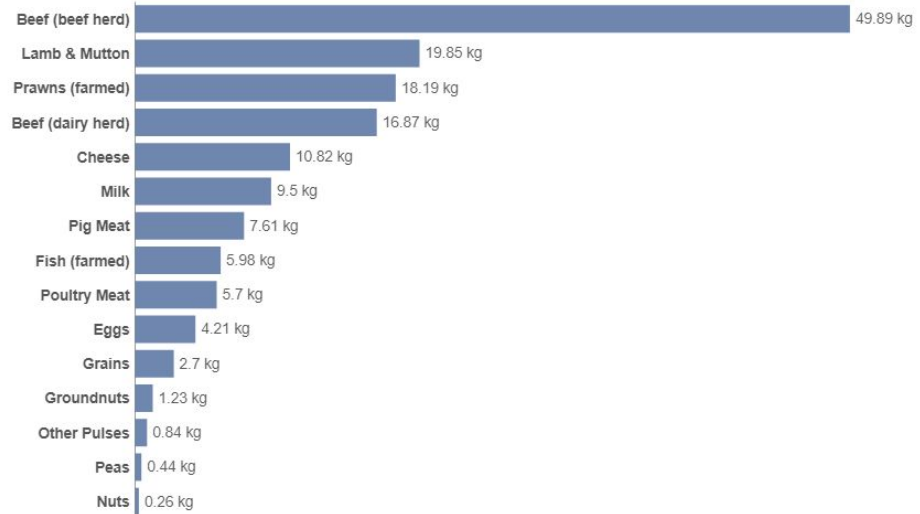
Meat consumption therefore contributes not only to climate change, but also to loss of biodiversity due to deforestation, and to scarcity of portable water.

It thus can indirectly entail conflicts over land, water and resources, with the most vulnerable communities often suffering the most (forest communities, small-scale and subsistence farmers).

Greenhouse gas emissions per 100 grams of protein

Greenhouse gas emissions are measured in kilograms of carbon dioxide-equivalents.

Our World
in Data



Data source: Poore and Nemecek (2018)

OurWorldinData.org/environmental-impacts-of-food | CC BY

Consumption trend

Trend 2: *decreasing share of locally produced goods, and in particular locally grown foods*

It implies an increase in global transport and thus GHG emissions, which may overcompensate the efficiency gains.

In addition, it implies social risks. An increasing number of farmers in emerging and developing countries produce crops for the world market rather than for their own consumption.

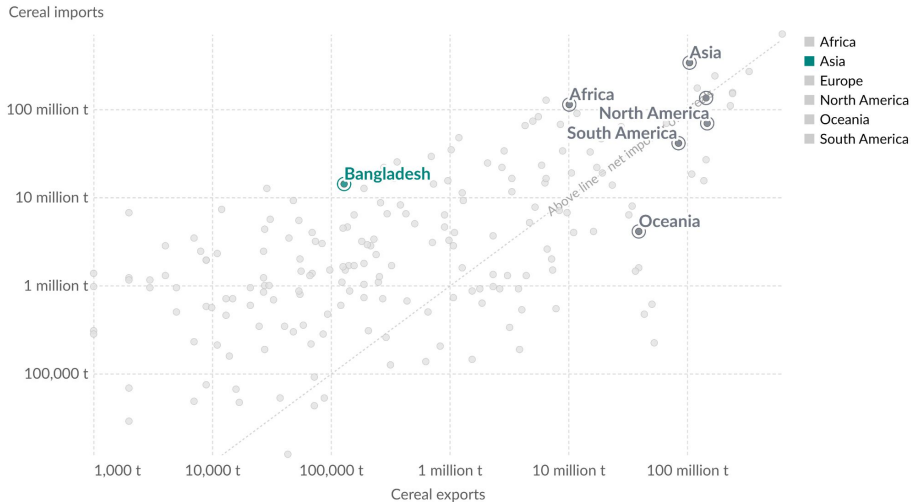
This may increase their income, but it also heightens their dependence on global market trends and prices, and hence their vulnerability.

Cereals: which countries are net importers and exporters? 2021

Our World
in Data

Imports and exports are measured as the net sum of all cereal crop varieties.

Countries which lie above the grey line are net importers of cereals; those below the line are net exporters.



Data source: Food and Agriculture Organization of the United Nations (2023)

OurWorldinData.org/food-supply | CC BY

Consumption trend

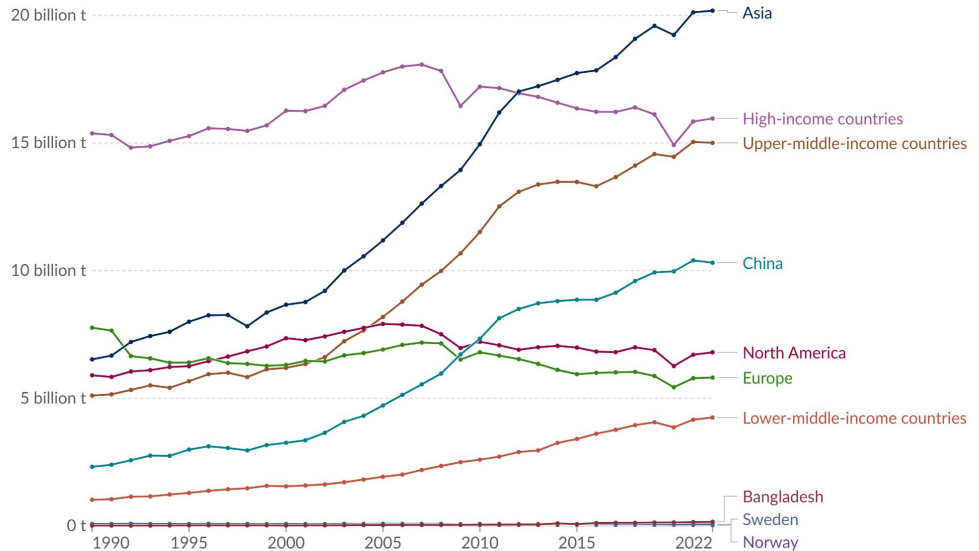
Trend 3: *increases the pressure on global resources is the overall rise in consumption levels*

Rather than (basic) needs, In particular, growth in automobiles, electronics, garments and consumer plastics is being pushed as much by 'desire' promoted by the advertising industry as by necessity.

- Consumption-based emissions attribute the emissions generated in the production of goods and services according to where they were *consumed*, rather than where they were *produced*.

Consumption-based CO₂ emissions

Consumption-based emissions¹ include those from fossil fuels and industry². Land-use change emissions are not included.



The math of sustainable lifestyles

Reducing the overall impact that people have on the environment can happen in only a limited number of ways:

- **changing lifestyles,**
- **improving the efficiency of technology,**
- **reducing the number of people on the planet.**

Paradox of well-being

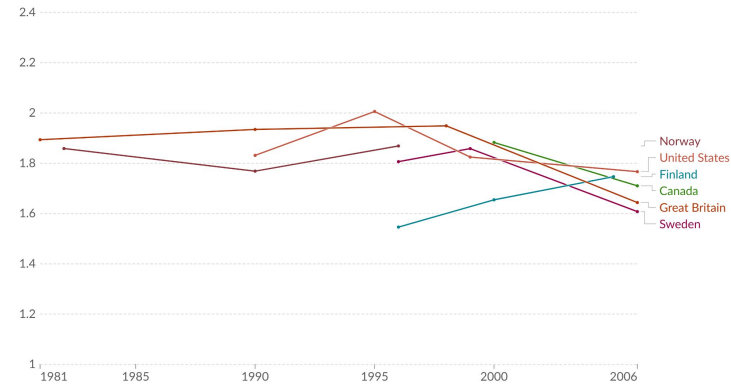
There is an increasing trend in life satisfaction at lower levels of income. Subjective well-being depends critically on family stability, friendship, and strength of community. But these aspects of life have suffered in the consumer society.

Data from around the world suggest that, at lower levels of per capita income, more money can increase life satisfaction. But in countries where per capita income is over \$15,000, there is virtually no connection between the two: more money does not improve life satisfaction.

Researchers have noted that there is a correlation between economic growth and reductions in happiness inequality—even when income inequality is increasing at the same time.

Happiness inequality during periods of economic growth, 1981 to 2006

Happiness inequality is expressed as the standard deviation in self-reported happiness. Lower values indicate less happiness inequality in a country.



Data source: Clark, Flèche & Senik – Happiness Inequality

OurWorldInData.org/happiness-and-life-satisfaction | CC BY

Poverty and the environment

In rich countries, it is commonly assumed that environmental quality can be improved only by sacrificing material consumption. Indeed, this is the whole premise behind benefit-cost analysis.

In poor countries, by contrast, a broad-based growth in income will, in many respects, tend to improve the quality of the environment.

Four of the close connections between poverty and the environment:

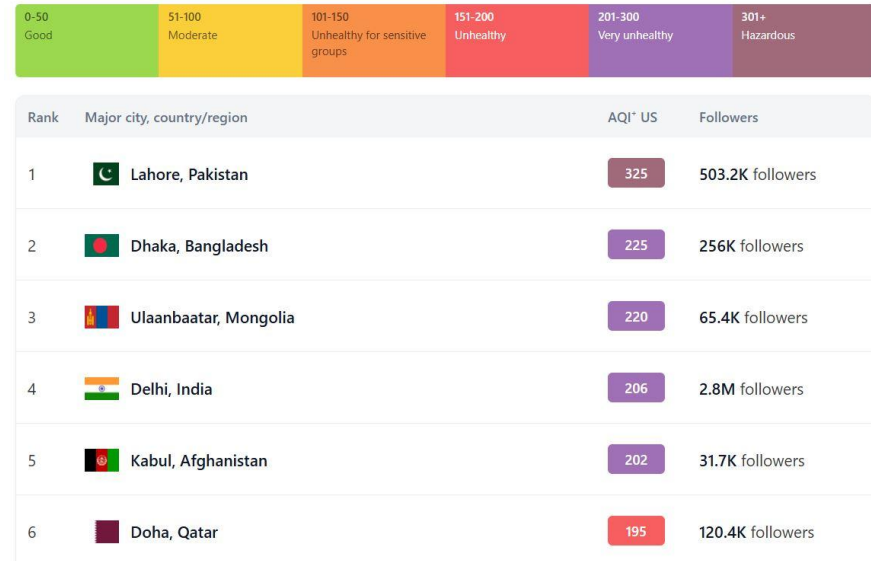
- For poor people, many environmental problems are problems of poverty.
- Poor people cannot afford to conserve resources.
- Richer people “demand” more pollution control.
- Population growth slows with increased income.

Poverty and the environment

For poor people, many environmental problems are problems of poverty.

The biggest environmental health threat facing most people in poor countries is unsafe drinking water, compounded by inadequate sewage facilities. About 1 billion people are without access to improved water, and more than 2.6 billion are without adequate sanitation. Billions of illnesses and millions of deaths each year are attributed to water pollution.

In developing countries, exposure to indoor air pollution (smoke) from cooking and heating sources in fact outweighs urban air pollution as a cause of premature death. Some half a billion people are exposed to unsafe levels of indoor smoke, and 1.6 million die each year from exposure. Half that (still a very large number) die in developing countries from exposure to urban air pollution.



Poverty and the environment

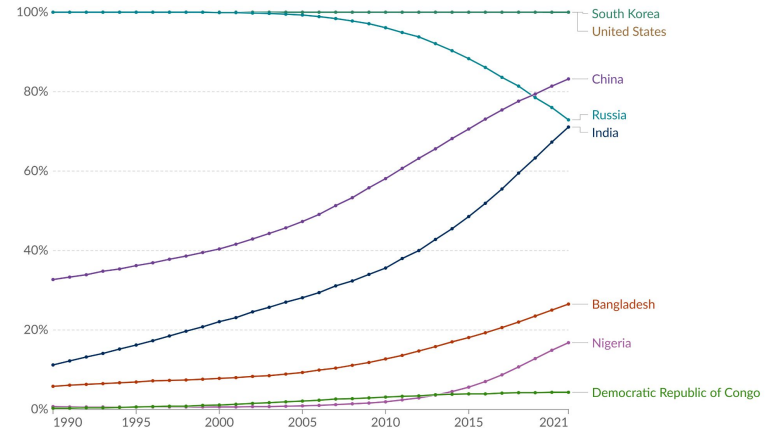
Poor people cannot afford to conserve resources.

Poor people often put an unsustainable burden on the natural capital in their immediate environment. Urban residents scour the immediate countryside for fuel—firewood or animal dung—and this leads to deforestation or the elimination of fertilizer sources. Landless farmers are pushed into overfarming small plots, farming on steep mountain slopes that soon wash out, or farming in clear-cut rain forests incapable of sustaining agriculture.

While poor people in search of subsistence often stress their immediate environment beyond easy repair, the much higher consumption levels of rich-country residents have a substantially larger global impact. For example, commercial ranching for beef exports to European markets has had a bigger impact on Brazilian deforestation than small farmers have.

Share of the population with access to clean fuels for cooking

Access to clean fuels or technologies¹ such as natural gas, electricity, and clean cookstoves reduces exposure to indoor air pollutants, a leading cause of death in low-income households.



Poverty and the environment

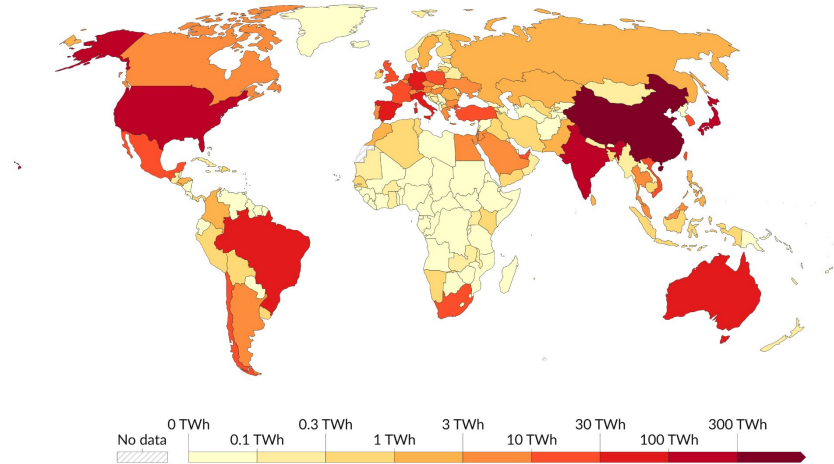
Richer people “demand” more pollution control.

As per-capita income rises in a country, people begin to express a more effective demand for pollution control. SO₂ concentrations—reflective of unregulated heavy industry, coal combustion, and auto traffic—are low in the urban areas of low-income countries, tend to rise in fast-growing low- and middle-income cities, then fall again in urban areas in wealthy countries. By contrast, the unregulated or lightly regulated pollutant, carbon dioxide, grows with per-capita income.

Solar power generation, 2023

Electricity generation from solar, measured in terawatt-hours (TWh) per year.

Our World
in Data



Data source: Ember (2024); Energy Institute - Statistical Review of World Energy (2024)
OurWorldinData.org/renewable-energy | CC BY

Poverty and the environment

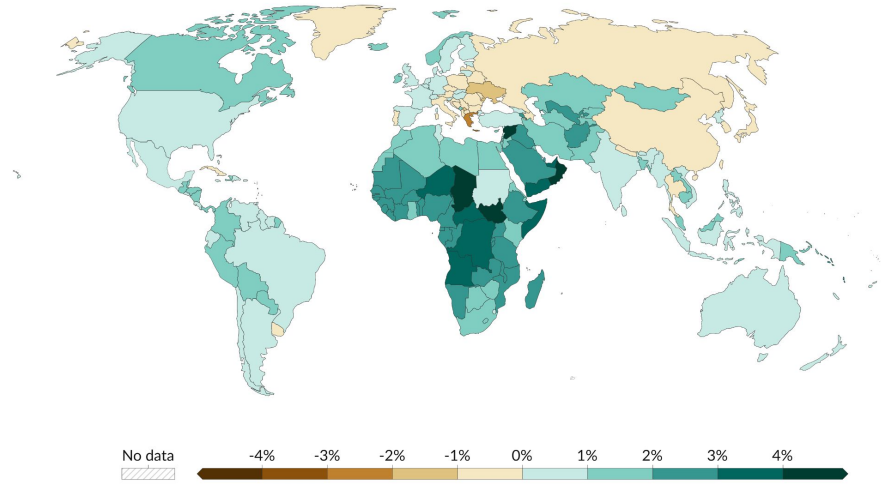
Population growth slows with increased income.

The final link between poverty and the environment lies in income growth as a means of population control. As societies grow wealthier, families almost universally have fewer children.

Population growth rate, 2023

Population growth rate¹ takes births, deaths and migration into account. Future projections are based on the UN medium scenario².

Our World
in Data



Food for thought

1. **Deep Ecology:** Emphasizes the intrinsic value of all living beings and the need for a radical shift in human relationships with the natural world.
2. **Ecocentrism:** Focuses on the value of ecosystems as wholes, rather than individual components, arguing for the protection of ecological integrity and health.
3. **Environmental Justice:** Addresses the fair distribution of environmental benefits and burdens, ensuring that marginalized communities are not disproportionately impacted by environmental harms.



Bilar Man-made forest in the Philippines



Kew Royal Botanical Gardens
LONDON, ENGLAND



The Little Village Environmental Justice Organization with community partners Únete La Villita, El Foro Del Pueblo, and Mi Villita Neighbors protesting in Chicago