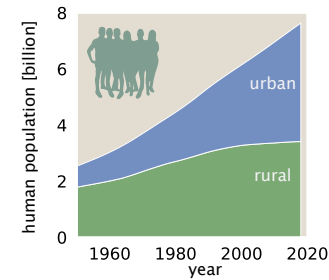


A THE HUMAN POPULATION

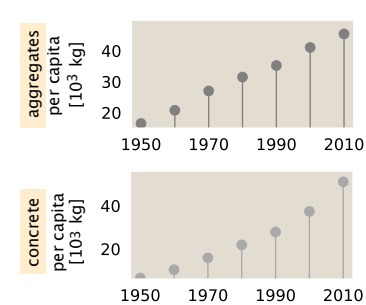
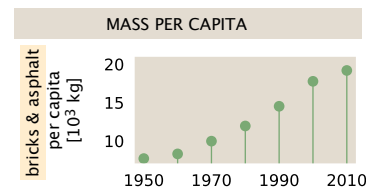
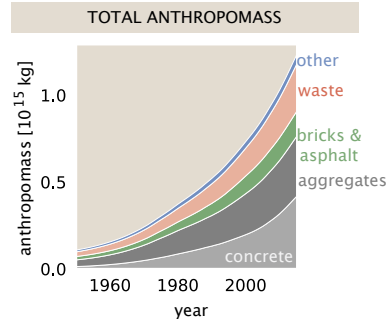
The human population has more than doubled in the past 60 years. During this time, the fraction of the population living in urban areas has steadily increased such that the global population is about evenly split between urban and rural environments.



Sources: Food and Agricultural Organization of the United Nations – World Population
Notes: Urban/rural designation has no set definition and follows the conventions set by each reporting country.

D MATERIAL PRODUCTION

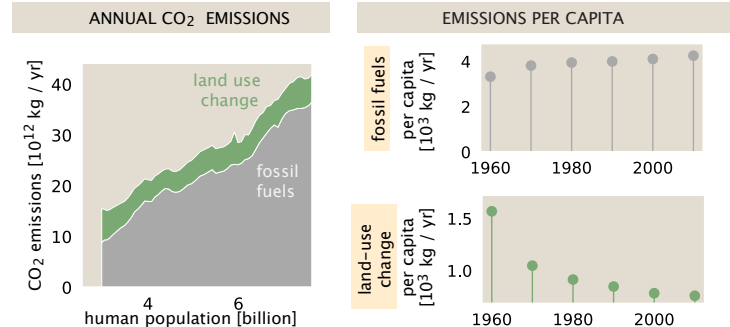
The total mass of human-made materials has been accumulating over time, dominated by construction materials. Per capita, the mass of bricks & asphalt, aggregates, and concrete has dramatically increased since the 1950s.



Sources: Krausmann et al. 2017 doi: 10.1073/pnas.1613773114
Notes: Material production is estimated from a material flows model.

G CO₂ EMISSIONS

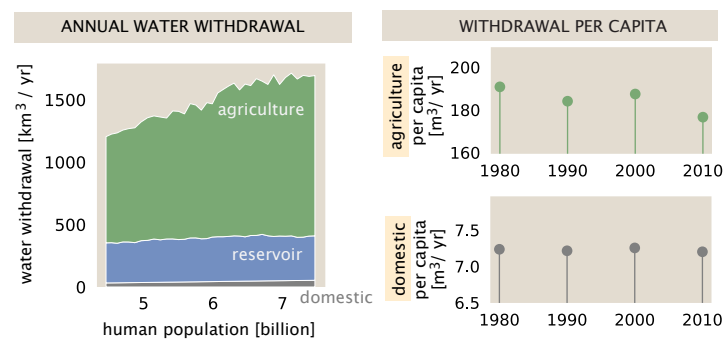
Annual anthropogenic CO₂ emissions have been increasing with the population, driven by an increase in fossil fuel combustion. The amount of CO₂ emissions from fossil fuels has increased slightly per capita, while the per capita emissions from land use change have decreased.



Data collated by: Friedlingstein, P. et al. (2019). doi: 10.5194/essd-11-1783-2019.
See Panel K on Pg. 4 for complete list of sources.

B WATER WITHDRAWAL

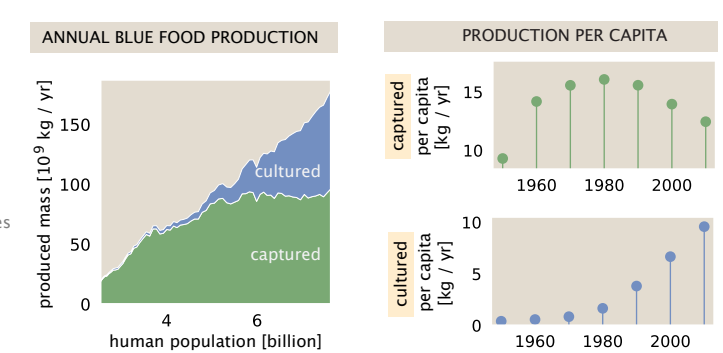
Total water withdrawal has increased in concert with the human population, dominated by increasing agricultural use. Despite this increase, the average per-capita water use for agricultural and domestic purposes has remained largely constant for the past 40 years.



Source: AQUASTAT Main Database, Food and Agriculture Organization of the United Nations.
Notes: Values are reported directly from member countries and represent average of 2013–2017 period. Per capita values are computed given population of reporting countries.

E AQUATIC FOODS PRODUCTION

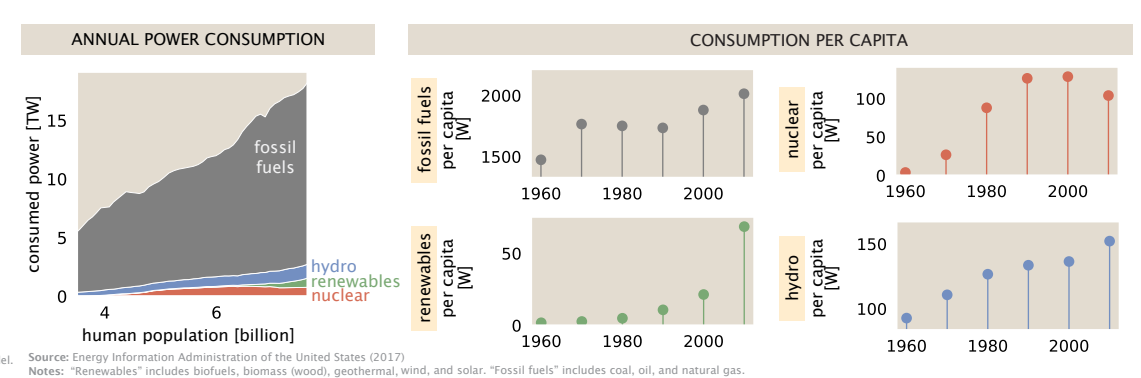
Aquatic (blue) foods production has been increasing with the human population. Interestingly, the mass produced from wild capture has remained constant per capita since the 1980s while the mass produced by aquaculture has increased per capita during the same period, driving the increase in overall production.



Sources: Food and Agricultural Organization of the United Nations

F POWER CONSUMPTION

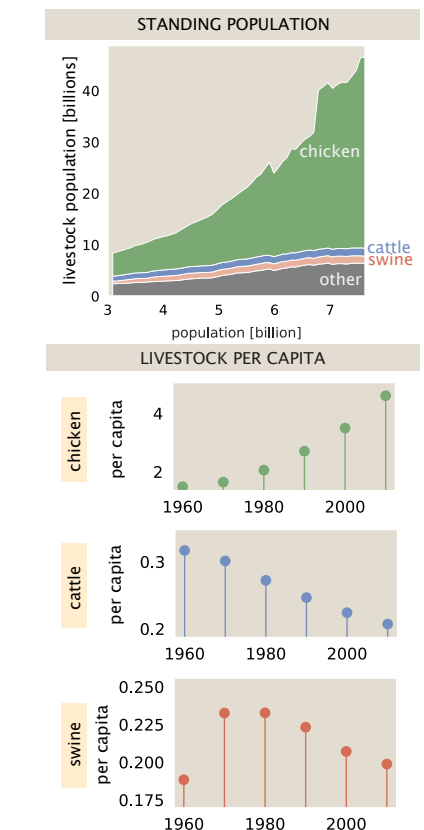
Power consumption has increased with population, as well as technological and societal changes, which have driven an increase in power per capita across all generation types. The source of our power has also changed over time. Over the last 60 years, nuclear power has become comparable to hydroelectricity, with most of the growth occurring between 1970 and 1990. Renewable power generation is currently experiencing a similar growth pattern.



Source: Energy Information Administration of the United States (2017)
Notes: "Renewables" includes biofuels, biomass (wood), geothermal, wind, and solar. "Fossil fuels" includes coal, oil, and natural gas.

C THE LIVESTOCK POPULATION

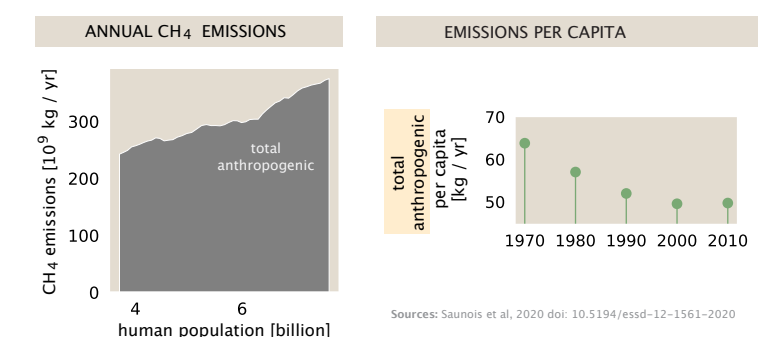
The standing population of livestock has been increasing, with chicken making up a large fraction of the total livestock population. The number of chicken raised per capita has increased since the 1960s, while cattle per capita have decreased.



Sources: Food and Agricultural Organization of the United Nations

H CH₄ EMISSIONS

While total anthropogenic methane (CH₄) emissions have been increasing with the human population, per capita emissions have been decreasing each decade since the 1970s. This per capita reduction reflects a shift in global diets away from methane-intensive beef products, as well as better waste management policies in developed countries.



Sources: Saunio et al, 2020 doi: 10.5194/essd-12-1561-2020