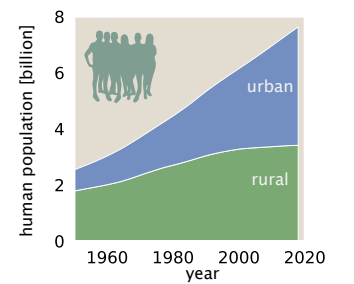


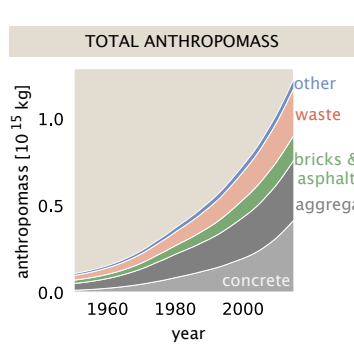
A THE HUMAN POPULATION

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 increased so that today the population is about evenly split between urban and rural.

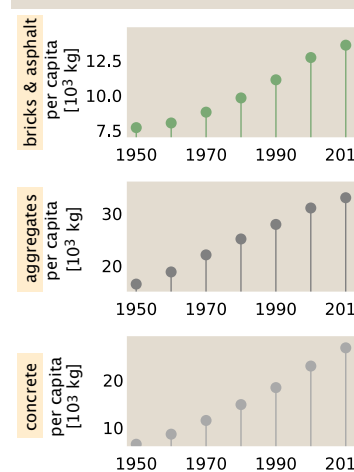


D MATERIAL PRODUCTION

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 increased since the 1950s.

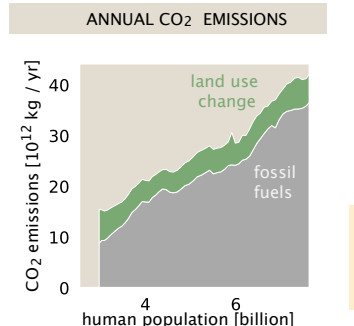


MASS PER CAPITA



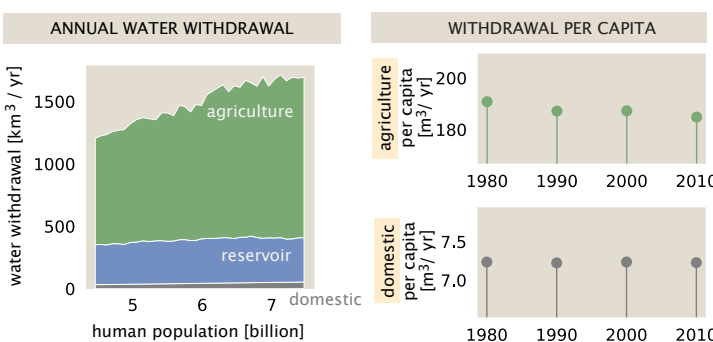
G CO₂ EMISSIONS

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.



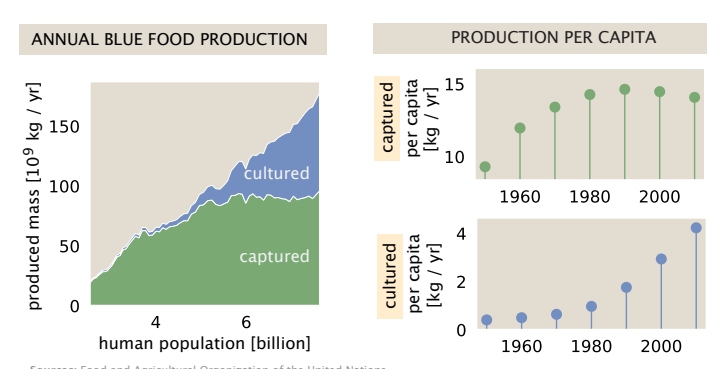
B WATER WITHDRAWAL

Total water withdrawal has increased with the human population, dominated by increasing agricultural use. Per capita, the amount of water withdrawn for agriculture and domestic use has remained constant since the 1980s.



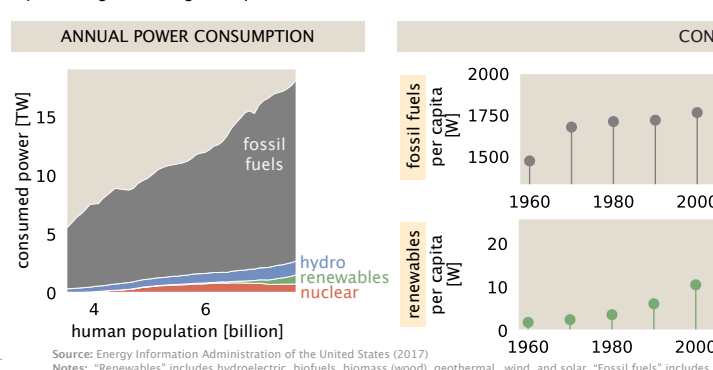
E AQUATIC FOODS PRODUCTION

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.



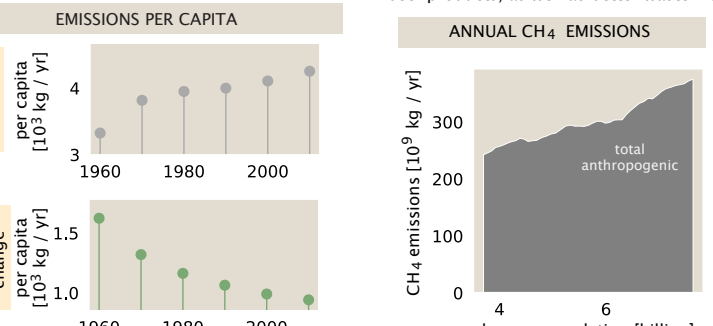
F POWER CONSUMPTION

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.



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.



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.

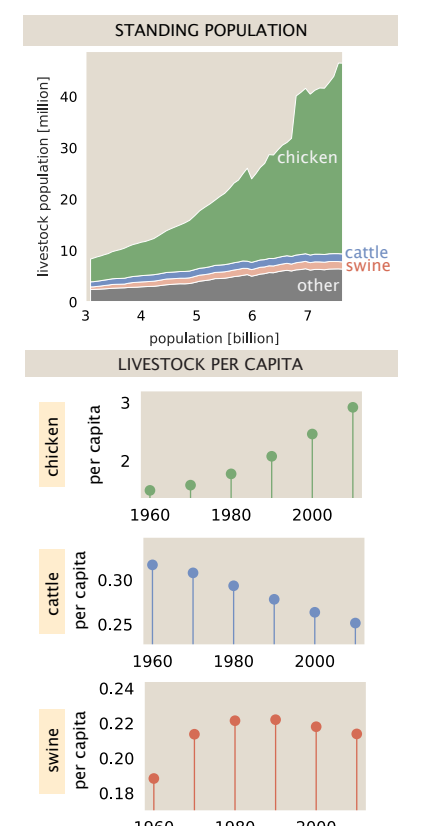


Figure 4: Temporal dynamics of key human impacts. Several quantities from Figure 2 were selected and the magnitudes were plotted either as a function of time (for cumulative quantities such as anthropomass) or human population (A). Ball-and-stick plots show the per capita breakdown as decadal averages to give a more reflective view of cultural and technological shifts than year-to-year variation.