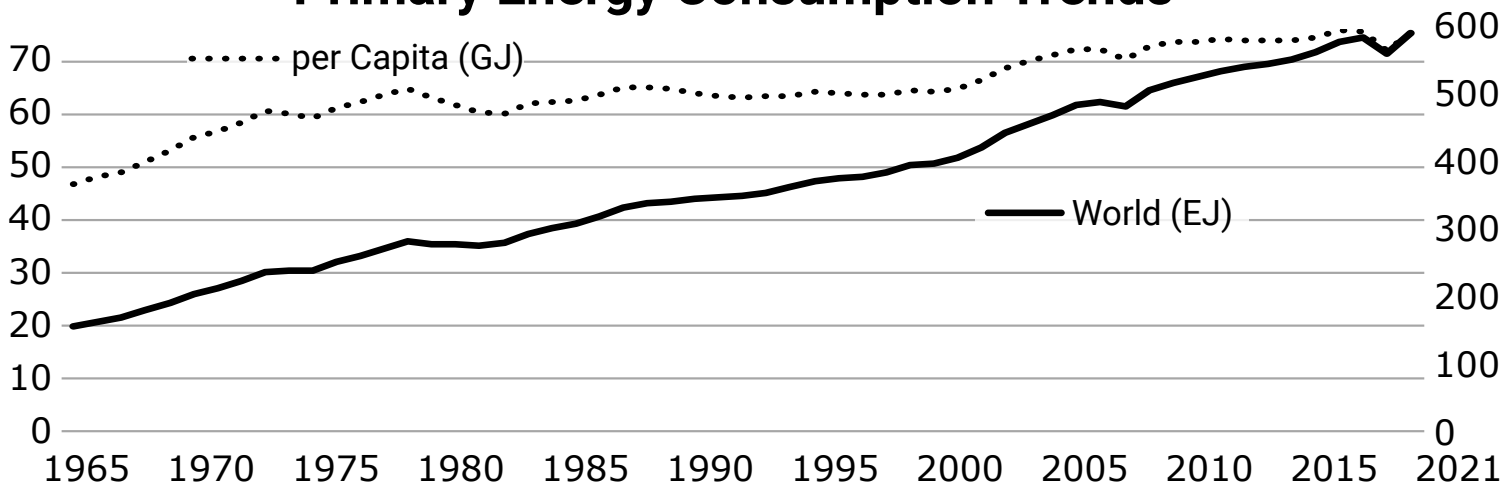
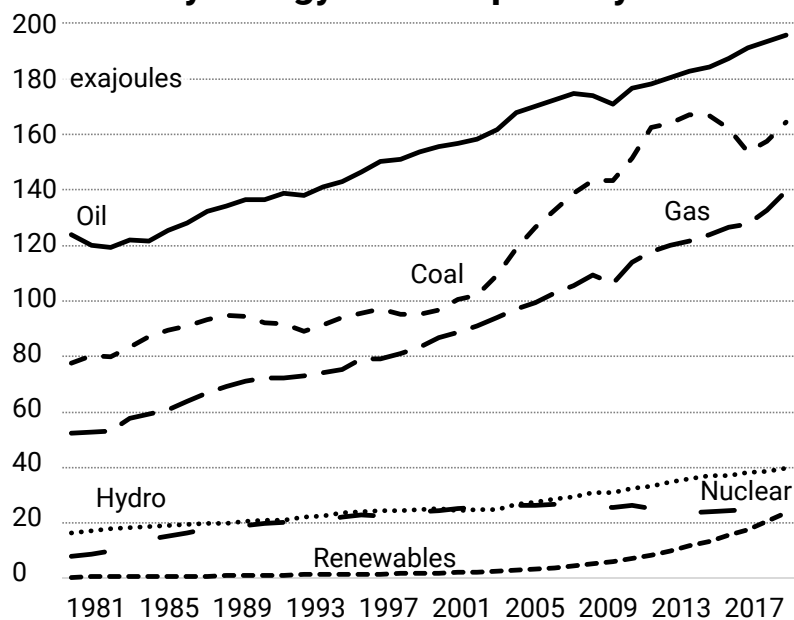


Primary Energy Consumption Trends



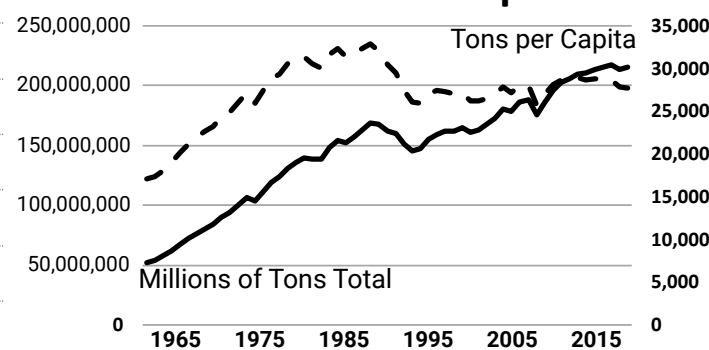
1) United Nations, Department of Economic and Social Affairs, Population Division, Population Estimates and Projections Section. "World Population Prospects: The 2017 Revision". <https://population.un.org/wpp/> Accessed April 18, 2019.
 2) BP. "Statistical Review of World Energy 2018". <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html> 2018

Primary Energy Consumption by Source



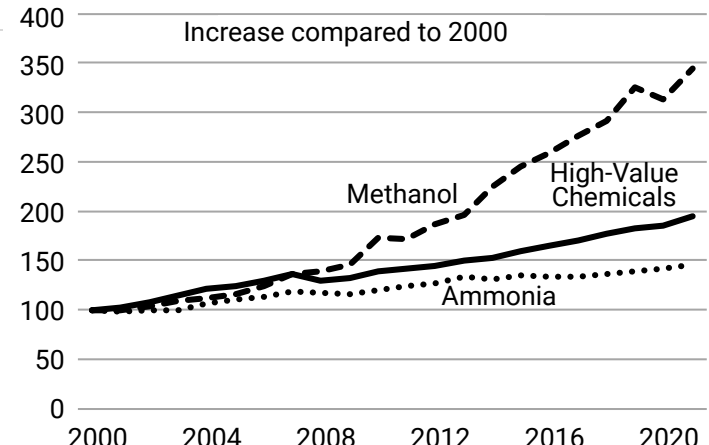
1) BP. "Statistical Review of World Energy 2018". <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy.html> 2018

Fertilizer Consumption



1) Our World in Data "Fertilizer Consumption" <https://ourworldindata.org/fertilizers> Accessed 6/8/2023
 2) Our World in Data "Population" <https://ourworldindata.org/grapher/population> Accessed 6/8/2023

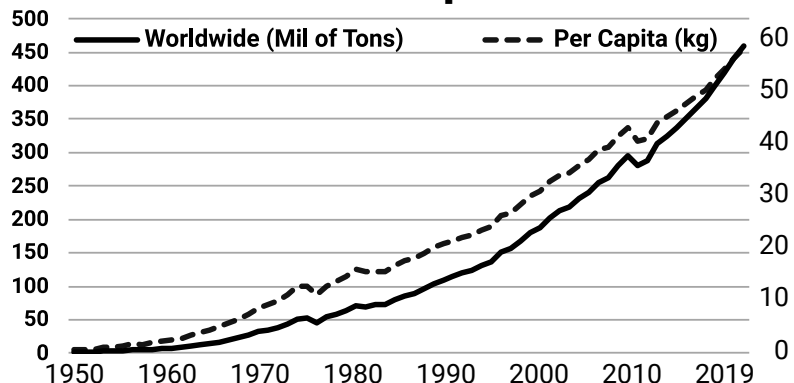
Primary Chemical Production Growth



Note: High-value chemicals are mostly precursors to plastics.

1) International Energy Association "Chemicals Report". <https://www.iea.org/reports/chemicals> Accessed 6/9/2023

Plastic Consumption Trends

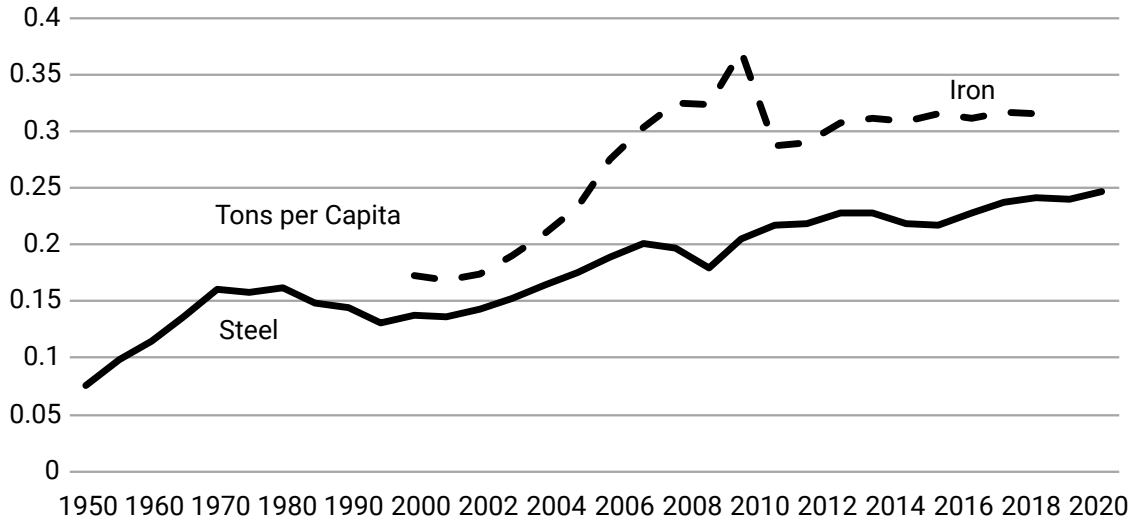


1) Our World in Data. "Global plastics production" <https://ourworldindata.org/grapher/global-plastics-production> Accessed January 30, 2023.
 2) Roser, M., Ritchie, H., Ortiz-Ospina, E., Rod s-Guirao, L. "World Population Growth". Our World in Data. <https://ourworldindata.org/world-population-growth> Accessed January 30, 2023.



Research by Michael Goff, research and graphics by Lee Nelson, concept by John van der Harst, Revision by jye 6/9/2023

Steel and Iron Consumption

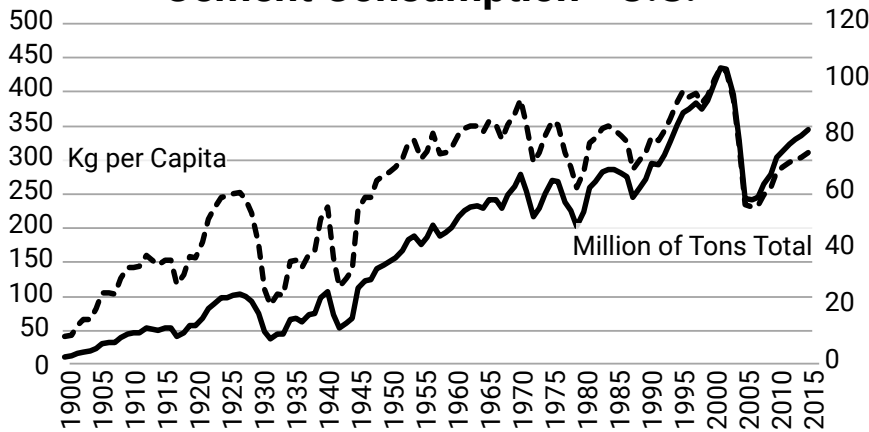


- 1) Worldsteel Association "World Steel in Figures 2022" <https://worldsteel.org/steel-topics/statistics/world-steel-in-figures-2022/> Accessed 5/5/2023
- 2) USGS "Iron and Steel Statistics and Information" <https://www.usgs.gov/centers/national-minerals-information-center/iron-and-steel-statistics-and-information> Accessed 6/6/2023
- 3) Our World in Data "Population" <https://ourworldindata.org/grapher/population> Accessed 4/14/2023



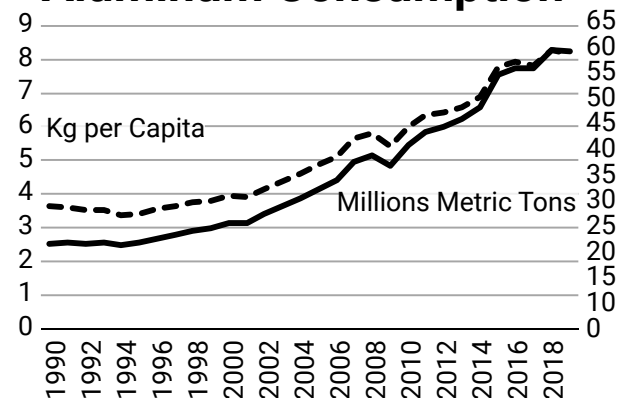
Research by Michael Goff and Lee Nelson.
Graphics by Lee Nelson, Revision by jye
7/10/2023

Cement Consumption - U.S.



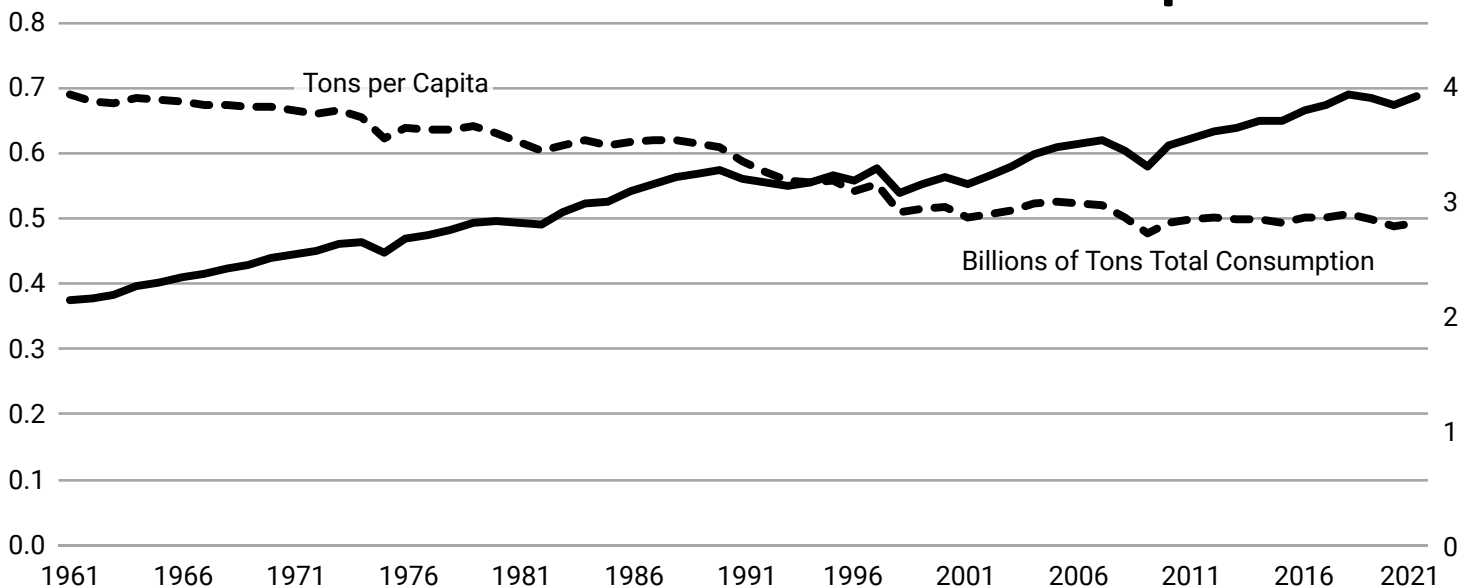
- 1) United States Geological Survey "Cement Statistics and Information" <https://www.usgs.gov/centers/national-minerals-information-center/cement-statistics-and-information> Accessed 5/16/2023
- 2) USA Facts "Population" <https://usafacts.org/data/topics/people-society/population-and-demographics/population-data/population/> Accessed 5/14/2023

Aluminum Consumption



- 1) USGS "Aluminum Statistics and Information". <https://www.usgs.gov/centers/national-minerals-information-center/aluminum-statistics-and-information> Accessed 5/28/2023
- 2) Our World in Data "Population" <https://ourworldindata.org/grapher/population> Accessed 5/28/2023

Wood and Forest Products Consumption



- 1) Food and Agriculture Organization of the United Nations "Forestry Production and Trade" <https://www.fao.org/faostat/en/#data/FO> Accessed 5/4/2023
- 2) Forest Research "Conversion Factors" <https://www.forestresearch.gov.uk/tools-and-resources/statistics/forestry-statistics-2018/sources/timber-2/conversion-factors/> Accessed 5/4/2023
- 3) Our World in Data "Population" <https://ourworldindata.org/grapher/population> Accessed 4/14/2023