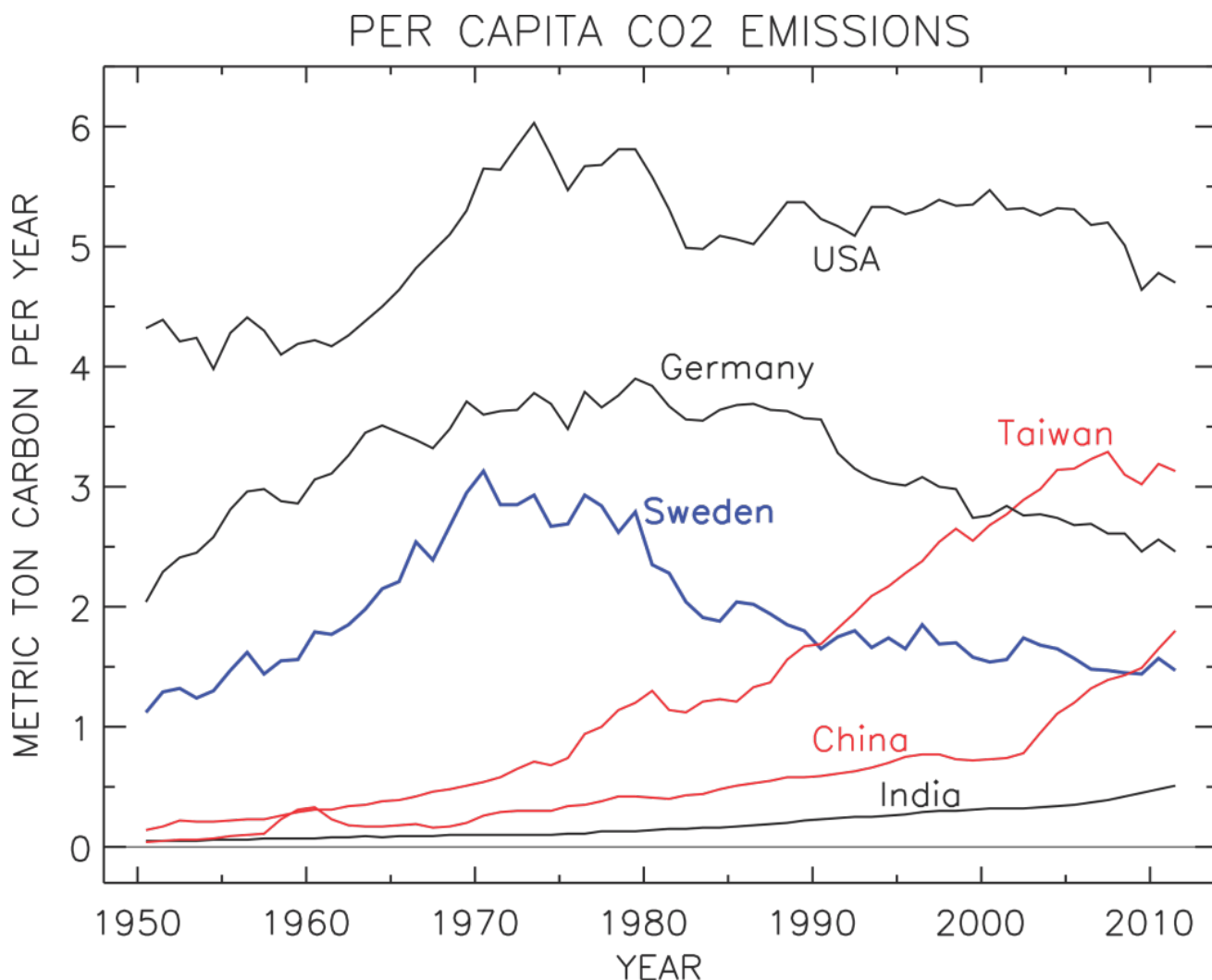


## The Earth Is Round: Some Elements of a Sustainable Society

P. Tans

NOAA Earth System Research Laboratory, 325 Broadway, Boulder, CO 80305; 303-497-6678, E-mail: pieter.tans@noaa.gov

Global climate change demonstrates clearly that our current social economic system is running into physical limits. The economic growth we have experienced in the past has been beneficial in many ways. Most economists and politicians still argue for its perpetual continuation, perhaps at 2% per year or so in developed countries, and more rapidly in developing countries. However, our collective impact on the Earth system has now become so large that further continuation of growth would likely be disastrous. Our real challenge is very different, namely to develop a society that provides enough food, shelter, jobs, and services while protecting the Earth's resources and shrinking our throughput of materials. In addition, we have an aging population and a large fraction of current jobs will be replaced by robots. We have to rethink our system of money, developing new ways to match unmet needs with new jobs. Gross Domestic Product (GDP) has to be replaced as a measure of success, the rights and obligations of corporations redefined, and the vast accumulation of wealth and power in very few hands reversed.



**Figure 1.** Vast emissions reductions can be accomplished with existing technology. Sweden's GDP per capita is almost the same as in the U.S., and it is much more equitably distributed.