

Are Environmental Problems Getting Worse or Better?

Environmental Policy

- Pattern of Government decisions and actions intended to address environmental problems
 - Defining environmental problems
 - Devising programs and activities to manage them

Environmental Policy Making

- How the government determines what are/not environmental problems and which deserve government attention
 - Institutions
 - How public concerns are translated in to government concerns
 - Procedures

Environmental Politics

- Clash of interests, ideas, & values that occurs -- inside and outside of government -- in the course of defining environmental problems and deciding what government should (not) do about them
 - Include public participation
 - Voting
 - Letter writing
 - Lobbying

Environmental Politics

- *What are the real problems we face as a society and how do we characterize and prioritize them?*
 - Environmental problems vs. other problems
- *Should our government do anything about the environmental problem(s) we identify?*
- *If so, what are our choices for government action? What can government do and what should government do?*
- *Once we know what we want government to do, how do we make it happen?*

Scientific & Engineering Data in Environmental Policy

- Where does science and technology come into play?
 - Defining the *some* of the characteristics of environmental problems
 - Defining *some aspects* of the solutions for solving the problems

Scientific & Engineering Data in Environmental Policy

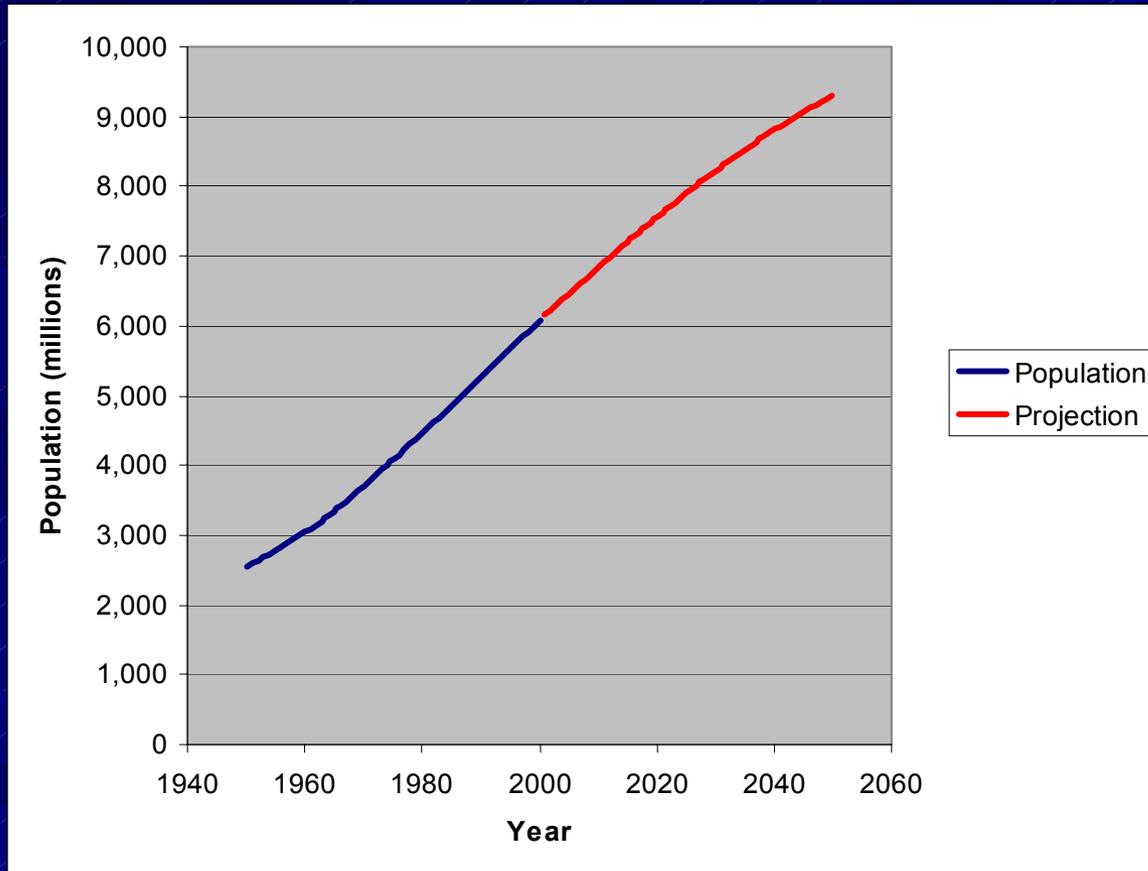
- “Emerging” science & technology
 - Tentative
 - Uncertain
 - Speculative
- Looking for the truth vs. Looking for evidence
 - Many ways to present data

Are Environmental Problems Getting Worse or Better?

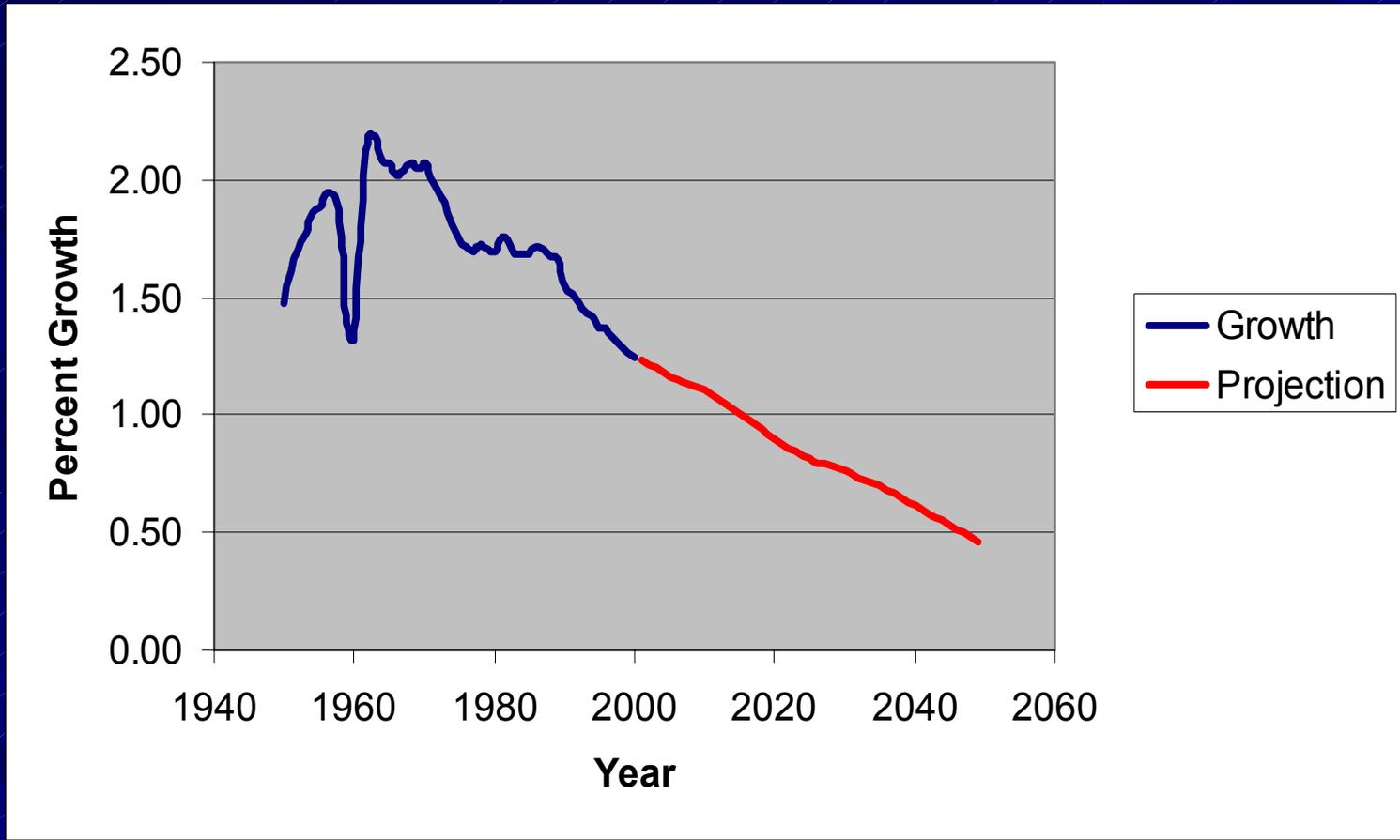
What do the Data show?

Things Are Getting Worse

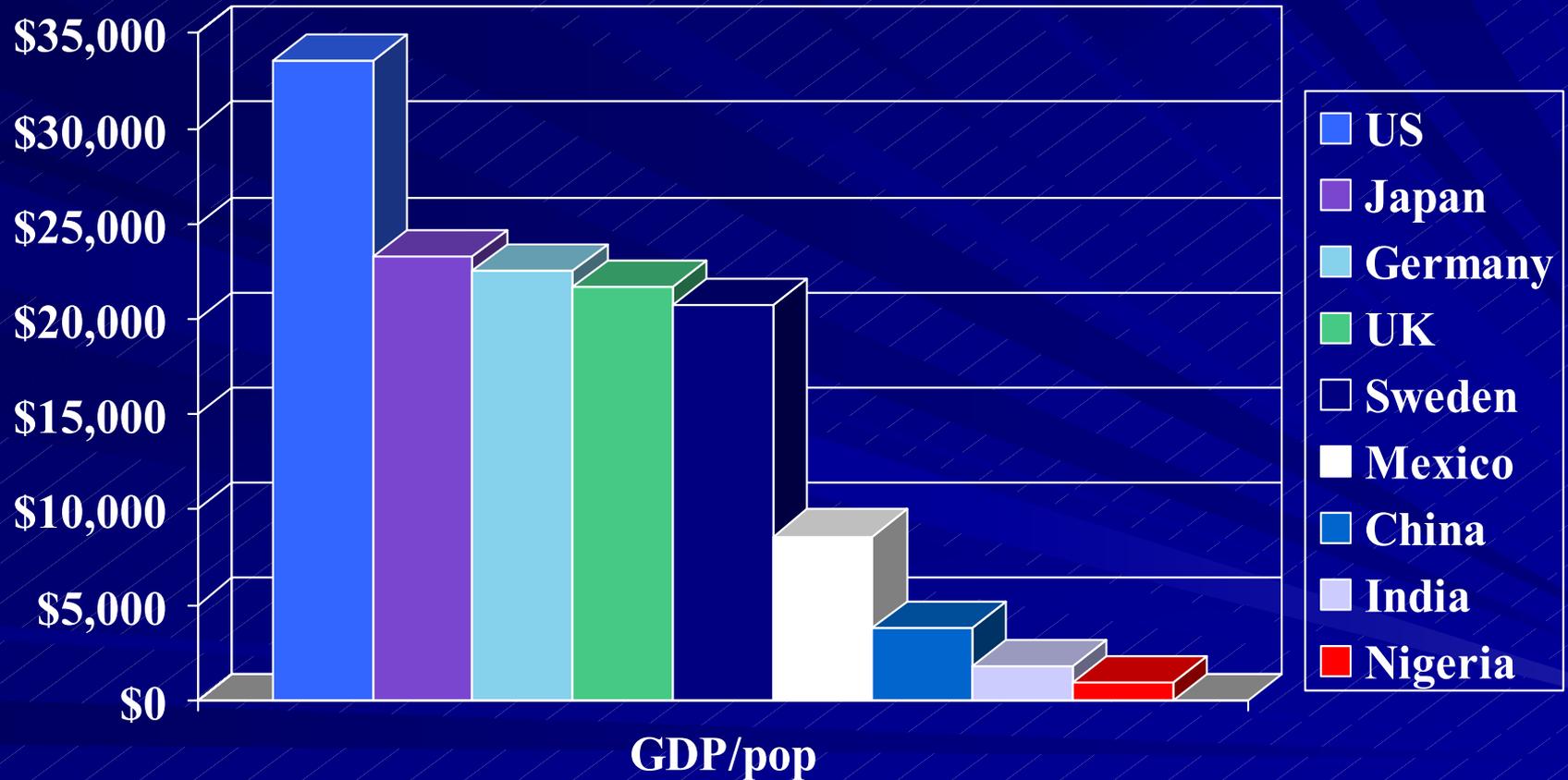
World Population



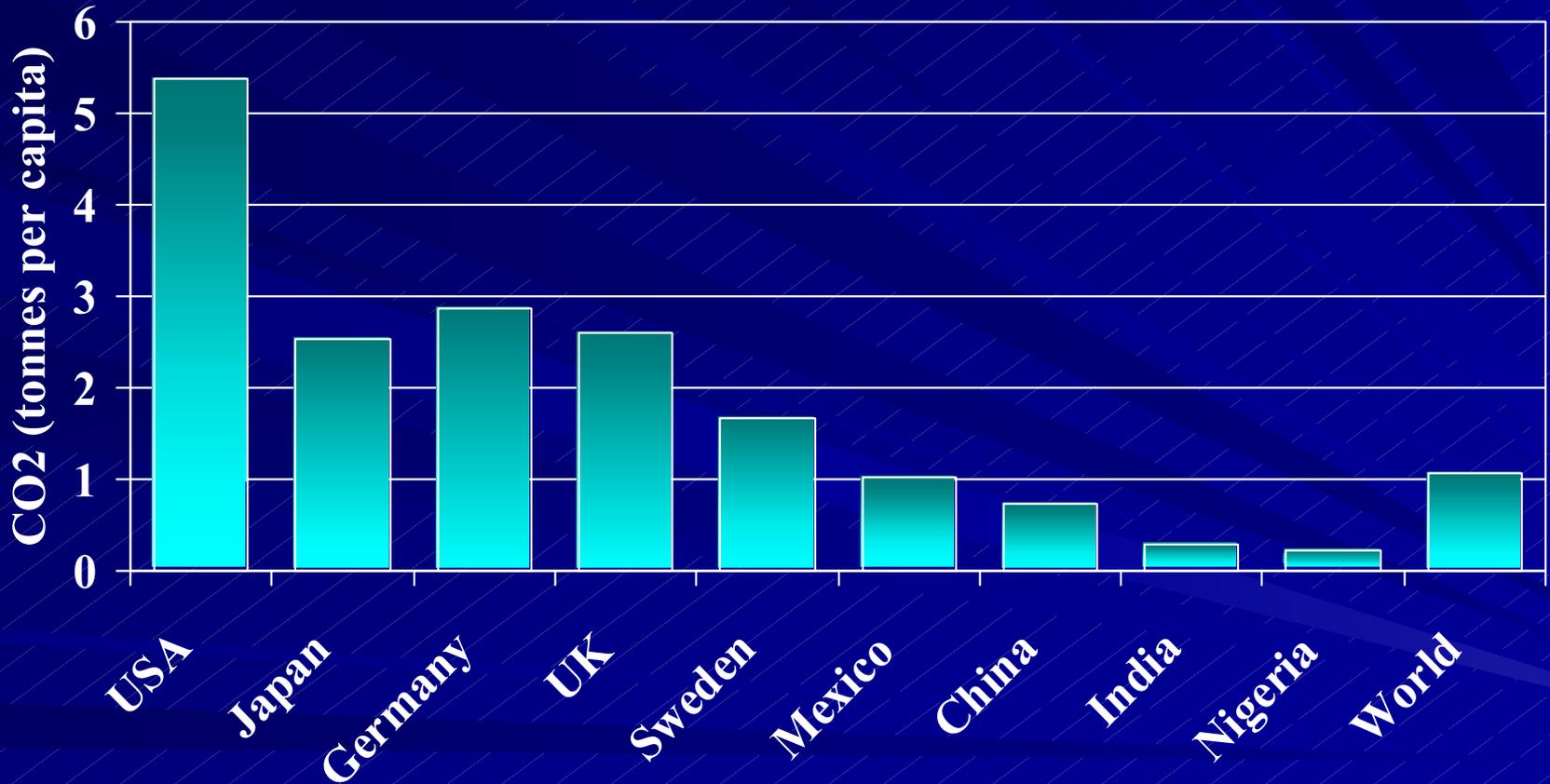
World Population Growth



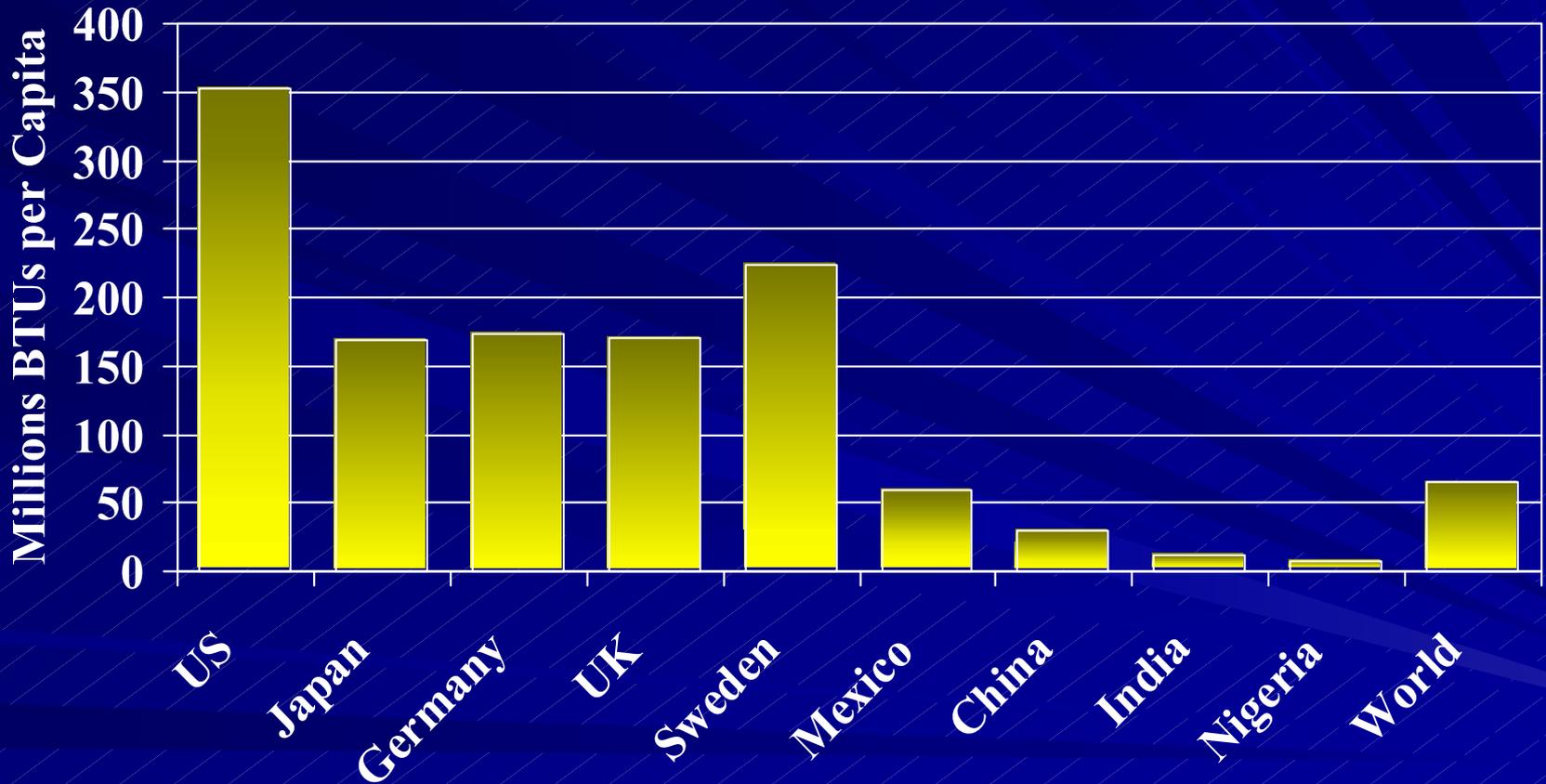
GDP per capita (2000)



CO₂ Emissions per Capita (1996)

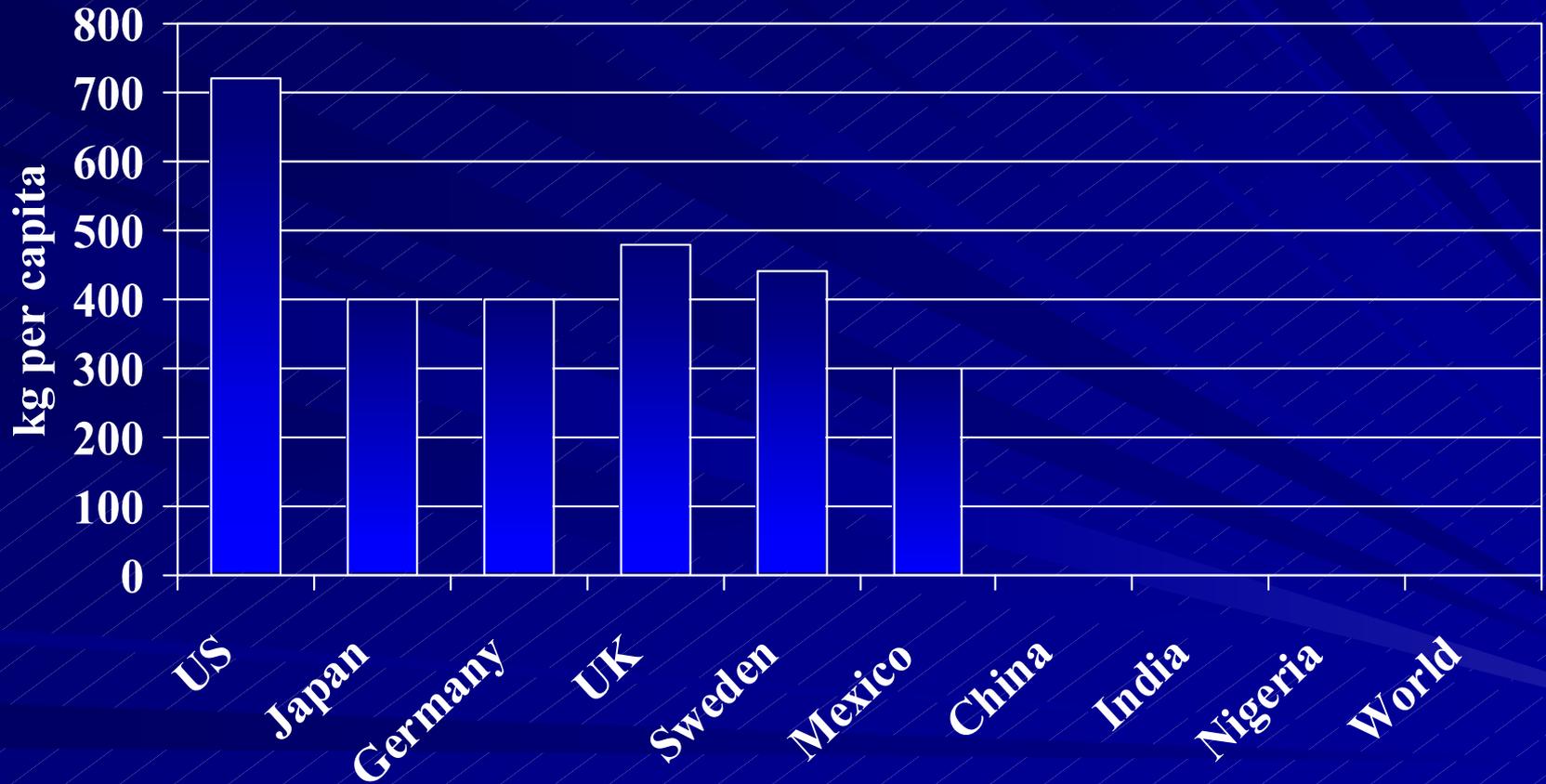


Energy Consumption per capita (1997)

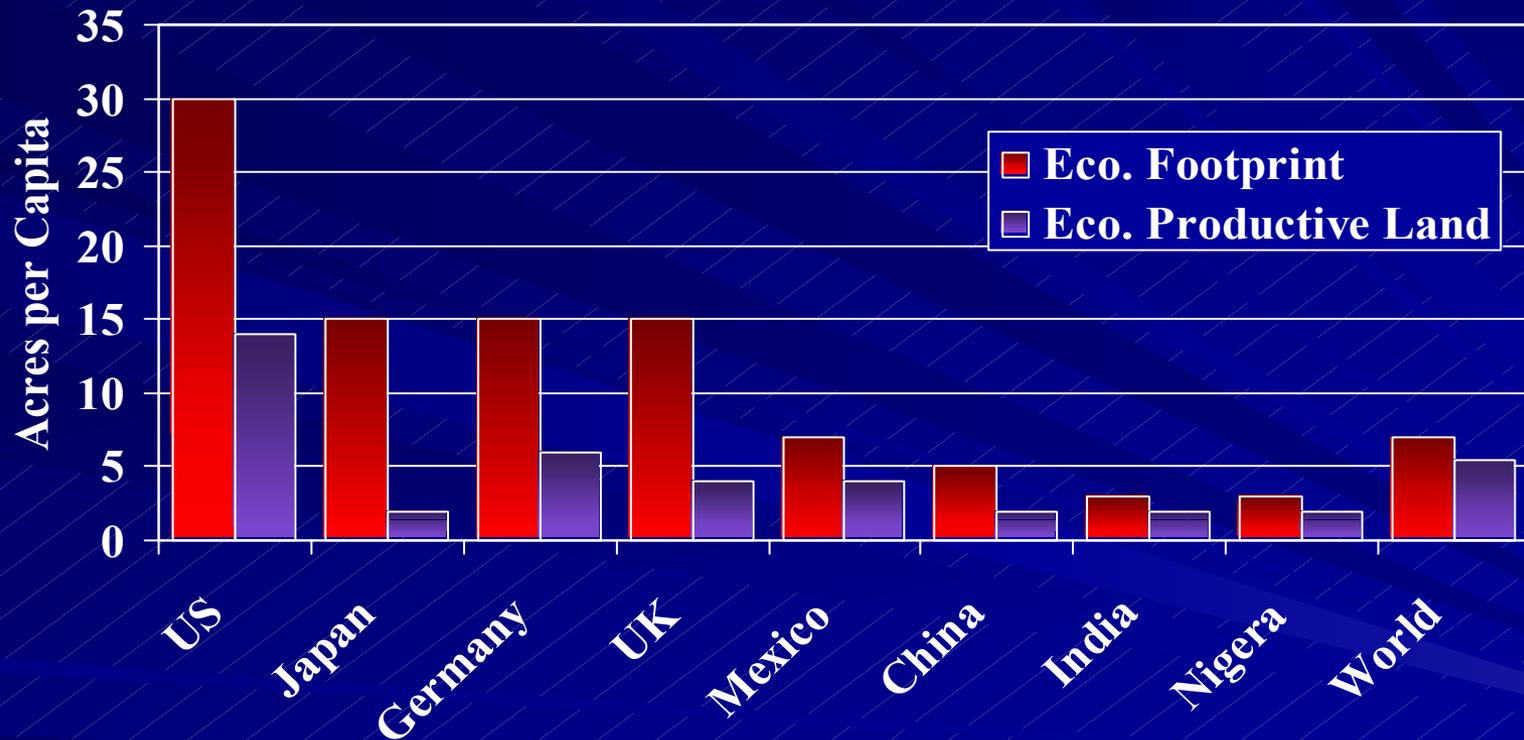


Municipal Trash

kg per capita



Ecological Footprint

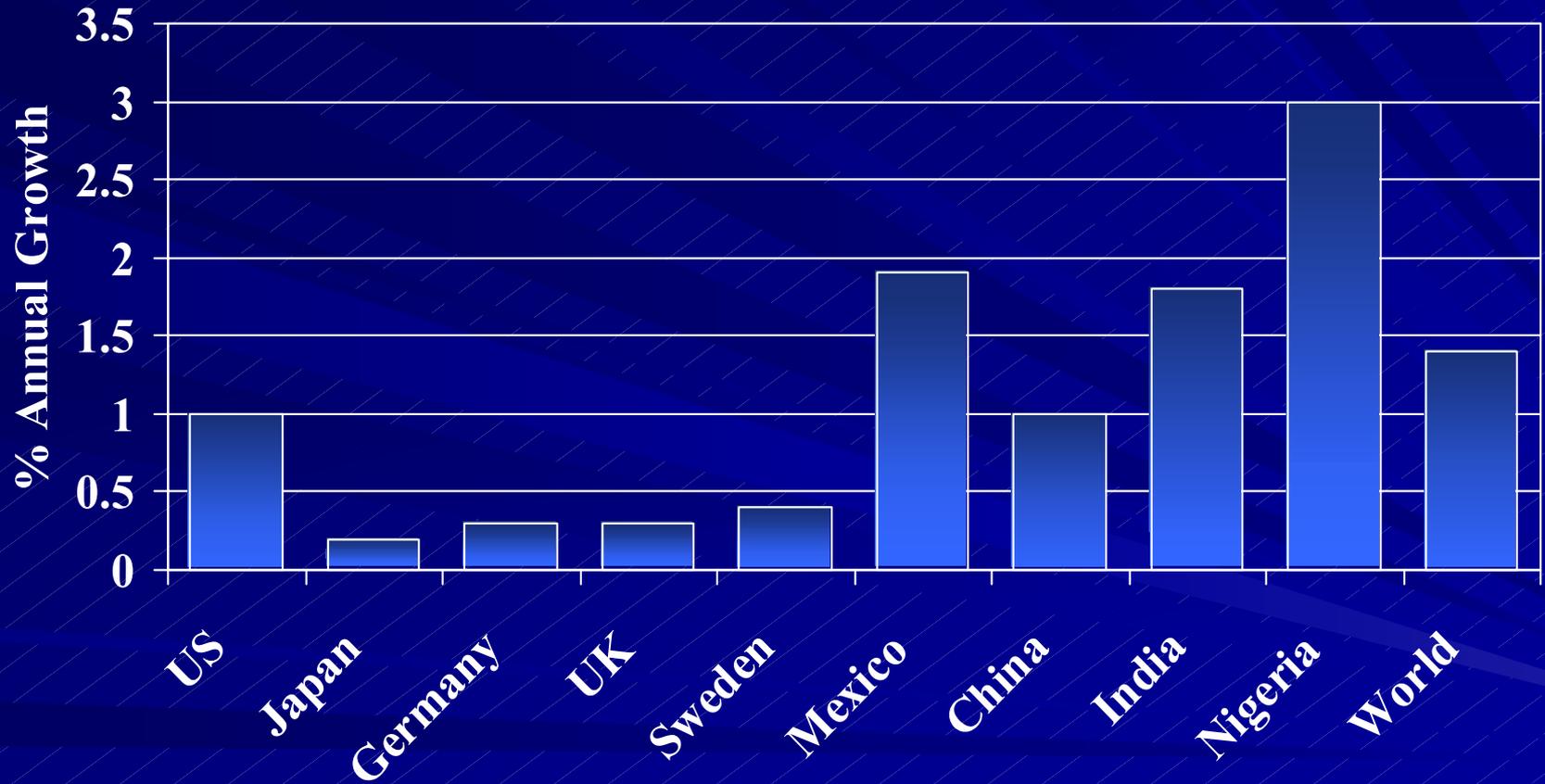


Ecological Footprint

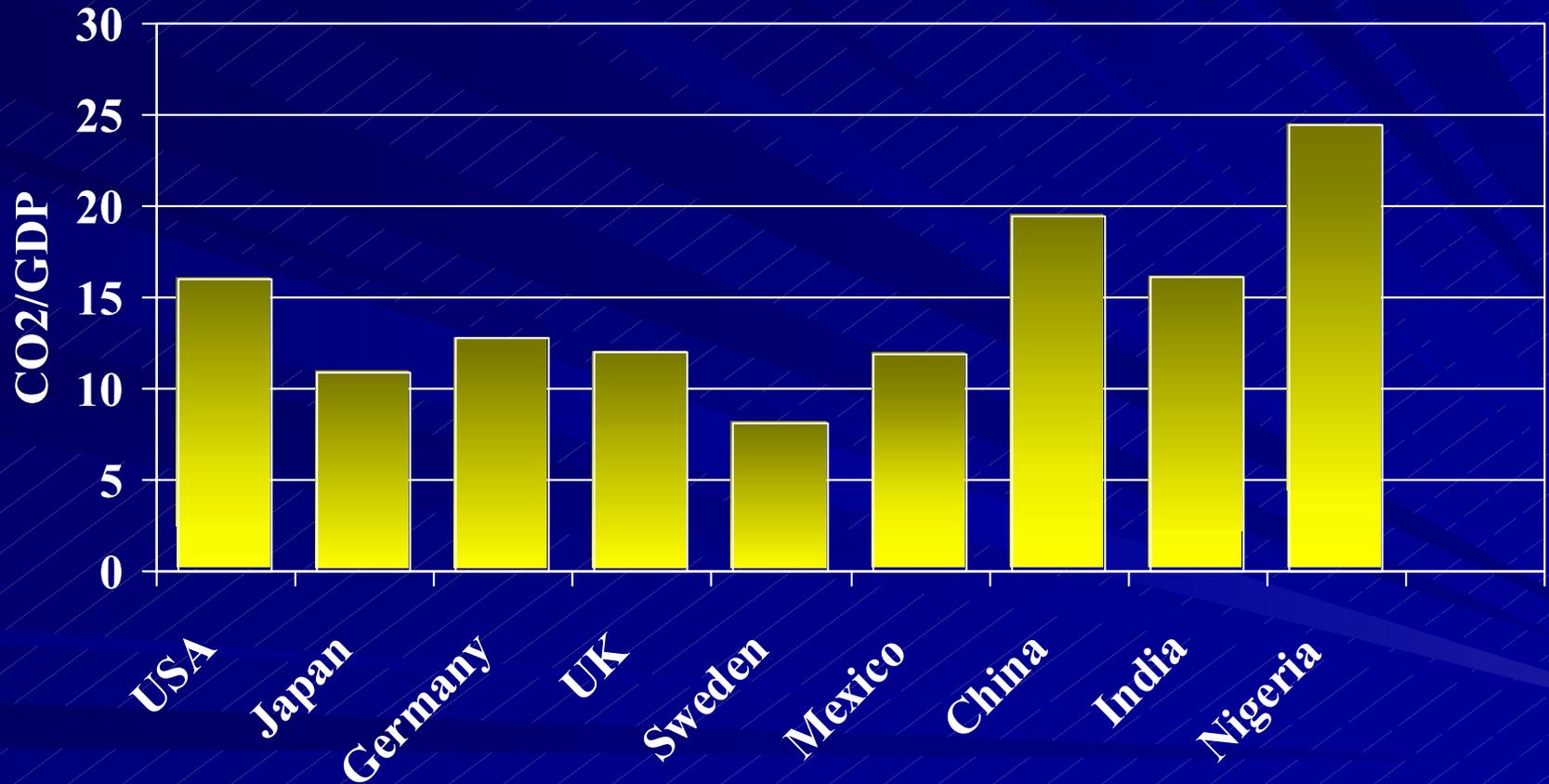
Things Are Getting Better

Population Growth

1990-2000

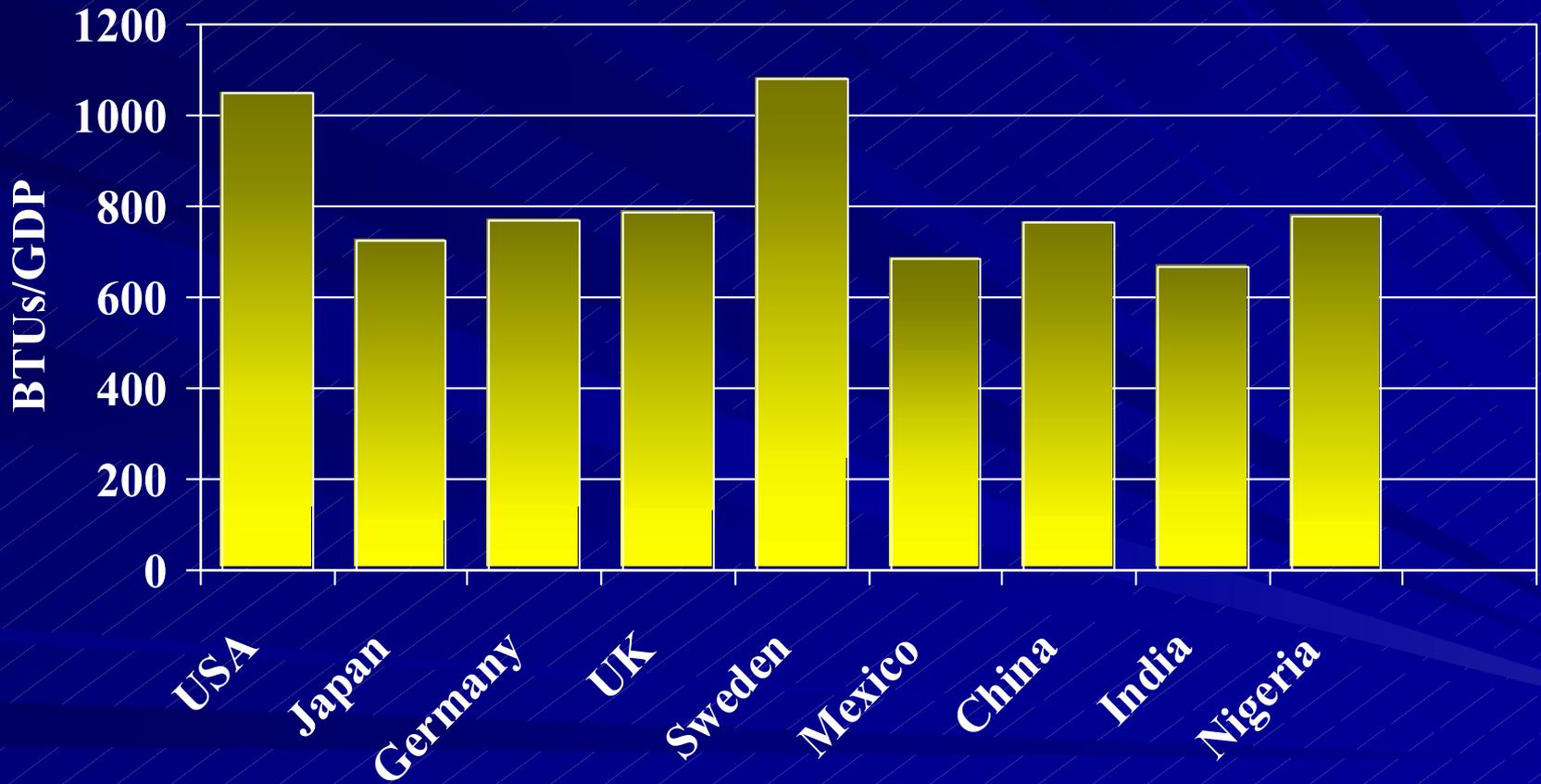


CO₂ Emissions per GDP (1996)

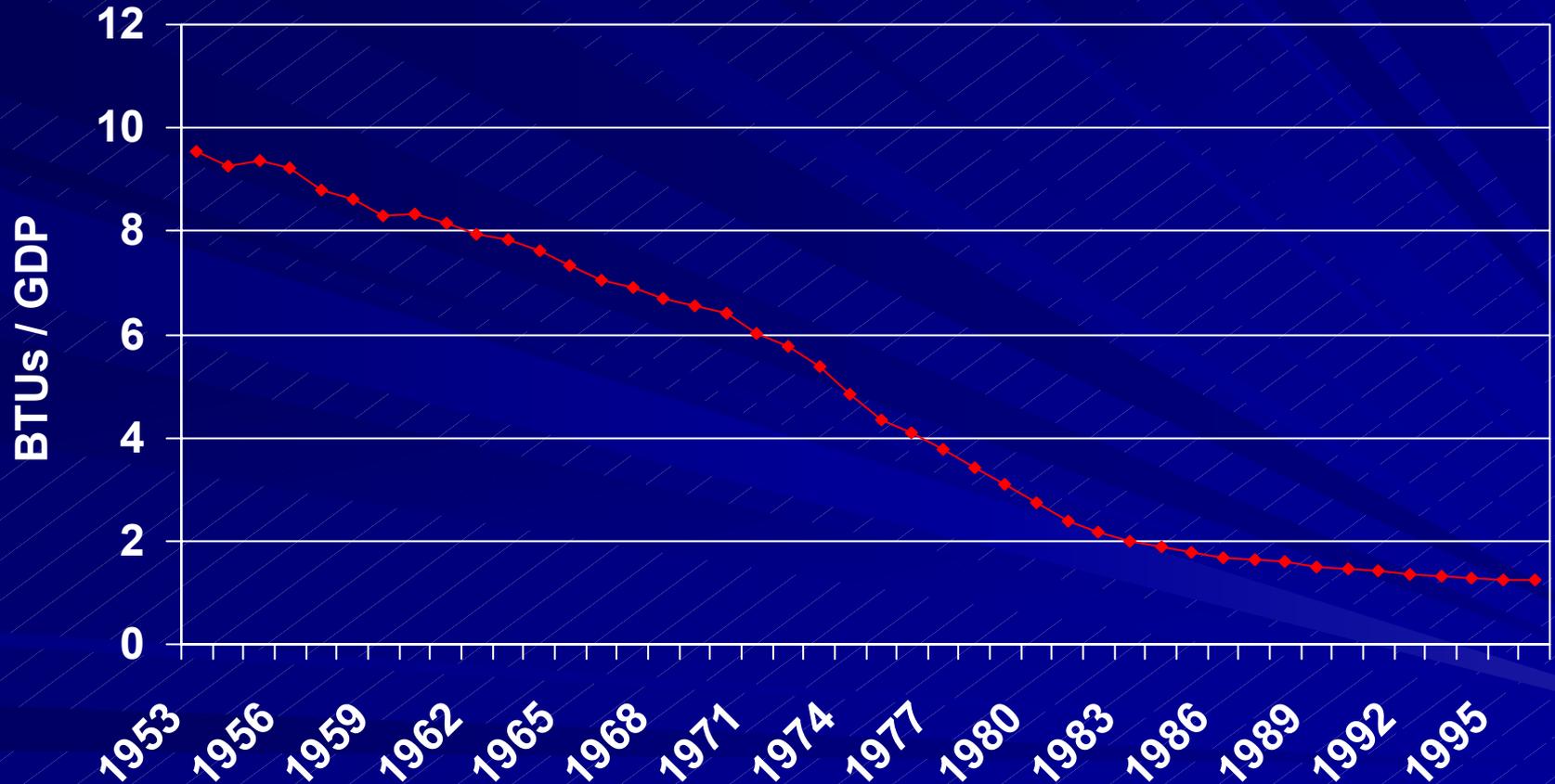


BTUs Consumed per GDP

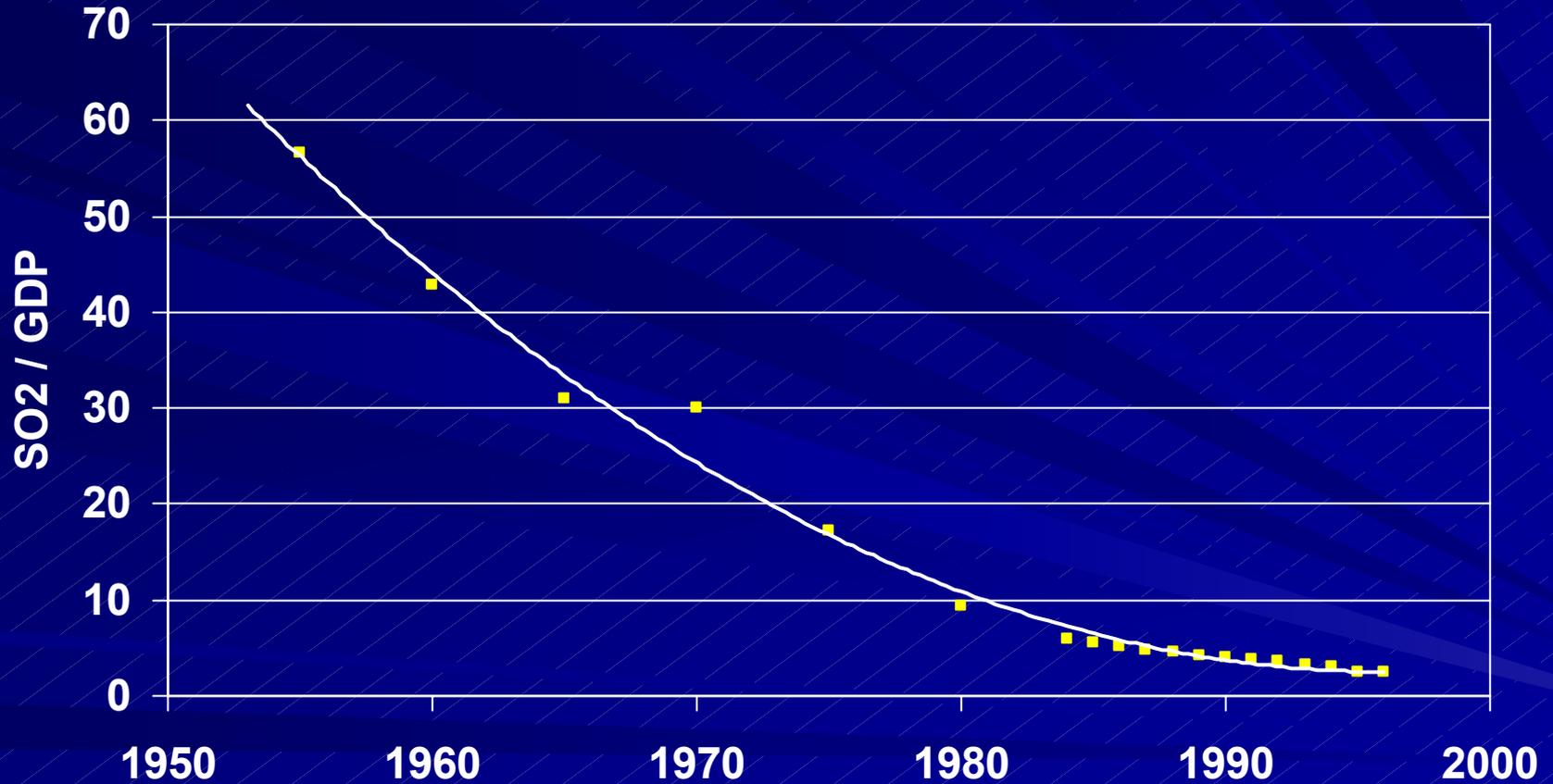
(1996)



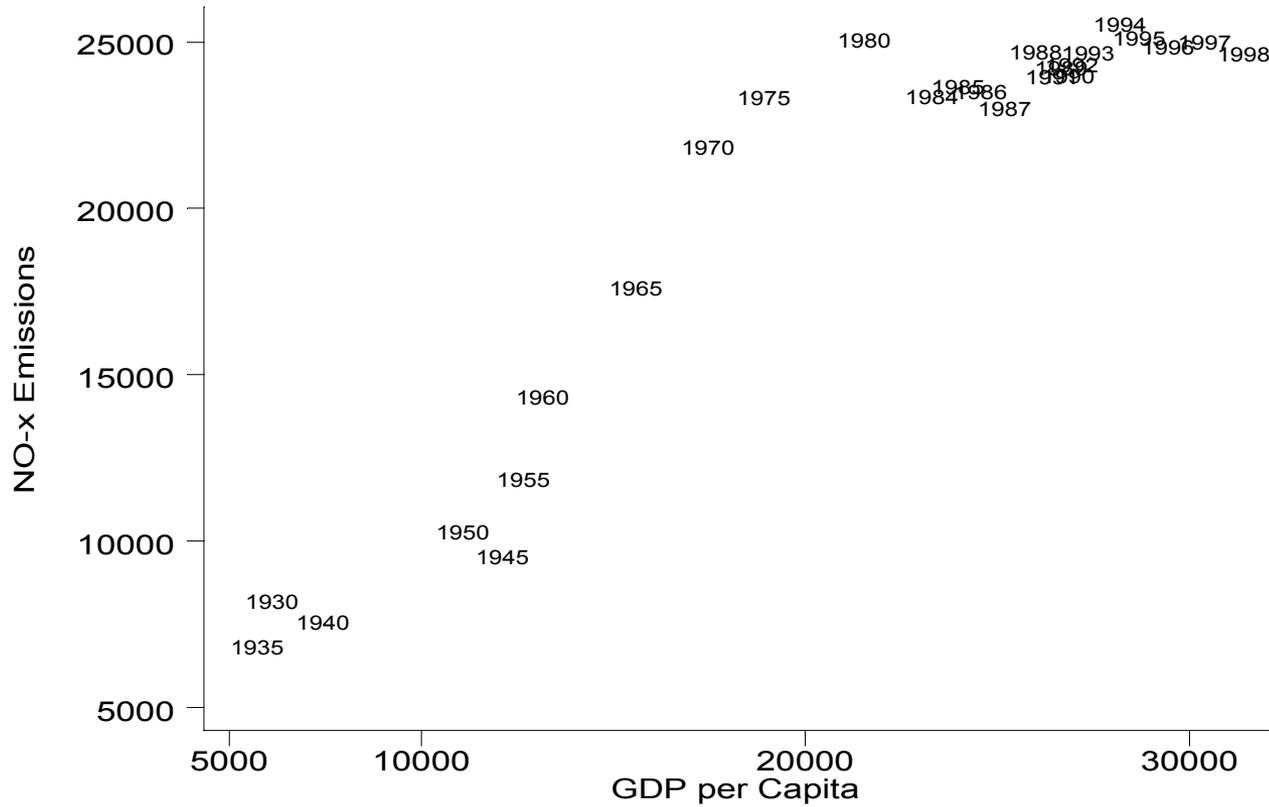
US Energy Use & GDP



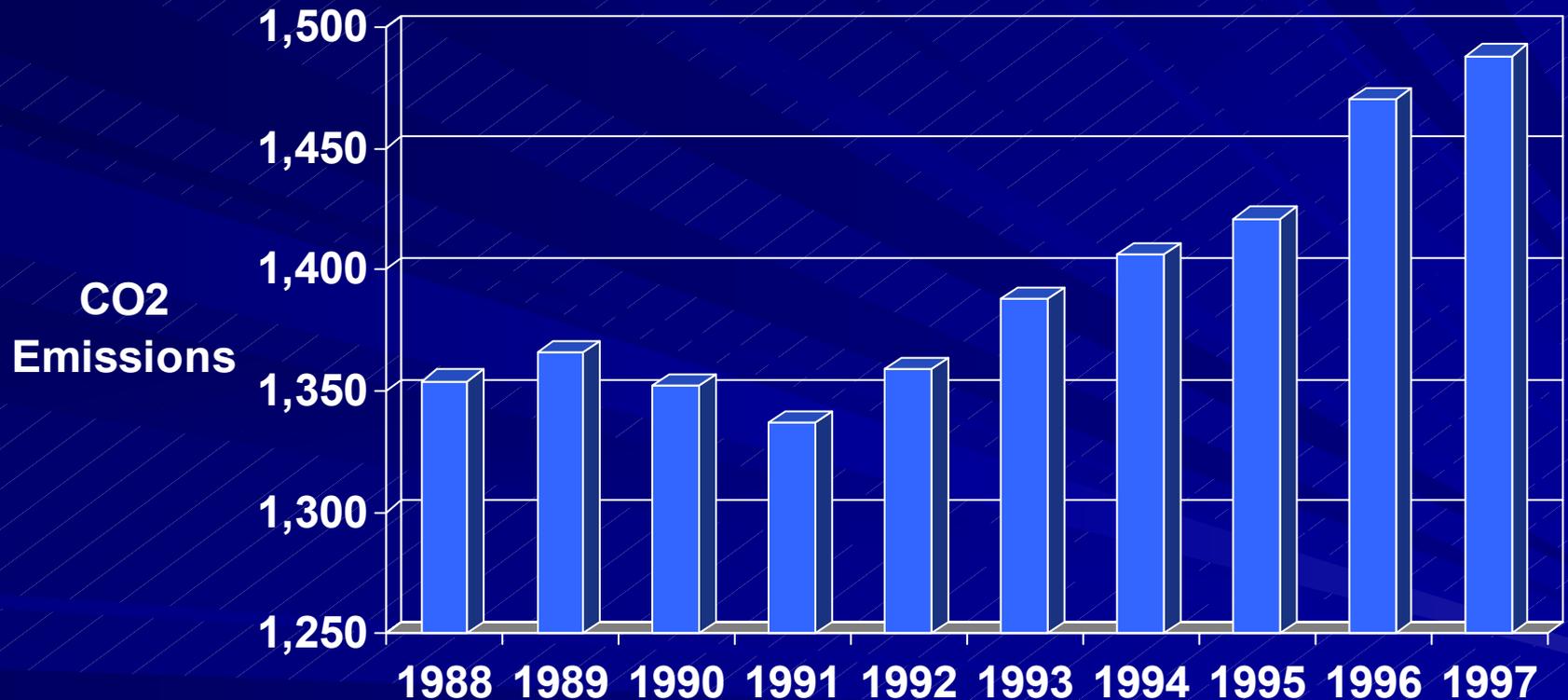
US SO₂ Pollution & GDP



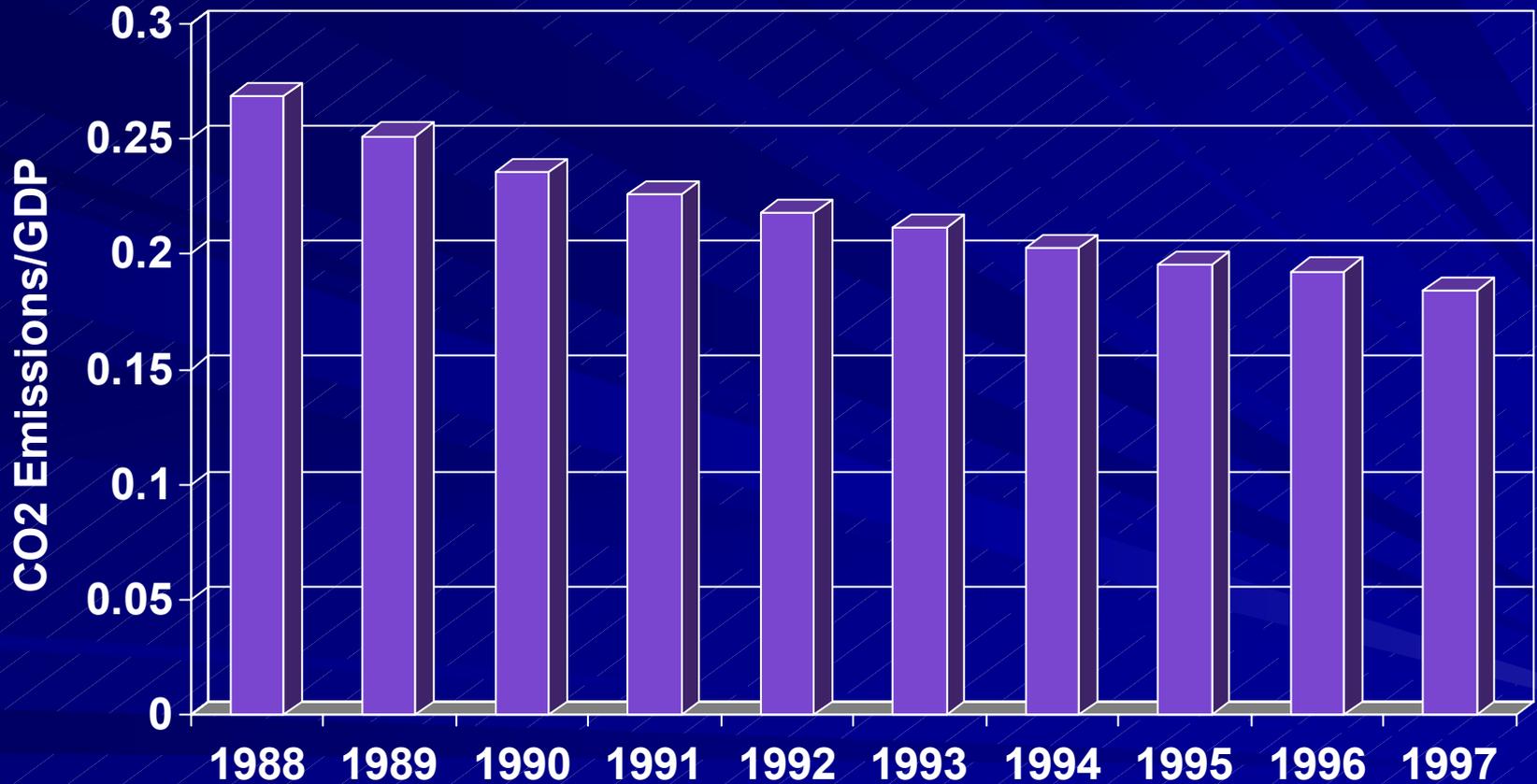
U.S. NO_x Emissions vs GDP/Pop



US CO2 Emissions



US CO2 Emissions / GDP



END

Simon & Kahn

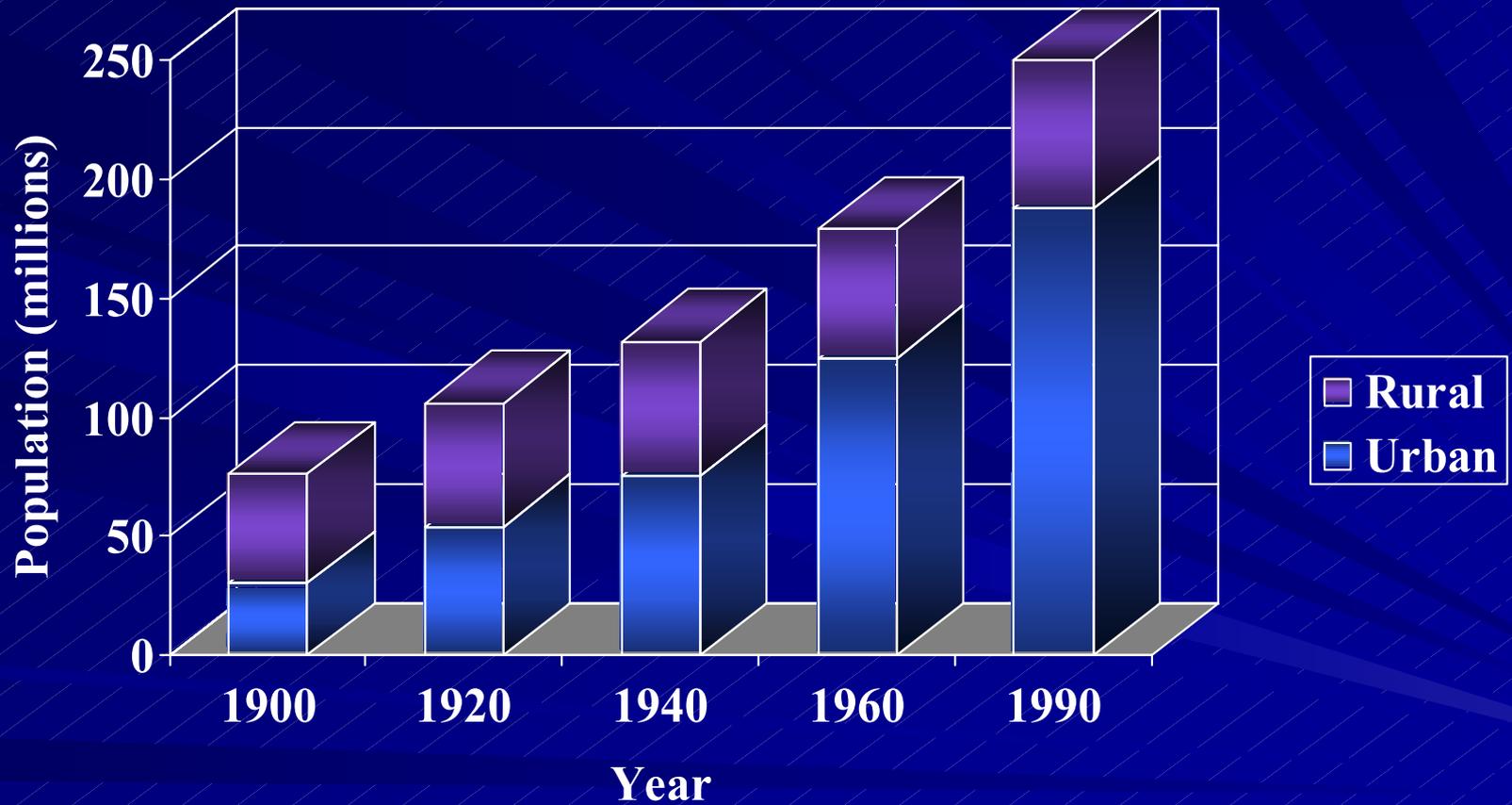
- Life expectancy is rising globally
- Birth rates are falling
- Global food supply is increasing
- No statistical evidence of species loss
- Fish catch is increasing
- Agriculture not constrained by land availability

Simon & Kahn

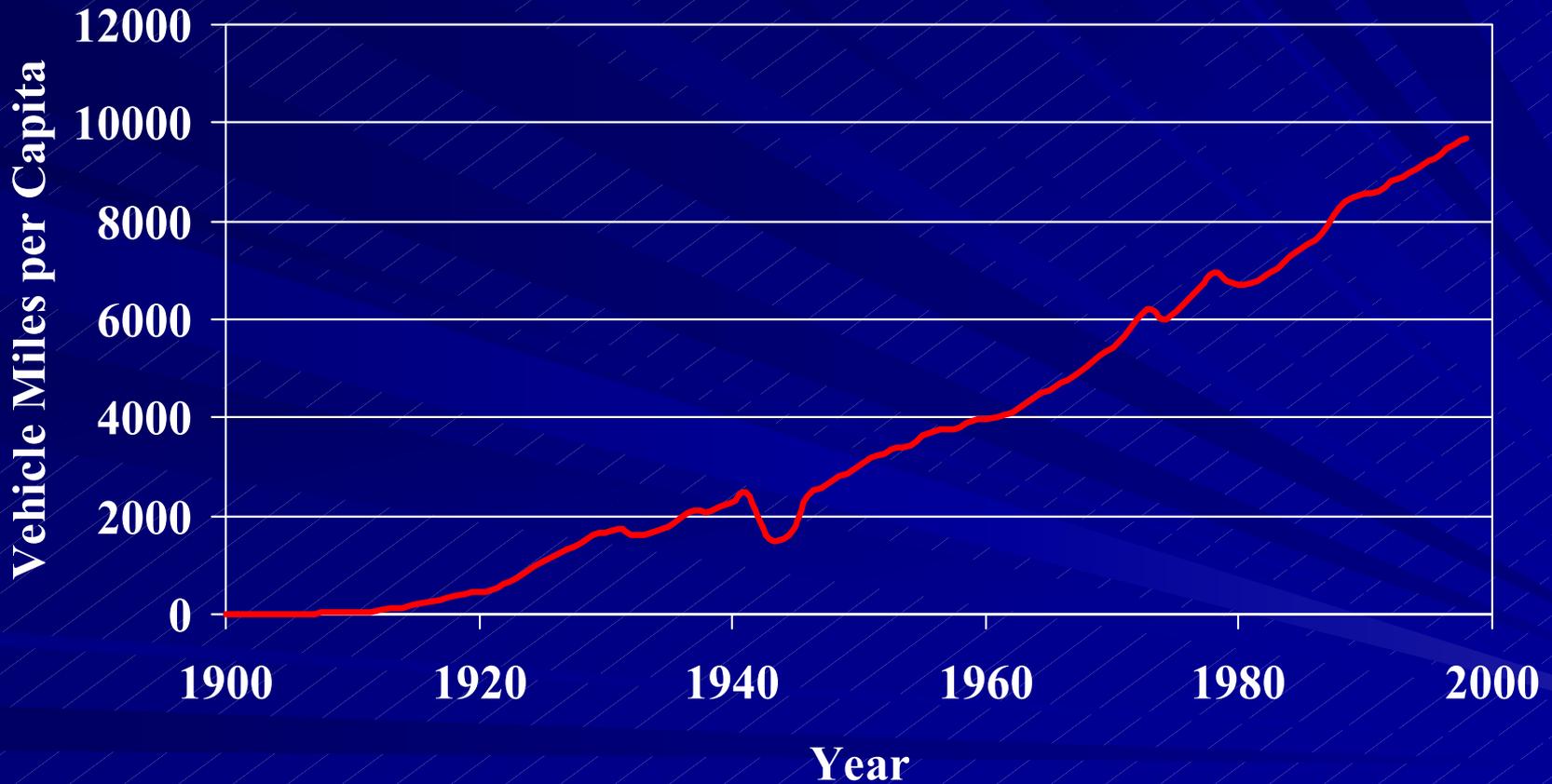
- US farmland is not being lost to urbanization
- Water is not growing scarce
- No sign of serious climate change
- Mineral resources are become less scarce
- Nuclear power is safe and competitive
- Air and Water pollution threats are exaggerated

U.S. Population

Urban & Rural



US Vehicles Miles per capita



Federal Environmental Laws Passed

(including amendments)

