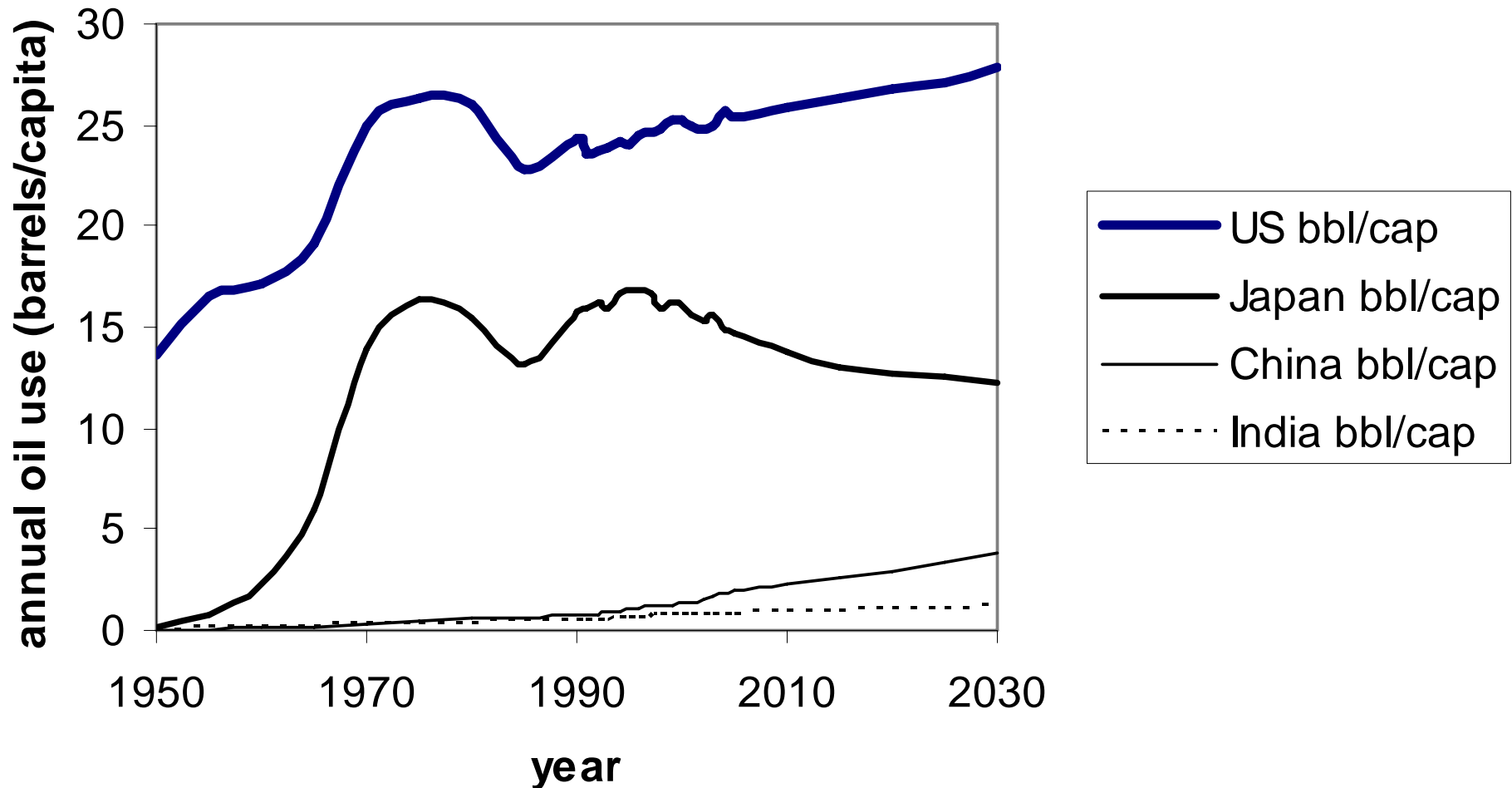


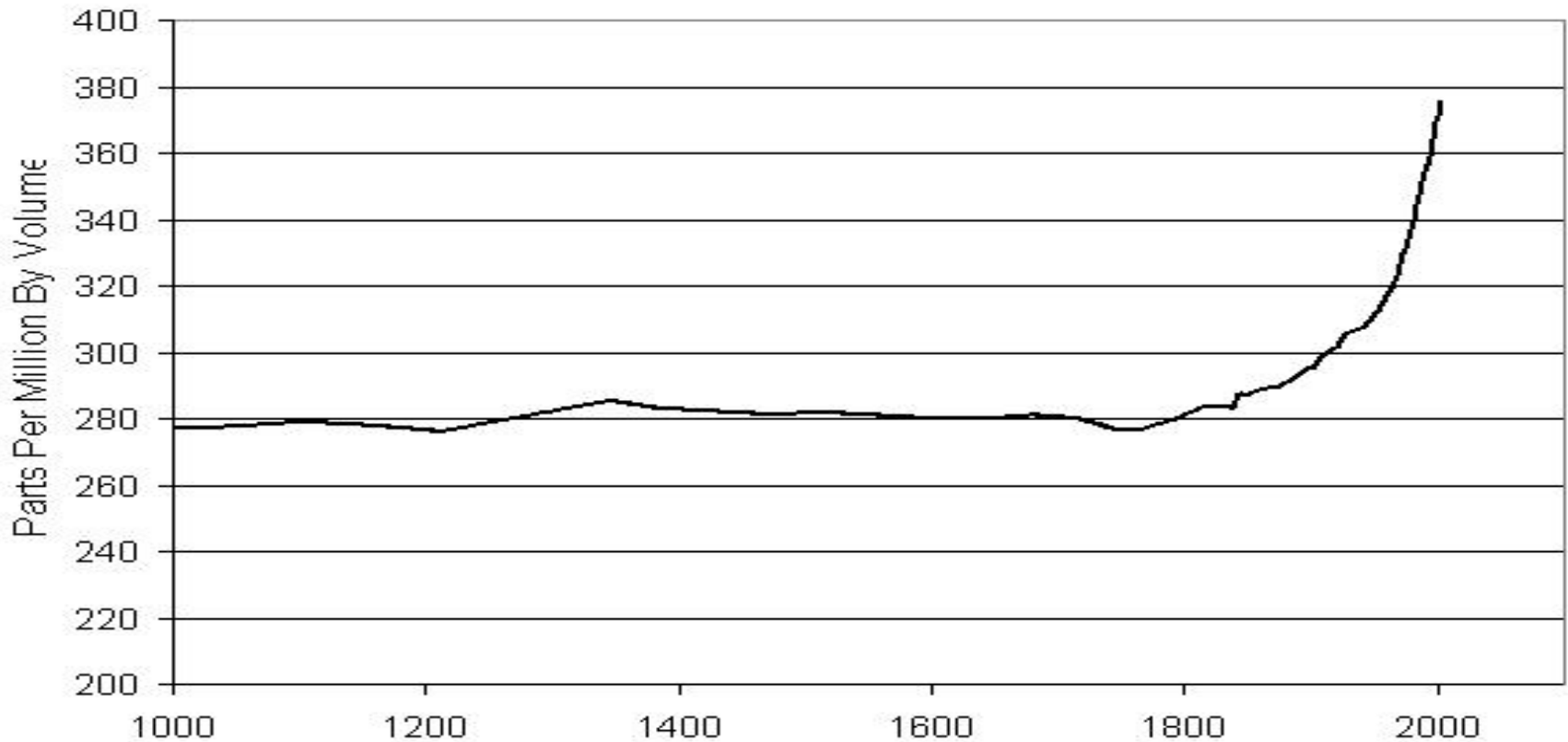
# Annual oil use per capita with EIA projections to 2030 in four countries





# Global atmospheric concentrations in ppm, year 1000-2003

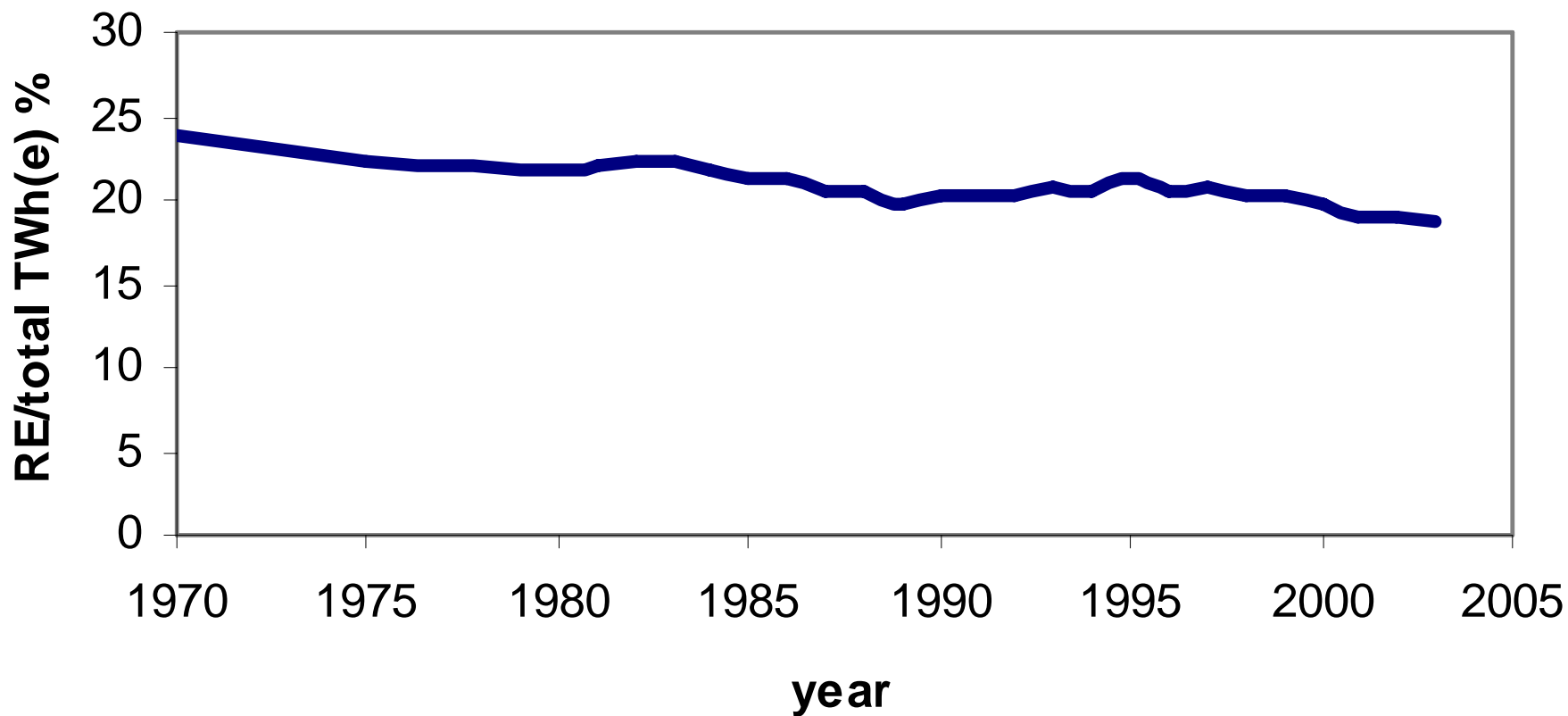
Atmospheric Concentrations of Carbon Dioxide, 1000-2003



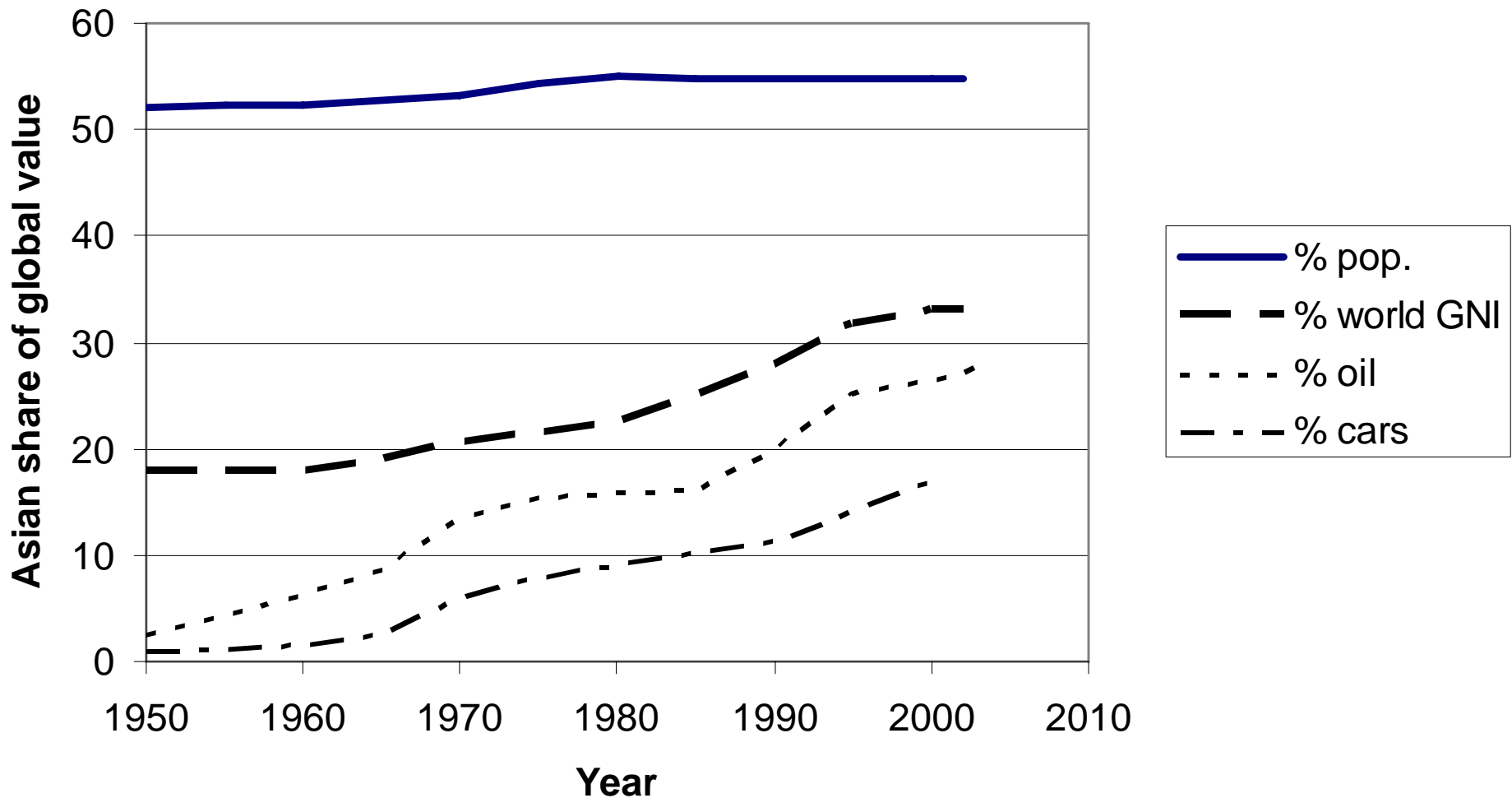
Source: Scripps, ORNL, and IPCC

# World electricity production-proportion from renewable energy 1970-2004

**Global RE/total % vs year**



# Asian share of global population, GNI, oil and cars, 1950-2004



# Criteria for solutions to global warming and oil depletion challenges to transport

Proposed transport energy solutions must:

- Give a positive energy return
- Not cause other environmental problems
- Be economically feasible
- Be capable of supplying a major share of transport energy, and do so for many decades
- Be available in the right time frame
- Be politically feasible.

# Proposed alternative transport fuels/propulsion systems

- LPG and compressed NG
- Bio-fuels—e.g. sugar cane ethanol
- Battery electric vehicles
- Battery hybrid electric vehicles
- Hydrogen fuel cell vehicles
- Hydrogen-fuelled conventional vehicles.

Large increases in vehicle energy efficiency is another possible solution.