

The Human Earth (MAE 124/ESYS 103)

Lecture 6

Eco-efficiency and design for environment

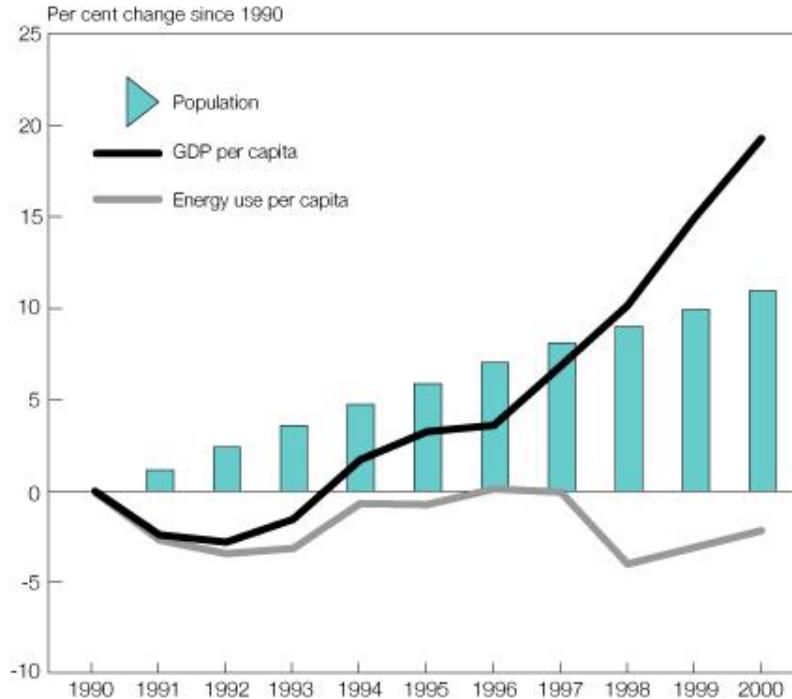
Appropriate Technology in the US



<http://www.solarhaven.org/Construction2.htm>

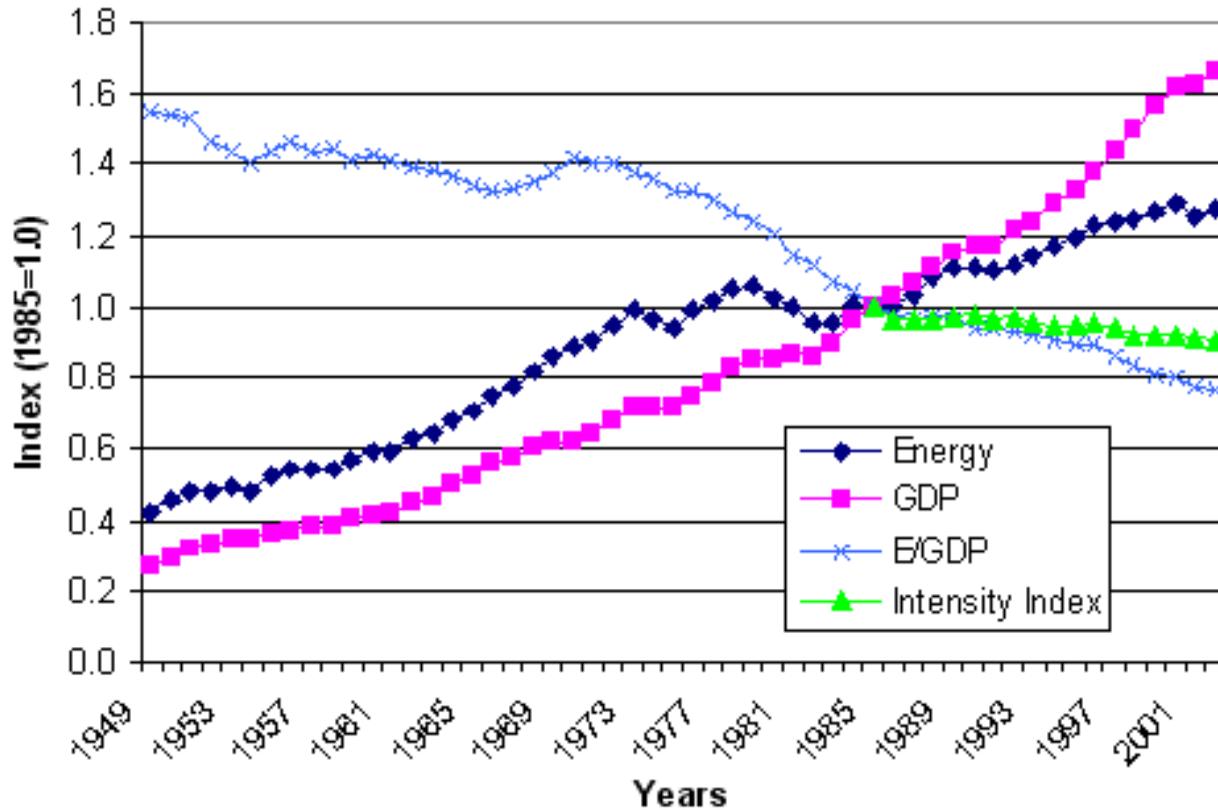
Energy and GDP per Capita (here for Canada)

Change in Population, GDP Per Capita, and Energy Use Per Capita



Source: Environment Canada, *Environmental Signals*, 2003

Energy per GDP



Design for environment: SC Johnson



<http://www.deh.gov.au/settlements/industry/corporate/eecp/case-studies/scjohnson-dfe.html>

Design for environment: Caroma Toilets



<http://www.deh.gov.au/settlements/industry/corporate/eecp/case-studies/caroma-dfe.html>

ISO 14001: Environmental Management System (EMS)

What EMS elements are required by ISO 14001?

- Establishing an environmental policy
- Establishing environmental objectives and targets and implementing plans for meeting these
- Evaluating environmental aspects and impacts
- Identifying regulatory requirements and evaluating compliance with requirements
- Defining roles and responsibilities
- Identifying and providing necessary training
- Communicating effectively
- Documenting processes that affect environmental impacts
- Controlling parameters that affect environmental impacts
- Evaluating which suppliers' goods and services affect environmental impacts
- Preparing for emergency situations
- Monitoring and measuring critical environmental parameters
- Initiating corrective actions when problems occur
- Maintaining environmental records
- Auditing the EMS
- Evaluating and reviewing the EMS to ensure it is effective, suitable, and adequate for your organization.