



A Global Outlook on Key Environmental Issues

Sanjay Sampath



"Friendly Service, No Surprises!"



Globalization

A politically incorrect example

“ An English princess with an Egyptian boyfriend crashes in a French tunnel, driving a German car with a Dutch engine, driven by a Belgian who was high on Scottish whiskey, followed closely by Italian Paparazzi, on Japanese motorcycles, treated by an American doctor, using Brazilian medicines!”

.....and this is being shared with you by an Indian engineer who went to graduate school in the US.





Global Interdependence

- Global trade: Increased 20-fold since 1947.
- Increasing multiculturalism/diversity.
- Global finance: Increased six-fold in the last 10 years.
- The IT revolution.





Impact of Global Issues

Government:

A key factor that determines national policy which impacts regional and local policy in all areas.

Industry:

Impact on other areas could have profound effect on local issues. Owners may be thousands of miles away.

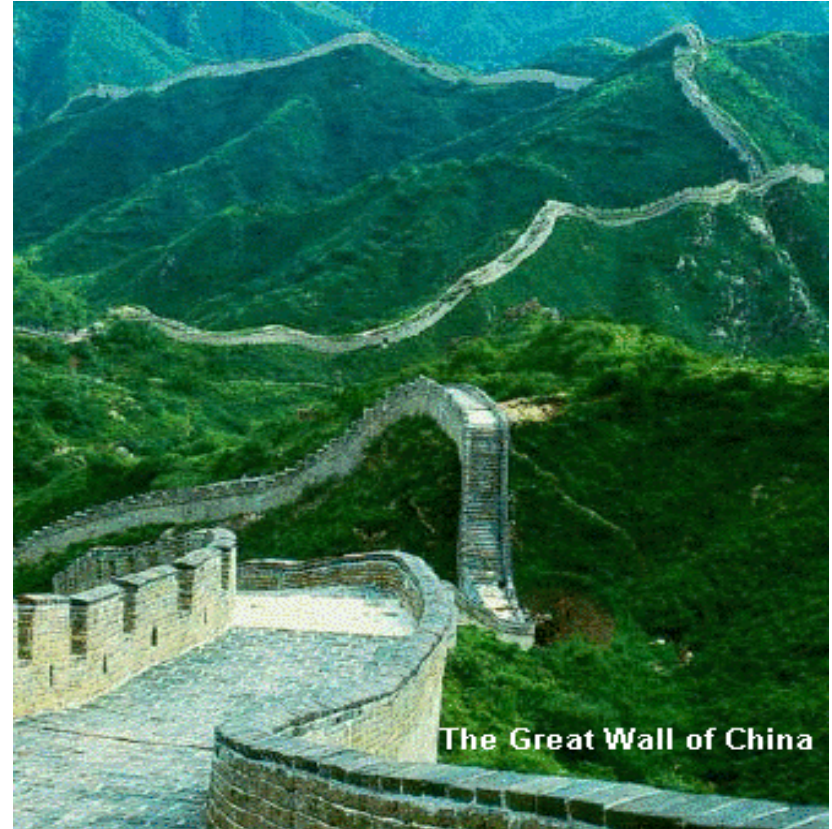
The common man:

Recognition of the increasing interdependence and strategy ahead.



China

- Of the 10 most polluted cities in the world, 7 are in China. Chief Pollutants - SO₂ and soot caused by coal combustion.
- 2nd largest emitter of energy related CO₂ emissions (12.7% vs. 24% by the US)
- Energy conservation laws emphasize natural gas, coal bed methane and hydropower.
- Per capita energy consumption: China 0.6 tons of Carbon/person; World 1.1 tons/person and US 5.5 tons carbon/person





Future Threats /Opportunities

- Three Gorges Dam – A controversial hydropower project over the Yangtze river.
- Bold initiatives to cut on coal use with 40 coal free zones.
- SO₂ emissions trading is being pilot tested.
- Nuclear power expected to increase to 4% by 2025 (1% currently)



The Yangtze River



European Union

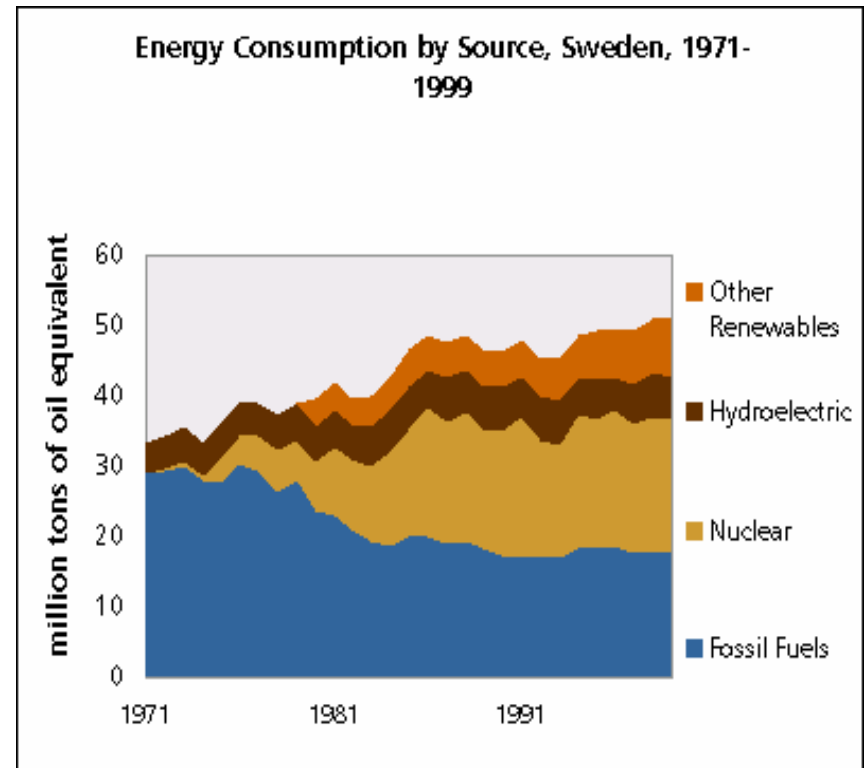
- Consumes 17% of the world's total energy consumption (The US consumes 23%)
- Net importer of energy (67% by 2020)
- Stringent limits on thermal power generators – Directive 2001/80/EC
- Carbon emissions trading started in January 2005
- Rethinking nuclear power and supporting it.





Environmental Opportunities

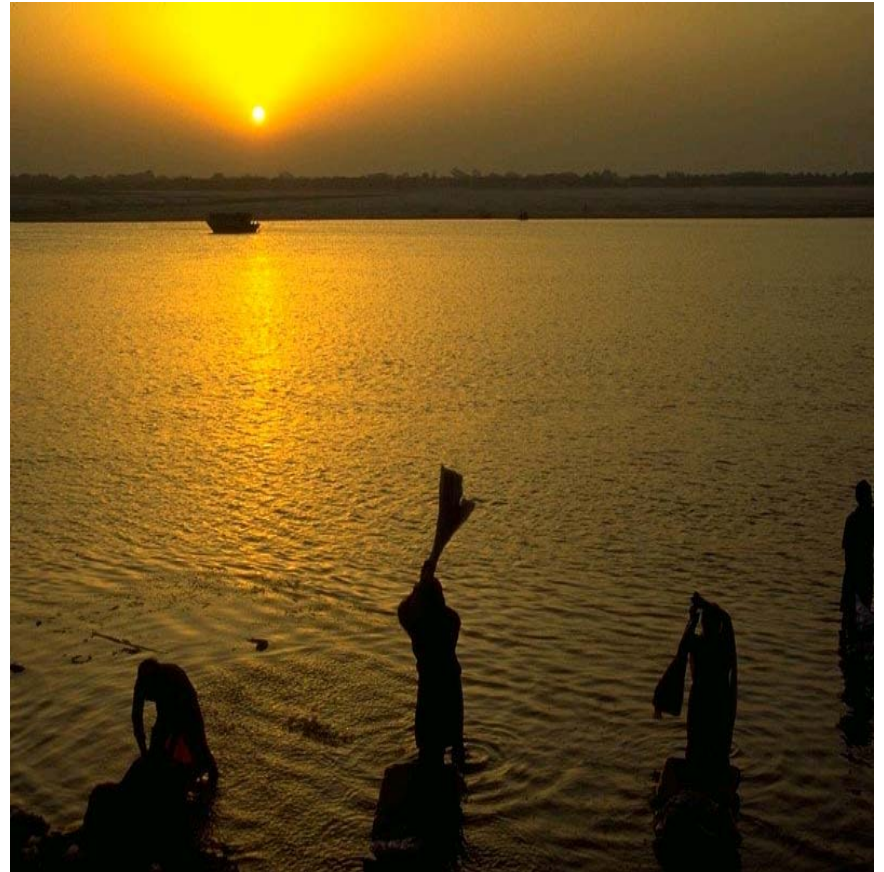
- Under Kyoto, EU obligated to reduce greenhouse gases 8% from 1990 levels by 2008-2012
- Sweden aims to be the first “oil free” nation by 2020. In 1970, 77% of Sweden’s energy came from oil. By 2003, this number is 32%.





India

- Urban air quality ranks among the world's worst.
- Lack of environmental enforcement at the local level.
- Still a minor player in world pollution level but will be a key player in 20 years.
- Per capita energy consumption: Among the lowest in the world. 1/22nd of the US



The Ganges



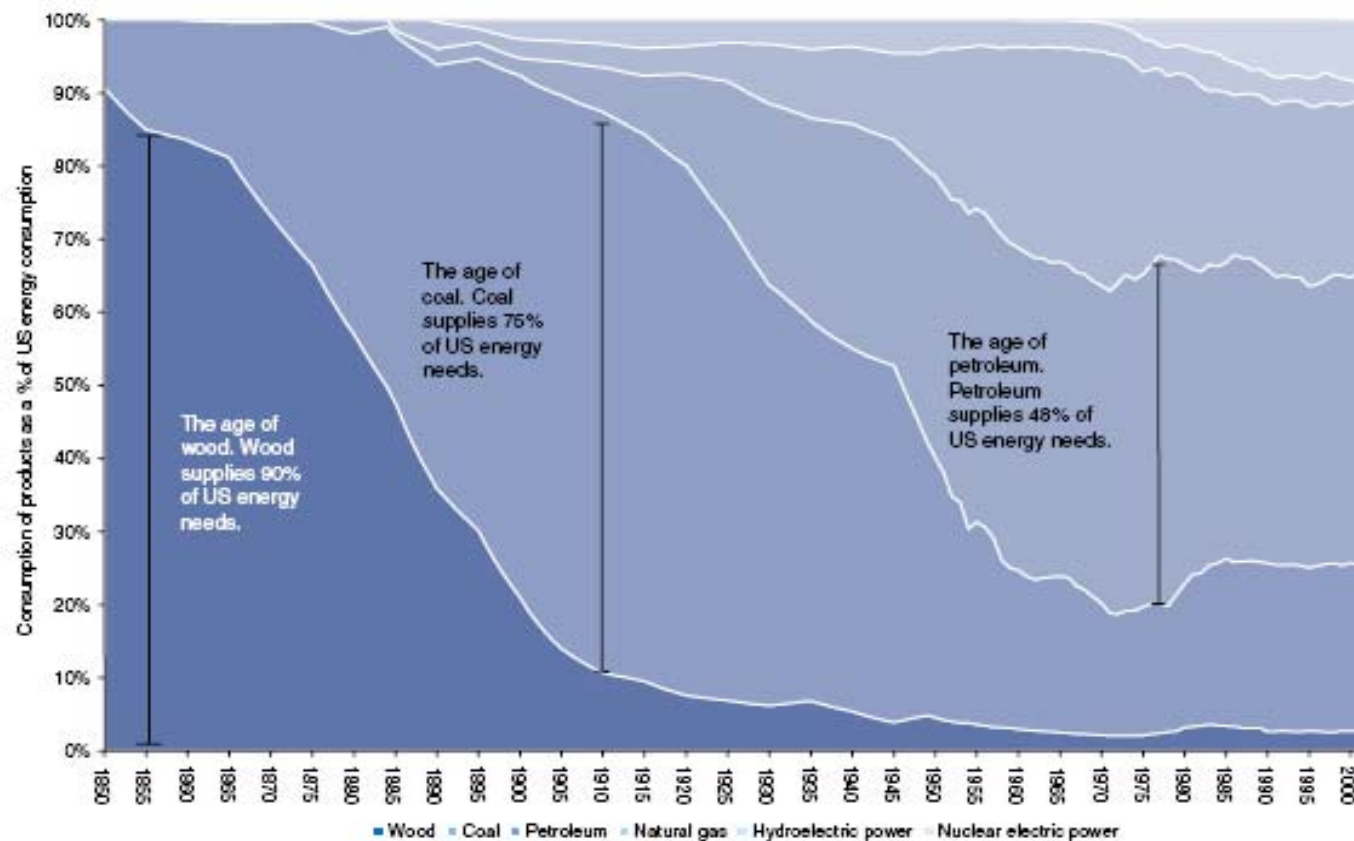
Future Threats /Opportunities

- Will increase carbon emissions contribution going forward.
- High import tariffs on high quality coal.
- Efficient Coal technologies are a government priority.
- Nuclear power expected to increase with US-India Nuclear agreement.
- Look out for Suzlon – A major wind energy giant.





US – State of Energy



Source: US Department of Energy, Goldman Sachs Research.



Climate Change Impact on Industry

Topic	Risk/Opportunity	Commentary
Reputation/Competitive Position	Risk and Opportunity	Companies viewed as environmentally friendly have a positive image as opposed to environmentally non friendly companies
Regulation	Risk	Uncertainty surrounding potential future regulation at the Federal and/or State level introduces uncertainty for companies that are heavy emitters of GHG
Litigation	Risk	As with Asbestos, the potential for liabilities to be realized at a future date may be a major issue in acquisitions.
New Product Development	Major Opportunity	Business opportunity for any company that can develop new "green" products or technology and thereby reduce GHG emissions
Impact on Business Operations	Risk	Unpredictable element in planning – Katrina.



Thanks!!!

- US Department of Energy
www.eia.doe.gov
- Goldman Sachs
www.gs.com
- National Aeronautics and Space Administration
www.nasa.gov
- Air and Waste Management Association
www.awma.org....

Questions??



...and DC Comics