

## U.S. Environmental Laws

- 1962 silent spring by Rachel Carson DDT
- 1973 Endangered Species Act
- 1974 Safe drinking water Act (CWA)
- 1977 Clean Air Act (CAAA) and Clean Water Act
- 1982 Nuclear Waste Policy Act (EEA)
- 1988 Montreal Protocol
- 1989 Exxonvaldez
- 1990 Oil pollution Act
- 1990 Global Climate Change Prevention Act
- 1993 North American Free Trade Act (NAFTA)
- 1994 WTO
- 1997 Superfund Cleanup Acceleration Act
- 1997 Kyoto Protocol

## UN Conference on Human Environment (Stockholm, 1972)

- Meeting led to UN Environmental Program (UNEP)
- The Stockholm Declaration and Action Plan, which were also produced, defined principles for the preservation and enhancement of the natural environment, and highlighted the need to support people in this process.

## Our Common future

- 1980's the UN set up the World Commission on Environment and Development
- They Produced "Our Common Future" or the Brundtland Report which became 40 chapters of Agenda 21 and 27 principles of the Rio Declaration
- *It defined sustainable development as "meets the needs of present generations without compromising the ability of future generations to meet their own needs"*

## Ozone layer

- Although scientists suggested as early as the 1960s that human activities were damaging the ozone layer, the issue did not attract significant attention until 1974.
- At that time, two scientists hypothesized that chlorofluorocarbons (CFCs) could destroy substantial amounts of stratospheric ozone. With this supposition, the international debate about the ozone layer was launched.

## CFCs CFC-11; CFC-12; CFC-113.....

- Chlorofluorocarbons are a group of inert, nontoxic, and nonflammable synthetic chemical compounds used as aerosol propellants, in refrigeration and air conditioning, in plastic foams for insulation and packaging, and as solvents for cleaning electrical components.
- CFCs diffuse upward into the stratosphere, where they are broken down by ultraviolet radiation, releasing free chlorine which reacts catalytically with ozone and results in its significant depletion.

## Policies and Protocols- Montreal Protocol

24 nations, meeting in Montreal in September 1987, signed the "Montreal Protocol on Substances that Deplete the Ozone Layer," an international agreement designed to reduce the worldwide production and use of chlorofluorocarbons (CFCs)

- Depletion of stratospheric ozone emerged as a political concern in the early 1970s in the United States in the debate over the development of a commercial fleet of supersonic transports.
- In the mid 1970s use of CFCs in aerosol spray cans
- 1978 the United States banned the nonessential use of CFCs as aerosol propellants.
- Efforts at negotiating an international agreement controlling CFC use began in the 1980s
- 1987 Montreal Protocol.
- the sources of the Montreal Protocol:
  - (1) the evolving scientific understanding of the problem,
  - (2) increasing public concern over the problem based on the threat of skin cancer and the discovery of the Antarctic ozone hole, and
  - (3) the availability of acceptable substitutes for CFCs.

## Earth Summit - Rio 1992

20 years after first global environmental meeting  
2,400 representatives of non-governmental organizations (NGOs); 17,000 people attended the parallel NGO Forum

- UN sought to help Governments rethink economic development and find ways to halt the destruction of irreplaceable natural resources and pollution of the planet
- **The Summit's message — that nothing less than a transformation of our attitudes and behaviour would bring about the necessary changes**

## Key points of Earth Summit

- Patterns of production — particularly the production of toxic components, such as lead in gasoline, or poisonous waste — are being scrutinized in a systematic manner by the UN and Governments alike;
- Alternative sources of energy are being sought to replace the use of fossil fuels which are linked to global climate change;
- New reliance on public transportation systems is being emphasized in order to reduce vehicle emissions, congestion in cities and the health problems caused by polluted air and smog;
- There is much greater awareness of and concern over the growing scarcity of water.

## Agenda 21 and Rio Declaration from the *Earth Summit-Rio*

- Key policies in achieving sustainable development that meets the needs of the poor and recognises the limits of development to meet global needs.
- *"Needs not only economic but harmonious with people and ecosystems"*

## Agenda 21

- **Social and economic dimensions**
  - Poverty, Production and Consumption, Health, Human Settlement, Integrated Decision - Making
- **Conservation and management of natural resources**
  - Atmosphere, Oceans and Seas, Land, Forests, Mountains, Biological Diversity, Ecosystems, Biotechnology, Freshwater resources, Toxic Chemicals, Hazardous Radioactive and Solid Wastes
- **Strengthening role of major groups**
  - Youth, Women, Indigenous Peoples, Non Government Organisations, Local Authorities, Trade Unions, Business, Scientific and Technical Communities, Farmers
- **Means of implementation**
  - Finance, Technology transfer, Information, Public Awareness, Capacity Building, Education, Legal Instruments, Institutional Frameworks

## Kyoto Protocol from Rio to Kyoto

- The Framework Convention on Climate Change (FCCC) agreed in 1992 at the Earth Summit in Rio, by almost every nation in the world, commitments to:
- *stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic interference with the climate systems"*

## What would this require?

- Stabilizing atmospheric concentrations would require not only slowing or freezing global emissions, but also reversing trends until global emissions begin to decline sharply.
- Scenario - 550 parts per million of CO<sub>2</sub> or roughly doubling of pre-industrial levels - would require dramatic cuts in emissions to between 60-80 percent of current levels by 2100.
- *However, the goal of stabilizing concentration does not require nations to reduce emissions now or at any specific date in the future; that is less aggressive reduction programs in the near-term can be traded off against a presumed commitment to steeper reductions in the future.*

## Approaches

- Technology strategies (advanced clean energy alternatives)
- Adaptation strategies (preparedness for climate-related disasters)
- Compensation for those populations most likely to be severely affected by climate change.

## Emissions trading

- In 1990 the US Clean Air Act Amendments led to proposals for emissions trading systems at the national and multi-national level.
- "Sky Trust" would redistribute the proceeds from revenues generated by auctioning off carbon permits to meet an emissions target.

## What happened instead?

- The period between Rio and Kyoto, climate negotiators took the most straightforward path - but perhaps the one that predestined the resulting accord for failure.

## COP-1 - Berlin 1995

- Goal- voluntary aim to return emissions to historical levels to create a legally binding instrument to return emissions below the base year of 1990.
- The U.S. and Japan, most reluctant, acquiesced. (To consent or comply passively or without protest.)

## COP-2 - Geneva 1996

- Tim Wirth, U.S. Undersecretary of State, recommended "the future negotiations focus on an agreement that sets a realistic, verifiable and binding medium-term emissions target.... Met through maximum flexibility in the selection of implementation measures." (see kyoto protocol handbook)

## Voluntary leads to different aims and level of true commitment

- Since 1990 each nation followed a different trajectory of energy consumption and economic growth.
- National trends in greenhouse gas emissions were far more dependent on macroeconomic growth than on climate policy, *success seemed to be governed by luck rather than ambitious programs.*
- *Russia met its target because of the fall of the Berlin Wall; Great Britain through discovery of North Sea Oil and Natural gas (changing over from coal to gas-fired electric plants); The Netherlands, having the most ambitious domestic climate program, came nowhere near its Rio target.*

### The United States

- Prior to 1997, the U.S. Senate unanimously passed the Byrd-Hagel resolution, a non-binding resolution demanding any climate agreement be contingent upon the participation of developing countries and result in minimal harmful effects on the U.S. economy.
- (also skepticism of U.S. legislators of validity of climate science that had already been accepted without question by the rest of the developed world.)

### The United States (continued)

- The United States had already exceeded its 1990 targets by 10 percent at the time of COP-3 in Kyoto 1997, and President Clinton's administration was constantly fighting to maintain congressional funding even for the voluntary programs designed to encourage energy efficiency through subsidies and education.

### Final political tradeoffs- Vice President Al Gore flies to Kyoto

- In the last hours to ensure that some sort of agreement emerged; the Japanese were unwilling to agree; British deputy prime minister (chief environmental minister) had the job of negotiating with the United States and its allies.

### Agreement possible....

- Only because none of the details of how to achieve these numbers were specified.
- Balance between domestic and external measures were "supplemental" and articles on "sinks" offered perverse possibility that forest companies could be rewarded for clearing plantations and replanting.

### Unresolved issues.... United States and Europe

- With major issues involving the United States and Europe, those developing countries were considered an afterthought, even though emissions were growing most rapidly in the developing world.
- The Byrd-Hagel resolution placed developing country participation center-stage and forced the Clinton administration to assume commitment to reduce emissions.

### From Kyoto to the Hague COP-4 Buenos Aires to COP-6

- Arranging the elements of the protocol into an action plan
- The Europeans arrived with a unified agreement, British argued for U.S. inclusion.. And the presidential race remained looming in the United States.
- Clinton in agreement - Bush opposed

## COP6 in Kyoto- The Umbrella Group

- The choice to adjourn COP6 and reconvene mid-2001
- French and German, Green Party ministers, unwilling to make further concessions to the "prolignite" United States.
- Fissures remained in the international environmental community: European-dominated groups such as Greenpeace and World Wide Fund for Nature blamed the Umbrella Group and their demand for flexibility which were termed as NGO's as "loopholes"
- In contrast U.S. based Environmental Defense and National Environmental Trust were more sympathetic.

## Failure

- U.S. is blamed for its wasteful ways and its stubborn insistence upon inclusion of carbon sinks.
- French and German Greens unable to compromise, and
- British moving too far in the direction of the U.S. position

## A final effort - Ottawa before Clinton leaves office

- Moving outside of the UN process, key developed countries hoped to resolve some of their larger differences.
- European and U.S. negotiators accuse each other of pulling back from positions agreed at The Hague.
- Negotiations ground to a halt.
- Japanese Minister of Foreign Affairs states "*should have made the rules first.*" *divisions were expected.*

## Where are we today?

- Interim meeting of developing nations in Bonn 2001
- COP -7 Marrakech to decide to reopen the Kyoto Protocol, or let it fail, try to tie together an agreement without the United States, or be willing to revisit and substantially modify the negotiating positions of COP-1 Berlin.

## COP 7 Marrakech, Morocco

- The Umbrella Group - the United States, Japan, Canada, Russia and New Zealand - has taken the lead in this area, which is a key to US refusal to ratify the Kyoto Protocol and Australia's view that the Protocol would be unworkable without the US and developing countries. Australia is pursuing the government's goal of a truly global framework for greenhouse action.
- Australia and the rest of the Umbrella Group - especially Japan - want COP7 to put in place a process for reopening at COP8 the developing country issue, which has been left in abeyance for several years. The European Union and others say developing country commitments should not be discussed again until the Protocol comes into force.
- **U.S. will not ratify Kyoto Protocol**