



- Significant and serious effects on estuary health - reductions in catchment runoff
- Significant and serious effects on coastal species and coastal habitats
- Some major changes have occurred in the marine ecosystem
- Change in distribution of some economically important fisheries



## THE ECONOMIC CASE FOR CLIMATE CHANGE

- The **Stern Review** on the Economics of Climate Change was released on October 30, 2006. Key points:
  - **Costs of no action:** equivalent to losing at least 5% of global GDP each year. Could rise to 20% of GDP or more.
  - **Costs of action** – reducing greenhouse gas emissions to avoid worst impacts – 1% of global GDP each year.
  - Investment in the next 10 – 20 years will have a profound effect on the climate in the second half of this century and in the next century.



- **Intergov Panel on Climate Change - IPCC**
  - **Working I:** (Feb 07) Observed and predicted future trends of changing climate are “unequivocal” and (with 90% certainty) caused by human socio-economic activities
  - **Working Group II:** (April 07) Impacts are more imminent and severe than previously thought. Between 2050 and 2100 – impact could be disastrous. Confirms Africa’s vulnerability
  - **Working Group III:** (May 07) Existing and new technology can solve the problem at a cost that is affordable (1-3% of global GDP)



- United Nations Framework Convention on Climate Change
- Kyoto Protocol:
  - Emission reduction targets for developed countries
  - 1<sup>st</sup> commitment period ends 2012





## Political Dynamics

- Political deadlock
- USA: largest emitter – Kyoto targets unrealistic - will compromise economy; developing country “large emitters” must take binding targets
- EU: need USA to be bound by reduction targets; their industry economically disadvantaged – need to secure / grow carbon market
- G77 & China: historical responsibility is developed world; priorities are economic growth & development; division between OPEC; Africa, LDCs



(1) mitigation, (2) adaptation (3) response measures

## 1. Mitigation

- COP11 in Dec 2005 – Montreal two-track process:
  - (i) negotiations under Kyoto Protocol on stricter emission targets for Developed Countries
  - (ii) dialogue under Convention on longterm co-operative action, focusing on Developing Countries commitments/action
- COP12 in Dec 2006 – Nairobi maintained the momentum
- Subsidiary Bodies in May 2007 - Bonn:
  - Agreed to develop a timetable to avoid gap between 1<sup>st</sup> & 2<sup>nd</sup> commitment period under Kyoto
  - Dialogue: SA and Brazil worked to shift discussions towards negotiations