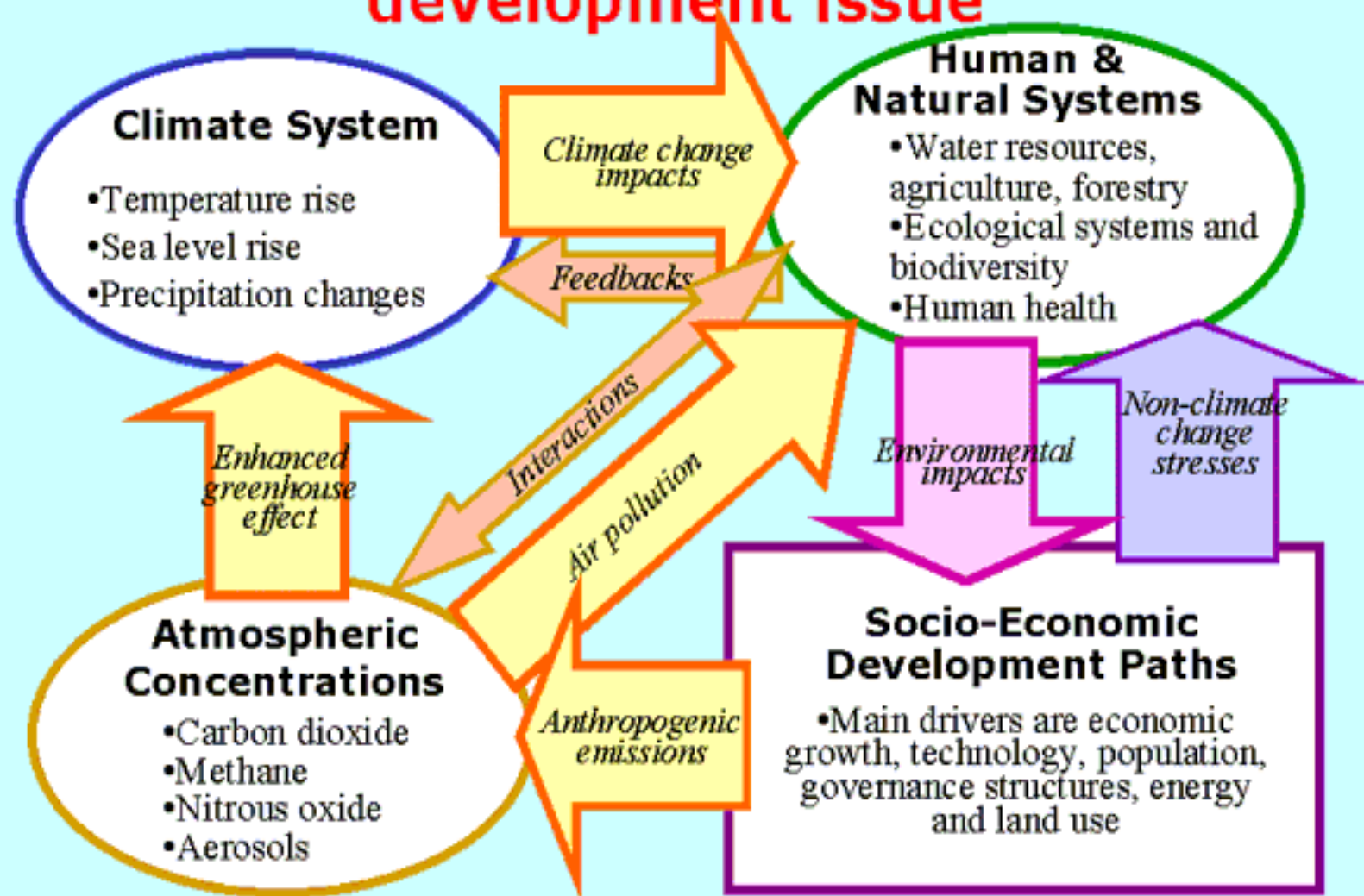# Cooperative Approaches to Science and Technology in Asia and the Pacific

14th Asia and the Pacific Seminar on Climate Change

21-24 September 2004

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UNESCAP

# Figure 9: Climate change is a sustainable development issue

**Climate System**

- Temperature rise
- Sea level rise
- Precipitation changes

*Climate change impacts*

*Feedbacks*

**Human & Natural Systems**

- Water resources, agriculture, forestry
- Ecological systems and biodiversity
- Human health

*Enhanced greenhouse effect*

*Interactions*

*Air pollution*

*Environmental impacts*

*Non-climate change stresses*

**Atmospheric Concentrations**

- Carbon dioxide
- Methane
- Nitrous oxide
- Aerosols

*Anthropogenic emissions*

**Socio-Economic Development Paths**

- Main drivers are economic growth, technology, population, governance structures, energy and land use

# Science and Climate Change

- Intergovernmental Panel on Climate Change (IPCC)
- Objective: To assess scientific, technical and socio-economic  information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation

    - 2001 Third Assessment Report
    - 2007 Fourth  Assessment Report

# Science and Policy Framework

Agreed:

- Worldwide scientific consensus on global warming
- Need to take steps to address the global warming

Disputed:

- How to address global warming and climate change issues

# Technology and Climate Change

- Tools to respond to take steps in addressing climate change issues
- Low Carbon Technologies: Energy Efficiency, Decarbonisation in the use of Energy, Fuel Cell, Carbon Sequestration
- Technology itself does not inherit elements of sustainability. Needs sound policy framework to ensure sustainability

# Challenges

- Technologies are available to reduce greenhouse gas emissions but policies and measures are needed to realize the technological potential

- The real challenge of controlling emissions is to overcome the many political, economic, social and behavioural barriers to implementing mitigation options

# Challenges

- Scientists must still identify the level of GHG emission that the atmosphere could sustain without an adverse impact on human and natural systems

- Strategies to reduce emissions would have to be mutually agreed.

- Linking technology development and utilization to sustainable development

# Cooperative Approach

- Collaborative research in science and technology
- Joint technology development including promotion of endogenous technology
- Capacity-building in science and technology
- North-South AND South-South

# Thank you.