



# Towards Low-Carbon, Climate-Resilient Policies

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ELIA – Ecological Living In Action

La Gaulette, Mauritius

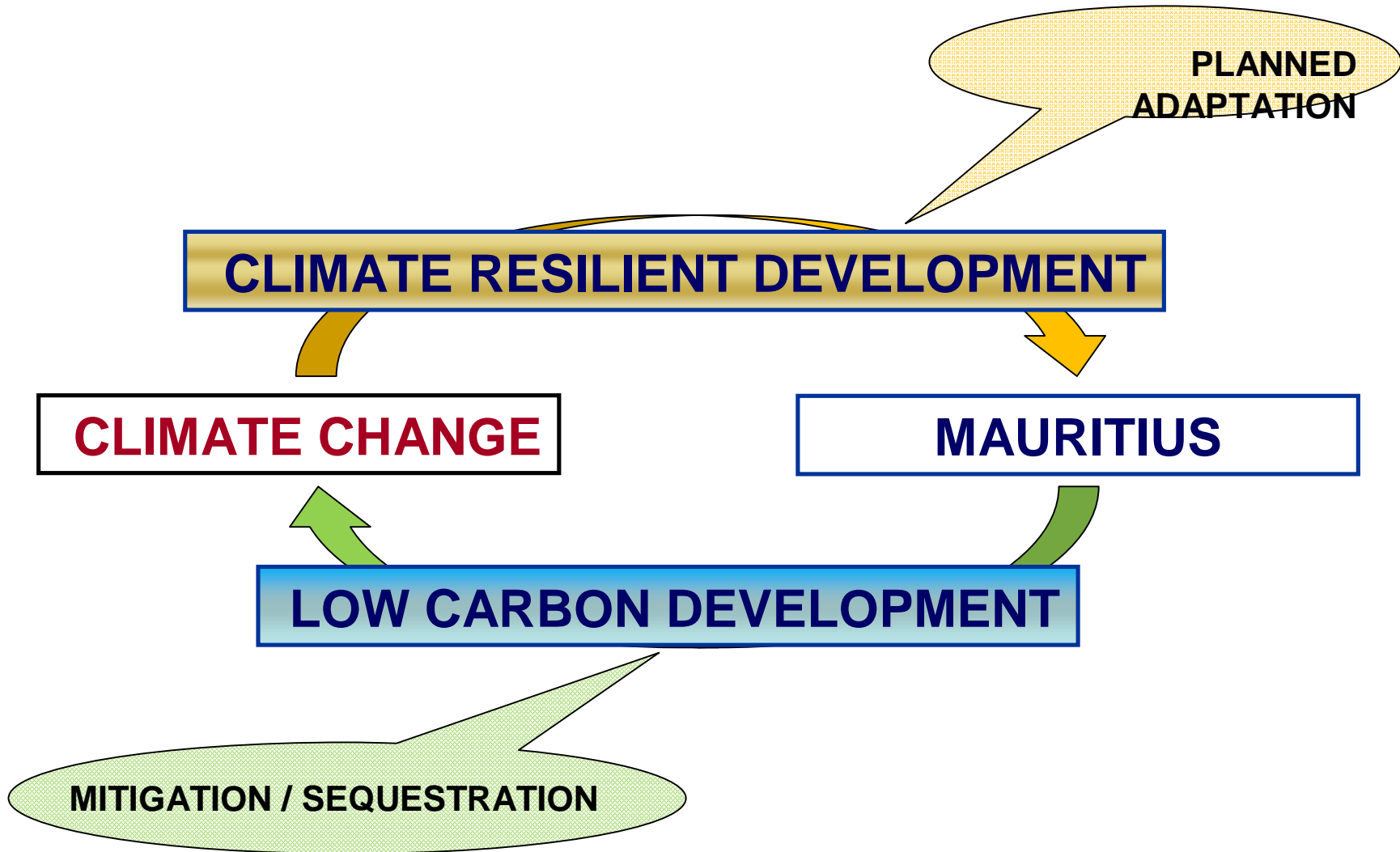
AAP Climate Change Week, UOM, 15 July 2011

# Outline of presentation

1. CC Adaptation & Mitigation – 2 faces of the same coin
2. Framework and Process for Planned Adaptation
3. Mitigation in a Carbon-Constrained World
4. Some Conclusions

1

# CC Adaptation & Mitigation – 2 faces of the same coin





**POLITICAL**

**Framework and Process for  
planned adaptation**

**ECONOMY**

**OF**

**CLIMATE**

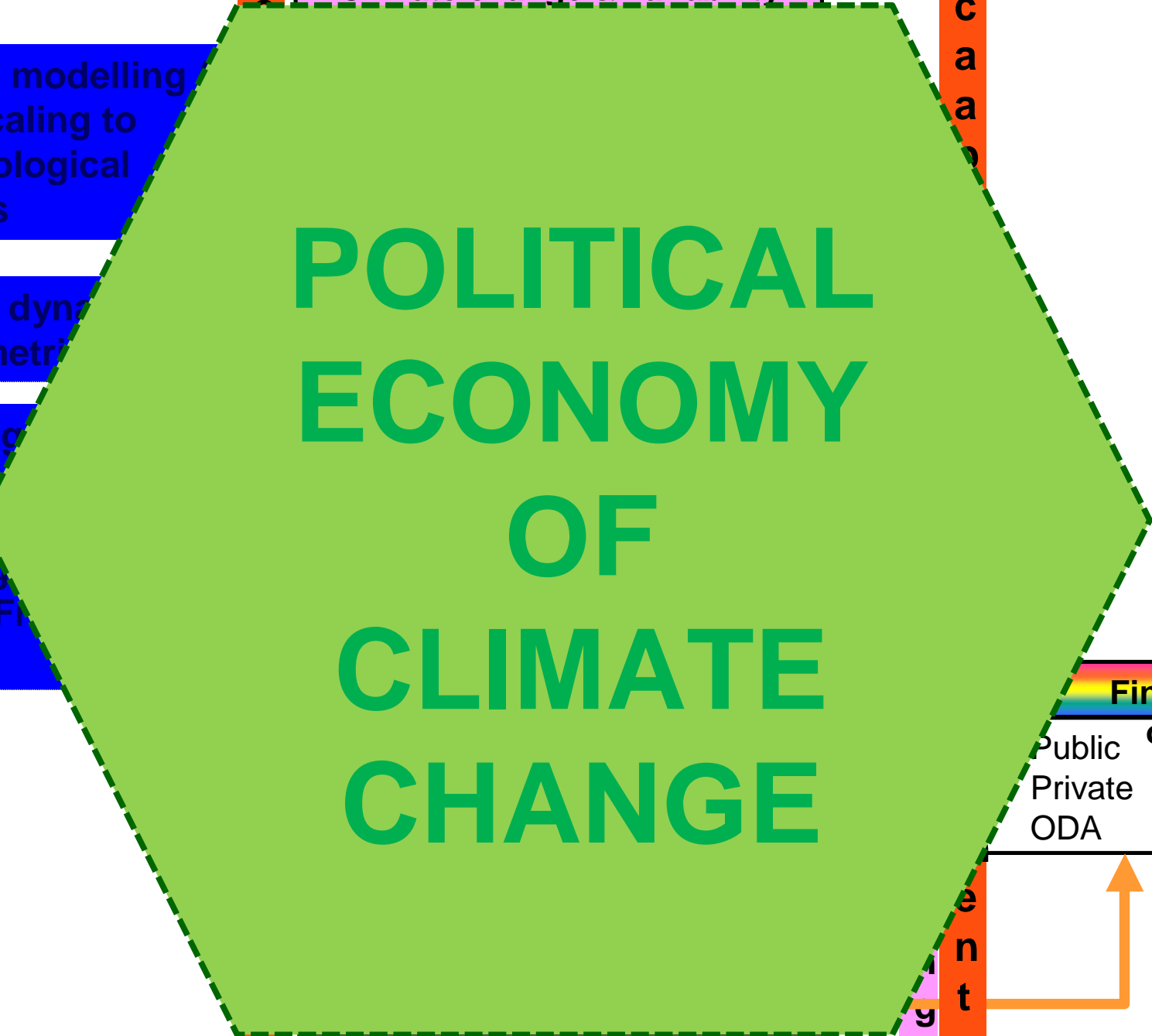
**CHANGE**

Climate change & variability

Climate modelling  
downscaling to  
meteorological  
stations

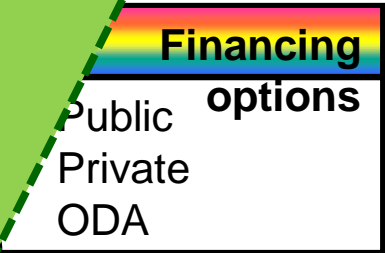
System dynamics  
econometrics

Sociological  
studies  
mapping  
warning  
Hyogo Framework  
etc ....



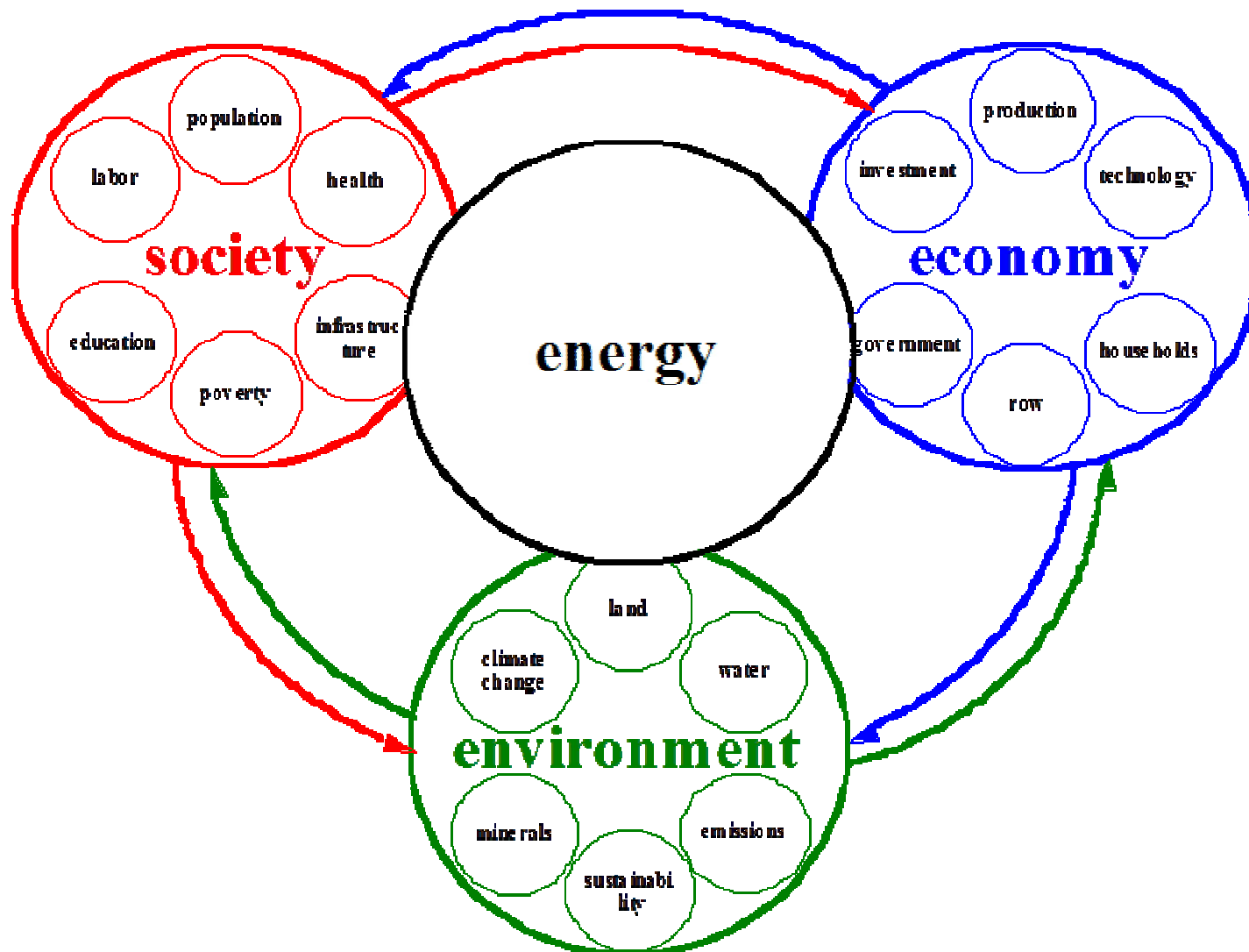
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3a

# Emissions – System Dynamics Modelling



## **3b** Structure of SD Model

- **Society: 4 modules**

Population, Education, health care, roads

- **Economy: 5 modules**

Firms, households, government, banks, energy bill

- **Environment: 3 modules**

Land, water, air emissions

- **Energy: 22 modules**

Primary demand, final consumption, power supply, prices, investment, and more...

## 3c Energy Policy Analysis

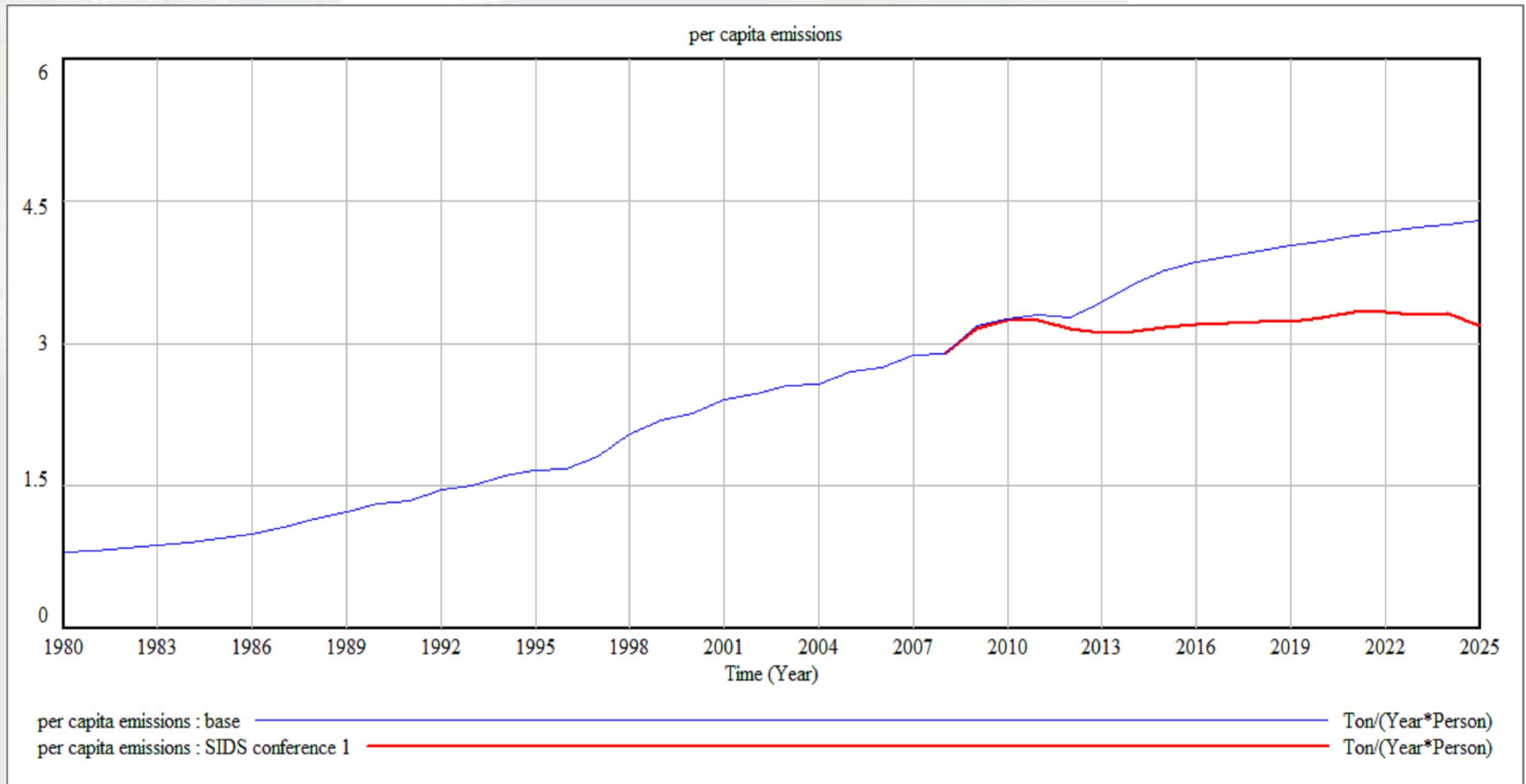
- Baseline and Policy simulations
  - Power Demand (CEB projections as benchmark)
    - Energy Efficiency (10% by 2025)
  - Power Supply
    - CEB: fuel oil (30+60 MW and longer term investment), wind (22+20 MW), plus maintenance of existing plants to a large extent
    - IPP/SIPP: efficiency increase for bagasse use (600 GWh by 2013), waste (7MW), hydro (1MW), solar (1.5MW), maintenance of existing cogeneration plants
  - Transport
    - Number of buses on bus way set to zero



# 3d

# Per Capita CO<sub>2</sub> Emissions

## Comparison between Scenarios



INTEGRATED DEVELOPMENT MODEL



Main Menu

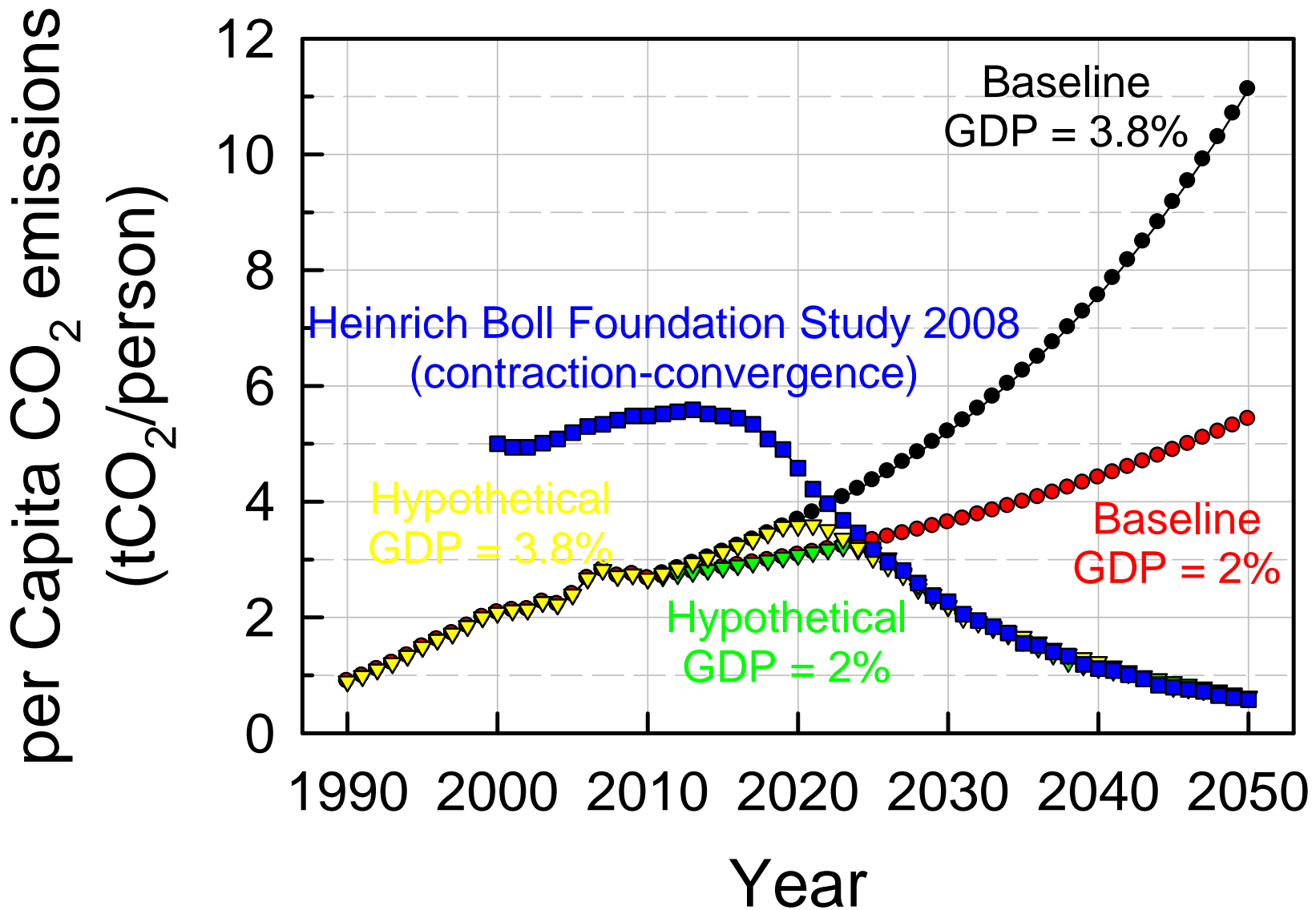
Previous Screen

View as Table

## **3e** Climate Mitigation Policy - NAMAs

- The methodology can be used to develop **Nationally Appropriate Mitigation Actions (NAMAs)**, and to monitor their impacts on emission reduction, job creation, contribution to energy security, cost of investments etc ...
- This approach can also be used to set **Sectoral Targets** (i.e. emission reduction targets for various sectors) against a **Dynamic Baseline**

# 3f Developing emission intensities under different global carbon constraints



# 4

## Some conclusions

- CC still perceived as an environmental issue and not a developmental one
- Climate versus non-climate drivers of vulnerabilities
- Need to consider the 'political economy' in which CC policies are formulated
  - ✓ Divergence between short-term political cycles and long-term time horizons required for addressing CC impacts and vulnerabilities (adaptation) and emissions (mitigation)
  - ✓ Low level of awareness concerning the cross-sectoral impacts of climate change (mitigation and adaptation)
  - ✓ Lack of integrated, cross-sectoral developmental planning can lead to mal-adaptation and/or enhance emissions
  - ✓ Low capacity at sub-national level to grapple with CC

A background image of pink hibiscus flowers with yellow centers, partially obscured by a semi-transparent white box containing text.

# **ELIA – Ecological Living In Action**

## **Thank You**

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