

# Climate Change: A global challenge

## - view beyond Europe, African Perspectives

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## African Context and opportunities

- Diversity of Political, Social, Cultural, Economical, Geographical, etc., Realities
- Democratization, Decentralization, Economic & Market Reforms and Regional Cooperation in Progress
- Depletion of Natural Resources / Extensive Production Systems
- Huge Unmet Demands for Modern Energy
- Much of Future Infrastructure not yet Designed or Built

## Key characteristics of urbanization in Africa

- Least urbanized continental region with highest growth rate in the world
- More than half of the urban population lives in slums or under slum conditions
- Large parts of urban areas lacks the most basic infrastructure and services
- Vulnerability to climatic and environmental risks and hazards is significantly high among the urban population

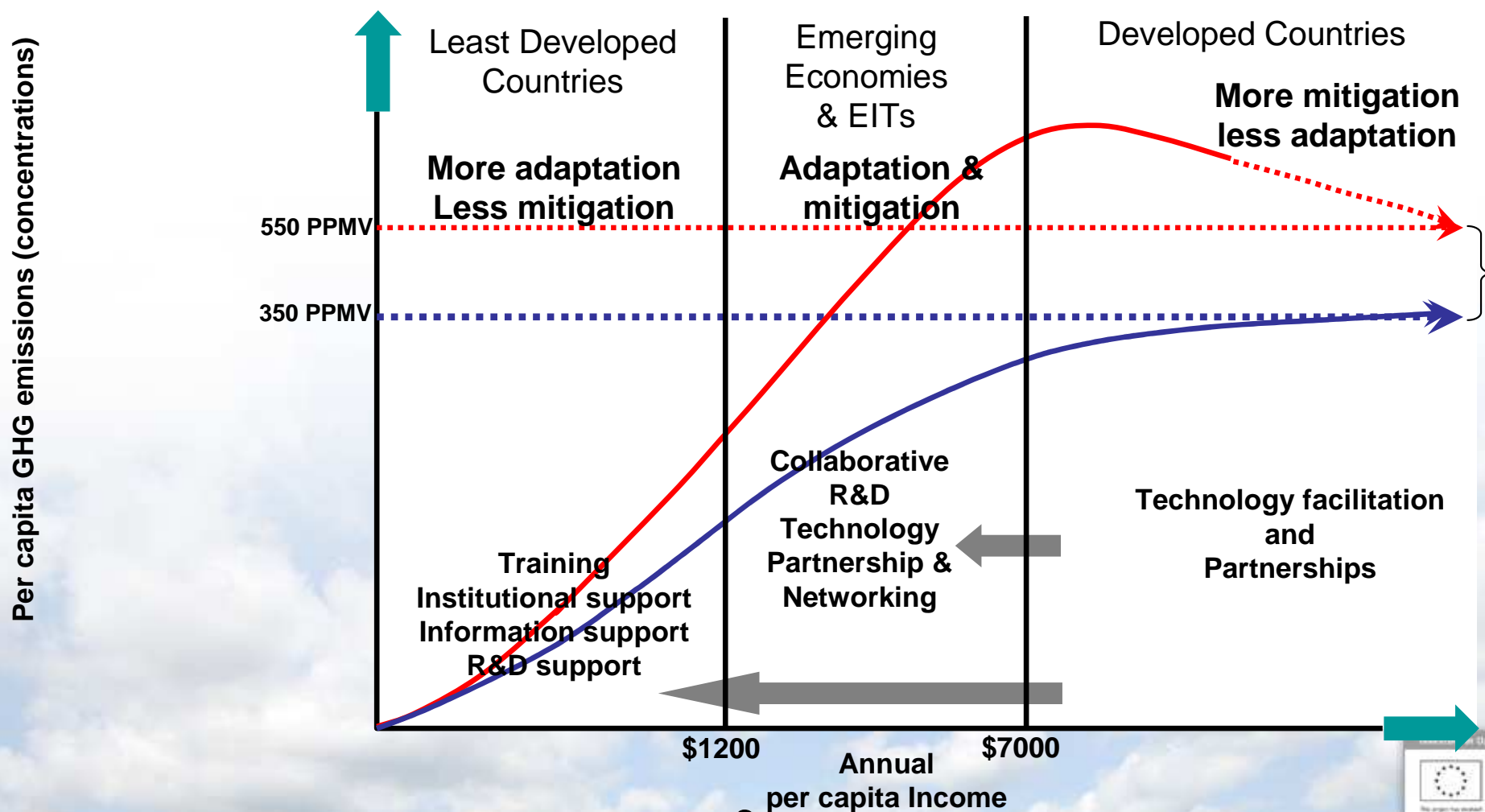
## Key future climate impacts for African cities

- It is widely accepted that climate change and climate variability will impact in SSA cities
  - Rapid-onset disaster events
  - Water availability, accessibility and demand
  - Food security
  - Health
  - Rural-urban linkages, migration
  - Livelihoods, etc.

## Observations

- Warming of the climate system is unequivocal, as is now evident from observations....
- Mitigation measures and impacts are slow and sparse, global emissions are increasing
- Adaptation is now unavoidable but without mitigation it may become impossible

# Holistic approach, concerted and differentiated actions are required for a low carbon future for all



## Low carbon economy is crucial in cities

- To tackle the root causes of climate change
- To lower the exposure of cities to climate change and the peaking of fossil fuels
- To reduce local and global environmental and atmospheric pollution levels
- To improve human health, quality of life,
- To slow the depletion of fresh water, minerals and biodiversity

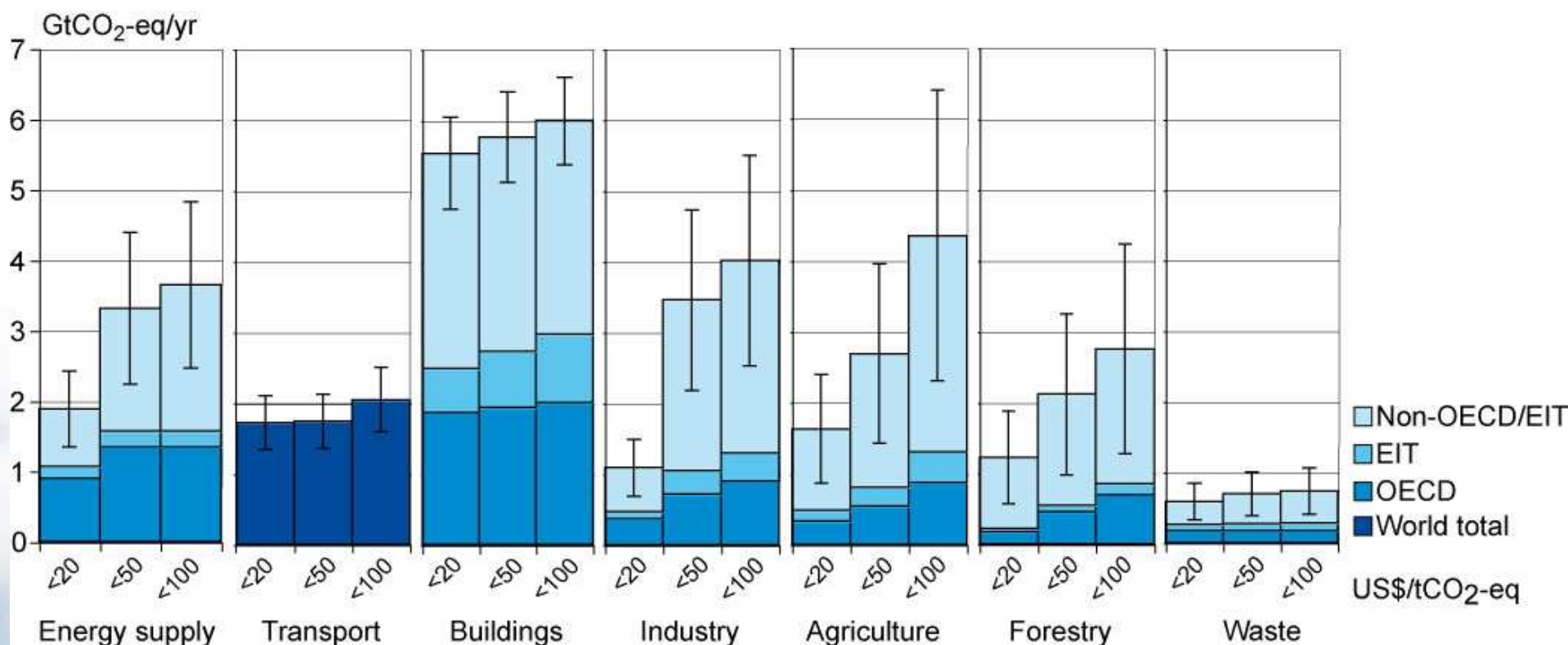
# Multitude of policy instruments are available to foster a low carbon economy in African cities

- Effectiveness of policies depends on national circumstances, their design, interaction, stringency and implementation.
  - Integrating climate policies in broader development policies
  - Regulations and standards
  - Taxes and charges
  - Carbon finance
  - Financial incentives
  - Voluntary agreements
  - Information instruments
  - Research and development

## In various countries

- Wide range of development initiatives are climate friendly
  - Energy policy instruments, energy sector restructuring, energy efficiency improvement;
  - Integrated rural development programs;
  - Agricultural soil protection and water management;
  - Sustainable forestry management and conservation;
  - Disaster preparedness actions, etc.
- Integrating development and climate change is receiving increasing attention and interest in research and policy making since the last few years

# All sectors and regions have the potential to contribute to GHG mitigation and transition to low carbon economy



## Rural development and land use

- Agricultural policies including climate variability/ climate change help ensuring food security (MDG 1)
- Bio-fuels as a new opportunity that could be mutually reinforcing with food production
- Scaling-up through:
  - Providing guidelines, practical standards and data
  - Capital for large scale biomass
- Better coordination between agricultural, energy and urban policies needed

# Energy

- Energy transition, security and access to modern energy are key concerns
  - Can be realised while also reducing health risks, create employment opportunities and lower emissions
  - Increasing attention for role energy in MDG agenda
- Use local political economy and involve private sector
- Scaling up through:
  - Large scale energy projects
  - Replicating small scale initiatives through international programmes (energy efficiency, renewable)
- Capacity building and development for energy transition

# Transport

- Urbanization comes with increase in mobility
- New infrastructure, modal shift and alternative fuels can help to improve quality of life, health, security of energy supply and lower emissions
- Ethanol/ biodiesel (Brazil) is good example, but might be difficult to replicate
- Scaling up through:
  - Documentation of case studies, development of guidelines and cooperation
  - Integration in infrastructure investments
- Lack of international organisations, programmes, partnerships for sustainable transport

# Technology development and diffusion

- Combined technology push (RD&D) and pull (carbon market) needed
- UNFCCC to provide long term price signal (beyond 2012)
- Possibility of UNFCCC sector agreements with technology standards
- Beyond UNFCCC:
  - Technology partnerships (IEA, Hydrogen etc)
  - New financial instruments to change investment patterns (Clean Energy and SD Framework)

## Disaster reduction

- From relief to preparedness and preventive action
- Climate change as levers to bring disaster reduction policies into development planning
- Scaling up through:
  - UN ISDR Hyogo Framework for Action 2005-2015 leading agenda
  - Joint efforts to improve vulnerability mapping, preventive approaches and early warning systems
- Preventive action often less visible and hence less attractive for decision-makers

## Finance

- Making development less vulnerable, more sustainable and creating clean energy systems
- Large additional funds are required
- Current provisions (CDM, GEF, SCCF, AF) inadequate
- Improve investment climate

# Sustainable development and emission reduction

- Design international commitments to encourage integrated development and climate policies
- Voluntary Sustainable Development Policy and Measures (“pledge and review”) or mandatory?
- Sector agreements focusing on energy security, renewable energy, mass transit, etc?
- Administratively manageable?

## Some key cooperation areas to consider from an African perspective

- Filling the knowledge gaps
- Accessing and understanding the best available information
- Harnessing opportunities presented by a low carbon future whilst promoting poverty reduction and human development
  - High quality technical advice
  - Partnerships
  - Knowledge generation and knowledge sharing

# AR5 WG III Outline

## **I: Introduction**

1. Introductory Chapter

## **II: Framing Issues**

2. Integrated Risk and Uncertainty Assessment of Climate Change Response Policies

3. Social, Economic and Ethical Concepts and Methods

4. Sustainable Development and Equity

## **III: Pathways for Mitigating Climate Change**

5. Drivers, Trends and Mitigation

6. Assessing Transformation Pathways

7. Energy Systems

8. Transport

9. Buildings

10. Industry

11. Agriculture, Forestry and Other Land Use (AFOLU)

12. Human Settlements, Infrastructure and Spatial Planning

## **IV: Assessment of Policies, Institutions and Finance**

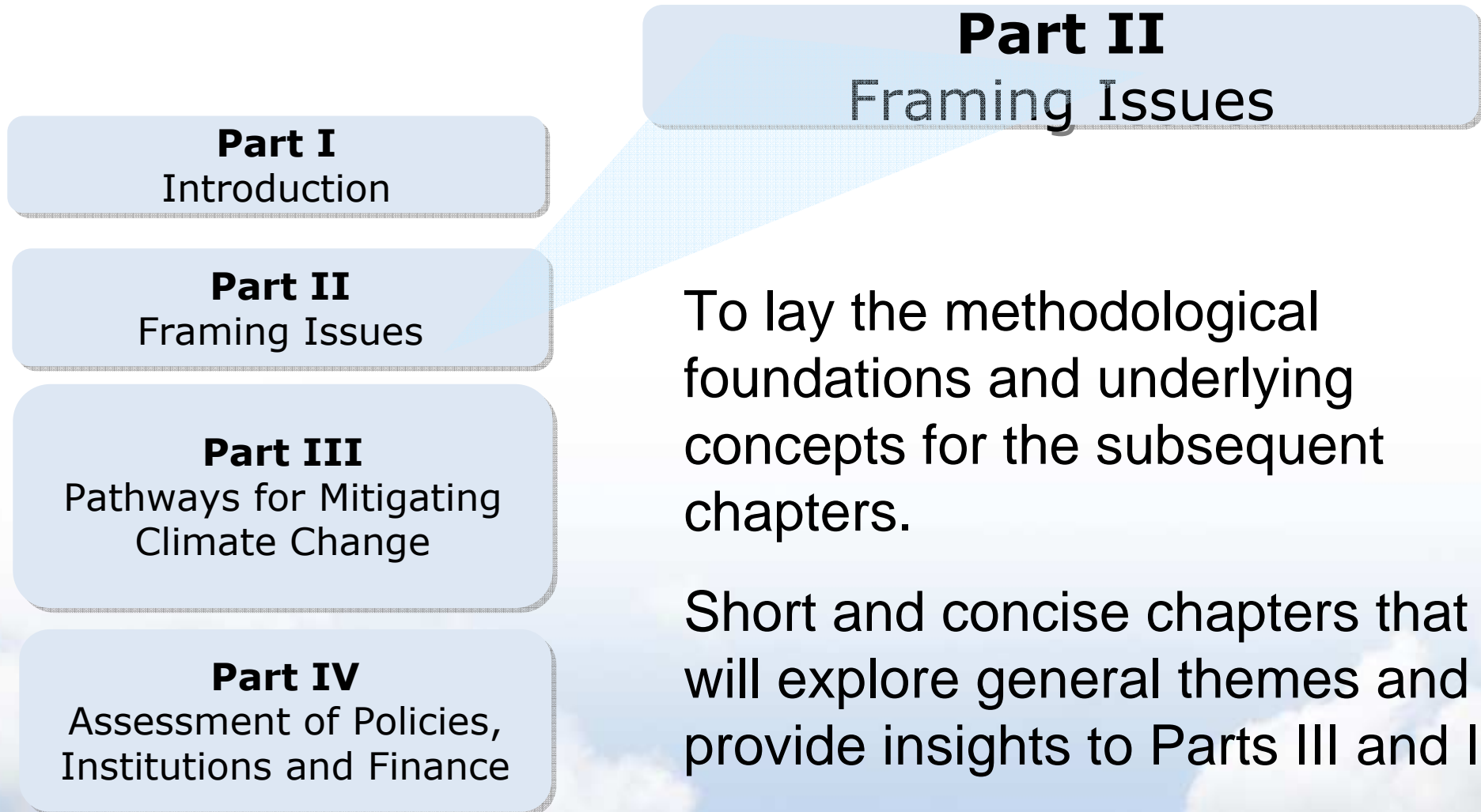
13. International Cooperation: Agreements and Instruments

14. Regional Development and Cooperation

15. National and Sub-national Policies and Institutions

16. Cross-cutting Investment and Finance Issues

# The Philosophy of Part II



# The Philosophy of Part III

**Part I**  
Introduction

**Part II**  
Framing Issues

**Part III**  
Pathways for Mitigating  
Climate Change

**Part IV**  
Assessment of Policies,  
Institutions and Finance

**Part III**  
Pathways for Mitigating  
Climate Change

To provide an integrated assessment of sectors (from a bottom-up perspective) and transformation pathways (from a top-down perspective).

# The Philosophy of Part IV

**Part I**  
Introduction

**Part II**  
Framing Issues

**Part III**  
Pathways for Mitigating  
Climate Change

**Part IV**  
Assessment of Policies,  
Institutions and Finance

**Part IV**  
Assessment of Policies,  
Institutions and Finance

To assess policies on all scales,  
from international to sub-national,  
and the role of investment and  
finance for mitigation.

# AR5 WG III Timeline

- LA1 16-20 May 2011
- LA2 13-17 Feb 2012
- FOD Expert Review 22 June - 20 Aug 2012
- LA3 5-9 Nov 2012
- SOD Exp & Gov't Review 12 April - 10 June 2013
- LA4 12-16 Aug 2013
- Final Gov't Distribution 23 Dec 2013-17 Feb 2014
- CLA Preparatory Meeting 4-6 April 2014
- WG III Plenary 7-11 April 2014

Thank you