

# Energy, Climate Change and Multi-level Governance in Cities

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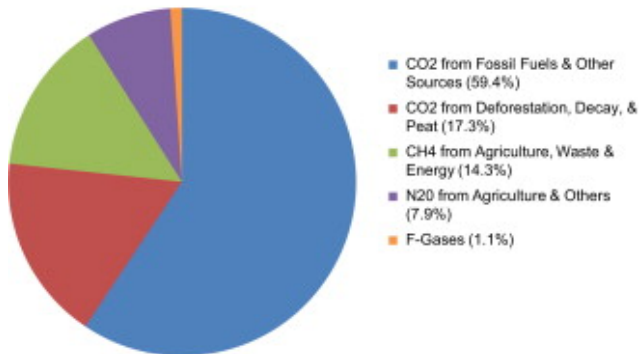
PNC 2011 Annual Conference and Joint Meetings, Sasin Graduate Institute of Business Administration of Chulalongkorn University, Bangkok, Thailand, 21 October 2011

# Key Messages

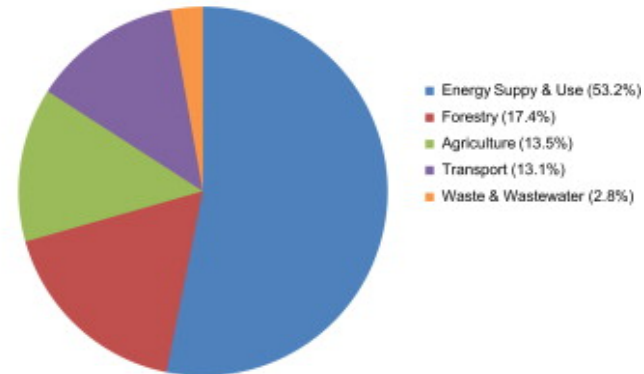
- Energy, climate change and cities can no longer be considered as separate issues
- Cities are directly and indirectly driving changes in the global and local climate through GHG emissions
- Cities are vulnerable to the impacts of climate change
- We cannot optimise with the nature
- Energy and climate governance takes place at several levels
- Multi-level governance has emerged to provide an insight for scientific-based policy
- New forms of governance would better manage the energy and climate change issues

# Key Messages

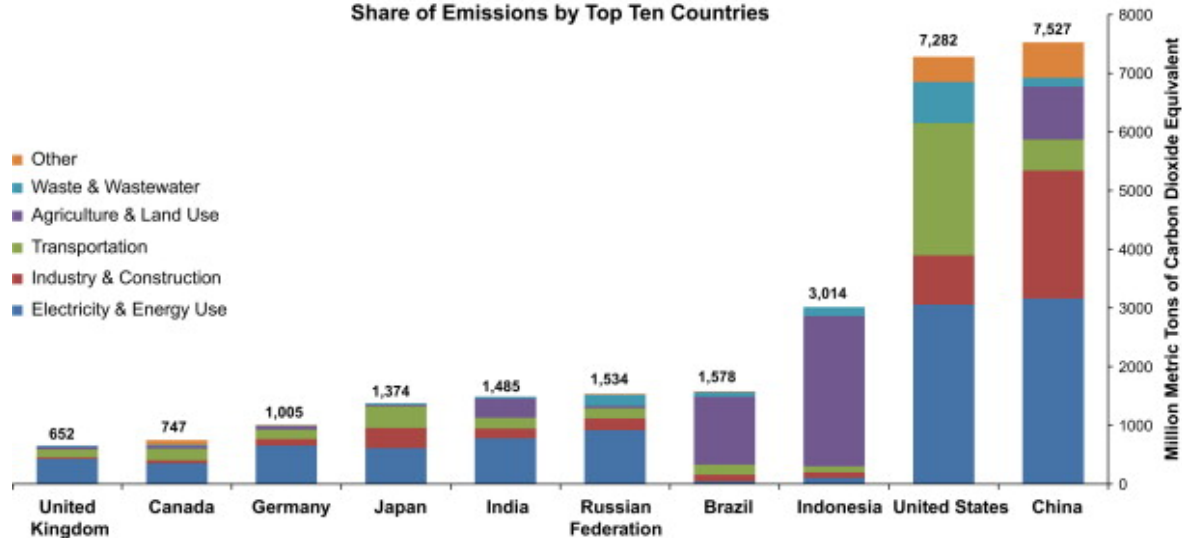
Share of Emissions by Greenhouse Gas



Share of Emissions by Sector



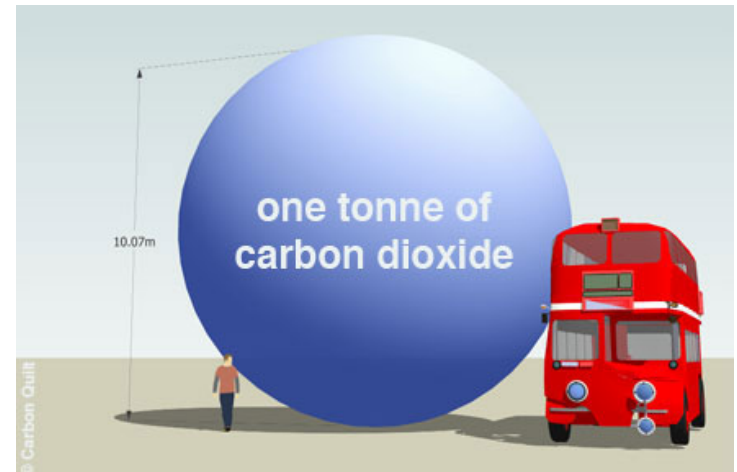
Share of Emissions by Top Ten Countries



Source: [Brown and Sovacool, 2011](#)

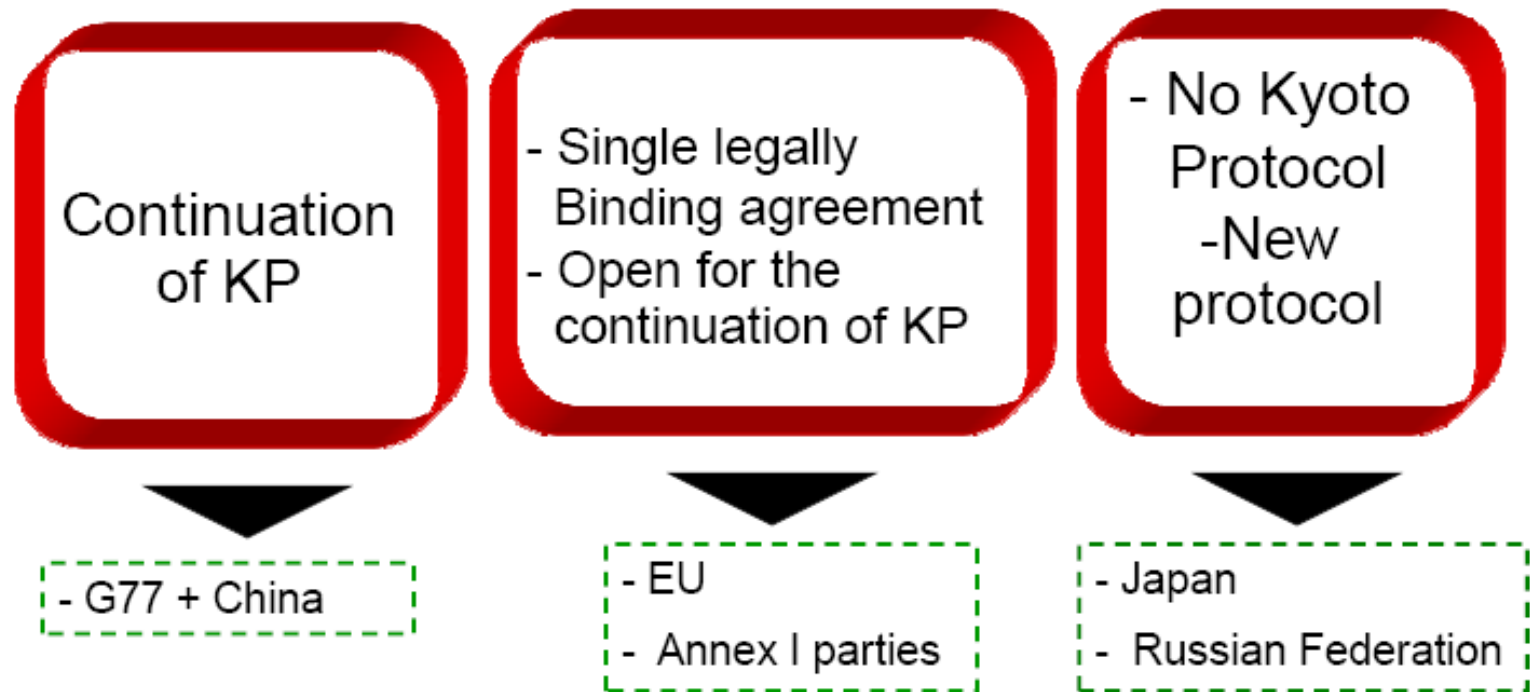
# Outline of Presentation

- Introduction & Current Situation
- Multi-level governance perspective
- Existing energy & climate regime in Thailand
- Case study findings: Thailand example
- Summary

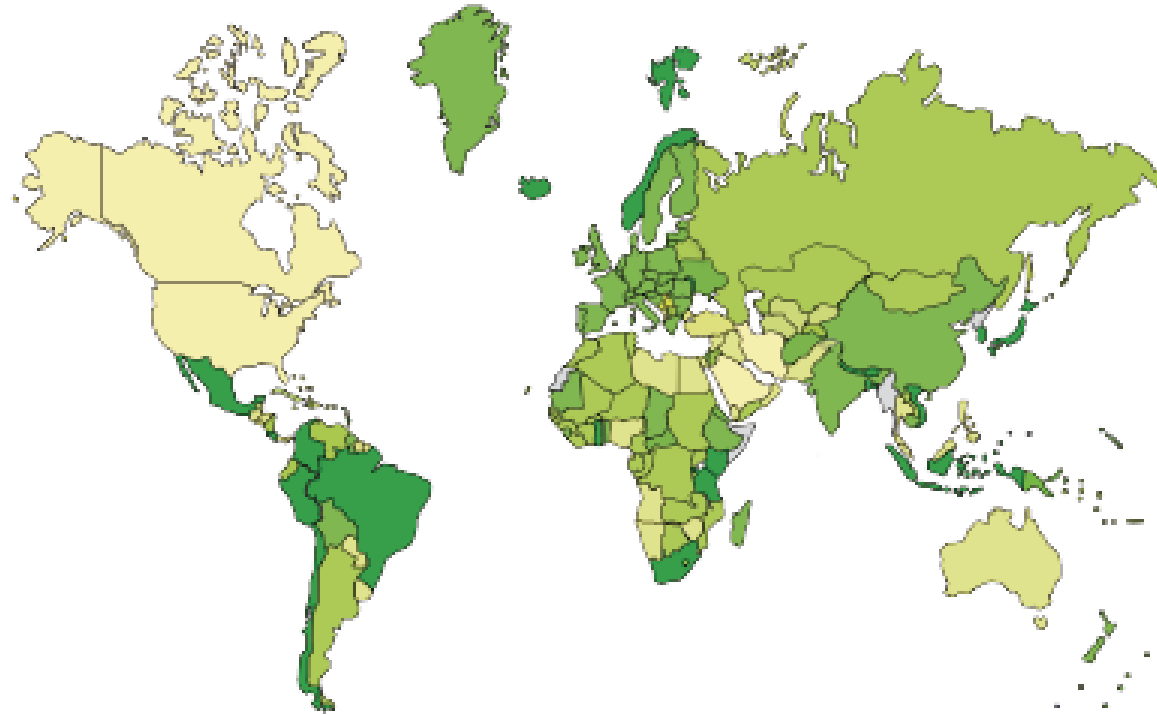
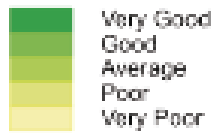


# Introduction - Current Situation

- Country's position for Post-2012 which is under negotiation
- USA requires commitments of major developing countries, while rejecting to discuss the Kyoto Protocol (KP), except the CDM



Source: [Muncharoen, 2010](#); [Mizuno, 2010](#)

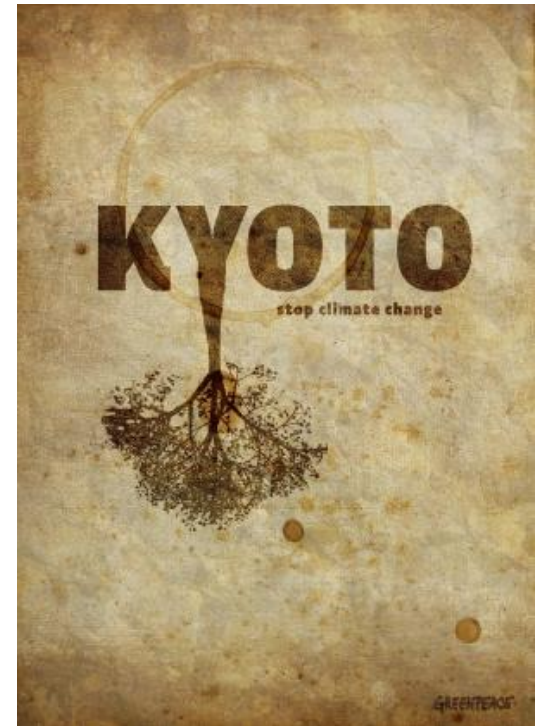


Source: [University of Oxford, 2011](#)

- A map of countries of the world rated in terms of national actions and commitments on climate change
- Those countries not participating in the UNFCCC process are coloured grey

# Introduction

- A changing climate and extreme weather events pose major challenges
- The way cities develop influences energy system and adaptation to climate change
- Governance of cities – the way they are designed, planned and managed
- Understanding how cities can create better governance mechanisms is the key to implement climate change mitigation and adaptation
- Climate change mitigation and adaptation in cities has emerged as a new theme on the global agenda



# Introduction

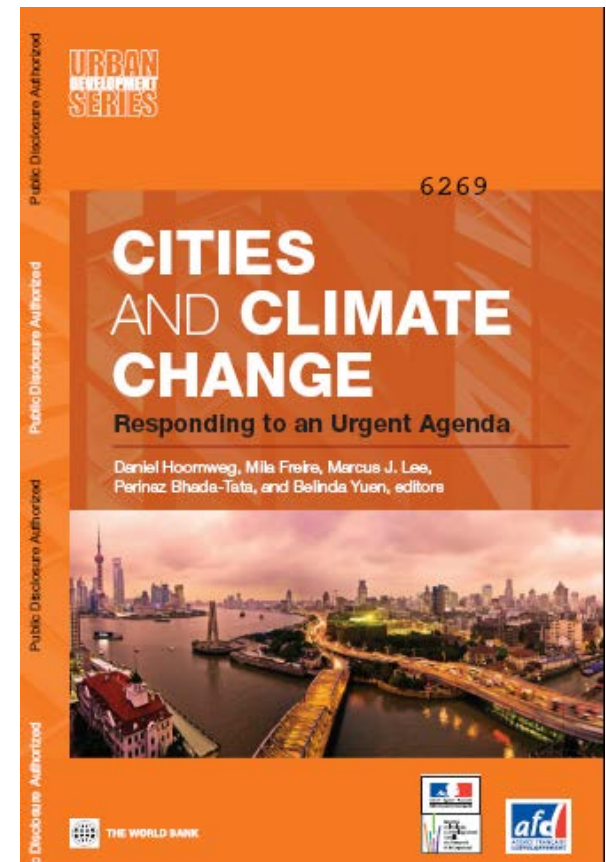
- A Policies should go beyond government and public administration to deliver effective results
- Governance structure should connect the different levels of governance (multi-level governance)
- Cities as “**Laboratories**”
  - Testing new ideas and policy approaches
- The simple equation:
  - **Climate Governance = Mitigation + Adaptation**
- To solve the above equation:
  - **Actions must be mitigation and adaptation simultaneously**





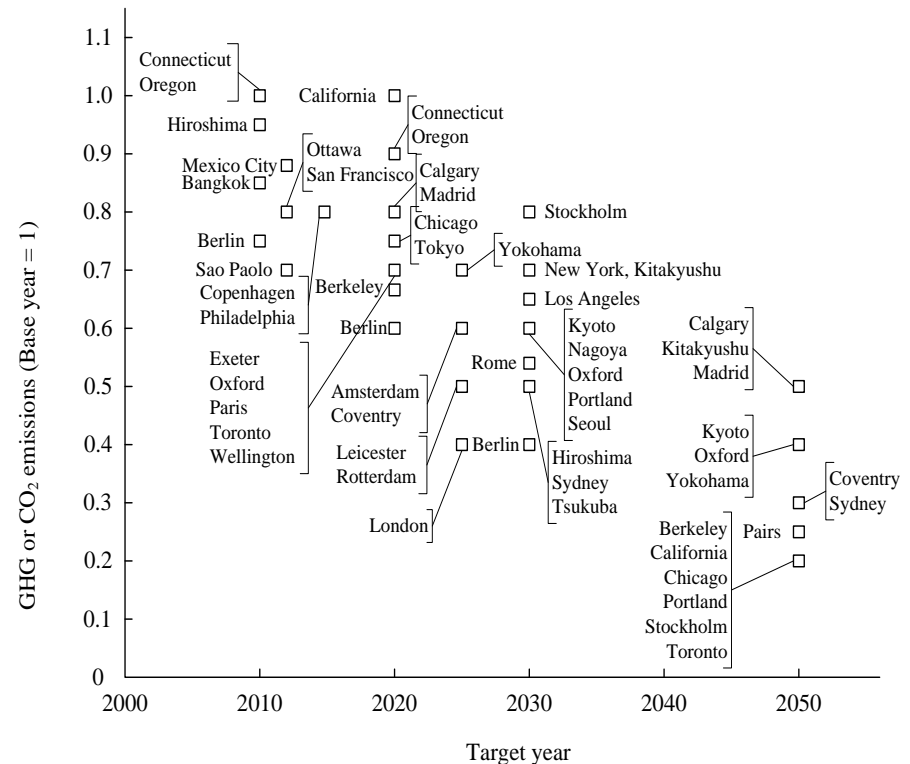
# Why cities?

- Cities are motors of economic growth and drive national economies
- Within a decade:
  - More than 500 cities will have populations exceeding one million
  - Southeast Asia is where urbanisation is occurring most rapidly
- Urban activities are energy & emissions intensive
- Cities consume much of the world's energy, and produce much of the world's GHG emissions



# Why cities?

- Cities are critical in global efforts to mitigate climate change
- Climate change mitigation plans and responses do vary among cities – Bangkok, London, New York, and Tokyo
- The expected impacts of climate change pose a massive challenge to cities
- How cities develop will determine a low-carbon future and sustainable development



Source: Phdungsilp, 2011

# Multi-level Governance Perspective

# Multi-level Governance Perspectives

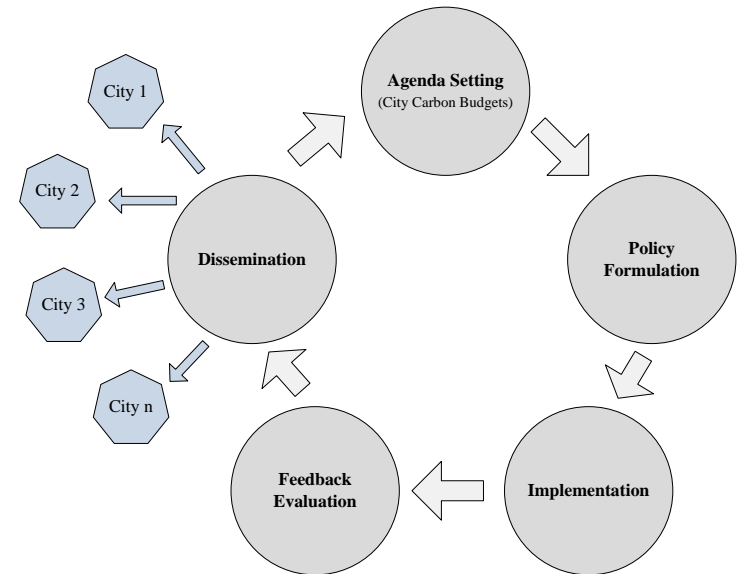
- Landscape of climate change governance has become extremely complex
  - Involving decision-making processes that span across multiple levels
  - A range of actors from government, private sector and civil society
- Modes of urban climate governance
  - Self-governing – as a consumer
  - Governing through enabling – as a facilitator
  - Governing by provision – as a provider
  - Governing by authority – as a regulator
- Climate change policy needs to be implemented in multi-level systems

**The Heat Is On**



# Climate Governance in Multi-level Systems

- Effective multi-level arrangements depend on a combination of horizontal and vertical collaboration
- Vertical dimension – national gov. works closely with regional & local gov. as agents of change
- Horizontal dimension – learning, information transmission & cooperation between cities, i.e., C-40 Large Cities
- Multi-level governance calls for a narrowing of closing of the policy gaps between levels of government – the adoption of tools for vertical and horizontal cooperation



(Source: [Corfee-Morlot et al., 2010](#))

# Types of Multi-level Governance

- Multi-level governance is concerned with the way policy has moved from centralised governmental forms and become distributed across levels and actors
- Two ideal types of multi-level governance ([Hooghe & Marks, 2003](#))
- Type I multi-level governance
  - Well-ordered
  - Nested responsibility
  - Distributed neatly between multi-functional institutions & networks
  - Tends to the older certainties within a hierarchical tier
- Type II multi-level governance is more fluid and task specific
  - With memberships intersecting across levels through more flexible institutional designs
  - Problem-focused approach

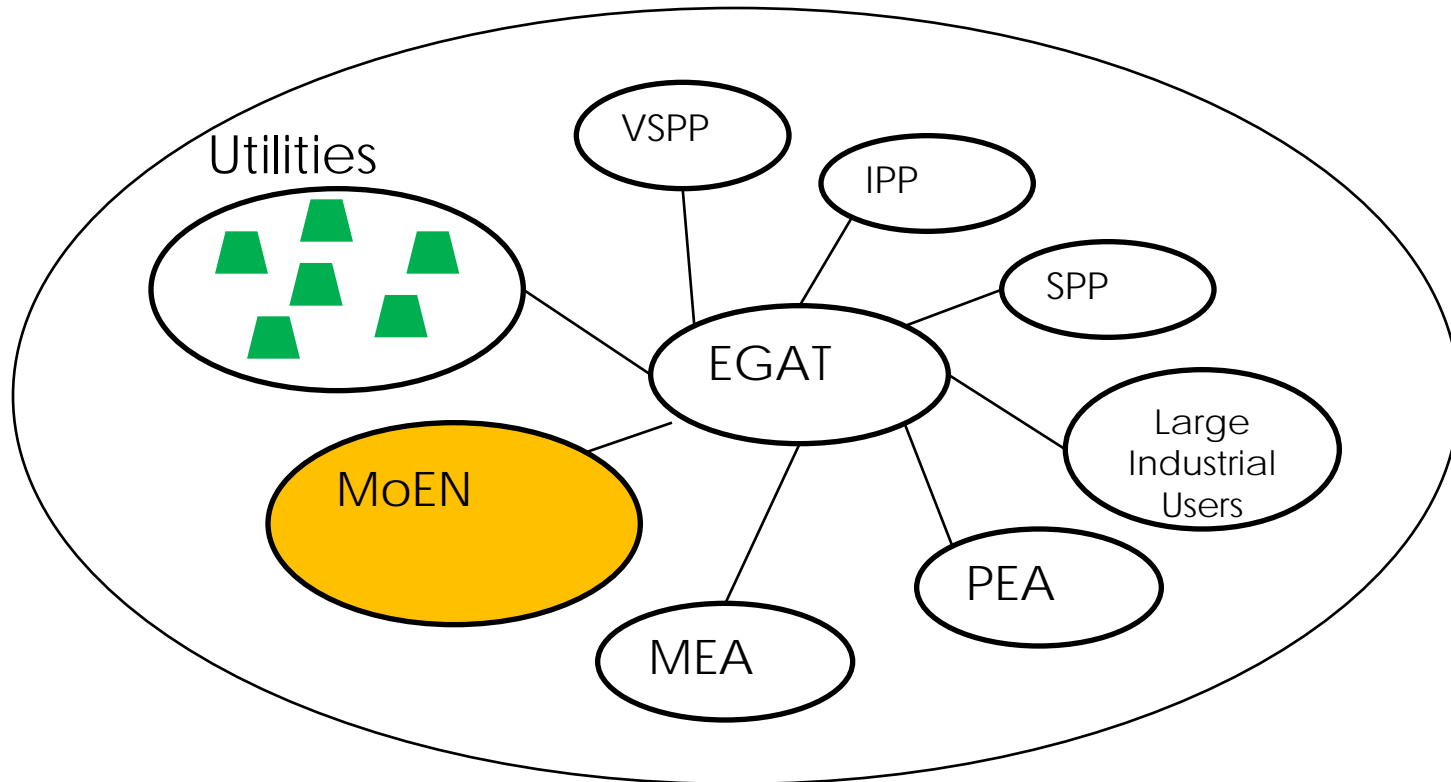
# Characteristics of Existing Energy & Climate Regime

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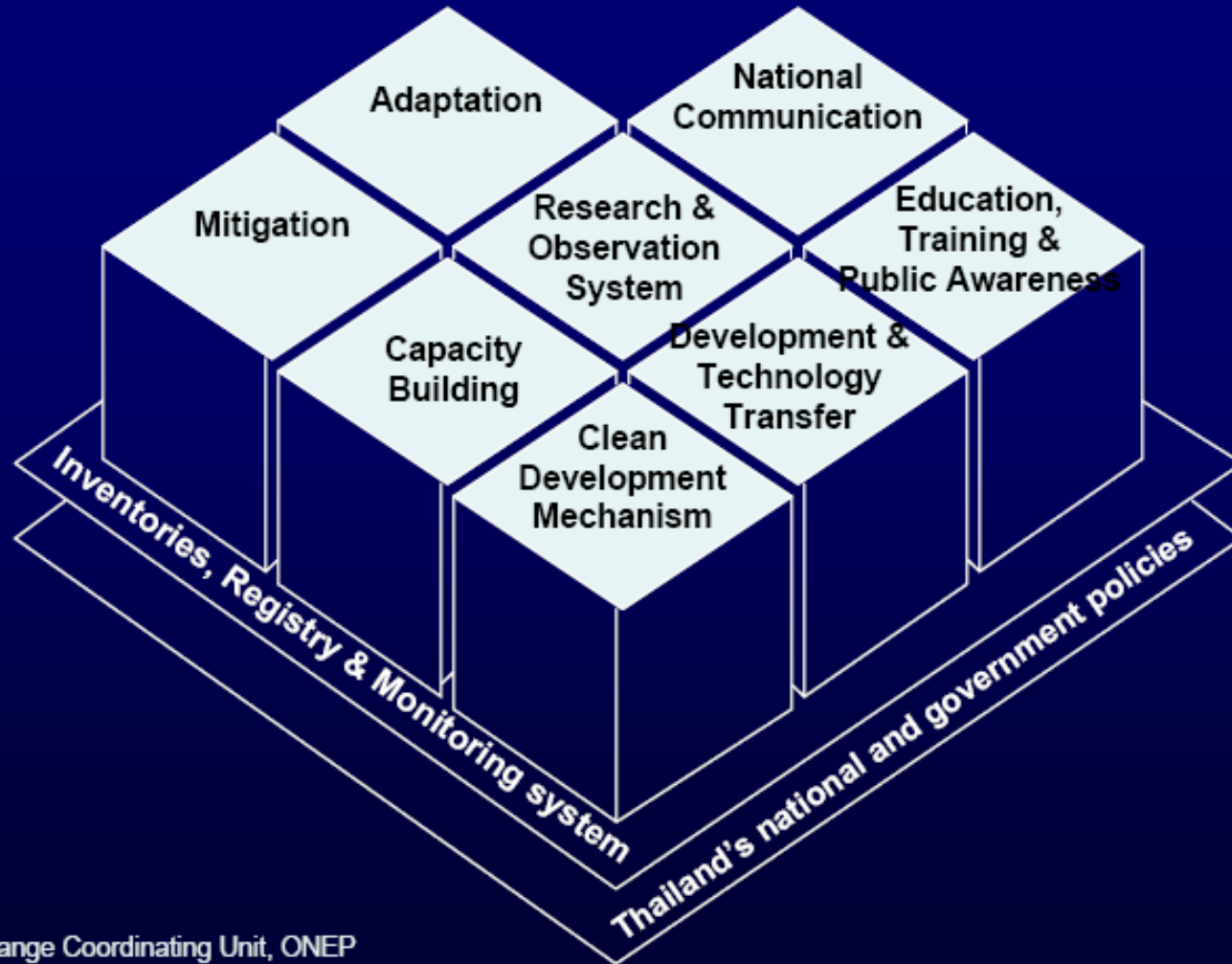
- Energy – Ministry of Energy (MoEN)
  - Energy Policy & Planning Office (EPPO) – policy-maker to recommend national energy policy
  - Dept. of Alternative Energy Development and Efficiency (DEDE) – a regulator and implementer in energy conservation activities
- Climate Change – Ministry of Natural Resource & Environment (MONRE)
  - Office of Natural Resource and Environmental Policy & Planning (ONEP) – a focal point for climate change
  - Thailand GHG Management Organization (TGO) – DNA-CDM
- Climate Change Knowledge Management Center
  - A national center under Ministry of Science & Technology (Beginning of 2010)



## Actors & Networks in Electricity Regime



# The Climate Change Coordinating Unit



Climate Change Coordinating Unit, ONEP

# Case Study Findings and Implications – Thailand Example

# Case study findings

- An increasing engagement though primarily action remains focused on mitigation rather than adaptation
- In terms of sectors covered
  - CC mitigation – built env., transport and urban infrastructure domains
  - CC adaptation – primarily related to infrastructure
- Adaptation measures often get adopted in response to natural disasters – **may not be climate related**
- Some cities are deploying multiple modes of governance: regulation and provision



มาตรฐานทองคำไทย  
CROWN STANDARD

Thailand's Carbon Label

# Findings – modes of climate governance

- **Governing by authority** observed less frequently
  - Many cities do not take advantage of their options for implementing climate protection measures
- The majority of measures related to climate change concentrate on the **self-governing** and **enabling modes**
- **Governing through provision** appear to be increasing
- Climate change policy appears to concentrate primarily on activities in the energy sector

# Findings – vertical & horizontal collaboration

- Vertical collaboration
  - A need for additional dialogue & exchange of information across levels of government within the country
  - A need for further monitoring & assessment the performance of different approaches
  
- Horizontal collaboration
  - Insufficient attention on linkages & communication among local & regional governments
  - Actions often remain individual & uncoordinated
  - Measures remain ad-hoc rather than problem-focused and goal-oriented

# Summary

- Cities are fundamental players for energy and climate governance.
- How cities develop is part of the climate problem, but it can be part of the solution
- Climate change governance is raised new mechanisms, such as transnational regimes, public-private partnerships, and market mechanisms
- Advancing governance of climate change across all levels is crucial to avoid policy gaps (vertical integration)
- Encouraging cross-scale learning in local and regional (horizontal dimension)
- Which features of the actors, institutions, and policy-making processes are resulting in effective outcomes?

# Thank you for your attention



New OS for  
Post-2012

Towards Low-Carbon  
Economy