Panel 2.2 Green leaps for emerging economies

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Speakers: Syamsidar Thamrin (BAPPENAS)
Emilio Lèbre La Rovere (UFRJ)
Nafees Meah (DECC)

Overview

P.R. Shukla started the panel proceedings by stating the question, "how emerging economies can leapfrog to green economies?" and invited the three speakers to share their countries' experiences. Each speaker spoke about his/her country's domestic voluntary initiatives towards mitigation and adaptation.

Major findings

Syamsidar Thamrin, BAPPENAS, Indonesia

Indonesian government has announced voluntary domestic mitigation plan as part of its NAMAs. It has set a mitigation target for 2020 of 26% by unilateral domestic actions and additional 15% with help of international cooperation. Corresponding to this it has drawn up a medium term plan for 2010-2014. The government has engaged research experts to identify sector level roadmaps. It has set up a climate change trust fund to support these actions. Major sectors identified for mitigation actions are Forestry & Peatland, Energy, Transport, Industry, and Waste management. Sectors identified for adaptation actions are Agriculture, Marine & Fishery, Water, and Health. For each sector detailed targets and actions have been proposed.

The next challenge is to carry out more reliable estimates of baselines and abatement cost of mitigation actions, especially for sectors for which data is not easily available.

Emilio Lèbre La Rovere, UFRJ, Brazil

Brazilian government has announced voluntary mitigation target of 36-39% mitigation by 2020 as compared to BAU. It has approved this through legislation and identified NAMAs. The sectors proposed to contribute to this mitigation are Land-use change (25%), Energy (6-7%), and Agriculture & Husbandry (5-6%). Land-use change includes reducing deforestation in Amazon and Savannah. Here the challenge is to design mechanisms for economic incentives. Energy sector actions include improving energy efficiency and enhancing capacity of biofuels, hydro power and renewable electricity options like small hydro, biomass and wind. The challenge here is to resolve social conflicts especially in case of large hydro dams. Agriculture & Husbandry includes recovery of degraded pasture lands, agro-forestry, low tillage, and use of bio-nitrogen.

The next steps in the process are to set up a set of monitoring, reporting and verification mechanisms to review achievement of sector-wise targets and to identify financial support to NAMAs. In addition, there are also institutional challenges to be overcome.

Nafees Meah, DECC, UK

In a study of Bangladesh energy system carried out for a UK-Bangladesh collaborative project, it was found that while adaptation challenges are relatively well understood and researched, the challenges facing the energy

sector to 2050 are not as clear. In the coming decades Bangladesh needs to rapidly expand its electricity supply capacity in order to meet growing demand. As climate change is likely to reinforce pre-existing vulnerabilities, the electricity generation infrastructure has to be resilient.

Under BAU, Bangladesh needs to expand electricity generation capacity from the present 5.5 GW to 200 GW by 2050. Its existing sources of energy are biomass and gas. However its gas reserves are depleting so it cannot expand gas based power. New coal reserves are being discovered but coal fired power has obvious problems of emissions besides public opposition to displacement from open cast mining. In any case coal can provide for at most 10 GW of capacity. The nuclear option has enhanced safety related risks in a densely populated country.

If Bangladesh has to avoid dependence on import, renewable alternatives, especially solar and biomass based power, can play an important role. Solar energy can potentially provide for almost 100GW - a lion's share of the increasing demand by 2050. However centralized grid based renewable options require huge investments. Hence a hybrid of dispersed micro-grid options along with centralized grid power appears to be a more robust strategy. Such local micro-grid systems can later be connected to the national grid..

Main issues discussed

- Emerging and less developed economies are undertaking significant voluntary domestic actions that mitigate GHG emissions under NAMAs, in spite of not offering binding commitments.
- Networks likes LCS-RNet are providing a platform to share information about such domestic actions as well as facilitating alignment of experts with governments to plan for low-carbon transition.
- There is a diversity of domestic actions and issues across emerging and less developed economies. Therefore each country is taking GHG mitigation actions so as to simultaneously address its internal issues. For instance, Indonesia is emphasising actions in forestry and linking them with REDD while also seeking support from Norway. Brazil is emphasising cutting deforestation and recovery of degraded pasture lands, whereas Bangladesh is trying to reconcile economic development together with climate change adaptation and mitigation.
- However, certain challenges remain with respect to effectively implementing the identified domestic actions. For instance, Brazil faces the challenge of property valuation and institutions to implement the proposed land-use changes.

Items for Future Research

- What are the barriers to LCS in emerging economies (EE)?
- How can these barriers be overcome?
- How can EE leapfrog to LCS transition?
- How can LCS and sustainable development (SD) be aligned in EE?
- What would be the comparative modes (and methodologies) to find the portfolio of technologies and policies that would deliver sustainable LCS transition in EE?
- How to develop ‘second best’ solutions that suit the ‘real world’ dynamics better than the ‘first best’ solutions from the ‘ideal world’ assumed by the models

Policy Relevant Questions

- What policy instruments can best suit the LCS transition in EE?
- How can LCS policies at national level in EE be linked to global carbon market?
- What technology transfer pathways can best suit the LCS transition in EE?
- What policies the fast growing cities can best use to transit to LCS in EE?
- What policies would help to deliver 'energy security' and 'energy access' during LCS transition in EE?
- What policies would best deliver climate and development co-benefits such as vis-à-vis national goals like air quality, forestation, energy security, and energy access?