

Workshop Proceedings

Toward Methodologies for Multiple-Objective Based Energy Policy

Thursday, 21st May 2015

The workshop was introduced to participants by Dr. Navroz K Dubash, Senior Fellow, CPR, followed by presentation by Dr. Brett Cohen, Energy Research Centre (ERC), University of Cape Town, and Dr. Radhika Khosla from CPR, Dr. Ashok Sreenivas and Srihari Dukkipati from the Prayas (Energy Group). Mr. Anil Jain, Advisor, NITI Aayog, was invited to comment on the MCDA approach as a discussant. Dr. Dubash laid the groundwork for discussion by considering the importance of the multiple objectives of development while planning mitigation or adaptation actions to manage climate change. The evaluation of multiple objectives has attracted attention in recent years, as is evident from the National Action Plan on Climate Change, the 12th Five Year Plan, the emphasis on co-benefits in the IPCC report, and National and Sub-national studies in India conducted by Delhi Science Forum, Centre for Policy Research (CPR), Council on Energy Environment and Water, Centre for Study of Science, Technology and Policy (CSTEP), Global Green Growth Initiative (GGGI), Prayas (Energy Group), among others as well as international studies which evaluate multiple objectives.

In spite of these existing conceptual frameworks, there is, however, no explicit methodology for linking climate and development planning and evaluating the actual trade-offs when pursuing multiple objectives. One way forward is to employ an approach based on Multi Criteria Decision Analysis (MCDA), which provides a credible set of tools for informed decision-making. To demonstrate and test the use of MCDA for policymaking, CPR, Prayas (Energy Group) and the ERC held a workshop on 21 May 2015. Two case studies, on the cooking and buildings sector, were used to demonstrate the benefits and challenges of MCDA techniques. The cases drew from the existing India Energy Security Scenarios (IESS) platform. Post the presentations, an open discussion focused on how MCDA techniques can be utilised further, and potential ways forward for operationalizing multiple objective based-policy. Highlights from the discussion are synthesized in this report.

Workshop presentations, listed below, are available for download from our website.

1. Methodologies for Multiple Objectives Based Energy Policies, Navroz K Dubash, CPR
2. Multi-criteria decision analysis in climate policy, Brett Cohen, ERC

3. Case Studies: Multi Criteria Decision Analysis of the Cooking and Buildings Sector, Radhika Khosla, CPR and Ashok Sreenivas and Srihari Dukkupati, Prayas (Energy Group)

Scope of Multi Criteria Decision Analysis

Participants raised a number of questions regarding the scope of MCDA and the impact this has on the formulation of policy questions and execution of the MCDA process. There was general agreement, consistent with the presentations, that defining the boundary conditions and framing a clear policy question is critical. For more complex problems such as international climate change cooperation, the larger problem would need to be broken down into smaller sections, which could each be served by an MCDA approach. Similarly, for a country like India with varying regional characteristics, it would be important to consider MCDA studies at sub-national levels (state or city levels) to reduce complexity, improve the robustness of questions being asked, the stakeholders involved, and hence the outcomes.

A related discussion was with respect to the tools used within the MCDA framework. MCDA is a set of tools and not one single method or tool, and it complements economy-wide analysis such as from a CGE or a bottom-up model to gain a deeper understanding of sectors or technologies. In summary, the focus of MCDA is to develop a robust and defensible process, with a variety of tools which can answer different problems at varying scales (sector-specific, regional, national, or global).

The example of using MCDA techniques in Karnataka's green growth strategy was discussed. This exercise, in addition to sector-specific analyses also included cross-sectoral comparisons to enable policymakers to choose between actions across sectors. It was noted that finding comparable parameters across sectors, to evaluate trade-offs, is difficult and hence the analyses presented during the workshop (focusing at the level of technologies) was a useful addition to the literature. Other examples of ongoing work (with the MoEFCC) on NAMAs illustrated cases of sector-specific analyses which could benefit from a structured methodology, such as MCDA.

Resource requirements of an MCDA process

An MCDA approach necessarily involves stakeholder consultations in order to arrive at robust and defensible outcomes. In light of this, the practicality of implementing it was discussed, focusing on considerations of stakeholder engagement and capacities. On stakeholder engagement, significant investment of time and financial resources is required, and convincing the government of the value of this

For example, the IESS tool evaluates implications of energy planning on land use, emissions and imports. The IESS tool was suggested as a good platform to further build on the MCDA approach. Adding to Mr. Jain's points, participants highlighted that the IESS enables energy data to be available in a transparent and publicly available format. There is an opportunity to further enhance its capabilities and explicitly evaluate further tradeoffs when pursuing multiple objectives.

Moving forward

The workshop was organised to demonstrate the use of MCDA techniques in energy and climate policymaking, demonstrate its benefits and challenges via two case-studies. Moving forward, the use of MCDA tools needs to be supported by the development of robust processes involving stakeholders. Participants discussed two opportunities to do this. Firstly, a collective effort involving organisations working closely with governments could further develop case-studies, seed MCDA techniques during policy analysis and establish a long term capacity development plan. The strength of a collective process lies in its ability to bring together a number of different stakeholders, which is most crucial for developing a robust MCDA process. Beyond the participants in the workshop, it was also discussed that researchers who are using MCDA techniques for studies other than energy and climate policy need to be identified and involved to learn from their experience on implementing MCDA in India. And secondly, these techniques could be included in the IESS tool to enhance its capabilities to address multiple objectives.

LIST OF PARTICIPANTS

<u>S.No</u>	<u>Name</u>	<u>Organisation</u>
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2	Anil Jain	NITI Aayog
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9	Jennifer Steeves	Acclimitise
10	Koyel Mandal	Gesellschaft für Internationale Zusammenarbeit
11	Manish Srivastava	The Energy and Resources Institute
12	Mihir R. Bhatt	All India Disaster Mitigation Institute/CDKN
13	Prabhat Upadhyay	Linkoping University, Sweden
14	Prasad Babu	Geo Climate Risk and Solutions
15	Prasoon Agarwal	Global Green Growth Institute
16	Sahil Ali	Center for Study of Science, Technology & Policy
17	Satish Kumar	Lawrence Berkeley National Laboratory
18	Shirish Sinha	Swiss Development Cooperation
19	Smita Chandiwala	Shakti Foundation
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22	Veena Joshi	Independent Consultant
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