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Increasing the Value of Climate Finance in an Uncertain Environment

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Human activities are widely believed to be contributing to climate change and the associated increased frequencies of extreme weather events such as floods and droughts (Boko et al, 2007: p 437). Whilst there still remains considerable uncertainty over the precise extent, time-scale, and consequences of climate change (Morton et al., 2011), most policy makers acknowledge that concrete actions have to be undertaken to mitigate and adapt to climate change. Since climate change mitigation and adaptation strategies require new investments in pertinent technologies, human capacity and institutions, climate finance has emerged as a means for providing financial support for mitigation and adaptation activities, including capacity-building and Research & Development, as well as broader efforts to enable the transition towards low-carbon, climate-resilient development (Buchner et al., 2011).

Barriers to implementation of climate finance projects (e.g. renewable energy development and fuels switching projects) in different countries include ineffective regulatory frameworks, inequitable distribution of wealth, technology adaption and transfer, transaction cost, and investor risks (Nautiyal and Varun, 2012). Additionally, global political and economic performance and priorities dictate the commitment of donors to global funds (climate finance) and consideration is also made to uncertainties related to (shifting) public policies; unreliability and costs of (new) technologies; indefinite future economic growth prospects and future emissions paths from different countries; subsequently creating erratic commitment levels of different countries (McKibbin and Wilcoxen, 2009; Masini and Menichetti, 2013; Hu and Monroy, 2012; Rong, 2010). The combined effect of this is funding levels falling short of the investments needed for climate finance activities to be undertaken effectively hence undermining the whole process.

Evaluation methods such as multi-criteria analysis (MCA) have potential to be utilised to encourage the engagement of various stakeholders and advance responsibility for immediate action towards climate change policies and financing regardless of prevailing uncertainties. A multi-criteria analysis enables efficient integration of diverse issues (e.g. economic, environmental and social) when there is a need for the identification of trade-offs where conflicting objectives are involved by providing an interactive mean with verbal, numerical and visual representation of preferences/alternatives even where there are criteria, objectives, costs and/or benefits that cannot be quantified and monetised (Broughton et al., 2012; Grafakos et al., 2010). Arguably, this can also improve stakeholder's understanding of climate finance.

This research aims to contribute to the existing body of knowledge on the implementation of climate finance. The paper briefly introduces the concept of multi-criteria analysis and how it can assist with climate finance decision making. This is then followed by suggesting that the value (i.e. importance and contribution) of climate finance can be enhanced if climate finance is considered as a development and investment instrument rather than an instrument related to environmental protection as it is often the case.
By improving the understanding of climate finance and enhancing the value of climate finance, some uncertainties related to funding can be minimised as projects will be addressing wider societal goals and developmental issues such as the Millennium Development Goals hence addressing the concerns and priorities of diverse stakeholder.

References

Boko, M., I. Niang, A. Nyong, C. Vogel, A. Githeko, M. Medany, B. Osman-Elasha, R. Tabo and P. Yanda, 2007: Africa. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge UK, 433-467.

Broughton, E.K., Brent, A.C., Haywood, L., 2012. Application Of A Multi-Criteria Analysis Approach For Decision-Making In The Energy Sector: The Case Of Concentrating Solar Power In South Africa. Energy & Environment 23, 1221-1231.

Buchner, B., Falconer, A., Hervé-Mignucci, M., Trabacchi, C., Brinkman, M., 2011. The Landscape of Climate Finance: A CPI report. Climate Policy Initiative. Available online at <http://climatepolicyinitiative.org/wpcontent/uploads/2011/10/The-Landscape-of-Climate-Finance-120120.pdf>

Grafakos, S., Flamos, A., Oikonomou, V., Zevgolis, D., 2010. Multi-criteria analysis weighting methodology to incorporate stakeholders' preferences in energy and climate policy interactions. International Journal of Energy Sector Management 4, 434-461.

Hu,Y., Monroy, C.R., 2012. Chinese energy and climate policies after Durban: Save the Kyoto Protocol. Renewable and Sustainable Energy Reviews 16, 3243– 3250.

Masini, A., Menichetti, E., 2013. Investment decisions in the renewable energy sector: An analysis of non-financial drivers. Technological Forecasting & Social Change 80, 510–524.

McKibbin, W.J., Wilcoxen, P.J., 2009. Uncertainty and climate change policy design. Journal of Policy Modeling 31, 463–477.
Morton, T.A., Rabinovich, A., Marshall, D., Bretschneider, P., 2011. The future that may (or may not) come: How framing changes responses to uncertainty in climate change communications. Global Environmental Change 21, 103–109.

Nautiyal, H., Varun, 2012. Progress in renewable energy under clean development mechanism in India. Renewable and Sustainable Energy Reviews 16, 2913– 2919.

Rong, F., 2010. Understanding developing country stances on post-2012 climate change negotiations: Comparative analysis of Brazil, China, India, Mexico, and South Africa Energy Policy 38, 4582–4591.