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Climate Change and Least Developed Countries: A Himalayan Perspective

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OLIVIA GIPPNER, MAY 26 2013

On 1 January 2013 the Himalayan country of Nepal became the Chair of the Least Developed Countries (LDC) grouping at the United Nations climate change negotiations. Its representative, Mr. Prakash Mathema, Chief of Climate Change Management Division at Nepal's Ministry of Science, Technology & Environment, underlined in his opening statement at the recent UN Framework Convention on Climate Change (UNFCCC) sessions in Bonn: "As the world's most vulnerable, we have the moral right to claim that all the countries must take immediate and urgent climate action" (Mathema 2013). The Least Developed Countries have been urging progress in the negotiations, as the effects are already being seen in an increased number of droughts, severe storms, and floods. These events are raising the intensity, frequency and magnitude of climate change impacts, thus worsening the day to day quality of life of already vulnerable and impoverished populations (Bajracharya, Mool, and Shrestha 2007; Eriksson et al. 2009; Shrestha and Aryal 2011). "Delay in action against climate change is not an option for the [LDC] group" (Freitas 2013).

But what are the actions that the least developed countries can take to avert the effects of rapid global temperature increase? The countries' own abilities to reduce greenhouse emissions are limited. A recent census carried out in Nepal "spoke volumes of the "medieval period" at which Nepal is stuck primarily due to energy issues. Out of the 5,423,297 households in Nepal, 64 percent use firewood for cooking, 21 percent use LPG, 10 percent use cow dung, 2.4 percent use biogas, 0.1 percent use electricity and the rest use other sources" (Dhakal 2013). Apart from not having the right technology and policy framework to reduce CO₂ emissions, the on-going development and electrification activities may not necessarily be low carbon. Considering the domestic constraints of non-Annex I countries and the LDCs a number of financing measures have been put in place, for instance the LDC fund or the Green Climate Fund. The most successful measure globally, however, has been the Clean Development Mechanism (CDM). In the following article we will take a look at the possibilities for low-emitting for LDCs like Nepal in obtaining these funds in line with their national development plans, for instance for energy sector investments.

The Clean Development Mechanism is one of the "flexibility mechanisms" set out in the Kyoto Protocol of 1997. The CDM is defined in Article 12 of the Protocol and is intended to meet two objectives: (1) to assist parties not included in Annex I (= developing countries) in achieving sustainable development and in contributing to the ultimate objective of the UNFCCC, which is to prevent dangerous climate change; and (2) to assist parties included in Annex I (industrialized countries) in achieving compliance with their quantified emission limitation and reduction commitments (greenhouse gas (GHG) emission caps). In order to achieve this goal, emission-reducing projects in developing countries are issued carbon credits, which they can then sell on the global carbon market – either through CDM exchanges or through other Voluntary Markets.

In the case of Nepal two projects have so far been able to register under the CDM, the Biogas Support Program (and its four subprograms) and the Microhydro Promotion Program, both administered by the Alternative Energy Promotion Center (Sovacool et al. 2011). Nepal's unique structure of power provision, where the majority of power is generated by clean hydro plants, has made it extremely difficult to create an emissions baseline. One of the preconditions for registering a project under the CDM is "additionality". The UNFCCC states, "a CDM project activity

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is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity” (Conference of the Parties 2006, 16). Since there are no notable thermal generation facilities in Nepal, a reduction of overall emissions remains difficult to measure. Therefore, under the current national scenario which is based on green energy from the start, hydro and other renewable energy sources can in most cases only benefit from the CDM if they are designed for exporting electricity, or for off-grid consumption, replacing a specific user’s demands, such as that of a cement factory.

This creates an absurd situation between the two goals of development cooperation and climate change mitigation. Clean energy cannot be developed with the help of the CDM, which at the same time counters efforts of development cooperation to raise Nepalese living standards. Another negative externality of a continuation of the present path of power provision coupled with the government’s own inability to foster more generation from renewables, is the increase in diesel generators employed by large scale industries and wealthier citizens for household electricity consumption. Unofficial estimates rank the combined potential of these diesel plants and generators to equal the total installed power generation capacity derived from the country’s official power plants (around 600 Megawatts). Furthermore, in the fiscal year 2010-11, Nepal imported oil worth about Rs 76.71 billion (\$ 880 Million), which is all paid in dollars, thus depleting Nepal’s foreign currency reserves. Oil imports constitute one-fifth of the countries annual budget which is around \$5 billion (Khanal 2011).

At the same time Nepal has an abundant water supply: Over 70% of the Ganges’ dry season water originates from the Mahakali, Karnali, Gandak and Koshi rivers in Nepal supplying water to estimated 1.2 billion people of India and Bangladesh (P. Shumsher and Rana 1996, 206-212). Nepal’s vulnerability to climate change, therefore, has far-reaching impacts on water access in South Asia. Nevertheless, the path for oil dependency is a dramatic reality for Nepal. Taking over the task of representing the LDC grouping at the international negotiations in 2013 could provide immense opportunities to lobby for change. As a local commentator, Ramesh Bushal put it,

“caught in this clash of egos and world powers are poor and vulnerable countries like Nepal that have been trying to convince both the parties of the urgent need to deal with these issues and come up with a workable solution. They have no option but to convince the developed world to support them in fighting climate change and to urge the developed world to take immediate steps to reduce GHGs like carbon dioxide from the atmosphere” (Bushal 2013).

Taking the example of the Clean Development Mechanism, a reform for least developed countries would be a first step. LDCs should be allowed to take overall energy consumption into consideration for baseline calculations – first efforts in that direction are being made under the REDD program. The World Bank is making further efforts to calculate the replacement effect of cumulative diesel generator consumption. To address the issue of additionality of CO₂ reduction of CDM projects alternative regulations might be considered. With a power provision of 578 MW in the fiscal year 2011/2012 (Nepal Electricity Authority 2012) and up to 14 hours load-shedding a day during the dry season a natural growth in energy consumption and CO₂ emissions is necessary – at the same time making CDM funding hard to attain. As the representative of the Nepali Designated National Authority for the CDM, Mr Naresh Sharma affirmed at an international CDM stakeholder consultation, “a simple mechanism is needed for the LDCs” (Chokkalingam 2012).

As this example shows, the needs of Least Developed Countries have traditionally not been addressed in the present-day climate negotiations. Successful market instruments, such as the Clean Development Mechanism have primarily benefited emerging economies, in particular China, which currently holds 61% of all Certified Emissions Reductions. This puts the LDCs in a tricky situation: On the one hand they argue for a global agreement and limiting of global temperature rise to a maximum of 1.5°C. On the other hand, they lack the means to foster a strong negotiation position. Nevertheless, for instance in Durban, it was only when the LDCs and AOSIS rallied behind the EU that the decision to form an agreement by 2015 was made. From the perspective of Prakash Mathema, this is a sign that if the LDCs stand united, they can bring negotiations forward (Khadka 2013). For his two-year chairmanship of the LDC grouping, he therefore set himself an ambitious goal: “For the new agreement to be reached by 2015, LDCs will perform a leadership role as a dealmaker whenever negotiations get stuck”.

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