FOCUS ON THE GLOBAL SOUTH

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The Asian context

Climate change poses a real economic and environmental threat to Asia. The region is home to more than half of the world's poor, of whom two-thirds are women. Sixty per cent of the world population lives in Asia and, of this, 60 per cent depend on agriculture, fisheries, forests and other ecosystems for its livelihood. In the past decades, Asia has experienced high rates of economic growth matched by ever increasing greenhouse gas emissions. This growth, while boosting GDP, has not translated into widespread improvements in well-being. Instead, millions of people have been marginalised and natural resources depleted. Consequently, communities and ecosystems are highly vulnerable to the current and predicted impacts of climate change.

Assessments of the actual and projected impacts of climate change indicate that adaptation should be the priority across the region, given the hundreds of millions of people whose lives and livelihoods are already and will be affected. Yet the regional institutions, multilateral development banks and national governments are, by and large, focusing on mitigation.

Economic growth, albeit "green" or "sustainable", remains the overarching policy objective for governments in the region (with the notable exception of Bhutan). Energy and infrastructure development projects are seen as key to achieving this objective and instruments such as the Clean Development Mechanism (CDM) are seen as an easy source of finance for these projects.[1]

At the end of 2011, the CDM Board had approved and registered 3,500 projects. Of these, the vast majority—79 per cent –are in Asia: China with 46 per cent, India 21 per cent, and Malaysia, Vietnam, Thailand, Philippines, South Korea and Indonesia making up the rest with between one and three per cent each.[2]

With the Kyoto Protocol virtually in tatters, rich countries have managed to wriggle out of binding targets to reduce greenhouse gas emissions. Most likely, the only part of the Protocol that will survive intact is the Clean Development Mechanism (CDM), a carbon trading tool that allows polluters to purchase (rather than actually carry out) emissions reductions. These Certified Emissions Reductions (CERs) are generated by projects in developing countries that are, supposedly, "cleaner" than might have been the case because the financial incentive of being able to sell CERs allows project developers to use cleaner technologies and hence reduce greenhouse gas emissions. This is called "additionality". That is, these "cleaner" projects become economically "viable" because of the income from the sale of CERs, which are traded on carbon markets or brokered directly between vendor and purchaser by middlemen.

There are plenty of reasons to believe that CDM is far from the best way to reduce greenhouse gas emissions and "incentivise" the switch to cleaner technologies and renewable energy. For a start, the trading price of carbon

has fallen to less than one tenth of that which economists say is needed to send the right "signals" to reduce carbon emissions. Second the argument that the CDM allows "poor" countries to invest in clean technologies and climate-friendly projects is spurious, given that almost eighty per cent of all CDM projects are in India and China–two countries with more than enough resources to invest in clean, renewable energy.

But one line of investigation that is under-reported is the impact of CDM on the ground. In this series of case studies of clean development projects in Thailand, India and the Philippines, we have sought out community voices to see whether CDM projects actually deliver the "sustainable development" they promise.

The case studies can be read in detail, accompanied by three short films in which people from the communities close to the CDM projects express their views.

In summary, the key finding of the case studies are:

Philippines

Ambuklao Hydroelectric Power Plant, Benguet Province, Luzon, Philippines.

Project owner/developer: SN-Aboitiz Power Benguet (SNAPB), a joint venture between Aboitiz Power Corporation (APC) and Statkraft Norfund Power Invest AS of Norway (SN Power), a global renewable energy company owned by the Norwegian government. CDM approved.

Binga Hydroelectric Power Plants, Benguet Province, Luzon, Philippines.

Project owner/developer: SN-Aboitiz Power Benguet (SNAPB), a joint venture between Aboitiz Power Corporation (APC) and Statkraft Norfund Power Invest AS of Norway (SN Power), a global renewable energy company owned by the Norwegian government. CDM approved.

- It is not clear whether these projects would have gone ahead without CDM approval and hence revenues from CERs. However, having gained CDM approval, it is clear that the key beneficiaries are the corporations, both in terms of profits as well as brushing up their corporate image.
- Given the obvious imbalance in understanding among 'stakeholders', there is some doubt whether the community consultations carried out as part of the CDM accreditation process were meaningful.
- The government's own inefficiency and historical transgression against these communities have made it easier for the private sector to step in and present what they call an 'alternative' to the government, offering livelihood packages, employment, and even money.
- In this context, and given the lack of information and understanding, it may be difficult for the communities to resist any negative impacts of the projects and to ensure their economic, social and environmental benefits.

Thailand

A.T. Biopower, Pichit province, Thailand.

Project owner/developer: A.T. Biopower Co., Ltd. 22 MW, CDM approved.

Buasommai I biomass power plant, Muang Roi Et district, Thailand.

Project Owner/Developer: Buasommai Electricity Generating Co., Ltd. 9.9 MW, CDM in process.

- In both cases, an unusually high proportion of people who do not live in close proximity were observed participating in the consultations, raising concerns about the legitimacy of the processes.
- Information regarding the potential benefits from carbon credits/carbon market were not well elaborated or even discussed with community members.
- The claim that Buasommai plant would create many jobs for local people has not been realized.
- The Community Development Funds distributed to affected communities are already required by existing national legislation, thus money from the sale of carbon credits is effectively a non-conditional bonus for the company.
- Environmental problems, pollution and health impacts on communities have been evident despite the fact that one project had undergone the EIA process and received CERs and the other is in process.

India

Tata Ultra Mega Power Project, Tundawand village, Mundra, Gujarat.

Project owner/developer: Coastal Gujarat Power Limited (CGPL) subsidiary of Tata Group, 4000 MW. CDM in process

- The plant is located in an ecologically sensitive region and the EIA does not take into account either the local impacts or the wider impacts of the project. The EIA is also based on false information claiming that the development site is "uninhabited".
- The livelihood of the local people, ranging from fishing, salt making, agriculture and animal husbandry, is closely linked to the ecology. It is unlikely that these people will find employment in the power plant, yet their fishing grounds, drinking water and the atmosphere are being polluted.
- The claim of additionality is dubious. First, the project was financed and developed without CDM accreditation—that is, CDM finance was not essential to the project's viability. Second, CGPL's tenuous case for carbon credits rests on its claim that it is using super critical technology, a more expensive option than the "sub critical" baseline. This is a false claim as India's Ministry of Power has mandated that all large coal fired power plants use super critical technology and it is no longer considered in energy policy circles as an additional technology
- Once in operation, the plant will be one of the largest sources of greenhouse gas emissions in the world, producing up to 26 millions tonnes of CO_{2e} a year.

The conclusions are not black and white, but this should not lead to the conclusion that the CDM can be "improved".

Rather, our analysis, and that of many communities and organisations across Asia, is that the CDM is an extension of the generalised approach to big project and energy intensive development that has systematically marginalised indigenous peoples and local communities and over-exploited the Earth.[3] The "clean development mechanism" is, quite simply, a mechanism that allows polluters to avoid binding emissions reductions in one location, while shifting emissions to another location. At the same time, it allows corporations and state entities to reap additional profits from projects that are questionable in terms of sustainability, community benefits or even addressing climate change.

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1 What is CDM? The clean development mechanism (CDM) allows emission-reduction (or emission removal) projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of CO2. These CERs can be traded and sold, and used by industrialized countries to meet a part of their emission reduction targets under the Kyoto Protocol. The mechanism stimulates *sustainable development and emission reductions* (our italics), while giving industrialized countries some flexibility in how they meet their emission reduction targets. http://cdm.unfccc.int/faq/index.html, accessed 28 May 2012

2 Annual report of the Executive Board of the clean development mechanism to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol. Part I. (October 2010 – October 2011) FCCC/KP/CMP/2011/3 (Part I). http://unfccc.int/documentation/documents/advanced_search/items/3594.php?rec=j&priref=600006560&suchen=ag&id_ag=92&anc=26. Accessed 28 May 2012

3 See, for example, *Food, Livelihoods & Climate Change in the Mekong Region: Summary Report of International Workshop*, Focus on the Global South, 2011. http://www.focusweb.org/content/food-livelihoods-climate-change-mekong-region-summary-report-international-workshop. Accessed 28 May 2012

Who Benefits from CDM? Perspectives and Voices from Communities

A case study from the Philippines
Focus on the Global South[1]
January 2012

Overview

The Philippines lies along the western rim of the Pacific Ring of Fire, which is a belt of active volcanoes, major earthquake faults, and tropical cyclones. This makes the country more vulnerable to extreme weather disturbances brought about by climate changes. In the last six decades, the annual average temperature has increased by about .57°C.[2] According to the scenarios simulated by the Philippine Atmospheric, Geophysical and Astronomical Services Association, the main weather forecasting and warning services government agency, widespread warming for 2020-2050 is expected, with longer hot days and shorter cold days. Severe climatic anomalies have also been recorded such as droughts, intense rains and floods, and an increasing number of typhoons and tropical storms. The Philippines ranks third in the list of countries most vulnerable to climate change. The report by the United Nations' University Institute for Environment and Human Security and the German Alliance Development Works lists the Philippines with a 24.32 % disaster risk, trailing behind Vanuatu as the top most vulnerable to climate change (with a 32 % disaster risk) and Tonga securing the second spot with 29.08 %.

While the country's vulnerability will increase in the future, the coping capacity of most of the population is limited due to poverty, lack of access to social capital, institutional fragmentation, and governance disconnection. Of the 32 provinces with poverty incidence of at least 40 %, half of them are hit by typhoons at least once a year.[3]

To address the gap and need to incorporate climate change in government policy formulation, the Philippine government passed the Climate Change Act of 2009 (Republic Act 9729). In 2010, the National Framework Strategy on Climate Change was also formulated as the overall plan to ensure the country's resilience to climate change through a balance of mitigation and adaptation initiatives and to chart a cleaner development path.[4]

A challenge for the government is the absence of a financing strategy for its climate-related needs, especially adaptation measures. The 2010 National Environmental Economic and Development Study (NEEDS) for Climate Change, which surveyed the financial development flows to the country, concluded that the budgetary resources allocated by the Philippine government for climate change adaptation have been far from inadequate. Even the larger budgetary share of disaster management from 2003-2008 only reflected the post-disaster relief and rehabilitation costs rather than efforts to mitigate the risks and expected damages from natural disasters.[5]

The country's climate vulnerability and the financial constraints characteristic of government programs offer a perfect environment to promote various loan or market-based finance schemes that promise to provide the much-needed investment to support the country's climate-related needs.

Binga is an agricultural community known for its rice terraces.

The Philippines has eyed the Clean Development Mechanism under the Kyoto Protocol as a possible source of investment to support its climate-mitigation activities, sustainable development initiatives and to attract foreign investors. As of March 2012, the UNFCCC lists 42 CDM projects in the Philippines, which accounts for less than one per cent of 3,886 registered CDM projects worldwide, 83 % of which are located in Asia-Pacific countries. Close to three-fourths of the Philippines projects involve waste—from landfills and wastewater treatment to swine manure, biogas and agricultural residues. The remaining ones are renewable energy projects such as hydropower, geothermal and rice hull/husk generation projects. Further, an overwhelming majority of the carbon credits will be sourced from installation of equipment or technology as part of an existing project or structure such as recovery pipes in landfills, installation of digesters in hog farms, incinerators in cement kilns, rehabilitation of existing hydropower plants.[6] The rest will come from stand alone projects which comprise building new wind and geothermal power plants.

The majority of projects involve financing from Europe: the United Kingdom (UK) and Northern Ireland, Spain, Netherlands, Switzerland and Italy. The UK and Northern Ireland are exceptionally involved in 28 small-scale CDM projects such as the installation of digesters in swine farms, renewable energy, landfill and methane recovery. The estimated emission reductions for these projects are 954,423 metric tonnes of carbon dioxide (CO_2) per year.

While the government expects to earn from the CDM, officials within the agency overseeing and approving the projects are aware that they are money-making schemes for corporations and local elites.[7] According to the investigative report "Clean Development Mechanism Projects in the Philippines: Costly, Dirty, Money-making Schemes" (Focus on the Global South, 2010) the multi-billion peso CDM may be promoting rather than mitigating climate change by rewarding polluters with additional revenues. The main beneficiaries of which are the country's oligarchs—the richest families and largest corporations that have interests in "dirty industries" that have huge carbon footprints such as oil, gas and coal-based energy, aviation, and extractive industries like mining and logging.[8]

But many of the CDM proponents claim that the projects benefit the communities where they are located. Is this really the case? What are the issues surrounding CDM on the ground? Who really benefits from CDM and what are the host communities' perspectives on them?

This paper offers some insights and answers to these questions. The following case studies focus on two of the

oldest hydropower plants in the Philippines, which are also amongst the first hyrdroelectric power plants to be approved under the CDM.

Case Studies: The Ambuklao and Binga Hydroelectric Power Plants

The Philippine government has targeted at least ten CDM projects for implementation under the 2006-2010 Medium-Term Philippine Development Plan.[9] The CDM is also being pursued under the country's thrust to develop renewable energy sources through the Renewable Energy Act of 2008. The act seeks to encourage private sector participation in the renewable energy industry through fiscal and non-fiscal incentives.

The country's installed capacity of 15,610 MW is dominated largely by fossil-fuelled power plants, with coal accounting for 27.4 %, followed by oil-based, 20.46 % and natural gas, 18.14 %. Renewable energy only makes up a little over 34 % (hydropower, 21.09 %, geo thermal, 13 %, and biomass, solar and wind, with barely .5 %). The Philippine government admits that reducing fossil fuel consumption and promoting the development and utilization of renewable energy remains a big challenge.[10]

The liberalized and market-based power industry put in place by the Electricity Power Industry Reform Act (EPIRA) relies heavily on the private sector for power generation, transmission and distribution. As of June 2010, the government was able to privatize 26 of its generating or operating plants and four decommissioned assets. Two of these are the Ambuklao and Binga Hyrdro-electric Power Plants (HEPPs), which were sold to SN-Aboitiz Power Benguet (SNAPB), a joint venture between Aboitiz Power Corporation (APC), owned by the Filipino business magnate Aboitiz, and Statkraft Norfund Power Invest AS of Norway or SN Power, a global renewable energy company owned by the Norwegian government.

The Ambuklao and Binga HEPPs, the country's two oldest hydroelectric facilities, are the first renewable energy plants to be registered as CDM projects. The HEPPs were approved by the CDM board in early 2011. But as early as September 2007, a month after the Philippine government opened the bidding process for the privatization of the two HEPPs, SNAPB already contracted a private firm, Point Carbon, to advise the company on the CDM possibilities of Ambuklao and Binga. In May 2008, after SNAPB was awarded the contract for Ambuklao-Binga HEPPs, the company's board passed a resolution to undertake the projects as CDM project activity with the view that the CER revenues are essential to make the projects viable.[11]

In September 2008, SNAPB submitted both HEPPs to the CDM with the twin goal of selling carbon emission reduction units (CERs) and reducing emissions in the

country by offsetting or displacing electricity generated by fossil fuel fired power plants in the Luzon-Visayas grid where the two plants are connected.

The CDM projects involve the revival of the grid-connected Ambuklao dam, after a 12-year hiatus due to siltation caused by a major earthquake in 1990 and the upgrading of the Binga HEPP, which was commissioned by the state-owned generation company National Power Corporation (NPC) in 1956 and 1960, respectively. Ambuklao HEPP has an installed generation capacity of 75 megawatt (MW) while the Binga HEPP has a capacity of 100 MW. Through the CDM, the combined HEPPs capacity will be increased by more than 25 % (Ambuklao's to 100 MW and Binga to 120 MW). Both are located on the Agno River in the villages of Bokod and Itogon in Benguet Province, in a relatively narrow and steep-sided valley, some 160-180 kilometers northwest of the Philippine capital.

The Philippine government through the Power Sector Assets and Liabilities Management Corporation (PSALM), the government-owned and controlled corporation which handles the NPC's assets, liabilities, and contracts, privatized the HEPPs in 2008 as part of the country's privatization program of the energy sector. Ambuklao and Binga are designed as peaking power plants, meaning that only the hydropower assets (the power plants) are privatized and the non-power facilities such as the dams remain government-owned.

(Left) Ibaloi Women Elders
(Below) Ambuklao Heritage Site

(Right) Ambuklao Heritage Site
(Below) The Ibaloi community celebrates the declaration of Ambuklao Heritage Site through traditional dance.

Both CDM projects will earn about 180,000 carbon credits a year for SNAPB. Together, the total expected emission reduction is 1,278,117 tonnes of carbon dioxide, over the first crediting period of seven years. More than three quarters of the estimated emissions reduction will come from the Ambuklao HEPP.

IFC financing

On June 17, 2008, The International Finance Corporation (IFC), the private sector arm of the World Bank group, provided a USD 100 million loan to SNAPB. According to the summary of proposed investment, the total project cost is currently estimated at around USD 560 million. The sources, all from private funds, include the IFC loan of USD 100 million, a Nordic Investment Bank loan of USD 60 Million, local banks consortium of USD 200 million and the remaining amount is expected to be financed by equity and internally generated cash flow. The uses of the loan include an acquisition price of USD 325 million, i.e. the cost of buying the two HEPPs from government, and rehabilitation/refurbishment capital expenditures of around USD 170 million. The IFC has already expressed full support for the registration of the projects under the CDM.

Complaints from the indigenous communities and CAO

A few days after the IFC loan approval on June 17, before the accreditation of Ambuklao and Binga HEPPs under CDM, members of the Ibaloi indigenous community and residents of the village of Tinongdan, Itogon in Benguet filed a complaint against the Ambuklao-Binga HEPPs at the Office of the Compliance Advisor/Ombudsman (CAO), an independent body and recourse mechanism that reviews complaints from communities affected by the development projects undertaken by private sector and insurance members of the World Bank group, IFC and the Multilateral Investment Guarantee Agency (MIGA)[12]. The CAO, which was established by the World Bank (WB), also reports directly to the WB President and is mandated to improve the environmental and social accountability of IFC and MIGA.

Based on its own Sustainability Framework document, the IFC had already identified that the project needs to address the following performance standards: environmental and social management capacity of SNAPB, and the expected technical support from the sponsors; environmental liabilities from past operations, and planned corrective actions; reservoir sedimentation; environmental upgrade plan; dam and reservoir safety; watershed management planning; and community engagement with indigenous peoples (IPs) that derive livelihoods from natural resources, in the reservoir and watershed areas. Only the land acquisition and involuntary settlement were not covered since land was already acquired and the indigenous people



relocated some 50 years ago when the two dams were originally constructed.

But the rehabilitation and privatization of the two HEPPs stirred historical tensions within the community as the Ibaloi people were displaced because of the original hydropower project. As displaced peoples, they raised the problem of displacement, deprivation of property, lands, and livelihoods of local communities and access to jobs and economic opportunities for local community members. Their complaint to CAO focused on three issues. First was the land ownership claims of the Ibaloi indigenous community and residents of Ambuklao-Binga, which were yet to be settled prior to the planned privatization of the HEPPs in 2008. The second referred to access to jobs and economic opportunities for local community members. The last one was the adherence of the planned privatization to appropriate standards.

In response to the complaints of the project-affected community, the CAO sent a field team to Ambuklao and Binga on July 16-23, 2008. The objective of the field team was to assess the situation and talk to the concerned groups including community leaders, the Council of Elders, elected officials from the various tiers of governments in Bokod and Tinongdan, a family of claimants (Lampitao family), community members and senior officials of SNAPB, government-owned and controlled corporations such as the National Power Corporation, the Power Sector Assets and Liabilities Management Corporation, government line agencies such as the Department of Environment and Natural Resources, and the National Commission on Indigenous Peoples.

On July 30, 2008, the CAO released a stakeholder assessment and framework document which guided its intervention in the SNAPB Ambuklao-Binga HEPP Project. The CAO classified the interests of various concerned groups into three: acknowledgement and respect of the past; build a collaborative relationship; and help to create joint opportunities, including socio-economic, for the future. It then embarked on a seven-month, three-stage process, which was designed to come up with a 'win-win' solution: assisting and strengthening existing community institutions (local government units and IP organizations) and the corporations to effectively represent the views of their principals and constituents; joint training and capacity building among the various 'stakeholders' for a multisectoral collaborative dialogue; and a facilitated dialogue process involving representatives from the indigenous communities, local officials, the NPC and PSALM and SN Aboitiz Power Benguet. The process, according to CAO's Complaint Conclusion Report (August 2009), was specially designed as it utilized a values-based mediation and negotiation training and facilitated dialogues rather than an adversarial or confrontational approach.

CAO brokered the signing of a final agreement among all parties in May 2009. The memorandum of agreement contains provisions for the following:

- access to land and usufruct rights for communities and communal property including the establishment and development of an Indigenous Peoples Cultural Heritage site,
- local benefits from the Corporate Social Responsibility fund of the private company, and revenues for the local government,
- enhanced livelihood for local people through the NPC's watershed development and protection programs,

- SN Aboitiz's provision for local employment and benefits through contracts for goods and services. [13]

Community Voices and the Big Picture

Lack of information and active citizenship

According to the community members of Binga and Ambuklao, SNAPB did conduct two separate consultations on the planned rehabilitation of the HEPPs and the CDM. Interestingly, these consultations were done prior to the CAO's field assessment. On July 14, 2008, SNAPB conducted a consultation with 144 'stakeholders' of the village of Tinongdan. For Ambuklao, the consultation was conducted the following day, July 15, and attended by 169 residents and leaders. On both occasions, according to SNAPB, they did not receive any comments prior to the consultations.

Through the consultations, SNAPB managed to get the general approval and social acceptability of their planned revival of Ambuklao and upgrading of Binga HEPPs. The company also presented their programs and plans to gain the communities' approval. These included the improvement of livelihood and other economic opportunities such as local employment in the community, promotion of sustainable use of natural resources, education and training to build the capacities of local stakeholders (on agroforestry, forest protection and fighting forest fires; assigning Community Relations Officer), and provision of financial resources to the community, with PhP 2.4 million or USD 56,000 per year for electricity subsidy, a portion sourced from their corporate social responsibility (CSR) fund.

Attorney Michael Hosillos, Vice President for Corporate Affairs of SNAPB, was confident and optimistic that everyone would benefit from the Ambuklao-Binga HEPPs CDM project.[14] According to him, the host community is at an advantage. Through SNAPB's selling or trading of the 180,000 CERs which the plants can generate annually, more projects can be realized for the 'stakeholders', who are mainly indigenous people belonging to the Ibaloi tribe.

(Previous page) Residents of Binga and Ambuklao interviewed for the case study. In the center is Ramon Capsula, one of the village leaders of Binga. (Below) Atty. Michael Hosillos, Vice President for Corporate Affairs of SNAPB in an interview with Emiloone West Fianza.

If the overall positive attitude of the community members of Binga and Ambuklao toward SNAPB is a sign, the promises of 'corporate social responsibility' seem to be doing its work. But the interviews with community members reveal a rather different story.

For one, most of the residents interviewed are unaware of CDM. Residents from Ambuklao and Binga are unfamiliar about its details, what it exactly stands for, and why the private company registered the HEPP under the mechanism. For instance, comments such as "haan ko ammo dayta" *(I'm not familiar with that/CDM)* or "saan ko sa naawatan dayta a" *(I think I didn't understand...)* were the usual response of other interviewed residents of Ambuklao and Binga. Village leaders, on the other hand, claim that they know about CDM. For instance, a village council member of Binga, Mr. Ramon Capsula, said that the company provided the community with information about the CDM. According to Capsula, *"Ada. They even brought that information idjay baranggay. Actually ti baranggay, ada met ti informationda iti CDM. Dagitada ngarud ket haan da mabalin nga ma i-implement, kailangan da metlaeng iti sitwasyon ti community. They briefed both the baranggay officials ken dagijay organizations. Isunga dagita ket well-informed.* (Yes. They even brought the information to the baranggay. The baranggay has information about CDM. They can't implement that without the community. They briefed both village officials and organizations. They are well informed.)

Although it became clear as the interview continued that Capsula did not understand the precise details and mechanisms of the CDM, he did mention that *"Iti company ket hydro...green energy. Makita tayo nga haan da unay nga producer iti carbon dioxide. Isu nga nu kitkitan ket, pabor tayo. Talaga nga mayat. Ada kuma ti close coordination ti LGUs tapno parallel with their program."* (The company is hydro... green energy. We can see that they don't produce much carbon dioxide. That's why we are in favor. It's really great. But there should be a close coordination with the local government units so that it's parallel with their program.)

The main source of the information on CDM was clearly from the SNAPB. When asked if the communities receive other information on the theme apart from the private company, the interviewees were in unison in saying "haan" *(none)*, not even from the local government.

While they recognize the efforts made by SNAPB to help the community and fulfil the promises made, some residents question who gets to benefit from the CDM. According to one resident of Ambuklao, the company will for sure profit but what benefits will the community get or the people. *"Ngeum nu private, idjay manen ti ikablan da, ti kayat ko ditoy barangay tano pag-ay-ayamen mi met nga datayo nga kwa."* (If it's private... what I want is for the barangay to receive benefits so we can have something to work with.)", said Benny Macloy of Ambuklao. During the consultations, the company, on the other hand, claim that they have not yet profited from the carbon credits because they spent millions for the rehabilitation of the two HEPPs. This was reiterated by Macloy stating in Ilocano, *"Haan da pay nga nag-subot piman ta milyon ti ingastos da."* (They haven't profited from it [CDM] because they spent millions).

Ibaloi elders and residents of Ambuklao and Binga interviewed for the case study.



A general observation here is whether or not "consultations" can be made meaningful when there is such an imbalance of understanding between the different stakeholders. Take the case of their views on climate change. Many interviewees are aware of the changes in the environment but are unfamiliar with the term "climate change". While there is no consensus whether climate change is real or not, the residents are in unison about the erratic and unpredictable weather patterns that they collectively experience. According to them, the wet or dry seasons are either longer or shorter than usual. Extreme cold and hot temperatures are becoming more and more common. Airborne diseases are also prevalent, which affect the health of the people in the communities. Water is becoming scarcer.

The residents collectively blame burning as the culprit of climate change. Some residents admitted burning their refuse but others are plainly unaware of the effects of climate change. Perhaps, these residents have yet to feel the great climatic changes in their areas and information dissemination in their community is probably not that effective.

Residents who are familiar with climate change are engaged in personal causes. For instance, village leader Ramon Capsula advocates for the stopping of any type of burning in the communities. Ambuklao resident Ceryl Eckman on the other hand recycles and collects his biodegradable garbage in a pit to be used as fertilizer. But informed officials such as Ramon Capsula proposed that in addressing climate change, *"papigsaen da kuma iti political will. Dapat nga agtinulong ti DENR, kapulisan ken local officials. Ada kuma metten ti aramiden da, ti rigat na, awan iti action. Isu nga inggana tatta, kasla nga ay-ayam laeng iti panunot."* (Political will should be strengthened. The Department of Environment and Natural Resources, the police and local officials should help each other. The problem is, no one acts that's why until now... it's like they're not serious...)

Private vs. public

The history of the hydropower plants acquired by the company is fraught with environmental damage and human rights violations, especially of indigenous people belonging to the Ibaloi tribe. In this case the perpetrator is the Philippine government. Ramon Capsula, one of the leaders of the Binga community, expressed that the hydropower plant was developed in the name of national interest but the project evicted the people from the host community, uprooted them from their lands, which led to loss of their livelihoods and sources of income.

SNAPB is re-addressing the communities' vulnerabilities and old wounds. According to Capsula, "with the Aboitiz, there's a big difference. First, they allocated PhP 1 million for each host community; there's also PhP 1 million (approximately USD 23,500) for the municipality. Based on my experience, aside from CSR projects, they conduct medical missions and various projects for the community. They spend for CSR. They sponsor officials' trainings. I can see that they are helping a lot. I have seen them personally." The interviewees mostly had good words for the company. Local government officials from the village were particularly happy with the company's takeover of the two HEPPs. Hon. Benjamin Saguid, provincial board member of the first district of Benguet, even hoped that the company stays for a long time.

SNAPB is indeed winning the trust of the communities by giving them the promises of employment, livelihood projects, and electricity subsidies and by sponsoring socio-cultural events such as the Indigenous Peoples Month, Senior Citizens Month and Mt. Purgatory Climb Culminating activity, for which they provided PhP 100,000 or USD 2,353.

The CAO's negotiation process also helped build some form of good faith between the SNAPB and the communities of Binga and Ambuklao. For these communities who have experienced years of historical wrongs and with a collective animosity towards the national and local governments, it definitely becomes easy for the private sector to become the "knight in shining armor".

The residents and indigenous peoples of Ambuklao and Binga have historically resisted the government's construction of the two dams and the National Power Corporation's management of the plants but to no avail. But the three-stage process of intervention embarked by CAO may have contributed to the overall positive attitude of the interviewed residents of Ambuklao and Binga. For one, the alternative dispute resolution and negotiation facilitated by CAO created communication lines between the communities and SNAPB, which apparently to this day is continuing[15]. The interviewed residents and community leaders have nothing but positive comments about the Aboitizes.

Rewarding polluters and promoting "power" monopoly

The host communities are largely in the dark about the underlying objective of the company applying for CDM accreditaiton for the HEPPs. But SNAPB is clear about that: it is for their bottom-line, for profit; it is after all a business. From the Binga HEPP alone, SNAPB stand to reap from a range of USD 4.6 million to USD 11.6 million for the sale of CERs.[16] Profits from the Ambuklao HEPP are in the same range.

So while the CDM accreditation is a seal of "environmental goodness" for the SNAPB, it is really a mechanism for them to get more money. It is unclear whether SNAPB would have invested in the hydro projects without the CDM. However what's clear from the project timelines and official project design documents was their claim that CDM revenues are essential for the viability of the project. The CDM projects will contribute on the average below 1% of gross power generated by renewable energy in the country.[17] This figure becomes even more measly when contrasted with fossil-based power generation.

In fact, in the scheme of things, the two CDM-rated hydroprojects represent just a fraction of the huge portfolio of the Aboitiz Power Group, the Filipino co-owner of SNAPB: 42% of their energy production is from fossil fuels, large dams 30% and geothermal 27 %. The two HEPPs comprise 13.6% of the total dependable capacity of the Aboitiz energy.

What's clear here is that while one hand reaches out to protect the environment, the other continues to destroy it.[18] Herbert Docena, former research associate of Focus on the Global South who did an in-depth research on CDM in the Philippines, calls this (in economic terms) "perverse incentives", i.e. the more fossil fuels they can claim to offset or displace in the national power grid, the more emissions reductions they will earn from, which in turn allow them to invest in even more dirty fossil fuelled power plants, and so on and so forth. So much for "environmental goodness".

Another big issue here is that the CDM further increases the monopoly and control of few families in the country's power sector. The host communities of Ambuklao and Binga are also unaware that the Aboitizes[19], the Filipino co-owner of SNAPB, are one of the biggest players in the energy sector. The Aboitiz family control the second largest power generation and distribution company in the country. As one of the main beneficiaries of the privatization of the Philippine power sector, more than half of their profits are derived from their interests in power.

Conclusion: In search of alternatives, active and politicized citizenry

The Ambuklao and Binga HEPPs present an interesting nexus between corporate control, the involvement of IFC financing and the CAO, government and corporate social responsibility as a tool to gain social acceptance and legitimacy for the company and CDM projects on the ground. However, as the case study showed, there is a question whether consultations become meaningful when there is an imbalance in understanding among 'stakeholders'.

But the government's own inefficiency and historical transgression against these communities have made it easier for the private sector to step in and present what they call as 'alternative' to the government, especially with the private company offering livelihood packages, employment, and even monies. At the heart of the issue still is whether a CDM project makes a difference in terms of social and environmental sustainability.

The lack of active and politicized citizenry makes it even more difficult to imagine alternatives and new ways of governing resources. This is not to say that communities in Ambukalao and Binga are not capable of resisting the CDM or coming up with community-based alternatives to address climate change. But to reach that, the basic step of bridging the information gaps in terms of what CDM is really doing, what climate change is, and the policies of government must be addressed. After all, information is power. But for sure, organizing and politicizing the residents of Binga and Ambuklao will be a tough act, especially up against a company providing economic resources to the community, even if they are negligible compared to the scale of company profits. To put it crudely, the company garners tens of millions a year from the sale of CERs, while the communities get some crumbs (relatively speaking) to "subsidy" the purchase of energy from the company and community development. Sooner or later though, the communities will learn for themselves who the real beneficiaries of the CDM projects are. If the numbers above are any indication, it will surely not be them. Let's hope it will be sooner than later.

(Previous page) Site of the SNAPB hydroelectric power plants.
(Below) SNAPB in Ambuklao.

The Agno rivers run through the communities of Ambuklao and Binga, making it a major source for drinking water, agriculture, and hydropower.

1 All local interviews were done by Emiloone West Fianza, a freelance researcher based in Baguio City, Benguet. All interviews were done in Ibaloi and Ilokano languages and transcripts were translated to English. Interviews were done from October 20, 2011 in Ambuklao and October 22-24, 2011 in Binga.

2 Republic of the Philippines, Philippine Development Plan 2010-2016, Manila: National Economic and Development Authority, 2011, p.313

3 Ibid., pp. 311 (Table 10.3.Hazard Susceptibility of Selected Provinces by Poverty Incidence) and 313.

4 Adaptation is still the overarching framework.

5 Resources, Environment, and Economics Center for Studies, Inc. National Environmental Economic and Development Study (NEEDS) for Climate Change, March 18, 2010, http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/philippines_final_report_needs.pdf, Accessed on October 13, 2011.

6 Herbert Docena, The Clean Development Mechanism Projects in the Philippines: Costly, Dirty, Money-Making Schemes, Focus on the Philippines Special Reports, Focus on the Global South: Quezon City, June 2010.

7 Ibid.

8 http://www.focusweb.org/books/cdmphilippinesreport, accessed 21 May 2012

9 Joseph Purugganan, *"Chapter 9: Case study of CDM governance in the Philippines"* in Governing finance: Critical perspectives from Africa, Asia and Latin America, edited by Trusha Reddy, ISS Roundtable Report: Capetown, September 1-2, 2010.

10 Philippine Development Plan, p. 151.

11 Binga Hydroelectric Power Plant, Project Design Document Form (CDM PDD) Version 3, p. 14

12 MIGA is member of the World Bank Group with a mission to promote foreign direct investment (FDI) into developing countries to help support economic growth, reduce poverty, and improve people's lives by providing political risk guarantee to the private sector

13 Memorandum of Agreement on the take-over of Amubklao-Binga Hydroelectric Power Plant by SN Aboitiz Power from the National Power Corporation, May 19, 2009, Baguio City.

14 Interview with Atty. Michael Hostillos, October 20, 2011.

15 Ramon Capsula, the village official directly communicates with SNAPB the community concerns. He was part of the CAO intervention process.

16 See Annex 1: Calculation of Estimated CDM Revenues from the Philippines in Herbert Docena, The Clean Development Mechanism Projects in the Philippines: Costly Dirty Money-making Schemes, p. 90-91.

17 This is based on the 2003-2005 baseline data provided by SNAPB in their project design document form. Binga HEPP will generate on the average 61,349.71 MW/h for the first crediting period of 7 years; while Ambuklao Binga HEPP will generate 44,349.2MW/h on the average from 2011-2017. The total average gross power generation of renewable energy in the country for the period 2003-2005 is 13,310,199 MW/h.

18 Germelina Lacorte, "Big power firms cashing in on CDM while destroying environment – report", MindaNews, December 2, 2010. Accessed at http://www.mindanews.com/top-stories/2010/12/02/big-power-firms-cashing-in-on-cdm-while-destroying-environment-report/ on April 27, 2012.

19 The Aboitizes include Jon Ramon Aboitiz and family and Enrique Aboitiz and family. Their other business interests are in real estate, heavy industries, construction, transportation, banking and others. Many of these are considered dirty industries.

CDM in Thailand: Perspectives and Experiences at the Community Level

Focus on the Global South and Thai Working Group for Climate Justice January 2012

Introduction

Although the number of clean development mechanism (CDM) projects in Thailand already receiving certified emissions reductions (CERs) and trading carbon credits is still limited, CDM is perceived by many, particularly policy makers, as a potential channel to generate national income and stimulate technology transfer, thus strengthening the country's capability to reduce emissions and, to some extent, adapt to climate change. The business sector sees CDM as promising new income source that can also create a positive image for the company [1] [2].

However, one must not forget that the key objective of CDM (which is one of the flexible mechanisms under the Kyoto Protocol) is to help achieve overall greenhouse gas reductions more efficiently. It is believed that the market is an effective mechanism to match demand and supply of carbon credits between developed and developing countries, which will stimulate 'GHG reduction activities' as the same time as promoting 'clean' and 'sustainable' development. Therefore, the assessment of CDM depends largely on whether or not it has led to a reduction of GHGs emissions, especially in comparison to non-market mechanisms. Furthermore, other key factors for measuring the success of the mechanism include various aspects of 'sustainable development' and how and to whom benefits from CDM projects are distributed.

This paper is divided into two parts: part one discusses the situation and trend of CDM in Thailand and part two is case studies of CDM projects in order to identify positive and negative effect at the community level.

PART 1

Situation and Trend of CDM in Thailand

For systematic and efficient implementation of CDM, the Thailand Greenhouse Gas Management Organization or TGO was established on 6 July 2007. It has the mandate to promote as well as analyze and screen CDM projects in Thailand. As the designated national authority (DNA) for implementation of CDM under the Kyoto Protocol, TGO has the authority to issue Letters of Approval (LoA) which is one of the documents required for registration of CDM projects with the CDM Executive Board (CDM EB). A set of sustainable development criteria[3] established by TGO are used to consider if a project should receive a LoA or not. The criteria are divided into four main categories with 24 indexes:

1. Natural resources and environment category: environment (greenhouse gas reduction, pollution) and natural resources (water management, water use efficiency, soil and coastal erosion, increasing green area, etc.)
2. Social category: public participation, social and cultural development, health of workers and communities

3. Development and technology transfer category: technology development, plan after crediting period, human resources development
4. Economic category: jobs creation, increase income of stakeholders, use of renewable energy, energy efficiency, use of domestic materials.

For each index, a project is rated from (-1) to (+2); a project must receive an aggregate positive mark in each category to ensure it contributes to sustainable development of the country in order to receive a LoA.

As of 28 September 2011, 146 CDM projects have received letters of approval from the TGO. Of these, 55 projects are already registered with the CDM EB and seven of these registered projects have been issued certified emission reductions (CERs).[4] The 146 CDM projects can be divided broadly into two categories in consideration of their potential impact at the project sites. One group is the CDM projects that relate to improvement of existing operations (internal improvement) where pro-spective incomes from carbon credits would be an incentive for the industries to install necessary technologies in order to improve performance or efficiency of their activities. For example, cassava plants already producing high organic content wastewater and causing problems to local communities may be incentivised by CDM (income from carbon credits) to install wastewater treatment (reducing emission) and subsequent electricity generation units (non-fossil energy).

The second group is the CDM projects that lead to completely new industrial activities such as bio-mass/ rice husk power plants. These projects have higher risk of generating impacts at the project site level.

Currently, of all the 146 projects having received the LoA from TGO, 21 are biomass projects; 14 of these are fueled by rice husk.

Problem with projects sites and proximity to communities

It is evident from the mapping investigation[5] of the project sites that there is a general tendency to locate biomass power plants as close as possible to the raw material sources for convenience and cost-saving in transportation and management. It is therefore difficult to avoid locating them near communities due to the availability of required infrastructure. Moreover, these biomass materials are generally residues from agricultural activities of communities. In this regard, communities' concerns of impacts from the power plants on their health, environment, and society are inevitable especially in cases of large-scale biomass power plants which are likely to be associated with dust and air pollution.

Loopholes in the existing environmental protection system and practices

Under the Environment Protection and Conservation Act B.E. 2535 (A.D. 1992), power plants generating electricity at 10 MW and above shall conduct an environmental impact assessment (EIA) with public hearings. Any biomass power plant project, being CDM or not, must fulfill this regulatory requirement. However, some projects clearly attempt to avoid this compliance by specifying their capacity 'slightly lower', i.e. 9 to 9.9 MW instead of 10 MW. This is also the case of some biomass/rice husk power plants projects. The significance of the 0.1 to 1 MW difference in power plant capacity and the extent of their impacts versus the need to conduct proper impact assessment and public hearing before approving a project are being debated.

To illustrate, nine out of 21 CDM biomass power plant projects which already received LoA from TGO are power plants with generation capacities between 9 - 9.9 MW, hence they are not obliged by the law to conduct an EIA and public hearing. This is clearly a loophole in the Thai environmental protection system. However, as for the CDM projects, they have to pass a set of sustainable

Biomass power plants already received LoA from TGO*	Projects
Biomass power plants from rice husk	14
Biomass power plants from bagasse and cane trash	4
Biomass power plants from palm empty bunch and residues from oil palm industry	3

* Source: 28 September 2011, www.tgo.or.th

development criteria laid down by TGO in order to receive the LoA. Therefore, at least in principle, the loopholes in the Thai environmental protection system should be solved to ensure that health and the environment of communities are not compromised in the case of CDM. This particular issue will be examined in the later part of the paper.

Biomass materials and economic values

It can be argued that the operation of biomass power plants is promoting the efficient use of agricultural industry byproducts and creating additional value for such materials. Nonetheless, some materials may still have value in other uses. For example, rice husks are useful in many agricultural activities (fertilizing and maintaining soil humidity) therefore burning them as fuel in power plant should be balanced against other economic values. Additionally, the current high demand for rice husk in Thailand results in high prices and supply shortage which could in turn force some rice husk/biomass power plants to use other biomass materials as fuel, e.g. wood or wood chip, which could entail more environmental consequences than originally envisaged.[6]

CDM projects and contribution to Thailand's emission reduction

How and to what extent CDM projects contribute to Thailand's total emission reduction is still open for debate. The 146 CDM projects having received LoA (by 2011) claim to reduce 8.79 million tCO2e per year. However, this level is very small compared to the total GHG emission of the country which was at 367 million tCO_{2e} per year in 2005 (the most recent available official data)[7]. In this regard, other legal mechanisms or economic instruments such as tax or regulating/capping should be considered in order to achieve higher GHG emissions reductions. Moreover, since these are CDM projects, the amount of emissions reduced should not be accounted as Thailand's emission reductions (at least during the CDM project period) since they are accounted for by the credit buyers already—otherwise it would be double-counting.

Economic additionalities—still debatable

Apart from directly benefiting the projects owners, it is still difficult to prove how CDM projects benefit the country as a whole and to what extent CDM is responsible for the

promotion of renewable energy nationally. In the case of Thailand, the growth of renewable energy has been linked largely to the agriculture sector (as the source of cheap raw material) and the high growth rate of biomass and biogas power generation projects does not show any correlation with the number of projects under CDM. Official statistics reveals that the current combined capacity of biomass power generation total at 1,751.86 MW[8], out of which only 236.71 MW (or 13.51 percent) came from CDM projects.

Furthermore, the official Alternative Energy Development Plan: AEDP 2012-2021 indicates the target to increase overall biomass power generation capacity to 3,630 MW by 2021, yet out of all the strategies identified in the plan in order to achieve the target (i.e. using feed in tariff) CDM or carbon credit were nowhere to be found.[9] It is important to note that Thailand has a system that gives incentives to renewable power plants to sell power to the grid (the special buying price depends on fuel/type of renewable). This could mean that there are already enough incentives for this kind of project and the financial gain from CDM (i.e. money from selling carbon credits) is not the main factor driving the development of these projects. At a conference organized by TGO[10], a prominent CDM project operator noted that a "carbon credit is like a bonus as the project's electricity sale also receives [the] state subsidized grid-rate".

PART 2: Case Studies of Two CDM Rice Husk/ Biomass Power Plant Projects[11]

CASE 1: A.T. Biopower, Pichit province. Project Owner/Developer: A.T. Biopower Co., Ltd.

The rice husk power plant project is located in Pichit province. It received a LoA on 30 January 2007 and was registered with CDM EB on 18 June 2007. It is one of the first seven CDM projects in Thailand to be registered with

the CDM EB and the first to receive CERs on 4 June 2008 with 77,292 tCO2e per year. The rice husk power plant has a capacity of 22 MW and its Environmental Impact Assessment (EIA) under the Thai regulation was approved[12]. The EIA indicated that impacts from the project will be minimal or kept within relevant Thai (environmental) standards. The power plant would be sourcing rice husk (fuel) from different locations; in this regard, the EIA study also indicated the number of trucks transporting rice husk to the power plant at 40 trucks per day and concluded that this would not affect communities[13].

However, in practice there are differences from what was evaluated in the EIA study. Communities around the rice husk power plant have reported problems of dust after the power plant started operation. It was observed from the field visit that houses near the facility need to close their doors and windows all the time to prevent too much dust accumulating inside. Additionally, the community leader pointed out that the "dust pollution is caused by trucks delivering rice husk to the power plant". [14] This is inconsistent with the claim that there would be no effect on communities from transporting the material.

Conflicts in local communities related to the power plant arose even before the plant started operation. Communities were divided between supporters and opponents to the power plant. It was revealed that the conflicts originated from the difference in benefits (or impacts) they would receive from the project. Although a public hearing was organized, many people who did not live close to the project area but in nearby sub-districts were participating in the event. Furthermore, participation in the public hearing was selective; most invited people were those who already support the project.[15]

On the other hand, the National Energy Policy Council regulates that power plants contracted to sell more than 6 MW electricity to the national grid need to establish a community development fund (CDF)[16] to improve the quality of life and environment of community members and areas around the power plants (which are affected by the projects). The A.T. Biopower Co., Ltd. power plant in Pichit established a CDF on 11 January 2008 which is chaired by the district-chief.

Initially the Fund supported seven sub-districts in two districts which have areas adjacent to the power plant. This fund-distribution practice has been criticized because it includes communities/settlements which are not near the power plant but only sharing administrative boundaries with districts adjacent to the plant. Furthermore, access to the CDF has been facilitated particularly to those who are part of the Fund's management committee and their circle of intimates.[17] There is a proposal from the community that priority should be given to those living closest to the power plant (i.e. those directly/most severely affected) while taking into account distances between the power plant and communities instead of the administrative boundaries. Also, "information and regulation on how to distribute the Fund should be made public and disbursements should be in relation to the severity of the impact from the power plant operation". [18]

CASE 2: Buasommai I biomass power plant at Muang Roi Et district. Project Owner/ Developer: Buasommai Electricity Generating Co., Ltd.

The biomass/rice husk power plant generates 9.9 MW of electricity. The project received a LoA from the TGO on 16 February 2011. Registration with the CDM EB[19] is still in process[20]. The project is located about two kilometers from the center of Roi-Et province at Moo 10 of Nua Mueng subdistrict in Muang district (the center of the province). The project site has a rice mill owned by the same company group which has been in operation since 1998. The construction of additional rice husk/biomass power plant started in 2008.

Since the beginning, most communities around the facilities did not agreed with the establishment of the rice mill and have been opposing its construction. After the rice mill started its operation, the communities have been facing environmental problems such as increasing dust and waste water and growing health problems i.e. skin and eye irritations (there has been a doubling of patients with the indicated symptoms at local health unit)[21]. These problems persist especially after the latter most re-cently constructed power plant started to operate. Villagers observed the intensification of dust and the health problems. However, until now there is no systematic study to quantify to what extent the prob-lems are caused by the rice mill and how much has been the result of the additional rice husk/ biomass power plant.

During the construction of the Buasommai I power plant, visits to other biomass power plants were organized for some community leaders, although there has been criticism that very few people went on these visits. As testified by the community leader, "the visit discussed mostly the positive side of the project and its processes and standards; the potential negative impacts were discussed much less."[22] Furthermore, the project developer had emphasized the job-creation possibilities of the project, saying that many positions would be opened up for local community members. However, this is not the case in practice. Operating the power plant requires specific knowledge and skills and at minimum graduates with bachelor degree; this has been the main obstacle for people in the communities. "Very few local people were able to get jobs and they are solely positions in the rice mill, not the power plant".[23]

One interesting point is that, according to the villagers, the public forums which the company organized for communities did not mention that the project would be part of the global carbon market with the potential of generating extra income.[24] This demonstrates that the project developer did not provide comprehensive information particularly relating to CDM to the local communities. Under the National Energy Policy Council regulation, the Community Development Fund for communities around the Buasommai I biomass power plant in Roi-Et was established. Three villages closest to the power plant location should benefit most from the fund since it is intended to help affected people and to promote sustainable development in communities. However, it has been criticized that "support to the communities is only in the form of charity and does not address priority needs."[25] Complaints or requests from communities are dealt with in an ad-hoc manner: for example, communities requested more medical personnel to help identify the causes of people' sickness but there was no response to the request and instead the company used the fund (150,000 THB) to construct a building for a community herb project.[26]

With the above mentioned situation at the Buasommai case (rice mill and biomass power plant) in Roi-Et, communities have proposed that, in order to reduce conflicts and build trust and raise the standard of project operation, approval of a project should require careful consideration of other related components/activities in the same areas which may potentially affect or exacerbate the existing impacts on communities, i.e. in this case, the rice mill. Furthermore, continuous monitoring of the plant's operation should be organized to ensure compliance with required and proposed standards.[27]

Summary from the case studies

The social, economic, and environment impacts of the CDM (rice husk/biomass power plant) projects are summarized as follow:

1. Conflicts intensified and communities participation have been problematic

Conflicts started even before the operation of the projects; communities are divided between supporters and opponents. This type of problem is not uncommon, but the question is whether the project operators have intensified the conflict by intentionally involving and rewarding selective groups especially those who have the tendency to support the projects. For example, in both cases, an unusually high proportional number of people who do not live in close proximity have been observed participating in the consultations process which raises concerns about the legitimacy of the processes.

This problem could be overcome if the project owners and relevant agencies could ensure transparent and just public participation and decision making

processes. Additionally, priority should be given to the groups who live in closest proximity of the projects hence they would be/have been directly affected by the project activities. Using administrative area boundaries to determine stakeholders for public participation, as discussed above, would include many people who live further away and are not or not directly affected by the projects therefore potentially having more positive impressions of the projects. Nonetheless, it is important to note that there has not been any attempt thus far from the project owner or the concerned agencies such as TGO to improve the process in order to lessen the conflict.

2. Information for communities' decision making was incomprehensive

It is evident from the interviews and the public consultation report[28] that information from project proponents is likely to be biased toward positive aspects of the projects while communities affected by the projects had complained of the lack of discussion about negative implications. Incomplete information is problematic to informed decision making. It is vital that potential negative impacts from projects activities are discussed with local communities, particularly the information necessary to establish effective monitoring and mitigation measures. The interesting point is that information regarding the potential benefits from carbon credits/carbon market (in the case that the project receives CDM status), which are the core components of the projects, were judged by project developers and concerned agencies as insignificant; hence they were not well elaborated or even discussed with community members.[29] Hence, community members have virtually no information or understanding regarding the carbon

credits gained by the projects, which limits the ability to negotiate on benefit sharing from the carbon-generated income.

3. Positive economic implications to local communities are uncertain

Buasommai had claimed that its power plant would create many jobs for local people; this claim has not been realized. The reason given was that local people have not been qualified for positions in the power plant due to their education level and lack of required skills.

Furthermore, the increasing price of rice husk, hence increasing incomes for rice farmers, has been a result of general increase in the demand of rice husk for the whole country and cannot be directly attributed to the CDM project in the areas. The rapid hike in the price of rice husk was the result of the sharp increase in number of, mostly non-CDM, biomass power plants across the country in recent years.

Moreover, the Community Development Funds to be distributed to affected communities are already required by existing national legislation, thus benefits from the Funds are not resulting from these projects joining CDM; with or without CDM and income from carbon credits, the Funds would be established. There is no requirement for the project owner to use carbon-generated income to finance the Community Development Fund or any initiatives to support local communities. Thus, money from the sale of carbon credit is practically a non-conditional bonus for the company. Moreover, there is no requirement for the power plant to provide cheap electricity to the surrounding communities.

In summary, it is still not possible to identify positive economic implications of these two CDM projects for the local communities.

4. Environmental impacts from CDM projects persist

Environmental problems, pollution and health impacts on communities from these two projects have been evident despite the fact that one project had undergone the EIA process and received CERs and the other received the LoA. Affected communities pointed out that these problems remain severe and have not been systematically tackled to date.

Conclusion

CDM projects having received LoAs from TGO should, at least theoretically, guarantee higher environmental standards and sustainability than normal projects. However, it has been evident from the case studies that these CDM projects have not added measurable benefit to local communities, and still cause social, economic, and environmental problems like other non-CDM projects.

This situation suggests that TGO should reform its sustainable development criteria and project approval process and include monitoring process of CDM projects already in operation; particularly putting most potentially affected communities at the center and adhere to transparency, participation, and justice principles. Otherwise CDM money from the carbon credits will not benefit the society; instead this new finance would further aggravate social and environmental problems, at least at the community level.

1 A.T. Biopower, Retrieved 20 February 2012, URL http://www.atbiopower.co.th/index_e.htm
2 Buasommai Group, Retrieved 20 February 2012, URL http://buasommaigroup.com/th/electricity/
3 Thailand Greenhouse Gas Management Organization. Sustainable Development Criteria. Retrieved 11 May 2011. URL: http://www.tgo.or.th/index.php?option=com_content&view=article&id=105:cdm-sd-criteria&catid=59:national-approval-&Itemid=12
4 Thailand Greenhouse Gas Management Organization. Status of CDM Projects in Thailand. Retrieved 28 September 2011. URL: http://www.tgo.or.th/index.php?option=com_content&view=category&id=60&Itemid=13
5 Thailand Greenhouse Gas Management Organization, Location of CDM projects in Thailand, http://www.tgo.or.th/index.php?option=com_content&view=article&id=111:project-map&catid=60:thailand-cdm-projects&Itemid=92
6 Sodsai Sawang-sok, 'Biomass Power Plant: Doing Bad in order to be Good", http://www.thaingo.org/writer/view.php?id=1306
7 Office of National Resources and Environmental Policy and Planning, National Master Plan on Climate Change 2010 – 2019, Draft November 2009.
8 Department of Alternative Energy Development and Efficiency, Ministry of Energy, http://www.dede.go.th/dede/
9 Alternative Energy Development Plan: AEDP 2012-2021), Ministry of Energy, http://www.dede.go.th/dede/images/stories/aedp25.pdf

10 Natee Sithiprasat, presentation at Carbon Credit: New commodity generating income for the country conference co-organised by Thailand Greenhouse Gas Management Organization and Thai Bankers' Association, Siam City Hotel, Bangkok, 5 July 2010.

11 Field survey was conducted by Mr. Natthawut Uppa for a combine period of eight days between 30 April - 26 July 2011. The study area comprises selected cases in 3 provinces as follow: 3 villages (Baan Nongnasarng Moo10, Baan Nongmuang Moo12, and Baan Nongbuathong Moo13) in Muang district of Roi-et province; in Horkrai and Nernmakork subdistricts in Bangmoonnark district of Pichit province; and in Namsong subdistrict in Payuhakeeree district of Nakhonsawan province

12 A.T. Biopower Co., Ltd., Environmental impact management. Retrieved 22 May 2011. http://www.atbiopower.co.th/power_plant/power_plant_khomun_t.htm

13 A.T. Biopower Co., Ltd., Environmental impact management. Retrieved 22 May 2011. http://www.atbiopower.co.th/power_plant/power_plant_khomun_t.htm

14 Sakon Malavej, School teacher and community leader, Bangmoonnark district of Pichit province, interviewed on 24th July 2011

15 Thanathep Wanboon, Village committee member, Bangmoonnark district of Pichit province, interviewed 25th July 2011

16 Community Development Fund for improvement of quality of life and environment of communities around power plants in sustainable manner. Retrieved 22 June 2011. URL http://www.eppo.go.th/cdf/about_cdf.html

17 Thanathep Wanboon, Village committee member, Bangmoonnark district of Pichit province, interviewed 25th July 2011

18 Sakon Malavej, School teacher and community leader, Bangmoonnark district of Pichit province, interviewed 24th July 2011

19 Thailand Greenhouse Gas Management Organization. Implementation of CDM Projects. Retrieved 11 May 2011. URL: http://www.tgo.or.th/index.php?option=com_content&view=category&id=39&Itemid=46

20 The first version of PDD was submitted in January 2003 to the CDM EB and since then was requested to revised two times in July 2005 and the last time in December 2006. The latest version of PDD (v03), available on the UNFCCC website indicated October 2007 as starting date of the construction. The latest PDD is available at URL http://cdm.unfccc.int/filestorage/8/9/E/89E1KUBYT4FD0NHSVQCJ2ZWMX573RL/PDD%20Buasommai%20I%20biomass%20power%20plant%20at%20Muang%20Roi%20Et%20district.pdf?

21 Thitawat Pratukam, School teacher and community leader, Bann Nong Na Sarng, Muang District, Roi-Et province, interviewed 18th July 2011

22 Apichat Polpisan, Village Head, Bann Nong Na Sarng, Muang District, Roi-Et province, interviewed 17th July 2011

23 Thonglor Chompubute, Community leader, Bann Nong Na Sarng, Muang District, Roi-Et province, interviewed 17th July 2011

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25 Thitawat Pratukam, School teacher and community leader, Bann Nong Na Sarng, Muang District, Roi-Et province, interviewed 18th July 2011

26 Thitawat Pratukam, Bann Nong Na Sarng, Muang District, Roi-Et province, interviewed 18th July 2011

27 Apichat Polpisan, Village Head, Bann Nong Na Sarng, Muang District, Roi-Et province, interviewed 17th July 2011

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Repeat offender: The CGPL power plant and the quest for CDM credits

A case study from Gujarat, India[1]
Focus on the Global South
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Overview

Energy use is a reasonably accurate proxy for economic growth and development. Since the advent of the 1991 economic reforms and a resultant era of high growth rates, India's energy capacity has nearly tripled from some 65,000 MW of installed capacity in 1991 to 181,558 MW by August 2011.[2] The Government of India (GoI) clearly intends to tread the path of high growth plus massive energy capacity addition as the model of development for the coming decades. The GOIs Integrated Energy Policy (IEP) takes its cue from this trajectory and predicts four times the current capacity at a colossal 800,000 MW by 2030. [3]

This capacity addition entails the construction of hundreds of coal fired thermal and hydro power projects and a considerable number of nuclear power stations across the country. It is evident from an examination of policy documents such as the IEP that despite the recognition of the need for a diversification of energy sources and shift towards renewables, coal will continue to be the mainstay energy source for the foreseeable future. 2010 data from the Ministry of Environment and Forests indicates that it approved somewhere between 150 and 173 coal fired plants. A recent report from the Prayas Energy group estimates that coal fired power projects in the pipeline make for a staggering 600% increase from the current coal capacity of 113,000 MW. [4]

The hunger for energy and high GDP growth is most evident in the western Indian state of Gujarat. Its controversial Chief Minister Narendra Modi (accused of complicity in the 2002 religious riots in which more than a thousand Muslims and Hindus lost their lives) has been in power since 2001. Data from the State Government indicates that its average annual growth rate has been 10.4% in the last five years (the Indian average is 8.3%) and Gujarat contributes some 16% of the industrial production of the country.[5] Under Modi, Gujarat has been on a hyper industrialisation mode. The state contributes 51% of chemicals, 62% of petrochemicals and 65% of the plastics industry to the Indian economy and generates 22% of Indian exports with only 5% of the population and 6% of geographical area.[6] Gujarat's showcase event for attracting investment 'Vibrant Gujarat' is into its 5th year and the latest edition in January 2011 saw some 7,936 memorandums of understanding (MoUs) being signed worth Rs. 20,83,000 crores (USD 450 billion). Though much of this might not come to fruition (given the current bleak prospects for the global economy) in the coming years, even a fraction of this amount as investment on the ground is indeed staggering.

Energy and infrastructure underpin the Gujarat industrialisation project. The state aims to be power surplus by 2020 and has sanctioned a massive number of energy projects to augment the present total installed capacity of 11,636 MW (2009 figures). The Government intends to fully exploit the states potential for thermal, gas, geo thermal, nuclear, wind and solar power.

Kutch region

The Kutch region is among the key hubs of industrialisation in Gujarat and with an area of 45,652 km it is the largest district in India. With three prominent ports of Kandla, Mundra and Mandavi, it is promoted by the Gujarat Government as the 'gateway to international trade'. Added to the three ports, the district has twelve special economic zones (SEZs), thirteen industrial estates and three industrial parks and has emerged as a hub for chemicals, minerals, textiles, energy, tourism and port based industries. [7]

The hyper industrialisation in this region becomes all the more striking and paradoxical as the Gulf of Kutch which demarcates the southern land mass of Saurashtra from the northern landmass of Kutch is also an officially declared ecologically sensitive region. The Gulf of Kutch Marine National Park and Sanctuary (MNPS) which straddles the southern coast of Saurashtra was designated as a protected area in 1980. Ironically, no sooner did this happen that the region became a key centre of industrial growth in Gujarat, threatening its marine ecology and traditional economy. Violations and dilutions to environmental regulations such as the Coastal Regulation Zone (CRZ) have led to a glut of industries including petrochemicals (the world's largest refinery owned by Reliance Industries is based in Jamnagar), soda ash, cement, fertilizer, salt works, thermal power, ship breaking and ports, leaving the region on the brink of an environmental disaster.

The Tata CGPL Plant

The Tata Ultra Mega Power Project is a 4,000 megawatt (5 units of 800 MW each) super critical power plant that is being developed by Coastal Gujarat Power Limited (CGPL) a subsidiary of the Tata Group of companies. The project site is in Tundawand village in Mundra. Added to the Tata plant, there are two other thermal plants being built in the vicinity; the 4620 MW plant being built by Adani Power Private Limited and a 300 MW plant by OPG Power Gujarat Private Limited. Infrastructure that benefits these thermal plants also includes a private railway line, the Mundra Port and the Mundra Special Economic Zone, all owned and operated by the Adani group of companies.

The CGPL plant has been controversial from inception and today the project developers' grapple with delays (the first of the five units was to be commissioned by September 2011 but as of January 2012 the boilers had not fired off) and rising coal prices. The plant was initially set to use imported coal from Indonesia but given the recent export taxes on Indonesian coal, CGPL is now considering the use of domestic coal for part of its operations.

The CGPL plant is located in an ecologically sensitive region–in the coastal plains of the Gulf of Kutch in an area that is home to mangroves, inter tidal mudflats, creeks, sand dunes and estuaries. The livelihood of the local people ranging from fishing, salt making, agriculture and animal husbandry is closely linked to the ecology.

In July 2010, at the 55th Executive meeting of the Clean Development Mechanism (CDM) Board, CGPL's application for carbon credits was rejected. The reason for rejection was cited as the failure to substantiate additionality. Among the several criteria for garnering carbon credits is the importance of CDM finance for the economic feasibility of the project. i.e. that without the additional finance provided by the CDM, the project would not be viable. It was quite evident from the history of the project that CGPL did not factor in CDM revenues. Further, two of the key lenders to the project, the International Finance Corporation (IFC) of the World Bank Group and the Asian Development Bank (ADB) had also not taken into account possible CDM registration of the project while advancing loans. Evidently the project developers expected the CDM to be an extra bonus for an already feasible and profitable project for which the required finance was secured through a host of institutions.[8] Added to the IFC and ADB, finance was forthcoming from a consortium of big banks including foreign sources such as the Export-Import Bank of Korea, Korea Export Insurance Corporation and BNP Paribas and Indian sources such as the State Bank of India, India Infrastructure Finance Company Ltd., Housing and Urban Development Corporation Ltd., Oriental Bank of Commerce, Vijaya Bank, State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Travancore and the State Bank of Indore. The total cost of project was estimated upwards of USD 4 billion.

Seemingly undeterred with the initial rejection, CGPL reapplied for CDM credits in June 2011. As of January 2012, their case is still being considered.

The under construction 4000 MW Tata CGPL Thermal plant in Mundra.

The next section of the report looks beyond the criteria of additionality and at the social and environmental impacts of the project which, in our view, further cements the case for a CDM rejection. That the project activity should assist in sustainable development is also an important objective of the CDM framework. CGPL, despite making claims to the contrary in its Project Design Document (PDD) falls far short of meeting even basic social and environmental objectives. The PDD mentions that the proposed project activity will benefit the local community by employment generation (both direct and indirect) and strengthening of social infrastructure in the region. [9]

Environmental and social concerns

With the construction of the power plants (both Adani and CGPL), the livelihoods of some ten thousand traditional fisherfolk are under threat. Led by their General Secretary Bharat Patel and Vice President Amina Behen the Machimar Adhikar Sangharsh Samiti (MASS[10]) has highlighted various environmental and social policy violations by the project developers. One of the key concerns of MASS is that with several industrial units to the south of the Gulf of Kutch (the Jamnagar area) and with the Mundra Special Economic Zone, the Mundra Port and with some ten major thermal power plants (including CGPL) on the north and south side of the Gulf, there will be serious cumulative adverse impacts on the marine ecology. So far such a cumulative impact assessment to measure the current and potential scale of environmental damage has not been done by government agencies. Without such a ground level assessment in place MASS makes a strong case against the CGPL plant being validated as a clean project eligible for carbon credits.

Further MASS has argued that CGPL has violated the terms of the environmental clearance accorded by the Ministry of Environment and Forests (MOEF). The

MOEF permission/clearance was given on the condition that the CGPL would install a closed cycle cooling tower. Instead the CGPL has constructed the cheaper but environmentally more damaging option of an open cooling channel. CGPL claims that it secured an amendment to the earlier permission from the MOEF, but MASS is yet to get a copy of the document despite requesting the company to provide it. MASS has cited several research studies that show the negative impact of the current technology being used by CGPL, which despite being affordable, kills marine life in the surrounding areas. Bharat Patel from MASS says that the discharged water from the open cooling channel will be significantly hotter that the source water and will kill the fish in the surrounding creek from which fisherfolk derive their livelihoods. Patel mentions that the construction of the outfall channel has dumped a huge amount of waste to the three fishing grounds (Tragadi, Modhva and Kotda) from where members of his union catch their fish. Fishworkers who were interviewed during the field visit reiterated Patel's point that the outflow channel will block the creek in which they fish, raise the temperature when hot waste water is released from the CGPL plant and eventually destroy some 250 hectares of mangrove forest once the plant is up and running at full capacity.

The Adani and CGPL plants also share the same intake channel for which there has been no environmental impact assessment. MASS mentions that even if studies were conducted either by the Ministry or project proponents, there is no public information available on that as yet.

The CDM application of CGPL will have to be necessarily viewed with a wider developmental lens. CGPL aims to transport its Indonesian coal from the Mundra port which is approximately 25 kilometres from the plant. A dedicated private railway line has been proposed for this purpose. The port and railway line have come under fire from the MOEF for violating provisions of the Coastal Regulation Zone (CRZ). The MOEF has asked the

Drying fish in the Tragadi fishing village.
The CGPL plant is visible in the background.

developers to show cause for using dredging material in the west and north side of the port. The project proponents have also laid a dredging disposal pipeline in an inter-tidal area (CRZ provisions prohibit this) which has obstructed tidal flow resulting in damage to mangroves. MASS makes a case that since the Mundra port and dedicated railway line is an integral part of the CGPL project, the violation of the CRZ and destruction of mangroves should be accounted for in the CDM approval process.

Another major flaw with the CGPL project is that despite several obvious adverse implications for the traditional fishing community who live (and earn their livelihood from) adjacent to the project site their concerns have been completely overlooked. The CGPL Social Impact Assessment claims that the project area has no habitation and settlement and hence does not require any major marine resource rehabilitation or resettlement. In a document prepared for the Asian Development Bank (among the key project financiers) on its plans for resettlement of project affected communities, the CGPL states that:

> *"Although the fishing potential of the Gulf of Kutch is significant, there are no local fishing activities in the coastal waters directly fronting the project area which has vast intertidal mudflats. The nearest small fishing community is at Kotdi Creek bank located outside the project area about 2.8 km from Mudhwa creek. The discharge of spent cooling water will not affect the fishing activities in the Gulf, which takes place several kilometres into the waters. The provision of a culvert over the intake channel will ensure continued access of the fishing community to the fish drying areas on the coastline."* [11]

This is a clear distortion of facts and MASS has consistently contested this through historical evidence, research reports and photo documentation. The Mundra coast has been for centuries the fishing ground for the Wagher fishing community—a migratory community that settles in the area for nine to ten months every year. It is only during the non fishing season that they go back to their villages. MASS has proved that there are ten fishing settlements on the Mundra coast and the CGPL project directly impinges on two of these settlements, Tragadi and Kutadi. CGPL by claiming that the area is uninhabited is avoiding its responsibility to put in safeguard policies and addressing the question of long term decline in fish catch due to the industrial waste and cutting down of mangroves. By taking this cynical view, the CGPL also evades its responsibility of addressing issues such as the loss of right of way from the fishing harbour to the nearby market (the earlier distance of seven kilometres has now doubled due to the construction of the outflow channel) and the loss of freshwater sources for the fishing community due to the dumping of waste.

Amina Behen one of the leaders of MASS says that there are no policies in place by the company or government to address the adverse impacts on women. The drying of fish is done mostly by the women and it requires large open areas with adequate sunlight. She says that the land taken up by the project has resulted in loss of drying space and also the fly ash from the project site contaminates the fish making it unfit for consumption.

Despite completely bypassing the concerns of the local community, CGPLs Project Design Document (PDD) claims that the project will benefit them through direct and indirect employment generation and strengthening of social infrastructure. Visits to the project area and interviews with people such as Amina Behen show the hollowness of such claims. The local community whose skills are in cattle herding, fishing and farming are losing their livelihoods due to the plant and are unlikely to get any meaningful jobs in the power plant. By claiming that there are no affected local communities, CGPL has deftly evaded the question of compensation.

In terms of carbon credits, there are very basic questions about super critical mega coal plants being classified as a Clean Development Mechanism to mitigate emissions. Once it is synchronised to run at full capacity, the CGPL plant will be one of the largest single sources of emissions in the world (estimates by CO2 scorecard put it at a staggering 26 million tonnes of CO2 emissions per year [12]).

CGPL's tenuous case for carbon credits rests on its claim that it is using super critical technology, a more expensive option than the "sub critical" baseline. This is a false claim as the Union Ministry of Power has mandated that all large coal fired power plants in India use super critical technology and it is no longer considered in energy policy circles as an additional technology.[13]

(Right) In the foreground is the outflow channel which has cut access of the fishing community to the nearby market. (Below) Waste from the construction site that has impacted fresh water supply to the fishing community.

What next?

Today CGPL finds itself in the eye of the coal crisis storm in India. International coal prices are on an upward trend and the era of cheap subsided coal from the state run Coal India Limited (CIL) is being challenged both by activists and investors (for different reasons). Mundra is in many ways a microcosm of India's development story, where dirty energy projects continue to be pushed with little consideration for social and environmental costs. Members of MASS recognise that a second rejection by the CDM board is unlikely to stop CGPL, which is nearing completion. There are already reports in the media about CGPL re-negotiating its baseline tariff with possible buyers from the neighbouring states of Maharastra, Punjab and Haryana. In the meanwhile MASS continues its case for legal redress for the loss of livelihoods and adverse impacts on health and environment. They also want punitive action against CGPL for the destruction of environmental resources such as creeks, sand dunes and mangroves. Until this is done, their aim is to stall the project. Ironically, the project is stuck today due to the coal price logjam.

1 The case study was conducted by Benny Kuruvilla through several interviews with members of the Machimar Adhikar Sangharsh Samiti (Association for the Protection of Fishworkers Rights) and a field trip to the project area in December 2011. The author is also thankful to inputs from Joe Athialy and Anuradha Munshi at the South Asia office of the Bank Information Centre (BIC).

2 http://www.cea.nic.in/reports/monthly/executive_rep/aug11/8.pdf (Accessed 20 September, 2011)

3 Government of India (2006). 'Integrated Energy Policy'. Planning Commission. August.

4 Prayas Energy Group (2011). 'Thermal plants on the anvil – Implications and need for rationalisation'. September.

5 http://www.vibrantgujarat.com/why-gujarat/strong-economic-credentials.aspx (Accessed 20 September, 2011)

6 Ibid

7 Government of Gujarat (2007). Industries Commissionerate.

8 http://www.businessstandard.com/india/news/tata-wrapsfinance-pacts-for-mundra-umpp/321166/

9 PDD available from: http://cdm.unfccc.int/filestorage/L/Q/H/LQHW6OR1VE0UBSYC4N8FDMPZ3I2X95/GHG%20Emission%20Reductions%20through%20grid%20connected%20high%20efficiency%20power%20generation%20-%20PDD.pdf?t=M2Z8bTI3OHhofDDlsptWFj9hc5yq9iRUvOS4

10 In English this translates as the Association for the Struggle of Fishworkers Rights

11 Resettlement Planning Document, Short Resettlement Plan, Prepared by Coastal Gujarat Power Limited, September 2008; http://www.adb.org/Documents/Resettlement_Plans/IND/41946/41946INDRP.pdf

12 http://www.co2scorecard.org/home/researchitem/20

13 http://www.powermin.nic.in/whats_new/pdf/ultra%20mega%20project.pdf

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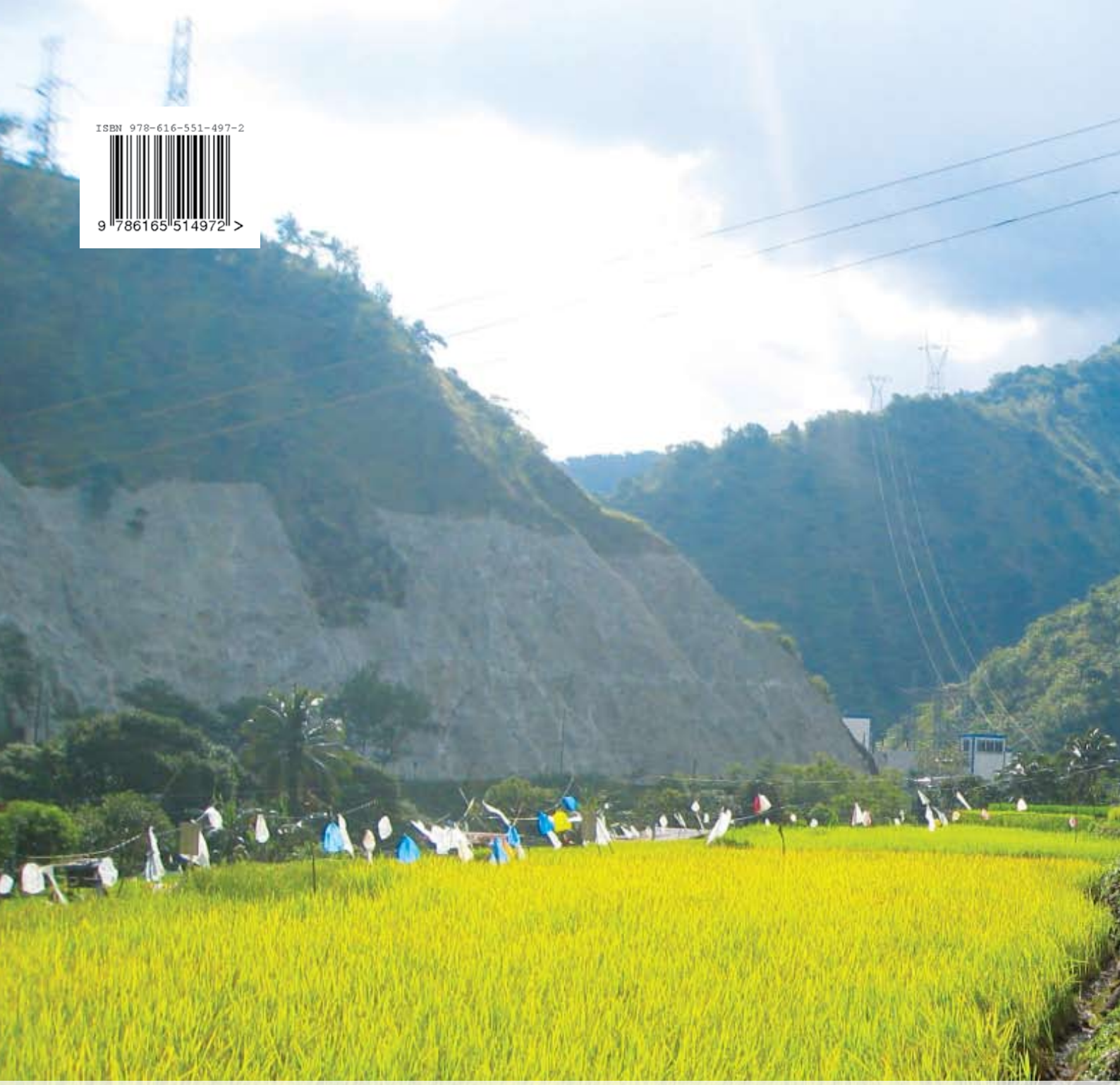

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For more information, including videos which accompany this study, go to www.focusweb.org