Expanding Fake Credits in the CDM: The Role of Japan and the World Bank

Report for Friends of the Earth Japan

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Overview

As the Kyoto Protocol approaches the end of its first phase in 2012, Japan is increasing its purchases of carbon offsets from Clean Development Mechanism (CDM) projects. Buying CDM offsets allows Japan to meet its Kyoto Protocol targets with only minimal efforts at cutting its own emissions. Japan accepted a commitment of reducing its emissions by 6% between 1990 and 2008-2012. Yet its emissions have been steadily rising—for instance, it rose 6.2% during the 2006 fiscal year alone.[i] Japan intends to bridge the gap between its international commitment and lack of domestic action through the large-scale use of the CDM, in particular the purchase of credits from hydro projects in Asia.

Japan is buying credits from over 80 large hydropower projects in China (defined here as equal to or greater than 15 MW), even though the Chinese dam industry is short on neither funds nor expertise when it comes to dam-building. The CDM's structural flaws, coupled with cheating by project developers, mean that billions of dollars worth of credits are being sold by projects that would have been built regardless of the CDM, and therefore are not leading to emissions reductions.

Japan is also the second largest donor to the World Bank, which has been a major player in the growth of the CDM. Several case studies of hydropower projects in the CDM pipeline in Asia and Latin America in which the World Bank is investing show convincing signs of mismanagement, a lack of regard for the World Commission on Dams (WCD) guidelines, and a failure to meet the CDM's own tests for additionality. A number of those projects also show significant negative environmental and social impacts. As a key participant in the World Bank, it is Japan's responsibility that the Bank does not continue to promote environmentally and socially harmful projects, or projects that do not result in actual emissions reductions.

This report first gives a general overview of the CDM hydropower projects, then examines the major Japanese credit buyers, particularly those buying credits from large hydropower projects in China. It goes on to analyze an array of problems within several hydropower projects currently financed by the World Bank's carbon funds (with Japan as a major donor), from a lack of additionality to a lack of public participation. The case studies examined in this report include the La Esperanza (Honduras), Chacabuquito (Chile), Xiaogushan (China), Hubei Xuanen Dongping (China), and Allain Duhangan (India). It argues that in the short-term, the CDM must be radically improved or be abolished from the Kyoto Mechanism. Beyond 2012, the World Bank, Japan, and other industrialized countries must meet the goal of providing finance for clean development (i.e. the achievement of a sustainable low carbon society) in developing countries through fund-based rather than offsets-based approaches.

1. What are Major Concerns Over the CDM?

The CDM was established under the Kyoto Protocol with the stated aims of reducing the costs of cutting greenhouse gas emissions in industrialized countries, and promoting sustainable development in developing countries. The CDM allows developers of supposedly "climate friendly" projects to generate revenue by selling "carbon credits" or "offsets" known as Certified Emission Reductions (CERs). The CER buyers — industrialized country companies and governments — use the credits to show compliance with Kyoto Protocol-mandated emissions reductions.

A CER is supposed to represent the equivalent of one tonne (metric ton, or Mt) of carbon dioxide not emitted to the atmosphere. As of November 1, 2008, the CDM's UN-appointed Executive Board (EB) had registered (i.e. approved) 1,990 projects. A further 2,684 projects were in the process of applying for registration.[ii]

The most common project type is hydropower dams (see Figure 1). Other projects include destroying waste gases from chemical factories, wind farms, biomass power plants, efficiency improvements in industrial processes, and capturing methane from coal mines and landfills. As of December 2008, there were 1,139 hydropower projects in the CDM pipeline, 45% of which were large hydro projects. Japanese companies as a single buyer accounted for 14% of hydro

projects and 24% of the total CERs. By January 3, 2009, there were 1,158 hydro projects seeking approval, according to the UNFCCC CDM project database.[iii]

Unfortunately, the CDM has failed to promote real emissions reductions and developers and regulators have rarely made any effort to ensure that CDM projects provide any non-climate benefits. When the CDM does cause a project to be implemented that lowers emissions locally, it allows an industrialized country to keep on polluting, which causes serious harm to air quality and the health of local communities in the industrialized country. It also discourages the wealthier country from investing in innovation and deployment of low-carbon technologies, particularly within developing countries that need to move away from old, polluting forms of energy development. Ultimately, this slows down the necessary rapid transition away from polluting energy sources to an economy compatible with a stable climate.

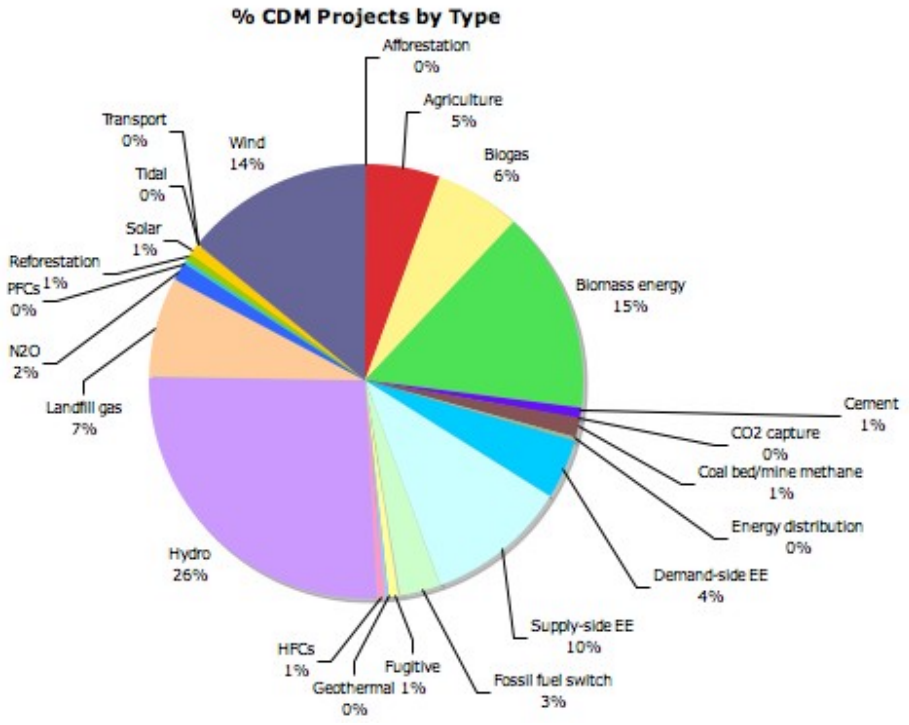

Figure 1: Projects in the CDM pipeline by type. Note: EE = energy efficiency.
(UNEP Risoe CDM/JI Pipeline Analysis and Database, 1 Dec 2008)

One fundamental flaw with the CDM is the need to prove the "additionality" of each project. A project is additional if it was implemented only because of the extra income from selling CERs.

If a project would happen anyway, regardless of CDM benefits, then its offsets do not represent any reduction in emissions. Experience has shown that it is extremely difficult for regulators and other analysts to assess developers' claims of additionality. But there is ample evidence to suggest that a significant proportion, perhaps the majority, of CERs is from non-additional projects. Lambert Schneider of Germany's Institute for Applied Ecology estimates that about a fifth of the credits from all projects registered by the CDM by mid-2007 were of "unlikely or at least questionable" additionality. For methodological reasons, Schneider's estimate is likely to underestimate the scale of the non-additionality problem.[iv] David Victor, head of Stanford's Energy and Sustainable Development Program, believes that "between a third and two thirds" of CDM offsets do not represent actual emission cuts.[v]

CDM Hydro Projects Database

Summary Data

		Large-scale	Small-scale	No.	Capacity (MW)	Expected CERs (x1000)/yr	No. projects with CERs issued	CERs Issued (x1000)
Total No. of Projects:				1139	39850	116261	74	7781
	Total Large-scale Projects (>15 MW):			512	34266	96892	24	4663
	Total Small-scale Projects (≤ 15 MW):			627	5584	19369	50	3118
By Region:		Large-scale	Small-scale					
	Africa & Middle East	5	5	10	266	885		0
	Asia Pacific	421	523	944	29932	100204		2895
	Europe	3	8	11	2572	572		0
	Latin America	83	91	174	7080	14600		4886

Large-Scale Hydros by Stage:

	Africa & Middle East	Asia Pacific	Europe	Latin America	Total
At validation:	5	254	2	48	310
Requested registration:	0	76	0	1	77
Registered:	0	46	0	27	72
Under review or correction:	0	45	0	5	50
Rejected or Withdrawn:	0	0	1	2	3

Total Large-scale projects currently open for comment: 13

Total Small-scale projects currently open for comment: 15

Figure 2: Total CDM Hydro Projects.

(Compiled from UNEP Risoe CDM/JI Pipeline Analysis and Database, 13 Dec 2008)

One glaring indication that most projects are not additional is that three-quarters of projects were already up and running at the time they were approved by the CDM. If carbon credit income were really essential for a project to go forward, then most developers would need to make sure that their project had been successfully approved by the CDM Board before beginning construction. However, as of October 1, 2008, 76% of all registered projects had not only started

construction, but they were also already completed by the time they were approved as eligible to sell credits.

Another major problem with the CDM is that it has not fulfilled its goal of supporting sustainable development. Literature on the CDM comes to the conclusion that the CDM has had little or no effect on achieving sustainable development in developing countries. On the contrary, some of the projects in the CDM pipeline produce substantial social and environmental harm. In addition, despite the adoption of the Nairobi framework, too few projects are being implemented in least developed countries. Institutional barriers prevent small-scale projects, including those in rural areas and at the household level, from being registered.

In addition, many projects that are approved represent marginal improvements at best (such as coal-fired power plants with cogeneration). These projects represent a failure to pursue the best options in terms of sustainable development and environmental integrity, such as emerging renewables and energy efficiency projects. High transaction costs, uncertainty, and the need for intermediaries such as consultants and verifiers also effectively prevent small businesses and NGOs from participation. In effect, CDM subsidies are limited to large, professional businesses that already have significant access to capital.

<Text Box> Other Underlying Problems with Offsetting and the CDM
▪ ***Perverse incentives*.** Offsetting mechanisms are measured against a "business-as-usual" baseline (what would have happened without CDM credits). They therefore risk creating perverse incentives for governments and individual facilities to maintain high baselines. For example, a relatively efficient company will be credited with fewer credits for implementing additional efficiency measures than an inefficient company which implements the same measures. The CDM could substantially increase emissions through these perverse incentives, especially by disincentivizing climate-friendly legislation by governments. Why would a government enact legislation forcing chemical companies to stop venting heat-trapping waste gases if in doing so it makes these activities "business-as-usual" and so not eligible for CDM income?
▪ ***Conflicts of interest.*** Validators have a vested interest in approving CDM projects, since they are hired by the developers and wish to be hired again. The subjectivity involved in additionality testing makes it easy to justify positive validations..
▪ ***Sustainable development?*** Projects that both reduce emissions and have high poverty alleviation benefits, such as biogas digesters and village electrification from renewable technologies, need relatively high CER prices and low transaction costs to be viable. They are therefore a tiny part of the CDM pipeline. The journal *Climatic Change* in 2007 investigated whether the CDM was delivering on its sustainable development mandate. The conclusion was a resounding no.[vi] Even worse, many projects in the CDM pipeline have severe negative social and environmental impacts.

2. Japanese and World Bank Involvement with the CDM

2.1 Japanese Companies

Japan is currently the largest purchaser of CERs, with Japanese companies representing 41% of all project CERs purchased in 2003-04.[vii] At the end of 2008, Japan represented 24% of all credit buying countries, as new players arrived onto the CDM stage (see Figure 3), but remains the largest credit buying nation. As of December 2008, at least 87 large (or greater than 15 MW) hydro projects with Japanese credit buyers were in the CDM project pipeline. Japan plans to spend 40% more on UN carbon credits in 2009 compared to 2008 (or about 43.3 billion yen) for CERs and ERUs (emission reduction units within Kyoto's Joint Implementation).

Within Japan, Mitsubishi represent the largest company to buy credits, followed by Marubeni and Sumitomo (see Figure 4). Most of these credits were bought for hydropower projects in China, with a few spread out in Latin America (see Figure 4). For instance, the biggest project to

be cleared for approval during the most recent round, the 210 MW Yunnan Yunpeng Hydropower Project in China,[viii] is selling credits to Mitsubishi Corp. Mitsui & Co. also recently bought the credits for another large project, the Guangxi Changzhou hydropower project in China.[ix] The Japanese power industry is planning to buy 190 Mt equivalent CERs by 2012 and the steel industry will buy 59 Mt by 2012. This is most likely a low estimate, especially in respect to the power industry, as their plan includes unrealistic nuclear assumptions.[x]

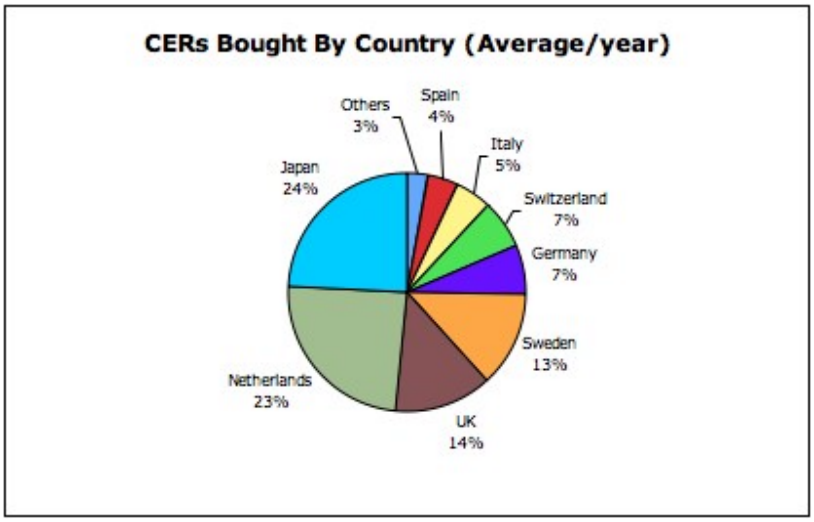

Figure 3: CERs bought by country at the end of 2008.

(Compiled from UNEP Risoe CDM/JI Pipeline Analysis and Database, 13 Dec 2008)

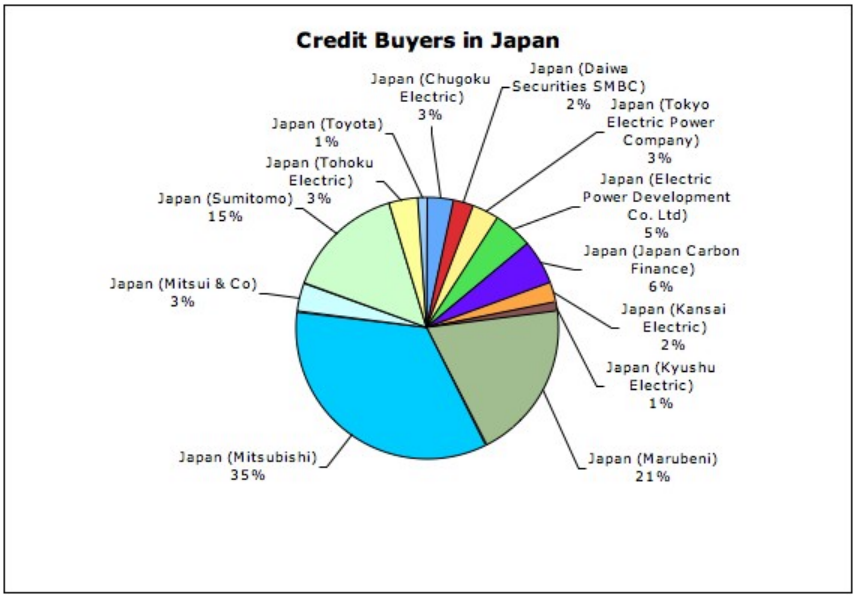

Figure 4: Japanese credit buyers.

(Compiled from UNEP Risoe CDM/JI Pipeline Analysis and Database, 13 Dec 2008)

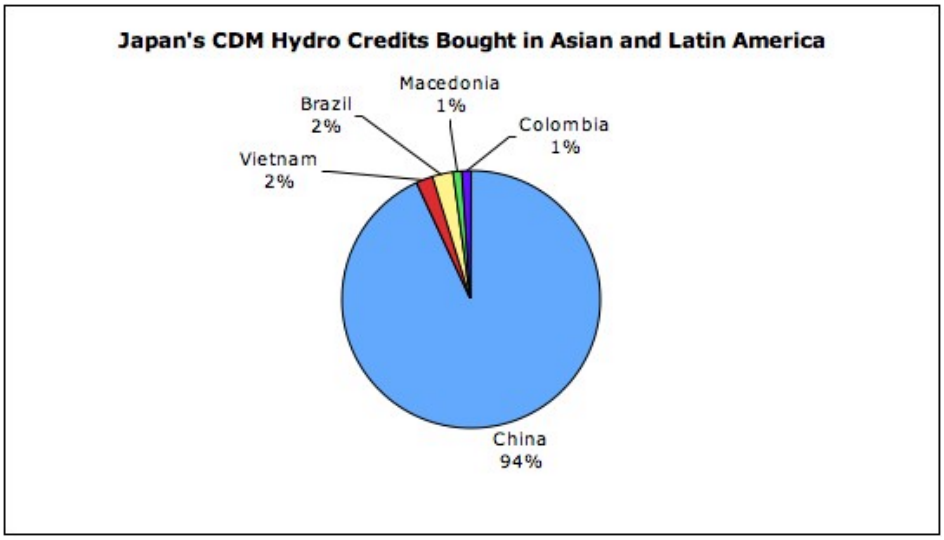

Figure 5: Japan's credits bought in Asian and Latin American countries
(Compiled from UNEP Risoe CDM/JI Pipeline Analysis and Database, 13 Dec 2008)

2.2 Japan and the World Bank

As the second largest donor to the World Bank, Japan has both an enormous responsibility for, and voting power within, the Bank and its development projects. The World Bank has a US$2 billion portfolio of trust funds that channel carbon finance from the industrialized North to the developing countries in the global South. A recent report by the Institute for Policy Studies (IPS) points to ten key problems with the World Bank's role in the carbon market, among which are a lack of transparency, minimal progress in emissions cuts, and support for polluting industries such as coal, chemical, iron, and steel, rather than renewable energy projects. For instance, only 10% of all funds from the Bank's carbon trust go to support wind, geothermal, solar, and small hydro (defined by the IPS as less than 10 MW).[xi] Less than 10% of the Bank's carbon offset investment portfolio has explicit stipulations for sustainable development and community benefits.

The Bank is already responsible for over one-fourth of the approved methodologies in the CDM.[xii] In its efforts to exploit the carbon market, the Bank has created a category of offsets known as Verified Emissions Reductions (VERs), credits that are not registered with the CDM but instead represent transactions that fall beyond the protocol's framework. These VERs are credits that do not meet the eligibility criteria of the CDM or any other non-World Bank body.

The World Bank is also rapidly moving forward on its so-called Clean Investment Funds (CIF) outside the UN climate convention process, despite the agreement at the 2007 UN climate negotiations in Bali that developing countries should have oversight on funds intended for use in their countries. The CIF also draws funding away from the UNFCCC. Till now, Japan has only made a contribution of $250,000 to the UNFCCC, which represents only 0.1% of the total pledges.[xiii]

2.3 Hydropower Projects

Large hydro projects make up about one-fifth of the total number of active projects in the World Bank's carbon portfolio. Similarly, hydropower makes up almost a quarter of all CDM projects in the pipeline, more than any other type. Small hydro projects make up only 6% of the Bank's carbon finance projects, according to the IPS study. The Bank has also approved $47 million to purchase credits from hydro projects, largely through its Carbon Finance Unit (CFU). On the CFU webpage, it states that all hydro projects will be reported as renewable regardless of size, since "the relationship between size and impact are not always directly related." Yet when the World Bank made its high-profile commitment to increase its support for renewables at the 2004 international renewable energy conference in Bonn, it included only hydro under 10 MW in its renewables target.

The following two sections include CDM hydropower case studies from Latin America and Asia, which are financed by the World Bank carbon funds. Since Japan invests heavily in the Bank, it is important for Japanese civil society to know what CDM projects their governments are supporting and from which their businesses are buying carbon credits.

3. Investment in Latin America

Japanese investment in CDM projects in Latin America has until now been relatively small. However, major Japanese players are joining the CDM stage in Latin America. For instance, Mitsui & Co signed a contract to set up a joint venture with a firm in Chile in November 2005 to implement greenhouse-gas-reduction projects.

3.1 La Esperanza, Honduras

The La Esperanza project in Honduras is a registered 12.7 MW "containment run–of–river" hydropower facility that was developed by the World Bank's Community Development Carbon Fund (CDCF). The Japanese government thus indirectly finances this project, which adds no additional emissions reductions value. The following Japanese companies are also purchasing credits from La Esperanza: Idemitsu Kosan, Okinawa Electric Power, Nippon Oil, and Fujifilm.[xiv] The main investors are the German Government's Kreditanstalt für Wiederaufbau (KfW) and BASF Aktiengesellschaft are investors. Stage 1A (485 kW) of the project was completed in June 2003, Stage 1B (785 kW) was completed May 2004, and Stage 2A (11.5 MW) entered construction in June 2003.

Figure 4: Construction at La Esperanza.
(FinnFund. www.finnfund.fi/ajankohtaista/uutiset06/en_GB/laesperanzahonduras/)

Despite its small size, which many have used as an excuse to not apply World Commission on Dams (WCD) guidelines, it nevertheless serves as an important test case for showing how projects should demonstrate compliance with the WCD regardless of size. For instance, Thailand's Pak Mun dam, a similar run-of-the-river dam, is one of the poorest performing and most damaging dams studied in detail by the WCD, despite its size. Small dams can even emit

greenhouse gases (GHGs), particularly if they are located in tropical regions and have a great deal of eutrophication in their reservoirs.

In the case of La Esperanza, the project could in fact be more of a GHG-emitter than a viable option for GHG reductions, as required under the CDM. The Project Design Document (PDD) states, "Emissions by sources are zero since hydroelectric power is a zero CO2–neutral (sic) source of energy." While emissions from true run–of–river projects are usually considered negligible, this may not be true for La Esperanza, which has a regulation reservoir and is described as a "containment run–of–river" project. The need to model methane emissions from La Esperanza is increased, as according to the PDD, the water entering the reservoir is contaminated with sewage, increasing the likelihood of the reservoir creating conditions suitable for methane–producing bacteria.

The PDD also makes a case for additionality based on barriers of investment, technology and prevailing practice. However, the cases made for why each of these three barriers exists are unconvincing and lack documentary evidence. For instance, in applying for CDM credits, the PDD argues that a prevailing practice barrier exists. The PDD claims, "Privately financed, built and operated small hydro plants are not common practice in Honduras." However, La Esperanza is just one of 16 small and medium hydropower plants included in the Honduran Generation Expansion Plan 2004–08.[xv] Of these plants (and not including any of the La Esperanza phases), six are already online or under construction. While the La Esperanza project has provided jobs and revenue to poor local communities, its reservoir emissions remain to be studied, and its need for carbon credit financing is questionable, given the prevailing practice.

3.2 Chacabuquito, Chile

A more recent project is the Chacabuquito Large Hydro Project in Chile, a 26 MW project that aims to reduce 80,000 Mt CO2 equivalent per year. It was registered in July 2007. The credit buyers are the Netherlands and Canada (IBRD), with financing from the World Bank PCF. Coincidentally, the World Bank Carbon Fund is also a PPD consultant. Among the main problems with this hydropower project, its PDD fails to mention compliance to the WCD, despite the requirement that all hydro projects used in the EU's Emissions Trading Scheme

(ETS) be WCD-compliant. As a Bank project, with indirect Japanese investment, Chacabuquito serves as an example of the Bank's disregard for WCD guidelines.

World Bank policies specify that alternatives to a project must be considered in the Environmental Impact Assessment (EIA). A comprehensive options assessment is also one of the main Strategic Priorities of the WCD. In the case of hydroelectric plants, alternatives such as demand side management, the potential for increasing operational efficiency of existing investments, and alternative energy sources should all be considered. The Bank has endorsed these Strategic Priorities, but the Chacabuquito PDD makes no mention of the WCD at all.

Figure 5: Chacabuquito construction area.
(Hydroelectric Plants in Chile. www.industcards.com/hydro-chile.htm)

In terms of transparency, only the Executive Summary of the EIA is disclosed through the PCF web site. The World Bank mandates that the EIA must be disclosed in full. Transparency in project planning, including the full disclosure of EIAs, is also one of the key recommendations of the WCD.

Similar to La Esperanza, the emissions reduction calculations for Chacabuquito leave out any discussion of possible emissions from the project's impoundment. GHGs have been recorded at all reservoirs where measurements have been taken. The issue of reservoir emissions must be

explicitly addressed in any CDM hydroelectric project that includes an impoundment. In addition, construction emissions were not mentioned in emissions reduction calculations. Lifecycle emissions should be considered, especially since the project involves the building of bridges and roads.

Finally, the argument that Chacabuquito could not be built without CDM revenue is contradicted by the PDD statement that, "Since 1982, this project has been in the planning stage", several years before the CDM was established. Initially, the project was not built because of a fall in energy prices. Thus, if the project was dependent on energy prices and prices were to increase in the future, this project could be funded without the help of PCF or CDM funds, thereby failing at the CDM test for additionality.

4. Investment in Asia

Japan currently buys most of its carbon credits from Asia (146 hydropower projects out of a total of 154). Large hydro projects are usually situated in China, with a couple 30 MW projects in Vietnam. Mitsubushi currently buys credits from the three largest hydropower projects within China, the 456 MW Guangxi Qiaogong Hydopower Project, the 309 MW Xinjiang Kaiduhe River Chahan Wusu Hydropower Project, and the 210 MW Yunnan Yunpeng Hydropower Project. Marubeni and Sumitomo are major credit buyers of a number of hydropower projects in China over 100 MW.

Some common problems shared among all of these large projects' PDDs are their vague language and the lack of evidence for their claims regarding environmental and social impacts. For instance, among the environmental impacts listed in several of the PDDs, the category of "Ecological environment of the river" always has the same wording, regardless of the project: "Since there are no the certain hydro bios (sic), which need to be protected based on the relevant regulations, within the part of the river, which could be affected by the proposed project, the construction and operation of the proposed project will lead to little impact on the ecological environment of the river."[xvi] None of the PDDs for the largest hydropower projects in China had any distinguishing language with regards to environmental impacts, despite the differences in their ecological location. These PDDs also fail to take into account long-term environmental

impacts, such as siltation, nutrient loss downstream, threats to local fisheries, etc. For instance, all of them state in their summaries, "As for the environmental impacts arising from the project, they are primarily temporary and can be effectively mitigated through measures specified in the EIA report, hence considered to be insignificant."[xvii]

Several PDDs for the large hydropower projects also share the same language regarding social impacts, for instance, claiming that the projects received "100% support from local people."[xviii] However, such large hydropower projects will involve resettling hundreds to thousands of people. According to their respective PDDs, the Yunnan project will involve resettling at least 481 individuals, while the Guangxi project will involve resettling more than 1,554 people. It is unlikely that support for these massive projects was 100%, given some of the conditions described in the following case studies.

4.1 Xuanen Dongping, China

As of November 1, 2008, 720 Chinese hydro projects representing 22,489 MW had applied to the CDM.[xix] Among these is the Hubei Xuanen Dongping hydropower project, a 110 MW mixed-type power station, which is financed by the German group RWE and the World Bank. This project is currently undergoing validation. The maximum height of the dam is 135 meters. The WCD compliance report was commissioned by TUV-SUD, which claims that the project has no negative impact on the river, the livelihood, and the general environment.[xx]

However, according to the report itself, various social guidelines under the WCD and the Bank's own policies were ignored. For instance, the report states that the concerned farmers, villagers and leaders were not involved in the decision process. The project was negotiated between the project owner and the provincial and regional government only. The PDD states that, "This is a clear deviation from the several guidelines of the WCD report." It defends the project by claiming that the affected people have improved living conditions. It goes on to note that, "As the core requirement of 'no social or cultural disadvantages' has been achieved the essence of the WCD guidelines is still fulfilled."[xxi] In January 2009, a journalist on the Swedish radio revealed TUV-SUD's practice of bringing police to their talks with affected peoples in China.[xxii] The clear

disregard for full and free public participation by this validator calls into question the social sustainability of this project.

In terms of environmental impacts, Dongping's EIA states that no essential negative impact by the power plant exists. However, the WCD compliance report notes that two hydro power plants already exist upstream and downstream from Xuanen Dongping dam, and that there is "anyway no free flow of the river."[xxiii] Likely, the negative impacts are cumulative and are clearly not as noticeable if Dongping was the only dam on the river. It also states no migrating fish species "such as eel, grass carp, herring, and bighead" would be impacted,[xxiv] but neglects other possible fish species that local communities might depend upon for sustenance and livelihood.

Compensation has been promised as the price of lost houses plus 800 RMB (or about 10,420 yen), to be disbursed by the local government. Given the history of corruption and embezzling of funds in such well-known cases as the Three Gorges Dam and Manwan Dam, there would need to be tight oversight and scrutiny over this project's disbursement of compensation. The language of the report is also vague, stating, "Their living conditions [have] been improved neglecting this aspect did not lead to any negative consequences."[xxv] At the time of the report, compensation had not yet been verified. Even with the promised compensation, it is often not sufficient to pay for more expensive new houses that oustees are forced to move to. Without job support, few are able to find new jobs in the new cities and towns they move into as well.

4.2 Xiaogushan, China

Xiaogushan Hydropower station is situated on the Heihe River in China's western Gansu province. The total installed capacity of the dam is estimated at 85 MW. It was registered under the CDM in November 2006 through the World Bank PCF. The project is owned by Xiaogushan Hydropower Company and has received financing from the local government and the Asian Development Bank, and its credit buyer is the Netherlands. A report and recommendation for financing was submitted to the ADB Board on Directors in 2003 and subsequently approved. One of the earliest project participants was the PCF. Japan Consulting Institute (JCI) was in charge of drawing up the Xiaogushan PDD, which makes no mention of WCD compliance (despite its requirement for use in the EU ETS).

Figure 6: Xiaogushan hydropower project in China.
("Xiaoxi and Xiaogushan CDM Hydropower Projects: Report from a Field Trip, November 2008." 27 Nov 2008)

Although it is nearly impossible to prove or disprove the "additionality" of a particular project, if large and attractive dam projects did not receive CDM funding they would stand a good chance at securing alternative or domestic investment in China. In this regard, China presents a far different scenario than countries such as Laos or Cambodia, where international funding may be the only avenue to enable large infrastructure projects.[xxvi] According to a letter written to the JCI, the PCF's attempts to show that CDM revenue is necessary for the project are disingenuous and thoroughly contradicted by the ADB's project approval report.[xxvii]

In Gansu, the "best" dams (i.e. those most likely to meet WCD standards) will be most encouraged to submit applications for CDM funding. Xiaogushan, for instance, previously received funding and technical advice from the ADB, which came with certain stipulations. Project documentation from the ADB clearly states that Xiaogushan was the least-cost generation option for Gansu and that revenue from CDM credits was irrelevant to the decision to go ahead with the project.[xxviii] By some criteria, this dam outperformed the other six dams located on a relatively short stretch of the Heihe River.[xxix] Given that the project was completed without CER revenue, this project fails in the CDM's criteria of financial barriers to production.

Alongside the lack of additionality is the concern that the project has not lived up to its social promises. According to figures in the ADB report, which cited the JCI report, the dam was expected to generate 3,000 jobs during the construction period. However, according to a representative from the hydropower company, only 600-700 jobs were generated during construction (with only about 70 of those jobs filled by locals), which is one-fifth of the original number touted.

A final key point is that CDM investment in such projects as Xiaogushan may be freeing up domestic capital for investment in other dam projects that currently are not being monitored by the international community or held accountable to WCD standards. While Xiaogushan has not caused any major environmental or social harms, it allows Chinese dam companies to continue their explosive dam-building on China's few remaining free-flowing rivers.

4.3 Allain Duhangan, India

Allain Duhangan is a registered 192 MW hydro project in Himachal Pradesh in Northern India. The main credit buyer is Italy through the IBRD, with financial support from the Norwegian government, the CDM, and the World Bank. The financial lending arm of the Bank, the IFC, intends to provide $45 million (in the form of equity and debt) to the $192 million cost of the project. The project lies on the Allain and Duhangan rivers, which are tributaries of Beas River, which in turn is a tributary of the Indus River. The water from the Duhangan stream is to be totally diverted to the Allain River and both are to pass through underground tunnels and a power house. The water from the powerhouse would return to the Allain stream. The Environmental and Social Impacts Assessment (ESIA) of the project is fundamentally flawed as shown in a letter from affected villagers to the World Bank President dated May 21, 2004.[xxx] This is clearly in violation of IFC environmental and social norms.

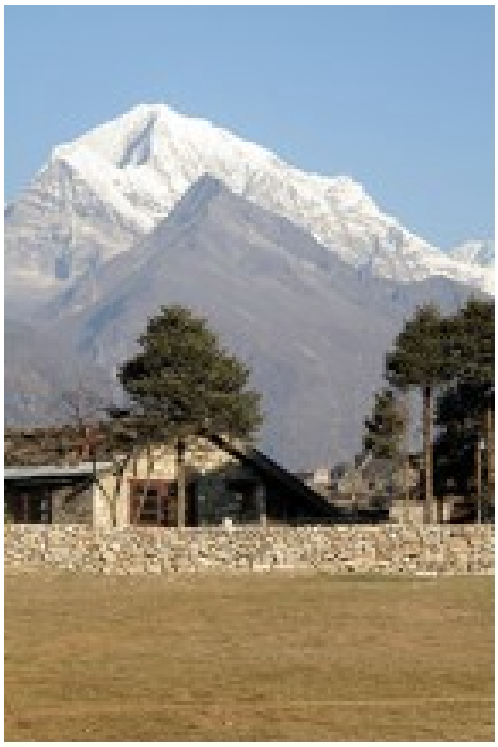

Figure 7: Site of Allain Duhangan.

(International Rivers. www.internationalrivers.org/en/blog/peter-bosshard/damming-a-global-heritage)

Among the complaints by the local villagers, the assembly of Jagatsukh village has not given the project developers a No Objection Certificate (NOC) for the project as is legally required. In fact, on July 4, 2004, the Jagatsukh village assembly unanimously passed a resolution rejecting the NOC to the project and opposed the project. Yet the IFC and the energy company have been claiming that the project has an NOC.

The project is likely to dry up the Duhangan River, which is a lifeline for Jagatsukh village, as the whole village and a few others depend on the river for their drinking water and irrigation. The river also has great cultural and religious significance for the village. In addition, the project has brought 2,000 workers, illegal logging, serious accidents and conflict to Jagatsukh. The dam will divert the creeks on which the farmers have so far depended for their livelihoods. But since the villagers will not be physically displaced, their concerns are not being addressed under the World Bank's safeguard policies, nor are they being addressed by the company and the ESIA consultants, despite repeated reminders about their concerns. These and other concerns of the

affected people have been supported by a number of reports including some from the persons and committees appointed by the IFC.

The affected people have a number of other serious concerns besides the increased insecurity due to the thousands of outsiders in the villages. Among these are the geological instability that the project will inflict on the village and surroundings, the destruction of their livelihoods due to project impacts on apple cultivation, tourism and the environment, and the behavior of the company, the IFC and the ESIA consultants towards the village people.[xxxi]

5. Conclusion

5.1 Moving Beyond the CDM

The CDM has recently responded to outside criticisms by tightening its processes and hiking its rejection rate, and the private sector project validators also appear to finally be taking a tougher line. Through pressure from NGO and individual comments during the 30-day project comment periods, the CDM Executive Board (EB) has begun to crack down on certain projects, as seen in the recent suspension of DNV's accreditation by the EB in December 2008.

While these efforts are signs of improvement, the subjectivity involved in project development, investment and lending decisions makes an accurate test for project additionality impossible. Project auditors are used to assessing projects under largely objective criteria. However, since a validator must audit each proposed CDM project under a number of criteria, including additionality, and since there are no accurate objective measures of the intentions of developers, investors and lenders, the quality of projects that are validated is highly inconsistent. Industry representatives have complained that "good story-tellers" can get a project approved, "while bad story-tellers may fail even if the project is really additional."[xxxii]

Further improving additionality testing will be essential to cracking down on this "story-telling" in the CDM, but doing so would increase the cost and length of the CDM approval process (already considered far too cumbersome and time-consuming by project developers and in particular, by Japanese companies) without resulting in sufficiently accurate additionality testing. The time, cost and uncertainty of the CDM approval process, which are inherent to the need to

prove additionality, make the CDM unattractive to the smaller scale and cutting edge projects that are most in need and deserving of support. Solar power, for example, has so far received not a single CDM credit.

Deep emissions cuts by industrialized countries will be necessary post-2012, as will much larger financial flows to support shifts towards low-carbon development paths in developing countries (and for helping these countries lessen the impacts of climate chaos). However, it is clear that the CDM will undermine these goals if it continues as an offsetting mechanism beyond 2012. Rather, alternative means of support must be pursued in order to achieve actual emissions reductions and sustainable development.

5.2 Alternative Solutions Exist

Thus far, investment in cheap but dirty industries as Japan and the World Bank have been prone to make means that small, renewable and local projects like wind farms or small hydro have to compete with low prices. The result is that these projects become less economically viable and attractive to investors.[xxxiii]

Industrialized countries will need to meet their obligations for financial transfers in a way that is independent from and additional to their emission reduction obligations. Several non-offsetting funding mechanisms to help developing countries reduce emissions and adapt to climate change have recently been proposed for the post-2012 regime, including by the G-77, Norway, and Switzerland. Carefully constructed fund-based approaches must replace offsetting in any post-2012 international agreement that stands a chance of pulling the planet back from climate disaster.[xxxiv]

For Japan, despite being one of the most energy efficient nations in the world, there are still significant opportunities to improve energy efficiency and switch less efficient facilities to the best available technology, as well as switching fuel sources away from coal and gas. In addition, new strategies and partnerships offer aid and loan support to developing countries as they attempt to mitigate climate change impacts and adapt to a warming world. So long as these loans

are kept as truly new and additional financial contributions, they can offer a much more sustainable pathway out of poverty than the CDM for developing countries.

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