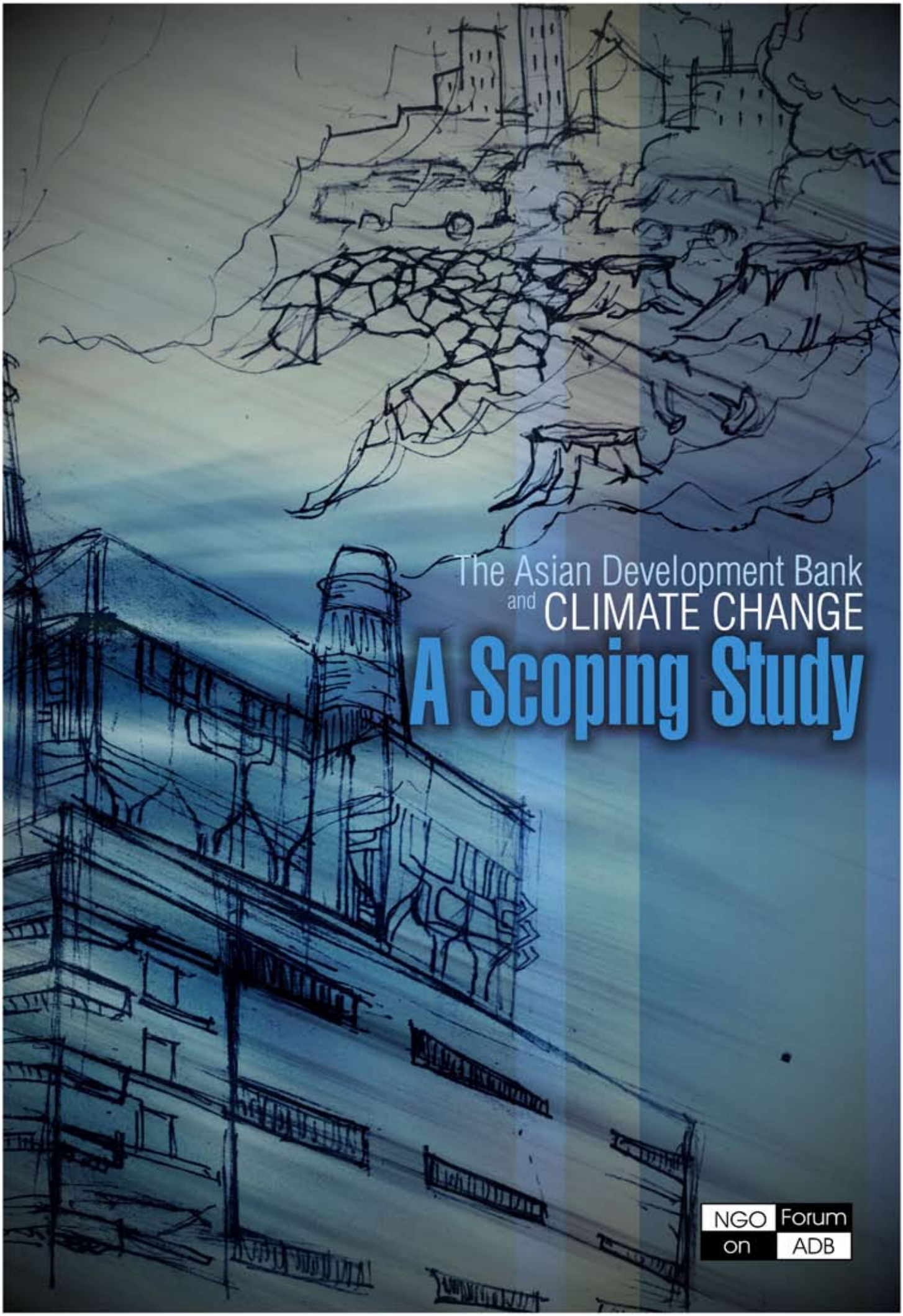
The Asian Development Bank
and CLIMATE CHANGE
A Scoping Study
NGO Forum on ADB

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The Asian Development Bank and Climate Change

A SCOPING STUDY

NGO Forum on ADB
May 2009

LIST OF ACRONYMS

ACEPEF	Asian Clean Energy Private Equity Funds
ADB	Asian Development Bank
ADF	Asian Development Fund
AF	Adaptation Fund
ALGAS	Asia Least-cost Greenhouse Gas Abatement Study
APCF	Asia-Pacific Carbon Fund
AQM	Air Quality Management
BAP	Bali Action Plan
CAI-Asia	Clean Air Initiative for Asian Cities
CALCILM	Central Asia Countries Initiative for Land Management
CCAIRR	Climate Change Adaptation through Integrated Risk Reduction
CCF	Climate Change Fund
CDM	Clean Development Mechanism
CE	Clean Energy
CEEP	Clean Energy and Environment Program
CEF	Clean Energy Fund
CEFPF	Clean Energy Financing Partnership Facility
CERs	Certified Emission Reductions
CHP	Combined heat and power
CIF	Climate Investment Funds
CLIMAP	Climate Change Adaptation Program for the Pacific
CMI	Carbon Market Initiative
COP	Conference of Parties
CTF	Clean Technology Fund
DEAP	Disaster and Emergency Assistance Policy
DES	district energy system
DFID	Department of International Development
DRM	Disaster Risk Management
EBRD	European Bank for Reconstruction and Development
EE	Energy Efficiency
EEC	Emerald Energy Corp.
EEI	Energy Efficiency Initiative
EIA	Environmental Impact Assessment
EPG	Eminent Persons Group
EPIRA	Electric Power Industry Reform Act
EUETS	European Union Emissions Trading Scheme
FCF	Future Carbon Fund
FCPF	Forest Carbon Partnership Facility
FPIC	Free and Prior Informed Consent
GDP	Gross Domestic Product
GEF	Global Environment Facility
GhG	Greenhouse Gas
GIS	Geographic Information Systems
IADB	Inter-American Development Bank
IFIs	International Financial Institutions
IGES	Institute for Global Environmental Strategies
IPCC	Intergovernmental Panel on Climate Change
IPR	Intellectual Property Rights

JI	Joint Implementation
LDC	Least Developed Countries
LDCF	Least Developed Countries Fund
LULUCF	Land-Use Change and Forestry
MDBs	Multilateral Development Banks
Mtoe	Million tons of oil equivalent
M2M	Methane to Markets
NAPA	National Adaptation Plans of Action
NEDO	New Energy and Industrial Technology Development Organization
NPC	National Power Corporation
NRE	New and Renewable Energy
ODA	Official Development Assistance
PEACE	PT Pelangi Energi Abadi Citra Enviro
PEP	Philippine Energy Plan
PPARs	Project Performance Audit Reports
PRC	The People's Republic of China
PREGA	Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement
PSUTA	Partnership for Sustainable Urban Transport in Asia
REACH	Renewable Energy, Energy Efficiency and Climate Change
REDD	Reduction of Emissions from Deforestation and forest Degradation in Developing Countries
SCF	Strategic Climate Fund
SCCF	Special Climate Change Fund
SPA	Strategic Priority on Adaptation
STI	Sustainable Urban Transport Initiative
TA	Technical Assistance
TSF	Technical Support Facility
UNCBD	United Nations Convention on Biological Diversity
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	UN Framework Convention on Climate Change
USI	Urban Services Initiative
WB	World Bank
WFP	World Food Programme

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Photo by Philip Gain/ SEHD

People march on the streets to oppose the implementation of the ADB-proposed Phulbari coal project.

The Asian Development Bank and Climate Change

A Scoping Study

Multilateral development banks (MDBs) such as the World Bank and regional development banks have been conferred with a special role in global actions to address the challenge of climate change. The 2007 Bali Action Plan (BAP) adopted by parties to the UN Framework Convention on Climate Change (UNFCCC) reiterates the growing importance such financial institutions play in consolidating and leveraging funds needed for mitigation and adaptation, as well as in advancing strategies that will enable client countries to develop their economies in a sustainable manner.[1] Using vast resources and technical and policy expertise, MDBs are expected to help determine appropriate national actions leading to low carbon growth and the reduction of greenhouse gas (GHG) emissions, and to enable vulnerable sectors and communities to adapt to the impacts of global warming.

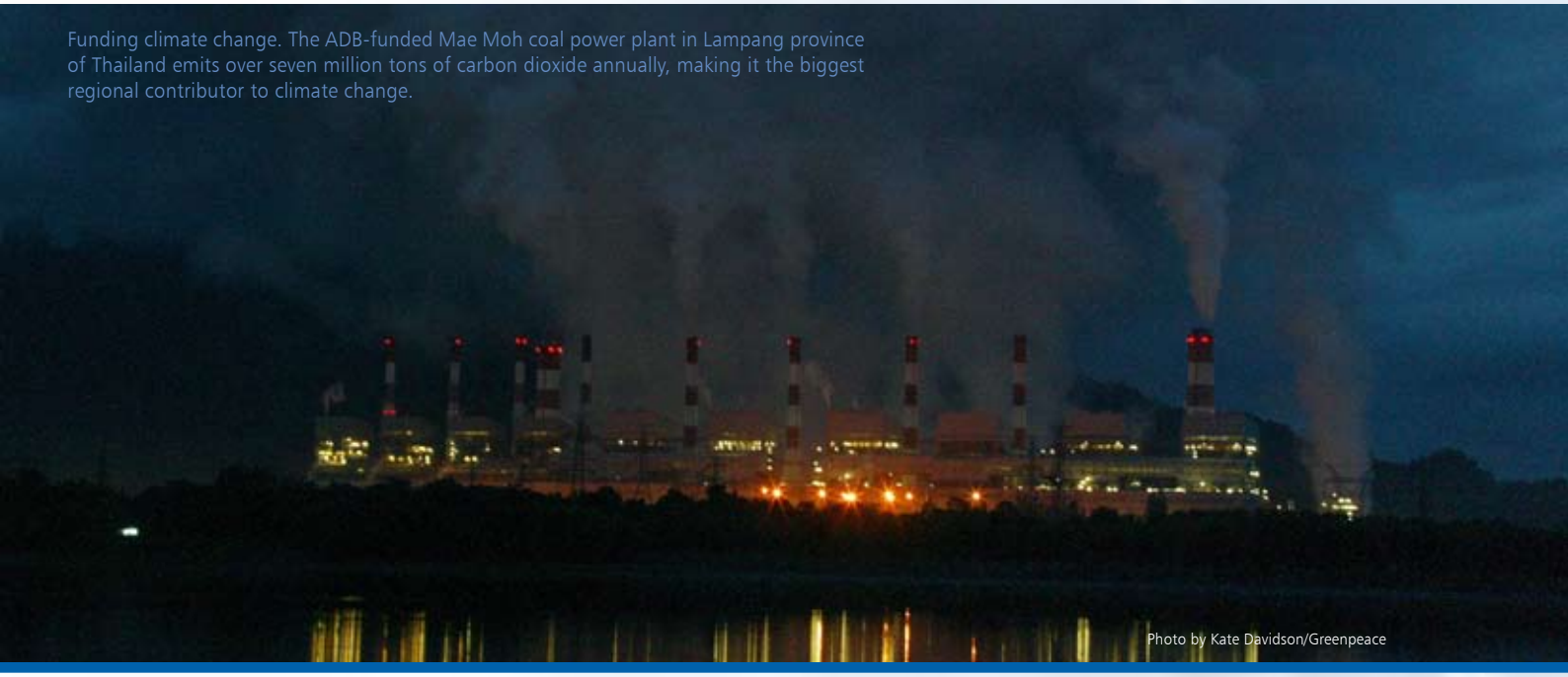
The immensity of the global crisis posed by climate change is undeniable and one which provides strong ballast to the contention that not one country, institution or sector should be spared from contributing to the rapid transition towards more sustainable, climate-sensitive economies. As the World Resources Institute pointed out recently, even MDBs may "have a central role to play in supporting low-carbon development" in their respective spheres of influence (Nakhooda 2008).

Despite this, the role of MDBs in providing solutions to climate change remains heavily contested.[2] The aggregate carbon footprint of MDBs is so massive that it would be impossible to hide or deny it. As analysts from the World Resources Institute point out, "The lending profile of MDBs demonstrate significant concentrations of finance in sectors with substantial greenhouse gas emission footprints, including transport, oil and gas, electric power and mining" (Sohn et al. 2005).

This study will attempt to appraise how MDBs, in particular the **Asian Development Bank** (ADB), is faring in the performance of its climate-related operations. An important actor in terms of grant provision, project implementation and funding, as well as provider of technical assistance and policy analysis in the region, the ADB considers itself "uniquely positioned in the climate change fight" to meet this challenge.

This research initiative is conducted to provide an overview and initial appraisal of the extent, range and nature of ADB programs and projects for climate change in the region, with special focus on Southeast Asia, specifically the Philippines and Indonesia. In particular, the paper poses the question whether the ADB's programs, policies and projects for climate change mitigation and adaptation are relevant and/or adequate (in terms of design and financing), effective, equitable and pro-poor. Potential specific areas where civil society organizations can work on the role of IFIs in addressing climate change are also identified.

The report is divided into six sections. The first provides background information on the global and regional financing climate for adaptation and mitigation initiatives. This is followed by an overview of ADB activities related to climate change in the region. Sections three and four delve into ADB's mitigation and adaptation portfolio. A country analysis on the sustainability and judiciousness of ADB's climate investments in the Philippines and Indonesia caps the report.



Funding climate change. The ADB-funded Mae Moh coal power plant in Lampang province of Thailand emits over seven million tons of carbon dioxide annually, making it the biggest regional contributor to climate change.

Photo by Kate Davidson/Greenpeace

Background and Overview

Humanity has the next 10-20 years to make significant cuts to global GHG emissions or else face the risk of cataclysmic, potentially irreversible climate change impacts. Financial resources and investment, along with technology development and transfer supportive of enhanced mitigation and adaptation efforts have been deemed "building blocks" for the long-term international cooperation required to address the issue. Unfortunately, following the trajectory towards a low carbon, sustainable economy is easier said than done.

A Staggering Expense Account. By World Bank (2006) estimates, incremental costs for mitigation to projected levels of global warming in developing countries could reach US$ 10–40 billion yearly. Oxfam International (2007) reckons this number to be over US$ 50 billion per year. *The Stern Review on the Economics of Climate Change* estimates that overall damage costs resulting from inaction to mitigate climate change will be equivalent to losing at least 5% of global gross domestic product (GDP) each year, with higher losses in most developing countries (Stern 2007).[3]

Meanwhile, UNESCAP (2008) estimates that between 2006 and 2030, the energy demand in the Asia-Pacific region will grow by about 2.75% annually from 5,380 to 8,936 million tons of oil equivalent (Mtoe). This would require total infrastructure investments worth about $9 trillion—though, if countries take the *low carbon route* and invest in sustainable energy sources, demand could fall to 7,710 Mtoe—reducing the required investment to $8.3 trillion" (UNESCAP 2008).[4]

TABLE 1. ESTIMATES OF COSTS OF ADAPTATION

Estimates (US$ billion/ year)	Remarks	Reference
>50	Total costs in developing countries • US$ 7.5 billion/year by scaling up NGO community-based initiatives • US$ 8-33 billion/year by scaling up urgent and immediate adaptation needs described in NAPAs • Other hidden costs (no estimates provided)	OXFAM International (2007)
49-171	Global costs in 2030	UNFCCC (2007)
28-67	Costs in non-Annex I parties in 2030 • US$ 7 billion for agriculture, forestry and fisheries sector • US$ 9 billion for water supply sector • US$ 5 billion associated with human health • US$ 5 billion in coastal zones • US$ 2-41 billion related to infrastructure	
50-170	Additional investment in 2030	Smith (2007)
1.9-32.4	In developing Asia in 2030	UNFCCC (2007)
50-100		FT (2007)
100		Christian Aid
9-41	Total costs for "climate proofing" investments in developing countries • US$ 4-8 billion to climate-proof ODA and concessionary finance • US$ 2-3 billion to climate proof FDI • US$ 3-30 billion to climate-proof Gross Domestic Investment	World Bank (2006)
15-150	Costs of making new infrastructure and buildings resilient to climate change in OECD	Stern Review 2006

Source: Srinivasan and Uchida, February 2008

Financing Mechanisms. Article 11 of the Convention provides for financial resources to developing country Parties through a financial mechanism that operates under the guidance of, and is accountable to the Conference of Parties (COP). Below are the existing financial mechanisms and sources that International Financial Institutions like the ADB relates to and vice versa – carbon finance, public funds and the private sector.

Carbon Finance

Clean Development Mechanism (CDM). The Clean Development Mechanism (CDM) is one of the three market-based mechanisms to help Annex I or developed countries meet their emissions target under the Kyoto Protocol. CDM links the mitigation agenda to financing for sustainable development in developing countries, i.e., a potential source of carbon financing for mitigation purposes such as greenhouse gas reducing projects that generate emission credits in developing countries, which can be used by developed countries to offset their own domestic emissions (UNDP 2007).[5] A 2% share of the total amount of certified emission reductions (CERs) issued for all CDM projects are allocated to the Adaptation Fund to finance adaptation projects and programs in developing country Parties to the Kyoto Protocol. As of April 1, 2009, a total of 1540 projects have already been registered by the CDM Executive Board as CDM projects.

Joint Implementation (JI). Like the CDM, the Joint Implementation (JI) is another flexibility mechanism set forth in the Kyoto Protocol to help Annex I or developed countries meet their obligations under the Protocol. But unlike in CDM, Annex I countries invest in emission reduction projects in any other Annex I country also as an alternative to reducing emissions domestically. JI projects are mainly taking place in so-called "economies in transition" or the Annex B countries of the Protocol, like Russia and Ukraine.

European Union Emissions Trading Scheme (EU ETS). The UK-based EU ETS came into force in October 2003 to promote cost effective emissions reductions and support the EU's commitment to a global carbon market. The global carbon market came into being through the Emissions Trading flexibility mechanism under the Kyoto Protocol. This flexibility mechanism enables the countries that have excess emission units to be sold or traded in the carbon market. The EU ETS works on a "cap and trade" basis. EU Member State governments are required to set emissions limits for all installations in their country covered by the scheme. Each installation is then allocated allowances equal to that cap for the particular phase in question.

Voluntary Markets. Unlike carbon markets like the EU-ETS and alike, voluntary markets do not implement any particular policy mandates. Compared to the compliance market, trading volumes are minimal in the voluntary market

Public Funds

Global Environment Facility. One of the major financing facilities for climate change is the Global Environment Facility (GEF).[6] With funds now amounting to $320 million[7] GEF undertakes adaptation action under three financing avenues: The *Least Developed Countries Fund* (LDCF) is another trust fund accessible only to the 49 Least Developed Countries (LDCs). To date it has mobilized $165 million, enabling 21 countries to develop and submit their National Adaptation Plans of Action (NAPAs), with 10 countries submitting concrete adaptation projects. The *Special Climate Change Fund* (SCCF) is a fund established by the UNFCCC to finance needs in four focal areas: a) adaptation, which is the top priority; b) technology transfer; c) energy, transport, industry, agriculture, forestry and waste management; and d) economic diversification. The resources for adaptation now amount to about $65 million. In 2004, the *Strategic Priority on Adaptation* (SPA) is a $50 million trust fund within the GEF that provides financing for concrete adaptation projects undertaken for the specific purpose of reducing vulnerability and increasing the adaptive capacity of vulnerable communities and their ecosystems.

International Financial Institutions (IFIs). IFIs such as the World Bank and regional banks like the ADB, have numerous initiatives on climate change. The World Bank last year was able to receive pledges, primarily from G8 countries, amounting to $6.1 billion for its Climate Investment Funds (CIF). The CIF has 2 trust funds – the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF). CTF will be used to invest in

projects and programs in developing countries that contribute to the demonstration, deployment, and transfer of low-carbon technologies, and the SCF will serve as an overarching fund for various programs to text innovative approaches to climate change. Another facility established by the World Bank is the Forest Carbon Partnership Facility (FCPF), which intends to "assist developing countries in their efforts to reduce emissions from deforestation and degradation by providing value to standing forests." The FCPF intends to do this *through* "providing incentive per ton of carbon dioxide of emissions reduced through specific Emission Reductions Programs."

Delivery Failure. Unfortunately, as the UNDP laments in the 2007/2008 edition of the Human Development Report, "Current resource mobilization is insufficient to finance low-carbon transition at the pace required. Moreover, the GEF continues to rely principally on voluntary contributions—an arrangement that reduces the predictability of finance."

Not only is adaptation financing is "slow to take off," the "delivery to date is not impressive" (UNDP 2007). "According to UNDP," the response has been characterized by chronic underfinancing, fragmentation and weak leadership. To make matters worse, international cooperation on adaptation has not been developed as part of the wider international aid partnership on poverty reduction. The end result is that multilateral financing mechanisms are delivering small flows of finance with high transaction costs, yielding very limited results."

On the mitigation side, even the "overall level of clean energy investment falls short of its technical and economic potential; many clean energy investments are not being made, despite the existence of a strong business case for them," the ADB points out. "Some market barriers still remain…which prevent economically rational energy efficiency-related investments, even at current energy prices."[8]

"There is also a lack of and need for (i) experience with clean energy projects among financial institutions and (ii) a menu of suitable financing instruments tailored to the different energy efficiency markets," the ADB adds, in explaining why low-carbon investments still has a lot of room to cover. The UNDP (2007) further explains: "developing countries themselves face constraints in financing and capacity" and the "failures in international cooperation" certainly did not help. "In the energy sector, setting a course for low-carbon transition requires large frontloaded investments in new technologies, some of which are still in the early stages of commercial application. The combination of large capital cost, higher risk and increased demands on technological capabilities represents an obstacle to early deployment. Achieving a breakthrough towards low-carbon transition will impose substantial incremental costs on developing countries, many of which are struggling to finance current energy reforms."

Call for 'Innovative' Solutions. "Investment on this scale cannot come from traditional sources of funding," UNESCAP (2008) points out. "Official development assistance has generally contributed only $5.4 billion per year to energy projects in developing countries worldwide—far short of the $344 billion required annually for energy infrastructure development in Asia and the Pacific for the next 22 years. Bridging the gap will require innovative financing solutions, including special funds for infrastructure development and greater private sector participation. Attracting sufficient capital will also require appropriate policies on pricing and taxation along with larger and more efficient financial markets that can draw on domestic savings and tap into international financial resources" (UNESCAP 2008). So much is needed in bridging the financing gap. And yet such innovative financing solutions should also be framed towards developing low carbon growth path for developing countries in the region, and not become or provide a backdoor towards the continued support for carbon intensive energy sources and projects.

As the UNFCCC in 2007 warned, "Failure to achieve changes in investment and financial flows for mitigation will lead to unsustainable development paths and "lock-in" effects for the next 20-30 years. This will lead to higher emissions, more climate change impacts, larger investment and financial flows needs for adaptation in the longer-term."

The poor are the most vulnerable to the adverse impact of climate change.

Photo by Aviash Roul/Forum

The ADB and Climate Change

Getting a Grip on Climate Leadership

On the surface, the Asian Development Bank can be regarded as a specialist on climate concerns in the region. It has its own battery of experts and links with international climate change think-tanks.[9] It has an "energy-efficient" building[10] with a rich repository of resources on the issue. In 2003, its video documentary *Islands and Climate Change*[11] was released ahead of Al Gore's classic, An *Inconvenient Truth*. In April 2009, the ADB released a highly significant study titled "The Economics of Climate Change in Southeast Asia: A Regional Review" where it demonstrated the region's "great potential to contribute to greenhouse gas emission reduction, and that the costs to the region and globally of taking no early action against climate change could be very high."[12] The Bank is also one of the Executing Agencies of the GEF that can implement projects. In 1997, the ADB was "formally admitted to the Conference of the Parties (COP) as an official observer organization and has participated in the annual meeting ever since." The ADB, however, has not had any definitive or institution-wide comprehensive climate change program until fairly recently.

Defining Statements of Intent. Climate change was formally included among the Bank's Core Programs in its long-term strategic framework titled Strategy 2020[13] upon the recommendation of the ADB-commissioned Eminent Persons Group (EPG). In their March 2007 report, the EPG identified "managing climate change, making efficient use of energy, greater reliance on clean and renewable energy and developing and expanding markets for trading carbon emissions" as primary focus areas. In June 2007, ADB President Haruhiko Kuroda declared the ADB as the "Regional Leader in Asia and the Pacific on Climate Change."[14] A brochure-cum-progress report published in November 2007 explains its programs for *Strengthening Mitigation and Adaptation in Asia and the Pacific*.[15] However, the absence of an overarching climate

change framework and action plan, which other international financial institutions such as the World Bank (WB) and the Inter-American Development Bank (IADB) already carry, demonstrates thus far the lack of coherence in the ADB's approach to the issue.

What follows are historical notes describing the ADB's engagements addressing climate change since 1989 as well as current Bank-sponsored or -supported climate initiatives.

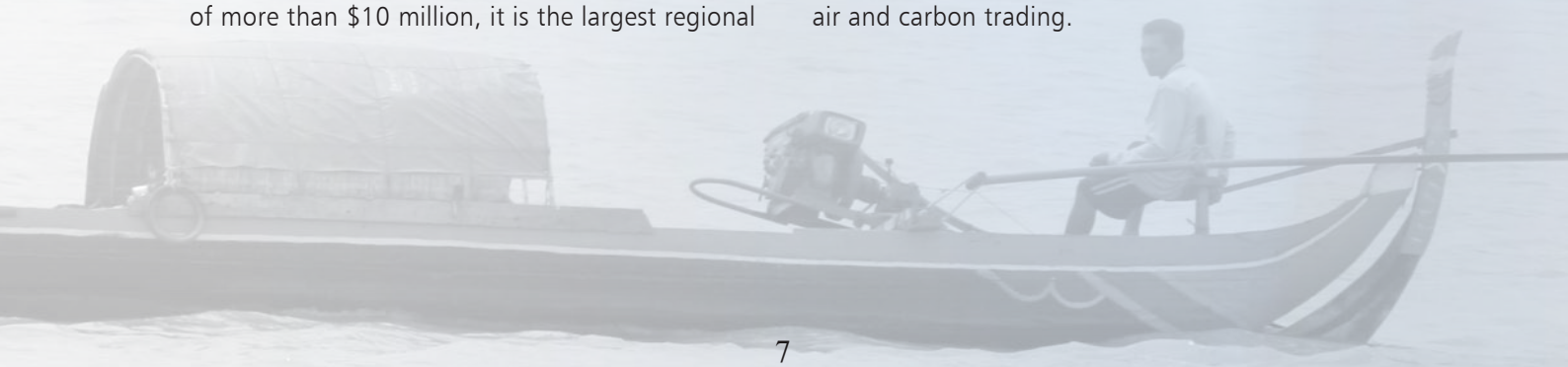
Studies, Capacity-Building and Project-oriented Initiatives. In February 1989, ADB issued a management directive—titled Global Environmental Concerns: Possible Implications to Bank Operations—to review "climate change and other key global environmental issues of relevance to ADB operations and recommended responses, in cooperation with regional and international partners." Since then, the Bank launched several regional initiatives meant to appraise Asia's vulnerability and enable its developing member countries (DMCs) to identify options for meeting the climate change challenge.

The *Regional Study on Environmental Considerations in Energy Development* (TA 5537-REG) was conducted in December 1989 and culminated in a publication of major findings. Almost a year later, the ADB hosted the "Asia–Pacific Seminar on Climate Change", which reviewed the responses to climate change in Asia. The *Regional Study on Global Environmental Issues*[16] generated a rapid assessment of Asia's vulnerability. Then in 1994, the *Asia Least-cost Greenhouse Gas Abatement Study* (ALGAS) came. This produced "seminal findings" for 12 Asian countries, which includes mitigation options in the energy, agriculture and forestry sectors.[17] The ALGAS Project was executed from 1995 to 1998, costing the GEF (through the United Nations Development Programme (UNDP) $9.5 million. ADB provided supplemental funding of $592,000. Governments of Norway and other participating countries co-financed the Project. "With a budget of more than $10 million, it is the largest regional technical assistance project executed by ADB," according to the September 1998-released *ALGAS Summary Report*.

In 2000, the ADB lend its hand to 16 DMCs,[18] launching a capacity building program for Implementation of the Kyoto Protocol and the Clean Development Mechanism (CDM). This technical assistance (TA 5861-REG) sought to empower DMCs to have more meaningful participation in international negotiations. It produced "studies and training materials for CDM project preparation" including the report *Implementation of the Kyoto Protocol: Opportunities and Pitfalls for Developing Countries*.

In 2002, another capacity building effort—the Renewable Energy, Energy Efficiency and Climate Change (REACH) Program—was initiated, promoting "expanded attention to renewable energy and energy efficiency options and other responses to climate change." REACH was funded by the governments of Canada, Denmark, Finland and the Netherlands and sought to "provide assistance to DMCs to address policy, market, financial and structural barriers facing RE and EE, as well as develop institutional capacity and technical capability of governments and local institutions. These interventions aimed at developing innovative solutions that would lead to widespread commercial application of renewable and energy efficiency technologies and services that will in turn lead to a decrease in GHG emissions" [ADB CEEP Update 2007]. REACH, in turn, financed the Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement (PREGA)[19]—a technical assistance project (2001-2006) that came up with "a new inventory of CDM-eligible projects in 18 countries in the Asia and Pacific region."

More recently, ADB's climate change-related programs focused on establishing a CDM facility, conducting studies and promotional work on climate change adaptation, and launching initiatives on clean energy financing, methane capture and utilization, sustainable transport/clean air and carbon trading.



Tatar Buakamsri of Greenpeace and Ms. Maliwan Nakwirot of the Mae Moh Community presents their issue to Mr. Bindu Lohani, then the director general of the Regional and Sustainable Development Department, during a demonstration in front of the ADB Headquarters in Manila. The controversial Mae Moh Coal project in Thailand emits over seven million tons of carbon dioxide annually, making it the biggest regional contributor to climate change.

ADB AND CLIMATE CHANGE: RECENT MILESTONES

August 2003 to July 2006 — Clean Development Mechanism (CDM) Facility. The CDM Facility at ADB was established to mobilize additional resource and technology flows to DMCs for projects reducing greenhouse gas emissions and conforming to sustainable development objectives.

2003 to 2005 — Climate Change Adaptation Program for the Pacific (CLIMAP) (TA 6064-REG). This technical assistance project reviewed Pacific climate change adaptation concerns and responses and developed a systematic risk-reduction approach based on case studies presented in the seminal publication Climate Proofing: A Risk-based Approach to Adaptation.

2005 to present — ADB Energy Efficiency Initiative. This initiative identifies opportunities for wider ADB involvement in financing clean energy investments and capacity building in the Asia and Pacific, with an annual target of $1 billion by 2008.

2006 — ADB joined the Methane to Markets (M2M) Partnership promoted by the United States Environmental Protection Agency to capture methane and utilize it for energy purposes. M2M now includes 20 developed and developing countries, and the European Commission as members. It aims to capture fugitive methane emissions and steer them toward energy purposes whenever possible. More than 640 private sector and non-government organizations have also signed on to participate in project-investment and project development activities.

2006 to present — ADB Sustainable Transport Initiative and Clean Air Initiative for Asian Cities. The Sustainable Transport Initiative was inaugurated, building on work of CAI-Asia to expand ADB's understanding of, and support for, low-carbon and low-air polluting transport technologies and investments.

2007 to present — ADB Carbon Market Initiative ADB's Carbon Market Initiative was inaugurated, with initial financing of $150 million to provide financial and other support to developers and sponsors of projects with greenhouse gas mitigation benefits that qualify for CDM financing.

2007 to present — Promoting Climate Change Adaptation in Asia and the Pacific A regional technical assistance project is initiated to support improved understanding of the consequences of climate change in the Asia and Pacific region and appropriate responses at the project, country and regional levels.

Source: ADB, Background Paper on ADB's Approach to Climate Change in Asian Development Fund Countries, November 2007.

Current ADB programs on climate change include the following:

* *The Clean Energy and Environment Program (CEEP).* Updated in 2007, this program is basically a combination of several ADB "sectoral and thematic initiatives" encompassing the energy sector, transport sector and environment. Interestingly, the ADB document *Environment Program 2003-2007* (an update of the 2006 edition and published in 2008) did not mention the CEEP, but introduced instead ADB's "Climate Change Program" that focuses on "mitigating greenhouse gas emissions" and "adapting to the effects of climate change."[20] The ADB Climate Change Team (2007) maintains that "ADB's approach to helping DMCs address climate change is anchored in poverty reduction and pro-growth strategies."

  As the CEEP is primarily anchored on the ADB's Energy Strategy, it is focused on mitigation.[21] ADB's Energy Policy is still being updated [see the ADB Updated Energy Policy draft, issued February 2009]. It purports to give "greater focus on energy security and climate change mitigation through promotion of cleaner, more efficient and less polluting sources and technologies, and greater use of indigenous forms of renewable energy."[22] The CEEP, which is said to be consistent with the World Bank-prepared Investment Framework for Clean Energy and Development (2006),[23] incorporates several previously existing initiatives with "new" capacity-building efforts"[24] (see Annex 1).

* *The Disaster and Emergency Assistance Policy* (DEAP) is closely related to ADB's climate change adaptation framework. Under Strategy 2020, the "ADB will continue to mainstream disaster risk management (DRM)[25]…by (i) adopting a systematic approach to disaster risk reduction (DRR)[26]; (ii) implementing strategies for short-term rehabilitation and reconstruction to lay the foundations for medium- and long-term development; (iii) working more closely with DMCs to encourage adoption of preventive measures; (iv) strengthening partnerships to maximize synergies among development and specialized relief agencies; and (v) improving ADB's organizational arrangements for planning and implementing DRM. The DEAP continues to be robust and does not require a full review and it is in harmony with global initiatives such as the 2005 Hyogo Framework of Action. While ADB's programs cover pre- and post-impact, greater support for risk-reduction activities has been suggested."[27]

* *Other Related Programs*. The Clean Air Initiative for Asian Cities (CAI-Asia) is an extension of two regional TA projects,[28] aiming to curb air pollution in major Asian cities. Moreover, an Urban Services Initiative (USI) is also being prepared. Its long-term outcome (2015) is "to increase ADB finance to and knowledge of the best practices in urban development." It intends to "complement ongoing initiatives such as the EEI and WFP, and aim to catalyze $4 billion in investments by ADB in urban infrastructure in 10 countries by 2015, $4 billion from the private sector, and $2 billion from co-financiers to support ADB investments."[29] The USI, through TA support, will attempt to produce "urban development road maps in 10 countries and city development road maps in 10 cities by 2015." Apart from this, the USI is set to launch "two vehicles for mobilizing additional resources required in 2007—a fund for grant co-financing of investment projects and a TA and networking entity for rapid response to clients' needs."[30]

  Other ADB climate change interventions cover clean energy from agricultural waste; supporting renewable energy development investment programs; capturing and using coal mine methane; using low-carbon transport fuel (e.g., compressed natural gas); promoting the use of cleaner or energy-efficient technologies; and supporting natural resources management.

Invested in Usual Business. Many of the Bank's accomplishments have yielded a gamut of knowledge products and modest changes in development policy and practice, which guided and capacitated various institutions to address climate change concerns across the region.

However, despite the recognition and further study of the problem of climate change, the ADB's initiatives seem to have done little to

inform widespread lucrative but unsustainable development programs implemented in various countries in Asia and the Pacific, especially in the energy sector.

TABLE 2. ENERGY PRODUCTION-RELATED CO_2 EMISSIONS IN SELECTED ASIAN COUNTRIES IN THE WORLD

Country	1990	2004	Change (%) 1990-2004	Share in % 2004
China	2289	4669	+108.3	17.9
India	588	1103	+87.5	4.1
Japan	1058	1215	+14.8	4.6
Republic of Korea	226	462	+104.6	1.7
Rest of Asia	686	1395	+103.4	5.3
Asia	4847	8944	+84.5	33.6
World	20783	26583	+27.9	100

Source: IEA 2007as cited by Srinivasan and Uchida, February 2008

Previous decades have become testament to stories of phenomenal growth in the region brought about with huge socio-economic-environmental price tags. The growth of GHG emissions from the Asia-Pacific region alone has tripled since 1973 and is reportedly likely to treble over the next 25 years (NGO Forum on the ADB, 2007). Other findings, particularly the results of consultations on climate change in Asia conducted by the Institute for Global Environmental Strategies (IGES) in 2005 found that "most countries have not taken climate change as a high policy priority…"[31]

As MDB monitors suggest, institutions such as the ADB have a lot of catching up to do now in the effort to "support transformative changes in key sectors to steer investment towards low carbon, environmentally unsustainable development choices;"[32] step up the drive to systematically incorporate climate considerations into development strategies and project development; and act with according haste and insight to ensure that genuine progress is made.

There is an intensifying need for developing countries in Asia to go against the previous development direction promoted by institutions such as the ADB. It is today imperative to accelerate the development, formulation and implementation of low-carbon development plans that comprehensively harnesses potential GHG reduction opportunities across various sectors, particularly carbon-intensive ones like cement, steel and aluminum, transport and energy. Such measures address co-benefits, particularly air pollution, including downstream pollution of rivers and ecosystems, and prepares peoples to better deal with energy security and fossil fuel price fluctuations.

Photo by Aviva Imhof/International Rivers

Construction of the Nam Theun 2 hydropower project in Laos.

A house lies in shambles after Typhoon Reming triggered a landslide on the slopes of Mayon volcano in Albay, Philippines. Clean energy advocates believe the latest extreme weather conditions as a consequence of climate change.

Photo by Ivan Sarenas/Greenpeace

ADB's Climate Change Mitigation Portfolio

ADB's approach to climate change mitigation follows the typical MDB recipe: reduce greenhouse gas emissions (both in the energy and transport sectors) by promoting energy efficiency and renewable sources and establish support financing via the carbon market. In its *Environment Program 2003-2006* report, the ADB manifested: "The promotion of clean energy and energy efficiency, sustainable transport alternatives, improved urban environmental management and conservation and management of natural resources can be expected to take a more prominent place in development programs in the years ahead and ADB will play its part in helping to achieve environmentally sustainable growth in the region."

Energy Efficiency Initiative (EEI)—the Annual $1B Clean Energy Program. Among major mitigation programs hatched by the ADB, the EEI is perhaps the most touted. It is already worth at least a billion dollars in 2008.[33] "Energy efficiency (EE)," says the ADB "is the most cost effective source for reducing the energy gap, carbon emissions and reliance on expensive hydrocarbon imports."[34] ADB's Draft Energy Strategy (May 2007) says "ADB will pay greater attention to EE activities in the power, heat and gas subsectors" by facilitating the financing of EE projects "through innovative and dedicated funds." ADB's EEI Task Force reckons that the EE market (which is worth over $24 billion per year) is "a large field of opportunity, consisting of a range of market segments" and to "turn EE's technical and economic potential into well-prepared investments," a "combination of TA, market development tools, policies and incentives will be needed."[35] Through the "indicative" $1 billion annual EEI target, it is hoped that "ADB can play a catalytic role in mobilizing public and commercial investments in this field."

A key component of the CEEP, the EEI was launched on 29 July 2005, aiming to develop "country-level and regional strategies and action

plans to build a healthy investment pipeline of renewable energy and energy efficiency projects" (ADB Infrastructure Operations March 2007). As such, the EEI "designs and implements innovative financing mechanisms for clean energy investments", targeting at least $1 billion annual (i.e., the indicative target) ADB support for both demand-side and supply-side efficiency (including renewable energy) for the period 2008-2010 (Environment Program 2003-2007). ADB support could either take the form of concessional loans, partial guarantee services or project development support. Currently in its third phase (2007-2010), the EEI is currently implementing EE investment and action plans, processing projects in the pipeline, and committing CEFPF funds. Present efforts also include "developing the necessary institutional capacity in ADB to scale up as well as to monitor and evaluate activities implemented under the EEI (ADB Environment Program, 2008).[36]

Clean Energy Financing Partnership Facility (CEFPF). In support of the EEI, a Clean Energy Financing Partnership Facility was launched on 24 April 2007 to initially raise $250 million and help fast-track clean energy projects in ADB's developing member countries (DMC). It has two components: a) the multi-donor Clean Energy Fund (CEF) to support technical assistance (TA), grant components of investment projects, and any other activities that may be agreed upon between financing partners and ADB; and b) the clean energy trust funds.[37]

The CEFPF (which the ADB says is a mere "umbrella" operational arrangement to enhance administrative coordination and efficiency and is "not a legal entity or structure"), is intended to be "a key mechanism to coordinate existing and new resources that are granted to ADB to promote clean energy" through the following: (i) pooled grants through the Clean Energy Fund (CEF); (ii) bilateral grants through clean energy trust funds; (iii) project-specific loans, grants or guarantees under framework agreements to be negotiated with financing partners; (iv) knowledge provision and exchange; and (v) other forms of assistance, such as risk-sharing mechanisms. "At the same time, the CEFPF will also be the mechanism for facilitating and channeling these resources for components of investment projects, TA, as well as any other activities that may be agreed upon between financing partners and ADB, for both private and public sector projects."[38]

The ADB will accept, "on an untied grant basis" contributions to the CEFPF from bilateral, multilateral, and individual sources, including companies and foundations.[39] According to the ADB, the CEFPF kitty (i.e., committed and intended) currently stands at $83.5 million for the period 2007-2011—$28 million equivalent from Australia, $5.5 million equivalent from Norway, and about $50 million from Japan. As of June 2008, the CEFPF has already "received $26.6 million in contributions from financing partners—$3.5 million in the multidonor Clean Energy Fund (CEF) supported by Australia and Norway, and $23.1 million in the single donor Asian Clean Energy Fund (ACEF) supported by the Government of Japan."[40] For the period 2007-2008, the CEFPF is expected to reach a total of $32.8 million as contributions from the Governments of Australia ($4.38 million) and Norway ($1.85 million) arrive by the second semester of the year. "CEFPF aims to secure up to $50 million by the end of 2008," the ADB says.

The CEFPF is designed to finance: (i) smaller energy efficiency investments that require quick and efficient transactions; (ii) technology transfer costs of clean technologies for a small number of high demonstration impact, large interventions that will catalyze deployment of clean energy technologies; and (iii) grant assistance for activities such as developing the knowledge base and incentive mechanisms, advocacy, institutional capacity building, project preparation, establishment of monitoring and evaluation mechanisms.[41] CEFPF resources are also intended to finance policy, regulatory, and institutional reforms that encourage clean energy (CE) development. Potential investments include: (i) deployment of new CE technology; (ii) projects that lower the barriers to adopting CE technologies, e.g., innovative investments, financing mechanisms, and bundling of smaller CE projects; (iii) projects that increase access to modern forms of clean and efficient energy for the poor; and (iv) technical capacity programs for CE.[42]

Though at an embryonic stage, the CEFPF shows potential in mobilizing or leveraging private funds for clean energy. It is touted as an effective tool to

help build public-private partnership towards the mainstreaming of renewables in the energy market and is seen as a program that can contribute to finance policy, regulatory, and institutional reforms that encourage renewable energy development.

Target Met Ahead of Schedule? As reported in *ADB EEI Update Issue No. 6,* dated May-July 2008, "the ADB met its CE investment target on 9 June 2008, almost seven months ahead of schedule.". According to the Bank, "Investments in 13 projects from both public and private sectors in India, Pakistan, Philippines and PRC within the first half of the year have led to this landmark achievement."[43]

As of March 2009, the ADB reported a "clean energy" investment worth $1.693 billion (with 62.83% of the total clean energy component, or $1.063.8 million, allocated to the public sector; and 37.15% or $629.1 million for the private sector). At that period, total ADB-approved projects with CE component already stood at $3.023 billion. The total CE investment is equivalent to 56% of the total approved EEI-related projects. The allocation of so-called "clean energy investments" under the EEI is subject to the *Guidelines for Estimating Asian Development Bank (ADB) Investments in Renewable Energy and Energy Efficiency Projects*.[44]

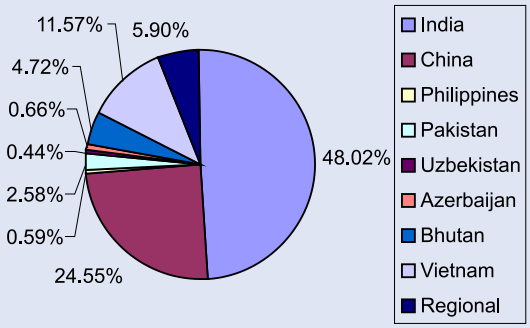
The ADB recognized that the $1 billion a year from EEI "is only a small fraction of the region's needs". The Bank noted however that it was "confident [it] can use this contribution to catalyze significant additional resources."[45]

India and China the Main Recipients. India and PRC—Asia's top two GHG emitters—got a combined share of 66.14 percent of the total approved energy-related projects as of March 2009.

Photo by Kate Davison/Greenpeace

Plug into clean energy now. Greenpeace campaigners install solar panels in Negros province, Philippines.

FIGURE 1. ADB CLEAN ENERGY ALLOCATION PER COUNTRY (2008)



Source of data: ADB Clean Energy Investments 2008, http://www.adb.org/Documents/Clean-Energy/2008-CE-aB.pdf

India received 40.6 percent of the total approved projects with CE component while the PRC's share was up 25.54 percent. The remainder was shared among Pakistan (8.53 percent), Vietnam (6.48 percent), Azerbaijan (5.29 percent), Bhutan (2.64%), Uzbekistan (0.99%) and the Philippines (6.6 percent). A regional project (the controversial ADB Asian Clean Energy Private Equity Funds) got $100 million or a 3.3 percent equivalent. On average, the public sector got bigger financing from the ADB for energy-related projects than the private firms.

In terms of CE investment, PRC and India received 72.6 percent, with India having the lion's share of 48.02 percent of the total CE investments and PRC 24.55 percent. Out of the 22 projects (both public and private) that were approved (as of March 2009), both PRC and India got seven apiece. Out of the 15 public sector CE projects approved, five went to PRC and four for India. In the case of the seven private sector CE projects, India hosted three and PRC received two. Pakistan got 2.58 percent of ADB's CE investment; Azerbaijan, 0.66 percent; Vietnam, 11.57 percent; Bhutan, 4.72%; Uzbekistan, 0.44%; and the Philippines, 0.59 percent.

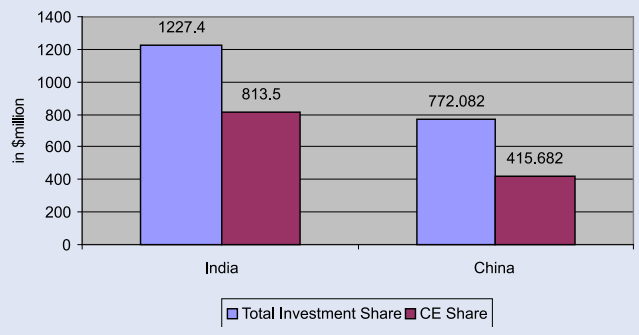
Among the EEI investment projects approved as of March 2009 is the CEFPF-supported Guangdong Energy Efficiency and Environment Improvement Program (worth $35 million, Tranche 1)—a partial credit guarantee program designed to support energy-efficient projects in the People's Republic of China (PRC).[46] Also included is the Gansu Heihe Rural Hydropower Development Investment Project (worth $28 million), also in

the PRC. Moreover, the Municipal District Energy Infrastructure Development Project (private sector, PRC) acquired $400 million from the ADB (with a supposedly 75 percent CE component equivalent to $300 million). According to the ADB, the "Project will fund and facilitate the construction of a series of district energy system (DES) infrastructures to cover 100 million square meters of heated and cooled areas with more energy-efficient combined heat and power (CHP) technologies to address operational deficiency and financial constraints faced by municipalities across PRC." Note that this is not the first time that PRC greatly benefited from ADB-supported CE projects. Out of the 23 ADB-approved projects that adopted cleaner energy forms (for the period 1995-2007), the PRC received 13, totaling $1.006 billion or half of the total loans under the Environment Sustainability subtheme.[47]

In the case of India, the ADB extended a $400 million-loan for the National Power Grid Development Investment Program (Tranche 1, public sector). A $45-million loan was also handed to the Gujarat Paguthan Wind Energy Financing Facility (a.k.a. Samana Wind Power Project), which is operated by the Gujarat Paguthan Energy Corporation Private Ltd. (owned by the China Light and Power or CLP Group). In addition, a $60-million loan was provided to the CLP Wind Farms Private Limited (Samana Phase 2 Project and Saudatti Project). Both fall under the Private Sector category.

Even the $100-million ADB stake in the *Asian Clean Energy Private Equity Funds*, which is supposedly a regional project, heavily favors PRC and India (see Annex for an extended discussion on the ACEPEF).[48] While prioritizing these two giants may be logical, the ADB must assess the effectiveness of lending to PRC and India. These two countries have vast financial resources already at their disposal and presently plays host to a number of significant investors. From an equity standpoint, should the ADB instead funnel a larger chunk of support to smaller countries desperately in need of climate-related financing?

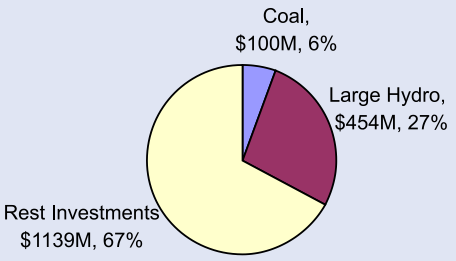
FIGURE 2. ADB CLEAN ENERGY INVESTMENTS IN INDIA AND PRC (2008)



Source of data: ADB Clean Energy Investments 2008, http://www.adb.org/Documents/Clean-Energy/2008-CE-aB.pdf

Coal Included. ADB's performance appears less impressive when projects such as the 4,000-MW Mundra Ultra Mega Power Project in Gujarat, India, with a $450 million-ADB tag, are taken into account. This private sector-initiated project alone constitutes almost 16 percent of the total CE-laden energy investments the ADB had approved as of September 2008. In terms of "clean energy" component, this massive coal-based power project garnered 20-percent, which is equivalent to $90 million. It is operated by the Mundra Coastal Gujarat Power Limited (owned by conglomerate Tata Power Company Limited).

FIGURE 3. ADB CLEAN ENERGY INVESTMENTS ON COAL AND LARGE HYDRO (2008)



Source of data: ADB Clean Energy Investments 2008, http://www.adb.org/Documents/Clean-Energy/2008-CE-aB.pdf

The present accomplishment also includes the upgrading of the 600-MW Masinloc coal-fired thermal plant in the Philippines. The ADB classified 5 percent of the total Masinloc investment (or $10 million out of the $200 million) as "clean". The CE portion of the Ultra Mega Mundra coal project is equivalent to 5.31 percent of the total CE investments; and Masinloc, 0.59 percent.

In the Bank's latest clean energy list (March 2009), the $210 investment to the Calaca Coal-Fired Power Plant Project was no longer included.

The ADB private sector funding for the privatization and refurbishment of Calaca coal-fired power plant in the Philippines in 2008 was put on hold due to the termination of acquisition of the sponsor, the Emerald Energy Corp. (EEC). The EEC terminated the acquisition of the facility due to the "deterioration of the power plant."

Large hydro gets a go. Large hydropower is also part of the list. Three large hydro projects get a big chunk of total public sector funding, amounting to $454 million, with 100% CE allocation. The classification of hydroelectric power as clean and renewable is widely and intensely contested due to the adverse impacts (including climatic impacts) that a hydro power plants bring to the environment.

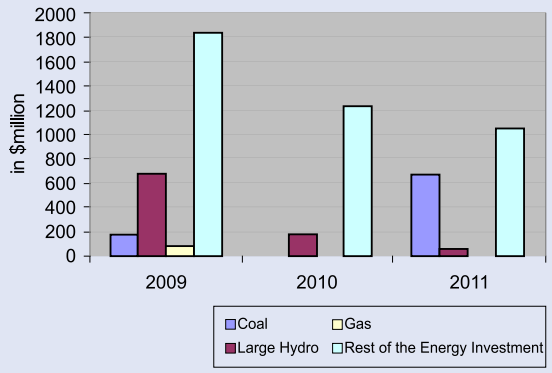
The construction of the 60 MW Dagushan hydropower plant in PRC was allocated $28 million, the 156 MW hydropower plant in the Vu Gia-Thu Bon river basin in Quang Nam province, Vietnam got $196 million, the construction of 111 MW Sawra Kuddu Hydroelectric Project in India got $150 million, and the construction of a 114 MW run-of-river type hydropower plant in Bhutan got $80 million.

Subtracting investments provided to coal and large hydro projects in the list, the ADB was still able to exceed its target of $1B for the rest of its investments for 2008. However minus the Asian Clean Energy Private Equity Funds, considered a gaping loophole through which palm oil, destructive and dirty energy projects can be financed and avoid both climate and ADB safeguards policy at the same time, the ADB is unable to reach its annual $1 billion target.

Glimpse of 2009-2011 pipeline. Based on the document of the Bank's 2009-2011 proposed clean energy investments (as of February 2009),[49] a lot of coal-based power plants and large hydroelectric plants are included in the list. The year 2009 showcases the $450 million Krishnapatnam Ultra Mega Power Project of India and a $531.5 total million funding of 6 large hydroelectric plants (1 in India, 3 in Nepal and 2 in Laos). In 2010 a $168.4 million total funding on 3 large hydroelectric plants (1 in India and 2 in Laos) is included; 2011 includes funding on 5 coal-fired power plants amounting to $3,100 million, all in Vietnam, with $53.8 million allocated to 2 hydroelectric power plants in India and Laos. While the 2009-2011 ADB clean energy pipeline initially indicates that the Bank will achieve and even exceed its $1 billion annual clean energy investment, the list actually showcases in a stronger way its unfettered promotion of climate-destructive coal and large hydro projects. The accompanying graph shows decreasing Bank proposed investment from 2009-2011 on non-coal and non-large hydro while investment on coal increases significantly in 2011.

Glance at guidelines. Based on the Guidelines set by ADB on investments in RE and EE, it came out with an inventory of its energy investment for the

FIGURE 4. ADB CLEAN ENERGY INVESTMENT PIPELINE (2009-2011)

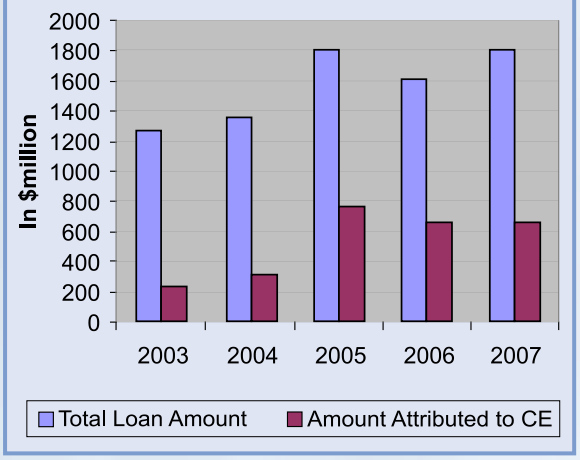


Source of data: Additional Information for W-Paper on Energy Policy, RSSD, February 4, 2009

year 2003-2007.[50] The inventory shows the Bank scaling up its investments in clean energy. Though not reaching the $1B annual mark, the Bank's clean energy investments were more than half a billion from 2005-2007. Quite evident though is the large investment going to greenhouse gas intensive coal, large hydro, oil and gas projects in 2003-2007, particularly in 2005, where more than 90% of the investments went to coal, large hydro, oil and gas projects.

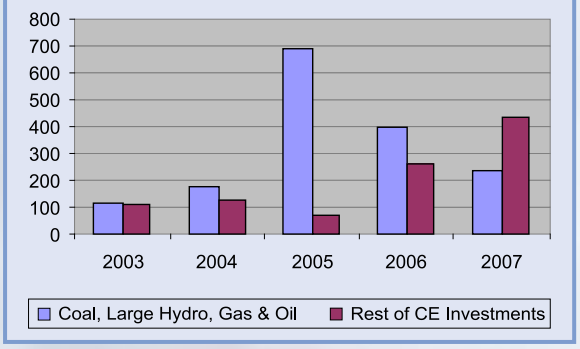
The *Guidelines for Estimating Asian Development Bank (ADB) Investments in Renewable Energy and Energy Efficiency Projects* is in so far as it helps track the Bank's so-called climate solutions-related investments. The views of Taylor et al. (2008), however, offer necessary balance to apparent assumptions made by the ADB. While the "objective of most energy efficiency financing projects today is the development of sustainable institutional mechanisms to deliver energy efficiency investments," Taylor and company point

FIGURE 5. ADB ENERGY INVESTMENT (2003-2007)



Source: ADB Clean Energy Investments 2003-2007, http://www.adb.org/clean-energy/documents/summary-table-2003-2007.pdf

FIGURE 6. ADB CLEAN ENERGY INVESTMENTS ON COAL, LARGE HYDRO, GAS & OIL (2003-2007)



Source: ADB Clean Energy Investments 2003-2007, http://www.adb.org/clean-energy/documents/summary-table-2003-2007.pdf

out in their study *Financing Energy Efficiency: Lesson from Brazil, China, India, and Beyond* (The World Bank, 2008), the "problem faced in most countries is not a shortage of capital" but the "lack of means to deliver existing capital to end users in suitable financial and technical packages." Therefore, "it follows that provision of flows of external capital…is not the solution." They added that "incorporating investment support with technical assistance typically is important—not for the capital flow as such, but to focus the effort on practical, operational implementation." In view of this, they pointed out that "Lending volumes need not be big and other instruments such as guarantees or well-targeted grant support may be as useful as lines of credit."

"The extent of IFI emphasis and contribution for specific development tasks," Taylor and company maintain, "is often measured in terms of the total amount of capital lent. This is clearly a misplaced measuring tool to gauge emphasis and success in the case of IFI involvement in end-use energy efficiency investments. The success of IFI involvement in energy efficiency should be measured, where possible, in terms of the energy savings achieved from IFI-sponsored programs and activities."[51]

The Carbon Market Initiative (CMI). As a complement to the EEI and also as successor to ADB's CDM Facility, the ADB launched the Carbon Market Initiative (CMI) in November 2006.[52] Thanks to the emergence of carbon as a tradable commodity, the CMI is ADB's attempt to further leverage the carbon market. The CMI facilitates the development of clean energy, promotion of energy efficiency, and other GHG abatement projects among DMCs eligible under the CDM of the Kyoto Protocol. Unlike other carbon market instruments (that only give room for payment-on-delivery carbon credit schemes) the CMI provides "up-front" co-financing for CDM-classified projects. Via the CMI, the ADB intends to remove the "fundamental barrier developing countries face in adopting cleaner technologies"—the shortage of adequate finance and capacity, especially in the case of small CDM-eligible projects.

One-Stop Shop. The CMI intends to provide a comprehensive service to DMCs, project developers and CER buyers from developed countries. It will work with project sponsors on various aspects

Photo by Philip Gain/SEHD

Villagers stage a protest against the implementation of the Phulbari coal project in Bangladesh.

of the overall project and the emission reduction component (including design, approvals and certifications, financing, and marketing of residual credits) in line with ADB's financing partnership strategy for co-financing. The CMI "facilitates the CDM process from start to finish through upfront co-financing, technical support, and marketing support for projects." The ADB describes the CMI as "a dedicated, comprehensive, and integrated initiative" that will "support existing projects" and "develop new concepts" that can be included in ADB's operational programs.[53]

CMI COMPONENTS

Asia-Pacific Carbon Fund (APCF): Established and managed by ADB, the APCF became operational on 01 May 2007 and has already received a total commitment of $151.8 million from participants comprising of Belgium, on behalf of the Flemish Region, Finland, Luxembourg, Portugal, Spain, Sweden and Switzerland. It co-finances CDM projects with ADB by securing a portion of the expected future certified emission reductions (CERs) from CDM-eligible projects in exchange for upfront finance (i.e., a "Buy and Pay now, Deliver later" scheme that partially "securitizes" the potential/future carbon credits). Through this, the APCF aims to bring down the initial financial contribution of project sponsors and commercial banks (usually 30–50 percent of the total cost for public sector projects and at least 75 percent for private sector projects).

The APCF will provide upfront payment against the purchase of between 25 percent and 50 percent of the CERs expected to be generated by each project (for the first commitment period of the Kyoto Protocol, i.e., up to and including 2012. The remaining 50–75 percent of CERs may be sold freely by the project sponsors in the market (including through the CMF), but only after the CERs sold to the APCF have been fully delivered. Sponsors of ADB-financed projects will be under no obligation to sell CERs to the APCF and will be free to explore other alternatives offered by the market. In the same way, the APCF will be free to decide which projects it wishes to acquire CERs from.

The types of projects eligible for APCF financing are: energy efficiency, including industrial technology and supply-side technology (e.g. an upgrade of generation equipment); renewable energy, including small to medium-sized run-of-river hydropower, biomass (e.g. biogas and biofuels), wind power, solar power; and methane capture and utilization, including coalmine methane and solid waste and wastewater treatment.

Technical Support Facility: The grant-based TSF aims to "ensure a continuous pipeline of "bankable" clean energy project proposals that can be considered for project finance and support. For those selected for ADB financing, it will provide technical support during project implementation and operation."

Credit Marketing Facility: Marketing support for the buying and selling of carbon credits will generate additional revenues during the project's operation stage. "With ADB facilitating the marketing of credits, buyers are instantly assured that the project has secured long-term project financing from ADB and that it conforms to ADB's environmental and social safeguard policies. ADB-supported projects offer strong fundamentals to buyers and ADB's marketing support helps obtain competitive prices for DMCs and project developers." However, the "ADB does not have the necessary capacity to conduct large-scale brokerage operations efficiently in-house. Therefore, the operations of the CMF will be subcontracted to qualified third party contractors." Currently, *CM Capital Markets Holding and Tradition Financial Services Ltd* are the retained sellers' representatives of the ADB.

"The potential carbon value (CO2 equivalent) in ADB's project pipeline is estimated to be about 42 to 63 million tCO2e to the end of 2012. It is estimated that over 80 projects in the ADB pipeline have potential carbon credit content," the ADB points out.

Source: ADB. Carbon Market Initiative: The Asia Pacific Carbon Fund, November 2006. See also ADB CMI Brochure.

Photo by Luis Liwanag/Greenpeace

Electric Jeepney (E-Jeepneys) the first public transport of its kind in Southeast Asia in a historic drive along Ayala Avenue in the Financial District of Makati by GRIPP (Green Renewable Independent Power Producer), Greenpeace, and the Makati City Government. The Electric Jeepneys, part of an innovative project led by GRIPP, are meant to steer clear of the use of fossil fuels to help mitigate climate change, even as it addresses urban problems such as air pollution and solid waste.

CMI implementation. The ADB established the Asia-Pacific Carbon Fund (APCF) as the dedicated CDM project co-financing facility (i.e., source for upfront payments). In exchange, projects will supply certificates of emissions reductions (CER) that ADB will use to recoup its investment. The CMI then provides technical support to CDM developers and projects through the Technical Support Facility, which will provide capacity building, due diligence, documentation and CDM project implementation support. The CMI also provides marketing support services to CDM project developers to promote the sale of carbon credits from their CDM projects through the *Credit Marketing Facility* (ADB Infrastructure Operations March 2007).

The APCF framework paper states: "The CMI is a balanced approach that will benefit both developing and developed member countries. DMCs will benefit from the greater availability and affordability of underlying finance for clean energy projects. They will also benefit from grant-based CDM technical support throughout the project lifecycle. They will have additional financial returns from sales of residual CERs. Developed countries (Annex B investors in the Kyoto protocol) will receive CERs that will enable them to meet their GHG reduction obligations. They will also benefit from their association with clean energy development projects. Both developing and developed member countries will benefit from ADB's own financing, extensive due diligence process and project risk assessment and mitigation strategies."

According to the ADB, "The CMI is available to projects that are already receiving ADB support subject to the satisfaction of the additionality criteria."[54] As of April 2008, the APCF Portfolio has around 45 projects in the pipeline.[55] Eighteen (18) preliminary agreements have already been signed in six ADB DMCs. So far, only one signed Purchase Agreement has been made: the China Erlongshan Hydropower project, worth approximately $4 million.[56]

Future Carbon Fund. According to Ursula Schaefer-Preuss, ADB's Vice President for Knowledge Management and Sustainable Development, the ADB launched in July 2008 another carbon finance facility—the Future Carbon Fund (FCF)—to complement the existing CMI-APCF and extend it beyond 2012 (the end of the Kyoto Protocol commitment period).[57] "The fund will be the first of its kind. It will provide upfront financing for clean energy projects leveraging carbon credits to be generated after 2012, and will therefore help bridge the gap until an international successor agreement is in place."[58]

Designed as a public-private partnership between ADB, governments and companies located in its 67 member countries, the FCF aims to "stimulate new investments in clean energy projects even before a new international agreement is reached." Like the APCF, the FCF will "provide financing up front for ADB-supported projects that will continue to generate carbon credits after 2012." The initial target size of the FCF is $100 million and "may be increased to $200 million if there is sufficient demand."

FUTURE CARBON FUND—PRIORITY TARGET PROJECTS

Energy Efficiency	Transport	Renewable Energy
- Industrial technology - Buildings and equipment - Supply-side efficiency (e.g. upgrade of generation equipment)	- Public transport - Vehicle efficiency	- Biomass energy - Run-of-river hydropower - Wind power - Geothermal power - Waste to energy

Source: Asian Development Bank, Future Carbon Fund. Available at: http://www.adb.org/Documents/Events/2008/CDMProject-Development-Workshop/Future-Carbon-Fund.pdf.

Green Desert: oil palm plantation in Indonesia.

Photo c/o WALHI

Another glance at the carbon market. The ADB is optimistic about the the role of the carbon market (valued at $64 billion in 2007, with a potential to reach $100 billion in the near term)[59] in mainstreaming so-called clean development.

The efficacy of the CDM and its carbon market corollary to actually reduce greenhouse gases is widely questioned. Carbon market monitors have pointed out that "the CDM at its best only offsets Annex I emissions, and without effective additionality testing and rigorous baselines, allows global emission to increase in absolute terms."[60] The present CDM structure has failed to deliver local sustainable development benefits to host countries and "it has to set up an apparatus that ties up so many resources…" avers other critics who have tracked the "[v]ast bureaucracies created to measure, monitor, register, certify, validate and enforce millions of separate emissions cuts. Thousands of bright technical people go to work inventing ways of achieving those cuts as cheaply as possible…Carbon buyers, sellers and consultants concentrate on finding cunning means of producing carbon permits for short-term profit…Ingenuity goes into milking the system, not into weaning the world off fossil fuels."[61]

Though it has accumulated sizeable merit, prospects for a vibrant Asian carbon market remain cloudy even though it is home to two of the world's largest carbon credit sellers, PRC and India. As observers point out, in light of the establishment of a number of Asian carbon exchanges, proximity to PRC or India alone "won't make for a liquid market. The drawback is that, unlike in Europe, most key economies in Asia such as India and PRC do not have regulations requiring companies to buy carbon credits. Japan is the only Asian country buying carbon credits, but Japanese companies do not buy them on exchanges."[62] Attracting buyers from Europe with innovative products "would not be enough on its own to ensure the success of the new Asian carbon exchanges. Asian governments also need to create local demand for carbon credits."[63] Absent "regulations requiring companies to buy credits, there is little reason for them to do so. Similarly, power plants are encouraged to cut emissions, but are not yet penalized if they do nothing."[64]

The Sustainable Urban Transport Initiative (STI). The ADB points out that the Asia-Pacific region "has the fastest growing motorization rate in the world with growth rates of over 10% per annum, sustainable transport is critical to protect the environment and address climate change."[65] Recognizing the transport sector as "the largest emitter by oil usage, and by far the fastest growing" in the region,[66] the ADB highlighted the need for "environmentally sustainable transport modes and mobility patterns… to stop the explosive growth in transport GHG emissions". The Bank singled out urban transport as "a major need for the region. In addition, ADB will also support the developing member countries to effectively adapt to the effects of climate change - thru climate proofing - in our transport and other infrastructure projects." According to the Bank, "transport projects will be geared towards mitigating climate change through sustainable transports, and adapting to climate change through climate proofing."

In 2006, two ADB-sponsored studies became the platform for launching STI: *A Roadmap for Cleaner Fuels and Vehicles in Asia* which assessed links between fuel quality and air emissions[67] and *Energy Efficiency and Climate Change Considerations for On-road Transport*,[68] which analyzed the relationship between the transport

sector and climate change in Asia. The latter noted that even if all expected technological improvements were incorporated, Asia will experience a "tripling of CO2 emissions" over 25 years. As such, action priorities were identified, namely (a) integrated management for travel demand, (b) improved uptake of new vehicle technologies, (c) fuel quality standards and increased use of alternative fuels, and (d) promotion of efficient transport systems.[69] STI aims to develop a coherent investment and development framework to deliver modalities for effective and efficient transport systems that goes beyond reducing carbon emissions in the transport sector.[70] The initiative gives "advice and financing for public transport innovations, cleaner technologies, and new mobility patterns to reduce GHG emissions and other vehicular pollution" (ADFX Document 2007).

Phase I of STI[71] aims to provide each selected city with the following: (i) a strategic development framework for sustainable urban transport; (ii) a set of effective investment programs to support efficient urban transport systems; and (iii) a set of innovative financing options, such as combining public and private resources and using new financing modalities.[72] It is also expected that the work will "identify specific investment programs in the ADB's project pipeline and ensure the enabling environment is conducive to successful implementation." ADB is currently undertaking "pilot urban transport projects" in five Asian cities: Changzhou, Colombo, Dhaka, Harbin and Kathmandu to develop sustainable and integrated transport solutions. The ADB is also developing "energy efficient public transport systems" in Bangkok, Hanoi, Ho Chi Minh, Karachi, Lahore and Manila. There is also an ongoing work to "develop national transport policies that place a high emphasis on emissions, energy use, and mobility efficiencies."

STI Phase II and Phase III provide regional technical assistance for implementation in the period 2008-2010 and will have an increased focus on energy efficiency in transport to help identify and implement needed policy updates and relevant institutional capacity building while assisting the financial structures of transport infrastructure and public transport systems.[73] Last November 2007 the ADB approved the provision of technical assistance not exceeding the equivalent of $500,000 on a grant basis for *A Development Framework for Sustainable Urban Transport*.[74]

An additional $120,000 in financing was infused in May 2008 by the global Transport Knowledge Partnership, a program supported by the Government of United Kingdom's Department of International Development (DFID) to include rural transport and cross-cutting themes such as governance, climate change, and social development. Another $100,000 was chipped in by the South East Asia Community Access Program (SEACAP)—also DFID-supported—in June 2008 for the planned transport workshop, for a revised RETA cost of $720,000.[75] The ADB notes that "[m]uch of [STI's] work is at the policy level."

STI actually stands as evidence of the scant attention given (particularly by the ADB) to the need to arrest the rise in transport-related greenhouse gas emissions in Asia. The ADB has actually perpetuated directly and indirectly the rise of transport-related greenhouse gas emissions in Asia through its transport funding from 1968-2008. According to a study done by the NGO Forum on the ADB in 2008, a staggering US$35.8 billion had been loaned out by the Bank to the transport sector since its inception, with 76% going to the energy-intensive construction of roads and

Photo c/o Uttaran

highways that further stimulate the production and use of fossil-fueled vehicles.

The Bank's financing of STI is virtually token, without a sense of urgency and almost completely bereft of recognition of central the role the ADB has played in abetting the rapid growth of climate-damaging transport systems in region.

Forest for Mitigation. The Fourth Assessment Report of the Intergovernmental Panel on Climate Change regarded the forest sector as one of the major contributors to climate change, mainly through deforestation and degradation, next to energy, accounting for 17% global greenhouse gas emission. The importance of forest management as an integral part of both mitigation and adaptation measures have been taken up in numerous conferences and gatherings even before the inception of the Reduction of Emissions from Deforestation and forest Degradation in Developing Countries (REDD), a UN initiative to curb greenhouse gas emissions from deforestation and forest degradation.

In the last decade, annual average rates of deforestation among DMCs have been as high as 1.8% of total forest area. The rate of deforestation is threatening Asia Pacific's 807 million hectares of forest cover, which represents 15% of the world's total forest and wooden land, and home to 450 million people who also depend on forest for their livelihood.[76]

Inundated ricefield, Bangladesh. Clean energy activists attribute the latest extreme weather conditions to rising temperature and climate change.

The ADB has been reviewing its 1995 Forest Policy since 2000. In June 2003 the latest draft of ADB Forest Policy came out, which numerous NGOs and forest advocates criticized heavily for its fundamental flaws. Critiques of the draft ranged from its promotion of land privatization instead of land rights, the absence of explicitly written protection of Indigenous Peoples' rights, and its promotion of tree plantations.

The ADB's track record in the forest sector speaks for itself. Since 1977-2002, the bank has invested around $1.06 billion in stand-alone forestry projects, more than 80% of which was spent on establishing more than one million hectares of tree plantations and 775,000 of which are commercial plantations.[77]

In Indonesia, the Bank financed a study in 1988 to identify sites for the development of the pulp industry. Since that time the pulp industry has expanded massively in Sumatra with devastating impacts on people and forests. The Bank has also been criticized for supporting monoculture plantations as part of its forest initiatives.

ADB's funding of numerous projects such as dams, mines and roads. have also exacerbated deforestation in the region. For example, the Route 9 project, which runs from the Vietnamese port of Dong Ha to Savanakhet in Laos, has become one of the preferred roads used by Vietnamese logging companies to export timber from Laos, much of it illegally. The road passes close to two National Biodiversity Conservation Areas. Before agreeing to finance the project, the ADB admitted the road would "exacerbate illegal trade of wildlife and log export". ADB loans have had a major impact on the forests of the Mekong Region, which shrank by 68,000 square kilometers between 1990 and 2000.[78]

In the Bank's $40 million Climate Change Fund, only $5 million is made available for land use and Reduced Emissions from Deforestation and Degradation (REDD) and improved land use management.

Photo by Ratan Bhandari/WAFED

Protest against West Seti High Dam in Deura Bajhang.

ADB's Climate Change Adaptation Program

Countries in Asia and the Pacific are among the most vulnerable to climate change, and are expected to suffer many of its most detrimental impacts. ADB estimates about 1.2 billion people could face freshwater shortages by 2020 and crop yields in Central and South Asia could drop by 50% in 2050. Flooding and damage from unpredictable weather patterns are expected to overwhelm Asia's coastal megacities, which include Bangkok, Jakarta, Karachi, Manila, Mumbai and Shanghai. Within the century, millions of citizens from Tuvalu to coastal Bangladesh may be forced to become climate refugees."[79]

The ADB recognized in its 2009 report on the economics of climate change impacts in Southeast Asia that warming temperatures "threaten to reverse decades of progress in poverty reduction in Asia and the Pacific."[80] According to the report, economic costs "would be 2.2 percent of gross domestic product by 2100 if only the impact on markets is considered, 5.7 percent if health costs and biodiversity losses are factored in and 6.7 percent of gross domestic product if losses from climate-related disasters are also included." This "far exceeds the projected cost globally of climate change, estimated at 2.6 percent of gross domestic product each year by the end of the century."[81]

Adaptation Program Thrusts and Current Initiatives. The ADB identified knowledge, financing, a regulatory framework for mainstreaming adaptation into development, including advanced planning and preparatory work for future rehabilitation needs, as key requirements[82] for a strong adaptation response in the Asia Pacific region. Its adaptation program evolved from almost a decade of very small project-based, co-financing initiatives seeking primarily to build knowledge of climate change impacts and adaptation measures into one that appears to consist of components related to national adaptation planning,[83] project-level "climate proofing" of infrastructure and future designs[84] and specific adaptation investments[85] to reduce risks from climate change impacts.[86] Support is also provided through regional and sub-regional cooperation, national adaptation support, and mainstreaming adaptation into project design.[87]

Among current and planned adaptation initiatives are the following:

NATIONAL ADAPTATION PLANNING

* **National Adaptation Programs of Action (NAPA)**. Using the Least Developed Countries Fund administered by the GEF, ADB provided assistance in the NAPAs preparation of Bangladesh, Bhutan and Samoa Ten more are being processed, particularly in Afghanistan, Cambodia, Kiribati, Lao PDR, Maldives, Solomon Islands, Tuvalu, Vanuatu, Myanmar and Nepal (McCauley, 2007).[88]

* **Initiative on Climate Impact and Adaptation in Asian Coastal Cities** (2007-2010). This ADB-World Bank-Japan Bank for International Cooperation project consists of adaptation studies that aim to determine future climate conditions, determine likely costs and assist local governments to adapt their investment plans. The coastal mega cities of Bangkok, Ho Chi Minh, Jakarta, Karachi, Kolkata and Manila were identified for analysis. In Vietnam, a geographic information system was created to improve identification and mapping of zones at risk from typhoons and storm surge.[89]

* **Promoting Climate Change Adaptation in Asia and the Pacific.** This is a $3.6 million technical assistance (the amount of $0.8 million is financed on a grant basis by the Japan Special Fund and $2.8 million will be financed on a grant basis by the Government of the United Kingdom). The project seeks to mainstream adaptation issues into investment planning, develop a national capacity for adaptation and coordinate/strengthen international community responses for adaptation. Small grants are awarded to developing member countries, NGOs or private sector to pilot-test, demonstrate or develop cost-effective adaptation measures in the region.[90]

* **Others**[91]

  – Analysis of the likely impacts of climate change on both natural and agricultural ecosystems in the Greater Mekong Sub-region, so that appropriate future investments can be planned to adapt to account for these added risks.

  – Prepare sector strategies for adaptation in the South Pacific (Coral Triangle Initiative).

PROJECT-LEVEL "CLIMATE PROOFING"

* **Climate Change Adaptation Program for the Pacific (CLIMAP)**, 2003 to 2005, is financed with the Canadian Cooperation Fund on Climate Change by the Government of Canada to help prepare small island developing states in the Pacific for future extreme events. It includes:

  – Climate proofing the design of Avatiu Harbor in the Cook Islands and the road development project in Kosrae, Federated States of Micronesia.

  – Piloting the conduct of adaptation mainstreaming at the national development planning, sector programs, and project activity levels.

  – Six case studies showcasing adaptation initiatives of Pacific developing member countries using the Climate Change Adaptation through Integrated Risk Reduction (CCAIRR) framework and methodology.

  – Preparation of an additional eight country climate risk profiles and 19 Project Adaptation Briefs.

  – Publication of the report Climate Proofing—A Risk-based Approach to Adaptation.

  Grants to revise the hydrological assumptions used in the design and implementation of water projects across the region is provided by the Water for All Program.[92]

SPECIFIC ADAPTATION INVESTMENTS

* **Central Asia Countries Initiative for Land Management** (CALCILM), 2006 to 2016. Although this multi-country and multi-donor partnership is focused on combating land degradation and improving livelihoods in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, ADB categorizes it as part of its climate change adaptation initiatives claiming that it is "helping the countries of that arid region adapt through drought-resistant crops, improvements in irrigation efficiency, water resource management, watershed protection and other measures."[93] CACILM has investments of about $1.4 billion and projected GEF co-financing of $100 million over 10 years.

* **Citarum River Basin Project** of Indonesia, will invest more than $3 billion in upgrading water resources management infrastructure and institutions over the next 15 years under an ADB-led program. A parallel analysis will examine areas of climate proofing or specific investment required to adjust to the added risks from climate change.

OTHER REGIONAL/SUB-REGIONAL ADAPTATION PROJECTS

* Regional Partnerships for Climate Change Adaptation and Disaster Preparedness,[94] a $1 million technical assistance project seeking to strengthen the financial resilience of participating Pacific Island countries to the effects of natural disasters. A desired outcome involves informing government and development partners regarding hazard exposure and risk minimization to guide decision making towards the development of a catastrophe insurance scheme. Targets include the development of:
  - 8-14 national and a consolidated regional, Geographic Information Systems (GIS) encompassing hazard and vulnerability data, analysis of regional data vis-à-vis suitability of the Pacific for catastrophe insurance coverage.
  - Stakeholder consultation meetings at the regional level.
  - Catastrophe insurance facility for the Pacific led by the World Bank.

Adaptation Financing. Until lately, the ADB had no major funds focused on adaptation. Besides GEF funds, it now taps the following sources:[95]

* *Climate Change Fund.* A new fund established in May 2008 "to slow the onset of climate change and to help the Asia-Pacific region adapt to the expected devastating impact of global warming."[96] Tagged as the Climate Change Fund (CCF), it was seeded with $40 million and is "open for further contributions from countries, other development organizations, foundations, the private sector and other sources." The ADB says that the CCF "is part of efforts to increase investments in helping countries adapt and avoid the negative consequences of climate change."

The CCF was created for the purpose of facilitating greater investments in developing countries in Asia and the Pacific to address the causes and consequences of global warming. Money from the fund will be used to provide grant financing for technical assistance, investment projects, research and other activities.[97] "In addition to supporting transition to low-carbon economies and establishing climate resilient infrastructure, this fund will allow ADB to address the cross-cutting social vulnerability issues related to climate change such as changes in livelihood, resettlement and health impacts. This new fund will help [the ADB] pool resources from around the world to invest here in Asia to help deal with this problem." While this Fund signals the Bank's shift towards increased adaptation efforts, it was recognized that "without a fund created specifically for adaptation, there is a danger that funding may still go disproportionately to mitigation as opposed to adaptation activities."

* *Climate Investment Funds.* ADB is a partner of the World Bank Group that will administer the Climate Investment Funds (CIF)—a pair of international investment instruments designed to provide interim, scaled-up funding to help developing countries in their efforts to mitigate increases in GHG emissions and adapt to climate change. The two trust funds under the CIF includes the *Clean Technology Fund* that will be used to invest in projects and programs in developing countries that contribute to the demonstration, deployment and transfer of low-carbon technologies; and the *Strategic Climate Fund*, which will serve as an overarching fund for various programs to test innovative approaches to climate change.

The CIFs were created through consultative meetings on climate change instigated by the World Bank Group over the past nine months, attended by the United Nations family, other multilateral development banks (MDBs), civil society organizations and the private sector. The funds will be disbursed as grants and/or concessional loans. Last 26 September 2008, leading industrialized nations pledged more than US$6.1 billion to the CIF.

* *Others.* There is mention of an ADB Small Grants for Adaptation Funds amounting to $1.2 million as another source for adaptation financing but the Bank has yet to announce details on this. The Bank is also looking into possibilities of tapping the UNFCC-created Adaptation Fund (AF) that will be financed through a 2% levy on transactions under the Clean Development Mechanism.

More Attention to Adaptation. The Fourth Assessment Report of the IPCC underscored that projected impacts of climate change on agriculture, water, health, and coastal and marine ecosystems would be very severe in many sectors in Asia and the Pacific. Overwhelming evidence of impending climate-induced disasters suggest that adaptation is not an option but an absolute necessity (IGES, 2005).[98]

It is not difficult to note the disparity in amounts channeled by the ADB towards mitigation and adaptation. The few adaptation activities identified are mostly technical assistance-driven or regional study projects conducted with Bank partners. Where incremental funding is needed, ADB provides assistance in identifying external financing sources, but hardly has the ADB moved or financed adaptation projects on its own. Moreover, there are cases when climate change has not been the focal point in the assistance cited by the ADB, such as the case with its adaptation investments in the CACILM project and Indonesia.

The financing that the ADB has so far provided to adaptation is too minute compared with the need which the ADB itself has identified to comprehensively and urgently address the adaptation requirements of its DMCs. Is it because the ADB believes there is little business to leverage from adaptation activities?

Adaptation measures context. Adaptation pursuits require broader focus trained on a complex process involving many sectors, needing more localized adjustments and with a higher prospect of failure compared to mitigation.

If the ADB was to adhere to its pronouncements regarding the urgency of climate action - particularly adaptive action - the Bank should actually be more pro-active in facilitating the mainstreaming of adaptation concerns into development planning, especially in light of reports that progress in this undertaking "was very slow in many Asian countries, due

Photo by Lala Cantillo/Forum

Coal-fired thermal power plant in Batangas, Philippines.

Photo c/o Uttaran

An old man traverses a local road submerged under water in Southwest Bangladesh.

to several institutional, informational, participatory and incentive-related barriers" (IGES, 2008). The Bank could consider suggestions derived from recent consultations on mainstreaming progress such as "screening project portfolio for potential mal-adaptations…creating an effective enabling environment for mainstreaming through (a) development of operational guidelines, (b) provision of additional support for monitoring and evaluation of mainstreaming approaches, and (c) enhancing the technical skills for mainstreaming at sectoral levels."

Should the Bank consider investing in or leveraging other recommended actions[99] such as the strengthening and reorienting of national meteorological services in Asian countries to provide policy-relevant information regarding adaptation and sustainable development? Could the ADB undertake more capacity building initiatives to address "significant shortfalls in institutional and human capacities to address climate change issues at various levels, [including] information (communication and coordination) barriers, institutional barriers, stakeholder participation-related barriers and the lack of suitable incentives and resources?" It has been widely determined that attention is particularly needed to attend to capacity building and information sharing needs especially at local community levels. The need for practical demonstrations of promising mainstreaming options, similar to the Nairobi Work Programme on Impacts, Vulnerability and Adaptation,[100] instead of the usual conceptual or theoretical approaches have been noted as crucial for improving understanding and decision-making on practical adaptation measures that developing countries can take (IGES, 2008). The ADB should also consider ensuring that incremental costs of mainstreamed mitigation and adaptation actions are clearly and separately worked out, perhaps on a project or program basis, so that sources of financing would be clear and such burden would not fall on the shoulders of developing countries.

But should the ADB – particularly its donor, Annex-1 member countries that provide the bulk of ADB funds – be allowed to provide such assistance in the form of loans, given how funding for adaptive measures is considered - particularly in the UN-organized climate negotiations - as just compensation for damages inflicted on the developing world through the emissions of historically responsible developed countries?

Climate Financing Issues.

The ADB's partnership with the World Bank Group to administer the Climate Investment Funds (CIF) needs to be monitored closely, particularly regarding issues inconsistent with UNFCCC principles. The CIF design is widely criticized for remaining premised on an aid framework placing financing parties in a donor-donee relationship. This is contrary to international climate change principles that financial resources for climate change should be provided as part of developed countries' obligations to climate change actions; it should not be considered as donor funds. Civil society groups are also particularly critical that CIF will be providing loans as well as grants to developing countries. While these loans will be provided on a concessional basis, it is widely seen as a violation of the 'polluters pay' principle observed by the current climate regime. It is also feared that the CIFs could divert funding away from UN-agreed sources such as the Adaptation Fund.

Climate Financing, ODA and Debt. Funds required in addressing climate change needs for

Photo c/o Uttaran

Changing lifestyle. A local community in Southwest Bangladesh tries to adapt to the changing weather conditions, completely altering their livelihood.

both mitigation and adaptation are huge. Even the ADB's Strategy 2020 considers "annual investment needs for environmental issues [can be] as high as $100 billion."

Even the World Bank admits that "current climate-related financial flows to developing countries – including the GEF, Clean Development Mechanism (CDM), and other sources – cover only a tiny fraction of the estimated amounts that developing countries would need over several decades."[101]

It is imperative that the developed world provides the great bulk of much needed funds in accordance with the "polluters pay" principle. Equally urgent however is the operationalization of developing country capacity to immediately access funds already at their disposal to address pressing adaptation needs. Here the twin issues of aid (Official Development Assistance) and debt play a crucial role.

Aid for Climate Change? Though the World Bank and other Multilateral Development Banks regard climate financing as additional to current ODA flows, according to Dr. Yogesh Vyas, Lead Environmentalist at the African Development Bank, "It is expected that most donors will include contributions to the CIFs in their ODA reporting."[102] Indeed "industrialized countries have a strong interest in climate finance being regarded as ODA. One of the main arguments advanced is that climate change is a core development issue and climate financing should therefore be part of ODA."[103]

Though many climate-change projects have implications to development projects, particularly on adaptation, and considering the fact that climate change poses critical challenges to the development agenda of the region, it is essential that development funds and projects be delineated. Funding for climate-related initiatives should be over and above existing development commitments of industrialized countries, which currently stand at 0.7% of GNP commitment of developed country signatories. Climate funds, especially resources intended for adaptation measures, should not even be regarded as aid but as a compensation for the harm that the climate change burden has imposed and will continue to impose on vulnerable peoples. It is also vital that the integration of "climate change adaptation into development work should not detract from existing development priorities."[104]

Debt repudiation as climate solution. Another viable handle to overcome the climate change financing predicament is the issue of debt. The demands for debt repudiation or a freeze on debt payments, or even a moratorium on interest payments on debts, should be considered a sound option for the international community.

Funds unlocked by such debt cancellation-related measures could give the most vulnerable countries much needed development space to

address not just urgent adaptation needs but also to pursue priority development aims.

Annual interest payments from total long-term debts in Asia and the Pacific alone, amounting to 32.4 billion annually,[105] could easily cover the $28 billion for adaptation, or the $30 billion needed for rapid renewable energy deployment globally (according to the ADB Strategy 2020). In fact, the annual total interest payments from long-term debts of all developing countries, $78.6 billion,[106] could almost cover the $100 billion estimated annual investment needs for renewable, adaptation, energy efficiency and sustainable management of water resources globally.

At the center of the debt issue is illegitimate debt. Debts, that in the process of contracting, were in gross violation of basic assumptions of debt contracts, as well as widely accepted ethical, social, economic, environmental values, standards and principles, and which has caused harm to the wellbeing of peoples and communities in whose name the debts were incurred and who are today paying for the said debts.[107] Debts that have been instrumental in exacerbating climate change, particularly fossil fuel based projects, should also be categorized as illegitimate debts.

In four countries alone in Asia (Bangladesh, Indonesia, India and Philippines), the repudiation of five ADB-co-funded projects considered illegitimate and widely rejected by community groups and civil society organizations would already amount to $3.29 billion.[108] Such an amount could easily eclipse the $40 million Climate Change Fund and the $1.2 million Small Grants for Adaptation Funds of the Bank combined, and could be used or channeled towards much needed adaptation – or other development needs – in the said countries.

It must be noted also that these same debts have, directly or indirectly, impeded historically the capacity of developing countries to develop alternative technologies and development strategies urgently required to confront deteriorating climate impacts.

The demands for cancellation, repudiation and moratorium on interest payments vis-à-vis climate change financing needs should not replace the responsibility of industrialized countries to provide funds for adaptation needs of the developing countries in accordance with the internationally recognized polluters pay principle. It should be seen as one of the many instruments that can give development space to make developing countries better equipped in confronting climate changes needs. The question begging to be asked, however, is what the ADB is prepared to do to help its DMCs unlock resources it already has and allow them to undertake adaptation (and mitigation) measures with adequate ambition?

Photo by Avilash Roul/Forum

What lies ahead for the young generation if we do not act now? The poor are the most vulnerable to the adverse impact of climate change.

Country Analysis

Looking at ADB Climate Initiatives in the Philippines and Indonesia

In 2007, the ADB vowed to "help developing member countries move economies into low-carbon growth paths" (Strategy2020). The Bank also claims to have built understanding in the region on the issue of climate change response options, adding that projects with environmental components comprise 20% of approved loans in 2006. Let us see how these claims have been manifested in two countries.

The Philippines

The forecast is clear: despite contributing very little GHG emissions, "the entire Philippines is a climate hotspot, vulnerable to the worst manifestations of climate change" (Amadore, as cited by Greenpeace, 2007). Being archipelagic and with low economic development, the country is "considered as one of the most hazard-prone"—host to at least 20 to 25 typhoons every year, numerous incidents of flooding and landslides and earthquakes that average 887 annually (Klima Climate Change Center). It is also periodically affected by the El Niño phenomenon that induces prolonged wet and dry seasons (Lasco, et.al. 2008). In 1999, it was found that the Philippines had the greatest number of natural disasters in the world from 1900 to 1998.[109] For 2008, the Global Climate Risk Index ranked the Philippines first among high-risk countries after a series of storms in 2006 left a death toll of 1,267—equivalent to 1.46 deaths per 100,000 inhabitants, as well as losses totaling $4.5 billion.[110]

Philippine Carbon Quota and Significant Emitters. The Philippines accounts for less than 1 ton of CO2 per capita per year but the country's emissions growth rates are rising. Figures from the World Resources Institute show that the country's

GHG emissions for 2004 totaled 79.1 MtCO2 representing 0.27% of the world's total, an increase of its 1990 emissions share of 0.18% (CAIT 2008). Increases in the country's GHG emissions come from energy and land-use changes. Among energy sub-sectors, the transport sector registered the most significant rise in GHG emissions at 279%, followed by electricity (89%). Industrial processes accounted for 88% and land-use change and forestry represented 20% (CAIT 2008).

PHILIPPINES GHG EMISSIONS BY SECTOR, 1990, 2000, 2004

	1*990		2000		2004		Change 1990-2000
Sector	$MtCO_2$	%	$MtCO_2$	%	$MtCO_2$	%	
Energy	36	30.4	68.9	40.6	72.6	91.8	91%
Electricity and Heat	14.2	11.9	26.8	15.8	28.9	36.5	89%
Manufacturing and Construction	8.3	7	9.2	5.4	11.2	14.1	11%
Transportation	6.2	5.2	23.5	13.9	25.4	32.1	279%
Other fuel combustion	7.4	6.2	9.4	5.5	6.8	8.6	27%
Fugitive Emissions	0	0	0	0	0.3	0.4	0%
Industrial processes	3.2	2.7	6	3.5	6.5	8.2	88%
Land use change and forestry	79.4	66.9	94.9	55.9	Na	Na	20%
TOTAL	118.6		169.8		79.1		43%

Source: Climate Analysis Indicators Tool (CAIT) Version 5.0 (Washington, D.C.: World Resources Institute, 2008) as cited by Rincon & Virtucio

In 2000, the latest year with data on land use change and forestry, emissions were 0.51% of the world total, ranking the Philippines in 36th place of the world's emitters. In 2000, land-use change and forestry was responsible for 55.9% of GHG emissions[111] while the energy sector was responsible for 40.6%. Increasing emissions from power generation was attributed to the heavy reliance of the Philippines on coal (USAID, 2006; Villarin, et.al. 2008) which, overall, is the second largest source of fuel for power generation in a mix that also consists of oil (largely imported), natural gas, geothermal power, and other forms of renewable energy (primarily hydropower).

Hard-hit Sectors. Climate change will continue to influence Philippine weather in terms of changes in temperature, precipitation, and tropical cyclone activity. As such, more and frequent extreme weather events such as droughts, typhoons and rainfall changes are expected. Sea level rise is another major threat[112] and conservative estimates from an indicative one-meter rise in sea level is projected to affect 64 out of 81 provinces, which cover about 703 of the total 1,610 municipalities (Greenpeace, 2007).

Anticipated to be hardest hit will be the sectors of agriculture and forestry, coastal areas and marine/fisheries, water and health. Loss of arable lands, decreased soil fertility, decreased crop productivity that would mean loss of food supply and jobs, accelerated forest loss and soil erosion are most feared in the agriculture and forestry sector. Climate change also threatens the rich biodiversity in coral reefs, mangrove forests and sea grasses. In recent years, reefs in poor condition increased to 40% due partly to ocean warming. Coral bleaching and fish kills have been observed in several coastal areas, giving rise to shelter and security issues. Meanwhile, El Niño events in the Philippines have significantly reduced water inflows into major watersheds, reservoirs and other impoundments, curtailing supply for households and irrigated agriculture. In the health sector, climate change may cause increasing under nutrition; increasing injuries, illness and deaths due to heat waves, floods, droughts, storms and fires; and increasing cases of diarrheal diseases, cardio-respiratory diseases, dengue, malaria, etc. (See Annex 5.1 for more climate change impacts by sector). The energy sector— the country's hydropower generation[113] is also affected.

ADB's Climate-related and Development Projects. The Philippine Inter-agency Committee on Climate Change reveals that since 1991, support for fighting climate change in the Philippines was expended largely for research, capacity and program building and a few promotional projects, usually to provide technical knowhow on the mechanics of CDM transactions and measures for monitoring and reducing GHG emissions, or to build up institutional support and local capability to address climate concerns. Annex 5.2 provides a list of these initiatives. Majority of the four projects with ADB involvement[114]

Coastal communities are one of the most vulnerable groups that will be adversely affected by rising global temperature and climate change.

Photo by Hemantha Withanage/Centre for Environmental Justice

were studies that served the purpose of informing various sectors about Philippine GHG emission sources, what can be done to reduce it, as well as vulnerabilities of some sectors. These were used as reference materials. For instance, the *Asia Least-Cost Greenhouse Gas Abatement Strategy* (ALGAS) project that was carried out in 1995-1998 under a regional technical assistance executed by ADB and funded by GEF through the United Nations Development Programme (UNDP) contained an inventory of GHG sources and sinks for 1990 and projections for 2020. Also identified in the study were least-cost abatement strategies, national GHG abatement action plans and a portfolio of technical assistance and GHG abatement investment projects. The most recent project with ADB involvement is another study on the economic cost of climate change. It is also a regional project that seeks to inform, as well as achieve a consensus among policy makers in the region on the steps needed to address climate change in Southeast Asia, including the adoption of investment programs, plans, policies and actions to adapt development to expected future conditions.

But that's as far as leveraging climate concerns in development work goes. Looking at the ADB's own Country Strategy Papers and other studies on Philippine development from 2000 (See Annex 5.3)[115] found hardly any referral to climate change and climate change mitigation and adaptation, although carbon dioxide emissions were largely used as indicators of environmental quality and in some projects, environmental, social and gender considerations were duly noted in the project design. Furthermore, projects supported renewable energy and energy efficiency concerns. The same observation is noted in examining selected ADB projects aligned with the Medium Term Philippine Development Program for 2004-2010 (wherein the Bank had 28 aligned programs spread in various sectors as shown in Annex 5.4) that were subjected to a cursory "climate-sensitivity" review[116] (see Annex 5.5). All these indicate that while the Bank may not consider climate change as a focal point in programming development thrusts for the country, it at least subscribes to some form of environmental and social norm that may prove beneficial to curtailing climate change in the conduct of its affairs.

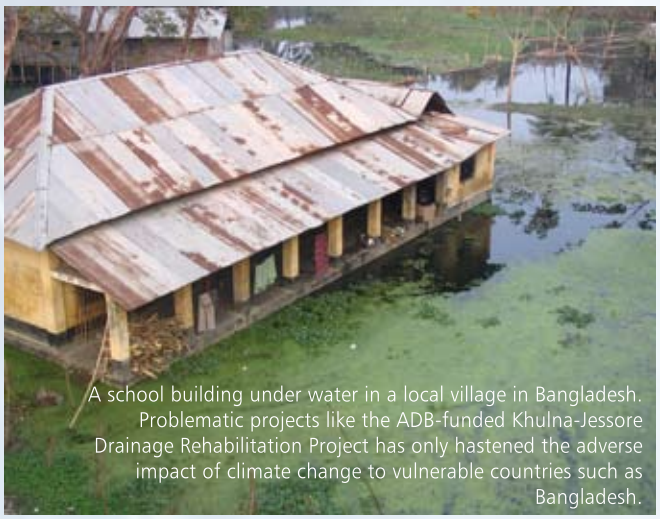
Disturbing Inconsistencies. A review of ADB's interventions in the energy sector, however, demonstrate actions inconsistent with the Bank's vows of steering the country to a low carbon growth path and also reinforces doubts towards its stance for pro-poor and sustainable socio-economic development.

It is in the energy sector that the ADB invested about $2.8 billion in loans and around $15 million in technical assistance—said to be the biggest for any sector—for over 30 years, mostly centered on conventional energy. Focus on renewable energy

and energy self-sufficiency is a fairly new thrust: A USAID survey of donor activities in clean energy since 2000 show the ADB carrying out five in 41 renewable energy/ energy efficiency projects worth $232.75 million.[117] Support for the sector also covers about 20 loans extended to the National Power Corporation (NPC), $1.6 billion for power generation and transmission projects, some private sector loans as well as "policy-based loans for power sector restructuring and debt liabilities management" ($1.3 billion) and 34 technical assistance grants (about $15 million) for institutional strengthening and various studies. The Bank[118] reports that these loans helped more Filipinos access electricity and contributed in averting power shortages beyond 2012, flaunting an increase in the electrification rate from 55% in 1986 to 94% in 2006 at the barangay level (ADB 2008).

Critics however have described ADB's energy lending practices as "disgraceful" for its clear privatization bias and policy influence-peddling, as well as its contentious support for environmentally damaging coal-fired and big hydropower projects. A 2007 study of the ADB/JBIC funded Power Sector Restructuring Program[119] by the Freedom from Debt Coalition (FDC) reveals that part of the loans amounting to $300 million and $450 million under the Power Sector Development Program was used to repay NPC debts and obligations to independent power firms—a way by which "the government directly shoulders the onerous debt burden of the NPC, including anomalous IPP contracts." Furthermore, ADB compelled the Philippine government to promulgate the Electric Power Industry Reform Act (EPIRA) that paved the way for privatizing the NPC and restructuring the entire power sector to attract more private sector involvement. FDC adds that "the passage of EPIRA was accompanied by issues of bribery and corruption. Six years after EPIRA's implementation, electricity rates have doubled, the government assumed P200 billion NPC debts and liabilities continue to pile up now amounting to P1.3 trillion."

Photo c/o Uttaran



A school building under water in a local village in Bangladesh. Problematic projects like the ADB-funded Khulna-Jessore Drainage Rehabilitation Project has only hastened the adverse impact of climate change to vulnerable countries such as Bangladesh.

Studies have revealed the vast potential of the Philippines' new and renewable energy (NRE) sources—more than 200,000 megawatts from a combination of geothermal, wind, solar, biomass and mini-hydro, which is more than five times the country's current energy demand.[120] Tapping this potential will be crucial for the country to attain energy self-sufficiency and would contribute to its efforts in mitigating the advance of climate change. Thus far, the updated Philippine Energy Plan (PEP) envisions NRE sources to contribute significantly to the country's electricity requirements as it is projected to increase to 53% of the total supply (400.91 MMBFOE) in 2013 from 51% of total supply (273.98 MMBFOE) in 2004 (DOE, 2006). There's only one sore spot: PEP encourages prospecting and maximizing the use of indigenous coal for power generation.[121]

Financing-wise, the ADB support for renewable energy "amounts to only 0.09% of the ADB's entire funding support to the Philippine energy sector" and "much of the financing was channeled in support of coal-fired initiatives."[122] The Bank continues to include coal in its renewable energy program and for 2008 has approved $210 million loans to the private sector for the acquisition/privatization and rehabilitation of Masinloc coal-fired thermal power plant and a pending financing for highly controversial[123] coal-fired thermal power plant in Calaca. A Greenpeace study reveals that support for environmentally destructive hydro power projects comprises 9.45% of the ADB's energy-related lending. Most of these projects were Official Development Assistance (ODA) projects negotiated under the Marcos regime, which is known for its "odious reputation for corruption, bribery, human rights violations, environmental degradation, and various implementation flaws."[124]

Photo by Joanna Levitt/International Accountability Project

Climate and gender justice. Women end up carrying the burden of climatic impacts.

Indonesia

Indonesia is a country of extremes—it is one of the top greenhouse gas (GHG) emitting countries of the world[125] and also highly vulnerable to the impacts of climate change. With total annual carbon dioxide emissions standing at 3.014 billion tons, Indonesia trails two giants: the United States—the world's top emitter with 6.005 billion tons and PRC at 5.017 billion tons. This condition puts severely at risk its high coastal population, as well as the archipelago's biodiversity—said to be among the richest in the planet (the country has the world's highest marine diversity and the second largest area of rain forest after the Amazon Basin). Indonesia's islands are vulnerable to earthquakes and tsunamis due to its location. General forecasts by global climate change models reveal the country is in for prolonged droughts, increased frequency of extreme weather events and heavy rainfall leading to big floods.[126] Furthermore, research in various locations in Indonesia also show that the sea level has risen by 8 mm per year (Bakosurtanal, 2002 as cited by the Indonesian Government's National Plan on Climate Change). ADB research predicts that the rise in sea level could reach 60 cm by the year 2070 if greenhouse gas emissions are not reduced.[127]

Burning Paradise, Significant Emitters. Various studies show that the Land Use, Land-Use Change and Forestry (LULUCF) sector accounts for the largest source of GHG emissions in Indonesia,[128] giving the country its disreputable distinction as a world class emitter. According to a World Bank study, the largest carbon dioxide emissions in the forestry sector, about three quarters (75%) come from deforestation and land conversion, followed by forest-related energy consumption (23%) and the remainder is from forest-related industrial processes (2%). Emissions resulting from deforestation, land degradation especially of peat swamps and forest fires are five times those from non-forestry emissions. An international scientific publication stated that forest and peat land fire in Indonesia in 1997 contributed 13-40% of the global carbon emissions (Page, et. al., 2002). Initiatives such as expansion of biofuel production and revitalization of forest industries may exacerbate emissions.

Altogether, Indonesia's energy, agriculture and waste sectors emit a total of around 451 million tons of carbon dioxide while LULUCF release estimates are about 2,563 million tons of carbon dioxide.[129] The same World Bank study puts emissions from the Energy sector at about 275 MTCO2e accounting for 9% of the country's total emissions. But these emissions from industry, power generation and the transport sector are growing very rapidly—tripling in the next 25 years from about 275 MtCO2e in 2003 to about 716 MtCO2e in 2030. Meanwhile, emissions from the Agriculture and Waste sectors are very small and insignificant globally, coming mainly from rice production.

Vulnerable Sectors. In general, climate change will influence a number of weather parameters including: temperature, rainfall, pressure, humidity, wind speed and direction, cloud condition and solar radiation. The change of rainfall will effect water-related sectors—water resources, agriculture, infrastructure (including settlement, transportation, hydro power plant), fisheries, swamp and peat as well as coastal areas. According to the Department of Marine Affairs and

Fisheries, in just two years (2005-2007), Indonesia has lost 24 small islands because of erosion, worsened by commercial mining activity. In addition, the Aceh tsunami in 2004 also destroyed three local small islands.

Across sectors, it is the agriculture, energy (water/hydropower), coastal resources and health sectors that will be among the hardest hit by climate change. Average area of agricultural land already affected by drought based on monitoring of rice areas from 1993-2002 has reached 220,380 has., with harvest failure over 43,434 has., equivalent to the loss of 190,000 ton of dried grain. Meanwhile, the area impacted by flooding is 158,787 has. with the harvest failure in 39,312 has. (equivalent to 174,000 ton dried grain). In the water sector, water volume in reservoirs has decreased far below normal level due to El Niño. Many hydropower plants also produced electricity below normal capacity (Indonesia Country Report, 2007). In coastal resources, the increase of sea surface temperature has caused serious problems to coral reef ecosystems. Coral bleaching occurred in many places such as East Sumatra, Java, Bali and Lombok. In the Seribu islands about 90 – 95% of coral reefs at the depth of 25 m have experienced coral bleaching. Meanwhile, weather variation has contributed to the spread of diseases such as malaria, dengue fever, diarrhea, cholera and other vector-borne diseases.

ADB's Climate-related and Development Projects. Since the 1990s, the ADB included Indonesia to regional technical assistance projects on climate studies, mostly for mitigation initiatives and activities supportive of CDM promotion and institutionalization. From 1995 – 1999, ADB administered the ALGAS Project for 11 countries that included Indonesia. The final report of the ALGAS project was completed in 1997 and produced a national GHG inventory and evaluated supporting technology options for abatement of greenhouse gas emissions in major economical sectors including energy, agriculture, forestry and land use. The Bank was also supportive of *Capacity Building on CDM*, producing a manual and conducting several national and regional workshops in 1999-2000 to enhance the abilities of policy makers to understand the implications of the Kyoto Protocol. In August 2003, ADB established its CDM Facility and under its REACH program, the Bank supported various climate change related projects in Indonesia. These include a) a regional technical assistance on *Promotion of Renewable Energy, Energy Efficiency and Greenhouse Gas Abatement* (PREGA) co-financed by the Dutch Cooperation Fund, b) another technical assistance on *Carbon Sequestration through CDM in Indonesia* financed by the Canadian Cooperation Fund on Climate Change and c) a technical assistance to Indonesia on Gas Generation from Waste In The Palm Oil Sector, which took place between September 2004 and May 2005. Another technical assistance project to the Government of Indonesia was conducted for Institutionalizing the CDM. Currently, Indonesia is included in the countries subjected to the Regional Review of the *Economic Cost of Climate Change in Southeast Asia*, which is funded by the British Government).[130]

Looking at the ADB's Country Strategy Paper for Indonesia found that the Bank took note of the need enhance efficiency and reduce dependence on oil, and then set goals to reduce air emissions. It also notes the need to find CDM opportunities to finance some lower emission options (WRI, 2008). In other country papers since 2000, ADB states intents to extend considerable technical assistance to address policy issues and focus on monitoring progress and rehabilitation of degraded areas, help improve management of natural resources and rehabilitation, esp. projects for coral reef rehabilitation, coastal resources management, improving air quality as well as urban waste management.[131]

In the energy sector, there were inconsistencies noted in the ADB's investment decisions and screening of projects. Two energy projects of the Bank that were subjected to review, namely the *Renewable Energy Development Sector Project to the Republic of Indonesia* and the *Technical Assistance to the Republic of Indonesia for the Gas Generation from Waste Project* were well designed and subjected to various kinds of screening. The projects aimed to expand renewable energy use, help avoid negative environmental impacts resulting from fossil fuel-based power generation, bring power connections to poor households, improve waste management and "electrify" or improve power supply access of covered villages, reducing carbon dioxide emission and greenhouse gas emissions, thus reducing global

warming. Furthermore, the projects underwent environmental, social and poverty impact appraisal, economic evaluation and financial analysis, including gender and other social dimensions. The same could not be said for the *Tangguh Liquified Natural project*, a $ 6.3 billion project to develop, build and operate gas production wells, platforms and a liquefied natural gas facility to export gas that attracted critical attention because of the actual and potential impacts on local people and the environment. The project area had a history of violence against the indigenous population by the Indonesian security forces associated with resource extraction but despite this, the ADB decided to invest US$ 350 millions into this project.[132]

ADB's performance in other sectors showed gross inefficiencies and inequities in project implementation and monitoring that resulted in detrimental effects on people and environment (see Annex 5.6). This finding is based on the evaluative study[133] of ADB's projects that the Bank rated successful but were found otherwise later by the ADB's own Evaluations Department, using Project Performance Audit Reports (PPARs). The audit reports indicate that at least 70 percent of Indonesia's ADB projects were not likely to produce lasting economic or social benefits for the country. The audited projects include the *Nusa Tenggara Agricultural Development Project* (1999, $137.3 million), the *Marine Science Education Project* (1997, $73.3 million), the *Food Crop Sector Program* (1997, $250 million), the *Health and Population Project* (1997, $38.4 million), the *Agro-Industries Credit Project* (1996, $29.5 million).

Concluding Notes

No entity holds the power to single-handedly overcome climate change. The financial requirements alone, both for mitigation and adaptation, are massive enough to create an extra financial strain, whether in the case of national governments or MDBs. For its part, the ADB has openly declared its intention to become a "climate friendly bank" in its long-term strategic document where the Bank committed to "offer finance and act as a catalyst for co-financing, maintain long-term commitment, facilitate exchange of regional experience, provide technical expertise, be a source of policy advice, support sector and policy studies, and provide training for capacity building in such key areas as finance and governance."

According to the ADB, the "estimated annual investment needs for environmental issues are as high as $100 billion, including $30 billion for renewable energy, $28 billion for adaptation to climate change, $14 billion for energy efficiency, and $8 billion for sustainable management of water resources."[134] Obviously, the ADB alone cannot meet the required financial resources to effectively address all of them, assuming the Bank should indeed maintain a role in assisting DMCs mitigate and adapt to climate change-induced impacts. According to the ADB, the transition to low carbon economies "requires all stakeholders to work together for creative solutions, and ADB stands fully committed to help DMCs meet the extraordinary challenges of climate change. As ADB President Kuroda stated recently, "There is clearly much to do, and it will take a collective response… to make it happen in the necessary timeframe. New policy and institutional approaches are needed, along with an infusion of capital into clean energy projects, new land use practices, and adaptation measures. This will draw upon both the emerging global carbon market and private funding."

An Eminent Persons Group organized in 2006 by Kuroda reminded the ADB previously that it would be better to approach the climate change concern "by promoting public-private

Photo by Enrique Soriano-Silverlens/Greenpeace

A young boy shows corn damaged by severe drought in the Southern Philippine town of Surallah, South Cotabato. Rising global temperatures and climate change have been the cause of the worst droughts to have struck the Philippines, Thailand, and Cambodia in recent memory.

Photo by Avilash Roul/Forum

Mekong River in Cambodia.

partnerships and supporting the development of market instruments rather than acting as a conduit for official transfers." In pursuit of this goal, the ADB professes it will take an "increasingly catalytic role in mobilizing private sector resources and in facilitating public-private partnerships" in meeting the institution's climate goals.

Kuroda elaborated on its role succinctly: "We believe that in order to increase the utilization of clean energy in our developing member countries, we need to facilitate wider deployment of clean energy technologies. This means raising awareness of new technologies, putting in place right policy and regulatory incentives to encourage their use, and putting together the right financing package to share the risks and to bring down the costs."[135] This catalytic role also includes "identifying and supporting fund managers willing to establish clean energy-focused private equity funds."[136]

Is such a role enough? Or is it actually needed? These are interesting questions.

There are a lot of doubters regarding the ADB's role, and not all are from CSOs. William Easterly, Professor of Economics at New York University and Research Associate of the National Bureau of Economic Research, commented in 2007 for instnace that ADB's long-term strategic framework is "a project best read as bureaucratic jargon for the ADB's promise to keep producing bureaucratic jargon through the year 2020." According to Easterly, it appears the ADB's fundamental problem is that "it needs advice from successful Asian countries more than they need advice from it."[137]

The Club of Rome has warned that "Radical and rapid social and economic transformations will be needed to avert runaway climate change and ecological breakdown."[138] The last three years has seen the ADB make significant advances in the promotion of alternatives in the sectors of energy and transport, with the latter making promising strides. Yet the changes the Bank has made institutionally are far from "radical" and "rapid".

The Bank's initiatives thus far on adaptation are incredibly tentative compared to the gravity of the situation the ADB has articulately described. Deserving the blame here are top ADB management and the Bank's Board for being content with the issuance of studies and climate urgency edicts while climate vulnerabilities worsen among DMCs, options to mainstream adaptation measures into development strategies are sidelined, and impacts due to warming temperatures threaten more and more concretely completely the viability of the region's long-term development goals.

The last 20 years presented ADB a great opportunity to show its leadership and relevance in the fight to contain climate change but its limited engagement in the past did not create much ripple. In fact, the ADB's promotion of economies dependent on energy intensive, fossil fuel and large hydro-powered centralized energy systems and the expansion of unsustainable, private, fossil-fueled transport and the haphazard financing of roads and highways-biased economic growth has served to wipe out whatever gains the Bank may claim to have made in the development arena.

Along with the ADB's top management and the Bank's Board -- representatives of governments that are either facing the full brunt of climate impacts (DMCs) or have largely promoted the accelerating deterioration of the Asia-Pacific region's living standards and its most fragile ecosystems (donor countries) -- must shoulder together the burden of having allowed the Bank to putter around the climate issue for two decades and having allowed the Bank to attempt to craft so-called solutions-driven instruments without acknowledging the role the ADB played in helping promote the spike in climate-harmful emissions in developing Asia.

Solutions cannot be crafted comprehensively and decisively if lessons from the past remain unlearned. Lessons cannot be learned without recognition of institutional complicity in the problem that may have its roots in the Bank's founding mandate. If the desire is truly about the development and implementation of effective region-wide, country-specific and sectoral climate change investment and action plans that would propel a measured and accelerating shift towards climate resilient, low-carbon economies in the Asia-Pacific, it may require nothing less than the abandonment of its growth-fixated, market-driven goals.

Some recommendations for advocates:

The UNFCCC's Bali Action Plan (BAP) articulates the role of multilateral bodies such as the ADB in supporting the mitigation of climate change and adaptation to the impacts of climate change "in a coherent and integrated manner." The Bali Action Plan's provisions give a role for MDBs in this global response, as "facilitators of national sustainable development strategies in their client countries." (Bali Action Plan, 2007)

To truly pursue the aims of the BAP, the ADB must implement the following:

* Completely phase-out its financial support for fossil-fueled energy and destructive hydropower projects and make sure its overall assistance portfolio is designed to support the transition of DMCs towards a low-carbon energy future with robust adaptive capacities. Nothing less than this can ensure banking operations are consisent with sustainable development aims.
* Immediately adopt and implement a GHG accounting system to ensure it is accounting for the emissions of its entire lending and finacing operations. The Bank should follow the lead of other MDBs such as the IFC and the EBRD that have both adopted policies to account for the carbon footprint of its portfolio. The Bank must ensure such an accounting system is fully integrated particularly in its Public Communication Policy, Updated Energy Policy and Updated Safeguards Policy.

Photo c/o Uttaran

Bangladeshi women and their respective families adapt to the adverse impact of rising temperature on their community. It has completely altered their way of life.

Photo by Joanna Levitt/International Accountability Project

Vulnerable groups, such as IP women, will be among the hardest hit by warming temperature and climate change.

* Fully engaged discussion and coordination with Central Banks, National Development Banks and major Commercial Banks regarding the mechanics of responsive and effective climate change mitigation and adaptation financing that would determine what manner of funds or financing programs or projects would be leveraged from MDBs, including the ADB, if at all new funds or facilities are needed.

* Fully integrate climate objectives in all of its Country Partnership Strategies and regional and sectoral assistance programs.

* In so far as the consequences of ecological crisis reflect actual differentiated impacts at the community level, gender must be given a consistent and constant role in initiatives determining the impacts of climate change, energy operations, adaptation programs and the mainstreaming of a future carbon-constrained climate regime in the development agenda.

* The encouragement of DMCs to pursue climate-friendly trade and investments policies, specifically climate-friendly production and manufacturing processes and technologies and issues relating to developing country market access. DMCs must be encouraged to aim for GHG reducing, low carbon strategies in specific sectors such as energy, transport and agriculture to contribute to global GHG reduction efforts in order to prevent dangerous climate change.

* Adopt a Rights-Based Approach to climate change mitigation and adaptation, given that the protection, promotion and fulfillment of various socio-economic rights would be affected by climate change, whether directly or indirectly.[139]

* Ensure that it fully implements its full safeguards policy covering all climate-related, energy-related, transport and infrastructure-related financing, including the entire operations of private equity funds of the ADB.

* Ensure that it increases its own capacity and expertise to deal with the increasing challenge of mainstreaming climate change mitigation in its development assistance and in ensuring adaptation is fundamentally integrated into its over-all operations. These include providing incentives for staff and officials engaged in climate resilient and low carbon activities and avoiding the "approval culture" and similar institutional practices.

* Prioritize good governance practices, primarily in creating greater transparency and people's participation in program formulation, prioritization, adoption and implementation, to prepare countries especially those most vulnerable to respond to the realities of climate change.

* Monitor closely the Energy Efficiency Initiative and prevent the further inclusion of coal or large hydro from EEI clean energy investment tabulation. Evaluate the technical effectivity of the *Guidelines for Estimating Asian Development Bank Investments in Renewable Energy and Energy Efficiency Projects*.

* On sustainable energy investments, the ADB should consider, at this stage, to concentrate more of its current resources for mitigation to the Energy Efficiency Initiative (EEI) and even consider collapsing or integrating other mitigation components into it. Furthermore, the ADB should consider scaling up its annual $1 billion clean energy investment target in the intention of rapidly reaching a 100% clean energy financing on its annual energy investment portfolio.

* DMCs must be encouraged to create a conducive environment for the expansion of sustainable energy in respective domestic energy markets. Such an environment could be enhanced through the setting up of mandatory renewable energy targets; removal of energy market distortions, which come in the form of explicit and implicit subsidies, which include the externality costs currently excluded from costs of traditional, polluting electricity from nuclear, fossil fuels and destructive hydropower; guaranteed and priority access to the grid for sustainable renewable energy sources; legislation of renewable energy laws promoting the application of feed-in-tariff mechanisms; and the promotion of decentralized energy systems.

On Adaptation

* Global efforts must be supported to build capacity in developing member countries towards national adaptation planning and development objectives; increasing resilience and improving vulnerability assessments. Channeling adaptation financing through the right channels ensures effective and meaningful results in countries. The Bank needs to ensure that it contributes to scaling up adaptation financing beyond traditional ODA.

* Climate resilient development strategies must be integrated in all national/country level and regional activities.

* DMCs must ensure that adaptation measures at the country level must always aim to meet the needs of the most vulnerable communities, indigenous peoples, and marginalized groups, including women. It must ensure that people's full participation in the development and implementation of adaptation activities; maximization of the use of local, traditional, and indigenous knowledge; safeguard people's basic human rights as well as their economic, social and cultural rights are recognized.

* Barriers to the adaptation technology-transfer must be removed, which includes the removal of IPR restrictions, to effectively scale up the diffusion and transfer of adaptation technologies, particularly on agriculture and small, community-based renewable energy systems.

* National or regional centers or networks, as appropriate, on adaptation, climate resilience and disaster risk-reduction and prevention must be established. These centers could increase research and capacity-building efforts that are closely link to national and local levels, involving stakeholders particularly the local communities or marginalized groups.

On Forests and Climate

* The ADB must ensure that the rights of indigenous people and local communities who are living in the forest are considered paramount in issues dealing with Reducing Emissions from Deforestation and Forest Degradation (REDD) in the region. It should implement good governance principles and democratic decision making, including the full application of Free and Prior Informed Consent (FPIC).

On Carbon Financing

* With serious concerns being raised on the structure and functioning of the Clean Development Mechanism (CDM), and carbon financing in general, the ADB should exercise robust caution in this field and reorient its carbon financing initiatives, e.g. Carbon Market Initiative, the Asia Pacific Carbon Fund and the Future Carbon Fund. The Bank must put in place monitoring mechanisms open to public participation and which ensure that projects from these facilities actually reduce GHG emissions with financing going towards energy efficiency and sustainable, renewable energy investments. Strong carbon regulations must be put in place to both govern the carbon market currently and move the region towards increasingly domestic action and the mobilization of resources from within the region while progressively reducing the carbon market's role in the shift towards low-carbon economies.

Endnotes

1 This "catalytic role" in facilitating sustainable development assigned to MDBs started way back in 1992, during the Climate Convention (signed by a majority of nations at the Rio Earth Summit), when it stated: "Multilateral institutions play a crucial role by providing intellectual leadership and policy advice, and by marshalling resources for countries committed to sustainable development." Moreover, the final communiqué of the May 1998 Summit of the Eight in Birmingham, England (endorsing the Environment Ministers communiqué) states: "We must ensure that the policies and operations of the World Bank and other International Financial Institutions (IFIs) take full account of climate change." The 2005 Gleneagles communiqué on climate change further encouraged MDBs to increase dialogue with client countries on climate-change mitigation and adaptation activities (See MDBs and Climate Change, 2007, for a rundown of MDB activities on climate change).

2 See for instance, Burning Our Future: Coal, Climate Change and Renewable Energy in Asia (Greenpeace, 2005); The Energy Tug of War: The Winners and Losers of World Bank Fossil Fuel Finance (Sustainable Energy & Economy Network: April 2004); Hoodwinked in the Hothouse: The G8, climate change and free-market environmentalism (Carbon Trade Watch, June 2005); A Wrong Turn From Rio: The World Bank's Road to Climate Catastrophe (SEEN, December 2004); Irrelevance or Leadership: The Asian Development Bank and Climate Change (Greenpeace, 2006).

3 Cited in Annett Möhner & Richard J.T. Klein, The Global Environment Facility: Funding for Adaptation or Adapting to Funds?, Climate & Energy Working Paper, Stockholm Environment Institute, June 2007. Available at: http://www.sei.se/editable/pages/sections/climate/publications/climate_energy_working_moehner_klein.pdf

4 UNESCAP. Energy Security and Sustainable Development in Asia and the Pacific, Bangkok: UN Economic and Social Commission for Asia and the Pacific, April 2008.

5 See UNDP. Fighting climate change: Human solidarity in a divided world, Human Development Report 2007/2008, New York: Palgrave MacMillan, 2007. In 2006, CDM financing amounted to US$5.2 billion (UNDP 2007). However, much of the said CDM projects are "concentrated" in just a handful of countries. "Globally, 10 developing countries provide over 90 per cent of annual certified emission reductions," the UNESCAP (2008) points out. "Other countries face a number of technical and financial barriers and the overall take-up has been slower than expected. " China and India are the CDM favorites, "with China responsible for an even higher proportion of certified emission reduction units" (UNESCAP 2008).

6 GEF Funds serve as financial mechanisms for four international conventions, namely the United Nations Convention on Biological Diversity (UNCBD), the United Nations Framework Convention on Climate Change (UNFCC), the United Nations Convention to Combat Desertification, and the Stockholm Convention on Persistent Organic Pollutants. It provides grants and concessional resources for projects and programs that address problems related to biodiversity, climate change, international waters, land degradation, ozone layer, and persistent organic pollutants. As a financial instrument of UNFCCC, it funds climate change projects mostly on renewable energy and energy efficiency and some adaptation measures. Since 1991, the GEF has already allocated US$3 billion, with US$14 billion worth of co-financing, as cited from UNDP 2007. The ADB is a GEF partner granted with direct access to GEF project resources in 2002. As such can a) identify, prepare, appraise and implement GEF projects on behalf of GEF; b) submit full project proposals for GEF financing directly to GEF without going through an implementing agency; and c) receive project grants directly from GEF and be directly accountable for their use.

7 Hale, Lily. "GEF Adaptation Funds: Emerging Trends and Links to Poverty Reduction," presentation, 13th Poverty and Environment Partnership Meeting, Asian Development Bank, Manila, 10 June 2008.

8 The barriers include (i) perverse energy policies, prices and subsidies; (ii) the lack of suitable financing models to bundle small investment projects; (iii) a high discount rate for appraising retrofit projects; (iv) a relative lack of customer awareness; and (v) intricate technical and high pre-investment development and transaction costs. These barriers result in a lack of well-prepared, investment-ready projects. Incentives are needed to overcome these externalities and barriers. See ADB, Clean Energy Financing Partnership Facility: Establishment of the Clean Energy Fund and Clean Energy Trust Funds, April 2007. Available at: www.adb.org/Documents/Others/Cofinancing/R61-07.pdf

9 See for instance, http://www.adb.org/Clean-Energy/links.asp for a sample listing.

10 See ADB, Energy Efficiency in the ADB Building: Conservation Begins at Home, Available at: www.adb.org/documents/brochures/adb-energy-efficiency.pdf

11 With a run time of around 11 minutes (DVD format), this documentary highlights the "pioneering initiative in Fiji's Coral Coast where coastal communities, environmentalists and the tourist sector industry bonded together to protect the water resources and save the fringing reef."

12 The Economics of Climate Change in Southeast Asia: A Regional Review, ADB, April 2009. http://www.adb.org/Documents/Books/Economics-Climate-Change-SEA/

13 Apart from environment (including climate change), ADB's other core specializations (i.e., the focus of ADB operations) under Strategy 2020 include: (i) infrastructure; (ii) regional cooperation and integration; (iii) financial sector development; and (iv) education. "In other areas, ADB will continue operations only selectively in close partnership with other agencies," the ADB explains.

14 Kuroda further pledged: "We at ADB are fully on board with this global commitment. Given the enormity of the challenge, we have strengthened our institutional commitment and launched a strategic approach with our Clean Energy and Environment Program. The Program includes a number of initiatives to help our developing member countries increase their utilization of renewable energy and energy efficiency technologies." He further emphasized that the "ADB can play a catalytic role in further moving forward the clean energy agenda in the region." See Haruhiko Kuroda, "ADB as the Regional Leader in Asia and the Pacific on Climate Change," Speech at the Opening Session of the Clean Energy Forum: Policy and Finance Solutions for Energy Security and Climate Change, ADB Headquarters, 26 June 2007.

15 Available at: http://www.adb.org/Documents/Brochures/Climate-Change/default.asp. Along with other MDBs, ADB also co-published two studies: The Multilateral Development Banks and the Climate Change Agenda (November 2007) and Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation (2003).

16 This project produced eight country studies on the preparation of national climate change response strategies" and "a regional strategy to respond to the challenge of climate change". See ADB, Background Paper on ADB's Approach to Climate Change in Asian Development Fund Countries, Asian Development Fund (ADF) X Donors' Meting, Vientiane, Lao People's Democratic Republic, 26–27 November 2007.

17 See TA 5592-REG: Asia Least-cost Greenhouse Gas Abatement Study, approved on 4 August 1994. One of the highlights of the study is "the formulation of national GHGs abatement strategies consistent with national development priorities, and the preparation of a portfolio of GHGs abatement projects and national action plans embodying national development objectives." The countries involved in the study are

Bangladesh, People's Republic of China, India, Indonesia, Republic of Korea, Mongolia, Myanmar, Pakistan, Philippines, Thailand, Viet Nam, and the Democratic People's Republic of Korea (DPRK). "Together, these countries account for more than one half of the world's population," notes the ALGAS Summary Report (September 1998).

18 Which include the following Asian Development Fund (ADF) countries: Bangladesh, Bhutan, Cambodia, Mongolia, Myanmar, Nepal, Pakistan, Sri Lanka and Viet Nam.

19 TA 5972-REG: Promotion of Renewable Energy, Energy Efficiency and Greenhouse Gas Abatement, approved 4 January 2001.

20 Under the ADB's 2004 Project Classification System, the subtheme "Climate Change" is under the "Environment and Biodiversity" theme of the Agriculture and Natural Resources sector while "climate change mitigation and adaptation" resides in the "Global and Regional Transboundary Environmental Concerns and Issues" which, in turn, is under Environmental Sustainability.

21 In fact, the "original" CE&EP was a mitigation-only portfolio. Adaptation was treated separately. See for instance the ADB document Clean Energy Financing Partnership Facility: Establishment of the Clean Energy Fund and Clean Energy Trust Funds, (April 2007), which states that "CE&EP is the mitigation part of ADB's efforts to address climate change."

22 From http://www.adb.org/Environment/world-environment-day-2007.asp

23 See for instance, Ursula Schäfer-Preuss, "Thirteenth Conference of the Parties to the United Nations Framework Convention on Climate Change," Statement, Bali, Indonesia, 14 December 200 7(http://www.adb.org/Documents/Speeches/2007/ms2007091.asp)

24 CEEP's Mitigation component comprise of the Energy Efficiency Initiative (EEI), Carbon Market Initiative (CMI), Sustainable Urban Transport Initiative (STI), REACH Program Energy for All Initiative and Establishing regional knowledge hubs on clean energy in Asia [Initially, three knowledge hubs have been established: (i) The Energy Research Institute (TERI) in New Delhi, India for Clean Energy, (ii) Tsinghua University in Beijing, PRC for Climate Change, and (iii) Asian Institute of Technology in Bangkok, Thailand for 3R (reduce, reuse and recycle). CEEP also has an Adaptation component.

25 The ADB defines "Disaster Risk Management" as "the systematic process of using administrative decisions, organizations, operational skills, and capacities to implement policies, strategies, and coping capacities to reduce the impacts of disasters." See ADB, Action Plan for Implementing ADB's Disaster and Emergency Assistance Policy, April 2008.

26 "Disaster risk reduction defines a series of interconnected actions to minimize disaster vulnerability by avoiding (prevention) or limiting (mitigation and preparedness) the adverse effects of hazards within the broad context of sustainable development," ADB explains.

27 ADB, Action Plan for Implementing ADB's Disaster and Emergency Assistance Policy, April 2008.

28 These TA projects are the Clean Air Initiative for Asian Cities and Better Air Quality Management in Asia. According to the ADB: "The first TA was designed to (i) develop CAI-Asia into an established and regionally recognized air quality management (AQM) organization and knowledge center; (ii) identify regional AQM priorities; (iii) implement pilot projects to demonstrate the available options for AQM; and (iv) provide advice on formulating AQM action plans. The second TA supports CAI-Asia by (i) improving the knowledge of decision makers in Asia on the economic and social effects of local and regional air pollution; (ii) supporting the formulation of AQM strategies at the national and local levels; and (iii) promoting regional dialogue on AQM."

29 Sharan, Diwesh, Bindu N. Lohani, Masahiro Kawai and Rajat Nag, ADB's Infrastructure Operations: Responding to Client Needs, Asian Development Bank, March 2007.

30 ADB Infrastructure Operations March 2007.

31 Institute for Global Environmental Strategies (IGES). The Climate Regime Beyond 2012 Reconciling Asian Developmental Priorities and Global Climate Interests, edited by Ancha Srinivasan, February 2008.

32 Nakhooda, Smitha. Correcting the World's Greatest Market Failure: Climate Change and the Multilateral Development Banks, World Resources Institute, June 2008.

33 The ADB reported that between 2000 and 2005, its total investments on clean energy projects totaled just about $720 million (including a $161 million Renewable Energy Development Project in Indonesia, a $35 million Gansu Clean Energy Development Project in the PRC, and several private sector equity investments in funds targeting clean energy projects, including $10 million in the China Environment Fund and the $20 million invested in FE Clean Energy Sub-Fund). Then, for 2006 alone, ADB's clean energy investments reached an unprecedented $700 million. See, ADB's Clean Energy and Environment Program, 2007 Update. Available at: http://unfccc.int/files/adaptation/sbsta_agenda_item_adaptation/application/pdf/adb_ccadaptation.pdf

34 ADB Draft Energy Strategy Paper, May 2007. The ADB defines "Energy Efficiency" as "economic investments in energy generation, delivery and end-use equipment, facilities, buildings, and infrastructure that deliver higher useful energy outputs or services (e.g., lighting, heating, refrigeration, pumped water). EE results in (i) lower consumption of energy, measured as energy input per unit of delivered output or service, and (ii) reduced emissions of GHGs. This definition covers many diverse and distinct market segments, both on the supply-side and use-side, all targeting the creation of a low-carbon sustainable energy future. Market segments include: supply-side efficiency in generation, transmission and distribution; grid-connected and off-grid renewable energy (RE); industrial EE, including changes in production technology; building end-use efficiency in commercial, governmental, and residential sectors; municipal infrastructure (street lighting, water, waste and sewage); transport efficiency, including urban mass transit; bio-fuel use to substitute for fossil fuels; irrigation (e.g., efficient pumps, foot valves and piping); and equipment/appliance standards." See EEI Report, 29 March 2006.

35 ADB Draft Energy Strategy Paper, May 2007.

36 See also EEI Draft Report, 29 March 2006. Phase I (completed in June 2006 with the endorsement by ADB management of the draft EEI Report), focused on establishing "the rationale for the expanded and sustained ADB action and EE investment and provide priorities and a framework for next steps." Phase II (June 2006-December 2007) was geared towards the preparation of "the country-level investment and action plans on EE," development of the project pipeline for 2008-2010, the design and establishment of the Clean Energy Financing Partnership Facility (CEFPF). The ADB had already allotted US$2.9 million to deliver the said tasks.

37 The Semiannual Progress Report of the CEFPF did not mention anything regarding the status of the clean energy trust funds. Instead, the Asian Clean Energy Fund was presented.

38 ADB. Clean Energy Financing Partnership Facility: Establishment of the Clean Energy Fund and Clean Energy Trust Funds, April 2007.

39 "To ensure cost-effective processing and reporting, the minimum contribution to the CEFPF will be $5,000,000 for bilateral partners and $1,000,000 for foundations and private partners," explains the ADB.

40 ADB. Clean Energy Financing Partnership Facility Semiannual Progress Report, January-June 2008.

41 Ibid.

42 ADB. Clean Energy Financing Partnership Facility Semiannual Progress Report, January-June 2008.

43 ADB EEI Update Issue No. 6, May-July 2008. Available at: http://www.adb.org/Documents/Periodicals/Clean-Energy/EEI-Update-Issue6.pdf

44 Available at: http://www.adb.org/Documents/Clean-Energy/Guidelines-Estimating-ADB-Investments.pdf. In 2007, the ADB approved loans totaled $10.1 billion, the highest ever recorded since its inception in 1966. Using this figure, the $2.911 ADB exposure is equivalent to around 28.82 percent of the total approved loans while the CE component equals 13.68 percent of the same.

45 Haruhiko Kuroda, "ADB as the Regional Leader in Asia and the Pacific on Climate Change," Speech at the Opening Session of the Clean Energy Forum: Policy and Finance Solutions for Energy Security and Climate Change, ADB Headquarters, 26 June 2007.

46 ADB Environment Program 2003-2007.

47 As reported in ADB Environment Program 2003-2007.

48 The $100 million ADB investment in the Asian Clean Energy Private Equity Funds (ACEPEF) is equally distributed in five funds (i.e., at $20 million each) namely: MAP Clean Energy Fund; China Environment Fund III; GEF South Asia Clean Energy Fund; Asia Clean Energy Fund; and China Clean Energy Capital. See ADB, Proposed Equity Investment in Asian Clean Energy Private Equity Funds, Report and Recommendation of the President to the Board of Directors, Project Number: 41922, March 2008. See also the Equity Investment in Asian Clean Energy Private Equity Funds project information, available at http://pid.adb.org:8040/pid/PsView.htm?projNo=41922&seqNo=01&typeCd=4

49 Additional Information for W-Paper on Energy Policy, RSSD, February 4, 2009.

50 http://www.adb.org/clean-energy/documents/summary-table-2003-2007.pdf

51 Taylor, Robert et al., Financing Energy Efficiency: Lesson from Brazil, China, India, and Beyond, Energy Sector Management Assistance Program, The World Bank, 2008.

52 The concept proposed by the ADB in December 2005 was entitled Carbon Market Special Initiative: A Multilateral Financing Scheme to Address the Investment Needs for Development and the Climate. Available at: www.adb.org/CDMF/CDMF-cmsi-concept.pdf

53 ADB Environment Program 2003-2007. Available at: www.adb.org/Documents/Reports/environment-program-2007/env-program-2007.pdf

54 "The CMI application process is relatively simple," says the ADB. "Applications to CMI are made by filling out an application form detailing the type of project they wish to seek assistance for and the specific assistance they require…There will be less additional documentation required for project appraisal as existing project documents such as feasibility studies, detailed design and other project preparation reports previously submitted to the ADB operations departments shall be utilized."

55 14 projects in China; 8 in India; 4 in Pakistan; 3 in Indonesia; 3 in Nepal; 2 each in Samoa and Uzbekistan; 1 each in Thailand, the Philippines, Vietnam, Vanuatu, Azerbaijan, Bhutan, Fiji, Kyrgyz Republic, and Mongolia. See Sandra Pettersson, Asia Pacific Carbon Fund, powerpoint presentation at the CDM Project Development Workshop, ADB Headquarters, 16 April 2008.

56 Sandra Pettersson, Asia Pacific Carbon Fund, powerpoint presentation at the CDM Project Development Workshop, ADB Headquarters, 16 April 2008.

57 ADB press release, "ADB Establishes Future Carbon Fund," 8 July 2008. "The current regulatory framework, based on the Kyoto Protocol's first commitment period expires on 31 December 2012, hampering the trading in post-2012 carbon credits. This would affect the level of interest in developing new clean energy projects and other climate change initiatives in developing countries. Without long-term price incentives for reducing greenhouse gas emissions, investment trends could quickly return to business as usual," the ADB explains.

58 ADB Exploring Future Carbon Fund, Committed to Addressing Climate Change, 14 December 2007.

59 Karan Capoor and Philippe Ambrosi, State and Trends of the Carbon Market 2008, World Bank Institute, May 2008.

60 CAN International, CAN Position Paper for COP13/COPMOP3, Bali 2007

61 Larry Lohmann, "Six Arguments Against Carbon Trading," 29 September 2008. Nick Davies of The Guardian pointed out that

"The Clean Development Mechanism (CDM), which is supposed to offset greenhouse gases emitted in the developed world by selling carbon credits from elsewhere, has been contaminated by gross incompetence, rule-breaking and possible fraud by companies in the developing world, according to UN paperwork, an unpublished expert report and alarming feedback from projects on the ground." See "Abuse and incompetence in fight against global warming," The Guardian, 2 June 2007. See also "Carbon Trading and the limits of free-market logic," by Kevin Smith, Ecologist, 10 March 2007.

62 Ellen Sheng and Aries Poon, "Asian Exchanges Target Carbon Trading," Dow Jones Newswires, 27 Feb 2008.

63 Ibid.

64 Ibid.

65 Ursula Schäfer-Preuss (Vice President, Knowledge Management and Sustainable Development, Asian Development Bank), "Asia on the Move: Energy Efficient and Inclusive Transport," remarks at the ADB Transport Forum, ADB Headquarters, Mandaluyong City, 9 September 2008.

"Transport has already been a critical sector for ADB," says Ursula Schäfer-Preuss. She reported that transport sector loans amount to 21 percent of ADB's total lending since 1966—the start of operations—and has "steadily risen" (has been above 30% of total lending since 2000).

66 "Estimates indicate that the transport sector contributes about 14 percent of global emissions, making this a key sector for climate-change interventions. In 2002 the transport sector accounted for 21 percent of worldwide energy consumption and is projected to generate over 60

percent of the increase in total energy use through 2025. The strong connection between economic growth and transport-generated greenhouse gases can be moderated over time by changes in travel behavior, logistics decisions, technology choices, and transport modes. These factors can, in turn, be influenced by planning, fiscal, and regulatory measures, as well as through public investments in infrastructure" [See the report MDBs and Climate Change].

67 This working paper was prepared under RETA 6144: Better Air Quality Management in Asia by Grant Boyle, John Courtis, Cornie Huizenga, and Michael Walsh, 18 May 2006.

68 Prepared under TA - 6261 (REG) : Energy Efficiency Initiative Consultation Workshop -Transport, Energy Efficiency and Climate Change by John Rogers with contributions from Jerome Weingart, Charles Melhuish and Cornie Huizenga.

69 As presented in ADB, Background Paper on ADB's Approach to Climate Change in Asian Development Fund Countries, Asian Development Fund (ADF) X Donors' Meeting, Vientiane, Lao People's Democratic Republic, 26–27 November 2007.

70 ADB, Clean Energy and Environment Program, 2007 Update.

71 See TA Number 6350 (Project Number: 39335-REG), Sustainable Urban Transport, October 2006 (total cost is estimated at $1,000,000 and will be financed on a grant basis by ADB's TA funding program).

72 As discussed in ADB's Environment Program 2003-2007 report, published in 2008.

73 Corollary to the STI, the ADB has been continuously involved in the integration of air-quality management and sustainable transport into the economic and social strategies, policies, programs, and projects of its DMCs. CAI-Asia, established in 2001 with support from the ADB, has taken the sustainable urban-transport agenda forward with the Partnership for Sustainable Urban Transport in Asia (PSUTA) program and SUMA program. The PSUTA project undertook case studies to examine transport impacts on pollution, congestion, and safety in Hanoi, Pune, and Xian. "Goals call for synergistic land use and transport planning designs," the ADB says.

74 Technical Assistance Number: 6416, Project Number: 40292.

75 See, Increase in Technical Assistance Amount: A Development Framework for Sustainable Urban Transport, Technical Assistance Number: 6416, Project Number: 40292, August 2008; and Major Change in Scope and Amount: A Development Framework for Sustainable Urban Transport, Project Number: 40292, Technical Assistance Number: 6416, June 2008.

76 June 2003 ADB Forest Policy Working Paper.

77 Chris Lang, "Increased poverty, land conflicts and deforestation: The Asian Development Bank's plantations record", WRM's bulletin No. 127, February 2008.

78 Chris Lang, "The ADB is destroying the Mekong's forests and the planet's climate", WRM's bulletin N° 137, December 2008.

79 ADB Project Number: 39343 October 2007 Promoting Climate Change Adaptation in Asia and the Pacific.

80 The Economic Costs of Climate Change in Southeast Asia: A Regional View, ADB, April 2009.

81 Ibid.

82 Xianbin Yao. Sustainable Development and Climate Change, speech delivered at the Delhi Sustainable Development Summit 2008; Plenary Session 3: Impacts and Adaptation - Creating Local Capacity and Global Resources, February 2008

83 This consists of integrating adaptation considerations in strategic planning processes at the country level, considering climate change risks in developing Country Partnership Strategies and reconfiguring sector development plans (agriculture and natural resources, transport, energy and urban development, among others) to make infrastructure and vulnerable populations more resilient to climate change.

84 This aims to ensure that existing and future infrastructure and other project designs, especially those involving water resources management, take account of predicted changes in rainfall patterns, the severity and frequency of storms, accelerated glacial melting, sea-level rise, and other impacts.

85 The ADB through its climate change brochure says that depending on resources available, it is ready to expand its adaptation program from technical assistance to investment in order to support country needs. The Background Paper on ADB's Approach to Climate Change in Asian Development Fund Countries say the aim of such investments is "to reduce the risks from increased flooding, storm surge, drought, wind damage, heat waves, dust storms and other anticipated impacts of climate change."

86 ADB, 2007. Climate Change ADB Programs Strengthening Mitigation and Adaptation in Asia and the Pacific.

87 Asian Development Bank. "ADB's Support for Climate Change Adaptation." Available http://www.adb.org/environment/wed2007-adbsupport.asp.

88 David McCauley. Climate Change Adaptation in Asia and Pacific, a presentation to the Climate Change, Poverty Reduction and Economic Growth Session, 11th Poverty and Environment Partnership Meeting Environmental Improvements for Poverty Reduction and Sustainable Growth: The Challenges of Implementation, June 18, 2007.

89 ADB, 2007. Climate Change ADB Programs Strengthening Mitigation and Adaptation in Asia and the Pacific.

90 ADB, 2007. Background Paper on ADB's Approach to Climate Change in Asian Development Fund Countries, Asian Development Fund Donors' Meeting, Vientiane, Lao People's Democratic Republic, 26–27 November 2007.

91 As cited in the Statement made by Asian Development Bank under the Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change, undated.

92 Ibid.

93 Asian Development Bank. (April 2008). "Water Briefs. Climate, Water, Development: Asia Adapts Through New Approaches and Investments." Available http://www.adb.org/Water/Water-Briefs/climatechange.asp - a3.

94 ADB says its adaptation program is bolstered by long standing programs of support for disaster preparedness and response. This regional TA project is currently lined up for approval.

95 Of late, there have been many climate funds being created or launched. Timothy Greer of the World Wildlife Fund notes that 12 have been created in the last 12 months (The New Financing Architecture for the Environment – and Some Associated Issues, presentation during the PEP session, June 2008).

96 ADB Press Release, ADB to Launch New Climate Change Fund, 5 May 2008.

97 Ibid.

98 The Institute for Global Environmental Strategies (IGES), 2008, cites as examples the "impact of sea level rise on the Ganges/Brahmaputra delta and the Mekong delta and displacement of more than 1 million people in each delta by 2050. ." IGES also reports about recent regional assessment activities on the progress of mainstreaming adaptation in agriculture and water sectors of Bangladesh, China, India and the Philippines confirming that "much more needs to be done to integrate adaptation concerns into sectoral development planning."

99 Other suggestions include promoting improvements in environmental impact assessments' (EIA) standards to consider how current and future impacts of climate change can affect the sustainability of projects, and ways of mainstreaming climate change concerns into infrastructure planning. It can also engage in exchanges of experiences and facilitating the development of region-wide and sector-wide approaches for mainstreaming.

100 The NWP covers nine areas (Figure 4.1) but actions initiated under this programme have been limited to date in Asia.

101 World Bank Group 2008, as quoted from ODA and Climate Change Finance, ODA Watch, March 2008.

102 "MDBs Discuss Climate Investment Fund Activities-Interview with Mr. Yogesh Vyas, Lead Environmentalist, OIVP," 06 November 2008, as quoted from ODA and Climate Change Finance, ODA Watch, March 2008.

103 Dr. Ana Pegels, Leveraging Private Investment in Climate Change Mitigation, as quoted from ODA and Climate Change Finance, ODA Watch, March 2008.

104 Huq and Ayers, as quoted from ODA and Climate Change Finance, ODA Watch, March 2008.

105 World Bank, Global Development Finance 2007.

106 Ibid.

107 Lidy Nacpil, The Illegitimacy of Debt and Illegitimate Debt, January 15, 2009.

108 Jubilee South – Asia Pacific Movement on Debt and Development, The ADB and Illegitimate Debt, 5 cases in Asia, 2008.

109 Ibay, Angela Consuelo. Mapping Vulnerability to Environmental Disasters: A Philippine Study, posted at the Klima Climate Change Center website.

110 Harmeling, Sven. Global Climate Risk Index 2008 Weather-related loss events and their impacts on countries in 2006 and in a long-term comparison, published by Germanwatch, December 2007.

111 Emissions are released when trees are burned and carbon dioxide is released back to the atmosphere. In a study done by Dr. Lasco in 1998, the Philippines contributed 3.7 Gt C to the atmosphere since the 1500s, 70% of which were released in the 20th century alone (Villarin, et.al. 2008). Data from changes in land use were not available in 2004.

112 Studies have also indicated that sea level rise may now be already occurring in the Philippines as observations from 5 primary tidal gauge stations in the country show a nearly 15 cm increase in sea level126 (Rincon and Virtucio, 2008).

113 The Philippines' major dams are located in Luzon and Mindanao which are currently experiencing decreasing rainfall patterns even as the reverse is happening in the Visayas, where the volume of rainfall is on the rise (Villarin, et.al. 2008).

114 These include the ADB's 1991 Climate Change Project involving a rapid assessment of vulnerable sectors, Asia Least Cost Greenhouse Gas Abatement Strategy (ALGAS) Project from 1995-1998, the Promotion of Renewable Energy, Energy Efficiency and GHG Abatement in 2002 and Regional Review of the Economic Cost of Climate Change in Southeast Asia, 2008.

115 It was shown that ADB is monitoring carbon emissions and air quality and uses it as an indicator of environment quality. Moreover, the Bank's energy thrusts mention support for renewable energy options and environmentally sound development of the sector although emission reduction targets were missing.

116 The review took note of the project design objectives, outputs/outcomes, GHG emission indicators and targets, vulnerability assessment and climate proofing objectives, renewable energy/ energy efficiency considerations.

117 USAID ECO-Asia Clean Development and Climate Program, 2006. The projects include the a) Renewable Energy and Livelihood Development Project for the Poor in Negros Occidental, b) Rehabilitation and Renewable Energy Projects for Rural Electrification and Livelihood Development, c) Institutional Strengthening for the Development of the Natural Gas Industry, d) Mindanao Basic Urban Services Sector, and e) Metro Manila Air Quality Improvement Sector Development Program.

118 From the presentation of ADB Southeast Asia Deputy Director General Tom Crouch reported during the January 2008 Philippine Energy Summit. From other sources (ADB CAPE 2008), ADB reports that "support for fiscal, energy, and nonbank financial reforms contributed to improving the private sector enabling environment. Private sector participation has increased in power generation. With ADB assistance, a wholesale electricity spot market is operational and independent regulation is being strengthened. Sequenced and combined use of public project finance and program lending to effect reforms followed by private sector financing, have improved the relevance and effectiveness of ADB's support for energy sector reforms and development."

119 FDC, Illegitimate Debt Case Brief: Power Sector Restructuring Program, presented and circulated at the Kyoto People's Forum on the occasion of ADB's 40th AGM in Kyoto, Japan, May 6, 2007.

120 PDI news report , Greenpeace invades coal plant site, 15 June 2008.

121 The DOE has offered seven coal prospect sites to potential investors in the areas of Polillo (Quezon), Tagkawayan (Quezon), Calatrava (Negros Occidental), Candoni/Bayawan (Negros Oriental), Gigaquit (Surigao del Norte), Tandag-Tago-Lianga-Bislig (Surigao del Sur) and Malangas (Zamboanga Sibugay). It also initiated the adoption of clean coal technologies. To date, several coal-fired power plants, namely those in Mauban, Pagbilao, Sual, Toledo, Salcon and Masinloc have started using this technology.

122 Greenpeace. Irrelevance or Leadership The Asian Development Bank and Climate Change, 2006.

123 It should be noted that the Calaca Coal-Fired Thermal Power Plant was listed among the country's top ten "socially and environmentally controversial projects" funded by official development assistance for endangering the environment and causing the involuntary dislocation of communities in the target area. Another ADB-funded project was also included in this list, namely the MWSS Umiray River Diversion Project.

124 Tadem, Eduardo. The Crisis of Official Development Assistance to the Philippines: New Global Trends and Old Local Issues, UP Asian Center, March 2007.

125 From reports compiled by by PT Pelangi Energi Abadi Citra Enviro (PEACE), a consulting arm of an Indonesian research institute dealing with the environment, and was sponsored by the World Bank and the British government, 2007.

126 Ibid., citing records from the OFDA/CRED International Disaster Database. Records show that weather-related disasters have increased in terms of their frequency and intensity since the 1990s, particularly flooding, followed by drought, forest fire and the increase of endemic diseases. Data from the country's National Development Planning Agency and National Coordination Body for Disaster Management (2006) reports the occurrence of 1,429 disasters in the period of 2003-2005, 53.3% of which were related to hydro-meteorology.

127 ADB 1994 as cited by the Indonesian government's National Action Plan Addressing Climate Change.

128 About 60% according to Indonesia: The First National Communication, 1999.

129 This is estimated by the IPCC (Houghton 2003, cited in Baumert et al 2005) from the report by PEACE.

130 New Energy and Industrial Technology Development Organization (NEDO). CDM Development in Indonesia-Enabling Policies, Institutions and Programmes, Issues and Challenges, 2006 (Second Edition).

131 Indonesia Country Strategy and Program Update (2002–2004) July 2001.

132 From Greenpeace, 2006. The ADB and Climate Change The Irrelevance of Leadership.

133 See Stephanie Fried's Evaluating the ADB in Indonesia: The Operation Was a Success, But the Patient Died, 2001; also Fried and Shannon Lawrence's The Asian Development Bank: In Its Own Words An Analysis of Project Audit Reports for Indonesia, Pakistan, and Sri Lanka, 2003.

134 ADB Strategy 2020.

135 Haruhiko Kuroda, "ADB as the Regional Leader in Asia and the Pacific on Climate Change," Speech at the Opening Session of the Clean Energy Forum: Policy and Finance Solutions for Energy Security and Climate Change, ADB Headquarters, 26 June 2007.

136 ADB Press Release, "ADB to Promote Clean Energy through Private Equity Funds," 17 April 2008.

137 Easterly, William R. "Don't Bank on the ADB," The Wall Street Journal Asia, 2 October 2007. Easterly, who spent sixteen years as a Research Economist at the World Bank, is the author of The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good (Penguin, 2006) and The Elusive Quest for Growth: Economist's Adventures and Misadventures in the Tropics (The MIT Press, 2002).

138 May 2008 Briefing Note: New Programme of the Club of Rome, available at: http://www.clubofrome.org/eng/new_path/

139 See for example the following publications: Climate Change and Human Rights: A Rough Guide, International Council on Human Rights Policy, 2008; Raworth, Kate, Climate Wrongs and Human Rights: Putting people at the heart of climate-change policy, Oxfam Briefing Paper 117, Oxfam International, September 2008; Climate Justice: A Fair Share of the Atmosphere, Friends of the Earth Australia, 2006; Baer, Paul, Tom Athanasiou and Sivan Kartha. The Right to Development in a Climate Constrained World: The Greenhouse Development Rights Framework, Heinrich Böll Foundation, Christian Aid, EcoEquity and the Stockholm Environment Institute, November 2007.

The vast open cast lignite mine which supplies the Mae Moh Power Plant with 50,000 tons of lignite each day. The ADB-funded coal plant emits over seven million tons of carbon dioxide, making it the biggest regional contributor to climate change in Southeast Asia.

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