

Gender and Climate Change Finance

A Case Study from The Philippines











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About WEDO

The Women's Environment and Development Organization (WEDO) is an international organization that advocates for women's equality in global policy. It seeks to empower women as decision makers to achieve economic, social and gender justice, a healthy, peaceful planet, and human rights for all.

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Foreword: **Gender is Crucial in Climate Change Finance**

nvesting in women is one of the most effective ways to advance sustainable development and fight climate change devastation. Existing conditions and discrimination determine who is most impacted by "natural" disasters. Women are the majority of the 1.3 billion people living in the deepest poverty worldwide, and people in poverty bear the brunt of climate change impacts. They are most dependent on the environment for livelihoods, food, fuel and medicine. Women often lead communities in conserving natural resources, adapting crops to changing soil and climatic conditions, and rebuilding following natural disasters.

The feminization of poverty and gendered divisions of labor present clear differences in how climate change impacts women and men, and their respective capacities for coping with and adapting to climate's changes. And while women tend to bear a disproportionate burden of adjustment to climate change, they contribute less than men to greenhouse gas emissions.

Still, women's voices are largely absent from policy discussions and negotiations over climate change. The prevalence of men in decision-making—which is often most acute in economic spheres—means that special efforts must be made to involve women in climate negotiations. Therefore, while women's lives and livelihoods should be central to the development of policies and mechanisms to finance climate change mitigation and adaptation, gender considerations are thus far scant.

Given this context, governments must ensure their climate financing policies are informed by gendered realities. With the support of Heinrich Boell Foundation, WEDO has launched a pilot initiative on climate change financing in adaptation and mitigation at the national level, starting with this case study from the Philippines. Partnering with Athena Peralta, a Philippines-based consultant on women, poverty and ecology, the study analyzes the challenges of financing gender equality in climate change mitigation and adaptation financing; identifies the specific issues of concern for women such as agriculture, food sovereignty, disease, migration, and agro-fuel production; and provides recommendations for improving women's lives through climate change mitigation and adaptation financing. The author used a combination of quantitative and qualitative second-person data with original interviews and analysis to complete the studies.

Making the Connections

Gender and climate financing in Philippines can only be

understood by addressing the intimate connections between climate change, agriculture and rural poverty. In the Philippines, approximately 30 percent of the population lives below the poverty line and rural agriculture provides a primary source of income and subsistence livelihoods. Some 75 percent of the rural population is considered poor and social hierarchies, such as gender and ethnicity, further shape the experience of poverty. Climate change poses a threat to important development issues such as water supply, food security, health, natural resources, and protection against natural hazards.

From Coping Strategies to Policy Needs

The study shows that it is women who have led their households and communities in the development of agricultural coping strategies including food preservation, mixed cropping and crop diversification, water harvesting and irrigation, growing reliance on wild fruits and forest products and cultivating at higher levels. Financial coping strategies include shifting from crop production, taking out loans, selling off livestock, seeking government financial assistance, reducing food consumption, and migrating to find other sources of work and income.

The studies also show that policymaking is often too narrow in scope, failing to adequately address development and equity. According to the Intergovernmental Panel on Climate Change, climate policy should carry three roles: to control the atmospheric concentrations of greenhouse gases; to prepare for and reduce adverse impacts of climate change and take advantage of opportunities; and to address development and equity issues (IPCC, 2007).

Currently, the Philippines financing policy framework has limited focus on women's concerns and minimal women's participation. For example, in assessing the Philippines national financial regime, the study found a lack of recognition of links between climate change and the financing of overall development goals, including gender equality; an inordinate reliance on market-based solutions that don't account for gender roles and feminized poverty; and a lack of consultation and participation of women and women's rights advocates.

Women as Agents of Change

Women are not only victims of climate change, but also effective agents of change in relation to both mitigation and adaptation. They have a strong body of knowledge and expertise that can be used in climate change mitigation, disaster reduction, and adaptation strategies.

A just and sustainable financing framework for mitigation and adaptation must guarantee that the financial burdens of coping with climate change risks are not transferred to those who contribute minimally to greenhouse gas emissions. Financing policies for climate change mitigation and adaptation must explicitly consider as well as respond to different experiences and needs of women, especially those women who are on the socio-economic margins of society.

Making Climate Finance Gender-Sensitive

At the national level, successful climate strategies, policies and programs must link with efforts to combat poverty and land degradation, and enhance food insecurity and access to safe water. Thus, financing to deal with climate change must be situated within the broader context of development financing and development goals: gender equality, poverty eradication and sustainable development. The mobilization of these funds must be complemented by a range of development policies that address poverty and social imbalances, e.g. debt and investment management. Additionally, the funds ought not to be raised at the expense of but rather in addition to other development commitments that continue to be severely under-resourced. Finally, gender-responsive climate finance at the national level requires conducive global funds and mechanisms, which whether from the United Nations or World Bank have thus far lacked gender considerations.

The study concludes with proposals for ensuring women and gender are adequately addressed in national

climate financing policies, programs and frameworks. These include:

- Create mechanisms that guarantee women's equal access to negotiating, developing managing and implementing adaptation and mitigation financing
- Include disaggregated indicators on mitigation and adaptation funds for targeting and monitoring benefits to women
- Develop principles and procedures to protect and encourage women's access to national adaptation programs and projects
- Conduct gender impact assessments of adaptation and mitigation strategies
- Implement the 'polluter pays' and 'shared but differentiated' principles
- Ensure mitigation strategies include both financing new, green technologies and development and enforcement of necessary regulations of greenhouse gas emissions

Moving Forward

This publication is part of a process by which WEDO is addressing the gender implications of climate change from multiple angles in order to ensure climate strategies, policies, mechanisms and other responses include gender equality and equity as central components. Updates on this study along with new resources, campaigns and actions are available at www.wedo.org.



Financing for Climate Change Mitigation And Adaptation in the Philippines: A Pro-poor and Gender-sensitive Perspective BY ATHENA PERALTA

elative to rich, industrialized countries, the Philippines is a minor contributor to global greenhouse gas (GHG) emissions, which are now known to cause global warming. Even so, it is highly vulnerable to climate change. Eight out of ten Filipinos are exposed to climate-induced natural disasters, and more than three-fourths of the national economy derives from climate-sensitive sectors, particularly agriculture (Garcia Rincón and Virtucio 2008). Moreover, the country's emissions have been steadily rising due mainly to unsustainable land and energy use linked to its espousal of a

neo-liberal development trajectory that emphasizes export-led and debt-driven growth.

Climate change scenarios for the Philippines (e.g., Lasco et al. 2006, 2007; Lasco and Pulhin 2008) predict adverse environmental and socio-economic consequences including: greater frequency and intensity of heat waves, droughts, floods, and typhoons; altered ecosystems; reduced output and productivity of the agriculture, fishery, and forestry sectors; livelihood losses, food insecurity, and diminished water supplies; and heightened incidence of certain diseases. The brunt of these changes will be borne by poor people since

they are more dependent on the environment for their livelihoods, food, fuel, and medicine, and are less equipped to adapt to natural disasters and weather variations. Women will be particularly affected due to their socially ascribed roles and to continuing gender-based discrimination.

A timely, comprehensive and coordinated response is required from local communities, the Government, and the global development community. At the local level, orga-

nized groups of women farmers are increasingly making the analytical connections between climate change and an approach to agriculture that emphasizes increased export productivity through massive applications of chemical fertilizers and pesticides. They are in the forefront of community-based organic farming, sustainable forest management initiatives, and other strategies to alleviate and cope with climate change. Yet, at the same time, they remain hugely underrepresented-if not altogether ignored-in the country's decisionmaking processes in this area.

As of this paper's writing, a senate bill on developing a Climate Change Framework Programme is being discussed by legislators. Its objectives

are to substantially increase the country's renewable energy-based capacity, and conduct risk and vulnerability assessments to identify and select appropriate adaptation measures. However, the question is: where will such a perennially cash-strapped country find the required funds to ameliorate the impacts of climate change? In this context, the purpose of this paper is to critically review the regime for financing the response to climate change in the Philippines from the perspective of the rural poor and women.

Why is there a need for a gender perspective on climate change?

There is now broad acknowledgement among policymakers that the effects of climate change will be unevenly distributed among countries and social classes. Less developed countries and poor people that contribute least to GHG emissions will actually be hardest hit (IPCC 2007). These impacts will be more severe on women than men because of their different roles in society due to gendered norms and women's weaker socio-economic status vis-à-vis men (Brody et al. 2008; IUCN 2007; Lambrou and Piana 2006).

Food, water, health, and energy—all of which are particularly affected by climate change—are the basis of women's livelihoods and fall within the purview of their responsibili-

ties (IUCN 2007). For instance, women are often in charge of growing and preparing food, gathering firewood for fuel, collecting water, and caring for the ill in their families and communities, and all of these become more grueling and time-consuming with the increased occurrence of floods and droughts. Research findings indicate that women's economic insecurity increases more than men's in the aftermath of natural disasters (Enarson 2000). Women also recover more slowly

than men from economic losses due to damage to property and loss of livelihood. Moreover, women's lack of property rights and control over natural resources—aggravated by their limited access to information, education, credit, and technologies—translate to fewer means to deal with climate change.

At the same time, women tend to contribute less than men to GHG emissions (Lambrou and Piana 2006). For example, women have a very high share of agricultural activities in many developing societies and are often involved in labor-intensive, low-emission subsistence agriculture. On the other hand, men are mainly responsible for irrigation and the cultivation of capital-intensive, high-

emission cash crops. Case studies also suggest that women have a better understanding of the causes and consequences of climate change and have the knowledge and skills to mitigate and adapt to it (O'Connor et al. 1998; Röhr 2007). Yet, they are consistently underrepresented in policy and decision making around climate change at the local, national, and global levels (Brody et al. 2008; IUCN 2007).

There is a rural saying these days that the seasons have become forgetful. In the dry season, it rains and rains; during the wet season, there is drought.

Zenaida Soriano,
member of Amihan

The Context: Overview of Climate Change Impacts in the Philippines

ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS

The Philippines accounts for 0.3 percent of global GHG emissions—an increase from its 1990 emissions share of 0.2 percent (WRI 2008)¹ but still relatively low. In 2000, unsustainable land use, agriculture, and forestry were responsible for 56 percent of its emissions, while the energy sector contributed 46 percent (WRI 2008). Agriculture alone accounted for 33 percent through rice cultivation and livestock production, use of fertilizers, and biomass burning (Habito 2002). Massive deforestation due to commercial logging activities and conversion to other land uses is also an important factor (Lasco et al. 2004).

Despite low GHG emissions, the Philippines has a high

vulnerability to current and future risks associated with climate change. This stems from at least three factors: its location and geography; its economic dependence on climate-sensitive agriculture and fisheries, agro-industry, and tourism; and its developing country status and worsening poverty problem that translate to lack of capital, technology, and human resources to mitigate and adapt to climate change.

The country lies across the western rim of the Pacific typhoon belt and has a discontinuous coastline of 32,000 meters (and with 70 percent of the country's municipalities located in coastal areas). Climate-related risks include tropical cyclones, rising sea levels, and the effects of El Niño. A study by the Philippines' Initial National Communication on Climate Change (PINCCC) (Republic of the Philippines 1999) observes that sea levels rose almost 15 cm in a 40-year period beginning in 1960.

Although their share of gross domestic product has been steadily shrinking, agriculture, fishery, and forestry continue to compose 18 percent of the economy and serve as the foundations for the country's agro-industrial and agro-services sectors (World Bank 2007). Agriculture is the main livelihood base for 35 percent of the country's labor force, while some 60 percent of the country's coastal population rely on marine resources for a living. The World Bank calculates that 85 percent of the country's gross national product comes from sectors at risk from rising temperatures and weather variability (Garcia Rincón and Virtucio 2008). The Climate Research Unit of the World Wide Fund (CRU-WWF 1998 in Garcia Rincón and Virtucio 2008) estimates a rise in temperatures of 0.1–0.3 degrees Celsius over a decade, while the PINCCC (Republic of the Philippines 1999) predicts an increase of 2–3 degrees Cel-

sius should the amount of GHGs in the atmosphere double. The box below gives a snapshot of climate change impacts by sector.

More than three out of 10 Filipinos live below the poverty line, and poverty incidence rose from 30 percent in 2000 to 32.9 percent in 2006 (Garcia Rincón and Virtucio 2008). Some 75 percent of the rural population is considered poor (Balisacan 2008 in ibid.). Social hierarchies such as gender and ethnicity further shape the experience of poverty. Preliminary evidence suggests that slightly more Filipino women and women-headed households are poor as compared to men (Encarnacion 2008). Not only do poor people tend to inhabit disaster-prone and environmentally precarious areas, but also their heavy reliance on pastures, fishing grounds, and forests for their livelihoods and other basic needs make them particularly susceptible to the degradation and depletion of natural resources (UNESCAP 2003).

Impacts on Rural Communities and on Rural Women

Women farmers in the Philippines compose over 70 percent of paid and unpaid agricultural labor in rice and corn production (Reyes-Cantos and Bernabe 2006 in Spieldoch 2007). They are often small owner-cultivators, tenants, and farm workers, with the primary tasks of planting, weeding, harvesting, sacking, and storing seeds; while men are mainly responsible for preparing the land, applying fertilizers and pesticides, and other mechanized tasks. Amihan,² a national non-governmental organization of Filipino peasant women with members in 32 provinces (see the box on page 8), notes that its members are already feeling the effects of climate change.

According to Amihan, the main manifestation of climate

Climate Change Impacts in the Philippines by Sector

AGRICULTURE, FORESTRY, AND FISHERY

Rising temperatures and prolonged dry and wet seasons associated with El Niño episodes have become more frequent in the Philippines since 1980. Between 1990 and 2000, 3.3 percent of rice production was lost to typhoons, floods, and droughts. The 1997–1998 El Niño event resulted in a 6.6 contraction in agriculture production. The rate of conversion of forests to agricultural lands due to people moving from areas degraded by drought and erosion into more productive forest lands is likely to accelerate. Rising sea levels put coastal economic activities and infrastructure at risk. After the 1997–1998 El Niño-induced bleaching event, live coral cover decreased by 46 percent; only 5-10 percent of the country's mangroves and coral reefs are in good condition, and further habitat destruction will have adverse consequences for fish catches.

WATER RESOURCES

El Niños significantly reduce water inflows into major watersheds and reservoirs, generating enormous strain on water resources. During

severe droughts, water for agriculture has been cut in favor of domestic and industrial water supply, seriously impairing agricultural productivity. Additionally, climate, topography, and tidal variations increase the salinity of water, making it undrinkable. Salt water intrusion in the country's fresh water supplies is already evident in nearly 28 percent of coastal municipalities in Luzon (the country's main island), 20 percent in the Visayas, and almost 29 percent in Mindanao.

HEALTH

There appears to be a strong association between climate change and health problems. Nutritional deficiencies have a more than 50 per cent correlation with climate change factors, while TB, pneumonia, diarrhea, dengue, and cholera have a 30–50 percent correlation. In 1998, malaria and other diseases increased significantly as a consequence of El Niño.

Source: Cruz (1997); Garcia Rincon and Virtucio (2008); Lasco et al. (2006, 2007); Lasco and Pulhin (2008); Moya and Malayang (2004); Rellin et al. (1999) in Garcia Rincon and Virtucio (2008); and Republic of the Philippines (1999).

change is altered rain patterns. Erratic monsoons disrupt planting seasons and adversely affect crop yields with devastating consequences for livelihoods and economic security. This is compounding an already existing and deepening agrarian crisis linked to under-investment in rural development, trade liberalization in agriculture, and land conversion policies that have eroded rural livelihoods and incomes, causing many women to take up jobs as domestic helpers in cities or migrating overseas, often illegally, in search of economic opportunities.³

Amihan notes that the climate change crisis disproportionately affects women farmers vis-à-vis men farmers in at least three ways. First, since women manage, control, and own fewer resources—especially land—than men, they have fewer assets to sell to cope when harvests collapse either because of floods or droughts. Second, more women than men fall into chronic indebtedness related to climate-induced crop failures because micro-credit is largely targeted at women and because, as managers of production and household expenses, they are under stronger pressure to bridge resource gaps. One study found that some 94 percent of women involved in rice production borrowed money from informal moneylenders, small convenience stores, cooperatives, and relatives to finance rice cultivation and augment household expenditures (Reyes-Cantos 2006 in Spieldoch 2007). Third, when food shortages arise from poor harvests linked to weather problems, women prioritize the food needs of male household members and children over their own. Some of the effects are described in the box on page 10.

Overview of the Philippine Response To the Climate Change Crisis

RURAL COMMUNITIES' AND WOMEN'S MITIGATION AND ADAPTATION STRATEGIES

Drawing from a rich body of local and traditional knowledge, people in the countryside have begun to adjust to extreme weather variations using a variety of adaptation and coping strategies (see the table on page 13).

With limited resources and support, women farmers are organizing and strategizing in order to secure their livelihoods and access to basic needs. In particular, Amihan members in the provinces of Rizal, Pampanga, Quezon, and South Cotabato are increasingly engaged in organic farming initiatives, integrated pest management programs, agro-forestry, and tree-planting projects (see the box on page 12).

Amihan also calls for government support and funds directed towards rural communities—and especially rural women—for the provision of subsidized organic seeds, fertilizers, and pesticides; access to affordable agricultural technologies; dissemination of agro-forestry techniques; and provision of low-interest farm credit and crop insurance schemes specifically

Amihan

Founded in 1986, Amihan has the overall goal of empowering peasant women through organization and collectively advocating for alternative policies and strategies that respond to their particular situation as peasants and women. With some 8.5 million out of 11.2 million rural workers landless, the organization's key demands include a genuine agrarian reform program that addresses land rights for women and the protection of peasant women's economic and political rights. Since the 1990s, the organization has been conducting research and advocacy on issues around trade liberalization, particularly the World Trade Organization's Agreement on Agriculture and its implications for food sovereignty and impacts on women farmers. Recently the organization has begun to examine the issue of climate change.

Source: Lindio-McGovern (1998); Reyes-Cantos and Bernabe (2006) in Spieldoch (2007); and interview with Amihan (2008).

targeted at small farmers. In addition, it is currently lobbying Congress to repeal the 2006 Bio-fuels Act. Amihan notes that plantations of jatropha, a major bio-fuel crop, would require high chemical inputs that cause the soil to dry up. Moreover, in the wake of the 2008 global food crisis, there are growing concerns about the impact on food security of converting food crop areas to bio-fuel plantations (FAO 2008). Amihan is also pushing for the passage of the Genuine Agrarian Reform Bill (House Bill No. 3059), pointing out that land reform, by establishing certainty of land tenure, will encourage farmers to invest in climate-proofing (as well as addressing basic issues of justice and equity).

In addition, Amihan is beginning to conduct advocacy around climate change at the global level. Together with other women's organizations, the group issued a statement on the occasion of the United Nations Food and Agriculture Organization (FAO) High-level Conference on World Food Security: The Challenges of Climate Change and Bio-energy (Rome, June 3–5, 2008). This noted that the escalation in the price of food staples had not translated into higher prices for small-scale producers but rather increased hunger and debt. Referring to what it called "the inherent fault-line in the free market paradigm," the statement placed the blame for the crisis on "the corporate agriculture practices being promoted and pushed through the World Trade Organization (WTO) and international financial institutions such as the World Bank, International Monetary Fund and Asian Development Bank" (Asia-Pacific Forum on Women, Law and Development 2008).

PHILIPPINE GOVERNMENT POLICY RESPONSE

Even prior to the 1992 Rio Summit, the Philippine Government had created in 1991 the Inter-agency Committee on

Climate Change (IACC), which is tasked with proposing climate change policies and preparing country positions on the negotiations around the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC and the Kyoto Protocol were adopted in 1992 and 1997 and ratified in 1994 and 2003, respectively, committing the country to the provisions set out in "Non-Annex I Party."

More recently, the Presidential Taskforce on Climate Change Mitigation and Adaptation (PTFCC) was formed in 2007 to address the impacts of climate change, paying particular attention to ensuring compliance to air emission standards and combating deforestation and environmental degradation in general. The PTFCC is made up of a number of government agencies as well as representatives from business and civil society. The IACC currently acts as its technical arm.

As a developing country and relatively minor emitter of GHGs, the Philippines is not obligated to curb its GHG emissions. Nonetheless, under the 2004–2013 Philippine Energy Plan (PEP), new and renewable energy sources are targeted to expand to 53 percent of the country's total energy requirements in 2013 from 51 percent in 2004. Since the ratification of the Kyoto Protocol, the country has participated in the Clean Development Mechanism (CDM),⁴ which is essentially geared towards increasing investments in GHG abatement opportunities in developing countries.

While the 2004–2010 Medium-term Philippine Development Plan (MTPDP)—the key document that steers national development programs and determines public resource allocation—hardly takes into account the looming challenges of climate change (Lasco et al. 2007), it does call for the Government to take advantage of opportunities presented under the CDM to boost the development of indigenous energy resources. As of February 15, 2008, 16 CDM projects have been registered with the Department of Environment and Natural Resources (DENR) and are expected to prevent the emission of 481,863 tons of CO2 per year (DENR 2008). This is equivalent to around 1 percent of the country's annual CO2 emissions. The Philippine Clean Air Act was also passed in 1999, while the Bio-fuels Act was adopted in 2006 to pursue energy efficiency and security as well as cut emissions.

The Philippines' adaptation policies tend to be concentrated on lowering risks and responding to natural disasters, especially those associated with tropical cyclones. For instance, several flood-management infrastructure projects are currently being undertaken (Lasco et al. 2007). The province of Albay, which was hardest hit by typhoons in 2006, is the first local government to work on disaster- and climate-proofing. The 2007 Albay Declaration calls for the improvement of evacuation sites, the introduction of climate change education in school curricula, and training of local officials in disaster preparedness.

While the 2004-2010 MTPDP cites the importance of reduc-

ing and managing climate-related risks in agriculture, and the PTFCC's (2007) Philippine Climate Change Strategic Framework broadly mentions the need for agricultural technologies and drought-resistant crops, hardly any measures have been proposed to build climate resilience in the agriculture and fishery sector. A general review of the country's climate-change policies and development plans gives a sense that the issue remains peripheral to the Government's macroeconomic goal of achieving sustained economic growth, even though it is becoming increasingly clear that it will have adverse consequences for the latter effort.

There is a disproportionate focus on mitigation, especially on the promotion of renewable energy. The "energy bias" is apparent in the fact that the PTFCC is currently chaired by the Department of Energy (DOE) even though Administrative Order No. 171 creating the taskforce states that it shall be chaired by the DENR. Furthermore, the "energy bias" is reflective of a preference for "hard" scientific and technology-based solutions over "soft" policies that address socio-economic needs and differences (Lambrou and Piana 2006). While land use, particularly agriculture, is the foremost source of GHG emissions in the country, very little has been done on mainstreaming an ecologically friendly land-use policy.

In short, there is a broad disconnect between current government policies for climate-change mitigation and adaptation and the priorities and needs articulated by poor rural women in the previous section.

Financing the Philippines' Response to Climate Change: a Critical Review

FINANCING POLICIES FOR CLIMATE CHANGE MITIGATION AND ADAPTATION

Current Policies in the Philippines

Consistent with the "energy bias," fiscal policies on mitigation in the Philippines are closely associated subsidies and incentives under the PEP to attract domestic and foreign investments in renewable energy development. Yet, at the same time, the Government continues to offer a package of incentives for the expansion of investments in fossil fuels that contribute to climate change.

Important sources of mitigation finance include CDM projects; the Global Environment Facility (GEF), which is jointly administered by the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), and the World Bank; loans from international and regional banks; and overseas development assistance (ODA). The World Bank's Carbon Finance Facility is supporting seven CDM-related projects in the Philippines, mainly dealing with wind and geothermal power generation (World Bank 2008). The Asian Development Bank (ADB) has also financed several initiatives in the country including the Rehabilitation

Climate Change And Women Farmers

Because of their limited resources, women farmers in Amulong, Cagayan, often have to take out loans at exorbitant interest rates from village moneylenders before every planting season to purchase fertilizers and other farming inputs. However, intense rains and sudden floods, followed by an unexpected drought and an unusually high incidence of insect infestations, caused their maize harvests to fail three seasons in a row, which meant they have not been able to pay their debts. The creditors have sued them for estafa (swindling), resulting in some women going to jail.

In the province of Pampanga, the soaring cost of rice has led some women farm workers who have lost their livelihoods to resort to providing sexual favors in order to save their families from starvation. The "palit-bigas" (or "sex for rice") phenomenon was first documented by women's groups in 1992 with the violent eruption of Mount Pinatubo, which caused tremendous damage to farmlands in Pampanga and neighboring areas, and therefore to rural livelihoods.

Source: Interview with Amihan (2008).

of Renewable Energy Projects for Rural Electrification and Livelihood Development (Kubo 2005), although ADB financing for renewable energy amounts to only 0.1 percent of its entire funding support for the Philippine energy sector (Greenpeace 2005).

Similarly, financing for adaptation interventions is currently sourced from government funds as well as multilateral and bilateral loans and grants. These largely focus on disaster risk management (see the table on page 15). Bilateral donors are only beginning to include adaptation in their project portfolios for the country; one example is the Japan International Cooperation Agency and Japan Bank for International Cooperation-funded Iloilo Flood Control Project (JBIC 2004).

There are also a couple of adaptation projects focusing on agriculture. For example, the Philippine Climate Change Adaptation Project Phase 1 includes the design of cost-effective adaptation measures in agriculture and natural resources management. While the benefits of risk pooling and insurance against climate-related hazards in support of adaptation efforts are increasingly appreciated internationally, this remains a rather underdeveloped area in the Philippines largely because of narrow private-sector interest. The government-owned Philippine Crop Insurance Corporation (PCIC) offers weatherrelated crop-damage insurance, but small farmers have limited access to the fund since they cannot afford the premiums (PIDS-ACIAR, date unknown). The World Bank and ProVention Consortium-funded Agriculture Climate Risk Assessment Project will explore the possibility of pilot-testing a weatherbased insurance system (Garcia Rincón and Virtucio 2008).

Future Directions

Future directions for mobilizing funds for climate change mitigation and adaptation can be gleaned from the PTFCC's (2007) preliminary Philippine Climate Change Strategic Framework, which considers financial interventions as one of the four pillars of the country's strategic response to climate change (the others are mitigation, adaptation, and technology solutions). It states that it "is committed to search for financing mechanisms in support of local and sectoral initiatives" (PTFCC 2007: 4). However, it does not offer much in terms of concrete, innovative financing solutions. Rather, it highlights the need to tap ODA and technical assistance, explore market-based incentives (e.g., tradable emission permits), develop targeted subsidies, and introduce other lending schemes.

Several climate change-related bills are currently being discussed by Congress, foremost of which is Senate Bill No. (SBN) 1890, entitled "Philippine Climate Change Act of 2007." The proposed legislation aims to: increase the country's renewable energy-based capacity by 50 percent from 2008 to 2013 and by another 50 percent from 2013 to 2020; identify the most vulnerable areas and communities to the extreme impacts of climate change; and conduct local risk and vulnerability assessments to identify options and select appropriate adaptation measures for adoption as joint priority projects of the national and local governments.

The legislation seeks to pilot a cap-and-trade program to be spearheaded by the DENR. Under this program, companies that hold their emissions below the cap can sell their remaining allowance on a carbon market, while companies that exceed their limit must purchase credits on that market. It also calls for the establishment of a Climate Adaptation Fund (CAF), a national version of the Adaptation Fund that was established by the UNFCCC Conference of Parties in Bali in December 2007 to channel funds for adaptation in developing countries derived from the share of proceeds from the CDM. The CAF is intended to finance research and development; demonstration and promotion of technologies; the conduct of climate vulnerability assessments and resources inventory; and advocacy, networking, and communications activities. A seed fund will be established from demonstration earnings, grants, donations, government share from the sale of certified emission reductions of CDM projects, and proceeds from the sale of government properties.

The revised (September 2008) version of SBN 1890, renamed SBN 2583 or "An Act Mainstreaming Climate Change into Government Policy Formulations, creating for this Purpose the Climate Change Commission, and for other Purposes" incorporates some positive changes. SBN 2583 has the key objective of systematically integrating the concept of climate change in government policy formulation, development plans, poverty reduction strategies and other development tools and techniques. Notably, provisions for fiscal incentives



for renewable energy, the piloting of a cap-and-trade program and the Climate Adaptation Fund have been scrapped in the revised senate bill.

Inspired by the Gender and Development (GAD) Budget model,⁵ SBN 2583 attempts to mainstream climate change mitigation and adaptation in all government agencies by calling on them to allocate adequate funds for national and local development and implementation of climate change programs from their existing budgets (though without specifying a percentage). The substitute senate bill also encourages government-owned and controlled financial institutions to formulate and identify loans and financing mechanisms to support local climate change plans, and empowers local government units to raise revenues and secure funds to implement their local climate change adaptation plans through a variety of methods.

International financial institutions such as the World Bank see a future role for themselves in catalyzing and strengthening the country's capacity to benefit from the carbon market as well as in mobilizing climate-risk management and financing schemes including through access to relevant technologies (Garcia Rincón and Virtucio 2008). In particular, the Bank plans to establish a Clean Technology Trust Fund with regional development banks as part of its Climate Investment Funds to provide scaled-up financing to assist developing countries in transitioning to low-carbon economies through cost-effective investments in clean technologies.

Overall, the Philippine Government's financing-policy response to climate-change mitigation and adaptation comprises four tracks:

Promoting investments in renewable-energy projects through

the provision of public subsidies, including fiscal incentives.

Scaling up CDM projects and piloting and establishing a carbon trading system.

Expanding ODA, loans, and grants from donor countries as well international and regional financial institutions.

Charging user-fees for some environmental services, encouraging public-private sector initiatives, and privatizing public enterprises and lands.

The question is whether these financing interventions address the needs and priorities of those that are most vulnerable to climate change. It is revealing that the National Commission on the Role of Filipino Women (NCRFW)—

the government agency tasked to further equality between women and men, and to review, evaluate, and recommend measures to ensure the full integration of women for economic, social, and cultural development—was not invited by the Senate Committee on Environment and Natural Resources to submit comments on SBN 1890.

A PRO-POOR AND GENDERED REVIEW OF THE PHILIPPINE FINANCIAL REGIME FOR CLIMATE CHANGE MITIGATION AND ADAPTATION

Amidst the various climate change-related financing initiatives put forward by the Government, international financial institutions, and donors, it is important to ask: where are the people—particularly the rural poor and marginalized groups such as women—in all of these?

In terms of the quantity of investments, it is difficult to assess whether existing and proposed mechanisms will be able to marshal the needed amounts, not least because of a dearth of information on the costs of mitigating and adapting to weather variations in the country. Nonetheless, if the Philippines' track record in financing other development objectives, such as those articulated in the Millennium Development Goals (MDGs), is to serve as a gauge, then the challenges are, to say the least, daunting. Resource gaps for achieving the MDGs are estimated to reach US\$13.2–18.5 billion for the period 2007–2013 (Manasan 2007).

Qualitatively, the country's policy regime around financing climate-change mitigation and adaptation is problematic for at least three reasons:

1. Lack of recognition of the links between financial strategies

to address climate change and overall development financing and development goals—On the public-expenditure side, there is hardly any recognition among Philippine policymakers that the availability of funds for government responses to climate change will be in large part determined by existing budget expenditure priorities, particularly the payment of the public debt, which was US\$81.9 billion in 2007 (FDC 2008). Debt-servicing obligations, which are mandated by law,

account for 85 percent of total government revenues and eat up more than 30 percent of public expenditures, severely constraining resources available for responding to climate change, gender inequality, rural poverty, and other development challenges. Taking out loans from the World Bank and ADB—as well as courting more ODA, which is often in the form of loans rather than grants⁷—to finance climate-change projects would add to the country's already heavy debt burden. At the same time, obligations to raise foreign-exchange revenues to service debt and its interest, primarily through expanding exports, could

make it difficult for the country to begin to pursue a low-carbon growth trajectory. At the very minimum, this points to an urgent need for new, additional, and non-debt-creating sources of climate change-related finance.

Also largely missing in policy discussions on climate change financing is an appreciation of how the allocation of subsidies

Women Plant Indigenous Rice to Mitigate And Adapt to Climate Change

Responding to spiraling costs of agricultural inputs (fertilizer costs rose by over 100 percent between 2007 from 2008) and recurrent heavy rains, women farmers who are members of Amihan in Montalban, Rizal, are beginning to cultivate a traditional, indigenous variety of rice that does not require massive doses of chemical fertilizers and pesticides and is more resistant to pests than commercial varieties. The women are also planting fruit trees and vegetables on the borders separating the rice paddies as a form of inter-cropping. While this alternative practice of farming rice yields only one harvest a year, it is respectful of the environment and generates significantly lower GHG emissions than commercial farming. At the same time, it adapts rice farming to the prolonged wet seasons brought about by climate change.

Source: Interview with Amihan (2008).

and incentives to large-scale renewable energy projects (e.g., mega-hydro dams and wind-harvesting projects) could have adverse gender and other social implications versus other GHG abatement projects with potentially strong poverty-alleviation outcomes (e.g., community forest-management and agro-forestry schemes). Likewise, the current focus on investing in mitigation—instead of a more balanced approach that simultaneously promotes investments in adaptation—may

not necessarily represent the best use of scarce government resources. From the point of view of the rural poor and women, the protection of their livelihoods and sources of sustenance are paramount, entailing adaptation measures that build-in climate resilience in agriculture and fishery, ensure people's access to potable water and other necessities, and provide social insurance and protection, among others.

On the public-revenue side, the country's policymakers demonstrate a reluctance to explore the imposition of national carbon and other forms of pollution taxes with the dual objec-

tives of reducing the country's GHG emissions and raising public funds for adaptation. Yet there is a growing consensus among environmental economists that national carbon taxes are superior to cap-and-trade schemes (Green et al. 2007). Notably, there is also new and interesting evidence that a national carbon tax implemented in the Philippine scenario could reduce poverty and increase people's welfare, provided the revenues are used to bring down income taxes (Corong 2008). While meriting further study, this finding suggests that linking national carbon taxation to raising revenues for adaptation could enhance gender equality and have strong poverty alleviation benefits, particularly if adaptation finance is used to support rural development.

In generating public revenues for financing climate change mitigation and adaptation, one strategy proposed by the revised version of SBN 1890 is the privatization of public enterprises and lands. There is an extensive body of literature on the negative effects of privatization, particularly the potential gendered consequences for employment and access to services, among others. It is equally important to note that privatization is an unpredictable and unsustainable way of mobilizing funds.

The lack of a holistic understanding of climate change and development financing and policy relationships limits the array of possible financial mechanisms to tackle climate change. While hardly exhaustive, the examples given above underline the point that such financing—not least public financing—cannot be designed in isolation from overall development financing and policy.

2. An inordinate reliance on market-based solutions—No doubt markets have a role to play in raising climate change funds, but market-based solutions will always be imperfect and inadequate as stand-alone policies. Perhaps the most cogent argument against market-based financing has to do with its failure to account for fair distribution. As emphasized by feminist and environmental economists, markets prices are in essence about determining who is willing to pay

for a scarce good, and thus have inherent tendencies to "price out" or exclude the poor as well as the non-monetized and non-commercial sectors where women predominate (Gender CC 2007; Lee 2007).

For instance, CDM projects that combine GHG abatement with poverty alleviation would tend to be micro-scale projects in micro hydro and biomass energy as well as community reforestation and agro-forestry activities (Lambrou and Piana 2006). However, the approval process for CDM projects is both cumbersome and costly, rendering small-scale projects unviable and making it difficult for poor communities to apply. Moreover, while the CDM could in theory offer opportunities for the diffusion of renewable energy options addressing rural women's needs (e.g., solar stoves), in actuality carbon investors are likely to find such projects considerably less financially attractive than one-off investments in industry and transportation (Skutch 2002).

To cite another example, the introduction of user fees for environmental services, with the sound objective of internalizing environmental costs in market prices, could, depending on how it is implemented, have regressive distributional impacts, preventing the rural poor and women, who are the most dependent on the environment, from accessing such services.

More generally, the Gender and Climate Change Network (Gender CC 2007) points out that markets are oriented towards short-term profitability whereas climate change mitigation and adaptation policies must necessarily take a long-term view if they are to address the needs of present and future generations. This is a key principle in understanding the concept of sustainable development. In the context of heightened economic globalization, the Network also expresses the concern that a market-based approach

Community Strategies To Adapt to and Cope with Climate Change

AGRICULTURAL ADAPTATION STRATEGIES

- · Practice crop diversification
- Plant crop varieties that are resistant to droughts, floods, and pests
- · Plant fruit trees and root crops
- · Cultivate at higher levels
- · Practice contour farming
- Plant bamboo to prevent soil erosion
- Construct temporary drainage or canals

FINANCIAL COPING STRATEGIES

- Engage in off-farm work
- Look for other sources of income in the country and abroad
- Take out loans from moneylenders, relatives, and friends
- · Sell off livestock
- Seek government financial assistance
- Rent out, sell, or pawn farm lots
- Reduce food consumption

Source: NEDA (2008).

would tend to prioritize international and regional trade and financial agreements, such as WTO regulations, over climate change policies.

3. Lack of consultation of women's organizations—While the Philippine Climate Change Strategic Framework is currently undergoing consultation among stakeholders, women's groups are not among them. Similarly, as noted above, the Government discussions around SBN 1890 exclude the NCRFW. These practices demonstrate the prevailing and mistaken view among policymakers that climate change and financing for mitigation and adaptation in particular are gender-neutral. The NCRFW is, however, starting to recognize that climate change is a women's issue. At the 52nd Session of the UN Commission on the Status of Women, it highlighted Filipino women's vulnerability to natural disasters, food shortages, and diseases linked to climate change (NCRFW 2008). Women farmers have clearly articulated their priorities and needs and must be fully integrated in decisionmaking processes around financing design, management, and operation. Indeed, there is a strong case for channeling funds towards rural women, who are already in the frontline of mitigation and adaptation efforts.

International financing facilities such as the GEF and donor grants have been likewise criticized for systematically failing to consider the gendered and social costs of climate change-related projects. The World Bank's Climate Investment Funds have remained a donor-driven endeavor, with developing countries and civil society—including women's groups – largely marginalized from their design (Tan 2008). An Action Aid study (Mitchell et al. 2007) also concludes that there is little evidence of specific efforts to target poor women in mitigation and adaptation activities funded as

Some initial thoughts on a holistic, pro-poor, and gender-sensitive financing framework for climate change mitigation and adaptation

BASIC PRINCIPLES

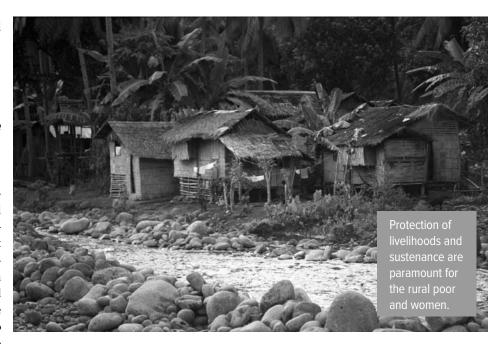
Climate change effectively introduces new dimensions to the social construction of risk (Carvajal-Escobar et al. 2008). In this context, a just and sustainable financing framework for mitigation and adaptation must guarantee that the financial burden of coping with climate change risks are not transferred to those who contribute minimally to

GHG emissions, who possess scant financial resources to deal with its effects, and yet who are particularly exposed to its impacts. Rather, such a framework must distribute the required financial outlays for responding to climate-change mitigation and adaptation among and within countries in proportion to their contribution to climate change—according to the "polluter pays" principle—and capacity to pay.

Moreover, such a framework must be founded on democratic and participatory decision-making processes that include all stakeholders and carefully consider and give weight to the perspectives and needs of rural and coastal communities and poor women. It must focus on safeguarding people's livelihoods, creating sustainable economic opportunities for the poorest and ensuring their access to basic needs and services (e.g. food, water, health, shelter), including through the protection of communal resources. It must consider gendered vulnerabilities and risks. It must be community-driven, national, and global at the same time. It must take a holistic approach that sees explicit connections between climate-change policies and socio-economic policies and development paths. And it must pull together new, additional, predictable, and reliable sources of finance.

FINANCING THROUGH THE LENS OF THE ECOLOGICAL DEBT CONCEPT

A variety of innovative, non-debt-creating multilateral financing mechanisms such as the Climate Change Fund, Solidarity Fund, Climate Change Insurance Fund, International Air Travel Adaptation Levy, and various international carbon taxes have been proposed by a number of non-government groups.⁸ These proposals need to be studied closely for urgent implementation.



At the same time, in mobilizing international resources, the concept of ecological debt offers critical and cutting edge insights. This has been defined as comprising ecological damages caused over time by a country to other communities of people or countries through its production and consumption patterns; and the exploitation or use of ecosystems or ecosystem goods and services by a country over time at the expense of the equitable rights of other countries, communities, or individuals (Paredis et al. 2004). A recent study concludes that through disproportionate emissions of GHGs alone, rich, industrialized countries have imposed climate damages on poor countries equivalent to US\$2.3 trillion, which is considerably greater than the latter's current foreign debt (Srivanasan et al. 2008). The concept of ecological debt thus reverses traditional debtor and creditor positions of countries with potentially transformative implications for power relations between rich and poor countries, as well as between the rich and poor within countries.

In this regard, Oxfam (2007) has developed an Adaptation Financing Index that is grounded on "the polluter pays" as well as capacity-to-pay principles. According to the index, the United States and European Union nations ought to contribute over 75 percent of the annual US\$50 billion needed for adaptation in developing countries, while Australia, Canada, Japan, and Korea ought to provide 20 percent of the amount. Such compensatory finance must be in addition to—and not counted as—ODA. In future climate-change negotiations, developing nations, not least the Philippines, will need to harness the political will to seek such contributions.

Moreover, non-government organizations in the forefront of ecological debt campaigns—such as Acción Ecológica, Jubilee South, and the World Council of Churches—point out that the recognition of the concept also entails the unconditional cancellation of illegitimate financial debts being claimed from poor countries in order to free-up resources for mitigation and adaptation. Case studies have established the different channels through which external financial debt generates ecological debt (Peralta 2006).

SOME RECOMMENDATIONS FOR GOVERNMENT FINANCING INTERVENTIONS

While addressing the global inequities described above—through ecological reparation and compensation, as well as through debt cancellation for developing countries—is the most justice-oriented and significant method of raising funds for tackling climatic vulnerabilities, national and local strategies could also have important impacts.

At the national level, financing to deal with climate change must be situated within the broader context of development financing and development goals: gender equality, poverty eradication, and sustainable development. More concretely, the mobilization of these funds must be complemented by a range of policies that address poverty and social imbalances, e.g., debt and investment management. Additionally, the funds ought not to be raised at the expense of other development needs that continue to be severely under-resourced.

In the Philippines, the ongoing discussions around SBN 1890 and the establishment of a Framework Programme on Climate Change provide a crucial opportunity to discuss alternative policy regimes as well as to reshape the financial architecture around climate change from the perspective of the rural poor and women. Needless to say, a first step would be to intentionally involve the rural poor and women and make processes more participative so that "strategies and interventions can truly identify and meet the needs of those they aim to assist" (Brody et al. 2008: 4).

Major Climate Change-Related Projects in the Philippines Funded by Multilateral Donors

Name of project and proponent	Status	Outcomes
Mainstreaming Disaster Risk Management (National Economic Development Authority – NEDA)	Ongoing; funded by the GEF	Guidelines on the preparation of disaster risk management components of regional/local physical framework and land use plans Enhanced capacities of regional/local planners in incorporating disaster risk management in physical framework and land use plans 16 regional and local plans using disaster risk management guidelines Communication strategy plan highlighting best practices
Philippine Climate Change Adaptation Programme Phase 1 (DENR)	Ongoing; funded by the World Bank	 Improved coordination of adaptation policy through clarity in the institutional structure Cost-effective climate risk reduction in key productive sectors Strengthening proactive disaster management Enhanced provision of scientific information for climate risk management
Enabling Activity for the Preparation of the Second National Communication to the UNFCCC (DENR)	Ongoing; funded by the GEF	 Evaluation of national circumstances Updating of the inventory of GHGs for the year 2000 Assessment of needs, barriers, and opportunities for mitigation and adaptation technologies and methodologies and capacity building to utilize these Assessment of potential impacts of climate change in selected areas and prioritization of adaptation measures Preparation and submission of the Second National Communication
Strengthening the Philippines' Institutional Capacity to Adapt to Climate Change (NEDA and DENR)	Approved for funding through UNDP	Climate risk reduction mainstreamed into key national and selected local plans and processes Inhanced national and local capacities to develop, manage, and administer projects addressing climate change risks Improved coping mechanisms improved through pilot adaptation projects

Towards this end, several specific recommendations can be made concerning climate change mitigation and adaptation financing; these are largely adapted from the proposals put forward by Gender CC (2007) and Mitchell et al. (2007) for the utilization of the UNFCCC's Adaptation Funds, but are also applicable to the financing of national and local initiatives:

Apply a gender-budgeting lens in mobilizing and disbursing the funds. This involves a systematic examination of government budget allocations to climate-change programs for their

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different impacts on women and men as well as decision-making that promotes gender equality in raising and spending the funds.

Ensure procedural justice in the design and implementation of financing. This necessitates, among others, mechanisms that guarantee women's equal access to negotiating, developing, and implementing the financing; and incorporating principles and procedures to protect and encourage women's access to

national adaptation programs and project development.

Prioritize the needs of the rural poor and women, including by reserving a significant percentage of the funds to improve their livelihoods and secure their adaptation capacity.

Include disaggregated indicators on use of funds for targeting and monitoring benefits to the rural poor and women.

Create mechanisms for the rural poor and women's participation in fund management.

Ensure the finance mechanisms support the livelihood priorities of the rural poor and women by, for example, improving women's access to education, information, training, and other resources and services they need to sustain their livelihoods.

Furthermore, the Philippine Government could carefully study and consider, in close consultation with all stakeholders (especially the rural poor and women's groups), the following proposals for raising funds for climate change mitigation and adaptation:

Conduct an ecological debt audit in partnership with civil society, including farmers, fisher folk, and women's groups. The findings could be used to seek the cancellation of the country's illegitimate debts, which, in turn, would make

available resources for financing mitigation and adaptation efforts.

Formulate and implement progressive national and/or local carbon taxes. Funds generated could be earmarked for financing climate-change adaptation measures, especially investments in climate-proofing of the agriculture and fishery sector, where the poor and women predominate.

Direct foreign and domestic investments towards mitigation

and adaptation, especially in areas with potentially strong gender equality and poverty reduction impacts, such as land-use, agriculture, fishery, and forestry, through the provision of subsidies and incentives (as well as through regulation).

In partnership with the private sector, develop and provide insurance schemes and low-interest credit programs specifically targeted at small-scale farmers, farming cooperatives, and rural women to protect

them against weather-related agricultural losses as well as to finance mitigation and adaptation technologies, especially those based on indigenous and traditional knowledge.

There is no easy fix to the climate-change financing problem. At its core, marshalling such funds is a political issue as much as it is an economic one and demands deep-seated changes in the current dominant model of development. Any effective, long-term response to the climate crisis will necessitate fundamental transformations in production and consumption patterns, particularly in the developed world but also for developing countries like the Philippines. The seeds of change lie within rural and coastal communities and women's organizations that are already facing up to the challenges and risks posed by climate change through a wide range of actions: agricultural adaptation, awareness-building, community organization, and political advocacy.

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Notes

- ¹ This estimate excludes land-use data, which would most likely increase the percentage somewhat.
- ² This section draws heavily from interviews with Amihan.
- ³ See Reyes-Cantos and Bernabe (2006) in Spieldoch (2007) for a concise case study of trade liberalization, agriculture, and women in the Philippines.
- ⁴ The CDM allows a industrialized countries to implement emission-reduction projects in developing countries. These earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO2, which can be counted towards meeting Kyoto targets (see UNFCCC website: http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php).
- ⁵ The GAD Budget provision mandated all government agencies and instrumentalities to allocate a minimum of 5 percent of their total appropriations for GAD programs and projects (see http://www.ncrfw.gov.ph/inside_pages/about_us/about_us.html).
- ⁶ Based on the current exchange rate of US\$1=PhP46.
- ⁷ See, for instance, an analysis by Antonio Tujan (2005) on the loan component of Japanese ODA to the Philippines. Japan is the country's biggest bilateral donor.
- ⁸ For a brief description of these alternative financing mechanisms, see Oxfam (2007) and the South Centre (2008).

References

Asia-Pacific Forum on Women, Law and Development (2008), "Don't Globalise Hunger! Assert Women's Right to Food Sovereignty", statement issued on the occasion of the UN FAO "High-level Conference on World Food Security: The Challenges of Climate Change and Bioenergy", 03–05 June 2008, Rome, Italy.

Brody, A., J. Demetriades and E. Espen (2008), Gender and Climate Change: Mapping the Linkages, BRIDGE-Institute of Development Studies: Sussex, retrieved from http://www.bridge.ids.ac.uk/reports/Climate_Change_DFID_draft.pdf.

Carvajal-Escobar, Y., M. Quintero-Angel, and M. Garcia-Vargas (2008), "Women's Role in Adapting to Climate Change and Variability", Advances in Geosciences, Vol. 14: 277–280, retrieved from http://www.adv-geosci.net/14/277/2008/adgeo-14-277-2008.pdf.

Chakrabortty, A. (2008), "Secret Report: Biofuel Caused Food Crisis", The Guardian, 04 July 2008, retrieved from http://www.guardian.co.uk/environment/2008/jul/03/biofuels.renewableenergy.

Corong, E. (2008), "Tariff Reductions, Carbon Emissions, and Poverty: An $\,$

Economy-wide Assessment of the Philippines", ASEAN Economic Bulletin Vol. 25 (1): 21–30.

Dargantes, B., C. Predo and H. Franciso (2008), "Adaptation and Strategies to Climate-induced Disaster: A Case Study of Households and Communities in Leyte", paper presented at the 3rd Conference of the Resource and Environmental Economics Foundation of the Philippines, 10 June 2008, Manila, Philippines.

Department of Energy or DOE (2007), "Philippine Country Report: Moving towards Energy Independence and Sustainable Development", presentation for the UN ESCAP Workshop on Business Models and Financial Frameworks to Scale-up Responses to Climate Change, Clean Energy and Sustainable Development, 18 July 2007, Bangkok, Thailand, retrieved from http://www.unescap.org/esd/climatechange/workshop/2007_07_18/documents/Thu,%2019%20July/Session5-1/5_Hershey%20T.%20dela%20Cruz.pdf.

Enarson, E. (2000), "Gender Issues in Natural Disasters: Talking Points and Research Needs" in Focus Programme on Crisis Response and Reconstruction Workshop, ILO: Geneva.

Ford Runge, C. and B. Senauer (2007), "How Bio-fuels Could Starve the Poor", Foreign Affairs, May/June 2007, retrieved from http://www.foreignaffairs.org/20070501faessay86305-p10/c-ford-rungebenjamin-senauer/how-biofuels-could-starve-the-poor.html.

Freedom from Debt Coalition (2008), "Is the Philippine Debt Problem Over?", Manila Times, 20 January 2008, retrieved from http://www.manilatimes.net/national/2008/jan/20/yehey/top_stories/20080120top2.html.

Garcia Rincón, M. F. and F. K. Virtucio (2008), Climate Change in the Philippines: A Contribution to the Country Environmental Analysis, World Bank Office Manila: Manila, retrieved from http://siteresources.world-bank.org/INTPHILIPPINES/Resources/PhilippineCEACC1July.pdf.

Gender CC (2007), "Gender: Missing Links in Financing Climate Change Adaptation and Mitigation", unpublished position paper presented at the UNFCCC COP 13, Bali, Indonesia, December 2007, retrieved from http://www.circletheearth.netfirms.com/press/gendercc_positionpaper.pdf.

Green, K., S. F. Hayward and K. A. Hassett (2007), "Climate Change: Caps vs. Taxes", American Enterprise Institute for Public Policy Research Environmental Policy Outlook No. 2, retrieved from http://www.aei.org/publications/publD.26286/pub_detail.asp.

Greenpeace (2005), "All Emission, No Solution: Energy Hypocrisy and the Asian Development Bank in Southeast Asia", briefing paper, retrieved from http://www.greenpeace.org/raw/content/seasia/en/press/reports/all-emission-no-solution-en.pdf.

Habito, C. F. (2002), "Climate Change and National Development", paper presented at the Meeting on Climate Change and National Development in the Philippines, 08 November 2002, Manila, Philippines.

Intergovernmental Panel on Climate Change or IPCC (2007), Climate Change 2007: Mitigation of Climate Change, IPCC: Bangkok.

International Union for Conservation of Nature (2007), "Gender Aspects of Climate Change", unpublished briefing paper, retrieved from http://www.iucn.org/en/news/archive/2007/03/7_gender_climate_change.pdf.

Japan Bank for International Cooperation or JBIC (2004), JBIC Environmental Report 2004, JBIC: Tokyo.

Kubo, Toru (2005), "ADB's Initiatives and Perspectives on Carbon Financing", presentation for the ADB Workshop on Financing Modalities of the CDM, 27–28 June 2005, Jakarta, Indonesia, retrieved from http://www.iges.or.jp/en/cdm/pdf/activity02/1_3_1.pdf.

Lambrou, Y. and G. Piana (2006), Gender: The Missing Component of the Response to Climate Change, Food and Agriculture Organisation: Rome, retrieved from http://www.fao.org/sd/dim_pe1/docs/pe1_051001d1_en.pdf.

Lane, J. (2007), "Philippine bio-diesel board to address "food vs. fuel" issue as bio-fuels critics slow investment, manufacturing", Bio-fuels Digest, 31 December 2007, retrieved from http://www.biofuelsdigest.com/blog2/2007/12/31/philippine-biodiesel-board-to-address-food-vs-fuel-issue-as-biofuels-critics-slow-investment-manufacturing/.

Lasco, R. D., F. B. Pulhin, J. M. Roshetko and M. R. N. Banaticla (2004), Climate Change Mitigation Projects: A Primer, World Agroforestry Center Southeast Asia Regional Research Programme: Laguna.

Lasco, R. D., J. M. Pulhin, R. V. O. Cruz, F. B. Pulhin and K. B. Garcia (2006), An Integrated Assessment of Climate Change Impacts, Adaptation and Vulnerability in Watershed Areas and Communities in the Philippines, Final Technical Report (AIACC-AS21).

Lasco, R. D., F. B. Pulhin, P. A. Jaranilla-Sanchez, K. Garcia, and R. V. Gerpacio (2007), Mainstreaming Climate Change in the Philippines, World Agroforestry Center Southeast Asia Regional Research Programme: Laguna.

Lasco, R.D. and F. B. Pulhin (2008), "Mitigation and Adaptation to Climate Change through Agro-forestry Systems", paper presented at the 3rd Conference of the Resource and Environmental Economics Foundation of the Philippines, 10 June 2008, Manila, Philippines.

Lee, Marc (2007), "Carbon Tax vs Cap-and-Trade", unpublished article, retrieved from http://www.progressive-economics.ca/2007/11/26/carbontax-vs-cap-and-trade/.

Lindio-McGovern, L. (1998), "The Peasant Women's Movement in the Philippines:

Alternative Perspectives on Development", Journal of South Asian Women's Studies Vol. 4 (1).

Manasan, R. (2007), Financing the Millennium Development Goals: The Philippines, Philippine Institute for Development Studies Discussion Paper No. 2007-06, retrieved from http://dirp4.pids.gov.ph/ris/dps/pids-dps0706.pdf.

Mitchell, T., T. Tanner and K. Lussier (2007), We Know What We Need: South Asian Women Speak Out on Climate Change Adaptation, Action Aid: London, retrieved from http://www.actionaid.org/assets/pdf/ ActionAid%20%20IDS%20Report%20_We%20know%20what%20we%20 need.pdf.

National Commission on the Role of Filipino Women (2008), "RP Gov't Urges UN to Change Debt Concept", NCFW press release, "retrieved

from http://www.ncrfw.gov.ph/inside_pages/news/20080410_debt_for_equity_mdg.html.

National Economic Development Authority or NEDA (2004), Medium-Term Philippine Development Plan 2004-2010, NEDA: Manila.

NEDA (2008), National Accounts of the Philippines, NEDA: Manila, retrieved from http://www.neda.gov.ph/econreports_dbs/NIA/GNP_GDP/nia2007fy.pdf.

Oxfam (2007), "Adapting to Climate Change – What's Needed in Poor Countries and Who Should Pay", briefing paper, retrieved from http://www.oxfam.org/files/adapting%20to%20climate%20change.pdf.

Paredis, E. et al (2004), Elaboration of the Concept of Ecological Debt, University of Ghent Centre for Sustainable Development VLIR-BVO Project Final Report.

Peralta, A., ed. (2006), Ecological Debt: The Peoples of the South are the Creditors, WCC: Manila.

Philippine Institute for Development Studies-Australian Centre for International Agricultural Research or PIDS-ACIAR (date unknown), "Crop Insurance for the Philippines: Security for Farmers and Agricultural Stakeholders", unpublished paper, retrieved from http://www3.pids.gov.ph/ACIAR/relatedresources/CROP%20INSURANCE%20IN%20THE%20 PHILIPPINES.pdf.

Philippine Presidential Taskforce on Climate Change or PTFCC (2007), Climate Change: The Philippine Response (Strategic Framework and Action Plan), preliminary and abridged version, 17 October 2008, PTFCC: Manila.

Republic of the Philippines (1999), The Philippines' Init ial National Communication on Climate Change, RP: Manila.

Röhr, U. (2007), "Gender, Climate Change and Adaptation: Introduction to Gender Dimensions", unpublished paper, retrieved from http://www.bothends.org/service/casestudy_genanet.pdf. .

Skutch, M, M (2002), "Protocol, Theories and Actions: the Climate Change Process viewed through Gender Spectacles", Gender and Development, Vol. 10 (2), pp. 30-39.

South Centre (2008), "Financing the Global Climate Change Response: Suggestions for a Climate Change Fund", analytical note, retrieved from http://www.southcentre.org/index.php?option=com_content&task=view&id=648&Itemid=1.

Spieldoch, A. (2007), A Row to Hoe: The Gender Impact of Trade Liberalisation on Our Food System, Agricultural Markets and Women's Human Rights, Friedrich-Ebert-Stiftung: Geneva, retrieved from http://www.iatp.org/iatp/publications.cfm?accountID=451&refID=96833.

Srinivasan, U. et al (2008), "The Debt of Nations and the Distribution of Ecological Impacts from Human Activities", Proceedings of the National Academy of Sciences, Vol. 105 (5): 1768–1773, retrieved from http://www.pnas.org/content/105/5/1768.full.pdf+html.

Swart R., J. Robinjon and S. Cohen (2003), "Climate Change and Sustainable Development: Expanding the Options", Climate Policy, Vol. 3 (1): 19-340.

Tan, C. (2008), "No Additionality, New Conditionality: A Critique of the World Bank's Climate Investment Funds", unpublished paper, retrieved from http://www.twnside.org.sg/title2/par/Paper.by.Celine.doc.

Tujan, A. (2005), "Japan ODA to the Philippines", in Reality of Aid Asia-Pacific 2005, retrieved from http://www.realityofaid.org/asia/downloads/ROA_Asia_2005_Part_2_06.pdf.

United Nations Economic Social Commission for Asia Pacific or UNESCAP (2003), "IV. The Environment-Poverty Nexus Revisited: Linkages and Policy Options" in UNESCAP Economic and Social Survey for Asia and the Pacific 2003, retrieved from http://www.unescap.org/pdd/publications/survey2003/Survey03-13.pdf.

United Nations Framework Convention on Climate Change or UNFCCC (1992), The United Nations Framework Convention on Climate Change, retrieved from http://unfccc.int/resource/docs/convkp/conveng.pdf.

UNFCCC (2007a), Investment and Financial Flows to Address Climate Change, UNFCCC: Bonn, retrieved from http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/background_paper.pdf.

UNFCCC (2007b), Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries, UNFCCC: Bonn, retrieved from http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/txt/pub_07_impacts.pdf

World Bank (2006), Clean Energy and Development: Towards an Investment Framework, World Bank: Washington D.C., retrieved from http://siteresources.worldbank.org/DEVCOMMINT/Documentation/20890696/DC2006-0002(E)-CleanEnergy.pdf

World Bank (2008), "Philippine Carbon Finance Assist TA", retrieved from http://siteresources.worldbank.org/EXTEAPREGTOPENVIRONMENT/Resources/noteonCFassiststatus.pdf.

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World Resources Institute (2008), Climate Analysis Indicators Tool Version 5.0, retrieved from http://cait.wri.org.

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