



GLOBAL CLIMATE CHANGE

MAY 2008



USAID has a vast array of environmental programs in the Philippines addressing multiple areas of concern. Through measures such as renewable energy and natural resources management, USAID has succeeded in implementing and supporting activities that help mitigate the effects of climate change and prevent future environmental degradation.

BACKGROUND

The Philippines hosts about 3,000 unique and endemic plants species and more than 500 of the world's 700 known coral species. This uniqueness and diversity is under severe threat from population pressure, over-exploitation, and pollution. In addition, deforestation is a significant problem in the Philippines. In 1991 and 1992, land use changes accounted for almost 70% of carbon dioxide (CO₂) emissions. The rate of growth in net greenhouse gas (GHG) emissions will be a critical issue in the Philippines, and therefore managing the country's natural resources wisely to protect their supply and quality and to maintain their diversity is critical for sustained economic growth. Also vital to this effort is improving efficiency and productivity in the energy sector. Due to inefficient generation and supply of electricity, the Philippines have one of the highest cost and energy consumption rates in Asia. The demand for energy is growing exponentially and over half of the Philippines' GHG emissions are attributed to the energy sector. The country is hampered by limited energy security due to dependence on imported fossil fuels and underdevelopment of indigenous energy sources. Consequently, thousands of communities still lack electricity, particularly in areas affected by conflict and severe poverty. The transportation sector, which currently produces as much atmospheric carbon as the power sector, is another significant source of GHG emissions.

Other factors that contribute to environmental problems are increasing urban and industrial wastes. Such unmanaged or untreated wastes pollute water, air, soil, and coastal resources, and have severe social and environmental impacts. These impacts are reflected in increasing health care costs, a growing natural resources export sector, and reduced workforce productivity. These sources of excessive atmospheric pollution not only contribute to global warming but also discourage foreign investment.

SECTOR-SPECIFIC CLIMATE CHANGE ACTIVITIES

To address these environmental challenges, which directly threaten the ability of the Philippines to develop in a climate-friendly and climate impact-resilient manner, USAID is implementing a variety of environmental programs. They include:

- Strengthening national and local government units and communities to address critical threats to resources;
- Improving environmental policies;
- Institution building through training and technical assistance;
- Environmental advocacy through public awareness campaigns; and
- Improving the performance of the energy and transportation sectors.

PARTNERS

USAID's partners in climate change activities in the Philippines include:

- At least 80 Provincial and municipal local government units
- Development Alternatives, Inc. (DAI)
- Philippines Department of Energy
- Philippines Department of Environment and Natural Resources (DENR)
- Philippines Department of Interior and Local Governments
- US Department of Energy (USDOE)
- Winrock International

Because partners change as new activities arise, this list of partners is not comprehensive.

ADDRESSING CLIMATE CHANGE THROUGH RENEWABLE ENERGY SOURCES

Meeting the ever-growing population's rising demand for energy continues to challenge Philippine policymakers. The oil crisis of the 1970s manifested the importance of energy security to national economies. Reliance on conventional sources of energy has also caused irreversible damage to the world's ecosystems. At both international and local levels, mitigation of GHG emissions is gaining recognition as a useful component of energy policy that is consistent with sustainable development. Clean energy technologies are particularly important solutions to the GHG problem because they address environmental quality and present viable options for both off-grid and on-grid electrification.

A successful example of a renewable energy electrification program can be seen in the conflict-affected and poverty-stricken areas of the Autonomous Region in Muslim Mindanao (ARMM) through USAID's partnership with the government and the private sector (Mirant Philippines) under the Alliance for Mindanao Off-Grid Renewable Energy Project (AMORE). AMORE has now installed electrical renewable energy systems, such as micro hydro and solar systems, in more than 400 villages, avoiding almost 5,400 tons of CO₂ emissions. These communities were not previously connected to the electricity grid, thus households were using kerosene lamps to provide lighting at night. With the installation of the new systems, the release of CO₂ from kerosene lamps has been avoided. The program also manages a 50-hectare watershed area to ensure the regular flow of water for the micro hydro facility. Renewable sources of energy, as demonstrated through the AMORE project, will be utilized to electrify more remote rural communities in ARMM areas. In addition to the energy benefits of this project, AMORE also promotes peace and economic growth in some of the poorest areas of the country.

In 2005, USAID instituted the Sustainable Energy Development Program, which assists the Philippine government in developing and expanding the use of clean and indigenous fuels for transport and power. Support has been extended for the development of such fuels including natural gas, coco-biodiesel and fuel ethanol, as well as renewable energy from solar, wind, geothermal and hydro. The project displaces conventional fuel used for transport and spurs development of renewable, climate friendly energy sources for power such as wind energy. Economic growth and other environmental benefits are envisioned with the development of indigenous fuel sources for the Philippines, particularly coco-biodiesel. Over 3.5 million coconut farmers located in conflict-affected areas will be given opportunities to identify markets for their products. The distribution and retail side will also create jobs to market alternative vehicle fuels. Local government units, transport groups and other stakeholders play important roles in the development and use of alternative fuels.

More recently the project collaborated with the U.S. Department of Energy's Clean Cities Program to promote the use of alternative and

indigenous fuels by creating public-private partnerships. The Philippine Clean Cities Program brings together all stakeholders driven by the objective of cleaner air for cleaner environment. Pilot cities under this program include Makati, Marikina, Baguio, Davao and Metro-Iloilo Guimaras. All clean cities coalitions in the pilot areas have enjoined their private partners to support the airing of a 30-second advertisement for coco biodiesel and a 60-second bioethanol cinema advertisement by providing free airtime. As a result, the program was able to raise \$280,000 worth of free airtime for the cinema ads. Further, the massive Information, Education and Communication (IEC) campaign activities in support of the Clean Cities Program helped in the passage of the Biofuels Act which promotes the development and use of indigenous renewable and sustainably-sourced clean fuels.

LAND USE

Together with the Philippines Department of Environment and Natural Resources (DENR), Department of Interior and Local Government (DILG), local government units, and other partners, the USAID-Environmental Governance (EcoGov) Project assists local government units (LGUs), tenure holders, and communities protect and manage their natural resources – natural forests, bare forest lands, coastal resources such as coral reefs, mangroves, and seagrasses. The EcoGov project assists to improve the capacities of LGUs and communities to plan and implement their approved resource management plans (such as forest land use, coastal resource management, marine protected areas, and fishery management). With EcoGov, LGUs and community stakeholders have intensified efforts to protect and manage their resources because of higher awareness, improved skills to adopt better approaches and technologies, improved property rights, enforcement, and adoption of technology innovations.

These efforts have resulted in improved management of forests, coastal resources, and development of bare forest lands, abandoned mangrove areas, and degraded seagrass beds. For example, reduced occurrence of forest fires and forest conversion has been observed in natural forests that are effectively protected and managed by communities and LGUs. Project beneficiaries have increased tree farm or agroforestry development in their farms as a result of improved property rights and LGU support systems. Also observed were reduced destruction of coral reefs, mangroves and seagrasses, and improved environment for private investments and collective actions, especially in collaborative enforcement activities.

Consequently, CO₂ emission has been lessened (from reduced forest fire, conversion to other uses, illegal cutting, etc.) by improving existing natural stocks for over 200,000 hectares of land. The EcoGov project also contributes to the reduction of CO₂ emissions as a result of composting biodegradable solid waste, recycling and reuse of recyclable waste, and sound treatment and disposal of wastewater.

VULNERABILITY AND ADAPTATION

Overall, the geography and socioeconomic characteristics of the Philippine archipelago require that attention be placed both on climate change mitigation and adaptation. Through the years, USAID has taken concrete steps, such as coastal zone management programs, to reduce long-term vulnerability. The klima Climate Change project focused attention on these critical issues by disseminating basic information on global warming and its impacts on the Philippines and Asia. Through the klima Climate Change Center, stakeholders gained access to vital information on climate change research, mitigation and adaptation strategies, climate friendly technologies and policy issues. Specifically, the project aimed to increase awareness of policy makers, implementers, private sector and academic institutions on potential impacts of climate change, to improve their capability to address realistic solutions and to facilitate linkages among stakeholders in the Philippines and neighboring countries.

Over 500 students, teachers, corporations and LGUs were trained under the program, resulting in increased awareness and understanding of the impacts from climate change. The training for teachers also included course development and integration of climate science into the curriculum. The klima Climate Change Center will continue to provide information and training on climate change impacts and mitigation. Several Memoranda of Agreement have been signed with private sector and media outfits to further the work on information and education.

For more information, visit:
<http://philippines.usaid.gov/>