

**BUREAU FOR DEMOCRACY, CONFLICT, AND HUMANITARIAN ASSISTANCE (DCHA)
OFFICE OF U.S. FOREIGN DISASTER ASSISTANCE (OFDA)**

MULTIPLYING RESILIENCY: PROMISE PROGRAM HELPS URBAN ASIAN COMMUNITIES MANAGE DISASTERS

In South and Southeast Asia, hydro-meteorological events such as flooding, cyclones, and drought cause economic and social losses each year. Due to poor infrastructure and inadequate early warning systems, populations in rapidly growing urban areas are particularly vulnerable to these disasters. Given the recurrence of extreme hydro-meteorological events in these areas, in 2005, USAID/OFDA initiated funding for the Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE), implemented by the Asian Disaster Preparedness Center (ADPC) and local partner organizations in six urban communities in Bangladesh, Indonesia, Pakistan, the Philippines, Sri Lanka, and Vietnam. Since 2005, USAID/OFDA has provided more than \$2.2 million for the PROMISE program, including \$367,000 in Fiscal Year 2009. By building these communities' capacity to mitigate and prepare for the hazards they face, USAID/OFDA has made a strategic investment in a safer, more disaster-resilient future for these and other urban areas in the region.



Barangay Mangin in Dagupan City, Philippines, tests its new early warning system during a flood simulation (Courtesy of ADPC).

CITIES IN ASIA: GROWING OPPORTUNITIES, INCREASING RISKS

The PROMISE city demonstration projects are the centerpiece of the PROMISE program. Through local partners, ADPC initiated projects in Chittagong, Bangladesh; Jakarta, Indonesia; Hyderabad, Pakistan; Dagupan City, Philippines; Kalutara, Sri Lanka; and Da Nang, Vietnam—six urban centers identified as highly vulnerable to hydro-meteorological disasters and receptive to improvements in disaster management at the community and city level. Each of these cities has experienced significant population growth in recent years and serves as a hub of livelihoods opportunities, attracting migration into ad-hoc settlements, typically in hazard-prone areas. The hazards that each community faces, whether the effects of flooding, cyclones, landslides, or drought, have only grown with the rapidly expanding population, placing an increasing strain on existing infrastructure and disaster response resources. In some cases, ad-hoc urban settlements have created the conditions for hydro-meteorological events to become disasters—for example, when normal seasonal flooding becomes hazardous due to over-full septic systems, increased siltation of rivers, or habitation of unfit land.



Floodwaters inundate Bukit Duri community in Jakarta, Indonesia (Courtesy of ADPC).

IDENTIFYING AND TACKLING HYDRO-METEOROLOGICAL HAZARDS

In order to address these underlying vulnerabilities, PROMISE partners have engaged stakeholders at a variety of levels, from the household member to the city official, in each of the six demonstration cities to build capacity in disaster management and preparedness. PROMISE began with participatory risk assessments in selected communities, moving from household to household to identify the locations and character of the hazards they face. Building upon these risk assessments, PROMISE partners have assisted communities and corresponding city officials to develop specific action plans to prepare for or mitigate the identified hazards. PROMISE has emphasized cost-effective, simple, and locally adaptable mechanisms rather than high-tech approaches in order to ensure sustainability of interventions. While each project had different specific aims and outcomes, each community received training in community-based search-and-rescue, medical first response, and community-based disaster risk management. In addition, each PROMISE demonstration city developed a locally appropriate and community-based early warning system. At the city level, PROMISE conducted workshops to integrate the participatory risk assessments developed by communities into city disaster mitigation plans and emergency response systems. In order to address identified needs and promote sustainability of disaster risk reduction interventions, each city received seed money for small-scale disaster mitigation projects implemented at the community level.



Above and below: Families in Chittagong, Bangladesh, develop a participatory risk assessment of the hazards in their community (Courtesy of ADPC).



DAGUPAN CITY: A “MODEL CITY” FOR DISASTER MANAGEMENT

Dagupan City is a bustling urban center in Ilocos Region on the Luzon island of the Philippines, located along a sea coast and a river delta. Recurrent floods in the city’s low-lying coastal delta areas cause regular damage to public infrastructure, private property, agricultural crops, fishponds, and other urban economic activities. Increased siltation of the delta area due to upstream erosion and a growing population along riverbanks has increased Dagupan City’s vulnerability to these risks. Prior to the introduction of PROMISE, Dagupan City had already begun taking steps to organize disaster response systems through a City Disaster Coordinating Council (CDCC); however, this body was primarily reactive in nature and did not have a comprehensive risk reduction plan in place. In addition, the corresponding disaster management organizations at the *barangay*, or district, level had become largely inactive, and communities continued to be dependent upon city and national authorities to provide assistance during flooding and other disaster events. As one resident of *Barangay Mangin* stated, “People would only take action when the flooding was already here—there was no real system in place.”

PROMISE assisted the CDCC, as well as the *Barangay* Disaster Coordinating Councils (BDCCs) in eight highly vulnerable *barangays*, to develop detailed risk assessments and action plans for disaster response, while also facilitating the communities’ development of end-to-end early warning systems. Each community’s early warning system incorporated the results of the participatory risk assessments, complete with different alert levels and corresponding warning signals and actions to be taken by

residents and BDCC members. Based on needs identified during the risk assessments, BDCC members and other residents participated in medical first responder and community-based disaster risk management trainings, ensuring that local communities are prepared to provide immediate, life-saving assistance well before the CDCC can gain access to disaster-affected areas. In addition, PROMISE facilitated the city's development of a dedicated disaster risk reduction working group, a disaster management information center, and an emergency operations center (EOC). The EOC was established by local ordinance and funded through the annual budget, ensuring the long-term sustainability of disaster preparedness in Dagupan.

The active engagement of city- and *barangay*-level officials in developing and coordinating early warning systems and risk management procedures through PROMISE has resulted in numerous awards for Dagupan City and one of its coastal *barangays*, as well as for APDC's local implementing partner, the Center for Disaster Preparedness (CDP). Since 2007, Barangay Mangin has received two regional awards for excellence in disaster risk management, CDP has received a regional award for its superior performance, while Dagupan City has received regional and national commendation for its disaster management systems. Most recently, in August 2009, the Republic of the Philippines National Disaster Coordinating Council (NDCC) awarded the Dagupan CDCC a National *Gawad Kalasag* Award for the best component CDCC in the Philippines for disaster preparedness. Dagupan has become a model city for disaster management in the country and the region, with the Philippine government facilitating replication courses and regular exchanges of city officials to determine how to apply the successes of the Dagupan City model to other locations.

The recent flooding events in the Philippines in fall 2009 underscored the importance of the PROMISE initiatives. On September 26, Tropical Storm Ketsana, known locally as Ondoy, made landfall in the northern Philippines with wind speeds of approximately 53 miles per hour, bringing sustained heavy rains throughout Luzon island. In two days, the island received the equivalent of a typical monsoon month's rainfall, causing extensive damage and inundating 100 percent of the Dagupan City jurisdiction. Utilizing the early warning systems and disaster management systems developed by PROMISE, the city implemented a pre-emptive evacuation of residents. The mayor of Dagupan City expressed gratitude for the PROMISE program, as the high-risk *barangays* involved in PROMISE were the first to participate in the evacuation.

SMALL-SCALE RISK MITIGATION PROJECTS REAP LARGE BENEFITS IN KALATURA

Kalatura, Sri Lanka, with a population of 100,000 individuals, is a rapidly developing satellite city located nearly 40 km south of the capital city of Colombo. The city is prone to frequent natural disasters, including riverine floods and rain-induced landslides. The 2004 tsunami, which killed more than 40,000 individuals in Sri Lanka, also affected Kalatura. PROMISE commenced activities in Kalatura in 2006 with an initial community-based disaster risk management training for local implementing partner staff and translation of the Community-Based Disaster Risk Management Field Practitioner's Handbook into the local language of Sinhala.

Following local disaster risk assessments and with the assistance of ADPC's local implementing partner Sarvodaya, the communities developed several small-scale risk mitigation activities to reduce the impact of and increase community resiliency to disasters. The construction of a drainage system in a vulnerable Kalutara community, Dhaham Mawatha, is one such project. With the technical assistance of the Kalutara

“[Dagupan City’s] commendable efforts earned them not only this recognition, but also the greater, unquantifiable benefit of providing security and peace of mind for their people that Dagupan City is and will always be a community that is resilient [to] and safe from disasters.”

-- 2009 National *Gawad Kalasag* Award for
Dagupan City CDCC



Urban Council, the people of Dhaham Mawatha constructed a drainage system to facilitate improved storm-water drainage in the community during heavy rains. Improved drainage will assist the community to weather future flooding and reduce flood-related damage to homes and infrastructure.

The participatory risk assessments in Kalutara also identified improper disposal of solid waste into the Bindunu Ela canal, as a serious hazard increasing communities' vulnerability to flooding disasters. Prior to the PROMISE program, community members used the canal as a disposal area for solid waste, resulting in the frequent overflow of the canal during heavy rains. Waste disposal into the canal also led to health and water, sanitation, and hygiene concerns, which were compounded during flooding events. During PROMISE, the Bindunu Ela community developed an alternative solid waste disposal mechanism, including a collection center for recyclable waste, a dedicated solid waste location, and support for composting. The local organization managing the recycling site has used the proceeds garnered by selling the recyclables to provide for vulnerable populations in the community. The seed money allocated through PROMISE also provided compost bins to local households in Bindunu Ela and introduced the concept of home gardening to local women. The home gardens established by Bindunu Ela women have prevented organic matter from blocking the canal and significantly augmented the livelihoods of the local community, increasing their resiliency to future shocks and reducing the risks posed by the canal during floods.



ADPC partner Sarvodaya distributes compost bins to women in Kalutara, Sri Lanka (Courtesy of ADPC).

LOOKING AHEAD

Through these projects, ADPC demonstrated that integrating disaster risk reduction into plans and practices at the community, city, and regional level can serve not only to enhance communities' capacity to respond to disasters but also to lessen the effects of disasters when they occur, resulting in a long-term, sustainable benefit for these locations. In addition, USAID/OFDA's investment in disaster risk reduction through the ADPC-implemented PROMISE program provided a key tool for replicating appropriate disaster management techniques throughout the region, providing a model for other communities in the region to follow.