



TERMINAL REPORT:

PROMISE PROJECT-PHILIPPINES
MARCH 2006 TO JULY 2009

Submitted by:
Center for Disaster Preparedness

Submitted to:
Asian Disaster Preparedness Center

November 2009



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Introduction

The Philippines experiences an average of 20 typhoons in a year. Nearly 25% of these are destructive. Such are often accompanied by strong winds and heavy rains which tragically impact the human populations, infrastructure, economy, and delivery of services. Crops and properties are damaged; offices and industries shut down; and human injuries and casualties mount up. These often happen in vulnerable communities situated in low-lying areas where flooding occurs.

Dagupan City is one low-lying area situated in the north western part of the Philippines. It straddles the sea coast of the Lingayen Gulf and the eastern margin of the Agno River Delta, making it the catchment basin of all waters from upstream exiting into the Gulf. Over the years, the build-up of settlements along the riverbanks and erosion led to the high sediment load of the rivers, which in turn prevents water from draining easily into the sea. This is aggravated by the release of water from two major dams (Binga and San Roque Dams) when heavy rainfall occurs. Hence, low-lying coastal delta areas in the city are frequently inundated.

The floods are worse when massive rainfall and high tide occur at the same time, with waters rising by as much as 2.2 meters above sea level. Meanwhile, the rapid urbanization and accompanying population growth have added pressure to the city's carrying capacity. Having a land area of over 4,000 hectares, Dagupan is home to approximately 150,000 people with a population density of almost 4,000 persons per square kilometer. The city serves as a sub-regional center for trade as well as health and education in Northern Luzon. At the same time, it is the country's top producer of milkfish. The flooding is a constant threat to the lives of the people and economy of the city.

The Dagupan City Government initially focused on emergency preparation (stockpiling and maintaining emergency equipment) and response (evacuation, search and rescue operations, first aid treatment, security provision), combined with mitigation activities (drainage system maintenance and river dredging) to address the issue of flooding. Nonetheless, city officials recognized that such mechanisms could still be improved by strengthening the capacity of local communities to engage in pre-disaster initiatives that focus on mitigation, prevention, and preparedness. This was done through the implementation of the Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE).

PROMISE-Philippines was implemented by the local government of Dagupan from March 2006 to July 2009 in partnership with the Center for Disaster Preparedness (CDP) as implementing agency, Asian Disaster Preparedness Center (ADPC) as regional coordinating institution, and United States Agency for International Development (USAID) as funding support arm. Through the Program, the city has adopted mechanisms for community preparedness and mitigation to address the problem of flooding.

Project Overview



Objectives

Dagupan City is one of the five highly vulnerable secondary cities in South and South East Asia selected for demonstration activities under PROMISE. PROMISE was primarily aimed at *reducing the vulnerability of the city through enhanced preparedness and mitigation of hydro-meteorological disasters*. Specifically, it sought to:

- ⇒ Enable stakeholders to adopt specific hydro-meteorological disaster preparedness and mitigation measures to manage hydro-meteorological disaster risk;
- ⇒ Increase stakeholder involvement and further enhancement of strategies, tools, and methodologies related to community preparedness and mitigation of hydro-meteorological disasters in urban communities;
- ⇒ Enhance coordination with USAID Missions to promote sustainability and ensure program activities in line with USAID country and regional strategies; and
- ⇒ Strengthen networks and regional links among relevant risk management institutions/organizations for improved application and dissemination of lessons learned.

Components

The City lacked a comprehensive disaster management system to integrate barangay-based and city-wide efforts prior to the implementation of PROMISE. Disaster mitigation and preparedness activities were very minimal and mostly done without the participation of communities. The City Government focused mainly on emergency response, hence other phases (preparedness, rehabilitation) of disaster were neglected. To change these conditions and realize the objectives of PROMISE, the City Government and CDP focused on implementing the following components of the Program:

Matrix A. Program Components of PROMISE

Component	Major Activities
1. <i>Hazard, Vulnerability and Risk Assessment</i>	<ul style="list-style-type: none"> • Hazard mapping and vulnerability assessment • Action planning workshops at the city and community (<i>barangay</i>) levels
2. <i>Mitigation and Preparedness</i>	<ul style="list-style-type: none"> • Strengthening of local disaster coordinating councils • Setting up of Early Warning and Evacuation System (EWS) for the city and low-lying communities • Development of Community Disaster Preparedness Manual • Consultation meetings with different stakeholders at the local, national, and regional levels • Implementation of community level projects for enhanced preparedness and mitigation
3. <i>Training and Public Awareness</i>	<ul style="list-style-type: none"> • Training activities on Urban Governance and Risk Management, Hydro-meteorological Risk Management and Community Preparedness, Search and Rescue, and First Aid Treatment • Mentoring and coaching of key community leaders • Launching of public awareness campaigns and Disaster Safety Day events at the city level
4. <i>Advocacy for Mainstreaming Risk Management in Urban Governance</i>	<ul style="list-style-type: none"> • Formulation of policies for disaster preparedness at the community and city levels • Conduct of study tours for local government officials • Developing a network of local practitioners for experience sharing • Convening of national level meetings for elected members, government and local government officials
5. <i>Regional Networking and Information Dissemination</i>	<ul style="list-style-type: none"> • Sharing of models and experiences • Influencing other groups to adopt similar strategies in disaster preparation and mitigation

Key Stakeholders

PROMISE-Philippines was implemented in eight pilot *barangays* in Dagupan: Bacayao Norte, Bacayao Sur, Lasip Chico, Lasip Grande, Manguin, Pogi Grande, Salisay, and Tebeng. These *barangays* were the most vulnerable to flooding. Through the Program, the Barangay Disaster Coordinating Council (BDCC) was strengthened in all eight areas to lead the development and management of a comprehensive risk reduction plan before, during, and after a disaster.

Roles and Responsibilities

The Program was an inter-organizational collaboration among the City Government of Dagupan, CDP, ADPC, and USAID.

The City Government of Dagupan

The City Government, led by the Mayor, was primarily responsible for ensuring the participation of program key stakeholders, policy formulation on disaster risk reduction, coordination with the communities, and implementation of disaster risk reduction plans. The City Disaster Coordinating Council (CDCC), a multi-sectoral body composed of key city officials, is the political and administrative unit directly responsible for responding to emergencies and disasters within the city. To ensure the smooth implementation of PROMISE, the CDCC formed a Technical Working Group (TWG) with members drawn from the existing members of the Council. Consequently, the TWG assigned a point person to directly coordinate with TWG members, BDCCs, CDP, and other concerned groups within the city.

The Center for Disaster Preparedness (CDP)

CDP is a non-government organization (NGO) committed to disaster risk reduction and protection of life, property, and the environment. The Center was responsible for the overall direction, coordination, and management of the daily operations of PROMISE-Philippines in close coordination with the TWG. It assigned a Project Officer to oversee the program and manage its finances. Moreover, CDP regularly communicated with ADPC regarding the progress of the Program.

The Asian Disaster Preparedness Center (ADPC)

ADPC is an independent, non-profit, inter-governmental foundation based in Thailand. It is a regional resource center dedicated to creating safer communities for sustainable development through disaster reduction. ADPC served as the regional coordinating institution of PROMISE. As such, it ensured that the program was efficiently and effectively implemented by partner institutions in target cities located in Bangladesh, Pakistan, Philippines, Sri Lanka, and Vietnam. It directly coordinated with and released financial support to CDP.

The United States Agency for International Development (USAID)

USAID is the arm of the US Government in providing economic and humanitarian assistance worldwide. It provided the needed financial support to realize the objectives of the Program. It directly released the funds to and coordinated with ADPC.

Strategies

The general strategy utilized by the Program was to adopt private and public sector mechanisms for community preparedness and mitigation. Hence, the following salient features characterized PROMISE-Philippines:

Focus on local disaster coordinating councils.

The Program tapped the political and administrative units responsible for emergency and disaster response by law: the CDCC and BDCCs. The structures and mechanisms of these units were re-aligned, redefined, and strengthened to emphasize disaster preparedness and mitigation in their work. Moreover, the capabilities of council members were enhanced such that they themselves could train locals and other community members in Disaster Risk Management (DRM).



A BDCC member validating the results of the risk assessment among community members

Converging Community-Based Approach with Local Government Unit (LGU) Participation.

All the efforts focused on enabling the eight low-lying delta communities to reduce risks in their areas when typhoons and flooding occur. Through the BDCCs, the City Government was able to collaborate with the communities from risk assessment to the development, implementation, monitoring, and assessment of community-based mechanisms so that the people themselves could prevent, prepare for, keep track of, and respond to hazards. This City Government-community partnership ensured the sustained support for community efforts and ownership of the process by the people involved.



The CDCC and BDCC of Barangay Manguin working together to conduct a community drill

Soliciting the Support of all Sectors.

The efforts in the vulnerable communities were complemented by the efforts of CDP and TWG members to link up with agencies that could provide information and resources needed by the communities. At the same time, the distribution of printed materials, advocacy through broadcast media, and celebration of the city-wide Disaster Preparedness Day, enhanced the support of all city residents (even those in low-risk areas) to disaster risk reduction endeavors.



A TWG member being interviewed on local TV regarding the City's disaster response



A visitor tries out the "konongkong," an indigenous device used to warn people of the water level

Ensuring community participation and reliance on indigenous knowledge.

The community members from the eight pilot barangays were consulted in mapping out the hazards, assessing their vulnerabilities, and developing a blueprint to reduce disaster risks in their communities. The Program likewise ensured that the technology and mechanisms used for the Early Warning Systems and Emergency Response were identified and developed by the local people themselves. Such ensured the appropriateness of the systems given the context and experiences of the locals.

Institutionalizing disaster risk reduction mechanisms. Mechanisms were institutionalized such that disaster preparedness could become an integral part of the efforts of the City and would remain in place even after the completion of the PROMISE project. Employing this strategy, each target community prepared its Community Disaster Preparedness Manual which could guide current and future BDCC members. The City likewise established an Emergency Operation Center (EOC), an office solely devoted to disaster risk reduction efforts. Moreover, the City Council passed a resolution to observe July 16 of every year as Disaster Safety Day. Hence the month of July has become a venue for schools and communities to hold Academic Olympics (competition on oration, essay writing, slogan and poster making), river clean up and mangrove revegetation, and earthquake and evacuation drills in schools.



The Dagupan City Council passing a resolution declaring July 16 as Disaster Safety Day



Local Government Officials signifying commitment to coordinate and provide mutual support

A Memorandum of Agreement (MOA) was likewise signed by all the mayors of Northern Luzon municipalities through the Region 1 Disaster Coordinating Council (RDCC). The MOA signified the commitment of the municipalities to coordinate with each other and provide mutual support in times of calamity.



The CDP Project Leader with the TWG members she mentored and coached

Mentoring of Local Trainers/ Leaders. With sustainability and self-reliance in mind, the Program focused on enabling local leaders (TWG and BDCC members) to become trainers in the field of Disaster Risk Management. This pool of local trainers were guided and coached by CDP to ensure that they were equipped with all the necessary knowledge, skills, and attitudes. The trainers themselves conducted the community-based workshops conducted in the eight target *barangays*.

Program Implementation Process

Participatory and collective processes were employed in undertaking the Program, taking into consideration the culture and context of the city government and eight pilot *barangays*. The process implemented is summarized in Figure 1. From the formation of the TWG to actual implementation of the disaster risk reduction plans, the Program relied on the knowledge and experiences of local community members.

The Program went through the following overlapping steps to realize its objectives.

Step 1: Institutional Strengthening

This step involved a series of consultations with the local units involved in disaster and emergency response: the CDCC and BDCCs. At the CDCC level, the series of consultations resulted in the creation of the TWG, which took on the responsibilities of coordinating and implementing PROMISE in the city. It took a while for CDP to establish rapport with the CDCC and TWG members. Building relationships and trust went through a process of adjustment on both sides. Nonetheless, this challenging phase was overcome and a more comfortable working atmosphere was established.

To prepare for the tasks at hand, the TWG defined its role and designated tasks among its members. The unit was later grouped into three teams. Each team was assigned at least two *barangays* for capacity building in Disaster Risk Reduction.

A similar process was undertaken by the BDCCs in the eight target *barangays*. Through the initiative of the TWG teams and CDP, meetings were held with the BDCCs to clarify the roles and structure of the unit and design a communication flow for actions.



The members of the TWG discussing their roles and responsibilities

The initiative of the City Government through the TWG to work with the communities served as an eye opener for both parties. It was an opportunity for the Government officials to grasp the real situation of the communities while it was the first time that the community got the chance to work with the officials closely.

Step 2: Capacity Building on Disaster Risk Management

City/TWG Level



The TWG undergoing a five-day workshop on CBDRM and PRA

The members of the TWG underwent a five-day workshop on Community-Based Disaster Risk Management (CBDRM) and Participatory Risk Assessment (PRA) to deepen their understanding of and experience on disaster risk reduction process and mechanisms. They then applied their newly acquired knowledge and skills by facilitating similar training activities for the eight target *barangays*. Recognizing the limited training experience of the TWG members/local trainers, CDP mentored them all throughout the process by providing guidance, additional inputs, and feedback when needed.

The TWG also attended a two-day Facilitators' Workshop to further hone their skills. Volunteers from the unit also took a short course on First Aid Treatment and Search and Rescue. This core of volunteers passed on the knowledge and skills they acquired to community-based volunteers in the eight *barangays*.

BDCC Level

Each target *barangay* was also trained on CBDRM, PRA, First Aid, and Search and Rescue by the local trainers/facilitators. The training activities were participated in by the BDCC members and community leaders. The training was followed by hands-on exercises and workshops on hazard mapping and vulnerability assessment, early warning and evacuation, and community disaster preparedness planning.



A TWG member passing on CBDRM knowledge and skills to BDCC members

The series of training activities and workshops culminated in the conduct of city- and *barangay*-wide warning and evacuation drills. The drills were aimed at testing the emergency standard operating procedures and guidelines developed.

Step 3: Development of Disaster Risk Reduction Mechanisms

The Capacity building activities resulted in the development of Barangay Risk Maps, Early Warning System (EWS), and Barangay Emergency Response and Evacuation Plans for the eight target communities. Similar outputs were also produced at the city level.

This step also entailed the implementation of small-scale structural and economic mitigation activities. The communities submitted proposals for the procurement of emergency equipment, conduct structural mitigation activities, and implement economic projects that would fund BDCC efforts. The equipment varied from one community to another, depending on their needs and context. Each community provided their counterpart such as labor for building markers and road guides, procurement of batteries for the flashlights, and storage facility for the equipment. The communities also developed guidelines in using, safe-keeping, and maintaining the gadgets.



A device used to measure the water level during typhoons or high tide



The community mapping out their Early Warning System (EWS) and evacuation plan during a workshop



A BDCC member making announcements during a simulation exercise to test the community's EWS

Structural mitigation activities entailed the construction/improvement of evacuation centers, elevation of toilets and foot bridges, dredging of rivers, mangrove reforestation, planting of trees along river banks, sand-bagging, and clean-up drive. On the other hand, small-scale economic mitigation projects included: rice retailing, setting up of loan facilities, pedicab operation, etc.

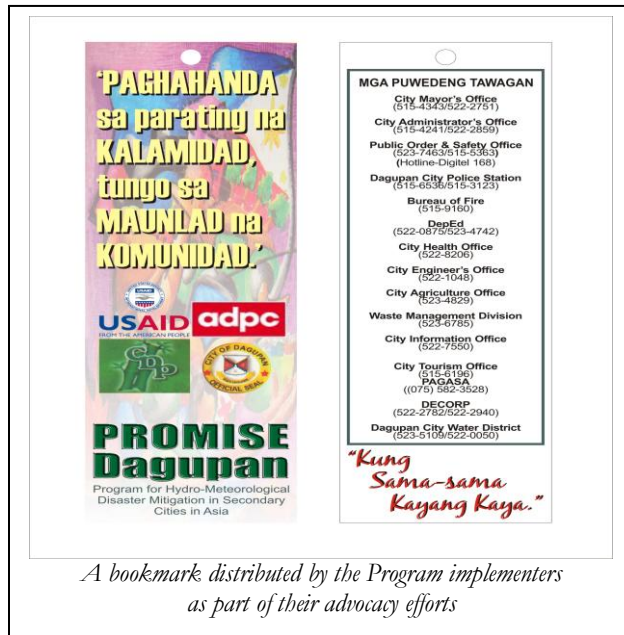


A barangay elevates its community toilet as part of its structural mitigation efforts



Community members help improve their evacuation center

Step 4: Advocacy and Networking

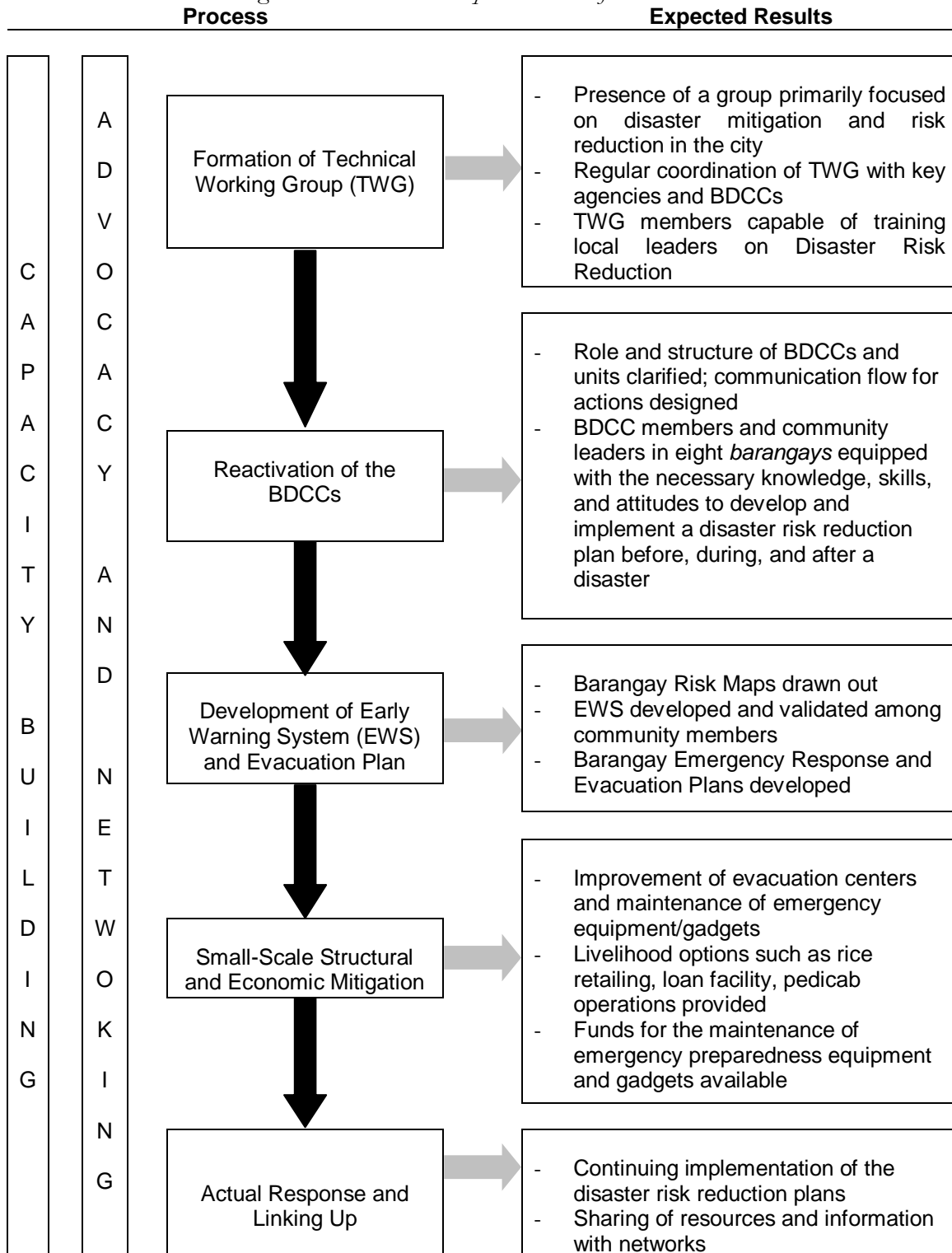


The foregoing steps were complemented by advocacy and networking activities that reinforced the community-based efforts. Public awareness campaigns were conducted by the City Government to raise the awareness of the general population on the results of the hazard and risk assessment. These campaigns included distribution of printed materials about hazard and risk, preparedness, mitigation, and emergency response. The same topics were also discussed by TWG members in local radio and TV programs. Other advocacy efforts entailed the yearly conduct of Disaster Safety Day at the city level.

CDP and the City Government established linkages with different government and non-government entities at the local, national, and international levels to collaborate on common endeavors, share knowledge and experiences, and influence other groups to adopt disaster risk reduction measures in their communities. The Program was able to link up with newly elected city officials, all the other *barangays* in the City, volunteer groups, private entities, government units, LGUs from other regions, NGOs, socio-civic organizations, and international agencies.



Figure 1. Process in the Implementation of PROMISE

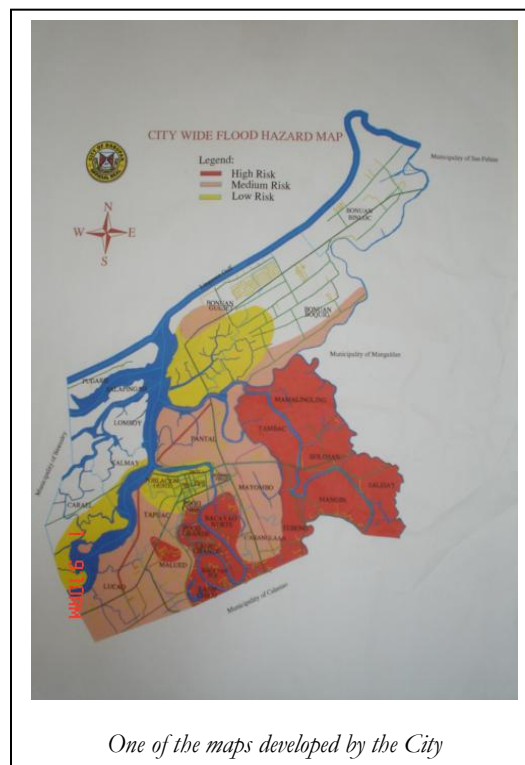


Achievements

Program Outputs

The foregoing process produced the results detailed in Matrix B. There was no significant deviation from the planned activities detailed in the project proposals. From March 2006 to July 2009, the Program produced the following major outputs:

- ❖ Eight (8) *barangays* with updated HVRC assessment, disaster risk reduction plans/manuals, community-based EWS, emergency response equipment and gears, safe evacuation centers, and financial support from small-scale economic endeavors
- ❖ 24 local experts/trainers in the field of Community-Based Disaster Risk Management
- ❖ 30 medical responders and search and rescue volunteers
- ❖ Institutionalized Emergency Operation Center (EOC), Disaster Preparedness Day, and coordination with Northern Luzon municipalities through RDCC
- ❖ Yearly celebration of Disaster Preparedness Day/Month since 2006



- ❖ Participation of government agencies, volunteer groups, non-government organizations, schools, media, and *barangays* in public awareness campaigns, evacuation drills, and other disaster preparedness efforts
- ❖ PROMISE experience in Dagupan featured in at least 2 local, 1 national, and 5 international publications
- ❖ PROMISE Dagupan team invited to share their experiences in several national workshops and at least 5 international gatherings
- ❖ At least five visits conducted by local and international groups to Dagupan City.

Matrix B. Program Achievements from March 2006 to July 2009

Component	Inputs	Outputs/Benefits
1. <i>Hazard, Vulnerability and Risk Assessment</i>	<ul style="list-style-type: none"> ➤ Community Based Disaster Risk Management- Participatory Risk Assessment Training of Trainers (ToT) at the City and community levels ➤ Facilitators' Workshop for TWG Teams 	<ul style="list-style-type: none"> ⇒ TWG members capable of training communities of CBDRM and PRA ⇒ Eight low-lying delta communities with validated and updated HVRC Assessment ⇒ Three-dimensional (3D) geographic maps of eight <i>barangays</i> developed ⇒ HVRC assessment results readily available to community members
2. <i>Mitigation and Preparedness</i>	<ul style="list-style-type: none"> ➤ Actual Risk Assessment and Community Disaster Risk Reduction Planning ➤ Workshop and simulations on Early Warning and Evacuation Planning for the 8 pilot communities and the City ➤ "Writeshop" of EWS/ Community Disaster Risk Management Manual ➤ Clean-up activities in all communities ➤ Submission and screening of small-scale economic and structural mitigation proposals ➤ Workshop on use and maintenance of emergency equipment ➤ Training on Emergency Health, First Aid, and Community-Based Emergency Response ➤ Sharing with other <i>barangays</i> 	<ul style="list-style-type: none"> ⇒ BDCC reactivated and capable of conducting disaster risk reduction in all phases of disaster ⇒ Disaster Risk Reduction Plans in eight <i>barangays</i> developed and implemented based on HVRC assessment results; women, children, elderly, and persons with disability prioritized in the Evacuation Plan ⇒ Availability of necessary gears and equipment during emergencies (boats, bamboo raft, road guides flashlights, hard hats, raincoats, boots, ropes, megaphones, emergency lamps, indigenous warning devices i.e. <i>kanungkong</i>, two-way radios, camera, radio transistor, farm tractor, life vests, etc.) ⇒ Small-scale structural and economic mitigation projects implemented in eight <i>barangays</i> ⇒ Safer and better-constructed evacuation centers; each <i>barangay</i> capable of hosting evacuees for three days to one week ⇒ Emergency equipment maintained using proceeds from economic projects ⇒ Availability of funds for BDCC endeavors ⇒ Thirty (30) emergency responders capable to serve during emergency situations
3. <i>Advocacy for Public Awareness</i>	<ul style="list-style-type: none"> ➤ Networking with non-government and government agencies at the local and national levels ➤ Setting Up of the Disaster Information Management System (DIMS) ➤ Production of materials about hazard and risk, preparedness, mitigation, and emergency response ➤ Disaster Management Orientation for the Media 	<ul style="list-style-type: none"> ⇒ Institutionalized Celebration of Disaster Preparedness Month <ul style="list-style-type: none"> - Participation of schools, line agencies, civic organizations, and NGOs in the yearly Disaster Preparedness Month activities - Evacuation and earthquake drills participated in by over 55,000 students in public and private schools in the City - City-wide Academic Olympics related to disaster preparedness conducted yearly - Discussion of Disaster Risk Reduction concepts and efforts in local print, radio and TV companies ⇒ Distribution of calendars, bookmarks, t-shirts, and bags that promote disaster preparedness ⇒ Support and coverage of the media of disaster reduction efforts

Matrix B Continued...

Component	Inputs	Outputs/Benefits
<p>4. <i>Advocacy for Mainstreaming Risk Management in Urban Governance</i></p>	<ul style="list-style-type: none"> ➤ Nurturing of good relations with City officials ➤ Networking with non-government and government agencies at the local and national levels ➤ Preparation and participation in the Regional Course on Disaster Management and Governance ➤ Development of modules and audio-visual presentations 	<ul style="list-style-type: none"> ⇒ Emergency Operation Center (EOC) established by the City Government ⇒ Ratification of City Resolution No. 5469-2006 to observe July 16 of every year as Disaster Safety Day ⇒ Memorandum of Agreement (MOA) by all the mayors of Northern Luzon municipalities through the Region 1 Disaster Coordinating Council (RDCC) signed. ⇒ Sharing of different tools and strategies on Disaster Risk Reduction and Governance in different Asian countries (Vietnam, Bangladesh, Sri Lanka and Philippines) and institutions (UNIFEM, NDCC- OCD, University of the Philippines, UN Habitat, ADPC and others) ⇒ Readily-available materials for experience-sharing
<p>5. <i>Regional Networking and Information Dissemination</i></p>	<ul style="list-style-type: none"> ➤ Networking with non-government and government agencies at the local and national levels ➤ Hosting of field visit participated by PROMISE coordinators from different Asian countries ➤ USAID visits and study visits from different international delegations (e.g. CARE Bangladesh) ➤ Participation in the annual Working Group Meeting (WGM) ➤ Participation in ProVention Forum in Tanzania 	<ul style="list-style-type: none"> ⇒ Publication of DRM experiences at the local, national, international levels: <ul style="list-style-type: none"> - Center for Disaster Preparedness. 2007. <i>Mainstreaming community-based mitigation in city governance</i>. In Building Disaster Resilient Communities: Good Practices and Lessons Learned. Geneva: International Strategy for Disaster Reduction, pp. 46 to 48. - Iglesias, G. 2007. <i>Cooperation between local authority and communities: reducing flood disaster risk in Dagupan City, Philippines</i>. ADPC: Safer Cities, 16, pp. 1-8. - Luneta, M. & Molina, J. 20---. <i>Community preparedness against perennial flooding: the barangay as a building block</i>. In Building Resilient Communities: Good Practices in Disaster Risk Management in the Philippines. Quezon City: Oxfam Great Britain Philippines Programme, pp. 28-41. - Watsala, J. 2008. <i>Reducing vulnerabilities to climate change impact and strengthening hydro-meteorological disaster risk mitigation in secondary cities in Asia</i>. ADPC: Safer Cities, 25, pp 6-7. - PROMISE updates published in the Bangus City Journal, the official publication of the City Government

Matrix B Continued...

Component	Inputs	Outputs/Benefits
		<p>⇒ Good relations and resource-sharing established and maintained with:</p> <ul style="list-style-type: none"> - Volunteer Organizations/ Socio Civic Groups: Bantay Dagupan, Expanded Bantay Dagat (Sea Patrollers), Dagupan Jaycess, Philippine National Red Cross-Dagupan City Chapter, Rover Scouts, Girls Scouts, Education Cluster, DRRNet - Government Agencies: Agno River Flood Control Office, DepEd, Department of Interior and Local Government (DILG), Office of Civil defense-National Disaster Coordinating Council, PAGASA-Dagupan, Philippine National Police, PHIVOLCS, RDCC - Local Government Units: Neighboring municipalities in Pangasinan, Provincial Government of Pangasinan, City Governments of Baguio, Batangas, Makati and Marikina, League of Cities of the Philippines, Municipal Governments of Guagua and Minalin, Pampanga - NGOs: National Network for Avian Influenza Preparedness, TAO Pilipinas, Inc., Balay Rehabilitation Center, Inc., World Vision, Plan International, Philippine Rural Reconstruction Movement (PRRM), Plan International - International Agencies: HEEDS of Bangladesh, Kirk in Actie, Oxfam-Hongkong, PROMISE partners in Bangladesh, Pakistan, Sri Lanka and Vietnam, Souhardo Care-Bangladesh, ProVention Consortium, TEAR Fund of United Kingdom, United Nations Development Program (UNDP), United Nations International Children's Fund (UNICEF), - Private Entities: local radio and television networks, private schools

The foregoing outputs generated the following impact:

❖ **Reduced Vulnerability of the City During Hydro-Meteorological Events**

The destruction brought about by hydro-meteorological events has significantly lessened due to Program interventions. When typhoon Pepeng (international name: Parma) incessantly hit Northern Luzon for almost two weeks in October 2009, even the low-risk areas in the City and whole region were inundated. It was the worst flooding in Northern Luzon history with over 500 casualties and at least P7 billion-damage to properties. Still, Dagupan City had recorded no casualty. Because of the built-in disaster preparedness systems developed, the eight high-risk *barangays* immediately evacuated their residents using their EWS while the City Government concentrated on assisting the medium- and low-risk *barangays* reached by flood waters.

The lack of human fatality during the onslaught of Pepeng was a reflection of the preparedness of the City for major calamities. Despite being the catch basin of all the river systems upstream and with flood waters reaching even low-risk areas, no life was spared. Moreover, the *barangays* of the City could readily give concerned agencies the number of people in need of aid and other necessary data during relief operations. Because the City has been trained in disaster preparedness, disaster-related data are readily available.

❖ **International and Local Recognition**

The prompt response of the City Government and communities during calamities was acknowledged by the NDCC through its prestigious *Kalasag Award*, the recognition given yearly to organizations with effective disaster risk management mechanisms. In 2007, Dagupan City and Barangay Manguin bagged the Best Performing CDCC and Best Performing BDCC respectively for Region 1. CDP was also awarded Best Performing NGO in the region. In 2008, Manguin won the Best Performing BDCC in the region again. This year, the CDCC won the most coveted award, the Best Performing CDCC in the whole country.



The Mayor accepting the City's Kalasag Award

Dagupan City has indeed become a model community in the field of disaster risk reduction. Beyond the awards, more and more organizations conduct study tours in the area to learn from the City's experiences. At the same time, local and international publications have written about the success of the PROMISE Project.

Influencing/Critical Factors

Facilitating Factors

Several factors facilitated the generation of Program benefits and impact:

❖ Committed and Competent TWG Members



TWG members reviewing their next move

TWG members belong to the different Offices of the City Government. Hence, the tasks they did under PROMISE were additional work for them. Still, they contributed so much of their time and energy to realize the objectives of the Program. Some of them even integrated the tasks under PROMISE with the efforts of their Units to save on time and resources. Moreover, they easily absorbed and imbibed the concepts and principles of CBDRM such that they themselves were able to train and enable communities.

❖ Receptive Communities

The openness of communities and BDCC members to work with the City Government and CDP made it easier to transfer the necessary technology to enable them to prepare for and respond to disasters. At the same time, their insights and ideas led to the development of disaster risk reduction mechanisms appropriate to their needs and context. More importantly, their willingness to provide counterpart for the small-scale projects proved how committed they were to creating a safer environment for community members.



Communities validating the results of risk assessment

❖ Strong and Supportive Local Leaders



LGU Officials discussing how to evacuate people in high-risk areas

The political will of the City Mayor, City Government Offices, and Barangay Captains to seriously implement the Program was commendable. Despite the many concerns of the City, disaster risk reduction was prioritized. Two Mayors served the City while the Program was on-going, one in 2006 to 2007, while the current Mayor's term started in 2007. Both ensured that key people were present to work with CDP in all aspects of program implementation. At the same time, City counselors ratified the resolution for a Disaster Preparedness Day, thus ensuring that disaster preparedness is part of the City's culture.

The Mayor, along with the Barangay captains, city counselors, and other City officers, have become strong advocates of DRM. They themselves serve as resource speakers in local and international gatherings related to Disaster Risk Reduction.

❖ Support of Partners and Networks

The information and resources from government and private organizations augmented the limitations of the Program. Experts from these groups serve as resources speakers during training activities, others provided information, some promoted the Program through information dissemination, others gave material and financial support. At the same time, these partners provided opportunities for sharing of experiences and promotion of DRM in areas outside of the City.



The media was a key partner in raising public awareness on disaster preparedness

❖ Expertise and Flexibility of CDP

The expertise of CDP was a key factor in the process of institutional strengthening and capacity-building. Moreover, the adjustments made by the CDP Officer to adapt to the culture and changing schedule of the City Government and TWG members helped establish a smooth working relationship among all stakeholders.

Constraints and Areas for Improvement

❖ Limitations in Financial Resources

The momentum achieved during key activities could have been sustained even more had there been additional finances to cover follow-up efforts. Nonetheless, the City Government and CDP were able to adjust by expanding its network of supporters. For instance, the United Nations Development Program (UNDP) funded a training on Earthquake Vulnerability Reduction which was participated in by the City. The experience in one area was also disseminated and published through the support of Oxfam. Moreover, organizations conducting study tours in the City provided additional gadgets needed for emergency response. Also helpful were government agencies and private organizations that provided material and financial resources during the yearly conduct of the Disaster Preparedness Week/Month.

❖ Multiple Tasks of TWG Members

Because of the multiple tasks of the TWG members, program schedules were often postponed. Rescheduling the postponed activities took a lot of time as there were at least eight offices involved.

❖ Changing Political Leadership

The changing composition of the LGU and BDCCs when their term of office expires could possibly get in the way of sustaining the current gains of the Program. Newly elected mayor and *barangay* captains may be unfamiliar with DRM concepts and may not be supportive of DRM efforts. While mechanisms have been installed to ensure sustainability, the support of local executives help the smooth implementation of the disaster preparedness plan.

The BDCC may also need to develop a mechanism to ensure that at least one member familiar with DRM concepts and mechanisms is maintained when a new term starts. Another option is to institutional training activities on DRM for newly elected local government executives (Governors, Mayors, Barangay Captains).

❖ Need to Strengthen the EOC

The creation of EOC is a major step in furthering the efforts of the City for disaster preparedness and response. Nonetheless, the current personnel of the Office still need to enhance their knowledge and skills in DRM. Also, they need to focus on preparedness and mitigation efforts as well as emergency response.

Sustainability

The Program was initiated with the end in mind. Hence, key processes and local structures were installed/strengthened to ensure that the gains derived by the City and communities would still continue even after the Program phased out. Such mechanisms include: training and mentoring locals into DRM experts; establishing a strong partnership between the City Government and local communities; institutionalizing policies; strengthening local structures; and capacity building of communities. Moreover, the working relationship among the members of the Northern Luzon DRR Network has been strengthened to ensure that the other municipalities in the region would also practice DRR in their areas. The MOA signed by the members is also an indication that they are committed to a long-term collaboration. All these mechanisms seem enough to sustain the gains of the Program.

Still, the City Government could assess their capacity given their experience with typhoon Pepeng/Parma. The typhoon was a big test on how well it was prepared for disasters. The CDCC and BDCCs could identify their strengths and weaknesses; and come up with mechanisms to address the weaknesses. These mechanisms could be integrated and institutionalized in the DRR Manual for the City and barangays. The revised manual could then be distributed to guide the Offices and communities.

On the part of CDP, the lessons and experience derived by the Center from the experience in Dagupan City are already being utilized in its other projects and activities. The Dagupan City model is often discussed by CDP in training and workshop activities, publications, forums, and other venues. The city is also one of the Center's sites for study tours.

The PROMISE Project has a very strong potential for replication in other cities especially if the local government has the commitment and political will to work with communities and allocate the necessary human, financial, and material resources for the endeavor.

Summary and Recommendations

Highlights of PROMISE-Philippines

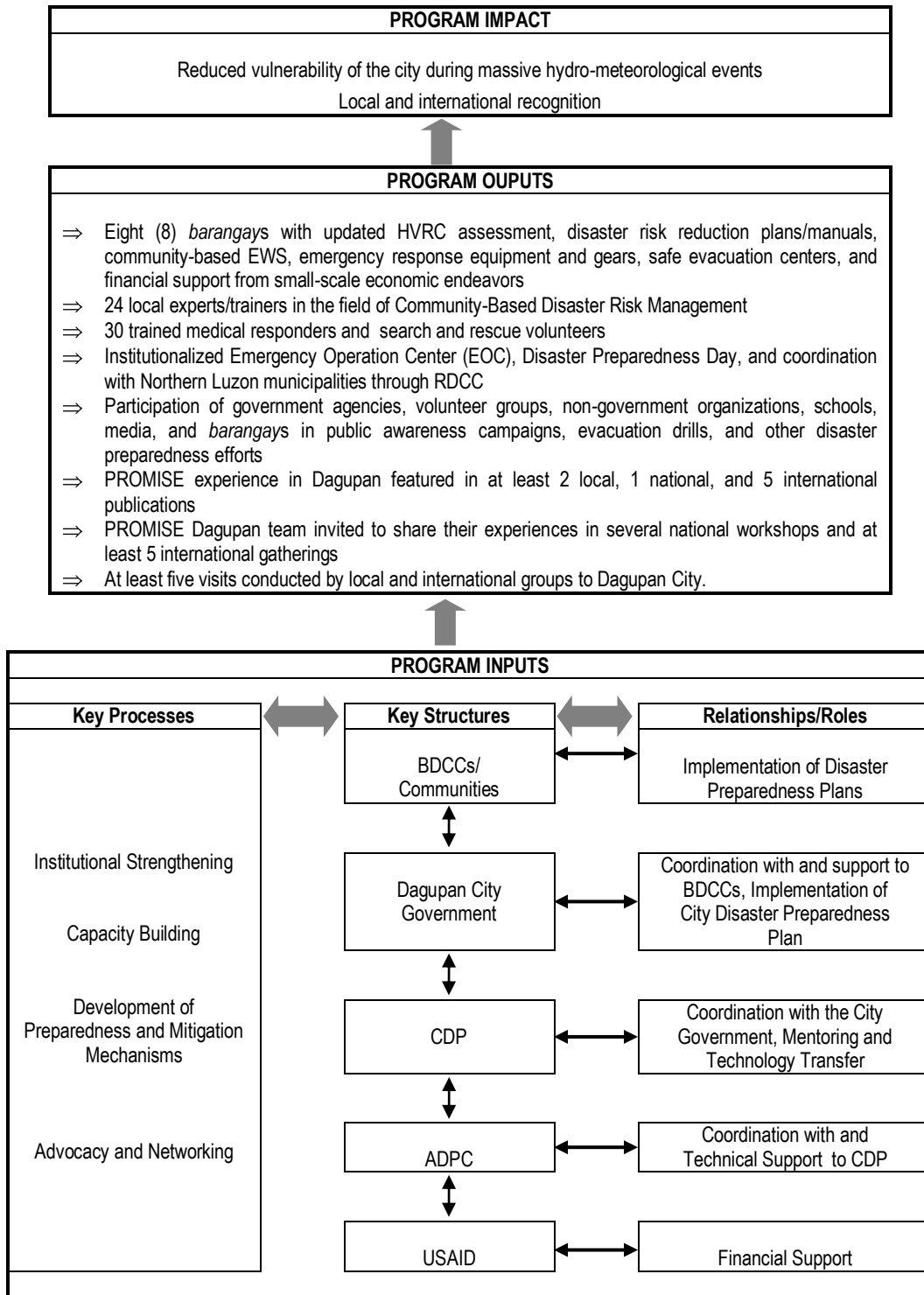
PROMISE was implemented in Dagupan City from March 2006 to July 2009 with the goal of *reducing the vulnerability of the city through enhanced preparedness and mitigation of hydro-meteorological disasters*. It was an inter-organizational collaboration among the City Government of Dagupan as local partner, CDP as implementing agency, ADPC as regional coordinating institution, and USAID as funding support arm.

The Program was implemented in eight pilot *barangays* in Dagupan: Bacayao Norte, Bacayao Sur, Lasip Chico, Lasip Grande, Manguin, Pogi Grande, Salisay, and Tebeng. These *barangays* were the most vulnerable to flooding. Through the Program, the Barangay Disaster Coordinating Council (BDCC) was strengthened in all eight areas through institutional strengthening, capacity building, development of appropriate mechanisms, and advocacy and networking. These processes enabled the eight *barangays* to conduct HVRC assessment, develop disaster risk reduction plans/manuals, install community-based EWS, procure emergency response equipment and gears, provide safer evacuation sites, and gain financial support from small-scale economic endeavors.

Aside from strengthening the eight *barangays*, the Program also produced 24 local experts/trainers in the field of Community-Based Disaster Risk Management, 30 medical responders and search and rescue volunteers. The City also developed mechanisms to institutionalize disaster preparedness through the establishment of the EOC, celebration of Disaster Preparedness Day, and signing of MOA with Northern Luzon municipalities through RDCC. All these efforts were supported by government agencies, volunteer groups, non-government organizations, schools, media, and *barangays*.

The outputs produced have indeed reduced the vulnerability of the city as it recorded no casualty even when northern Luzon was hit by the most destructive typhoon in history in October 2009. The resilience of the City during major disaster has earned the respect and recognition of local and international groups. Such benefits and impact are in line with the Program indicators identified before the program implementation.

Figure 2. Summary of Program Inputs, Outputs, and Impact



The factors that affected the production of outputs and generation of impact are summarized below:

Matrix C. Influencing/ Critical Factors

Facilitating Factors	Constraints/Areas for Improvement
⇒ Committed and competent TWG members	⇒ Limitations in resources
⇒ Receptive communities	⇒ Multiple tasks of TWG members
⇒ Strong and supportive LGU	⇒ Changing political leadership
⇒ Support of partners and network	⇒ Need to strengthen EOC
⇒ Expertise and flexibility of CDP	

In terms of sustainability, the Program has installed mechanisms to ensure the continuity of benefits even after phasing out of the City/communities. Still, the CDCC-TWG and BDCCs need to look into how the current system can be maintained given the changing political leadership and composition of the BDCCs. At the same time, it could revise and distribute its DRR Manual based on the experience with Typhoon Pepeng/Parma.

On the part of CDP, the Program has contributed in the enhancement of the Center's capability to engage in similar partnerships with other LGUs in the future.

Recommendations

For the City Government

1. Assess the experience with typhoon Pepeng/Parma and make the necessary revisions on the City DRR Manual. Distribute copies of the revised/standardized manual to Offices and communities.
2. Strengthen the EOC by enhancing the knowledge and skills of personnel in DRM and expanding the unit's focus on preparedness and mitigation efforts as well as emergency response.
3. Ensure that at least one incumbent member of the BDCC remains during administration change. Such would ensure that at least one member is familiar with the history and context of the disaster risk reduction mechanisms and can pass on the knowledge to the new ones.

4. Train newly elected City and Barangay officials on DRM.
5. Maintain the strong partnership established with the BDCCs and communities.
6. Expand networks for greater resource sharing.

For Program Replication

1. Institutionalize the structures and mechanisms for disaster risk reduction to ensure sustained efforts.
2. Involve community members in all aspects of the Program: assessment, planning, and actual implementation. Allow them to make decisions on and be in control of the disaster risk reduction mechanisms in their communities. Moreover, indigenous knowledge and technology should be utilized as these are often more appropriate to the context and culture of the communities.
3. Build networks and maintain good relations with them. They could help augment limitations in resources and strengthen local efforts. Partners and networks can share information, expertise, technology, finances, and materials to enhance disaster preparedness and response.
4. Ensure the participation of the most vulnerable sectors: women, children, elderly, differently-abled.
5. Identify advocates from the LGU and communities who will promote the Program and take on responsibilities.
6. Even if the people are equipped with the necessary knowledge and skills, they would still need gadgets and equipment for effective emergency response.
7. Test the ability of the communities to effectively implement the EWS by conducting and evaluating regular drills and simulations.
8. Advocate for the institutionalization of DRM training for newly elected local government officials (through the National Disaster Coordinating Council).

ANNEXES

- A HVRC Assessment Report
- B Campaign Materials
- C Publications

[link](#)

[link](#)

[Safer Cities issues 16 and 20](#)
[External publications](#)

