

Informality and Resilience: Quezon City Solutions Basket

Background

Quezon City is the largest city in Metro Manila in terms of population size which is 3,177,435 (2015 census). It covers a land area of 161.126 sq. km. which comprises almost one-fourth of the expanse of Metro Manila. The City is located near the centre of Metro Manila and is organized into six congressional districts. It hosts a number of major commercial establishments in the metropolis and is home to the country's major broadcasting networks. Quezon City also houses a number of national government offices and major academic institutions in the Philippines. According to the data provided by the Housing Community Development and Resettlement Department (HCDRD) of the Local Government of Quezon City, the City has an estimated Informal Settlement Family (ISF) population of 195,875.

The Informal Settlements

Asprer Informal Settlement is located in Asprer Area, Quezon City, on land owned by the government, with a total area of 3 hectares situated near the Payatas Sanitary Landfill (SLF) that caters to all solid waste

disposal of Quezon City. A total population of 491 ISFs reside here and the community is divided into 32 blocks each of which has a designated block leader. A creek traverses the community area and empties into Marikina River. The land occupied was awarded to the settlers by the government after a Memorandum of Agreement was signed and a City Resolution was passed. Community members are gradually repaying the government for their land. A community organization comprised of elected officials and board members, administers the entire management of the community.

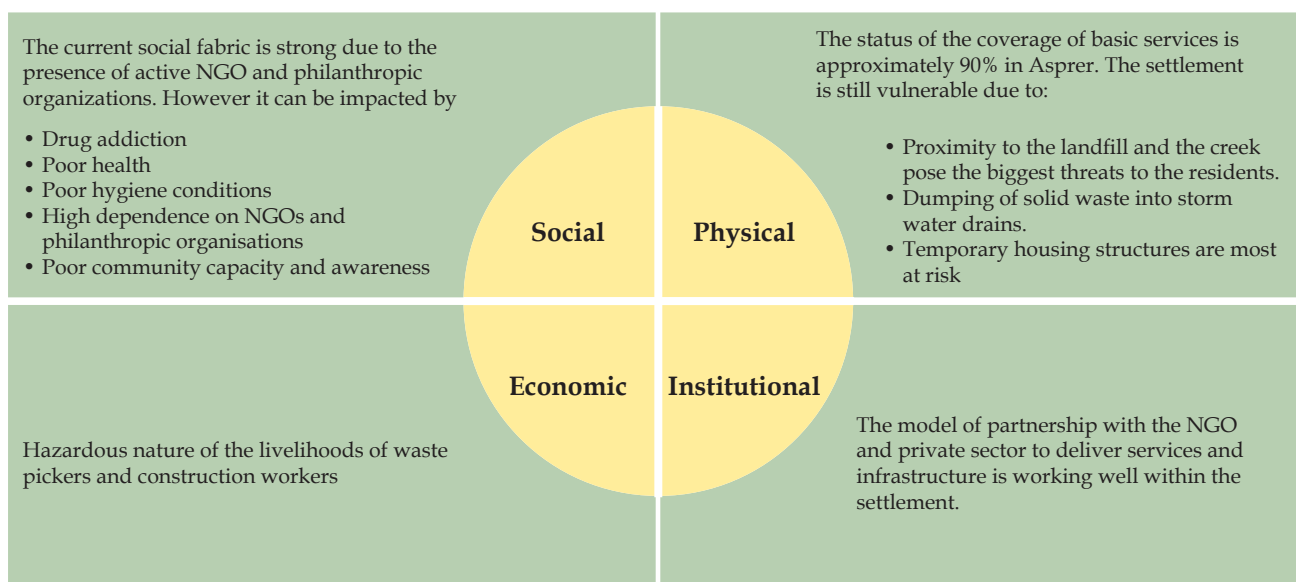
Suggested Interventions

In order to address the issues identified in the problem statement, a solutions basket was developed. Solutions have been put forward sector wise (Physical, Economic, Social and Governance- Table 1), keeping in line with the thread as identified in the problem statement.

a. Methodology

A combination of different methods was employed to identify appropriate solutions that aptly address the

Problem Statement



The greatest threat to the community living in Asprer is their location. The close proximity to a sanitary landfill and a creek that is prone to flooding makes them more vulnerable when viewed through a climate lens. While their social fabric and access to physical services is strong, it is largely due to the local NGO and philanthropic organizations working there. With the eventual discontinuity of the operations of these organisations in the area, the sustainability of basic services and resources will be threatened. Furthermore, the poor awareness and capacity of the community with regard to impacts of climate change and disasters will affect ability to respond to climate shocks.

problems faced by informal settlement dwellers in the context of building climate resilience.

Workshops

'Reality check' workshops were organized as part of a regional conference- Resilient Cities Asia Pacific 2016 (RCAP) in the month of March at Melaka, Malaysia to gather external inputs. In these workshops, inputs were sourced from a panel of experts who were presented with the problems faced by informal settlers of the selected cities. Panel experts comprised organizations like ARKOJAM, YUVA, GIZ (through the Nexus programme); city mayors and administrators from cities across Asia-Pacific and subject matter specialists. The workshops helped to identify a bigger basket of possible solutions, which would help address the issues faced by informal settlements.

Literature review

To supplement the deliberations from the workshops, an exhaustive literature review was conducted. Case studies from across the world were analysed for their feasibility of implementation within the context of the selected city and problems. Solutions that fit within the four sectors of the problem were included as part of the city specific solutions basket.

Discussions with the City and the Community

Discussions were carried out with the city municipal officials and their feedback was sourced. The primary stakeholder- the community- was approached and consulted with regards to the prioritized solutions. Relevant inclusions and modifications were made to the interventions as per the results of these discussions.

Resilience and Feasibility assessment

The identified climate resilience actions were then evaluated in terms of their resilience (redundancy, flexibility / robustness, responsiveness / re-organisation, capacity to learn), feasibility (technical, political, cost), and benefits of the action (short term/medium term/long term). On the basis of these criteria their applicability for the city has been identified.

b. Solutions baskets

The solutions basket thus developed for Quezon city is presented in Table 1. Solutions are categorized by Sectors- Physical, Economic, Social and Governance. Any government funds (schemes, programmes, missions) that link with the solution, the reactions of city officials and community representatives are mentioned. Finally, the association of solutions with other sectors is suggested to qualify the magnitude of impact that it might have.



Table 1: Solutions basket for Quezon City

Solution intervention with details	Any city scheme/ funds addressing the same	City reactions	Community reactions
Physical (interlinks with Economic, Social and Governance Sectors)			
Low cost socialized on-site housing: Three-storey structures constructed using Habitat's Concrete Interlocking Block (CIB) system, a volunteer-friendly method of construction*.	Bistekville Program	As this intervention is not in the scope of the project, these reactions were not solicited	
Declogging of drains and regular clean-up services	Funds exist under the Environment Protection and Waste Management Department (EPWMD)	City government already does this to some extent however they are dependent on communication from the community	The community works with the local NGO and government on this presently. However they require an inbuilt mechanism to sustain the same.
River Rehabilitation <ul style="list-style-type: none"> ■ Dredging of accumulated silt and solid waste ■ Construction of catchment pipes to reduce household discharges ■ Installation of anaerobic baffle reactor for on-site wastewater treatment ■ Phytoremediation ■ Installation of active island reactors to restore adequate oxygen levels in the water 	Pasig River Rehabilitation Commission	Costly for the City and technically challenging.	Community is not fully aware about the importance of the same.
Community based organization of volunteers for sustainable river rehabilitation	N/A	N/A	NGO has initiated this with the help of the community.
Solid waste management: Community-based Materials Recovery Facility (MRF) at the barangay level	N/A	The government is attempting to implement this at the Barangay level.	Barangays are not complying with the initiative
Social (interlinks with Physical, Economic and Governance Sectors)			
Counselling and rehabilitation: Alcoholism and drug abuse*	The City Anti-Drug Abuse Council (CADAC) provides counselling and rehabilitation for alleged drug users with particular attention given to minors.	As this intervention is not in the scope of the project, these reactions were not solicited	
Community-based health insurance system*	Funds may be available under Department of Health	As this intervention is not in the scope of the project, these reactions were not solicited	

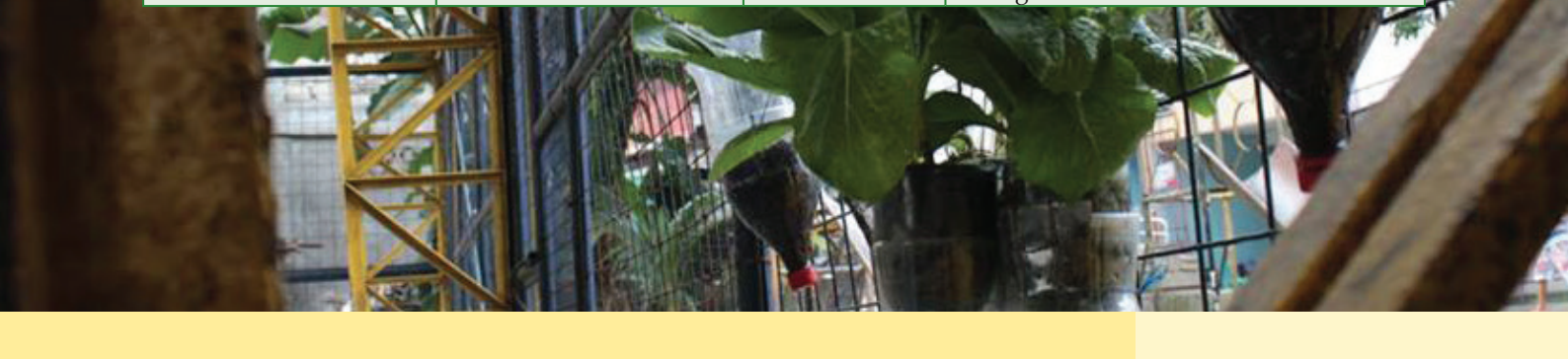
Solution intervention with details	Any city scheme/ funds addressing the same	City reactions	Community reactions
Awareness generation and capacity building programmes on sustaining and improving basic services and climate change	Funds exist under the Environment Protection and Waste Management Department (EPWMD)	N/A	The community has generally poor awareness and regard to the effects and impacts of climate change as well as their potential risks, exposure and vulnerabilities because these are not directly seen and felt by them at the present.
Community-based disaster risk reduction and management: Orientation and Hazard Mapping	Funds may be available under National Disaster Risk Reduction and Management Council	N/A	Currently being piloted by the NGO FCJ. Some uptake by the community who if properly sensitized on the importance of the activity, get involved
Economic (interlinks with Physical, Social and Governance Sectors)			
Alternative livelihood trainings such as Beauty Care/Cosmetology, Commercial Cooking, Computer Hardware Servicing, Computer Programming, Dressmaking and tailoring, Housekeeping, Food and Beverages Services	Technical Educational and Skills Development Authority (TESDA)	Through TESDA the government is trying to support alternate livelihood trainings to some degree; however limitations in accessing the job market have been identified.	Active participation, however as employment is not guaranteed they revert back to the informal sector
Urban Farming: Transforming vacant lots productive urban farms or organic gardens	The Joy of Urban Farming Program	The Joy of Urban Farming, a flagship program of Vice Mayor Joy Belmonte that aims to transform vacant lots into productive and garbage-free areas suitable for urban farming or organic gardening. The program has been adopted in a number of barangays and schools within Quezon City	The community leadership has plans to explore opportunities to establish a community urban farm however they have limited knowledge and network to do so.
Governance (interlinks with Physical, Economic and Social Sectors)			
Population monitoring and house tagging*	Housing Community Development and Resettlement Department (HCDRD)	As this intervention is not in the scope of the project, these reactions were not solicited	

* Outside the scope of the project

Table 2 comprises of the short-listed solutions after discussions with the city and community. Each intervention that is short-listed is detailed with its location, number, cost, conditions necessary to implement, the responsibility of management and monitoring.

Table 2: Prioritised Interventions for Quezon City

Suggested intervention	Unit cost (PHP)	Preconditions	Monitoring mechanism
Urban Farming: Alternative Livelihood Training and Piloting of Demo Farm	<ul style="list-style-type: none"> ■ Suitability assessment of a site to be allocated for community-managed urban farm/garden: PHP 100,000 (Tentative) ■ Alternative livelihood training and piloting of a demo farm: PHP 218,000 (Tentative) 	Availability of vacant lots	<p>Documentation and evaluation report on the implementation of the pilot-tested urban farm as well as on the assessment of knowledge gained and added value of the initiative to the general welfare of the community.</p> <p>A group composed of community members will be formed by the community leadership. The group who will undertake the trainings for the establishment and management of the community-based urban farm will primarily be responsible for the overall management of the urban farm once turned over. The same group is also expected to supervise knowledge and skills transfer to other members of the community in the envisioned expansion of the urban farm in the future as well as in replicating the methods at the household level.</p>
Awareness generation and Workshop on Climate Change and Disaster Risk Reduction Management	<ul style="list-style-type: none"> ■ Development of Climate Change Adaptation Management (CCAM)/Disaster Risk Reduction Management (DRRM) training module, production of IEC materials: PHP 100,000.00 ■ Training programme: PHP 16,000.00 	N/A	Documentation and evaluation report on the knowledge gained and added value of the workshop delivered particularly in the development of community-based DRRM plan
Capacity Building Training for Community Leadership and Management: Sustaining and Improving Basic Services	PHP 20,900	N/A	<p>Documentation and evaluation report on the assessment of knowledge gained and added value of the initiative to the general welfare of the community.</p> <p>Managing committee who will primarily be responsible for the overall management of the urban farm</p>



The short-listed interventions were then assessed by their resilience capacity in terms of their redundancy, flexibility, responsiveness and ability to increase access to information. The prioritised climate resilience interventions that had a medium or high score were then assessed for feasibility (technical, financial and political) and their impact (short, medium or long term).

Table 3: Resilience Prioritization and Feasibility Assessment of Short-listed Interventions

Suggested intervention	Overall Resilience	Overall Feasibility	Impact**
Urban Farming: Alternative Livelihood Training and Piloting of Demo Farm	Medium	High	Short Term
Awareness Raising and Workshop on Climate Change and Disaster Risk Reduction Management	High	High	Short Term
Capacity Building Training for Community Leadership and Management: Sustaining and Improving Basic Services	Medium	High	Short Term

**Refers to duration of action

Of the short-listed interventions that were assessed for resilience and feasibility, the Urban Farming intervention was selected as it would provide a hard and soft solution option that would generate an alternate livelihood or income supplementing option which could provide the community with greater economic stability during unpredictable climate events, coupled with an option for usage of organic waste for composting and thus clearing the disposal sites and preventing drains from clogging. This intervention was endorsed by the Local government and the community members.

Benefits of implementation of urban farming intervention in Quezon

