RESEARCH ARTICLE

A new approach to urban community resilience: lessons from building city coalitions and applying system thinking for community resilience

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ABSTRACT

This article aims to document the lessons learned and key ingredients to success in setting up and maintaining a city-level coalition and in applying system thinking for community resilience in Southeast Asia. This innovative approach has been implemented by the Red Cross National Society of Indonesia and of Vanuatu with technical support from the Global Disaster Preparedness Center of the American Red Cross and funding support from the United States Agency for International Development (USAID). The article attempts to showcase an answer to the question of how community-based humanitarian organizations such as the International Federation of Red Cross Red Crescent Societies can respond to the complexities of urban environments and contribute to urban resilience.

Although the concept of resilience has a long history of use in engineering and psychology, adapting it to the disaster and urban contexts is relatively new (Meerow, 2016). The Arup Group (2014, p. 3) defines city resilience as "the capacity of cities to survive, adapt, and thrive no matter what kinds of chronic stresses or acute shocks they experience." This definition aligns well with the definition of community resilience used by the International Federation of Red Cross Red Crescent Societies (IFRC, 2018), which emphasizes the importance of enabling communities not only just to survive disasters and shocks but to thrive and take further action to protect their resources. However, identifying what is urban and what makes communities resilient is not so straightforward in a complex urban environment. The traditional concept of city as a physical space within rural surroundings has also eroded and been replaced by much more complex and interconnected human settlements (e.g., mega-cities, metropolitan regions; Sanderson, 2019). As discussed below, repeated engagement with a larger, more diverse group of stakeholders and partners over longer periods is required to build relationships and ensure the sustainability of interventions (International Institute for Environment and Development [IIED], 2017).

The Increase in Disaster and Climate Resilience Risks Urban Communities Face

Throughout history, cities have attracted people seeking opportunities and better living conditions. Today, around 54% of the world's population live in cities, and urban populations are projected to reach 66% of the world's population by 2050 (United Nations Department of Economic and Social Affairs [UN DESA], 2018). This rapid urban growth has forced poor, marginalized, and underserved communities to settle in areas prone to multiple risks stemming from lack of access to basic services and exclusion from local municipal support whose budgets often falls short of meeting the growing population's needs (IIED, 2020). The COVID-19 pandemic has also affected the poor and marginalized urban communities hardest. In addition to suffering from lack of access to health care and safe and adequate water and sanitation services, poor and underserved urban communities have faced unprecedented pressure from the widespread lockdown measures required for addressing COVID-19 (United Nations Human Settlement Programme [UN-Habitat], 2021). Young workers, women, the self-employed, and low/medium-skilled workers have lost their jobs and live-

lihoods, which has further exacerbated urban poverty and risk (Organisation for Economic Co-operation and Development [OECD], 2021).

The IFRC World Disaster Report (2020) highlights the compounding impact of climate change on poverty, displacement, and health. More frequent and extreme weather and climate events due to climate change have hit cities the hardest. Many of the world's largest cities are in coastal areas highly prone to floods, sea level rise, and other hazards due to the expansion of impermeable surfaces, increased groundwater extraction, and destruction of the natural environment (Global Facility for Disaster Reduction and Recovery [GFDRR], 2016). People living in urban areas, particularly in the densest parts of the city with the fewest greenspaces, are among the most vulnerable when heatwaves occur (IFRC, 2019).

Urban settings are not new to humanitarian networks or the Red Cross Red Crescent network. The 192 RCRC National Societies have thousands of branches and millions of volunteers in cities, respond to urban disasters daily, and significantly contribute to reconstruction recovery efforts. As the disaster landscape is rapidly urbanizing, many national societies have explored new ways of working in urban areas to develop relevant, sustainable, and more importantly scalable solutions that will work within the complexities of urban environments and systems (Global Disaster Preparedness Center [GDPC], 2021).

Urban Environmental Complexities Require New Forms of Humanitarian Action

Cities are complex systems with many formal and informal interrelated, coexistent networks, diverse communities, and a large range of actors making decisions and taking actions. Cities also have a multitude of communities of identity that often overlap (e.g., people can be part from different networks or from different religious, professional, or familial networks) in cities (Active Learning Network for Accountability and Performance [ALNAP], 2016. The complexity of urban environments requires repeated engagement with a larger, more diverse group of stakeholders and partners over longer periods of time in order to build relationships and ensure the sustainability of interventions (IIED, 2017). Cities are also a source for future solutions, and people living in cities are themselves agents of change with significant resources, skills, and capacities to bring about resilience efforts in their own communities as well as throughout their cities and districts.

Globally, many coalitions and networks of cities have emerged in response to the growing urgency in addressing these issues. The most prominent of these are the Resilience Cities Network, Global Parliament of Mayors, Local Governments for Sustainability (ICLEI), and United Cities and Local Governments (UCLG). However, city-level coalition building led by civic organizations is a relatively new concept.

Recognizing the need for new ways of working in urban environments, the Global Disaster Preparedness Center (GDPC), the American Red Cross, and the Indonesian Red Cross (Palang Merah Indonesia, PMI), the Vanuatu Red Cross Society (VRCS), and the Myanmar Red Cross Society (MRCS) have developed and applied a new approach and set of tools between 2015-2020 (GDPC, 2017). The urban community resilience toolkit includes the city-wide resilience assessment tool and guidance for building coalitions for urban resilience and for designing solutions for urban community resilience.

These new tools provide a fresh perspective for national societies and urban stakeholders to look at urban resilience and understand the intricacies and interdependencies of systems as well as their impacts on communities. These tools also provide an approach for linking city-wide planning with community-level engagement and action. The key things learned from the project can be summarized as follows:

- Co-leading the coalition building process with local government and creating a shared vision among stakeholders at an early stage creates ownership and scalability.

- Applying system thinking leads to broader integrated solutions beyond the community level in which diverse stakeholders contribute at different levels with complementary solutions.

- Co-design processes with diverse stakeholders lead to developing locally appropriate sustainable solutions others can replicate.

The project was implemented in four cities: Semarang and Ternate in Indonesia, Luganville in Vanuatu, and partially in Mawlamyine in Myanmar due to the recent political developments in the country. Brief information about each city is given below.

Semarang is the capital of the province of Central Java in Indonesia and has a population of 1.6 million. Semarang is prone to tidal flooding, erosion, land subsidence, and rising sea levels in the lower-elevations of the city. At the same time, development in the hilly upper-elevations of Semarang have resulted in a depleted tree canopy in the upstream area, severely increasing vulnerability to landslides, water shortages, and floods.

Ternate is the provincial capital of North Maluku in Indonesia and has a population of 220,000. Ternate is prone to earthquakes and volcanic eruptions due to its location along the Ring of Fire in the Pacific. The city is home to Mount Gamalama, an active volcano that last erupted in 2014.

Luganville is the capital city of Vanuatu and has a population of 16,000. It has a history of major disasters causing destruction to infrastructures and interrupting services such as water, electricity, health, telecommunication, and transportation.

Mawlamyine is a mid-size city in the southern part of Myanmar and has a population of 258,000. Mawlamyine is highly influenced by the monsoon season and is exposed to flooding and sea-surges, given the city's proximity to the river and sea.

Working collaboratively with a wide range of partners and facilitating a coalition were new experiences for all national societies in the three countries. Challenges initially occurred regarding reaching out to different urban stakeholders, mobilizing stakeholders, and organizing local coalitions as well as keeping them together (Table 1). As a principle, the project encouraged the national societies to leverage existing systems and platforms and to create a new coalition only as needed. The study has been conducted to apprehend the lessons learned (GDPC, 2019) from the project found that overall, the process led to strengthened relationships at city level, community-level action, and a renewed commitment to working together.

Table 1

List of the Coalition Members in Each City

Semarang	Ternate	Luganville	Mawlamyine
PMI Semarang city chapter (co-lead)	PMI Ternate city chapter (co-lead)	VRCS, Luganville city chapter (co-lead)	MRCS, Mawlamyine city chapter (co-lead)
Semarang City Government (co-lead)	Mayor's Office (Lead)	Provincial Disaster Committee,	Mawlamyine City Government (co-lead)
Mayor's Office	Law and Human Rights Department	Luganville Municipality	Ministry of Natural Resource and Environment
Disaster Management Department	Disaster Management Department	National Disaster Management Office	Fire Services
Public Housing Department	Public Housing Department	Lands Department Sanma	Police
Agriculture Department	Agriculture Department	Education Sanma	General Administration Department
Education department	Education department	Public Works Department Sanma	Mawlamyine DRR Working Group
Environment Department	Environment Department	Environment Department Sanma	Forest Department
Women's Empowerment and Child Protection Department	Women's Empowerment and Child Protection Department	Save The Children	Department of Disaster Management
Social Welfare Department	Social Welfare Department	Tourism Department	Ministry of Social Welfare
Department of Meteorology and Climatology	Marine and Fishery Department	Ports & Harbor Administration	Health Department
Public Works Department	Public Works Department	Vanuatu Family Health Association	Education Department
	Department of Meteorology and Climatology	Disability Promotional & Advocacy	
	Department of Volcanology	Vanuatu Police Force, Northern Command	Note: The list represents the informal coalition members in Mawlamyine
	Khairun University	World Vision	
	Muhammadiyah University of North Maluku	National Bank of Vanuatu	
		ANZ Bank	
		Bred Bank Vanuatu	

This experience showed us that key ingredients to success exist in setting up and maintaining a city-level coalition, as summarized below:

- Co-leadership by the local government and the local RCRC branch helped build trust and cohesion among stakeholders who may have different mandates, priorities, and operational modalities.

- A simple but well-functioning governance structure formed the basis for visibility, accountability, and effective co-ordination of the process and actions different coalition members should take.

- Creating a shared vision in the early stages and applying system thinking led to broader solutions beyond the community level where different stakeholders contribute complementary solutions at various levels.

- Coalitions are very effective advocacy tools.

Leading Coalitions with Trust and Building Cohesion

Building urban community resilience is seen by many as a positive, flexible approach for managing complex, inter-connected, and unpredictable threats such as extreme weather, shifting climate, aging infrastructure, economic instability, and equity concerns (IIED, 2020). Our experience revealed that, while the local RCRC branches provided much needed connections with the community and local stakeholders, co-leadership with the local governments proved to be critical for ensuring trust and cohesion among local communities and stakeholders.

In all the project cities, mayoral leadership proved to be a critical factor in maintaining the coalitions. In Semarang and Ternate, for example, the mayor issued a letter of decree that tasked departments with being involved in the coalition. This level of support gave the two projects legitimacy and helped get stakeholders involved. In Ternate, active mayoral involvement was very influential in ensuring agency leaders participated in regular meetings.

Through the process, the coalition members developed stronger networks for their everyday work. Stakeholders gained understanding of what other coalition members do, and this helped overcome "sectoral egos" – the tendency to think that each sector can address the issues on their own. At the community level, the involvement of community-based organizations within the coalition gave communities a stronger voice with government stakeholders. The networks and relationships created through the coalition have continued after the project ended through informal groups and on social media platforms.

Table 2 shows a comparison model of the different coalitions developed as part of IFRC's (2015) activities supporting the One Billion Coalitions for Resilience. The study outlines the following best practices for establishing national and local coalitions:

- Design a range of coalition models appropriate for the national and local levels.

- Formalize informal collaborations.

- Align with government priorities to ensure endorsement and avoid duplication.

- Provide initial seed funding to assist coalitions in launching their operations.

- Share an executive summary of the coalition with potential partners and ask them to endorse the strategy and consider contributing resources.

Table 2

Coalition Types and Characteristics

Coalition	Global reach (# of countries)[1]	Local ownership[2]	Activities[3]				
			Risk awareness	Galvanizing local action	Partnering	Resource mobilization	Advocacy
Global Road Safety Partnership	44	Yes	Yes	Yes	Yes	Yes	Yes
Global Water and Sanitation Initiative	80	Yes	No	No	Yes	Yes	No
Kenyans for Kenya Initiative	1	No	Yes	No	Yes	Yes	No
At the Water's Edge	1	Yes	Yes	Yes	Yes	No	Yes
Red Cross 143	1	Yes	Yes	Yes	No	No	No
United States Home Fire Preparedness Campaign	1	Yes	Yes	Yes	Yes	No	No
New Zealand Red Cross Recovery Program	1	No	No	Yes	No	Yes	No
Roll Back Malaria	47	No	No	No	Yes	Yes	Yes
2030 WRG	9	No	Yes	No	Yes	No	Yes
GAIN	29	No	Yes	No	Yes	Yes	Yes
Grow Africa	12	No	No	No	Yes	Yes	No
Project Last Mile	3	No	No	No	Yes	Yes	No

Key: ▨ Areas that are aligned with the One Billion Coalition   IFRC participates in coalitions in **bold**

The study also highlights the following common success factors among the reviewed coalitions:

▪ Co-creation ➔ Including local people in coalitions. Local community members and organizations are engaged in the decision-making process and/or receive training.

▪ Leadership ➔ Strengthening local capacity. National and local governments are included in national- and local-level coalitions.

▪ Diversity of entry points and solutions ➔ Recruiting volunteers. National Society volunteers span a broad range of sectors and professions. Engaging local institutions. Local level partners are responsible for project implementation.

▪ Relevance for all communities ➔ Implementing projects across the world. Coalitions tend to address broad issues that affect people regardless of their differences (e.g., road safety).

▪ Connectedness and consolidation ➔ Supporting existing initiatives. Coalitions tend to receive external funding or generate new funding to strengthen existing initiatives.

Simple, Well-functioning Governance Structure

The national societies found the level of progress and the amount of support from the coalition members to depend on the awareness and experience those stakeholders have in collaborative work. For example, the city of Semarang, being part of the Rockefeller 100 Resilient Cities initiative, had already gone through a similar process of coalition- and resilience-building work. Stakeholders in Semarang required much less support, and the program had a bigger impact compared to other project cities. In Luganville, on the other hand, coalition members took longer to start working together, and the process was interrupted a few times due to the disasters that occurred during the project. The biggest challenge in Mawlamyine was maintaining the continuity of the coalition, as members who were committed to the process were transferred to other geographical locations or moved on to other responsibilities.

Collaborative multi-stakeholder initiatives can often run the risk of being pushed or led by one organization. The coalitions in Semarang and Ternate found practical ways to promote a concept of shared ownership and promote collaboration. In Ternate, the Regional Disaster Management Agency (Badan Penanggulangan Beneana Daerah) carried out the secretariat role with support from the Indonesian Red Cross (PMI). In Semarang, PMI had the key coordinating role, but each meeting was hosted

by a different organization with up to 40 organizations attending monthly meetings. Each government department also had a focal person whose responsibility was to be part of the coalition, which helped formalize their participation.

Recommendations for ensuring a functioning city coalition include:

- *Be patient.* Each stakeholder works at a different speed, and one needs to know when to push and when to move more slowly.

- *Be a participant, not just a facilitator.* Have some tangible examples of the work in order to give other stakeholders confidence in your abilities.

- *Encourage involvement.* Encourage the involvement energetic, capable individuals who will devote the time to representing their organizations in a coalition.

- *Share roles and responsibilities.* Share roles and responsibilities in the coalition (e.g., host meetings and take the lead on actions and projects).

- *Ensure consultation among coalition members.* This is done as the basis for any policy solutions or compromises.

- *Establish procedures for coalition operation.* Identify a structure for decision-making and accountability, designate a spokesperson for media and public relations as well as for interactions with elected officials and others.

Applying System Thinking in Risk and Vulnerability Analyses

Cities are complex systems with interacting and interdependent parts that together form an identifiable whole. These include but are not limited to water, food, electricity, communications, transportation, finance, and governance. Building urban community resilience requires these critical systems to keep running even during disasters, crises, and stresses. Providing reliable, equitable access to critical systems increases resilience. It also may require extending systems to areas where they aren't available, changing laws about who can access a system, or changing the social norms around who is allowed to use the system. System thinking works in situations where neither the problems nor the solutions are fully known; it avoids overly-simplified solutions or responses and allows for ongoing learning and questioning.

Figure 1. Ternate city coalition members with a rain harvesting unit installed through the project.

One of the benefits from applying system thinking into the coalition members' collective resilience analysis and action planning study in the project cities was that the results from the collective resilience assessment were incorporated into city planning processes. This was a major achievement, as community-centric and climate change considerations identified in the assessments informed the respective local governments' city-level plans. For example, in Luganville, the Municipal Council used the results to develop their standard operating procedures (SOPs) for disasters, which was the critical issue the assessment report had raised; the Luganville Municipality Council endorsed the SOPs as the document to use as a referential guide during times of disasters.

Coalitions Are Very Effective Advocacy Tools

A coalition can be a very effective advocacy tool. After all, there is strength in numbers. Some advantages that may result from forming or joining a coalition to advance or strengthen your cause are as follows:

- *Strength in numbers:* Coalitions project a united front, especially when voicing support for a controversial issue.

- *Visibility:* Joining a coalition can help add prestige to one's efforts. This is especially true if at least one partner is a high-profile, well-known organization.

- *Contacts:* One's coalition partner(s) may have contact with important or influential people and networks that can further the cause.

- *Intelligence:* One's partner(s) may have better or more experienced intelligence-gathering capabilities because of their contacts

- *Expertise:* If one lacks expertise on a novel issue, coalition members may already have been working on that issue for years. This can save much time and effort.

- *Sharing the work:* Having coalition partners can relieve demands on staff.

- *Mutual support:* Life can be less lonely when knowing others involved with the same issue.

- *Future support:* After working on an issue that may have little or nothing to do with the mission, one can expect coalition members to support an issue that is deemed important.

Conclusion

Communities worldwide have greater opportunities for growth and connectedness than ever before; yet the number of people exposed to hazards, shocks, and stresses is rapidly increasing, especially in coastal cities, and this has led to increased risk and vulnerability. Numerous community organizations do significant humanitarian and development works in vulnerable neighborhoods, and this helps build social capital and local capacity. However, they are unable to address the full range of needs related to resilience and are also frequently unable to relay unaddressed concerns – including many related to disaster risks – to either the corresponding municipal or national authorities or other potential partners. By working together in a coalition, community organizations can combine their efforts together with local governments, the business community, academic and media organizations, and other partners to increase their collective impact and plant the seeds for sustainability and resilience within communities.

This experience has demonstrated the Red Cross Red Crescent National Societies to be well positioned to convene partners around resilience and enable a greater level of multi-stakeholder problem-solving and local investment in community and household resilience. The national societies are also auxiliaries to their governments, which can also be interpreted and applied at the local level. This provides a unique opportunity to connect the most vulnerable and often invisible people and communities with city authorities, planners, and decision makers while still maintaining the fundamental principles of neutrality and impartiality. In urban areas, working closely with city authorities and municipalities is particularly important as they have direct influence over the well-being of the communities and the sustainability of cities through their roles in urban planning and delivery of basic services, transportation, energy supplies, and solid waste management.

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