# Community-Based Disaster Risk Management in the Philippines: Achievements and Challenges of the *Purok* System

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The *purok* system in the Philippines is promoted as a voluntary self-organization at the sub-village level which strengthens community resilience to natural hazards. In 2011, the system received the UN Sasakawa Award and gained prominence among the practitioner community. Based on a qualitative study in the municipality of San Francisco (Cebu province) from December 2014 to March 2015, the article elaborates on the achievements and challenges of the *purok* system. Striking merits encompass efficient and effective information dissemination and evacuation measurements between all levels of political administration that stem from the system's remarkable enforcement of human and social capital. This is underpinned by a clear determination of roles and responsibility that is subsumed under the concept of accountability. However, the *purok* system faces internal challenges of maintenance and implies profound conceptual ambiguities regarding the notion of voluntarism and capabilities that favor clientelism. Nevertheless, the *purok* system clearly distinguishes itself from conventional community-based disaster risk management practices and implies potentials that are highly beneficial for strengthening resilience in disaster prone areas.

**Keywords:** Community-Based Disaster Risk Management; *Purok* System; Resilience; Social Capital; Voluntarism


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## INTRODUCTION

Due to its geographic location as well as its socio-economic conditions, the Philippines is one of the most disaster-prone countries in the world and ranks third out of 171 countries in the World Risk Report 2016 (Welle & Birkmann, 2016, p. 49). Consequently, efficient strategies at national, regional, and local level that cope with, resist, and enable the recovery from such events are constantly in demand. This article presents an effort to respond to this demand by means of illuminating community-based disaster risk management (CBDRM) in the Philippines with special reference to the *purok* system[1].

The article is based on a two-pillar problem statement. First, prevalent CBDRM approaches imply certain difficulties that require further explanation and proposals for solution. Second, the *purok* system might imply incentives for the

1 *Purok* is a subdivision of a barangay and thus signifies a sub-village in the Philippines. *Barangay* is the smallest administrative unit in the Philippines and refers to districts or villages (Allen, 2003, p. 7, 39). It serves as the administrative arm of the government and functions as part of the delivery system of goods and services at the community level (Guillermo & Win, 2005, p. 60).

sought-after alternative approach but lacks systematically gathered data. Hence, the main purpose of this research was to capture tacit knowledge about the system and make it accessible to scientists as well as practitioners who draw on such incentives in order to overcome shortcomings within CBDRM.

The *purok* system is promoted as an indigenous system of self-organization at the sub-village level. It proved its relevance particularly when typhoon Haiyan, locally named Yolanda, made landfall on 8 November 2013 as the strongest typhoon ever recorded. At that time, the prompt evacuation of the small island Tulang Diyot, located in the municipality of San Francisco (Cebu province), saved the entire island population as the aftermath revealed that all 500 houses were totally destroyed (Mc Elroy, 2013). Such efficient and effective evacuation merits pertain to strong community participation measures and a salient disaster risk reduction (DRR) knowledge transfer which is underpinned by a close linkage between *purok*, *barangay*, and municipality, thus highly increasing the resilience[2] of San Francisco. In 2011, the system received the UN Sasakawa Award[3] and gained prominence among the practitioner community since local government units (LGUs)[4] and NGOs have been striving to duplicate the system in other regional areas. However, opposed to scientifically ascertained data, data about the *purok* system pertain to short online articles (Mc Elroy, 2013; Ranada, 2014) and lack an in depth examination.

Overall, community-based approaches to DRR that build on existing knowledge, resources, coping, and adaptive strategies are highly appreciated by communities, people's organizations, NGOs, and government agencies for strengthening coping and adaptive capacities at the local community level (Allen, 2006, p. 83; Victoria, 2003, p. 1). However, they contain particular shortcomings as they are based in communities but are run and implemented by numerous external actors, leading to difficulties and dependencies with regard to their realization. Problems, for instance, show the CBDRM project's neglect of social heterogeneity within communities which often leads to the neglect of those community members that may already find themselves in marginalized positions. Moreover, participation processes can appear challenging to communities due to an attitude stemming from the history of oppression or dole-out policies. Especially in rural areas in the Philippines, the government has left the people incapable of making decisions. Moreover, years of solely being receivers of relief goods bring about a form of lethargy and as a consequence a lack of the personal initiative needed in order to implement CBDRM. Referring to that, Alfredo Arquillano Jr. who conceptualized and still maintains the *purok* system in San Francisco noted:

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2 Although definitions of resilience vary in numerous ways, most definitions describe it as a capacity for successful adaptation in the face of disturbance, stress, or adversity and the ability to resist damage (Norris, Stevens, Pfefferbaum, Eyche, & Pfefferbaum., 2008, p. 129).

3 The United Nations Sasakawa Award for Disaster Reduction recognizes excellence in innovation, outreach, and collaboration to improve resilience of nations and communities. It is awarded to an individual or an institution for taking active efforts in reducing disaster risk in their communities.

4 A common definition of local government refers to it as "state administration at a level closest to the population within its area of jurisdiction" (O'Brien, Bhatt, Saunders, Gaillard, & Wisner, 2012, p. 629). It unveils the diversity and complexity of local governments around the globe. Within this article, it refers to the government of the municipality.

> When I started the *purok* system, I started only one community. You know why? Because of the negative attitude of people. . . . You know for them it is a waste of time and money and effort (A. Arquillano Jr., 16 December 2014).

Consequently, 'real' community participation appears as a concept that is easier to promote than to implement (Delica-Willison & Gaillard, 2012, p. 721). Besides, a project-based approach within CBDRM accompanied by short-term funding leads to dissolutions of community-based teams after projects have been completed.

Within the frame of a two-month fieldtrip to the municipality of San Francisco from December 2014 to March 2015, the article examines achievements and challenges of the *purok* system regarding DRR. Methods include semi-structured individual and group interviews as well as participant observation, explicitly referred to the attendance of monthly and annual *purok* meetings, weekly *purok* coordinator meetings, and DRR trainings.

The article introduces the development and organizational structure of the *purok* system as well as its achievements and challenges by means of an illumination of the notion of human and social capital – concepts which adequately capture the striking merits of the *purok* system. It concludes with the discussion of the systems' relevance as an alternative to conventional CBDRM and as well as an outlook for further research.

## DEVELOPMENT AND STRUCTURE OF THE *PUROK* SYSTEM

In 2004, the *purok* system was conceptualized by Alfredo Arquillano Jr., the former mayor of San Francisco who describes the *purok* system as the smallest unit of governance that is located at the sub-village level, basically making up 50 to 100 households. The administrative division into *purok*s exists all over the Philippines. However, its systemized use for CBDRM started in San Francisco and is still unique to this municipality. Within two years, Arquillano Jr. and the municipal *purok* coordination team established about 120 *purok*s comprising several *purok*s in each barangay. The *purok* system is delineated as "the smaller version of a barangay" (Municipal Disaster Risk Reduction Management Office, 6 January 2015) as it includes an arrangement of committees similar to the organizational structure of the barangay. The following organigram gives an example of the average organizational structure (see Figure 1).

At the beginning of its establishment, it aimed to solve problems of solid waste management and took on additional tasks over time, such as planting vegetable gardens and starting livelihood projects until it developed its own DRR strategies. This development took place in response to the implementation of the new disaster management law in 2010 (National Disaster Risk Reduction & Management Council Philippines, 2016) that officially adopted CBDRM as a model to engage communities in DRR (Fernandez, Uy, & Shaw, 2012, p. 209; Shaw, 2009, p. 138). It was Alfredo Arquillano Jr. who encouraged the communities to build *purok* halls (see Figure 2) for the purpose of monthly meetings. Such meetings gather at least one representative of each household as well as the responsible district coordinators and *purok* chairmen (appointed counselor of the barangay) who are required to attend and act as a bridge between communities and LGUs. If a *purok* member is prevented from joining the

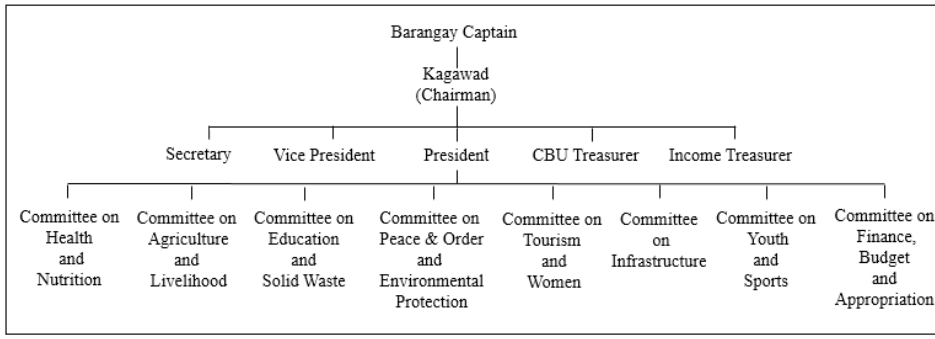


Figure 1: Organizational chart of a Purok. (own illustration).


Figure 2. Left: Light material purok hall of purok Bagakay (San Isidro, South District).
Right: Concrete purok hall of purok Cantuwak (Union, North District).
(photos by Angelina Matthies).

monthly meeting for any reason, s/he can either send a representative or pay a penalty ranging from PHP 20 to 50 (EUR 0.38 to 0.94). During such meetings, the *purok* members are informed and briefed about municipal projects, evacuation measures, and adaptation mechanisms.

*Pintakasi*[5] is assumed as the heart and reason for portraying the *purok* system as a system of self-organization based on voluntarism. Within the scope of the *purok* system, it entails a voluntary activity which takes place on a regular basis and aims to clean surroundings through, for example, garbage collection or the maintenance of a community garden. Similar to the meeting policy, non-participating members must pay a penalty. Combined with other membership fees, such penalties form the capital build up system (CBU) that serves as a deposit for micro-financing procedures. Opposed to its promotion as a post disaster fund (United Nations Office for Disaster Risk Reduction, 2012), the field research revealed that the CBU takes the role of

5 *Pintakasi* is referred to as *bayanihan* in Tagalog. Originally, it is related to the practice of mutual help stemming from the common tradition among neighbours in Philippine towns and villages who together move an entire house to a new place (Devuyst, 2001, pp. 118-119).

financial help for general emergencies like illness or overdue electric bills. However, the low livelihood situation of *purok* members often prevents them from repayment.

## THE ACHIEVEMENT OF SOCIAL COHESION

Within the scope of the *purok* system and its role within DRR, the idea of social capital proves to be of high importance and acts as a useful tool for illustrating its achievements and challenges. Putnam (1995) defines social capital as "features of social life – network, norms and trust – that enable participants to act together more effectively to pursue shared objectives" (pp. 664-665). Moreover, he distinguishes between "bonding" and "bridging" social capital and describes the first as "reinforcing the identity of a homogenous group" whereas the latter encompasses "socializing across diverse social cleavages" (Putnam, 2000, pp. 22-23). Furthermore, Szreter and Woolcock (2004) refer to a third kind of social capital namely "linking capital" (p. 655) that they define as relationships aiming to bridge individuals across institutional boundaries. Especially linking and bonding capital proved to be of utmost significance for evacuation procedures.

Due to a well-functioning social network based on particular assigned roles within the *purok*, *barangay*, and municipality, everybody within the *purok* is accountable for a certain task, thereby improving efficiency of evacuation processes. Since *purok* communities are strongly linked to the *barangay* level via *kagawads* and to the municipality via *purok* coordinators, they experience a profound enhancement in their social network which can be seen as reinforcement of linking capital. This especially comes into force in cases of information dissemination ahead of natural hazards. The MDRRMO staff constantly monitors weather forecasts, initiates emergency meetings in case of potential hazards, and informs the *barangay* captains about evacuation plans. They subsequently inform the *puroks*. Furthermore, the *purok* coordinators ensure that each *purok* receives the information by virtue of their additional visits. Moreover, it is perceived that the *purok* system reinforces a sense of unity among the *purok* members which was noted by several interviewees during the conversation about the advantages of the *purok* system (Chairman of Health in Sungkayao, 10 December 2014). Similar to the *barangay* structure, *purok* communities are organized through a DRR committee including assigned persons who ensure that every household is informed of an upcoming hazard. More precisely, such a committee requires that there be *purok* members especially assigned to take care of vulnerable community members. In cases of natural hazards, *purok* communities gather and wait for the transportation to evacuation centers. If some households, that experience a higher risk due to houses with light building materials, are affected by an upcoming hazard, other households who inhabit more resilient concrete houses accommodate them. Such forms of community cohesion can be identified as bonding social capital according to Putnam's definition.

Overall, the strengthening of human capital mentioned above that happens through imparting DRR knowledge and skills, paves the way for effective evacuation procedures, ensures its maintenance due to knowledge refreshments, and aims at long-term resiliency and autonomy due to the encouragement of self-sufficiency.

## CHALLENGES FOR THE SYSTEM'S MAINTENANCE

Concerning the maintenance of the system, challenges mainly appear internally (i.e., within the community). One of the main obstacles to successful performance of the system is the inactivity of members. Their inactivity is due to multiple motives that I classified into three types. The first relates to the upper social stratum comprising individuals with a high level of education who often perform time-consuming jobs that overlap with the monthly meetings. The second reason behind inactivity is based on attitudes of certain citizens who do not believe in or do not want to invest in the *purok* system. This is moreover underpinned by an attitude of lethargy given that inactive members are often deemed as the first to demand relief goods during calamities (DRR advocator head, 16 February 2015). The third type of motive behind inactivity refers to political opponents or political rivals. These community members are opposed to the *purok* system due to their political position against government representatives and strive to discourage people from the system by initiating 'black propaganda'. Furthermore, the system faces profound conceptual ambiguities with regard to the notion of voluntarism. It became clear in the course of the research that voluntarism is a somehow misdirecting term since active participation of each citizen in the *purok* system is prescribed by the Municipal Ordinance No. 2007-045. Even more, the legal regulation holds that inactive members who do not pay the penalty are not allowed to receive a *purok* clearance. A missing *purok* clearance restricts community members from obtaining a *barangay* clearance which in turn is required in order to assert the rights of a Philippine citizen and thus signifies a symbolic form of leverage. Overall, the research showed that voluntarism in the case of the *purok* system is embedded in power relations and restricted by the instrumental way in which it is realized given that voluntary participation is bound to law. *Pintakasi* is perceived as a voluntary activity since nobody is overtly forced to participate but abstinence clearly brings about severe disadvantages. The system's power of instrumentality also becomes evident during elections through clientelistic structures. *Purok* groupings highly alleviate vote-buying processes since a whole group of votes can be acquired, for instance, by visiting only one *purok.* Moreover, missing political commitment by particular *purok* communities may result in the redirection of relief goods.

## THE *PUROK* SYSTEM AS AN ALTERNATIVE TO CONVENTIONAL CBDRM?

The gathered data shows ambiguous findings that identify the *purok* system as a strikingly efficient system with regard to DRR, but at the same time, highlight fundamental challenges within processes of maintenance and volunteering. On the one hand, the *purok* system triggers the enforcement of social and human capital which promotes a process of resilience and empowerment. The improvement of resilience takes place at every administrative level and comes especially into force by means of efficient and effective information dissemination and evacuation procedures which are based on the close linkage between *purok*, *barangay*, and municipality. Moreover, the PDRRMC plays a crucial role during evacuation situations as it distributes tasks within the *purok*s and ensures accelerated procedures. It clearly distinguishes itself from conventional CBDRM since it involves a fundamental and sustainable restruc-

turing of communities that counteracts the project-based approach that often implies a structural dissolution after CBDRM projects are completed. The involvement of vulnerable people is one of the *purok* system's priorities. The determination of roles and responsibilities before, during, and after natural hazards ensures that especially vulnerable people (pregnant women, disabled, older persons, or people living in light material houses) are protected. Moreover, the self-determined process of election and internal policies increase decision-making power and levels of participation.

On the other hand, the gathered data lead to disenchantments based on various challenges. As opposed to the expected autonomous indigenous method of self-organization that is promoted in the available literature, the *purok* system is initiated and maintained by the local government. Considering the statutory anchoring, penalty or clearance policies, the system is embedded in a top-down modus operandi. This somehow employs *purok* communities as executive authorities and increases the system's susceptibility to political instrumentalization. Despite its remarkable achievements, the present research warns against treating the *purok* system as a panacea to disaster risk management problems as it is always accompanied by institutional authority and embedded in prevalent power relations that embrace difficulties in its effective realization. The *purok* system is only capable of realizing its full potential if *barangay* and municipality incorporate sufficient capacity to train the PDRRMC. In addition, the municipality as well as the *barangay* require a well-functioning structure including sufficient staff and a clear allocation of tasks in order to distribute relevant information and provide essential help within the evacuation process.

Since main problems such as the practice of a 'forced voluntarism' pertain to its municipal anchoring, it will be highly conducive to conduct further comparative research in *puroks* of adjacent municipalities like Liloan (Cebu Mainland) that are maintained without statutory anchoring (Training Officer at the PDRRMC, 18 February 2015). This will especially be interesting in terms of maintenance and motivation of the community. As suggested by a non-active *purok* member, it might be contributive to bring about a far more participatory approach during meetings, for instance, by allowing members to define visions, goals, and content themselves.

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## ABOUT THE AUTHOR

Angelina Matthies received an MA in Southeast Asian Studies from the University of Passau, Germany, with a focus on conflicts, disasters, and nation-building processes. This article is an outcome of her MA thesis. It is dedicated to the world-wide victims of natural hazards and the warm-hearted citizens of San Francisco (Cebu province).

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