



# Humanitarian Assistance to Decreasing Vulnerability in Flood-Prone Village: A Case Study in Boeung Leas Village, Steung Sen District, Kampong Thom Province, Cambodia

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**Abstract** Flood is the most severe disaster in Cambodia because the country locates in the flood plain region. To tackle this national challenge, the Cambodian government has been developing policies and programs on disaster risk reduction. For supporting disaster-affected populations, various organizations provide humanitarian assistance before and after the disaster. However, due to country's vulnerabilities, a number of Cambodians still suffer from floods, such as food insecurity and health problems. To decrease its vulnerabilities, community should build community resilience through build back better based on their past experiences, while receiving humanitarian assistance to enhance their capitals. As women are among the most vulnerable victims in post-flood situation, the study tried to understand existing major community capitals as well as gaps between humanitarian assistance and needs of vulnerable women. Totally 53 people consist from 33 female villagers and 20 key informants mixture of male and female were selected as respondents for Focal Group Discussions (FGDs) and Key Informants Interviews (KIIs) through purposive and snowball sampling approaches based on their status and experiences. The study concluded that humanitarian actors better to focus more on activities to enhance insufficient physical, natural, and financial capitals of the village for decreasing existing vulnerabilities including poverty, weak governance, and insufficient local structure for disaster risk reduction by applying Build Back Better approach, which build resilience of vulnerable areas based on past experiences and impacts.

**Keywords** community resilience, vulnerability, humanitarian assistance, build back better

## INTRODUCTION

Cambodia has a tropical monsoon climate and is known as one of the most disaster-prone countries in the world. United Nations Development Programme (UNDP) (2012) reported that 53% of 2,050 disaster-related deaths between 1996 and 2011 were caused by flood in Cambodia. Women are

among the most vulnerable groups without their participation opportunities to share their experiences and needs in decision-making process of authorities. Even though the Cambodian government has policies and programs on disaster risk reduction, villages still have vulnerabilities to hamper community resilience. Vulnerability normally generated due to insufficient capacity for preparation, response, adaptation, resistance, and recovery from hazard impact (Winsner et al., 2004). As Human Policy Group (2006) specified that disasters are caused by human vulnerabilities rather than hazard per se, decreasing vulnerability is a key to reduce disaster impacts. According to Sendai Framework (2015), identification of vulnerability is essential for proper humanitarian assistance. It is because that vulnerability will be decreased when the community improve their capacity to cope with disasters because these two factors are interrelated (Cannon et al., n.d.).

Humanitarian assistance aims at lifesaving and damage alleviation during and after disasters, as well as strengthening preparedness for future hazard (Development Initiatives, n.d.). Ideal humanitarian assistances decrease vulnerability while promoting community resilience and capacity to mitigate impacts of future hazard. From this point, Build Back Better is one of appropriate approach for humanitarian assistance because it is an process to improve resilience and capacity of the disaster-affected communities, while reducing their vulnerability based on their experiences (Mannakkara and Wilkinson, 2015). Schilderman (2010) also specified that the experience with owner-driven reconstruction has been more positive than with donor-driven reconstruction.

Therefore, this paper attempts to analyze existing community's five-capital as well as gaps between emergency response and needs of vulnerable women to decrease vulnerability in Boeung Leas village.

## MATERIALS AND METHODS

### Study Site

Study site is the Boeung Leas village, which is the one of four villages in Ou Kantor commune in Steung Sen district in Kampong Thom province, Cambodia (Fig 1). The village has 130.89 hectares of land with 88 households with population of 354 including 182 females. Main income resources of the residents are fishery, rice production and harvesting naturally grown morning glory (*Ipomoea aquatica*) because the village has big lake in the southern part of village, which stream from the Tonle Sap Lake. Due to its location in low terrain near Steung Sen River and Tonle Sap Lake, the village is the most vulnerable village to regular flood among four neighboring villages. Especially southern part of the village suffers from severe flood impact annually. Chronic impact of severe floods and droughts in whole year make the villagers poor. In 2015, 33% of households in the village recognized as poor and received the recognition paper for the poor by provincial government.



**Fig. 1** Map of flood affected households and Boeung Leas village in Kampong Thom province

## **Data Collection and Analysis**

By aiming at understanding existing major community capitals as well as gaps between emergency response and needs of vulnerable women to decrease vulnerabilities in village, the study applied focus group discussions (FGDs) and key informant interviews (KIIs). The study collected data from total 53 samples consist from 33 female villagers, nine members of the Disaster Management Committee in the commune, and 11 key informants who involved in the humanitarian assistance. All samples were purposively selected applying snowball sampling approaches based on their status and experiences. Align with recommendation of Dworkin (2012) for 25-30 participants for in-depth interviews, 33 women which covers 18.13% of female villagers were selected for three FGDs. Men were intentionally excluded to avoid interruption and dominant on answers. Besides, a female and eight male members of the Disaster Management Committee were also invited for another FGDs in order to understand vulnerability and common emergency response in the post-flood situation in the village. Addition to that, KIIs were conducted to purposively selected experts who involved in the emergency response, such as local NGO, the Cambodian Red Cross, and District Health Center.

Collected data summarized and analyzed based on the five-capital asset pentagon of the Sustainable Livelihood Framework (SLF) (DFID, 1999). By setting the five-capital pentagon - human, social, physical, natural, and financial capital- in the key, the framework clarifying mechanisms of vulnerability, shocks, and transforming process. The SLF distinctly emphasizes improving capital assets to reduce vulnerability and enhance disaster resilience (Burton, 2012).

## **RESULTS AND DISCUSSION**

### **General Information and Conditions**

Although the villagers suffer from flood annually, after 2000, severe flood damaged the villagers in 2000, 2001, 2011, and 2013. Especially the Southern part of the village is vulnerable to flood due to its location along or in paddy field (Fig 2 left). Interviewees shared their experience that water level drastically increase to reach the house floor and occasionally cause water runoff to the house with the raised-floor style. It causes villagers in flood-prone areas to evacuate to higher road and stay in temporary tent for a while (Fig 2 right).

Villagers have similar flood-induced impacts in the post-flood situation, such as food insecurity, health problem, financial shortage, lack of accessibility, and loss of human lives and livestock. Due to lack of portable water, people reluctantly drink flood water, even though it may cause diarrhea and other health issues. Children generally suffer from diarrhea and accidental drown due to unsafe and high-level water. Many villagers also critically suffer from income shortage without accessibility to the big lake southern part of the village as well as Steung Sen River, where people gain profit from morning glory and fish sales.



**Fig. 2 Shelter in flood-prone areas along paddy field (left) and higher road to evacuate (right)**

## **Humanitarian Actors and their Roles**

The study identified four main key humanitarian actors that provide assistances to the Boeung Leas village. These are local government including the Commune Disaster Management Committee, district health care institution, local NGO, the Cambodian Red Cross.

In cooperation with local NGO, local government of Ou Kantor commune established Disaster Management Committee that consist from representatives of four villages based on the national disaster risk reduction (DRR) policy in 2011. The committee consists from five female and 12 male members who were nominated based on their status, such as commune chief, village chiefs, senior villagers, and school director and teachers. The main task of the committee is to identify needs of the poor for humanitarian assistance and coordinate with humanitarian agencies and provincial government. Networking effort successfully receive a project to improve community roads by Ministry of Rural Development and Asian Development Bank (ADB).

Local authority also collaborates with district health care institution to enhance accessibility of the poor to medical services by disseminating “the recognition paper for the poor”, which initiated by Ministry of Planning and Ministry of Interior. This certificate aims to improve accessibility of the poor for social services including exemption of medical services.

On the other hand, local NGO named Help Old Ages and Miserable People Organization (HOM) also closely work with poor communities since 2000. With financial support from ActionAid and Oxfam, HOM works for food security and livelihood, school education, gender, natural resource management, DRR, Climate Change Adaptation (CCA), water, sanitation and hygiene (WASH) and sexual harassment. HOM also supported local government to establish the disaster management committee through workshop on hazard map and action plan development. Reflecting their limited budget for providing humanitarian assistances, they supported villagers to form a village saving groups for pooling money for emergency use. In addition, HOM also contributed to the establishment of an early warning information system in cooperation with the International Cocoa Organization (ICCO).

The other actor is the Cambodian Red Cross (CRC), which works for community resilience, clean water and shelters, microfinance, security, and community-based health development program since its establishment on 1994. The organization provided humanitarian assistances for more than 20,000 flood-affected families in Kampong Thom province by 2011. CRC normally provides assistances based on the request of local authority and selected CRC volunteers in the village. Both relief recipients and assistances are decided by local authority and volunteers based on specific selection criteria including poverty level and family structure.

## **Capitals and Vulnerabilities of the Boeung Leas Village**

Based on the five-capital or asset pentagon of the SLF, this section summarizes existing capitals and vulnerabilities of the Boeung Leas village. First, the research revealed that the villagers have skills and basic knowledge on various topics, such as WASH and disaster risk reduction through workshops of humanitarian actors. However, physical capability of villagers, mostly women who take care both the elderlies and children, are incapable of having different livelihood measures except production and selling of morning glory, rice, and fishing. Second, the village has appropriate social capital because there are existing disaster management groups in village and commune level (Fig 3 left). Not only local authorities and disaster management groups, but also community residents have network with humanitarian agencies directly and indirectly through local authorities and CRC volunteers. Third, the village has physical capital including water gauge system (Fig 3 right), irrigation canals, radio emergency information system, and some boats as community’s common property. However, the research also exposed that families does not have transportation means such as bicycle and boats that people can use in the flooded condition to access markets, health facilities and school. These physical capitals are what women eager to receive as humanitarian assistance because they can continuously use in the flooded condition for access health services, income generation, and food purchase. Pao Pisey temple is also one of physical capital because displaced people are allowed to stay at their 5 buildings and use 4 toilet

facilities until flood water drain. The temple also provides stock of foods such as rice and canned fish to displaced people. Fourth, natural capital of the Boeung Leas village is limited because the village regularly suffer from flood and have challenges on acquiring safe drinking water and food resources. Besides, most of interviewees of the study stated that they have limited sources for livelihood (rice production and naturally grown morning glory harvesting as well as fishery) due to their educational background. Although the village has paddy fields, these are owned by the rich and not allocated for the vulnerable families to harvest agricultural crops. Fifth, financial capital of the village and household level is limited because local authority does not have enough finance to provide facilities that requested by dwellers, such as community toilet and boats. That is why residents collect savings and request provincial government to provide toilets. When we consider about individual level, the most vulnerable families who live along or in the paddy field mentioned that financial shortage is the key factor why they continuously stay in the flood-prone areas. They do not have money to move, do not know where to move, and do not know what to do for livelihood in other areas.



**Fig. 3 FGDs with Disaster Management Committee (left) and water gauge system (right)**

According to Kafle (2017), South Asian countries have following seven major vulnerability factors; (1) high population density, (2) weak governance, (3) climate change, (4) high rate of urbanization, (5) ineffective DRR structure, (6) poverty due to high unemployment of women and youth, and (7) population increase and natural resource degradation. The research also identified some of these causes in the Boeung Leas village. For example, majority of households in the village face poverty and most of male adults migrate to other cities/ countries for earning more income. Due to limited amount and frequency of remittance, adult female responsible to earn income and take care family members simultaneously. Although people recognize vulnerability of the living area, they helplessly stay in the same area due to their financial shortage. People also specified that they cannot prepare anything without financial surplus, even though they receive lectures on disaster preparedness. For the community level, local authorities and village leader also suffer from financial shortage and does not have adequate amount of budget to invest for disaster risk reduction. Therefore, commune strongly depend on financial support of National Disaster Committee. Another example is weak governance and ineffective local DRR structure. Inappropriate decision-making of commune council chief and paddy field owners deteriorate the flood situation because they delay water release from paddy field. Although residents suffer from high-level water and water runoff in their houses, the commune council chief does not release water until receiving request from landowners because flood water make paddy field fertile. It was also revealed that early warning information dissemination of the disaster management group is inadequate, and people obtain information more from television and radio, and direct information sharing in the local authority. Besides, most of decision-making on recipient selection and assistance components were decided by local authorities and specific volunteers without needs assessment and any participation of the vulnerable households. It accumulated frustration and doubt about corruption of local authorities to injustice selection of receivers.

## **Gaps between Humanitarian Assistance and Needs**

The study identified four main gaps between humanitarian assistance and needs of vulnerable women to decrease vulnerability in Boeung Leas village.

First gap was inconsistent humanitarian assistance with prior needs of people. Women eager to receive long-term aids, such as boat, bicycle, fishing net and other materials that people can utilize for income generation and enhance their accessibility to facilities including school, hospital, market. However, focus of humanitarian actors in post-flood situation is prevention of hunger for few days, and that is why they normally distribute short-term aids, such as 25 kilogram of rice, canned fish, noodle, fish sauce. Sometimes they also distribute blue tarpaulin to reinforce damaged roof. This inconsistency of aids happens due to lack of needs assessment before decision-making on humanitarian assistance consist of financial and human resource shortage of humanitarian actors, even though De la Torre et al. (2012) stated that accurate needs assessment is crucial for achieving maximizing the benefit of distributing relief goods.

Second gap was distribution approach. Villagers expects equal distribution of humanitarian assistance among flood-affected households immediately after the occurrence of flood. But it is difficult for humanitarian actors because of financial and human resource shortage. Unequal distribution generally caused jealousy and doubt for local authority among villagers who could not receive humanitarian assistance.

Third gap was different priority among commune council chief, paddy field owners, and flood-affected people. It is clear from the findings that prolonged water release of paddy field that affect houses was decided by commune council chief in order to fertile paddy soil. In other words, the local authority set their priority to benefits the rich rather than the safety of the flood-affected families. In addition, villagers hesitate to claim commune council chief directly because they afraid criticism of local authority and the rich.

The last gap was ineffective recognition of the poor with “the recognition paper for the poor”. The purpose of this paper is to improve accessibility of the poor for medical and other social services. However, some medical facilities reject the poor to exempt their payment, or sometimes request recommendation letter from community leaders. Ineffective recognition of the poor and limited financial resources for transportation keep people away from medical services.

## **CONCLUSION**

According to the results and discussion done in this study, it is identified that Boeung Leas village is vulnerable to flood and annually suffer from flood-induced issues, such as food insecurity and health problem. The village has adequate human and social capitals specifically knowledge on DRR, network, the disaster management group in the village or the commune. By contrast, both the village and individual households have space for improvement on physical, natural, and financial capitals because these shortages induce food insecurity, limited accessibility and income generation in post-flood situation. Besides, the village has common vulnerability causes similar to other South Asian countries, specifically on poverty, weak governance, and insufficient local structure on disaster risk reduction.

The study also identified main gaps between humanitarian assistance and needs of vulnerable women to decrease vulnerability in Boeung Leas village. First, there are inconsistent humanitarian aids with prior needs of people due to lack of needs assessment and dependency on limited local authority and villagers. Second, financial and human resource shortages of humanitarian actors limit equal distribution of assistances to flood-affected people, even though villagers expect equal distribution among them. Unequal distribution and limited humanitarian assistance distribution created jealousy and doubt of villagers on local authority. Third, there are gap between priority of commune management chief, paddy field owners, and vulnerable women. Although they could help flood-affected households by release water from paddy field, authorities prioritize benefit for paddy owners to fertile paddy soil. The study also identified the cases that ineffective recognition

of the poor and limited financial resources for transportation keep people away from medical services.

For improving resilience of the Boeung Leas village for future flood, attention should be paid for Build Back Better, which is the process to improve community's resilience and capacity, while reducing their vulnerability simultaneously. Specifically, the study recommends humanitarian actors to focus not only on short-term assistances for few days, but also enhancement of local governance and local systems on disaster risk reduction including participatory decision-making system for pre- and post-flood affected condition. It is because that reflection of past experience and challenges contributes to create evidence-based disaster risk reduction and management structures in the village. Poverty reduction through creating alternative livelihood options is also vital components to improve community resilience.

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