

# KNOWLEDGE BRIEF

PARR

Pan Asia  
Risk Reduction  
Fellowship Program

## Exploring the Existing School-Community Network and Enabling Environment for Enhancing Community Resilience to Disaster

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### INTRODUCTION

Schools have the potential to play a role in building community resilience to disasters through their mandate for education and knowledge sharing, as well as their broad stakeholder networks (Oktari et al., 2015).

Oktari et al. (2015) carried out a survey of 634 teachers and students in 19 schools in Banda Aceh, to evaluate the school-based disaster preparedness program (known as Sekolah Siaga Bencana [SSB] in Bahasa Indonesian). The study concluded that the SSB<sup>1</sup> program

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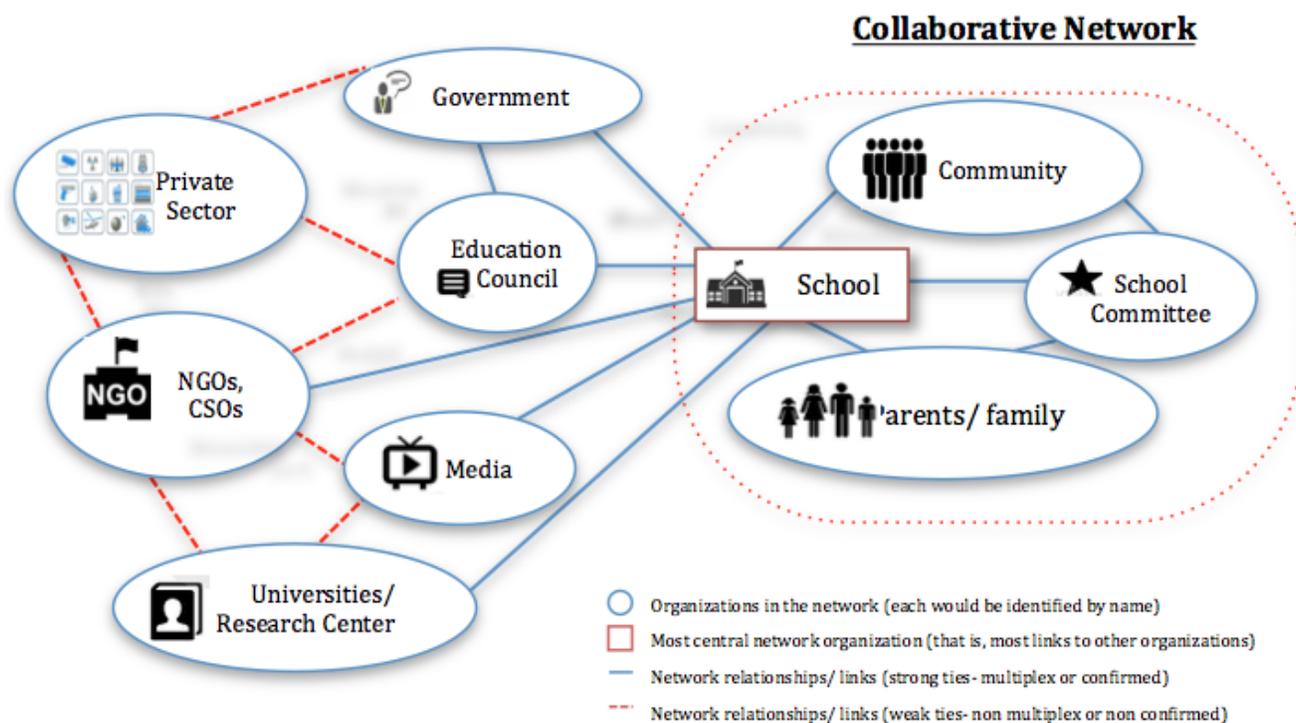
1 Some components/activities of the SSB program are: (i) First Aid training involving the Indonesian Red Cross (PMI) as a training facilitator; (ii) school workshops to provide basic knowledge about disaster management, school preparedness, and hazard assessment; and to integrate disaster subject matter into school curricula and extra-curricular activities and emergency/evacuation planning; (iii) art workshops on disaster mitigation; (iv) provision of disaster-related equipment for schools; (v) mentoring, training and simulation; and (vi) a DRR festival to promote disaster knowledge through art and music competitions.

was effective in improving the capacity<sup>2</sup> of teachers and students. The study also indicated that some forms of collaboration existed between schools and communities to improve education services. These results led to creation of the School-Community Collaborative Networks (SCCN) model. UNESCO (2005) has emphasized the importance of facilitating networking and collaboration among stakeholders. The proposed model highlights involvement of the community in disaster education efforts (shown in Figure 1). The SCCN model relies on engagement and involvement of a collaborative network that consists of schools, community members, families, School Committees, boards of

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2 Capacity development for teachers included improvement in their ability to disseminate knowledge to students and the broader community. Students learned through participating in training activities or meetings on preparedness, which also built their capacity to share knowledge.

Figure 1 Conceptual Framework of SCCN Model (Oktari et al., 2015)



education, governments, NGOs, CSOs, the private sector, the media, universities, and research centers. Linkages between network members vary in nature and degree of strength. In this model, the school is the hub that connects the other stakeholders in the network.

The strategic goal for establishing the collaborative network is to strengthen the partnerships between the school, school committee, families, and community. Once the collaborative network has been established and strengthened, the network may be expanded to more broadly engage other stakeholders, including government institutions, NGOs, CSOs, the private sector, the media, universities, and research centers. Participation of the Education Board will be required to assist the school in engaging various stakeholders to build resilience to disasters (Oktari et al., 2015).

## RESEARCH GOAL AND OBJECTIVES

This study aims to explore the existing network and enabling environment by identifying the

network actors, strength of their relationships, and opportunities, challenges, and factors influencing strengthening of the network to enhance community disaster resilience.

This goal implies three objectives:

1. To assess the strength of relationships between parties in the network.
2. To identify the factors which contribute to a well-functioning SCCN.
3. To determine some of the opportunities and challenges that schools experience in building partnerships with other stakeholders.

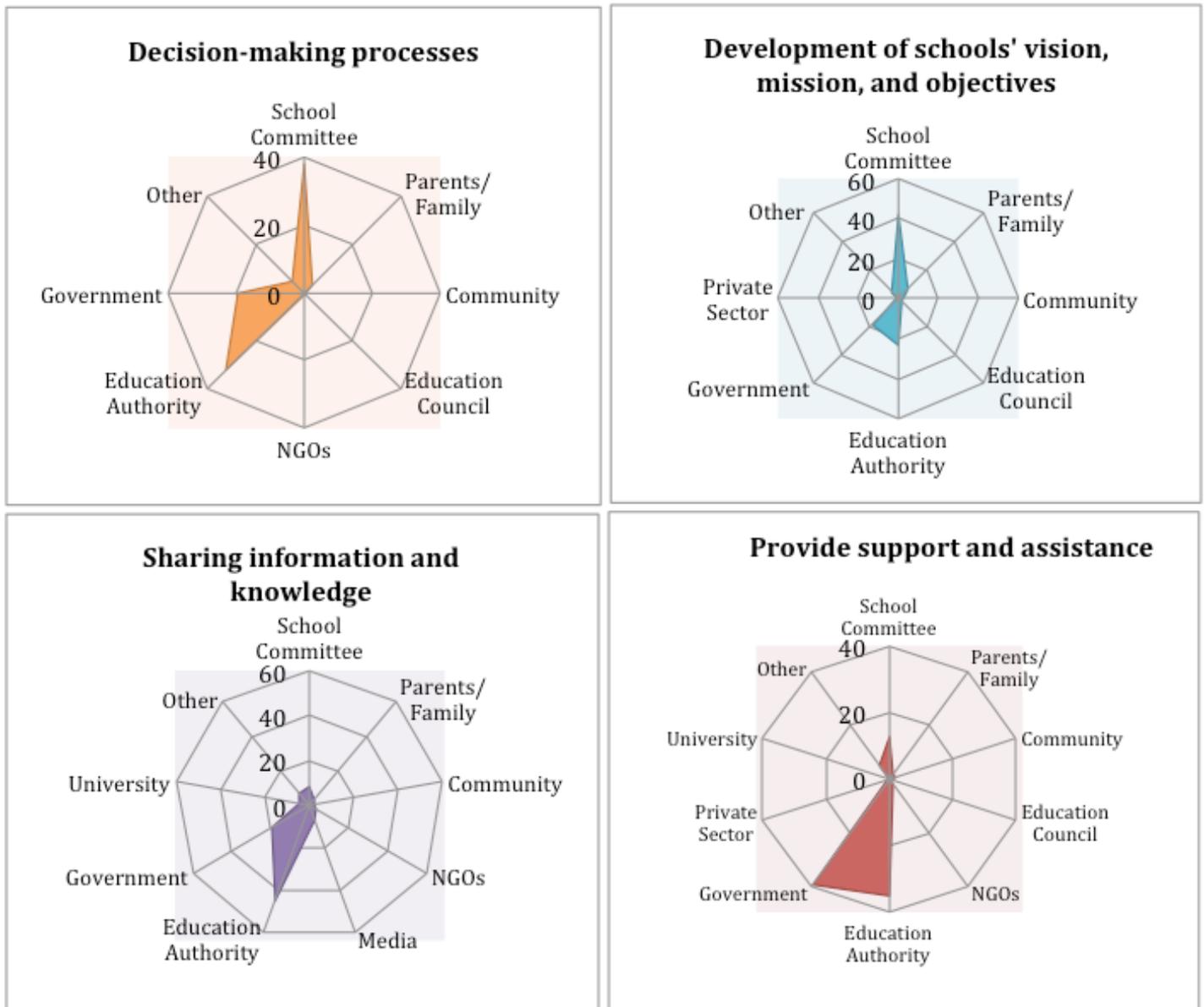
## RESEARCH APPROACH

A case study methodology was used to examine the current state of school-community collaboration and to identify factors that influence the relationship. A variety of data collection techniques were used, including observations, interviews, focus group discussions (FGDs), workshops, surveys, and literature review. The study was carried out in both

urban and rural coastal areas of Banda Aceh and Aceh Besar. Observation was the primary method used to determine the current state of stakeholder relationships in the SCCN model. In-depth interviews of six school principals and six teachers were conducted to generate more detailed information on the existing relationships and recommendations for strategies to improve the SCCN’s ability to build disaster resilience. FGDs were held at six schools to engender productive discussion on opportunities and challenges for the SCCN model. Each FGD consisted

of 10 participants, including the school principal, teachers, parents, the school committee, community leaders, youth leaders, female leaders, and CSOs. To determine if there were significant differences between urban and rural schools in building relationships with other stakeholders, we distributed surveys to 37 schools (18 urban and 19 rural), with a total of 148 respondents. A workshop was organized and attended by 30 participants, including representatives from schools, school committees, community, government, NGOs, and universities. This workshop aimed to

**Figure 2 Perceptions of stakeholder engagement in each category**



**Table 1 Summary of teacher perceptions on the opportunities for schools to build relationships with other stakeholders**

No	Stakeholders	Rural School		Urban School		$\chi^2$
		N	%	N	%	
1	School Committee	68	89.47	70	97.22	0.070
2	Parents/ family	65	85.53	69	95.83	0.026
3	Community	64	84.21	68	94.44	0.084
4	Education Council	53	69.74	51	70.83	0.996
5	NGOs/ CSOs	43	56.58	48	66.67	0.581
6	Media	27	35.53	49	68.06	0.001
7	Education Authority	69	90.79	70	97.22	0.093
8	Other Government Institution	56	73.68	58	80.56	0.079
9	Private Sector	39	51.32	38	52.78	0.299
10	University/ Research center	55	72.37	64	88.89	0.090

*N* : Number of respondents who selected the stakeholder option

*%* : Percentage of respondents who selected the stakeholder option

$\chi^2$  : Chi-Square value

obtain feedback on improvement of the SCCN model in enhancing disaster resilience.

and having mutual trust, adequate facilities and infrastructure, and funding resources.

## RESULTS OVERVIEW

The case study generated four key findings:

1. The school has maintained a strong working relationship with the School Committee<sup>3</sup> and the Education Authority (at the district-level).
2. Both rural and urban schools have opportunities to build partnerships with the Education Authority, School Committee, families, and community.
3. The biggest challenge for schools in building partnerships is the lack of teachers appointed to build and maintain partnerships.
4. Some factors that enable SCCNs are the quality of leadership, availability of capacity building,

### *Current state of school-community collaboration*

According to the interviews and FGD results, schools have maintained working relationships with other stakeholders. As described in Figure 2, there are four types of engagement between schools and stakeholders. They are through: 1) the decision-making process; 2) the development of a vision, mission, and objectives; 3) sharing information and knowledge; and 4) providing support and assistance. The survey results indicate that School Committees currently have the strongest working relationships with schools, especially in decision-making processes and the development of schools' vision, mission, and objectives. Meanwhile, the Education Authority and other government institutions have strong engagement in sharing information and knowledge and providing support and assistance to schools. Figure 2 shows what percentage of survey respondents identified

<sup>3</sup> The School Committee has a legal mandate to serve as a conduit for knowledge exchange and mediation between the school and community.

each stakeholder group as falling under the category of engagement.

**Opportunities, challenges, and enabling factors for school relationship building with other stakeholders**

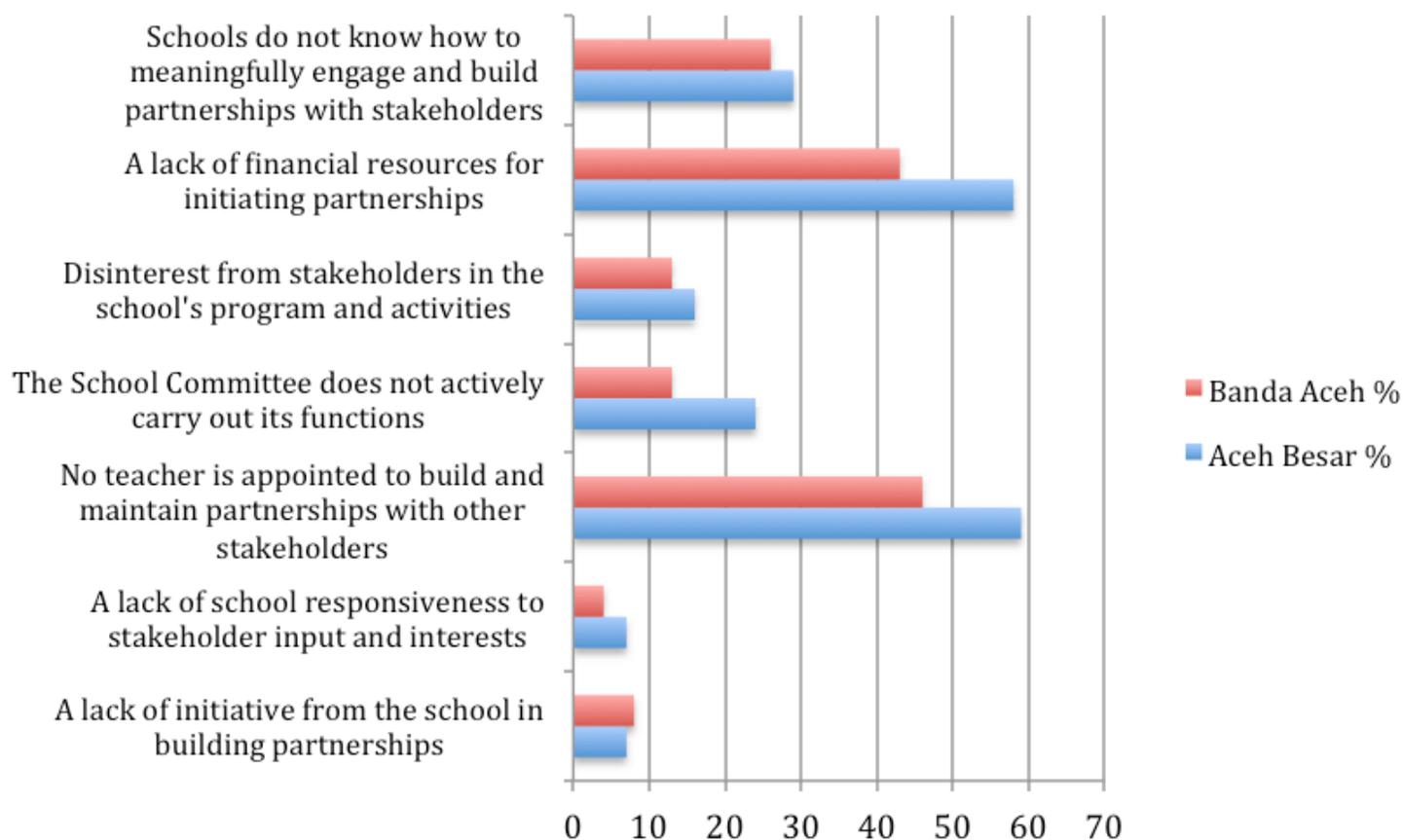
Schools’ opportunities and challenges for building relationships with other stakeholders were identified from the in-depth interviews and FGDs. In addition, a survey of teachers in rural and urban schools was conducted to investigate perceptions on opportunities for relationship building between schools and other stakeholders. We analyzed the data according to the frequency of responses and percentage of respondents who gave the same answer. A chi-square test was also performed, using one degree of freedom and a significance level of 0.05. The results demonstrated no significant differences between relationship building opportunities in rural versus urban schools. Table 1

provides a summary of the opportunities for a school to collaborate with other stakeholders. As demonstrated in Table 1, both rural and urban schools stated that the greatest opportunities are building a partnership with the Education Authority, School Committee, families, and community.

Challenges faced by schools in building relationships were identified. Both rural and urban schoolteachers said that the greatest challenge schools face in building relationships is that no teacher is charged with building and maintaining relationships. Other high-ranking challenges include: a lack of financial resources and ability to foster meaningful stakeholder engagement and collaboration. The challenges are shown in Figure 3.

In the survey, the respondents selected factors they felt enabled functioning of the SCCN. As shown in Table

**Figure 3 Challenges schools face in building relationships**



**Table 2** Enabling factors for the SCCN

No	Enabling factor	TOTAL	
		N	%
1	Leadership	142	96
2	Mutual trust	141	95
3	Facilities and infrastructure	140	95
4	Funding resources	139	94
5	Building capacity to build partnership	137	93
6	Awareness of all parties	136	92
7	Regulation and policies	131	89
8	Appointed team to build partnership	126	85

*N* : Number of respondents selected the option of the enabling factor  
*%* : Percentage of respondents selected the option of the enabling factor

2, the quality of leadership, mutual trust, adequate facilities and infrastructure, funding resources, and capacity building are among the most important enabling factors.

## DISCUSSION

Community-based activities will not be sustainable without the participation of multiple stakeholders (Matsuda & Okada, 2006). Community motivation to take proactive measures for disaster preparedness arises through community and stakeholder interaction. This includes discussion between residents, collaboration between different community associations, or stimulation by outside parties.

This study concludes that schools have maintained strong working relationships with other parties, especially with School Committees and the Education Authority. Unfortunately, there has not been significant progress in collaboration between schools and the community. For example, during the FGDs, one of the community representatives mentioned that the previous disaster education program had not involved the local communities. This study finds that

schools have an opportunity to build relationships with the Education Authority, School Committee, families, community and other stakeholders to enhance community resilience to disaster. However, schools must first address their greatest challenge—appointing a teacher to be responsible for building and maintaining community and stakeholder relationships.

This study also found leadership to be an important enabling factor for the SCCN. School principal turnover was cited as an impediment to the SCCN. This finding is in line with Sanders & Harvey (2002), that principal support for community involvement is a central factor in the school's success in developing meaningful community connections.

## RECOMMENDATIONS

- The School Committee plays a key role as a liaison between the school, parents and community. In addition, the School Committee also serves supporting functions in the determination and implementation of education policy in schools. The School Committee should be used to ensure

the involvement of parents and the community in the school's disaster education program.

- Once the collaborative network between the school, School Committee, parents and community has been established and strengthened, the network may be expanded to engage other stakeholders, including government institutions, NGOs, CSOs, the private sector, the media, universities, and research centers.
- To enhance community resilience to disasters, schools, communities, NGOs, and government agencies need to work together. According to Gajda (2004), there is an ever-increasing need for individuals, education authorities, government agencies, non-profit organizations, community networks, and business groups to come together to address the complex issues that confront our society today.
- Collaborative efforts to create disaster resilient communities should take into account motivators for and inhibitors to forming partnerships, sustaining them, and gaining knowledge about partner roles (National Research Council, 2011). Therefore, further research should be done to determine how, when, and why collaboration works or fails.

## CONCLUSION

The SCCN conceptual model has four components: (i) a collaborative network between the school and community, (ii) a knowledge management framework, (iii) intergenerational knowledge transmission, and (iv) a knowledge ladder. Members of the SCCN include schools, communities, families, School Committees, boards of education, governments, NGOs, CSOs, the private sector, the media, universities, and research centers. Relationships between SCCN members vary in nature and strength (Oktari et al., 2015). This study assessed the first component—the collaborative network between the school and community. Strong relationships were found between schools, School Committees, and the Education Authority. Community members expressed a desire to engage

"...There are three main factors that influence child learning. The first is family, the second is school, and the third is community. If the school has implemented disaster preparedness education, then the community can also learn from the program, and community disaster preparedness can then be achieved..." (Teacher in Banda Aceh, Seminar-Workshop)

"...When the disaster preparedness program was held in this school some time ago, the community was never involved. Maybe if there are similar activities in the future, we hope that there will also be involvement of the community. Although not necessarily everybody in the community, that there are at least some representatives who are involved directly so that people can improve disaster preparedness..." (Community in Aceh Besar)

"...It is quite a big challenge when the school has no teachers specially appointed to handle a disaster preparedness school program. A teacher will be assigned to attend a meeting, on days that there is no work at the school. When teachers are invited to the next meeting, the school will look for another teacher who has no work ... (NGOs staff in Banda Aceh, Seminar-Workshop)

"...However, the challenge is frequently changing school principals. This change causes the disaster preparedness program that has been running well to be stopped...." (Teacher in Aceh Besar, In-depth Interview)

more with schools. School representatives identified dedicated leadership as a key factor for successful SCCNs; however, a challenge that schools face is a lack of teachers appointed to do community outreach. The first step in strengthening SCCNs is addressing this challenge. Next steps will be the implementation and evaluation of the other components in the proposed model.

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