

**Developing School-centered Disaster Resilient  
Communities in the Aftermath of the  
East Japan Earthquake and Tsunami**

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## **Executive Summary**

### **1. Background and purpose of the study**

The East Japan Earthquake and Tsunami (EJET) was the largest natural disaster that Japan had experienced since end of World War II. The 9M earthquake triggered tsunamis that brought extensive infrastructural damages and human casualties over a wide area in North East Japan. In the education sector, 6,211 educational facilities were damaged displacing over 25,000 students from their original schools. The damages that the EJET brought upon the education sector did not only affect teachers and students, but also significantly impacted the whole community because communities in Japan commonly perceive their schools as a central public facility that are also used as evacuation centers during emergencies. Approximately a year into the EJET recovery process, the Cabinet Office presented the damage projections for the Nankai Trough Megathrust Earthquake (NTME) that is anticipated to occur within the next 30 years with 60% probability alerting schools and communities to further strengthen their DRR measures.

With this background, this study aims to investigate the possibilities of realizing “School Centered Recovery and Community Building” in Toni District of Kamaishi, Iwate Prefecture in which its elementary (ES) and junior high schools (JHS) received total damage by EJET. With objectives to propose an efficient and effective approach in implementing the concept, the study looks into the potentials and challenges faced in Toni. The study also refers to good practices in other areas, including Saijo, Ehime Prefecture, which has been active in implementing its city wide DRR education program to prepare for the anticipated NTME and other possible future disasters. Surveys were conducted in selected cities and organizations to identify the key elements required in strengthening school – community linkage for building School-centered Disaster Resilient Communities.

### **2. Scope of the study**

The scope of the study is based on the “School Centered Community Building” concept that was introduced by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) in October 2011. The objective of the concept is to promote school recovery by: (1) Ensuring safety and security of schools, (2) Strengthening schools as Disaster Risk Reduction (DRR) hubs, (3) Incorporating sustainable eco-friendly features and (4) Combining schools with other public facilities and functions to facilitate interactions among different community

members. As this study focuses its discussions to facilitate school centered recovery and community building, the attention will be placed more on the fourth component that is directly linked with reinforcing school and community linkage through structural and non-structural measures that is expected to positively impact the overall community recovery.

Under this scope of study, interview and questionnaire surveys, group discussions and workshops were conducted with local government, community members and schools (teachers and students) that covered the following topics.

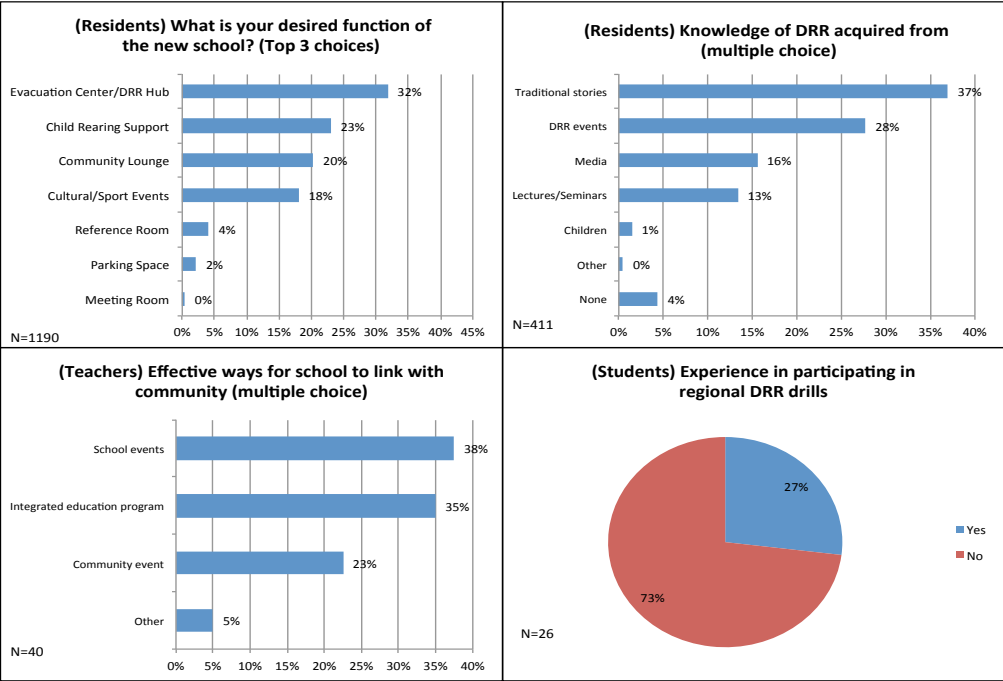
1. Experiences and lessons from responding to EJET
2. Relationship between schools and communities before and after EJET
3. Social/Regional and DRR school education and activities with communities
4. Perceptions on school centered recovery and community building
5. Educational governance

### **3. Key findings**

In recovering Toni ES/JHS, the idea of integrating new schools with other public facilities and functions received positive response from residents. The questionnaire survey targeting all households in Toni showed their keen interest for adding child raising support (32%) and DRR functions (23%) to the new schools. From the start, the Toni School Reconstruction Consultative Committee had been firm with the idea of making the new ES and JHS to become a joint school, anticipating that the student number will continue to decrease in the future. On the other hand, interview surveys revealed that City Board of Education (BoE) and schools felt apprehensions in making the new schools to become a multi-functional facility that will be open to the public as a platform for community engagements, primarily due to concerns in management and security issues. Improving safety and DRR function of schools to become an effective evacuation center also posed challenges for BoE because the tasks are beyond its ordinary mandates.

Community engagement in school activities through joint social/regional and DRR education through school events (38%) and integrated education program (35%) has been perceived as an effective way to facilitate recovery, community building and strengthening disaster resilience by the Toni ES/JHS teachers once the schools are able to recover their basic functions. The reason given for this is because such education can nurture students' understanding and consciousness for their hometown in preparing them to become

responsible citizens of their communities. For implementation, it was revealed that Toni communities possess abundant human resources, such as elder group and local fishermen that are able to provide students with “real-life” education that compliments academic education provided in the school classrooms. With regards to DRR education and activities, it was found that although there is high community perception of schools as being a DRR hub, there was limited school – community engagements for disaster preparedness before EJET. For example, this was shown in the questionnaire survey results of students in which only 27% have experience participating in the regional DRR drills prior to EJET. For DRR knowledge, while local/traditional knowledge has been a significant part in maintaining residents’ awareness about disasters (37%), incorporation into school DRR programs has been limited.



**Figure 1** Key results from Community and school survey (questionnaire survey)questionnaire survey in Toni, Kamaishi

From the surveys conducted in Saijo through direct interviews and focused group discussions with representatives of three target school districts, it was found that schools have numerous school based networks, which can help identify the key stakeholders for realizing school centered disaster resilient community building. Building partnerships with these actors can be further developed to enhance support systems that will help communities better respond, recover and prepare for large-scale disasters. Commonly, schools are first connected with their communities through students’ parents while other community members are also

linked through participation to school events, such as sports and cultural festivals. Specifically by means of DRR activities, the city wide Town Watching activities conducted in Saijo in its 12-year old DRR Education Program, which calls for close school – community collaboration, can be seen as an effective way in building school based networks. Saijo has also been endeavoring on building new partnership in DRR with private companies and informal networks that exist in the community, such as Saijo Festival groups that may not be at present directly linked with schools through education or DRR. These practices can be suggested as references that can benefit Toni's efforts in recovery and community building.

Issue on education governance has also been highlighted in this study for creating enabling conditions to effectively and sustainably implement school-centered recovery and community building. During EJET, issues in coordination and communication within and among different administrative levels (central – prefectural – city) in the education sector became a major problem for providing timely assistance to affected schools and communities. While the Disaster Countermeasures Basic Act stipulates the city level authorities to be the main agents for initial response, EJET had overwhelmed the City BoEs and schools with numerous tasks that necessitated extended support from higher administrative levels. However, MEXT have shown shortcomings for not knowing their contact person at the local levels. Surveys also found that Prefectural BoEs, with their mandate and capacity to coordinate disaster management efforts, could do more to support affected City BoE and schools not only in disaster response, but also for recovery and preparedness. In some cases, lack of coordination and communication has created inequality among affected city governments for receiving needed support in responding to and recovering from EJET. At the city level, breakdown in the decision making process posed great challenges for local authorities to make prompt planning and implementation for school recovery and community building.

#### **4. Conclusion and way forward**

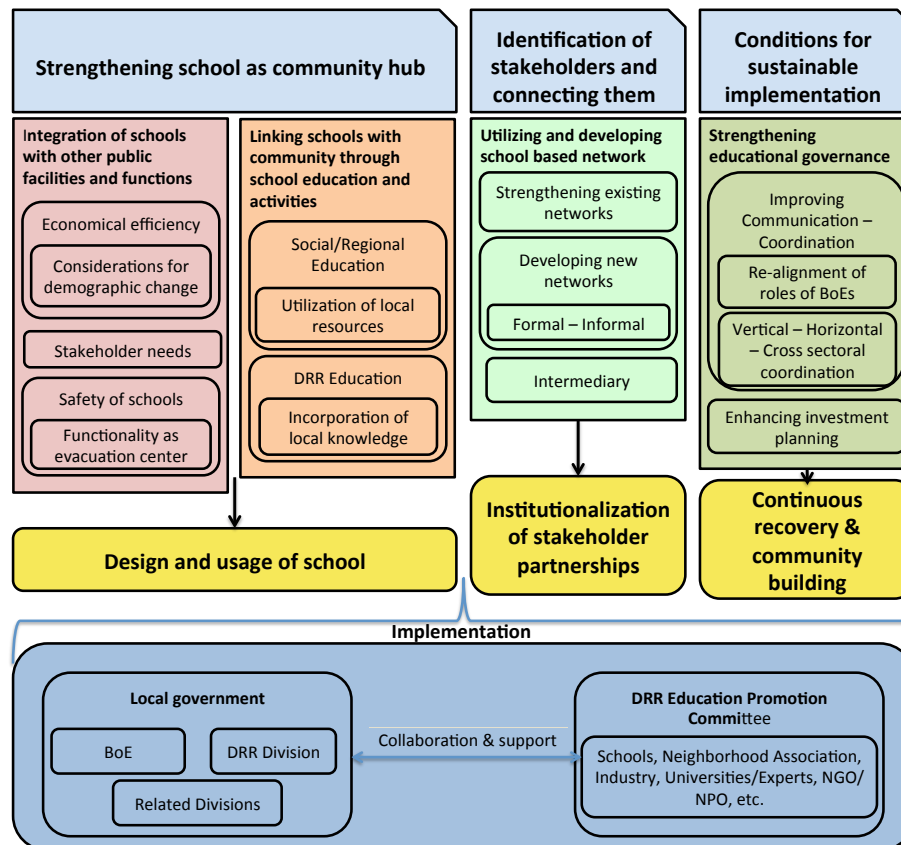
With the challenges and key elements to effectively implement School Centered Recovery and Community Building identified through interview and questionnaire surveys, focused group discussions and workshops, the following are provided as the possible way forward for implementation.

1. Rebuilding new schools as a multi-functional facility can be pursued for economical efficiency that is adaptable to future demographic changes. More importantly, flexible use

of school facilities allows strengthening of schools to become a hub for school – community interactions in recuperating weakened ties. Possible utilization of school facilities should be considered through joint multi-stakeholder consultations to grasp various needs that will ultimately determine the design and usage of the new schools. DRR features of schools should also be further strengthened for them to function effectively as a community evacuation center. Such structural and non-structural integration of school with other public facilities and functions can provide the platform that will help facilitate the overall recovery and community building process.

2. Local human resources and knowledge should be fully utilized in conducting programs such as social/regional education and DRR education because teachers may not possess all of the knowledge and experiences, especially those of local context, required to provide practical learning for nurturing students to become contributing citizens of their hometowns. This sort of community participation in educational activities can compliment academic school education provided by teachers. Collaboration between schools and communities to jointly take tasks to resolve common social issues that exist in the respective communities can create mutual benefits that will not only be valuable in terms of recovery, but also helpful to boost measures on issues such as population drainage and revitalization of rural communities that had existed prior to EJET.
3. School based networks can be mapped out to identify the key stakeholders for implementing school centered recovery and community building. In addition to formal networks that are linked with schools, there are also informal networks that may not be necessarily connected through education or DRR, but can be looked into for identifying new partners. These may include private companies, NGOs and other informal networks such as social groups that may exist within and outside of the region. A system to institutionalize these kinds of partnerships can be realized thorough the establishment of working group or committee, but may require an intermediary that can initially connect and coordinate the different stakeholders.
4. Enhancing the governance system through institutional strengthening can improve coordination and communication that enables better support for affected schools and communities. Specifically, re-alignment of roles and responsibilities of national, prefectural and city BoEs (and schools) that is adaptable to damage levels and recovery process can significantly improve effectiveness and efficiency in supporting local levels. In particular, Prefecture BoE could utilize more of its intermediary role and human

resource management authority for supporting troubled local cities. Such improved governance system can create an enabling environment for various stakeholders of different administrative levels, regions and sectors to work together, making streamlining of recovery, mitigation, preparedness and community building process possible for School Centered Recovery and Community Building.



**Figure 2** Suggested components for developing School-centered Disaster Resilient Communities

The overarching elements to make School-centered Disaster Resilient Communities feasible are continuous multi-stakeholder consultations with community participation and monitoring and evaluation of achievements and accountability in which tools such as checklist can be developed. Although the contents for disaster recovery and community would differ depending on local contexts, the key findings from this study may be used as a reference to allow the concept to be applied in other disaster prone communities with different public facilities that are central to the communities.