



**Final Evaluation of School Based
Disaster Risk Reduction Project
in Gazipur**

**Implemented By: Bangladesh
Red Crescent Society and
Supported by International
Federation of Red Cross and Red
Crescent Societies funded by
Hong Kong Red Cross**

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LIST OF ABBREVIATIONS

APO	: Assistant Programme Officer
BDRCS	: Bangladesh Red Crescent Society
BDRM	: Basic Disaster Risk Management
CPP	: Cyclone Preparedness Program
CPR	: Cardiopulmonary Resuscitation
DLC	: Disaster Learning Center
DM	: Disaster Management
DoE	: Department of Education
DP	: Disaster Preparedness
DRR	: Disaster Risk Reduction
FA	: First Aid
FSCD	: Fire Service and Civil Defence
HKRC	: Hong Kong Red Cross
IEC	: Information, Education & Communication
IFRC	: International Federation of Red Cross & Red Crescent Societies
KII	: Key Informant Interview
LFA	: Logical framework
LSAR	: Light Search & Rescue
MoU	: Memorandum of Understanding
NHQ	: National Head quarter
NGO	: Non-Government organization
PM	: Project Manager
PMER	: Planning, Monitoring, Evaluation & Reporting
RCRC	: Red Cross & Red Crescent
RCY	: Red Crescent Youth
SBDP	: School based Disaster Preparedness
SDMC	: School Disaster Management Committee
SSC	: School Safety Club
SSM	: Small Scale Mitigation
ToT	: Training of Trainers
TV	: Television
UDRT	: Unit Disaster Response Team
ULO	: Unit Level Officer
VCA	: Vulnerability & Capacity Assessment

ACKNOWLEDGEMENTS

The evaluation team would like to thank to the teachers, students, and guardians of SBDRR project schools for their participation in providing the information during the field evaluation.

Also, expressing grateful to the SBDRR project team of BDRCS and IFRC for their generous cooperation and time spent for mobilizing the stakeholders for conducting FGDs, schools visit, supported field enumerators for survey of teachers and students, KII as well as to share their insights about the project challenges, lessons and for their hospitality.

In particular, the evaluation team is indebted to BDRCS for giving this opportunity of final evaluation of SBDRR project and IFRC for their final thoughts to us and finally to Hong Kong Red Cross for their funding to reduce disaster risks of schools and enhancing the culture of safety in schools in our country.

Finally, the evaluation team expresses gratitude to Mr. Kh. Jakaria Khaled, Deputy Secretary General of BDRCS for his kind cooperation.

Warm regards,

Md. Rezaul Karim

Team Leader

The Evaluation Team

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EXECUTIVE SUMMARY

Bangladesh is one of the worst vulnerable countries to disasters. Disasters, thus, continue to pose a threat for Bangladesh towards achieving the Sustainable Development Goals (SDGs), including those related to education.

Taking into account the vulnerability of children to disaster, numerous initiatives have been taken to raise awareness among school children about the hazards in order to enable them equipped with knowledge that eventually will help children protect themselves and their family members from disasters. In line with that thought, BDRCS with the technical support from IFRC implemented the School Based Disaster Risk Reduction (SBDRR) project in 10 schools under Gazipur district covering a period of 27 months including 5 months with no cost extension from March 2015 to April 2017. The project was funded by Hong Kong Red Cross, Branch of Red Cross Society of China. Following a result-focused process, the project commenced with a baseline survey. To measure the outcome and impact of the intervention, the final evaluation was planned and conducted at the end of project.

The overall objective of the final evaluation was to assess the program performances and to provide inputs for new strategic directions or implementation design of the school level disaster risk reduction program in Bangladesh aligning with the BDRCS strategic plan. However, the specific objectives included:

- Assess/measure performance and impact in relation to the results and indicators identified in the project proposals.
- Set for the recommendations based on the best practices and lessons learned, for strengthening program strategies, management and implementation for future school safety/ school level disaster risk reduction program in Bangladesh.

As part of data collection, the evaluation adopted both quantitative and qualitative approach. The questionnaire survey covered a total of 313 students out of 830 while 22 teachers out of 87, who directly participated in the project activities to capture the direct output of the SBDRR project. In the qualitative part, data was collected from FGDs and KIIs with the SDMCs, School Heads, School Safety Club Members, Students at DLCs, Guardians/Parents. To capture the indirect impact, data was collected from FGDs with the students and teachers who did not directly participate in any project activities. Notably, data collection covered 100% schools i.e. all the 10 project schools. The data analysis and overall findings of analysis were conducted following the basic evaluation criteria based on the evaluation theory i.e. disaster cycle.

Students' survey data revealed that 86% respondents informed about their participation in training out of which 97% received FA training: followed by 88% school disaster risk management: 66% LSAR and 16% on leadership management. However, the study observed that 67% were able to describe the key activities that were learnt from the leadership, school disaster risk management, FA, LSAR, and thundering training.

Similarly, 87% explained the activities on disaster preparedness that they carried out following the DP plan, 91% reported the activities to do during hazard strikes following emergency evacuation plan, 86% seen the evacuation map and routes. 98% informed that they adopted the

measures during the hazard of earthquake, 82% reported about small scale mitigation measures that they implemented in school, above 90% reported about the awareness activities on earthquake, 93% explained how the school safety club works to reduce the risks of schools for the students and teachers, 60% students properly explained their learning from science fair. Besides, they also explained the knowledge they obtained from IEC materials and the FA and LSAR materials produced from the project.

Teachers' survey data revealed that 82% of them participated in the FA trainings, followed by 77% in LSAR, 59% in ToT on school based disaster preparedness, 55% in school disaster risk management and 45% in day-long training on VCA. Of the training recipients, 73% facilitated the training session on school-based disaster preparedness. For VCA orientation, 100% participants explained the same activity. Also, all of them learnt from earthquake drill. Above 90% of them learnt about the emergency evacuation plan and the map, and the small scale (non-structural) mitigation measures that reduce the disaster risks of schools.

For DLCs, proper operational manual needs to be introduced and practiced. The non-participating students were found highly active and learnt more than 50% of the project activities that are related to DRR that they learnt from their class mates (who directly participated in SBDRR project activities), The guardians were also found aware of more than 50% of the project activities pertaining to DRR which they learnt from their children and discussion with BDRCS staff during meetings. Similarly, 100% of the key informant appreciated the SBDRR project and its activities for DRR.

Considering the unplanned urbanization, very poor development and limited communication for the new settlers and marginalized communities, the project area seems **highly relevant** and is located on a highly seismically active zone.

The study found the project **significantly effective** in building awareness and mobilizing the key actors at various levels. The volunteers (UDRT members) conducted the same trainings in schools, facilitated the DP plan development, organized and facilitated the mock drill as well. Above 85% students learnt about disaster preparedness, during disaster safety measures and what to do just after disasters. They learnt about FA and LSAR effectively through mock drill.

The project **efficiently implemented** the activities during the timeframe. The UDRT members skilled on SBDRR initiatives through this project and they are with schools for future efforts to continue the project interventions. School disaster safety clubs formed (100%) and observed moderately (50%) functional. The water supply plants including (solar operated) established effectively. The concept of SBDRR has been furnished among the school authority and students which will contribute in developing the culture of safety in schools.

The **outcome** of the project is that total of 220 working days utilized to facilitate the training of 830 students and teachers. The learning from the training is not limited up to school rather extended up to the community as measurable **impact**. The mock drill generated the learning of DRR at the daily life of the stakeholders and all stakeholders appreciated that these are lifesaving learning for them. The RCY mobilization observed the most effective result and they will significantly enhance the scope to work for reducing future risk of schools. The teachers

shared their learning received from the training to other non-participant teachers. Overall school learnt from mock drills as **direct impact** of the project. **Indirect impact** observed that the guardians learnt from their children at their home with siblings, and neighbors.

For gradual exit and **sustainability**, the SDMC and SSC need to facilitate further towards sustainability. However, there was an exit phase mentioned in the proposal while in the project such activities were not planned and implemented. Despite, the knowledge level at individual student and teachers will remain active which further needs practice by the form of simulation exercises. The capacity for DRR at institutional/school level needs further facilitation following the disaster cycle.

The project has **covered** almost all the students at selected 10 governments and non-government high schools. Total of 830 students and 87 teachers were trained up on different issues i.e. SBDRM, First Aid, Light Search & Rescue, Leadership Development. Within the timeframe, project reinforced the UDRT and they played a very important role in implementing the project activities. A total of 25 members of UDRT have been trained on all required trainings afterwards they have facilitated the same trainings to all the teachers and students.

BDRCS authority has implemented the project activities in **coordination** and consent from Department of Education (DoE) at district level. They have also participated in the meetings with DoE on occasional basis. The representative of DoE office participated in some SDMC meetings and other meetings at school level.

The school authority, teachers, students and their guardians expressed overall **satisfactions** on SBDRR project activities as received primary benefit from the project. The wider **replication** of undertaken project activities can be facilitated by the DEO to other schools at their jurisdiction with the assistance from BDRCS.

The progress of project intervention basing on the logical framework was monitored on regular basis. The Project Manager visited the project sites regularly. The Unit Level Officer (ULO) monitored the progress of project interventions regularly from Gazipur unit. The monitoring process was done under the guidance of “Planning, Monitoring, Evaluation and Reporting (PMER) sector of BDRCS.

1. BACKGROUND

1.1. Background and Context

Bangladesh has, let's just say, a long history of several types of disasters. Earthquake is one of the potential devastating disasters for which communities as well as authorities are not well prepared. The 1897 disaster took place on the Shillong Plateau, in Northern Bangladesh. This was the result of a blind thrust fault, called the Oldham Fault. The resulting earthquake reached a magnitude of between 8.0 and 8.7, killing 1,500 people. In the earthquake zone, people are still unaware of the impact of disaster and the institutions are yet to acknowledge the risks and persist in a state of denial. Schools have no associated activities in their curriculum

At the national level, the Ministry of Disaster Management & Relief initiated the vulnerability reduction process with emphasis on preparedness as well pledging to implement the priorities for action of the Sendai Framework for Disaster Risk Reduction 2015-2030. A comprehensive disaster management perspective is yet to be developed. During any disaster, the most affected sector is education but this sector has no preparedness or risk reduction plan. Even though the immediate impact of an earthquake might affect all sections of the community, neither the community nor the authorities is effectively aware of likelihood and consequence of earthquake and/or prepared to deal with the implications for disaster preparedness especially earthquake. The challenge is to convey the possibility of earthquake to the policy community and fast track preparedness initiatives. **The project expected to channel its efforts to mitigate specially earthquake and fire vulnerability.**

Students, faculty and administrators can prepare themselves for emergencies at school in several ways, from conducting regular, emergency-specific drills to make sure the building's infrastructure is up to code. When emergencies do happen, schools need to know how to respond appropriately and recover as quickly and effectively as possible. When a natural hazard strikes, children are predominantly the most vulnerable population group - especially those who are attending school when the disaster strikes. Learning about disaster risk in school will play an important role in their ability to save their own lives and in protecting members of their families and communities in times of disaster. Additionally, children often transfer knowledge to their families as well as their neighbors.

Recognizing the need, BDRCS has planned to implement a school safety program. In last decade, few initiatives have been taken and School Safety program has been implemented in Dhaka city area by the international NGOs. Although Gazipur district is in same geological settings, no initiatives have been taken to reduce the disaster risks specially earthquake, fire and thunder storm in schools in Gazipur district. In this context, BDRCS has implemented "Safer school and disaster preparedness for response" in 10 schools in Gazipur district.

1.2.Objective of the Evaluation

The overall objective of the evaluation is to assess the program performances and to provide inputs for new strategic directions or implementation design of the school level disaster risk reduction program in Bangladesh aligning with the BDRCS strategic plan.

Specific objective of evaluation:

- Assess/measure performance and impact in relation to the results and indicators identified in the project proposals.
- Harvest recommendations, based on best practices and lessons learned, for strengthening program strategies, management and implementation for future school safety/ school level disaster risk reduction program in Bangladesh.

2. EVALUATION METHODOLOGY

The methodology was designed based on the purpose, objective, criteria, scope of work, and deliverables of the final evaluation of SBDRR project. The evaluation and data collection were carried out at 10 schools in Gazipur district. The methodology included both qualitative and quantitative approaches with a variety of primary and secondary data sources including participatory methods using the mix-matrix for data collection. The data sources were investigated through questionnaire survey, key informant interviews, focus groups discussions and meetings with stakeholders and BDRCS staff, UDRT, and RCY to cover all dimensions of the project components, log frame and project plan. The quality of data with respect to accuracy, reliability and validity was carefully maintained during the study and triangulation of similar information improved the validity of collected data by using different tools and sources.

2.1.Tools and Data Collection

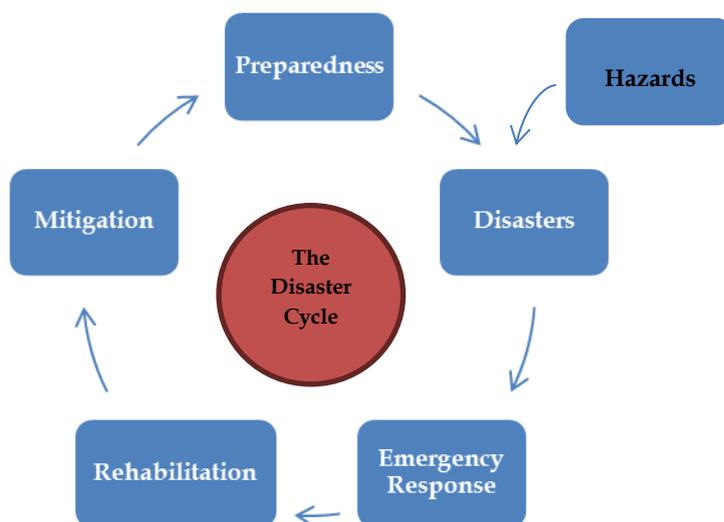
The data for the final evaluation were collected from both primary and secondary sources. The evaluators conducted the review of project documents and completed data collection from secondary sources. In order to conduct the primary data collection, two survey questionnaires, five FGD checklists, one KII checklists, one checklist for documentation of most significant changes were developed. The key objectives for tools development were to frame the study and structure the data collection process comprehensive to cover overall project inputs and activities. A total number of 313 students surveyed, 23 teachers interviewed following the teachers' survey questionnaire. For qualitative aspects of the data collection, a total number of 50 FGDs were conducted covering 100% i.e. all 10 schools with the SDMC members, SSC members, non-project participant students, students at DLC and with guardians during the evaluation at project site. The collected data and tools are presented below (Table-1).

Table-1: Status of Tools and Data Collection during Final Evaluation.

Tools/Methods	Source of Information	Achieved
Secondary Sources	<ul style="list-style-type: none"> Project Documents 	1
End-line random survey	<ul style="list-style-type: none"> Among the randomly selected students who directly participated in the project activities¹ Teachers who received Training of Trainers 	313 23
Focus Group Discussions (FGDs)	<ul style="list-style-type: none"> School Disaster Management Committees (SDMCs) School Safety Clubs (SSCs) Students did not directly participate in project activities Students at Disaster Learning Centers Guardians who attended the quarterly meetings 	10 10 10 10 10
KII	Official of District Education Office Head of SDMC	1 10
Field observations	Project interventions at schools	10
Meetings	Stakeholders BDRCS UDRT members and RCY	1 4 1
Case Studies	Project stakeholders including students, teacher, UDRT & project staff	6

2.2. Evaluation Theory

In order to measure the project outcome and changes, the final evaluation was conducted based on the disaster cycle. In the design of evaluation, the disaster cycle was the key for measuring the successful outcome to combat hazards and reduce the losses due to the event of disasters. Therefore, the evaluation conducted for the project interventions following the lens of disaster cycle to review the SBDRR inputs and the outcome of interventions. In one hand, the cycle enhanced the sustainability on the other the interventions enhanced the effectiveness and efficiency of the project. The detailed steps of the evaluation methodology are enclosed in **appendix-1**.



¹ The project activities included trainings, mock drill, DP planning, Members of SSC, science fair, IEC materials, awareness activities, SSM and summit.

3. BRIEF DESCRIPTION OF THE SBDRR PROJECT

The SBDRR project planned to reduce the disaster risks of 10 schools in Gazipur district. The key activity included the capacity building of Gazipur UDRT and therefore, they can facilitate the capacity building process for the selected schools. In order to facilitate the capacity building process series of training imparted to the UDRT members to develop them as Master trainers. Also, 20 teachers (two from each school) trained as local instructors aiming for transmitting the capacities on DRR. Alongside of training, mock drill, awareness raising campaign, IEC materials, students' summit, science fair were held by the project at the project schools. Also, to mitigate the disaster risks, small scale non-structural mitigation measures were implemented at all project schools. To ensure water supply during any emergency, solar operated water supply system was installed at the selected four project schools by the project. For conducting earthquake and fire simulation exercises and evacuating in case of any emergency, emergency evacuation plan was developed for all project schools. Besides these, the project also supported schools to develop disaster preparedness plans, provided FA and LASR kits to each school, established DLCs in 03 schools to spread DRR knowledge among students, teachers and parents, formed SDMC and founded SSC at each school.

4. FINDINGS OF THE EVALUATION

In this section, the quantitative findings from survey of students, teachers and qualitative findings from FGDs and KII are presented below.

4.1. Students Survey

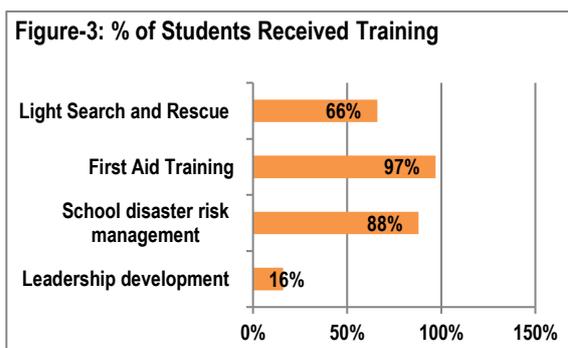
Survey conducted particularly with the students who have received trainings and directly participated in other activities of SBDRR project. A total number of 313 students interviewed to capture the status of SBDRR project. Among the survey respondents, 43% observed male and 57% female students. The year class of student respondents observed 48% from class X; followed by 30% from IX; 18% VIII and 4% VII (Figure-1). Notably, the students received trainings from the project not remained constant as after completion of their education, they left school towards college. However, the learning of students throughout the training and other project activities were disseminated among their family members, neighbors and other students at school.

4.1.1. Students' Participation in SBDRR Project

Survey data revealed that 100% respondents recalled the SBDRR project and confirmed their direct participation in the project activities. Out of which, 96% students mentioned their participation in mock drill; followed by training 86%; preparation of DP plan 51%; awareness activities on DRR 46%; uses of DRR equipment by 30%; and participation in the students' summit mentioned by 11% (Figure-2). Remarkably, students actively involved in mock drill represent their highest (96%) involvement and they can recall the activity. Secondly, they have mentioned (86%) training as learnt about school based DRR.

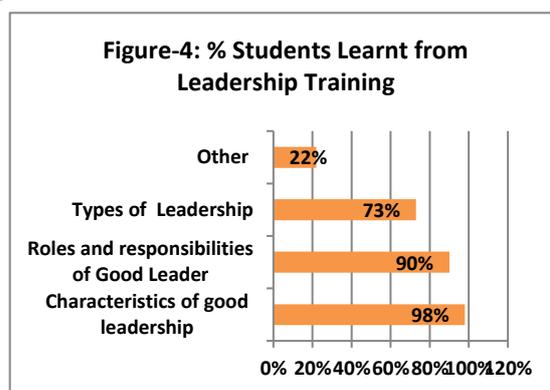
4.1.2. Students' Participation and Learning from Training

Data revealed that 97% students informed about first aid training; followed by School Disaster Risk Management 88%; Light Search and Rescue 66%; and Leadership training 16% (Figure-3). Among the received training, it has been observed that the practical sessions oriented training has impact on the learning and the students shared the learning of the training.



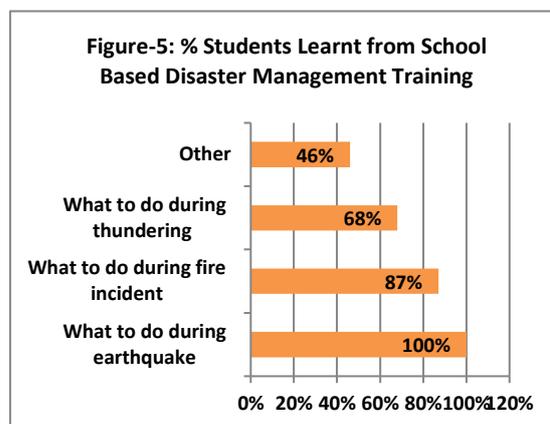
School Level Leadership Development Training

Data revealed that only 15.65% students can recall the learning from school level leadership development training. Out of which 98% can explain the characteristics of good leaders; followed by 90% explained the roles and responsibilities of a good leader; 73% about types of leadership and 22% explained leadership during disasters. The students participated in the leadership training not given the responsibility as leaders to lead any sorts of activities thus resulted less practice and they are gradually forgetting the learning out of that training (Figure-4).



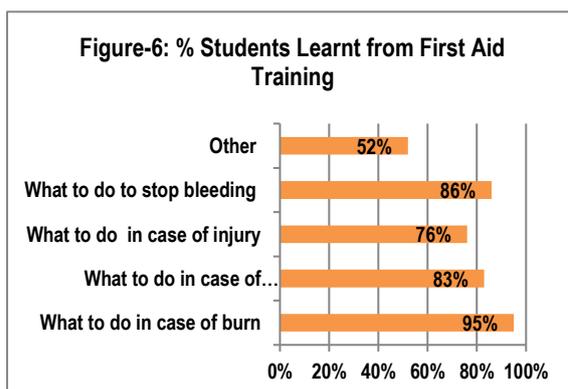
School Based Disaster Risk Management Training

Out of total 313 respondents, 88.18% training participating students mentioned the learning from School Based Disaster Risk Management Training. Of which, 100% learnt what to do during the event of disaster, 87% explained preparedness and response mechanism of fire hazards, 68% explained preparedness and safety from thundering. A total of 46% explained preparedness measures on floods, cyclones and landslides (Figure-5). The key reason for higher percentages of learning is the students observed more learnt from the practical session through simulation exercise about what to do for school based risk disaster management.



First Aid Training

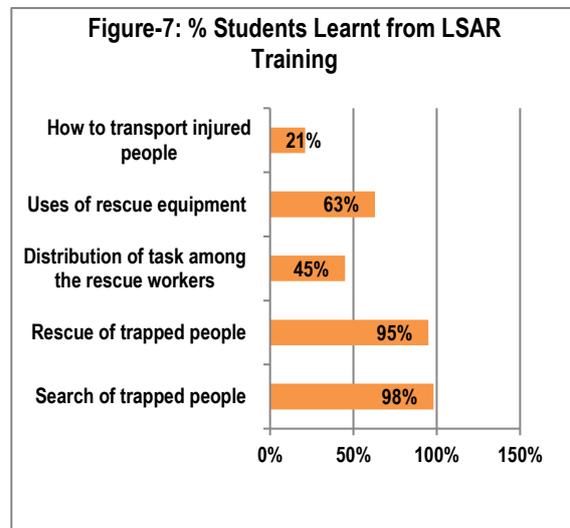
Among the participating students, 97% recalled their participation in the FA training. Out of which, 95% were able to explain the provision



of first aid in case of burn; 86% explained how to provide first aid to stop bleeding; 83% explained how to provide first aid for bone fracture; 76% described how to provide first aid for injury; and 52% described to provide first aid for other cases included CPR methods; what to do in case of choking, shock, snake bite (Figure-6). Remarkably, comparatively majority of the participants observed can skillfully explain the first aid of which they learnt out of practical session from first aid training.

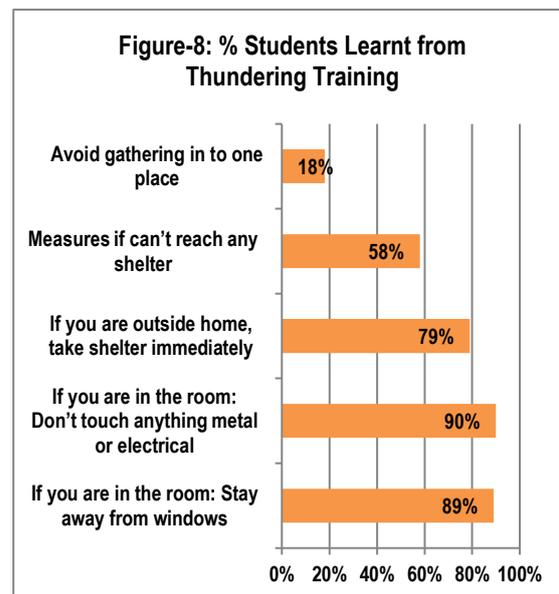
Light Search and Rescue Training

Compared to first aid training, 66.45% participants able to explain the learning from LSAR training. Out of which, 98% described how to search trapped people; 95% explained the method of rescue of trapped people; 63% described the use of rescue equipment; 45% explained how to distribute tasks among the rescue worker and 21% able to describe how to transport injured people. Overall, the participants observed not that much learnt and remember the technical aspects, while, able more to explain the operation aspects of LSAR (Figure-7).



Orientation on Thundering

In regards to orientation on thundering, data revealed that 82% respondents informed that they have participated in that training. Out of 82%, 90% able to explain don't touch any metal or electrical objects during thundering; 89% explained to stay away from window; 79% explained to take shelter immediately in case of outside home; 58% described the measure that needs to be taken in case of scarcity of shelter; and 18% informed to avoid gathering into one place during the event of thundering. Overall, the data represent that about 80% participants remained active and able to explain important measures that necessary for safety during the event of thundering (Figure-8).



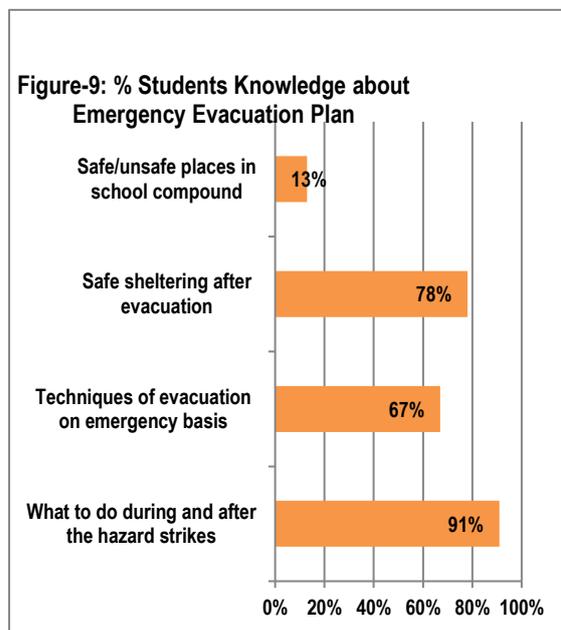
4.1.3. Students' Knowledge on DP Plan

The survey data revealed that 67% students able to recall DP plan, 14% can't remember the DP plan and 19% don't know about this plan. Out of 67%, majority (87.08%) described the activities for disaster preparedness; 70.33% explained emergency evacuation route; 57.42% informed about schools' structural risk reduction and only 8.61% reported that DP plan has

activities about emergency management. According to the project report, the DP plan was prepared by some students and teachers following one day session. However, once after the preparation of the plan, the plan was not shared with all students and teachers and reviewed during the project period.

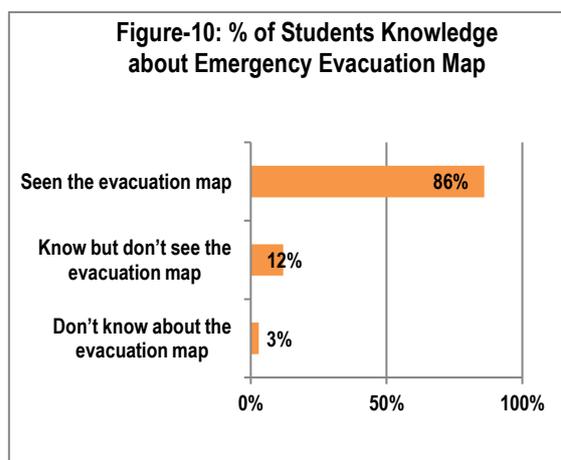
4.1.4. Students' Knowhow on Emergency Evacuation Plan

Data revealed that 96% respondents know emergency evacuation plan; while, 3% couldn't exactly recall the same. Rests of the 1% couldn't recall the emergency evacuation plan. Out of 96%, 91% described that the emergency evacuation plan explained what to do during and after hazard strikes; 67% explained the techniques of evacuation on emergency basis. Rest of the 13% explained the safe and unsafe places in the school compound (Figure-9). Thus, overall, the efficiency for the knowledge level stands for only 13% considering the overall process and plan for emergency evacuation. To know what to do during and after hazards, actively related with the information of safe and unsafe places to consider during emergency evacuation.



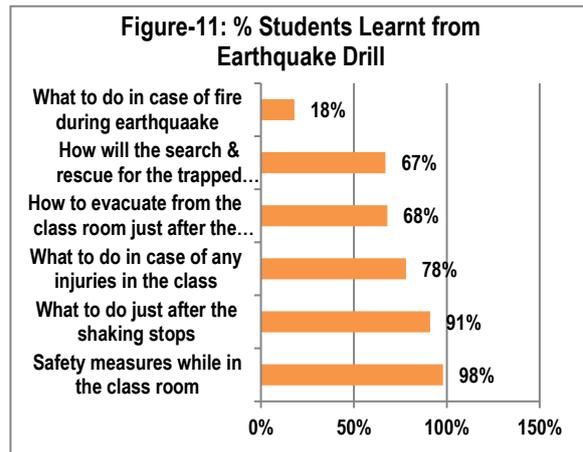
4.1.5. Students' Knowledge on Evacuation Map

Following the emergency evacuation plan, there is an evacuation layout map as developed by the hired consulting firm and placed in the common place at each implementing school. During interview, 86% respondents informed that they have seen the evacuation map and know the physical locations of the emergency evacuation routes. Whilst, 12% known to the emergency evacuation map but don't see the same. Rests of the 3% don't know the emergency evacuation map and don't see the same (Figure-10).



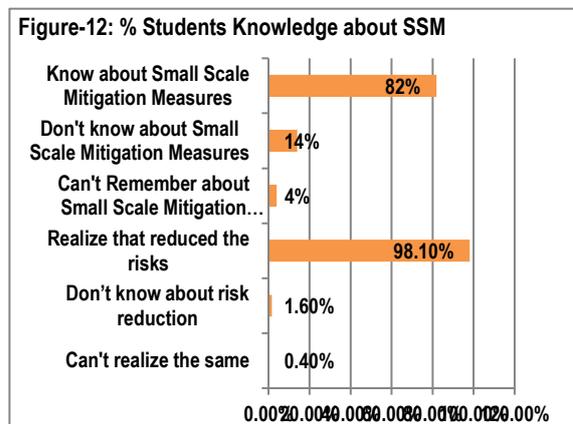
4.1.6. Students Learnt from Earthquake Drill

In regards to students learning from earthquake drill, data revealed that 96% expressed that they know the drill; 3% can't remember the activity and 1% don't know it. Out of 96%, majority of them (98%) observed able to explain the safety measures in the classroom during earthquake; just after shaking stops what to do explained by 91%; in case of injuries in the class what to do explained by 78%; 68% explained how to evacuate from class room just after the shaking stopped; 67% explained how to start search and rescue of the trapped people; 18% explained what to do in case of fire during earthquake (Figure-11).



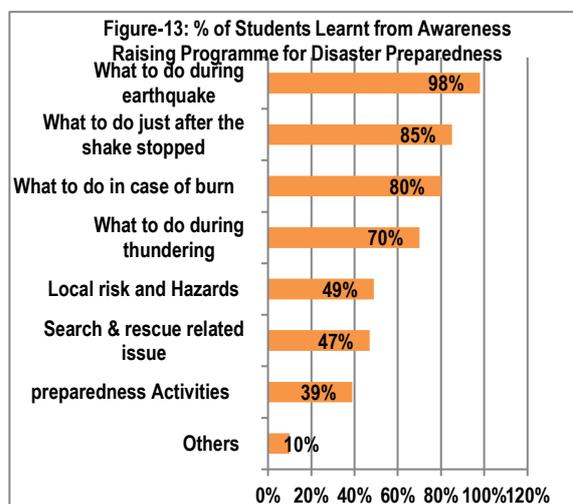
4.1.7. Students' Knowledge on Small Scale Non-structural Mitigation Measures

During interview, data revealed that 82% students have known small scale non-structural mitigation measures (SSM). While, 14% don't know SSM and 4% can't remember that interventions. It is to mention here that the respondents who don't know SSM revealed after discussion that they don't know. However, respondents claimed after detailed discussion that they were involved in the activity, right now they can't remember. Among the 82%, 98.10% realized SSM reduced the risks of the students, 1.60% doesn't know risk reduction, and 0.40% can't realize that SSM can reduce the risks (Figure-12).



4.1.8. Students Learnt about Disaster Preparedness from Awareness Program

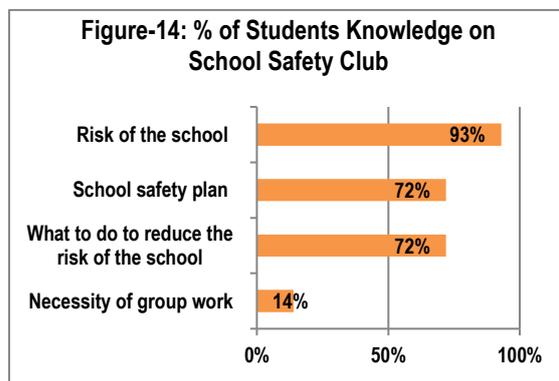
According to the discussion during interviews, 98% students informed that they have learnt about what to do during earthquake from awareness program of SBDRR project. 85% recalled that they learnt what to do just after shaking stopped. 80% explained what to do in case of burn as learnt from awareness program from the project. 70% learnt what to do during thundering; followed by 49% about local risks and hazards; 47% search and rescue related issues; 39% learnt about disaster preparedness activities and 10% informed not to stay outside during thundering, don't panic during shaking, etc. (Figure-13). Notably, students participated



in the series of trainings and learnt the same activities, while similar students didn't receive all the trainings and not learnt all the disaster preparedness activities fully from the trainings. However, they have also learnt from awareness program as facilitated from the project.

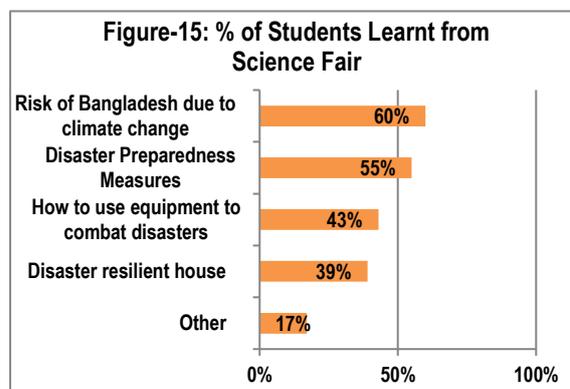
4.1.9. Students' Knowledge on School Safety Club

Following the interview questions, 56% students confirmed that they know the School Safety Club (SSC). Rest of the 44% replied that they don't know the SSC. Afterwards, out of 56%, 93% informed that SSC concerned about the risks of school aiming to reduce the same and increase the safety for the pupils. Overall, 72% informed that there is a school safety plan which they have titled as DP (Disaster Preparedness) plan for school as was prepared following/applying some VCA tools. Also, they (72%) have explained that the SSC deals with what to do to reduce the risks of school. In doing the risk reduction activities, 14% respondents explained the group works and activities as conducted during the group works (Figure-14).



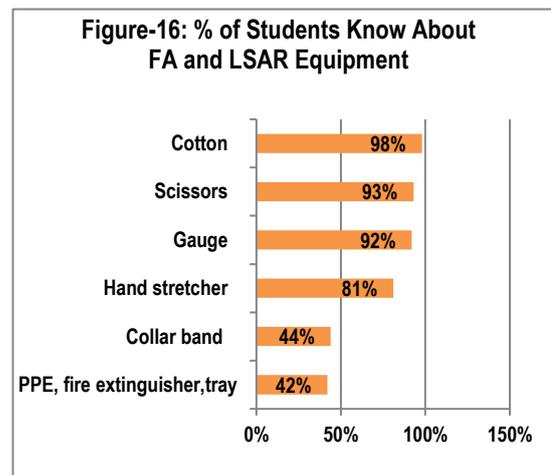
4.1.10. Students' Involvement in Science Fair

During the project period, there was a science fair to demonstrate the DRR related knowledge and practices to sensitize the students, teachers and guardians. Following the same, 59% students replied that yes there was a science fair. During detailed discussion, out of 59%, 60% informed that they have learnt about the risks of Bangladesh due to climate change; 55% explained the disaster preparedness measures as learnt from the science fair; 43% explained how to use equipment to combat disasters; 39% recall the disaster resilient housing; 17% described other topics related to DRR (Figure-15).



4.1.11. Students' Knowledge on FA and LSAR Equipment

SBDRR project provided equipment to each school for First Aid (FA) and Light Search and Rescue (LSAR). During interview, 95% students informed that they knew the FA and LSAR equipment. While, 5% respondents replied that they don't know it. Out of 95%, majority (98%) of them informed that project provided cotton for first aid; 93% informed scissors; 92% mentioned gauge; 81% informed about hand stretcher for rescue; 44% informed about collar band; and 42% informed about Personal Protective Equipment (PPE), fire extinguisher, and tray (Figure-16). In regards to location of the equipment 92.6% students (out of that 95%) informed that teacher kept the received equipment in empty class room, or head master's room, or room besides the head master's room.



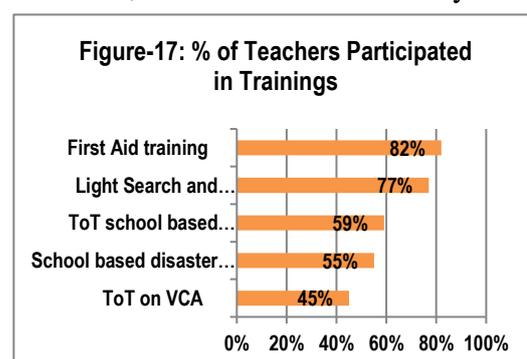
4.1.12. Students' Knowledge on IEC Materials

During the interview with the students, following the question, 96% respondents informed that they knew IEC materials as provided by the SBDRR project. From the known respondents, 89% informed that they saw the first aid guide; 80% informed about DRR and DP posters; 69% replied about DRR and DP leaflets; 55% informed about LSAR guide; 31% informed about DRR manual; and 10% informed about other information as learnt from the IEC materials. Notably, the students' response on IEC materials actively relevant with the quantity of materials distributed, mode of distribution, use, and practice and learning from these materials.

4.1.13. Teachers' Knowledge on SBDRR Project

A total number of 22 teachers (out of trained 87) interviewed to capture the status of their inputs on SBDRR project activities. Among the survey respondents, 64% observed male and 36% female. Notably, the teachers received the training from the project to facilitate the same training to the students. However, the learning of teachers throughout the training and other project activities were disseminated among their family members, neighbors and other teachers at school.

Survey data revealed that 100% teachers responded that they know the SBDRR project being implemented at their schools also they have confirmed that they have directly participated in the project activities. Among them, 100% recall mock drill; 95% informed that they have participated in ToT and other trainings; 64% informed about DP (Disaster Preparedness) plan; 55% responded that they are aware of the uses of equipment to combat disasters; 50% informed about SSM for school DRR, VCA process, and awareness activities related to DRR. Only, 5% described other issues related to DRR (Figure-17).

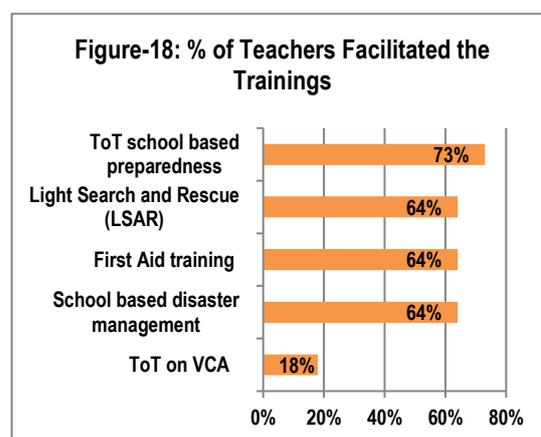


4.1.14. Teachers' Participation in Trainings

Following the discussions, 100% teachers recall that they have participated in different trainings as organized by SBDRR project. Among them, 82% informed about their participation in FA training; 77% in LSAR; 59% in ToT on School Based Disaster Preparedness; 55% informed about School Based Disaster Risk Management; and 45% explained their participation in orientation on VCA process (Figure-20). Notably, different teachers have participated in different trainings as organized by the project. Therefore, the responses varied according to percentages represented their varied participation in couples of trainings.

Teachers Facilitated the Trainings

The key objective of organizing ToT on SBDRR for the teachers was to develop them as local instructors so that they can facilitate the same training to other students and teachers at their respective schools. Upon discussions, data revealed that 73% teachers (who have ToT) have facilitated sessions effectively in the training on School Based DRR; It is to mention here that the SBDRR project organized the trainings and the trained teachers facilitated effectively couple of session along with UDRT facilitators to complete the trainings for teachers and students.



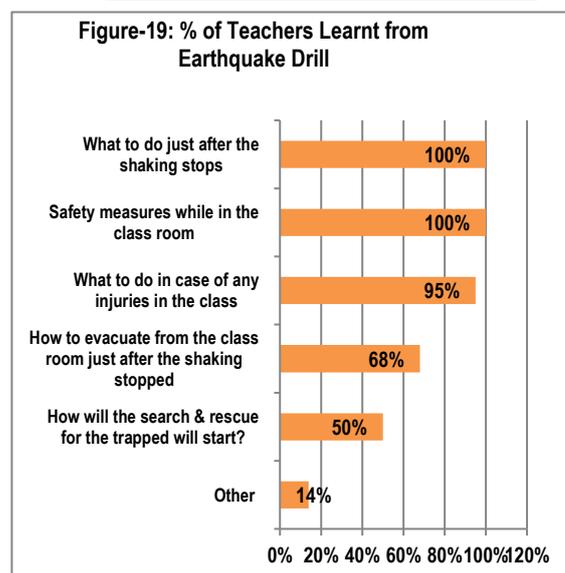
4.1.15. Teachers Learnt from VCA Orientation

Data revealed that among the 10 participants, all of them explained that they have learnt to conduct mapping of vulnerability and capacity; also, they learnt for listing of hazards as common at their areas. Only, 40% recalled and explained their learning on to develop the action plan for DRR to reduce the vulnerability and enhance the capacity to combat the listed hazards.

Mapping of vulnerability and capacity	100%
List of hazards	100%
Action plan for DRR	40%

4.1.16. Teachers Learnt from Earthquake Drill

During survey 100% teachers (22) informed that there was earthquake drill conducted at their schools. Also, all of them explained what to do just after shaking stops, safety measures while in the class room. What to do in case of injuries in the class room explained by 95% respondents; followed by 68% explained how to evacuate from class room just after shaking stopped. How the search and rescue will start for trapped people



explained by 50% respondents; and 14% explained other areas of earthquake drill (Figure-19). Notably, from the practical sessions oriented mock drill the participants learnt more through visual observations compared to only lecture dependent sessions.

4.1.17. Teachers' Knowledge on SBDRR Project Activities

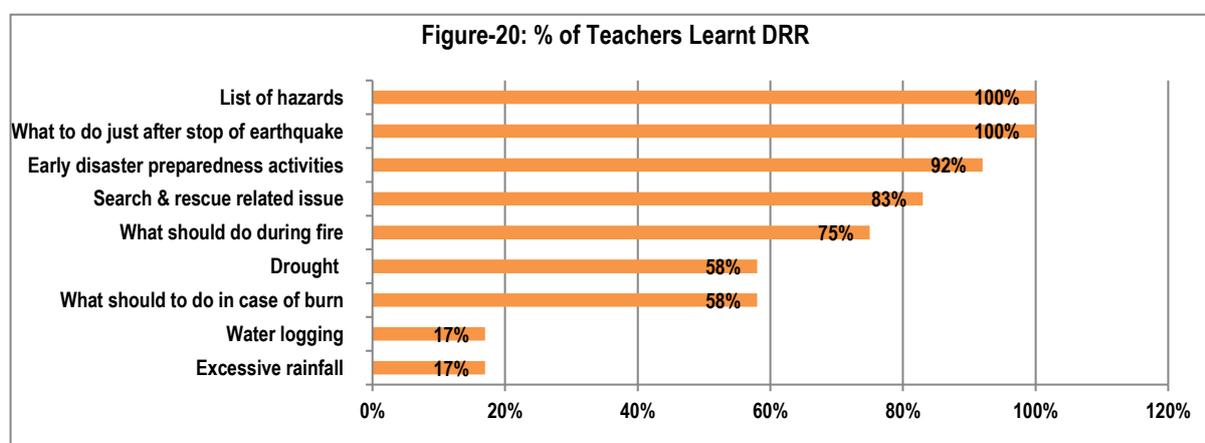
Upon discussions, teachers responded that they know other activities of SBDRR project. Out of which, 73% responded that there is a DP plan for school; while 14% said no; and 14% don't know it. Majority (91%) of the teachers knew emergency evacuation plan, while, 86% seen the emergency evacuation layout map and routes as displayed at their schools. In order to reduce the disaster risks, 95% teachers knew that project implemented small scale non-structural mitigation measures at their schools and all of them believed that risks have been reduced by these activities (Table-2).

Table-2: Teachers Knew SBDRR Project Activities.

Responses	Is there any DP Plan	Emergency Evacuation		Small Scale Non-structural Mitigation Measures (SSM)	
		Know the Plan	Saw the Evacuation Map	Know that SSM Implemented	Considered that Risk Reduced by the SSM
Yes	73%	91%	86%	95%	100%
No	14%	9%	9%	5%	0%
Don't know	14%	0%	5%	0%	0%

4.1.18. Teachers' knowledge on DRR from Students' Summit or Exchange Sharing events

Selected teachers from all schools, who have participated in the summit on DRR organized by the project held at National Scouts Training Center, Mouchak, Gazipur; all of them (100%) are



now well aware about the local hazards, what to do just after earthquake and during the fire incident, 92% learnt DRR by early disaster preparedness activities; 83% learnt search and rescue related activities; 75% explained what to do during fire; 58% about drought and things to do in case of burn; 17% explained what to do in the event of water logging and excessive rainfall (Figure-23).

4.1.19. Teachers' knowledge on Project Materials

Survey data revealed that 100% respondents observed first aid guide; followed by 86% observed LSAR guide; 73% observed poster related to DRR; 64% received leaflets on DRR and earthquake; 27% observed manual on DRR; and 14% observed. It is to mention here that responding teachers received training guide as participated in the respective trainings. Also, they have observed posters, leaflets, and DRR manual as of awareness materials. The numbers of teachers' observance actively correlated with the plenty of awareness materials printed, distributed and displayed at schools. However, each training participants received at least one copy of each training materials as indicated higher percentages.

4.1.20. School Disaster Management Committee in Operation

In order to evaluate the activeness of School Disaster Management Committees (SDMC), FGDs were conducted at schools. The FGD data revealed that 07 SDMC members were able to inform that since when the SMDC was formed. Based on their information we found that on an average since last 17 months the SDMCs were formed at all 10 schools. There are 60.70% SDMC members observed male and 30.30% female. Upon discussion, participants informed that all (100%) SDMCs have DRR/DP plan following which they will implement the school DRR activities. The members participated in the meetings of SDMCs on quarterly basis. However, they informed that they have the meeting minutes as well. All the SDMCs informed that they have discussed trainings, small scale non-structural mitigation measures and mock drill during their meetings. Each SDMC is comprised of representatives from DEO, FSCD, BDRCS Gazipur unit, other organizations working with schools in that area and school. Therefore, DEO was informed by BDRCS unit or representative from DEO regarding the meeting decision.

Also, they have responded that DP plan is there but they didn't know the details. The SDMCs (100%) were engaged in setting up of Disaster Learning Centers (Table-3).

Table-3: Status of SDMC Operation Responses.

Responses	No. of SDMCs	%
SDMC members informed that they have discussed trainings, small scale non-structural mitigation measures, and mock drill in SDMC meetings.	10	100
SDMC meeting minutes belong to BDRCS	10	100
SDMC members informed that they don't share the SDMC meeting decisions to DEO.	10	100
PD Plan is there but SDMCs don't know the details.	10	100
SDMCs worked for DLC Setup	3	100

In regards to FA and LSAR Kits, 75% SDMC members in all the 10 FGDs informed that they have received the kits. While, to keep the kits in the store, SDMCs informed that 01 school kept in a safe room, 03 schools in special room, 01 school in primary health care room, 01

school in the room beside the Head Master's room, 03 schools in teachers' common room, and 01 school kept temporarily in Assistant Head Master's room (Table-5).

Table-5: Status of Locations of FA and LSAR Kits.

FA and LSAR Kits Locations	No. of Schools	%
In a safe room	1	10
In a special room	3	30
Primary Health Care Room	1	10
Store room beside the room of Headmaster	1	10
Teachers' common room	3	30
Temporarily kept at Assistant Head Master's room. After completion of new building they allocate a room to keep finally.	1	10

4.1.21. School Safety Club in Operation

The FGDs were conducted at all 10 schools with the School Safety Club (SSC) Members to map out their operation for DRR and safety for students. Data revealed that all the SSC conducted the monthly meeting on regular basis. Among their conducted activities, 65% members informed that they have conducted the sharing of the training to other students who didn't participate in the training. They (70%) have shared their learning from DRR summit, and 75% members shared the learning from the mock drill. For raising students' awareness on DRR, 70% members shared the information at classes. The SSC members observed operating the DLCs at the 03 schools where the DLCs have been established. In regards to DP planning exercises, similarly, the SSC members observed aware but not involved in implementation of small scale non-structural mitigation measures at all schools. Similarly, none of the SSC members facilitated the uses of equipment from kits to protect the students from disasters (Table-6).

Table-6: Status of School Safety Club in Operations.

School Safety Club Activities	No. of Schools	Progress	Units/Remarks
The resolution of School Safety Club Monthly Meeting belonged to BDRCS	10	100%	Schools
Sharing learning from trainings	10	65%	Club members
Sharing learning from DRR Summit	10	70%	Club members
Sharing learning from Mock Drill	10	75%	Club members
Raising DRR Awareness on DP/DRR/DRM at the classes	10	70%	Club members
Operating the Disaster Learning Center	3	100%	Schools
Conducting the School based DP Planning	10	50%	Club members

4.1.22. Small Scale Non-Structural Mitigation

The project has provided technical assistance and seed money in materializing the small-scale mitigation support. However, solar operated water supply system was installed in selected three

schools in addition to the small-scale mitigation activities. This will ensure the access to the safe drinking water. The proposed project will consider improving water, sanitation and health aspects, as the schools are generally used as temporary shelter during the disasters and these interventions also support during the emergency response. Besides, during disaster, if the power supply is disrupted, students, even neighboring people will be able to collect safe water from solar power operated water supply system. It is noted here that small scale non-structural mitigation was done by joint contribution (school and project).

Sl#	Name of School	Work done under small scale mitigation
01	Joydebpur Govt. Girls' High School	Improved sanitation facilities at school and non-structural mitigation i.e. fixing non-structural items
02	Rani Bilas Moni Govt. Boys' High School	Improved sanitation facilities at school
03	Harinal High School	Non-structural mitigation i.e. fixing non-structural items
04	Kazi Razia Sultana Girls' High School	Repair of the roof of school building
05	Shaheed Smrity High School	Repair of store room for keeping FA and LSAR kits & Guardian Shed
06	Tongi Pilot High School & College	Development of drainage system
07	Safiuddin Sarker Academy & College	Establishing a water purifier filter for ensuring safe drinking water
08	Chandana High School	School Playground raised, and fencing the balcony
09	Noagaon M A Mazid Mia High School	Improved sanitation facilities at school and non-structural mitigation i.e. fixing non-structural items
10	Salna N M High School & College	Construction of safety tank and drainage system

4.1.23. Non -Participant Students Learning about SBDRR Project

In order to capture the knowledge of students who didn't directly participate in any SBDRR project activities, we have conducted 10 Focus Group Discussions (FGDs) with them at 10 schools where the project being implemented. Among the FGD participants, 58% informed that they knew the SBDRR project activities. Out of which, 75% participants informed about the mock drill; followed by 65% informed that they have seen DRR awareness raising materials and activities; as only implemented in 03 schools, 58% respondents in that 03 schools informed about the Disaster Learning Center (DLCs); 55% participants informed that their class friends attended the DRR Summit; 50% know that in their school, there is a school safety club. However, none of the FGD participants could recall FA and LSAR equipment; undertaken small scale non-structural mitigation measures, and school based DM/DP planning. Remarkably, 50% FGD participants observed able to explain their learning on what to do during thundering, earthquake, burn incident, faint case and injury.

4.1.24. Disaster Learning Center Facilities

The evaluation team visited the Disaster Learning Centers (DLCs) and conducted FGDs with the available students (who didn't directly participate in any training) during the field observations. Following the discussions, 75% participating students responded that DLC is a common space for them to learn about DRR. In more detailed discussions, they (75%) have informed about their learning on FA and LSAR. In one DLC, participants informed about their learning on school disaster risk management. Also, 75% participants explained the mock drill on earthquake and fire safety. During FGDs, the evaluators observed DRR materials are available in all the DLCs, Also, observed that all the DLCs have completed sitting arrangement with TV screen and audio system while the operation not started yet as informed by the participants and confirmed by the operation in charge (SSC members). Also, 100% SSC confirmed that they are managing the DLCs; however, they were not given orientation on how to operate and manage the DLCs (Table-7).

Table-7: Status of Disaster Learning Centers Facilities.

DLC facilities and Services	Findings	Remarks
Space for students to learn about DRR	75%	FGD participants
Students exchange sharing for learning on:		
First Aid, LSAR	75%	FGD participants
School based Disaster Risk Management	One DLC (65%)	FGD participants
Mock drill on Earth Quake, Fire Safety	75%	FGD participants
Availability of DRR documents:		
DRR related reading materials	100%	Evaluators
DRR Poster	(100%)	Evaluators
DRR Festoons	In one DLC	Evaluators
Physical Facilities:		
Sitting arrangements	100%	DLCs
TV Screen and audio system for showing DRR documentary	100% (not in operation)	DLCs
School Safety Club Managing the DLC	Yes (100%)	DLCs
School Safety Club given orientation on management and operation of DLC	No (100%)	School Safety Club Members

4.1.25. Guardians' Learning on DRR

In regards to guardians' knowledge building on DRR, 10 FGDs were conducted at 10 schools with the guardians to capture their learning. The key consideration was that how far they have learnt from quarterly guardians' meetings. Data revealed that only in 01 school the FGD participants were able to recall their participation in one discussion meeting. Following the project plan about guardian's



quarterly meeting, the guardians observed not able to recall the quarterly meetings and not confirm their participations in those meetings while, 50% guardians explained their learning on FA, LSAR, and mock drills. Some of the guardians (30%) observed more advanced in learning as they have sent their children at the DRR summit or mock drill or in training and learnt from them. Above 50% of the guardians informed about learning from DRR IEC materials as their children brought home from schools. While, in regards to DLC, SSC, DP plan, and SSM, the guardians observed not able to recall during discussions in all 10 schools (Table-8).

Table-8: Status of Guardians Learning on DRR.

Areas	Learning by (%) of Participants	Comments
Learning on FA, LSAR, Mock Drill	50%	
Advanced in learning and able to explain FA, LSAR, mock drill and DRR summit	30%	
Learning from DRR IEC materials	50%	
Disaster Learning Center (DLC)	0%	
School Safety Club (SSC)	0%	
School based DP Planning and Implementation	0%	
Small Scale Non-structural Mitigation (SSM) measures for school DRR	0%	

5. ANALYSIS OF FINDINGS

The analysis of findings was conducted based on the evaluation criteria and based on disaster cycle. The disaster cycle is considered aiming to ensure the introduction and practice of resilience and culture of safety.

5.1. Relevance

The project has identified and piloted creditable approaches in a mix of geographical locations (urban and sub-urban settlement) and multi-hazard context (earthquake, fire and thundering) at Gazipur City Corporation and Tongi sub-urban area. Institutional preparedness and responsiveness have been a critical gap in the overall risk reduction effort in Bangladesh which

has been selectively piloted by the project. It was also implemented in the most vulnerable wards of the City Corporation and sub-urban area respectively.

Gazipur City Corporation is located on a seismically active region with unplanned development. Gazipur, the only hill settlement included in this project is also located on a highly seismically active zone where long insurgencies, very poor development and limited communication resulted in high vulnerability of the both new settlers and marginalized communities. The project was consistent with national and Sendai Framework priorities for action. The SBDRR project funding was useful for continuing and expanding some of the core activities and approaches initiated by BDRCS. The project was built upon local capacity of the vulnerable communities. Scale of disaster is the most important parameter which should be pre-determined while designing a DRR program. Effectiveness of preparedness activities largely depends on their ability withstand scale of hazard. The project was selective in addressing causes of vulnerabilities. The context clearly suggests usefulness of increased number of volunteers but the evaluation team thinks that the volunteer's team could have been properly coordinated and linked to work together.

Satisfaction: During discussion with the heads of schools, they have expressed their satisfaction about the SBDRR project and its activities. Commonly, they expressed that the first aid training has supported them a lot as students facing difficulties that resolved with the proper first aid support as was not available there before. Even they said previously their practice of aid support to the students was improper and risky which they now realized after learning from the project activities. Moreover, schools with solar operated water supply support expressed their gratitude to the SBDRR project as the students are now with sufficient drinking water support along with self-sufficient solar operated system as load shading remained common at their areas. They have also recognized the support of FA and LSAR kits considered as an asset for them to give the DRR support to the students for the longer run.

The students expressed their satisfaction on learning about DRR through various activities from the project. They also appreciated the forum like SSC and DLC as sustainable continuation of culture of resilience and safety for the students at their schools. Also, they explained that they are practicing their learning elsewhere upon getting their opportunity for reducing the sufferings of the people. More students, observed eager to get enroll into the training, after learning from their class friends.

The guardians explained that after receiving the training and participating in the summit, science fair, and mock drills, their children are educating other members of the family about the same practice towards DRR. They also shared their learning with the relatives and neighbors on the same. They wish to continue their children's involvement with similar DRR activities for long duration.

5.2. Effectiveness

The project was significantly successful in building awareness and mobilizing the key actors at various levels. Many inactive but critical factors such as trained school teachers, member of

school safety club and local volunteers (UDRT) are now mobilized. The following paragraphs summarize the observations of the evaluation team by each result and component of the project.

Role of UDRT: The volunteer mobilization was perhaps the most effective result of the project, which has already and will significantly enhance the scope of reducing risk of schools. Under SBDRR project, 25 volunteers (UDRT) were trained on different issues i.e. SBDRP, First Aid, Light Search and Rescue, VCA and Basic Humanitarian Response. Those volunteers conducted the same trainings in schools and played the role of master trainers. They contributed significantly in developing the DP plan in schools. Besides, they played a vital role in organizing the mock drill in schools. In future, BDRCS will be able to continue the follow-up activities of the project with the assistance of those volunteers.

Awareness raising on disaster preparedness among the students: BDRCS has been able to do the awareness raising on disaster preparedness among the students under the project SBDRR. This component of SBDRR can be treated as the benchmark of the project which directs the Replicability of SBDRR further in different locations. The survey data revealed that:

- Out of total 313 respondents, 88.18% training participating students mentioned the learning from School Based Disaster Risk Management Training. Out of which, 100% learnt what to do during the event of disaster, 87% explained preparedness and response mechanism of fire hazard, 68% explained preparedness and safety from thundering.
- Among the participating students, 95% able to explain provision of first aid in case of burn; 86% explained to provide first aid to stop bleeding; 83% explained to provide first aid for bone fracture; 76% described to provide first aid for injury; and 52% described to provide first aid for other cases included CPR methods.
- Compared to first aid training, only 66.45% participants able to explain the learning from LSAR training. Out of which, 98% described how to search trapped people; 95% explained how to rescue of trapped people; 63% described the use of rescue equipment.
- The survey data revealed that 70.33% explained emergency evacuation route.
- Data revealed that 96% respondents know emergency evacuation plan. Out of 96%, 91% described that the emergency evacuation plan explained what to do during and after any hazard strikes; 67% explained the techniques of evacuation on emergency basis.
- The findings of FGD with the students who have not participated in any training, most of them (Grade: High- 65-75%) in all schools could explain what to do during disaster i.e. earthquake, thundering, burn case and faint case. In response to the query, they mentioned that they have learnt it from mock drill, awareness raising leaflet, discussion with friends (who have received training).

Learnt and Respond

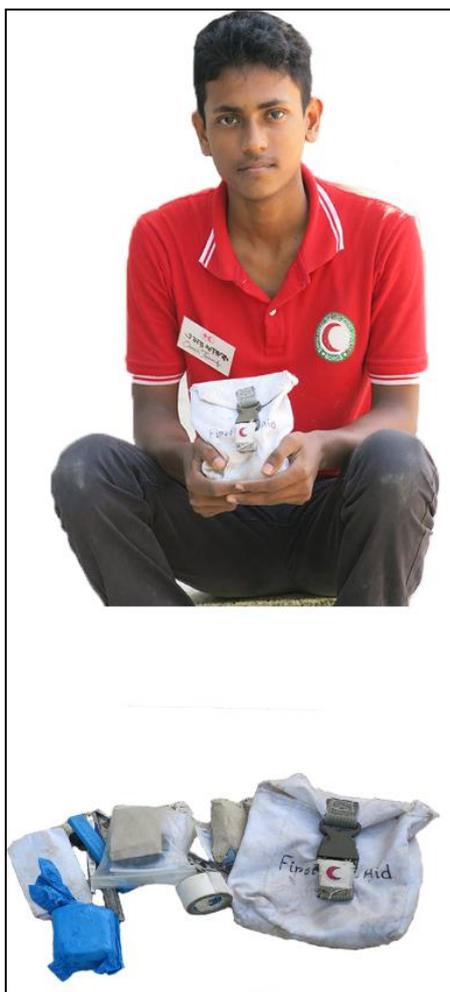
On 11 September 2016, a major fire accident broke out at Tongi, Gazipur. At least 24 people were killed and more than 50 people injured when a boiler at a packaging factory exploded. The explosion triggered a massive fire and led to the partial collapse of the three-storied factory building of Tampaco Foils Ltd in the Basic industrial area in Gazipur, some 20km north of the capital Dhaka. Officials reported that about 100 people were working at the factory when the explosion took place early in the morning (6:15am). The life-saving forces like Fire Service and Civil Defense responded immediately, and so did Bangladesh Red Crescent Society (BDRCS). The Unit Disaster Response Team (UDRT) of Gazipur unit came along with the trained school volunteers.

The most interesting part, however, was to discover the brave and enthusiastic boys and girls joining the response activities from the nearby 'Tongi Pilot High School' who are studying in Grade 8 or 9. Twenty-five students were trained under BDRCS' School based Disaster Risk Reduction (SBDRR) project on Basic Disaster Risk Management, First Aid and Light Search & Rescue. The average age of boys and girls participated in the response activities is not more than 14. Surprisingly, they were not panicked or traumatized by the disastrous event. One of the volunteers expressed, *"I was nervous but I knew what to do. UDRT members were there. So, I tried to help them, be safe and abide by the orders. In the training, we learned safety first so I was well aware of my safety."*

Rakibul Islam, one of responders from the same school said, *"I felt a bit nervous when I saw the dead bodies and wounded persons. But I remembered my lessons from the trainings. I was there to help people and I was told that I would have to witness something very terrible. But, I was ready"*. Volunteers felt very confident about themselves since they could practically respond to a disaster. Moreover, they could put the lessons into practice.

Another responder from the same school put his feelings in this way, *"I had a beautiful feeling after the completion of response activities. The feeling can't just be expressed with any word from the dictionary"*.

A little effort to make the future leaders of our country skilled, human and nonetheless resilient seems to work efficiently



I LEARNED ABOUT THE NECESSITY OF FIRST AID KIT FROM THE TRAINING I RECEIVED FROM THE RED CRESCENT. I MANAGED TO RESPOND WHEN MY FATHER ONCE CUT HIS HAND. I CARRY MY SELF-MADE FIRST AID KIT WITH ME IN MY SCHOOL BAG, BECAUSE I REALIZE THAT EMERGENCY SITUATION CAN COME WITHOUT ANY PRIOR NOTICE AND THE KIT CAN BE VERY USEFUL

- OMAR FARUQUE
MONEM, CLASS IX,
SHAHID SMRITY HIGH
SCHOOL

Mock drill: Mock drill at school premises was highly appreciated by all the stakeholders i.e. SMC, SDMC, students, guardians and DoE. The students who did not get the opportunity to participate in the trainings they have learnt the disaster preparedness messages from the drill. Since all the viewers observed the simulation of providing first aid, search & rescue, and using method of equipment, it has been treated as the best learning tool. Out of 96%, majority of them (98%) observed able to explain the safety measures in the classroom during earthquake; just after shaking stops what to do explained by 91%; in case of injuries in the class what to do explained 78%; 68% explained how to evacuate from class room just after the shaking stopped; 67% explained how to start search and rescue of the trapped people.

5.3. Efficiency

The project had successfully set up management structure, foundation training, engagement with community and institutions, reporting system and work plan. Limited evidence was found where management processes has significantly hampered project implementation. The project had successfully set up management structure, foundation training, and engagement with schools and concerning Institutions (i.e. DoE, FSCD), reporting mechanism, work plan and partnership. Limited evidence was found where management processes have significantly hampered the project implementation. The project plan was implemented as per the schedule, although few systems related documents have not been developed i.e. Monitoring Mechanism, Exit Plan.

The operational problems were limited and quickly solved by the Unit level BDRCS office. Most of schools organized additional fund to implement the non-structural mitigation. The project staff both at NHQ and field levels were committed and value-led. Field staff unanimously felt that BDRCS NHQ and IFRC were extremely supportive and responded quickly to even minute problems. For example, staff of other project of BDRCS (including IFRC staff) conducted VCA training for UDRT and orientation on VCA process for local instructors (teachers) and assisted the project team in developing the DP plan for one project school.

BDRCS faced a big challenge that is very common in schools. Scope of working in school with adequate time was one of the biggest challenges. Long vacation, long non-schooling period (December and January), frequent examination, involvement of the teachers in schooling activities were the major constraints in implementing the project activities. However, intellectual guidance from the local and NHQ leadership could have provided field staff with a broader perspective on the project and helped them link the project activities better.

Human resources support for the project was limited as well. Only two full time staff was deployed at field level for this project who are new in DRR field. The head of unit office (ULO) were assigned for 50% time. And, the Project Manager (PM) and a Program Officer were in NHQ of BDRCS. Moreover, he is head of UDDR unit of BDRCS.

5.4. Outcome and Impact

Outcome

The outcome of the project actively correlated with the overall performance of accomplishments. So far the project activities implemented observed at the introduction level during field evaluation. Based on the survey findings, the students learning rate observed above 65%. The students observed disseminating the learning to others. The practice of the learning was also evident as situation required. Similarly, the teachers also observed learnt out of their ToT and other trainings as participated at schools with the students. The behavioral changes of the project participants initiated with their observations on simulation exercises of earthquake drills. The implemented small scale non-structural mitigation measures are benefiting schools, while, the participants observed were not able to relate this outcome with the risk reduction interventions for schools. Some of the SSM observed are not related with the DRR rather for infrastructural improvement. The School Safety Club and Disaster Learning Center observed at introduction level, therefore, the outcome not realized rather output is that students are gathering there to discuss the DRR related issues. Remarkably, outcome of this effort realized that the culture of resilience and safety is already initiated by this forum, while, the continuation of tenure after exit of project remained under consideration. For the social structure, SDMC and School Safety Club observed are existing respectively at the management level and students' level. Thus, operation of SDMC needs to facilitate to develop their skills for further sustainability. For example, instead of separate SDMC meeting, school can hold their DRR discussions during the SMC meetings to implement the DP plan and enhance their practice on DRR. Similarly, the facilitation needs for School Safety Club for enhancing their skills for facilitation of safety measures for the students and continuation of the culture of resilience and safety.

NABILA HARUN

**Class X,
Kazi Razia Sultana Girls' High School**

Under the SBDRR project I have been trained on Basic Disaster Risk Management (BDRM), First Aid (FA), and Light Search and Rescue (LSAR). I have learned what I have to do while feeling a sudden shake of an earthquake.

I know when to leave the room and when to take the position of 'Drop, Cover, and Hold on'. The trainings taught me what I must do before, during, and after a disaster. We cannot prevent disasters from happening, so we need to be prepared for them to reduce our risks.

Most of us in the society have the basic knowledge on how to react when any disaster strikes and what to do when we see danger. This informal knowledge has been refined broadly by Bangladesh Red Crescent Society (BDRCS). It was known to me that when I see someone suffering, I have to serve him/her; but what new to me was that the first and foremost priority must be given to my own safety. If I get into trouble while serving a victim, I will be doing



nothing but slowing down the emergency response operation. Our textbooks contain such knowledge but in a limited amount.

Now I know the importance of identifying relatively safe places and where we can find dry food, clothing, and medicines to distribute among the victims so that they can start recovering soon. I have been fortunate I got full support of my family and that is why I have been able to amuse myself with the trainings and sessions of Red Crescent.

If I compare myself with a student who did not receive trainings offered by BDRCS, among many differences a big one would be the calmness within us, which is very important at the time of emergency response operations. We must keep calm when we face an unpleasant situation, and always be confident and aware of ourselves. I am not sure whether I would have had these in me if I had not received the mentioned trainings.

Allah forbids if any disaster, like an earthquake, occurs in our country, Dhaka, the capital, will be affected the most. Since Gazipur is just at the outskirts of the capital, I can say that I will certainly be ready to provide my service and support to the victims – it will be a great opportunity for me to give value to the trainings I received from BDRCS.

Jean Henry Dunant wanted to serve the humanity. Through BDRCS I am going to follow his steps and serve the people of Bangladesh and beyond for as long as I can.

Impact

The project derived direct and indirect impact for schools and among the involved community people. Therefore, direct impact observed among the teachers and students are:

- The non-project participant students are found aware and learnt about 35% undertaken project activities by observing the Mock Drills, also by exchange sharing with the project participant students, and through SSC, DLC.
- The direct impact observed among the teachers is that the training participating teachers sharing their learning from the training to other non-participant teachers, overall school learnt from mock drills.

The indirect impact observed that:

- The guardians described that their children who participated in the project activities shared the learning and DRR practice at their home with parents, siblings, and neighbors.
- After earthquake simulation, there was a mild seismic pressure at the project areas. The students observed very structured during that event and introduced their learning in the right fashion as they learnt from the project activities.

The overall of impact of structural works impacted the student life of children as 04 schools remained with drinking water sources for the students. Out of which, in one school earlier there was not water supply for the students. The raised school playground, repairing of toilets and windows have reduced their risk from injuries for longer periods.

MD. SAYFULLAH

Class VIII

**Salna NM High School and College,
Gazipur**



From the trainings on Basic Disaster Risk Management (BDRM), First Aid (FA) and Light Search and Rescue (LSAR) offered by Bangladesh Red Crescent Society (BDRCS) in our school I, along with many other students,

have learned about disasters in our country, how to reduce risks, how to prepare for and how to respond to. Now I know the comparatively safer spots of my house which can support us in saving lives from earthquake.

If an earthquake occurs when we are in school, we know how to go to relatively safe places in an orderly manner. The teachers and trainers of BDRCS have discussed, identified and declared the safe areas where we have to assemble. Separate teams have been formed and the responsibilities have been divided. There are first aid team, light search and rescue team, food and shelter team, security team, psychosocial support team, logistics team, firefighter team, communication team etc. I want to be in the first aid team. I have learned about first aid very well.

There is no doubt that I have learned many things. But what I have found most useful about the trainings mentioned above is the knowledge on what to do when simple accidents occur. These accidents can become fatal if right procedures are not followed when treating. For instance, I have learned that if someone faints we must lay the patient on his/her back and keep the feet upwards so that sufficient oxygen quickly reaches the brain. Previously, we used to pour water on the head, rub mustard oil on the feet, etc. – but these obsolete methods are of no use.

My family has supported me a lot in receiving those trainings. If any disaster strikes I will surely go forward to help the victims.

5.5. Sustainability

It is a big challenge to assess the impact of the implemented activities just at the end month of the project period. Even though, the evaluation team noticed some likelihoods of impact from the current project and some examples of immediate results. Selected teachers of schools and volunteer groups trained on disaster preparedness (first aid, search & rescue, advocacy, etc.) are showing traces program impacts. The volunteer group trained in different phases (UDRT and RCY) conducted trainings at schools. They played important role in developing the Disaster Preparedness (DP) plan at schools.

Ownership of the project outcome, institutionalization of the processes initiated by the project, adequate input and follow up mechanisms are some of the key conditions that can make the project outcome and impact sustainable. The review team feels that the inputs for some of the

activities are far less than what is required to make some of the activities continuing beyond the project phase. The Headmaster has knowledge on DP plan of school developed under this project.

The evaluation team found that project activities have built certain degree of eagerness and confidence among the trained students at schools. This has created a sense that when organized—as a group in urban settings—they will have more opportunities to voice their risk and safety related concerns, and be represented in the ongoing risk reduction and emergency preparedness initiatives of government. This would be very valuable achievement for the project.

The evaluation team recommends that BDRCS should develop a comprehensive plan that allows reviewing of impact beyond the project period. The evaluation team thinks that DoE should be involved with a view to making the result of the project interventions sustainable. Bipul Acharjya, Assistant Inspector of DoE suggested to start *a dialogue between BDRCS and DoE as to this*. He said, “If the District Education Officer of DoE issued a letter to schools under this project to organize mock drill as a special event in the annual sports of school, the concerned school authority will treat it as government order. And, since the mock drill is being considered as the most effective awareness raising tool, the anticipated result will be achieved. And, gradually it will be a regular event of schools.”

A project exit strategy refers to a specific plan that describes how the program will end in targeted area and be assuring the achievement of overall objective is not jeopardized. Rather, the strategy will facilitate further progress toward the objective. The goal of an exit strategy is to assure sustainability of impacts and activities after the program has departed. "Exit" refers to the withdrawal of externally provided program resources (material goods, human resources, technical assistance) from the entire program area. As per the Project Proposal an “Exit” was supposed to formulate during Exit phase of the project. But a complete exit plan is not formulated yet. Under the project, physical resources (First Aid and SAR equipment) have been provided in all schools. Special maintenance mechanism will be required functional. Only the Department of Fire Service and Civil Defence (FSCD) or trained volunteers has the required skills to keep those functional.

BDRCS has signed MoU with the school authority to continue the major activities i.e. mock drill, training etc. Department of Education (DoE and FSCD) could have been a party of the MoU. Exit workshop at district level, at the end month of the project would have been useful, through which all the stakeholders would be aware of the completion of the project.

5.6. Coverage and Targeting

With a CHF 320,975.80 total budget, 29 months of Project duration including 5 months no cost extension and minimum project staff size, the project has reached to almost all the students and generated significant outputs. 10 government and non-government High Schools were covered under this project. Mr. Bipul Acharjya, Assistant Inspector of DoE said to the evaluation team, “*DRR project of BDRCS has covered all the big High Schools in Gazipur district head quarter*

and Tongi Upazila". A total number of 813 students were trained on different issues i.e. SBDRM, First Aid, Light Search & Rescue, and school level Leadership Development.

Within this timeframe, the SBDRR project has reinforced the UDRT who can play a very important role in continuing the project activities in the targeted schools. A total number of 25 members of UDRT have been trained on all required trainings including ToT i.e. SBDP, First Aid, Light Search & Rescue, and Basic Humanitarian Response

Eighty-seven (87) teachers of 10 schools were trained on First Aid, Light Search & Rescue. Earlier mentioned that 20 teachers of the ten schools received ToT on SBDP, and they have facilitated the trainings for the students and other teachers along with the master trainers (UDRT and project personnel).

In Bangladesh, there are simply too many disaster- prone areas but development and disaster preparedness activities are still inadequate. Yet, disaster risk reduction activities that are being implemented do not address diverse types of disasters. Disaster preparedness activities implemented by BDRCS in Gazipur are very timely and innovative; specially, earthquake preparedness targeting schools is very vital area in disaster preparedness. The evaluation team suggests continuing the project activities as "Follow-up" phase at least for one more year, when BDRCS mainly will conduct advocacy at government level to ensure the sustainability. Therefore, this final evaluation recommends that SBDRR project more realistically matches resource allocation with the likelihood of scaling up coverage and achieving results in other schools in the areas, prone to earthquake risk.

5.7. Coordination

As per the Project Proposal, there is no scope of organizing formal coordination meeting with the stakeholders. But BDRCS authority has implemented the project activities in consent Department of Education (DoE) at district level. They have also participated in the meeting of DoE on occasional basis. The representative of BDRCS unit office participated in all SDMC meeting, Safety Club meeting and other meetings at school level.

However, the evaluation team suggested for increasing follow up and coordination from BDRCS part on the regular basis. They expected technical (and financial, if possible) support of BDRCS in organizing some important events i.e. technical training, mock drill. Besides, all the school authorities claimed support to implement the action points as per Disaster Preparedness plan.

Recommendation: Clear guidelines, specifying terms of authority, roles and responsibilities, modes of coordination meeting, importance of linking DRR to local government effort, etc., need to be developed for ensuring the continuation of project activities. The evaluation team suggests organizing coordination meeting between BDRCS and School authorities on the bi-monthly or quarterly basis.

5.8. Replicability

There is little evidence from research or practice to show which approach is the best to replicate the SBDRR interventions and under what conditions. BDRCS is, therefore, advised to adopt a balance and a combination of following three strategies.

Additive: Increase size of SBDRR in the same districts.

Multiplicative: Achieving greater impact through:

- Influence
- Challenging decisions and plans
- Higher visibility and exposure of the project
- Lobbying for policy reform and enforcement of regulations
- Using SBDRR to press for more government accountability.

Diffusive: Extend and replicate SBDRR model to new districts and sub-districts

A good example of successful scaling-up is Cyclone Preparedness Programme (CPP) run jointly BDRCS and the government of Bangladesh, which is a classic additive approach. The strong argument behind the need for replication is that experience has shown that long-term program that adapts them over time maximizes their outreach and effectiveness. Many mitigation projects at schools never progress beyond the pilot stage (three years or less) provide poor foundations for long-term growth and development.

5.9. Management & Monitoring

The project management observed comprising BDRCS and IFRC to implement the project successfully. Notably, the Project Manager and a Program Officer were based at NHQ and rest of two full-time staff located at Gazipur district. With the mentioned four staff the project management remained sporadic where the role of Secretary of BDRCS, Gazipur unit remained non-structured. Notably, the administrative validation of Secretary of Gazipur unit remained obligatory in all dealings. Also, the evaluation found the Assistant Project Officer (APO) actively engaged in all the financial activities, billing, invoicing which consumed his more attention than implementing the project activities with desired standards.

The project employed a regular monitoring system consisting of field visit, monthly reporting, and review of implementation progress. The monitoring carried out in the course of the project addressed inputs, activities and outputs. This mainly met the ongoing need for information by project managers to provide information for donor reports. This system provided the project with ample opportunity of tracking the input delivery and output generation, such as, number of training conducted, disaster preparedness (DP) plan developed, number of mock drills held, etc. The monitoring plan is mostly considered outputs generation and quantitative in nature.

There was a certain degree of inconsistency in monitoring the project. The reason is the lack of clarity on indicators from the design stage of the project. It is important to be clear about what is being monitored and for what purposes.

Technical Inputs

The project was implemented with the necessary relevant technical inputs. Remarkably, the staff of BDRCS from other projects/departments facilitated the technical assistance during facilitation of the trainings organized for master trainers and local instructors, etc. The hired consulting firm observed conducted the emergency evacuation plan and layout map with evacuation routes. While, technical inputs for development of guidelines on SDMC and SSC formation, their objectives, duties and responsibilities may accelerate more support for the implementing staff of SBDRR project to operationalize these DM structures towards continuation of undertaken activities towards sustainability after exit of project from schools.

5.10. Disaster Cycle vs. Project Implementation

As reviewed, the project activities implemented following need basis. Whilst, if the project implementation follows the disaster cycle and project cycle management, it can derive more benefit for schools towards sustainability. For example, after all the trainings and simulation exercise, the DP plan was prepared. Also, at the last month of the project the prepared DP plan was handed over to the school heads. However, considering the disaster cycle, if the formation of SDMC and SSC conducted at the first quarter of the project and their operation continued followed by the DP plan. That will assist the project staff in getting more time to nurse the SDMC and SSC and develop their skills. Similarly, if the training can be planned as part of DRR action plan or DP plan, the project beneficiaries can learn about the disaster cycle. Accordingly, all the activities can be organized by the SDMC and SSC so that their skills in school DRR can be developed towards continuation and sustainability. Right now, the project committees like SDMC and SSC are not structured to continue the disaster cycle to develop their skills and to continue the DRR to combat disasters and reduce the losses of life and assets considering the event of disaster.

6. RECOMMENDATIONS AND CONCLUSION

6.1. Recommendation

Effectiveness

Raising awareness among institutions about risk of low frequency hazards is a global challenge. Transforming them into practice is far bigger task. The project was particularly successful in raising awareness and put in place preparedness measures in schools.

- However, practice is greater with the institutions where: leadership is committed, process integrates with ongoing activities (e.g. earthquake preparedness was integrated with fire evacuation practice in schools).
- What should be the right strategy when people cannot take action of what they have learnt because of various unaddressed factors? Clearly, minimization of earthquake impact is right strategy.
- BDRCS can develop a research on behavioral change in low frequency hazard context building on existing experience.
- Future project should clearly identify priorities compare to resources. One project can only address all important issues. Are we doing enough (adequate input) to achieve a result? It should be the guiding question. Projects should adequately plan input for achieving lasting impact.

Efficiency

- BDRCS needs to ensure that review and reflection process is an integral part of project. The coordination meeting should include such process and adopt flexibility to include ongoing learning. The foundation training must include sufficient discussion about past reviews.
- BDRCS should adopt number of management tools and Risk matrix used in other projects. These should identify vital processes and risks well ahead with clear accountability and responsibility. Supervisor of the Project Manager should be made accountable to ensure that project benefits. He/she should also take accountability to ensure that the project uses RCRC principles and values in the implementation.
- BDRCS should immediately define advocacy strategy. School safety and preparedness are suggested as priority: no other advocacy issues should be initiated unless adequate resources are invested.

Impact

The project achieved most of its results within over stated objectives. No doubt the project has dealt with some of the complex institutions in schools. Given the limitations, all schools are now better prepared. The school safety activities helped establish preparedness system in 10 schools in Gazipur.

- Clearly the project has developed important approaches with number of good practices. All the practices are appreciated and replicable in other areas.
- The projects advocacy achieved limited success because its strategy was not defined properly and there has been limited input.
- Need at least one year follow-up project in same schools so that BDRCS can mainstream the successful events of the project.
- The evaluation team suggests developing Booklet on DP messages for all students so that they can bring it to their parents.

Sustainability

Long-term effectiveness and sustainability of implemented activities are yet to assess.

- It is recommended that BDRCS should develop a system that allows reviewing of impact beyond the program reporting period. An individual or institution may be assigned this role with matching resources to track impact beyond the implementation timeframe.
- Ownership of the project outcome, institutionalization of the processes initiated by the project, adequate input and follow up mechanisms are some of the key conditions that make the project outcome and impact sustainable. While the institutions are committed, the evaluation team documented range of challenges they face.
- Providing equipment to the volunteers will contribute to sustainability. Keeping up involvement of women volunteers may be difficult, unless strategic input in there.
- BDRCS must support schools to establish coordination with other volunteer groups in their areas. BDRCS should explore whether DP plan can be reviewed again by schools. And, local school authority should be involved with the reviewing process. As a result, they will be well informed about the action points of the plan.

Coordination

Clear guidelines, specifying terms of authority, roles and responsibilities, modes of coordination meeting, importance of linking DRR to local government effort, etc., need to be developed for ensuring the continuation of project activities.

Monitoring

This evaluation recommends that BDRCS needs to develop a comprehensive M&E system, combining quantitative and qualitative methodologies and plan to monitor input delivery, output generation and outcome/effect level changes in the following Action plan. It may need advocacy with donor.

A well-defined exit strategy may ensure sustainability of these initiatives and enhance the integration of long-term DRR strategies between BDRCS and Government. The project develops an exit strategy involving Schools, local government and relevant government departments.

At this moment, the project can develop the simple one page operational document which may contain aim and five bullets detailing role and responsibilities/common activities of SDMC and SSC as well towards continuation of undertaken activities by the SBDRR project.

7. CONCLUSION

Participation of volunteers in implementation of SBDRR project is an innovative approach for disaster risk reduction at school. Capacity building of the volunteers through the training of trainers (ToT) is the benchmark intervention of the project. The volunteers conducted all trainings at schools successfully. They have also conducted orientation on VCA for the teachers, conducted together with the SDMC. The project has been successful in identifying appropriate DP and DRR measures and implementing them beyond the project period. Many of these interventions are signaling for long-term impact. The volunteers of BDRCS contributed significantly in implementing all the activities at schools.

Training on different issues is highly effective intervention of this project. Students who have participated in different trainings (i.e. SBDRM, First Aid, LSAR, etc.) they are now highly knowledgeable and sensitized on DP. They have also conveyed lessons learnt to the guardians and classmates. Mock drill is another effective intervention under this project. All the students could not get opportunities to participate in the trainings conducted under this project. But, they have seen what to do during earthquake, how to provide first aid to the victims and how to conduct LSAR. In FGD session, most of the students successfully could say what to do during earthquake, thundering, burn injury etc. They have learnt this from mock drill and awareness campaign. Mock drill is such an event what is highly appreciated by the volunteers, students, teachers and guardians.

Non-structural mitigation measures implemented at schools is an effective intervention. Most of the non-structural mitigation works at schools contributed in SBDRR. Financial contribution of the school authority in implementing the non-structural mitigation work has proven that it was their burning and hopefully they will take the responsibility to continue the non-structural mitigation intervention by themselves.

The members of school safety club are enjoying this, where they can sit in DLC. DLCs have been established only in 3 schools. In other schools, the scope of togetherness of the members of safety club is limited. The evaluation suggests to establish DLC in all schools. A concrete operation policy needs to formulate for the DLC and safety club.

The project employed a regular monitoring system consisting of field visit, monthly reporting, and review of implementation progress. This system provided the project with ample opportunity of tracking the input delivery and output generation, such as, number of training conducted, contingency plan developed, number of homestead flood proofed, etc. The monitoring plan mostly considered outputs generation and quantitative in nature.

A well-defined exit strategy may ensure sustainability of these initiatives and enhance the integration of long-term DRR strategies between DoE and Schools. Long-term effectiveness and sustainability of implemented activities are yet to assess.