Save the Children

Development Workshop

Save the Children's Nargis Cyclone Response in Myanmar

Schools Strengthening Using Cyclone Resistance Construction Technique

# *SAFER SCHOOLS PROJECT PROCEDURE MANUAL*

Safer Schools Project in Myanmar, June 2009

# 1. CONTENTS

# 1. DAY 1 WORKSHOP PROCEDURES

## 1.1. AIMS OF DAY-1 WORKSHOP

**The aims of workshop day-1 are:**

1) **To make the villagers (participants) aware of cyclone recurrence intervals and necessary preparation before cyclone season**
2) **To share technical knowledge on ten key points for cyclone resistant construction and ways how to use in actual construction**
3) **To give engineering techniques on how to make the connections strong**
4) **To share knowledge on local traditional methods for cyclone and flood resistant construction**
5) **To let the children participate in the workshop, to make them happy for reducing stresses from Nargis and formulate the children's ideas for strengthening their school and needs for making the school a good learning environment**
6) **To motivate to strengthen the school which is not only a learning place for the children but may also a refugee place for the villagers at time of emergency**
7) **To tell villagers that they can learn from the safer school about how to make their homes safer**

## 1.2. SSP VILLAGE AND SCHOOL SELECTION CRITERIA

The project villages and schools are selected based on the following criteria;

1. To select the government and monastic primary schools to which Save the Children assisted material for the repair work for early recovery in time of post Nargis
2. To select the schools that are agreed and approved by respective Township Education Officers to be repaired or strengthened or rebuilt
3. To select the schools where primary school students are attending
4. Not to select the schools that are using temporary building for teaching places. So temporary schools means;
   (a) Schools which cannot be strengthened.
   (b) Schools which are constructed with bamboo for posts and framing and tarpaulin sheet roofing
   (c) Schools which are so old that the members are decayed by termites and should no longer be used. So they should be dismantled and newly constructed.
5. Schools which are constructed with palm tree stem as post and bamboo as framing and tarpaulin sheet roofing.
6. The target students are primary students. It is the best if the building was the refuge place at time of Nargis.

Not to select the schools which were constructed by UN agencies or NGOs and were affected with only minor damage due to Nargis because those buildings were engineered and constructed to be able to withstand wind load.

After standardizing with the above criteria, we can choose the project villages. We can, however, also scrutinized for selection of project schools by the following table.

## 1.3. VILLAGE PROFILE FOR SELECTION OF SSP VILLAGE

| | | | |
|---|---|---|---|
| 1 | Village name | | Remark |
| 2 | Village tract | | |
| 3 | Township | | |
| 4 | Population | | |
| 5 | No. of Household | | |
| 6 | No. of Building | | |
| 7 | No. of building totally destructed by Nargis | | |
| 8 | No. of building least affected by Nargis | | |
| 9 | Refuge places after Nargis | | |
| 10 | Max flood level under peak rainy period | | |
| 11 | Flood level due to Nargis | | |

I. Village- building analysis

| Total Number of buildings | No. of R.C buildings | No. of brick noggin buildings | No. of timber frame building | No. of bamboo frame building | Remark |
|---|---|---|---|---|---|
| | | | | | |

II. School data

| | | | |
|---|---|---|---|
| 1 | School grade | | |
| 2 | School size | | |
| 3 | Building type | | |
| 4 | No. of student | | |
| 5 | No. of student (girls) | | |
| 6 | No. of student (boys) | | |

| | | | |
|---|---|---|---|
| 7 | Total number of buildings in compound | | |
| 8 | No. of latrines | | |
| 9 | Condition of drinking water facility | | |

III. Analysis on existing school building

| | | | |
|---|---|---|---|
| 1 | Orientation type (Facing East, West, North or South) | | |
| 2 | Building shape in plan | | |
| 3 | Roof pitch | | |
| 4 | Lean-to roof ( separated/integrated) | | |
| 5 | Length to breadth ratio | | |
| 6 | Roof shape | | |
| 7 | Trusses type | | |
| 8 | Wall type | | |
| 9 | Plinth level | | |
| 10 | Floor type | | |
| 11 | Foundation type | | |

Assessor's name

Post

Date

### 1.4.1 PREPARATION IN WORKSHOP CORE VILLAGE

The particular items below are needed to prepare for Day 1 Workshop;

1. To select the most suitable **workshop village** for Day 1 workshop amongst a group of villages
2. To select workshop place as per the following necessities
   i. The workshop place (building) should have good ventilation for participants
   ii. The workshop place (building) should have good lighting and be safe and healthy place for the participants
   iii. The workshop place (building) should be free from noise, air and water pollution
   iv. The workshop place (building) is to be selected with the agreement of the villagers
3. To prepare meal and tea for the participants
4. To select the villagers (Village head, Strengthening committee member, Carpenters and teachers) who will participate in Day-1 workshop
5. To select children(students from Grade-3 & 4) who will participate in workshop
6. To prepare get the permission approval for workshop from village and township authorities

### 1.4.2. WORKSHOP MATERIAL CHECKLIST

The necessary preparation for Day- 1 workshop is done according to the following workshop checklist;

| Item | Tools and material | No. | Remark |
|---|---|---|---|
| 1 | White board + Duster | 1 Nos | |
| 2 | White board marker(blue) | 2 Nos | |
| 3 | White board marker(Red) | 1 Nos | |
| 4 | Soft pen (blue) | 10 Nos | |
| 5 | Stationery for participants | 70 sets | |
| 6 | Model House | 1 Nos | |
| 7 | Connection Detail model | 1 Nos | |
| 8 | Vinyl sheet( workshop title) | 1 Nos | |
| 9 | Vinyl sheet ( Ten key points) | 1 Nos | |
| 10 | Flip chart (A-0 size) | 30 Nos | |
| 11 | Handout(booklet-1) | 45 Nos | |
| 12 | Handout(booklet-2) | 45 Nos | |
| 13 | Handout( booklet-3) | 45 Nos | |
| 14 | Illustration flip chart | 1 set | |
| 15 | Ten Key Points poster | 65 Nos | |
| 16 | Attendant record sheet | 2 sets | |
| 17 | Travel cost for participants | - | |
| 18 | Cash payment form | | |
| 19 | Camera | 1 Nos | |
| 20 | Drinking water (if necessary) | - | |
| 21 | CP or Education ( OW) for children | 3 Nos | |

## 1.4. DAY 1 WORKSHOP TIME-TABLE

SSP Day 1 workshop program is as per the following table:

| Time | Discussion | Facilitator | Remark |
|---|---|---|---|
| 9:50 to 10:00 | Explanation about Save the Children<br>Introduction and grouping the participants | Eng/ Manager | |
| 10:00 to 10:15 | Introduction about the workshop | Eng/ Manager | |
| 10:15 to 10:45 | Questions about the experiences of Nargis and damage due to it<br>Answers on flip paper discussed by group. | Eng/ Manager | Question for that period are stated separately. |
| 10:45 to 10:55 | Tea break | | |
| 10:55 to 12:00 | Discussion on (10) key points<br>(important points to consider in construction to be able to resistant against strong storms | Eng/ Manager<br>+ Eng/PO | With (10) key points Poster |
| 12:oo to 013:00 | Lunch | | |
| 13:00 to 14:00 | - Cabbage game on house member<br>- Discussion on Safe house construction technique, then test on safe house<br>(Discussion on important points for connections between different parts of the building.) | Eng/ Manager | |
| 14:00 to 14:15 | Tea break | | |
| 14:15 to 15:30 | Discussion on how to fix firmly<br>Detail connection and fixing methods to firmly join every part of the building, using the house model | Eng/ Manager | With Model house |
| 15:30 to 15:50 | Test on comprehension of participants for the whole day discussion | Adult participants | Children discussed about their needs |
| 15:50 to 16:30 | Discussion on safe school needs<br>( child participation and integration program) | Children | Competition and examined for grades |
| 16:30 to 17:00 | -Polishing for the day discussion<br>-Prize giving to each winner group<br>-Introduce for Day-2 program | Eng/ Manager | Prize giver<br>Program coordinator<br>Eng/ Manager |

### 1.6.1 QUESTIONS TO ASSESS THE PEOPLES' AWARENESS TO STORM, BEFORE THE WORKSHOP START

1. What happened to the school in your village when Nargis hit? What do you think of it why the school was damaged? Explain about it.
2. How can you make the roof strong in order not to damaged?
3. In which month does the storm usually come? And how do you prepare for it before it comes?
4. Where were the refuge places when your houses are collapsed due to Nargis?
5. Should you make your children's school strong and safe? How will you do it?

### 1.6.2 EXPLANATION NOTES FOR (10) KEY POINTS

| Item | Explanation Notes | **Remark** |
|---|---|---|
| 1 | To choose suitable location for building construction so as to reduce direct forces of wind and tidal waves; e.g.: 1) To choose a place surrounded by natural barriers such as hills, forests and valleys that will reduce wind speed. 2) If the area is liable to flooding, raise the floor level of the building. | |
| 2 | Keep the shape of the building simple. Avoid very long narrow buildings where the middle can be weak; avoid L shape buildings or irregular layout as wind pressure can build up in enclose corners | |
| 3 | The roof must have a slope of more than 30°; if lower than this there is a greater risk that suction of the wind will lift the roof covering off. | |
| 4 | Any lean to or veranda roof must be separate from the main roof as it is at much greater risk of damage. It is most important that damage to the lean to roof does not lead to damage in the main roof. | |
| 5 | Make sure that all parts of the structure are strongly connected together. It is not enough to make simple nailed joints. Each joint between components must be made so that it cannot be pulled apart by the pressure of the wind or water. Joints can be made solid for example using metal brackets or very strong fishing line/string. | |
| 6 | Put diagonal bracing in framed construction, so that the structure cannot be pushed out of shape by the pressure of wind or water. The foundation posts wall frame and roof frame need to be braced. | |
| 7 | Firmly fix down the roof covering. Usually, fixing down CGI sheeting only with nails is insufficient. The best solution is to fix horizontal bars over the roof, fixed through to the roof frame. | |
| 8 | Make sure that there are openings on opposite sides of each room, so that wind can blow through to the other side. If not, it can build up pressure inside the room and cause the roof or walls to break | |
| 9 | If possible, put window leaves and doors that can be tightly shut during the storm, this provides even better protection from damage inside the building. | |
| 10 | Plant trees and bushes near the building to act as a wind brake, but not too close that a falling tree would land on the building. | |

### 1.6.3 EXPLANATION NOTES FOR SAFE HOUSE SECTION

| Item | Explanation Notes | Remark |
|---|---|---|
| 1 | To choose suitable location for building construction so as to reduce direct forces of wind and tidal waves; e.g.: 1) To choose a place surrounded by natural barriers such as hills, forests and valleys that will reduce wind speed. 2) If the area is liable to flooding, raise the floor level of the building. | |
| 2 | Keep the shape of the building simple. Avoid very long narrow buildings where the middle can be weak; avoid L shape buildings or irregular layout as wind pressure can build up in enclose corners | |
| 3 | The roof must have a slope of more than 30°; if lower than this there is a greater risk that suction of the wind will lift the roof covering off. | |
| 4 | Any lean to or veranda roof must be separate from the main roof as it is at much greater risk of damage. It is most important that damage to the lean to roof does not lead to damage in the main roof. | |
| 5 | Make sure that all parts of the structure are strongly connected together. It is not enough to make simple nailed joints. Each joint between components must be made so that it cannot be pulled apart by the pressure of the wind or water. Joints can be made solid for example using metal brackets or very strong fishing line/string. | |
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| 8 | Make sure that there are openings on opposite sides of each room, so that wind can blow through to the other side. If not, it can build up pressure inside the room and cause the roof or walls to break | |
| 9 | If possible, put window leaves and doors that can be tightly shut during the storm, this provides even better protection from damage inside the building. | |
| 10 | Plant trees and bushes near the building to act as a wind brake, but not too close that a falling tree would land on the building. | |

## 1.6.4. EXPLANATION NOTES FOR "HOW TO MAKE FIRMLY FIXED" SECTION

| Item | Explanation Notes | **Remark** |
|---|---|---|
| 1 | To fix down the roofing sheets so they don't blow off, use 1" x 1" angle iron or 1" x ¼" metal flat as metal strip and 2-1/2" screw from purlins at the following places;1) On along the uppermost purlins of the roof 2) On along the purlins over which two roofing sheets are lapped 3) On along the lowest purlins | |
| 2 | Thick roofing sheets such as (26 to 28 gauge) should be used so as not to rupture in high wind speeds. If thick sheets are not available, purlins and roofing screws should be spaced closer than usual. Be careful using fibre cement sheets, they can very easily brake in storms. | |
| 3 | Roofing screw spacing should be reduced especially in over eave projection (on along the lowest purlins), over eave projection and roof overhangs, On along the uppermost purlins and on along the purlins over which two roofing sheets are lapped. | |
| 4 | To use U-strap or 1/8" diameter fishing rope to fix the purlins to rafters so that the purlins and the rafters are not separated. | |
| 5 | Purlins should be placed depth upright position with cleats to increase the stiffness of the roof framing and not to let purlins bend at roof overhang. | |
| 6 | Rafter and timber –post joint should be bolted connection using ½" bolts in case of timber frame building | |
| 7 | Use diagonal bracing in trusses, roof framing, wailing and floor for the building not to deform sideways under wind load. | |

## 1.6.5. QUESTIONS TO EVALUATE PARTICIPANTS' COMPREHENSION, AT THE END OF WORKSHOP

How will you make the roof strong enough not to be damaged from wind?

1. What facilities should a safe school have? What do you understand by safe school?
2. How will you prepare in the month before the month in which the storm usually comes?
3. What are the most important three points among ten key points?
4. Is today workshop is advantageous to you? What are the benefits for you?

## 1.6.6. DEMONSTRATION HOUSE MODEL






## 1.7. DAY 1 WORKSHOP COMPLETION REPORTING FORMAT

| | |
|---|---|
| Workshop type | **Workshop on safe schools construction technique** |
| Workshop core village | Atwin None Kaw Monastic Education school |
| Township | Mawlamyinegyun (Delta) |
| Workshop date | 21.5.09 |
| Workshop facilitators | U Kyaw Win Maw, U Than Htut |
| No of village coverage | 5 villages |
| No of male participant (adult) | 33 Nos |
| No of female participant (adult) | 21 Nos |
| **Total workshop participants** | 54 Nos |
| No of school boy participant | 12 Nos |
| No of school girl participant | 18 Nos |
| **Total Children participants** | 30 Nos |
| No. of stationery set distributed | 90 Nos |
| No. of ten key point poster distributed | 101 Nos |
| Workshop cost per participant | 3500 kyats |
| Workshop timetable | attached |
| Workshop minute | attached |
| Workshop photo record | attached |
| Finding and suggestion: | |

# 2. DAY 2 WORKSHOP PROCEDURE

## 2.1 AIMS OF DAY 2 WORKSHOP

Aim of the Day 2 workshop is;

**1) To let the villagers participated in practical strengthening work of the schools of their village, using the technical ideas gained from Day 1 workshop,**

**2) To jointly prepare strengthening works action plan for the works to be continued**

**3) To form school strengthening work committee, and organize and mobilize the members for successful strengthening works**

Day 2 workshop time-table is as follows:

| Time | Discussion | Facilitator | Remark |
|---|---|---|---|
| 9:30 to 9:15 | - Explain the day's program<br>- Asses the strengthening needs of the school<br>- Prepare checklist for strengthening work | Engineer | All the participants (villagers) participated |
| 9:15 to 10:00 | Get detail measurement for material and labour cost estimation | Engineer | Villagers participated |
| 10:00 to 10:15 | Tea break | | |
| 10:15 to 12:00 | Villagers do practical strengthening work such as fixing metal strip to roofing sheet and purlin | Participants | Villagers |
| 12:oo to 13:00 | Lunch | | |
| 13:00 to 14:15 | Continue practical strengthening work | Engineer | Villagers |
| 14:15 to 14:30 | Tea break | | |
| 14:30 to 16:00 | - Prepare action plan for school strengthening work<br>- Prepare action plan for children needs | Participants and Engineer | Villagers |

## 2.2 SAMPLE CONNECTION PHOTOS FOR REFERENCES

**Post- Footing Connection**

**Wall Framing**

**Purlin- rafter connection**

**Bracing in & between trusses**

**Brace to post connection**

**Diagonal Bracing bet: trusses**

**Post-plate & Rafter connection**

**Struts , in case of long eaves projection**

**Purlin & Rafter connection**

**Cyclone strap in wall framing**

**Purlin-rafter connection using fishing rope**

**Knee bracing to prevent wall twisting in case of long- length building**

Sample strengthening work action plan

| Item | Particular type of work | Duration | Specification and quality | Remark |
|---|---|---|---|---|
| 1 | Fixing metal strips to CGI roofing sheets not to blow off from purlins | 2-days | Use 1" x 1" angle iron metal strip and 21/2" screw for fixing | |
| 2 | Binding the purlins to rafters with U-straps not to unfasten purlins from rafter | 1-days | Use ¾" width and 1/8" thick U-straps | |
| 3 | Replacing the old post plates with the new ones | 2 days | To use 4" x 2" hardwood timber for new post plates | |
| 4 | Putting vertical and inclined struts in all trusses and make the bolted joints for them | 3-days | To use 4" x 2" hardwood timber for struts and ½" diameter bolts of joints | |
| 5 | Installation of diagonal bracing in between trusses and make the joints bolted ones | 2-day | To use 4" x 2" hardwood timber for struts and ½" diameter bolts of joints | |
| 6 | Putting brace in walls | 4-days | Use 3" x 2" wall braces and fixed with cyclone straps | |
| 7 | Installation of doors and windows accessories | 5-days | Put on hinges, handle, hooks and eyes, towel bolts and angle strap at corners | |

## 2.3 DAY 2 WORKSHOP COMPLETION REPORT

| | |
|---|---|
| Workshop type | **DAY-2 WORKSHOP** |
| Workshop village | Atwin None Kaw Monastic Education school |
| Township | Mawlamyinegyun (Delta) |
| Workshop date | 21.5.09 |
| Workshop facilitator | U Than Htut |
| No of male participant (adult) | 33 Nos |
| No of female participant (adult) | 21 Nos |
| **Total workshop participants** | 54 Nos |
| No. of stationery set distributed | 90 Nos |
| Workshop cost per participant | 3500 kyats |
| Strengthening work action plan | Attached |
| Workshop timetable | Attached |
| Workshop minute | Attached |
| Workshop photo record | Attached |

## 2.4 MONITORING TRIP LOG BOOK FORMAT

When one of SSP team member goes field trip to project site for monitoring the ongoing strengthening work, he/she/ they will have to fill in log book about their visit and suggestions.

| No | Date | Name | Arr: time | Dept: Time | Finding | Suggestion and recommendation | Committee member signature | SC Visitor Signature |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

# 3. DAY 3 WORKSHOP (OPEN DAY) PROCEDURES

## 3.1 AIMS OF THE OPEN DAY

1) **To officially open the strengthened school**
2) **To show all the villagers the strengthened works and techniques to be learnt**
3) **To officially handover the strengthened school to the village and the villagers, getting a sense of ownership so they will regularly maintain the school for sustainable use**
4) **To distribute educative ten key points posters for cyclone resistant construction to villagers , this will lead to dissemination of technical knowledge on cyclone resistant construction among village communities**
5) **To give technical knowledge on safe bamboo house construction to village communities**
6) **Children participation such as singing and dancing and talking of how they see their safer school, the open day will give them more awareness for strengthening techniques and preparation before every years' storms**

## 3.1 OPEN DAY PROGRAM

| No. | Period | Program | Remark |
|---|---|---|---|
| 1 | From 9:00 to 9:30 am | Welcome the guests | |
| 2 | From 9:30 to 10:00 | Cutting the ribbon and open the strengthened school by TEO/AM/Headmaster of the school | |
| 3 | From 10:00 to 10:05 | Handing over the necessary document of strengthening work from AM /Coordinator /Manager to TEO/ Headmaster/Headmistress | |
| 4 | From 10:05 to 10:15 | Speech by TEO/AM/Coordinator / Manager | |
| 5 | From 10:15 to 10:30 | One of the villagers explain his experience of Participating in Day-1 workshop | |
| 6 | From 10:30 to 10:55 | Two of the builders explain their experience of school strengthening work and importance of ten key points | |
| 7 | From 10:55 to 11:05 | Children express ideas about their safer school | |
| 8 | From 11:05 to 11:25 | Tea break | |

| | | | |
|---|---|---|---|
| 9 | From 11:25 to 11:45 am | Questionnaire by attendees | Answer by explainers and engineers |
| 10 | From 11:25 to 12:00 noon | The villagers go around the strengthened school building, bamboo fame demonstration structure, and see educative drawings for retrofit work and learn building safety against cyclones; Focus group discussion with families | |
| 11 | From 01:00 to 2:00 pm | The children dance and sing. | |
| 12 | From 01:00 to 2:00 pm | Prize giving to the children by teachers and parent | |
| 13 | From 02:00 to 2:30 pm | Taking group photos | |
| 14 | From 2:30 to 3:00 | Focus group sessions with parents<br>Focus groups sessions with children | Education PO |

## 3.2 OPEN DAY PREPARATION CHECKLIST

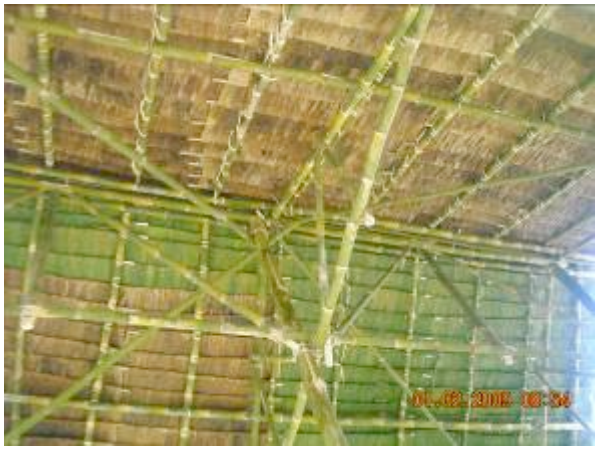
| Item | Preparation for open day ceremony | Y/N | Remark |
|---|---|---|---|
| 1 | 100% completion of strengthening work | Â | |
| 2 | 100% completion of community contributed facilities such as latrine, water pot stand and access bridge etc. for the children | Â | |
| 3 | 100% completion of model bamboo house | Â | |
| 4 | Advocating about open day ceremony program to village | | |
| 5 | Discuss for meal and tea to serve to the participants in open day | | |
| 6 | Ribbon, flowers and hydrogen balloon and children to hold them | | |
| 7 | Prepare an experienced lady announcer who will announce open day programs | | |
| 8 | Invite TEO/ATEO to participate in open day ceremony | | |
| 9 | Prepare an experienced villagers to let explain his experience before and after workshop Day 1 | | |
| 10 | Prepare an experienced villager to explain his experience about strengthening works | | |
| 11 | Prepare (10) key points poster to distribute to participant | | |
| 12 | Prepare for camera, video camera to record open day | | |
| 13 | Highlight the strengthening work items with colored paint | | |
| 14 | Prepare for children's dance and song program | | |
| 15 | Prepare that a small group of children will talk about their ideas on the safer school and what this means | | |

## 3.3 SAMPLE BAMBOO HOUSE PHOTOS

**Bamboo House Model Framing**

**Bamboo House Model Framing**

**Bracing in trusses**



**Diagonal bracing between trusses**

## 3.4 COMPULSORY FRAMING TECNIQUES IN MODEL BAMBOO HOUSE

| No. | Compulsory work items | Remark |
|---|---|---|
| 1 | Bamboo strip on roof | |
| 2 | Roofing plane bracings | |
| 3 | Wall corner bracings at ceiling plane | |
| 4 | Bracings in trusses | |
| 5 | Bracings between trusses | |
| 6 | Wall bracings | |
| 7 | Wall corner bracings at floor plane | |
| 8 | Bamboo post bracings under floor | |
| 9 | Wall beadings | |
| 10 | Make all joints strong with suitable available connection methods | |

## 3.5 OPEN DAY COMPLETION REPORTING FORMAT WITH EXAMPLE

| | |
|---|---|
| School Name | Atwin None Kaw Monastic Education school |
| Township | Mawlamyinegyun (Delta) |
| School grade | Primary school |
| School building type | Timber building ( Bamboo mat wall and CGI sheet roofing |
| School accessories | Water-pot-stand, two latrine, playground in front of school, bamboo house, fence |
| School building | 26’ x 54’ x 10’ |
| No. of student | (96) Nos |
| Village population | 630 Nos |
| Value of existing building based on current prices | 4,000,000 kyat (app: 4000$) |
| Day-1 workshop date | 14.12.08 |
| Day-2 workshop date | 15.12.08 |
| Strengthening works start date | 8 March, 2009 |
| Strengthening works finish date | 3 March, 2009 |
| Strengthened school open day date | 5 March, 2009 |
| ( SC contribution) for School | 1,482,357 kyat ( app: 1400 $) |

| | |
|---|---|
| strengthening | |
| SC contribution for Bamboo house | 125,000 kyat |
| ( SC contribution) for School strengthening | 900,000 kyat ( app: 900$) |
| Added % value to make the building safe | 50% |
| Direct beneficiaries by SSP | 96 Nos ( students in that school) |
| Indirect beneficiaries by SSP | 630 Nos |

## 3.6 OPEN DAY PHOTOS

***Atwin None Kaw School before strengthening***

***Atwin None Kaw School after strengthening***

***Atwin None Kaw School before strengthening***

***Atwin None Kaw School after strengthening***

***Cutting ribbon to open the strengthened school***

***The students sang the song to open the ceremony***

***U Soe Myint Than (APC/ Mawlamyinegyun) making the opening speech***

***U Soe Myint Than (APC/ Mawlamyinegyun) handed over related document for the school to Sayadaw (Monk) of Atwin None Kaw Monastic school***

***U Min Thein Soe( Manager/Engineer) explaining maintenance key points for the strengthened school***

***U Than Soe(One of the strengthening committee member) explaining his experience of participating in Day-1 workshop and strengthening works***

***U Than Soe(Carpenter of the strengthening work) explaining ten key points and his experience of participating in strengthening works***

***U Min Thein Soe( Manager/Engineer) answering questions raised by villagers about key points on cyclone resistant construction technique***

***U Than Htut(Engineer/SSP) explaining key points on Bamboo house framing in construction***

***The villagers learning key points on Bamboo house framing in construction***

***The villagers learning key points on Bamboo house framing in construction***

***The villagers learning key points on Bamboo house framing in construction***

***The villagers learning key points on Bamboo house framing in construction***

***The villagers learning key points on Bamboo house framing in construction***


***The strengthened school maintenance committee members of Atwin None Kaw monastic education school***

***The school maintenance committee members and the children of Atwin None Kaw Monastic Education school***

***The villagers(Atwin None Kaw) constructed school fence as part of their contribution (Participation for the interest of the children)***

***The villagers(Atwin None Kaw) constructed school water- pot-stand as part of their contribution (participation for the interest of the children)***

***The Bamboo house model for the children to play and for the villagers to learn on construction technique***

***The Bamboo house model for the children to play and for the villagers to learn on construction technique***

***The students ( Children) happily playing in Bamboo house***


***The sign-board showing " Atwin None Kaw" Monastic education school was jointly strengthened by village community and Save the Children in Myanmar.***