Report of End - line Assessment

Cyclone Giri Emergency Response Project

6th December 2010 – 30th April 2011

Myebone Township

Contents

Executive Summary

The Cyclone Giri – Emergency Response Project for shelter reconstruction was implemented by CARE Myanmar in partnership with Swanyee Development Foundation in 15 villages of the worst affected township of Myebon. Between 6th December 2010 and 30th April 2011, the project was able to provide material and training support for 500 families for partial reconstruction and 100 families for total reconstruction of their damaged houses.

At the end of the reconstruction process, the project conducted an assessment to assess the effectiveness and quality of processes used in the project and to identify lessons for future shelter projects. The assessment was carried out in 12 of the 15 villages where the project was implemented and covered 48.5% of beneficiaries. The assessment also included the views of key informants' i.e the members of the Village Development Councils (VDCs). A team of 10 enumerators and two field supervisors collected the assessment data by means of interviews using structured and semi-structured questionnaires. The data analysis was subsequently carried out by CARE's M&E team.

The key findings from the assessment indicate that the project intervention was most timely – as it provided shelters to the most poor and vulnerable families just before the monsoons arrived. The beneficiaries also gained knowledge of shelter reconstruction techniques as well as DRR features that can make their houses resilient to storms/cyclones etc.

Community participation in the project was high as most respondents were aware of the beneficiary selection criteria, they had participated in the decision making process for beneficiary selection, the members of the Village Development Committees worked along with the project team on most aspects and they also provided support to the beneficiaries as and when required.

On the other hand, the shelters provided needed to be more appropriate – in keeping with the size and materials that were used locally. Hence, several beneficiaries made modifications to the design of the house suggested by the project – changing the height of the floor, the bracings on the walls and adding extra rooms and partitions as per their own requirement.

Overall, the project approach and design were appropriate for the affected families – however greater efforts needed to be made to ensure women's participation. The suggestions from the beneficiaries re-emphasised the need to ensure a close match between their traditional houses and the project supported houses with regard to the quality and quantity of materials Other suggestions included provision of WASH facilities and use of a cash for work method for reconstruction so as to help livelihood recovery as well.

1. Introduction

Following the humanitarian crisis caused by cyclone Giri in north-western Myanmar, CARE joined in the massive relief and recovery operations launched by humanitarian agencies. Cyclone Giri made landfall in Rakhine state on 22nd October 2010. Assessments carried out by the UN agencies, I/NGOs and the government confirmed that the townships of Myebon, Pauktaw, Kyaukpyu and Minbya were the most affected with massive destruction of shelters, livelihoods and health facilities.

CARE in collaboration with Swanyee Development Foundation initially responded by distributing relief items such as shelter tool kits, family kits, mosquito nets, blankets, tarpaulins and some non-food items such as jerry cans, children's clothes, kitchen utensils and soap. Along with the distribution, the team also carried out a rapid assessment in 40 villages of Myebon township to ascertain the most urgent needs of the communities.

By the end of November 2010, CARE had secured funding from Ausaid for reconstruction of shelters. Based on the rapid assessment, 15 villages were selected for provision of support for reconstruction of shelters. In partnership with Swanyee Development Foundation, this project was launched in December 2010 for a period of 5 months, to provide partial reconstruction support to 500 affected households and complete reconstruction support to another 100 households. The project teams (from Swanyee and CARE) were based in Myebon with a coordination team in Sittwe. They were supported by their head offices in Yangon. In addition, the project also received support from technical experts and the Shelter Technical Working Group. Village Development Committees (VDCs) were formed in each village who led the process of beneficiary selection, complaints management and quality checking at the village level. Incorporating DRR features, the project built one house in every village as a model. Subsequently, the construction materials were distributed amongst the beneficiaries and they reconstructed their houses on their own, following this model. The reconstruction of all 600 houses was completed in April 2011. Subsequently, an assessment of the entire process was carried out in May 2011. This report presents the findings of the assessment.

1.1 Objectives of the Assessment

The objectives of the assessment were as follows:

1) To assess the effectiveness and quality of processes used in the project
2) To identify gaps and drawbacks in order to draw lessons for the future

2. Methodology of the Assessment

The assessment was carried out through individual interviews with beneficiaries of households and key informants from the VDCs from the 4th until 16th of May 2011.

2.1 Assessment Tools

The assessment used structured and semi-structured questionnaires to elicit responses from the beneficiaries of re-constructed houses and from members of the VDC. The questionnaires were developed by CARE Myanmar and translated into Myanmar language. Household questionnaires included basic information about the beneficiary, socio-demographic information of the beneficiary household and household members, community participation, role of VDC, features of the rebuilt/repaired house, the outcome of the project activities and suggestions for future projects for shelter reconstruction. The topics discussed in the Key Informant Interviews (KII) included impact of the cyclone and community coping mechanisms, role of the VDC under the project, impact of the project, community satisfaction , cultural appropriateness of the project activities, and suggestions for similar projects in future.

2.2 Sampling Method

The assessment sample was selected out of 12 of the 15villages in which the project was implemented. This was done to ensure coverage of: all three village tracts under the project, the nearest as well as the farthest villages, communities of different ethnic groups[1], different levels of socio-economic conditions and villages with varying degrees of accessibility (using different transportation routes). The sampling also took into consideration the village size, the availability of the respondents and safety and security of enumerators. Beneficiary lists were used to carry out random sampling and every alternate household on the beneficiary list was included in the sample size. In case that particular household was either unwilling to participate or unavailable, the adjacent household was included in the sample. There were a total of 291 individual beneficiaries (48.5% of total beneficiaries) and 17 VDC members who participated in the assessment.

Sampled Villages and Number of Respondents in each Village

	Village Tract	Village	Number of project supported HH in each village	Number of Respondents
1	Kyaut Nga Nwar	Kyaut Nga Nwar	29	19
2	Shaut Chon	Kyar Inn Taung	62	33
3		Shaut Chon	29	18
4		Kyar Hnin Khar	29	17
5	Yo Sa Nwin	Oak Kan	110	55
6		Myaing Thar Yar	90	54
7		Din Gar Ya	38	18
8		Yo Sa Nwin	77	41
9		Taung Gyi	20	12
10		Nat Hla	20	11

[1]Among the villages where the project was implemented, there are mainly two major ethnic groups: Rakhine and Chin. The Bamar people form the smallest ethnic group in the local population.

11		Thaung Pyin	11	9
12		Maung Chaung	8	4
Total	3	12	523	291

2.3 Assessment Team

The assessment team comprised the Giri Emergency Response Coordinator (ERC) from CARE, the M&E team from CARE, ten enumerators, the Emergency Response Field Coordinator (ERFC) and 2 field supervisors.

Among the ten enumerators – seven were members of the former project team of the partner agency (Swanyee) and were experienced in data collection. The remaining three enumerators were newly recruited from the local villages. All the enumerators along with the ERFC and the supervisors were trained by the Monitoring and Assessment Data Analyst from CARE Yangon, who visited Myebon specifically for this purpose.

The data entry was done by four experienced data entry persons supervised by the M&E team. The M& E team along with the Giri ERC produced the final report with the findings and analysis.

2.4 Assessment Schedule

The data analyst from the M&E team of CARE visited Myebon between 2nd and 7th of May 2011. During this period she held day long training for all enumerators and supervisors. This was followed by pilot testing the questionnaire in one village which was representative of the villages included in the sample. Following the pilot test, the questionnaire was was modified and finalized. The enumerators began their data collection among all 12 villages on 6th May and it was completed by 16th May 2011. At the end of the data collection in each village, the supervisors verified the data for gaps or inconsistencies.

All the data sheets from the field were sent to the Yangon office, where the M&E team hired four data entry operators to do the data entry. This process was overseen by the Data Analyst with counterchecks being conducted by double entry on a random basis. Data was analyzed using SPSS software, Microsoft Excel and Qualitative Data Analysis Tool. The findings and conclusions have been compiled in this report.

2.5 Limitations

The assessment was an internal process carried out by CARE using team members who had been involved in project implementation and hence there is a possibility of overly positive responses from the sampled population.

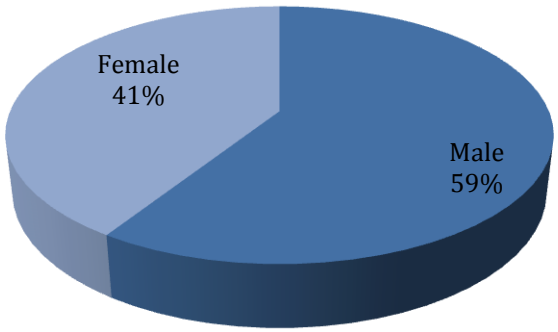
Secondly, the assessment only focused on the views of the beneficiaries and did not take into consideration the views of other stakeholders such as other members of the village who were not beneficiaries, local government officials, material suppliers and the staff themselves. Hence, the assessment was not able to provide a holistic picture of the gaps, achievements and impacts of the project.

3. Findings of the Assessment

3.1 Assessment Coverage and Socio-Demographic Data

The assessment covered 291 beneficiary households representing 48.5 % of the total number of beneficiaries and 12 villages representing 80% of the total number of villages where the project was implemented. The age of respondents ranged from 18 years to 86 years with a median of 40 years (SD =14.86). The male-female ratio was 3:2 (Figure 1).

Figure 1 Distribution of Respondents by Sex (N=291)



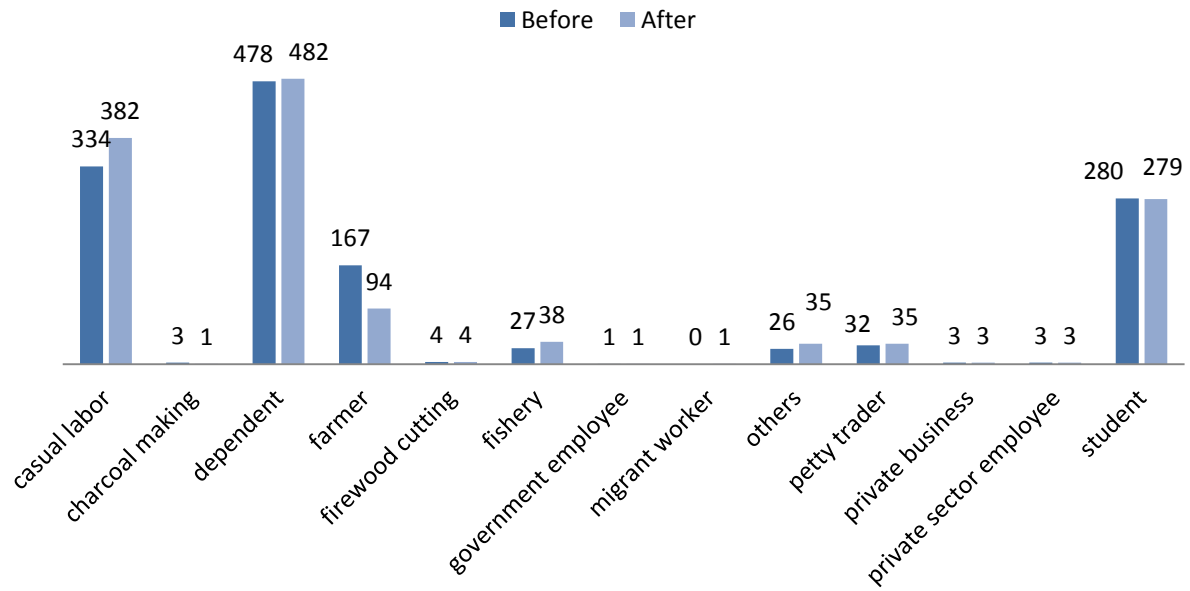
Beneficiaries of the Rakhine community formed the majority of the studied population, and accounted for 72.8% of respondents followed by Chin people (26.8%) and only 0.3% were Bamar people. The size of family ranged from 1 - 10 household members, with an average of 5 family members (mean = 4.68±1.97) per household.

17 key informants (KI) were interviewed as part of the assessment from among the 12 sampled villages. Key informants were members of the village development committees. 50% of the respondents held the post of president, 37.5% were members and 12.5% were secretaries. Among them, 76.47% were Rakhine (13 respondents) and 23.53% were Chin (4 respondents). Female to male ratio among KIs was 1:16.

According to the information collected on income sources and status, poverty and dependency seem to have been exacerbated by the impact of the cyclone. Figure 2 shows that the level of dependency[2] (which was already quite high prior to the cyclone) has increased even further. The assessment also found an increase in casual labor, fishing, petty trade and other occupations such as herding, gardening and migration to work in jade mines in neighboring states. On the other hand there has been a decrease in the number of farmers. These point to the need of the community for alternative quicker and better sources of income so as to be able to recover faster from the impact of the cyclone.

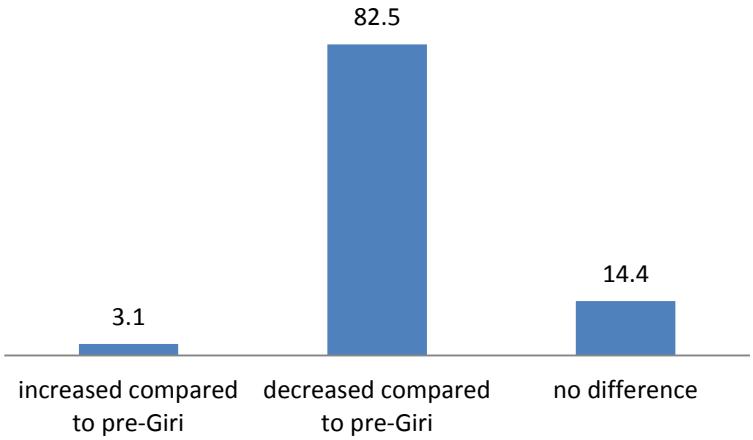
[2] Here, the term 'Dependency' refers to the condition of the people of having to depend on others for their sustenance and do not have any income of their own.

Figure 2: Occupations of the Respondents and their Family Members before and after Cyclone Giri



Majority (82.5%) of the respondents said that their household incomes had reduced compared to pre-Giri conditions (Figure 3). Half of the respondents reported that they had an average income of between 10,001-50,000 Kyats (13 – 66 USD)[3] and 44% of the respondents reported that they had an income between 50,001-100,000 Kyats (67 – 133USD) per month before the Cyclone. Only five percent of the respondents had incomes above 100,000 Kyats (above 133 USD) per month while one percent of respondents earned less than 10,000 Kyats (less than 13USD) per month.

Figure 3 Comparison of Household Income Levels Pre and Post Giri (N=291)



[3] 1 USD = 750 Kyats

3.2 Household Damage due to Cyclone Giri

Among the respondents, 77.3% had their houses totally destroyed by the Cyclone and 22.3% reported that their houses were partially destroyed (Figure 4). However, the project was only able to provide partial reconstruction support to a majority of respondents (81.1%) (Figure 5). Table 1 below shows a cross tabulation of the households damaged and the type of support received.

Figure 4 Degree of Damage to Houses caused by Cyclone Giri (N=291)

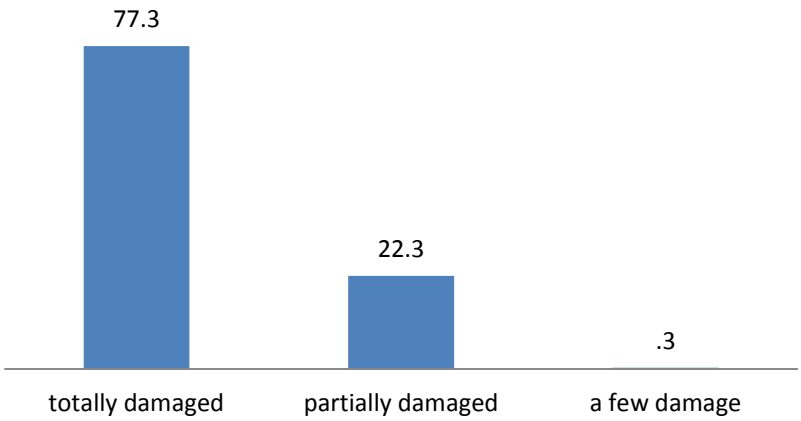


Figure 5 Type of Support Received from the Project (N=291)

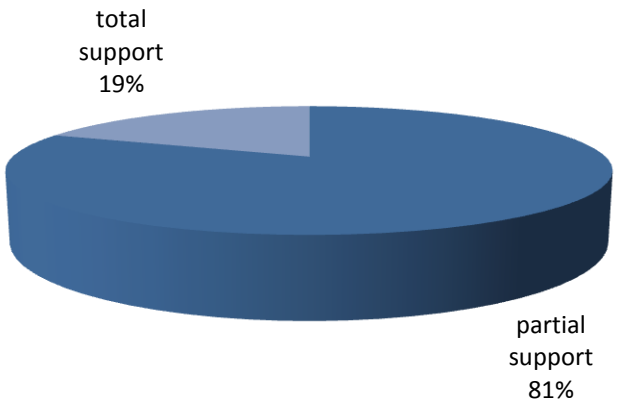


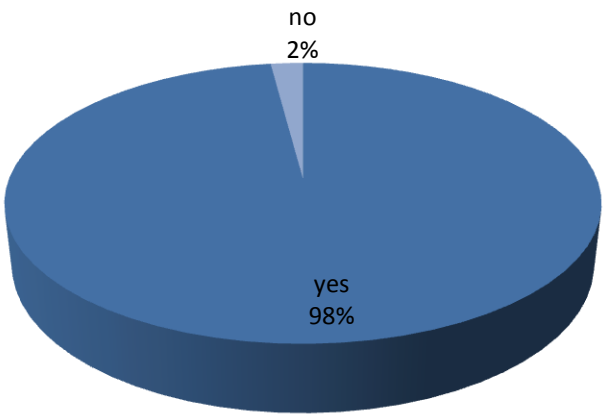
Table 1 Cross tabulation between Extent of Damage and Type of Support Received

		Type of support received		
		Partial support	Total support	Total
Extent of damage caused by Giri	Totally damaged	172	53	225
	Partially damaged	63	2	65
	Small damage	1	0	1
	Total	236	55	291

Roof and wall damage were the most common (67.7%) among partially damaged households (N=65); followed by damage to roof, wall and floor (17.7%); followed by damage to roof, wall and post (14.5%).

98% of respondents owned the land on which their house was rebuilt or repaired (Figure 6), while the remaining two percent said that the land on which their house was built was owned by their relatives or neighbors.

Figure 6 Ownership of the Land where the House was Rebuilt



3.3 Beneficiary Participation

Most of the respondents were aware of the projects' beneficiary selection criteria (76.9%) (Figure 7) and were able to clearly cite the sources of this information (80.1%) (Figure 8). They got the information of their selection because they were involved in the decision making process (76.4%). Other means of learning about their selection included community meetings (70.8%), from VDC members (69.1%), from the local authority (18%), friends and neighbors (10.7%) and from their spouse and notice boards (2.6 percent).

Figure 7 Respondents' Awareness of Beneficiary Selection Criteria (N=291)

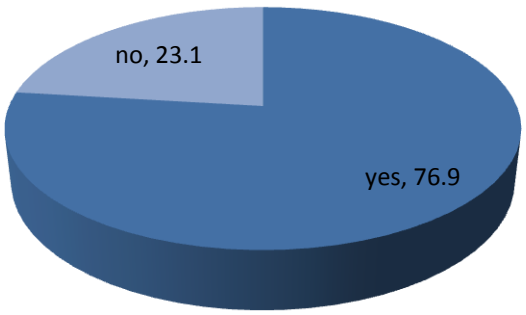
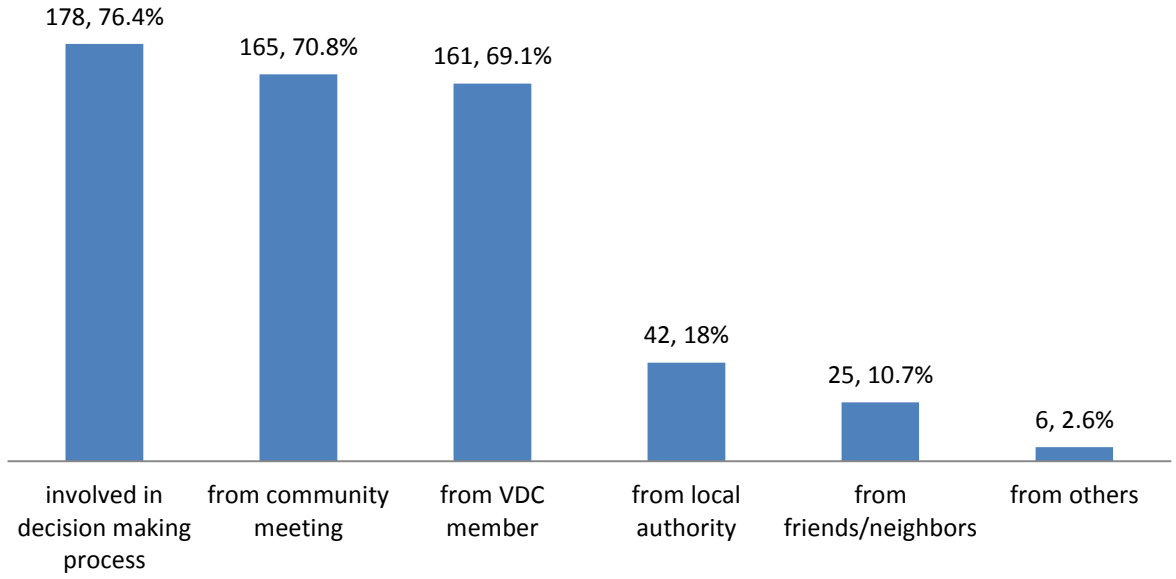


Figure 8 Sources of Information Regarding Selection for Support (N=233)



20.3% of respondents felt that there were some persons who should have been selected but were left out during beneficiary selection. However, most of these respondents (59.3%) could not state any reasons for this opinion. Among the remaining respondents, the reasons cited included unfair decision making process, absence from the beneficiary selection meetings, ability to rebuild by themselves and constraints related to supporting capacity of the project.

On the other hand 8.6% of respondents felt that there were some undeserving persons who had been selected due to a hasty and unfair decision making process.

3.4 Quality of Materials Provided

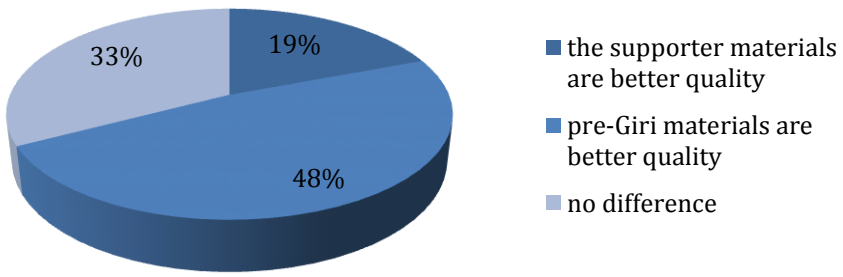
All respondents said that the materials received were useful for rebuilding or repairing their houses to a good quality. However, one fourth of the respondents (71 out of 291; 24%) said that the materials were not enough for rebuilding their house to the size of their original house. The materials that were insufficient were bamboo (23.4%), nippa palms (10.7%), nails and coconut fiber ropes (1 percent).

Nearly half the respondents (48.1%) however said that their pre-Giri housing materials were of better quality as compared to the materials supported by the project (Figure 9). The reason given was that the bamboo and nippa palm was not mature enough and could be easily destroyed by insects when the rains come. 25.4% of respondents felt that the bamboo should have been treated in brine. The other reason was that some of them used to live in wooden houses with galvanized iron sheets before Giri, (10.0%), while others used better quality wood for the house's posts (6.5%), their former dwellings were wooden houses with bamboo matted walls (4.8%) and some materials supplied had been damaged due to the long transportation (1.3%).

However, these statements seem to contradict their later responses where nearly all respondents said that they were satisfied with the quality of the house and expected it to last for at least 2-4 years.

However, 32.6% of the respondents said that the materials provided were no different from what they had earlier and 19.2% of respondents said that the supported materials were of better quality than what they previously had. The reason cited was that the bamboo and nippa palm provided were of better quality and standard because they were cut and prepared at the right time (11.7%), the materials provided were new (5.2%), the respondents had the opportunity to select good quality materials on their own (0.3%) and the materials were provided at the time of dire need (0.3 percent).

Figure 9 Perception Regarding Quality of Housing Materials

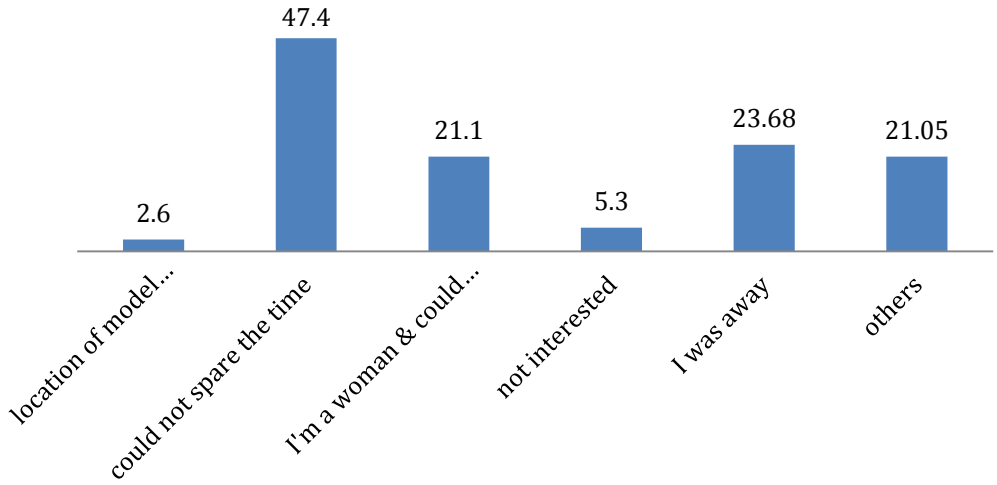


Almost all of the Key Informants (88.24%) expressed their satisfaction with the quality of the bamboo and nipa palm distributed, saying that these materials were difficult to find in their areas. Yet, 41% of the Key Informants said that their community was not used to use the type of the mangrove stems provided.

3.5 Demonstration of Model House

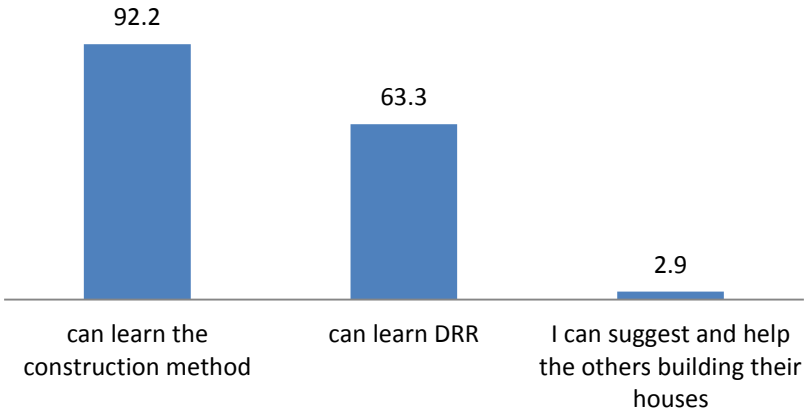
Out of 291, 253 (86.9%) respondents had participated in the demonstration of the model house by the project. The most common reasons cited for not participating were lack of time (47.4%), absence from the village (23.68%), being women - they could not rebuild their house (21.1%), lack of interest (5.3%), distance of model house site (2.6%) and other reasons (21.05%) such as being preoccupied with their livelihood priorities, social activities, parents' illnesses etc (Figure 10).

Figure 10 Reasons for not being able to attend the Model House Demonstration (N=38)



Majority of the participants in the model house demonstration (96.8%) said that it was useful for them because they learnt about construction methods (92.2%), about disaster risk reduction (DRR) features (63.3%) and that with this knowledge, they could help others to rebuild their houses (2.9%)(Figure 11).

Figure 11 Reasons why the Model House Demonstration was Useful (N=245)



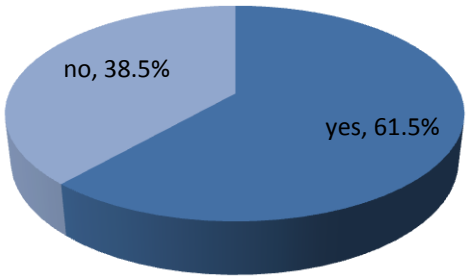
Only eight respondents said that the demonstration was not useful for them. The reasons cited were that - it was not in keeping with their culture where houses were traditionally bigger with more partitions, 12.5% percent found the demonstration technique difficult to understand and 12.5 percent said that the demonstration house had no partitions and was inappropriate for women.

33% of Key informants (from 6 villages (five Rakhine villages and one Chin village) also felt that the kind of house introduced by the project was not locally appropriate. The usual type of house in their villages was built with good quality wooden poles (the better off used teak), the wall was made of bamboo and roof with nippa palms. The houses also had many partitions. However, the houses demonstrated by the project were acceptable as they had storm resistant features.

3.6 Reconstruction of the House

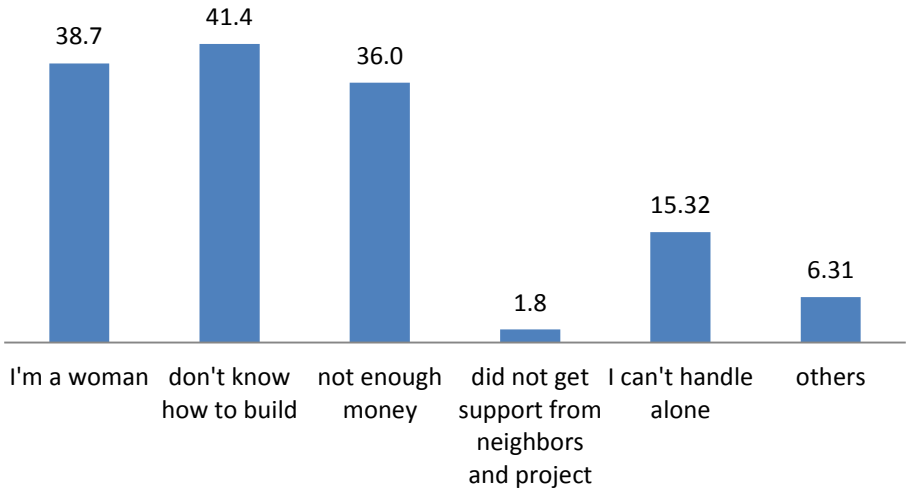
Out of 291 respondents, 179 (61.5%) rebuilt/repaired their house by themselves while the remaining 112 respondents (38.5%) needed additional support. They relied on neighbors/relatives (79.3%), paid laborers (10.8%) and friends (0.9%) for such additional support (Figure 12). The remaining 9% of respondents had received a model house from the project.

Figure12 Number of Respondents who Reconstructed/Repaired their House on their Own (N=291)



Among those who did not reconstruct or repair their house on their own but needed help to rebuild, 41.4% of respondents said that they did not know how to build, 38.7% respondents said that being women they were unable to reconstruct on their own, 36% said that they did not have enough money, 15.32% said they lacked enough labor support in their own family and 1.8% of respondents said that they did not get enough support from neighbors and project. The remaining 6.31% were beneficiaries of the model house (Figure 13).

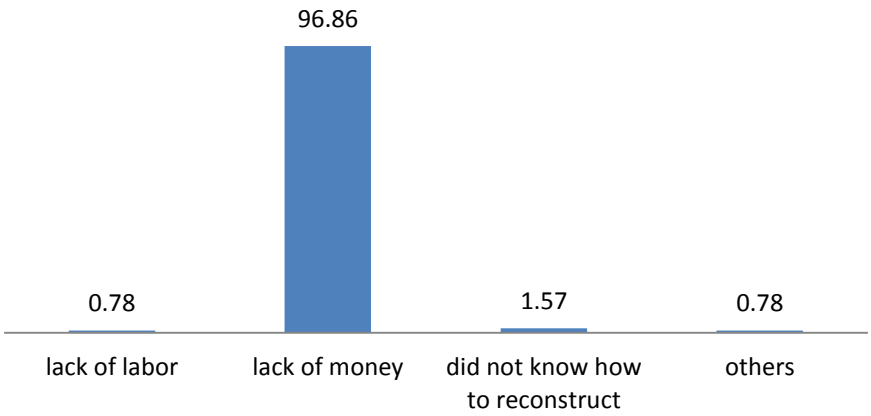
Figure 13 Reasons for not Reconstructing/Repairing their Houses on their Own (N=112)



Only twelve percent (36 respondents) of respondents reported not having any difficulties in the reconstruction process. However, 88% (255 respondents) had faced some or the other difficulty. The most common difficulties faced for reconstruction of their houses under the CARE-Swanyee Project were economic problems (96.86%), lack of knowledge to rebuild the

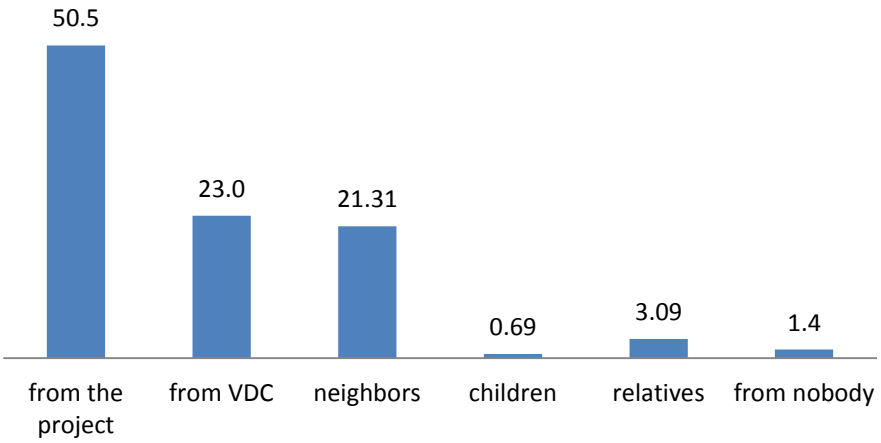
house (1.57%), lack of labor (0.78%) and other problems like insufficient construction materials and other family priorities which delayed the construction (0.78%) (Figure14).

Figure 14 Difficulties faced by the Community during Reconstruction (N=255)



Most respondents stated that they received adequate support for reconstruction from the project team. 50.5% of respondents stated that they got support from the project team and 23.0% of respondents said they were supported by the VDC members (Figure 15). The other sources of support were neighbors (21.31%) and relatives (3.09%).

Figure 15 Sources of Support during Reconstruction Process (N=291)



Among the respondents who said that they received support from the VDC – 61% said they had received support from the VDC every time they asked for help and 72.55% said they received support during the monitoring visits of the VDC members.

A number of respondents said that they had made some changes to their newly built or repaired houses supported by the project. Table 2 shows the type of changes made:

Table 2 Changes Made to the Reconstructed House (N=291)

What kind of changes have you made to your house design				
	Yes		No	
	Frequency	Percent	Frequency	Percent
Raise the level of the floor	123	42.3	168	57.7
Added extra rooms	94	32.3	197	67.7
Placed cross bracings	23	7.9	268	92.1
Others (More posts, Size variations, lower the floor)	51	17.5	240	82.5
No changes	77	26.5	214	73.5

Among the Key Informants, all respondents were of the opinion that the reconstruction methods were suitable for the communities.

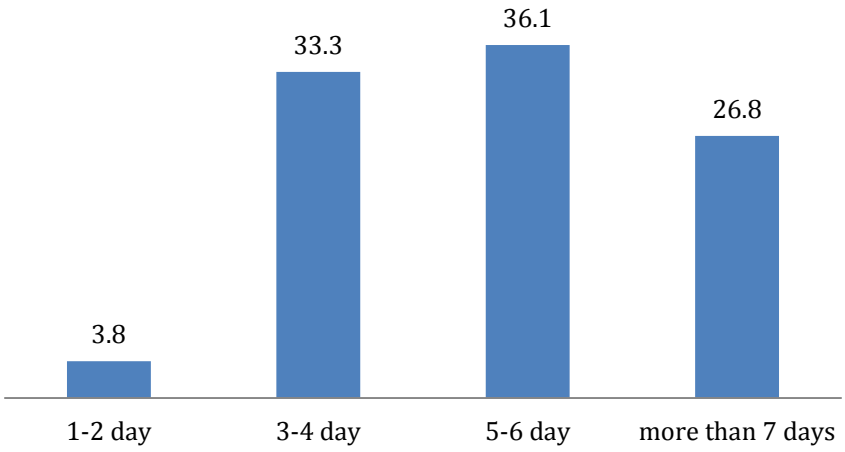
Table 3: Reasons Why the Reconstruction Methods Were Suitable

Reasons for suitability of the reconstruction methods	**Freq**	**%**
The houses were rebuilt with V-shaped or X-shaped bracings which made them resistant to heavy rains and wind	8	47.06
All activities were carried out through discussions with the communities and with their agreement	3	17.65
The community gained new knowledge on house construction methods, with which they were able to share and help each other	3	17.65
The project reached the neediest families at a critical time. Else, these families would be forced to continue living under tarpaulins tied to poles	3	17.65
All the reconstruction processes were done at the right time(before monsoons)	1	5.88

3.7 Resources Contributed for Reconstruction

Most respondents (36.1%) contributed about 5-6days of time to repair their house. Only 3.8% of respondents could rebuild/repair their house within 1-2 days. The remaining took more than 3 days (33.3%) and some (26.8%) took over a week (Figure 16) to rebuild/ repair their house.

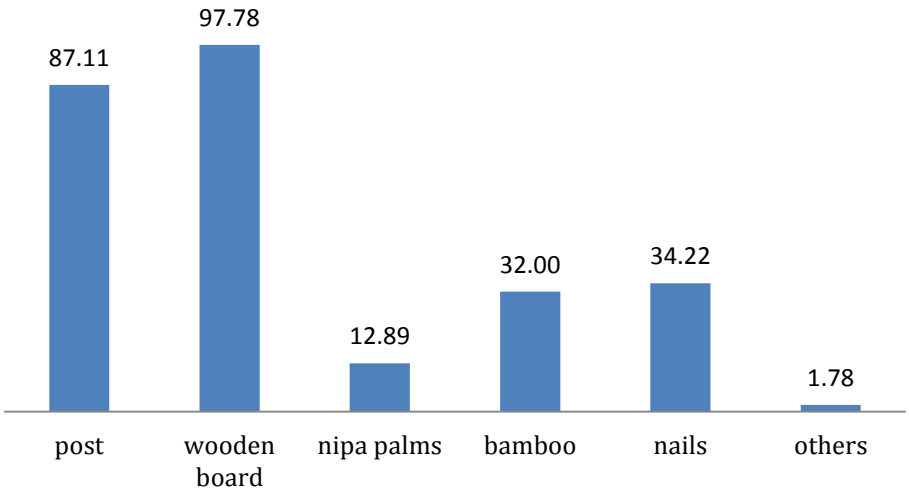
Figure 16 Number of Days Taken for the Reconstruction of the Houses (N=291)



Overall, most respondents (99.3%) felt that the time period provided by the project for the entire reconstruction process was enough. Only 0.7% (2 out of 291 respondents) said that the time given for selection of materials was not enough - thus leading to selection of immature bamboo and nipa palms which could not be used; and 1%(3 out of 291 respondents) said the time was not enough because they had to travel to other places in between for personal reasons. Only one respondent complained that it was difficult to find laborers within the limited time period.

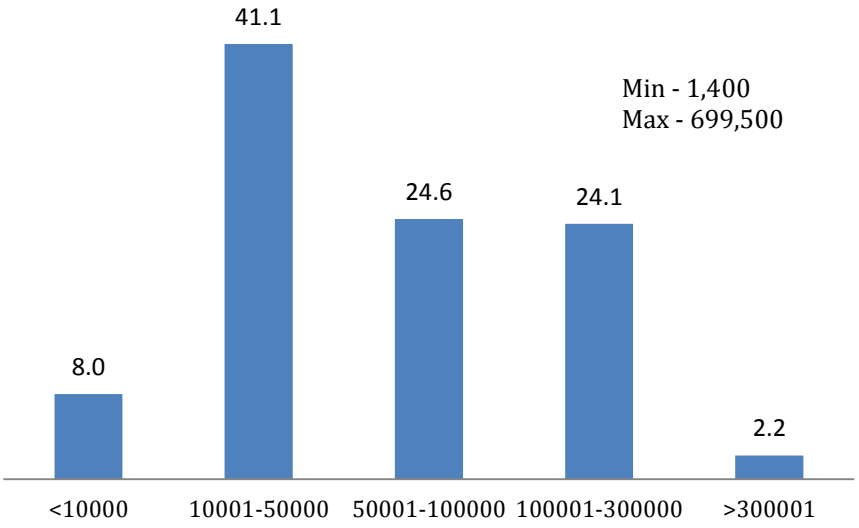
Over three fourth of the respondents (225 out of 291 respondents) said that they had to contribute additional construction materials over and above the materials provided by the project. Figure 17 shows the kind of materials contributed by the community.

Figure 17 Materials Contributed by the Community (N=225)



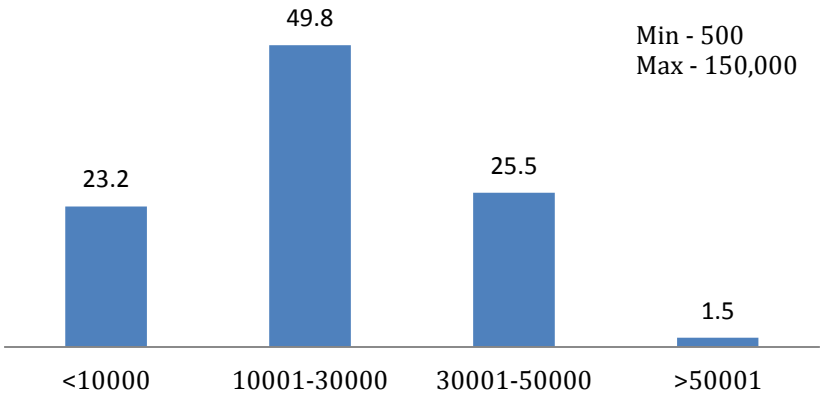
Majority of respondents (41.1%) put the value of their contribution between 10,000 kyats (13.33USD)[4] to 50,000 kyats (66.66USD). However, this varied greatly depending upon the size and type of the house they rebuilt (Figure 18). 24.6% of respondents said that the value of their contribution ranged between 50001 to 100000 Kyats (66 USD to 133 USD) and 24.1% of respondents contributed material worth 100001 to 300000 Kyats (133 USD to 400USD). 2.2% for respondents stated that they had contributed more than 400 USD worth of materials[5].

Figure 18 Value of Materials Contributed by Community (in Kyats) (N=225)



Besides paying for the materials, the community also had to pay for labor or per diem for helpers (usually their neighbors and other villagers) for supporting them with the reconstruction of their house (Figure 19). This ranged from payment of less than 10000 Kyats (13 USD) to more than 50000 Kyats (66USD).

Figure 19 Value of Labor Contributed by Community (in Kyats) (N=263)



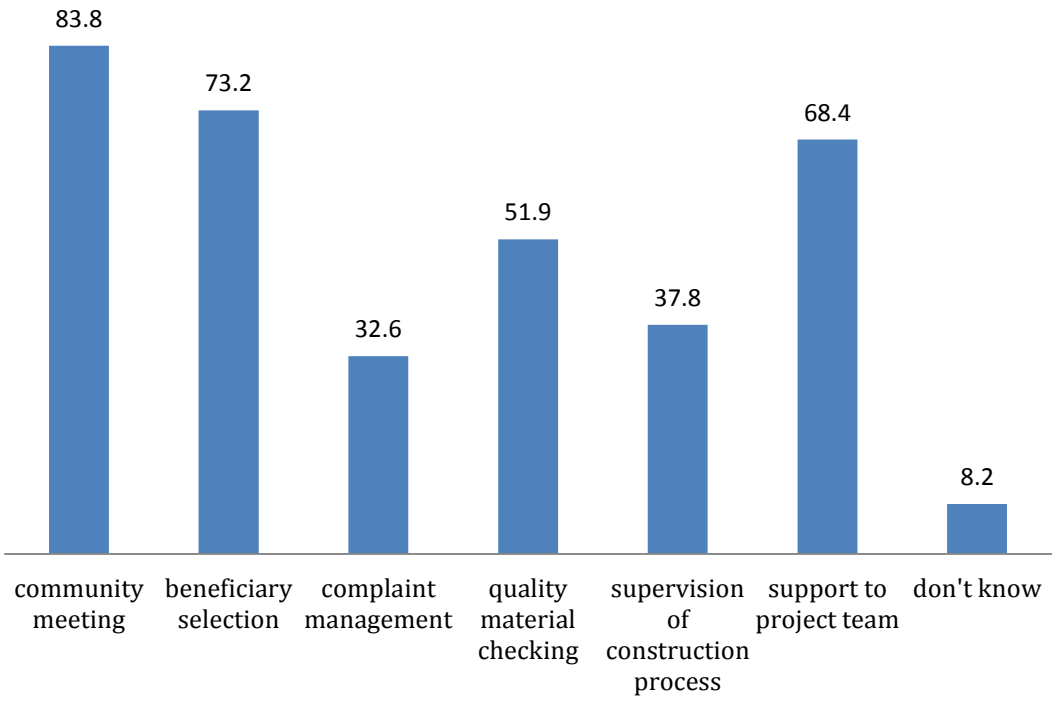
[4] 1 USD is approximately equivalent to 750 Kyats.
[5]

Nearly half of the respondents (45.4 percent) also reported that they knew the value of the reconstruction support provided by the project. The value of support for a completely reconstructed house provided by the project was 374785Kyats (500USD). The value of support for partially reconstruction of a damaged house was 134810Kyat (180 USD).

3.8 Role of Village Development Committee (VDC)

VDCs in each village supported the community mobilization process and the implementation of the project at the village level in various ways. According to the respondents, the role of the VDC in the shelter re-construction process consisted of leading the community meetings (83.8%), facilitating the beneficiary selection process (73.2%), supporting the project team (68.4%), checking the quality of materials (51.9%), supervision of construction (37.8%) and complaint management (32.6%) (Figure20).

Figure 20 Role of VDC in Shelter Construction Process (N=291)



According to the Key Informants (KIs), the role of the VDCs was largely to support the project team in distributing materials and maintaining records and to mobilize the community for reconstructing their houses. The detailed breakup of their responses is as follows:

Table 4: Role of VDC in Project Activities

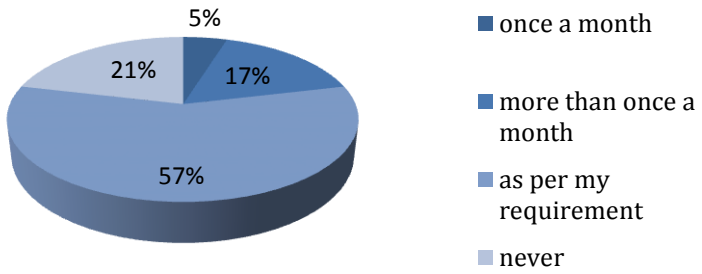
Role of VDC in project activities	Freq	%
Assist the project team in distribution of materials and record keeping	7	41.18
Mobilising the community and monitoring the process of reconstruction	7	41.18
Leading community meetings and managing project activities with project team	5	29.41

Responsible for solving conflicts and complaints	4	23.53
Ensuring safe storage of materials provided	3	17.65
Assist the project team in data collection and beneficiary selection	2	11.76
Assist the project team in checking quality of materials	1	5.88
Support and help in reconstruction of houses	1	5.88
Assist the project team in building the model house	1	5.88

The Key Informants from 4 villages (Kyar Inn Taung Village (Shout Chon Village Tract), Nat Hla Village, Oak Kan Village and Yo Sa Nwin Village (Yo Sa Nwin Village Tract))also reported that in addition to the material support, they received the ideas on how to mobilize the community, how to solve the community's complaints and how to manage and continue their committee for the future.

Nearly 60 percent of the individual respondents said that the VDC members visited their house during the reconstruction process (Figure 21).

Figure 21 Frequency of VDC Member's Visit to the House Reconstruction Process (N=291)



Apart from performing their roles as listed above, the VDC members also helped the community in the transportation of their construction materials and in rebuilding their houses. The details of the community's response in this regard is shown in Table 3.

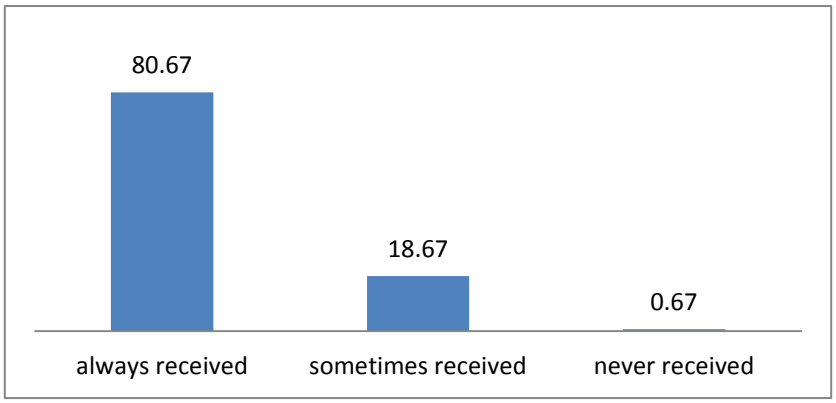
Table 5 Type of Support Received from VDC Members (N=291)

Kind of Support Received	Frequency	Percent
Help in rebuilding the house	96	33.00
Helped in transportation and distribution of materials	98	33.68
Mobilization of community to raise awareness, attend meetings, to participate in beneficiary selection	42	14.43
Checking quality of materials provided for reconstruction	20	6.87
Others (whenever help was required, notifying arrival of materials, providing some materials, and in their role as VDC members)	8	2.74

No response	27	9.3
Total	291	100.0

Of 291 respondents, 141 (48.5%) said that they had never asked for help from the VDC members. A majority of respondents (80.67%) who had asked for help from the VDC (51.5%) said that they had always received support whenever they had asked for help. Less than 1% (i.e., only one respondent) said that he/she did not receive any support from the VDC members upon asking for it (Figure 22).

Figure 22 Frequency of Support Received from VDC (N=150)



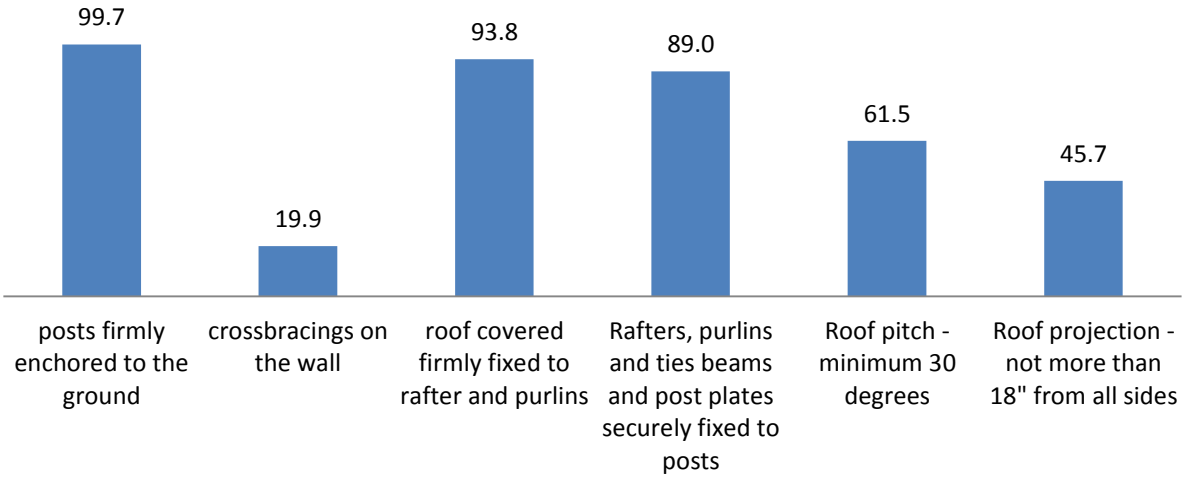
The reasons for not asking /not receiving help included reasons such as VDC members being occupied by other village activities, their absence from home and pre-occupation with their livelihoods.

Only a few respondents (7, 2.4%) said that they had complaints about the process of beneficiary selection and shelter construction by the project. Of those who had raised complaints, 57.1% said that they had raised their complaint through the complaint box mechanism and that their complaints were resolved to their satisfaction.

3.9 Features of the House

The observations of the enumerators regarding the features of the respondents' houses are as shown in Figure 23 below:

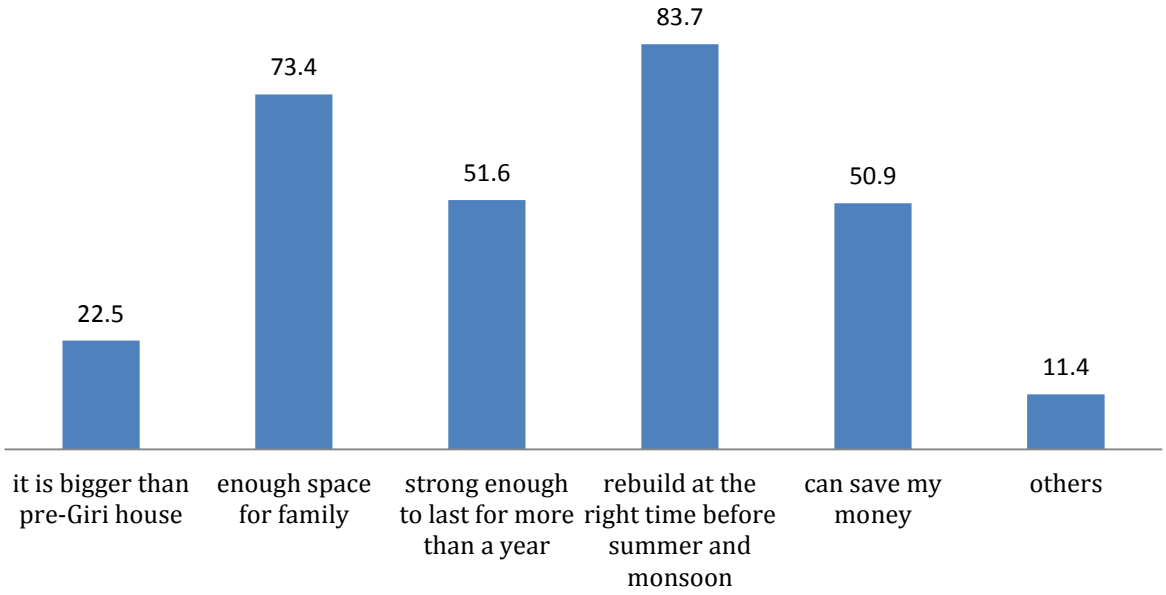
Figure 23 Features of the Reconstructed House (N=291)



3.10 Key Outcomes of the Project

Almost all respondents, i.e, 290 respondents said they were satisfied with the new house built / material support provided by the project. The reasons for their satisfaction (Figure 24) were that - they could rebuild their house at the right time (before summer and monsoon), the houses had enough space for their families, the reconstructed houses were strong, and because they could save money for other purposes.

Figure 24 Reasons for Satisfaction with the Reconstructed/Repaired House (N=290)



Other reasons included: the support received when they were in most need; it was difficult to find the materials provided in their own locality at that time; and that they could continue to stay safely in their own houses.

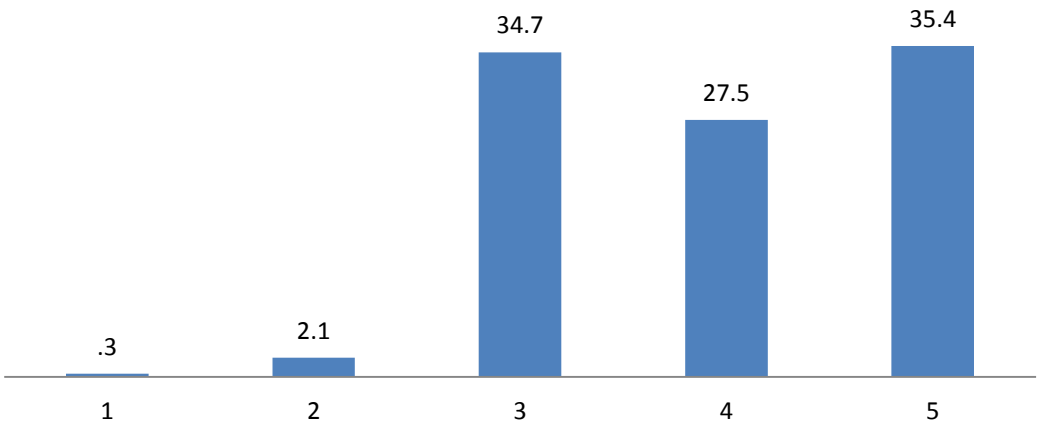
The only respondent who was not satisfied with the new house/materials provided stated that the materials received were not enough.

The responses from the Key Informants also corroborated the findings above. They said that the support from the project was very timely as it helped the beneficiaries to rebuild their houses before the monsoon (52.94%). They also stated that the support provided, indirectly helped the community's livelihood (23.53%). They also said that the model house building activity was very effective and the community was satisfied with it because the most needy households received this benefit and the family members of that household had a safe place to live.

The individual respondents rated their satisfaction with the support provided, on a scale of 1 to 5, with 5 being the highest level of satisfaction and 1 being the lowest level of satisfaction (Figure 25). 34.7% of respondents rated their satisfaction at 3 , 35.4% rated satisfaction as being 5, 27.5 % rated it at 4, 2.1% rated it as 2 and 0.3% rated satisfaction as being 1 .

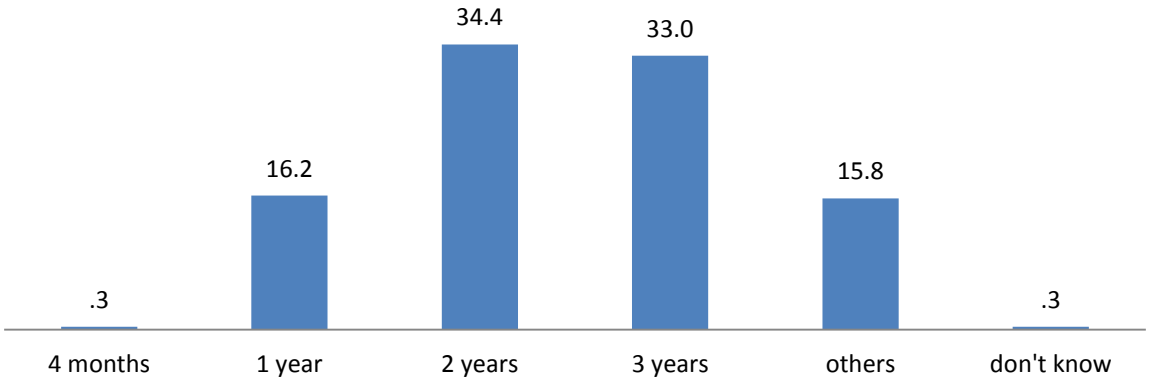
Figure 25 Rating of Overall Satisfaction with the Reconstructed/ Repaired House

(5= the most satisfied, 1=the least satisfied)



Almost all respondents (97.9 percent) said that the reconstructed houses could withstand the rains and winds in their region. Majority of the respondents reported that they thought the houses would last for 2-3 years. There were also a few respondents (15.8 percent) who reported that the houses could last for at least 4-10 years (Figure 26).

Figure 26 Respondents' Opinion regarding the Longevity of the re-constructed/ repaired House



3.11 Coping Mechanism in the absence of external support

When asked for their coping strategy in the eventuality of there being no external support, 34% of respondents said that they would have to stay in sub-standard conditions –small huts or with tarpaulins while 25% responded that they would have to rebuild on their own in their own time. The need for finding additional sources of income was mentioned as an important coping mechanism for recovering their shelter by 10.3% of the respondents. The other mechanisms mentioned are given below in Table 4.

Table 6 Respondents' Coping Mechanisms Regarding Reconstruction /Repair of The House

Coping Mechanism	Frequency	Percent
I have to stay with hut / tarpaulins /	99	34.1
I have to stay with relatives/neighbors/monastery	10	3.4
I have to depend myself to rebuild my house/ will take time	73	25.0
I will rebuild my house with the help of my relatives/ neighbors	21	7.2
We have to save money from our daily expense time after time to rebuild the house/ earn more or pawn from others to rebuild my house/ family members have to work as casual labors to rebuild the house	30	10.3
I will reuse the old materials from my destructed house/ find the materials in the forest by myself	24	8.2
I can't rebuild if I were not supported/ can't rebuild my house till next season/ stay slovenly as I am a woman and cannot rebuild by myself/ family problems/ handicapped	17	5.7
Others (I have no idea/ wait for the donor/ can only build the house smaller than this)	17	5.8
Total	291	100.0

The Key Informants said that there were no significant coping mechanisms among the community. Only two respondents said that they would borrow money from their neighbors and relatives and rebuild their houses with help from the neighbors and the village leaders.

According to the key informants interviewed, the most common problems the villages could encounter if the project had never been implemented were:

1) The poorest and most vulnerable families would not have been able to rebuild their houses on time before the monsoons and would have to live under tarpaulins further exacerbating their poor health and poverty.

2) Even among those who were economically better off, there would have been a delay in reconstructing the houses due to lack of income, and they would have to stay in temporary houses which only had a roof, floor and poles.

3.12 Suggestion for Future Shelter Re-construction/ Repair Project

The respondents were also asked for their suggestion regarding future projects on shelter re-construction/repair. Most respondents (33.9%) suggested that the project should provide better quality and culturally more appropriate houses. 26% of respondents suggested that materials for reconstruction should be provided equally among all beneficiaries. Other suggestions included providing support to the remaining un-assisted families, provide latrines, ponds, fencing materials and livelihoods along with houses and to build bigger and stronger model house. Table 5 below gives the details of their suggestions.

Table 7 Respondents' Suggestions for Future Housing Project

Suggestions	Frequency	Percent
Support better quality and culturally more appropriate house	99	33.9
Provide enough materials for all beneficiaries equally	78	26.8
No suggestions	65	22.3
Support the remaining un-assisted families in future projects	17	5.8
To prioritize the most needy families and the things needed most for distribution	10	3.4
To build a stronger and bigger house and model house	6	2.0
Support with construction materials as well as latrines , ponds, fencing materials and livelihoods	8	2.6
Other Suggestions (to give support immediately after the disaster; project team to build the house directly / provide materials directly to beneficiaries; use a cash for work approach as the beneficiaries can themselves procure the kind of posts they traditionally use; proper project orientation; address favouritism if it exists; and to organize closer distribution points to save on transportation costs)	8	2.4
Total	291	100.0

The key informants also suggested that the project should build not just technically sound houses but also culturally appropriate houses in the future. In this regard, it would be better to let the beneficiaries find the posts for the houses by themselves and the project could support them with cash instead. Thus it could become a source of income as well. They also would like the project to support the remaining households who were not supported under the current project.

4. Key Issues and Conclusions

Cyclone Giri had caused extensive damage to most houses. Although there were several houses that were completely damaged, the project could only support few houses for total reconstruction. Hence most of the affected households only received partial reconstruction support from the project and the rest of the materials were put together by the households themselves.

According to the rapid assessment carried out in 40 villages prior to the start of the project, 90% of the population had suffered damage to their houses and household items. Most houses had lost their floors and walls. 90% of key informants had reported damage to houses in their villages, and estimated that approximately 4000 houses were destroyed or damaged. Some people had already made temporary repairs and returned home while the majority continued to live with friends or relatives.

The 15 villages covered under this project were also a part of the rapid assessment. The project was able to provide support only for 65% of the population whose houses were damaged, among these 15 villages. The project supported 11% of the totally damaged houses and 54% of the partially damaged houses. All families which received support from the project are now living in their own houses. The remaining damaged houses have not received any form of external support until the end of this project.

Overview of Poverty Situation

Most families face greater poverty than before with incomes having dropped and dependency having increased in the post Giri situation. There has been a clear increase in daily wage labor and migration for work as opportunities for income generation have declined in the area.

During the rapid assessment, it was reported that agriculture was the chief source of income with 75% of the population relying on it and the remaining relying on fishing. 88% of the cultivated land had been destroyed due to break down of embankments and intrusion of salt water. Two thirds of the population reported having insufficient food stocks with nearly one third having no food stock at all.

Even seven months after the disaster, the lack of income and capital, continues to be the biggest impediment to self recovery among the affected families. As most respondents indicated, without the external support provided by the project for rebuilding the houses, the beneficiaries would have remained shelter less (or living in extremely poor shelters) – thus exposing themselves to further poverty and marginalization. However, the project was only able to support their shelter needs while their food security and livelihood needs continue to remain unfulfilled.

Overall satisfaction of beneficiaries

Although the project was unable to provide complete support to all the beneficiary families, and in many cases the beneficiaries reported having better quality housing materials before the cyclone, the respondents were satisfied with the support provided by the project mainly because:

- The support was timely as the reconstruction support reached just – before the extreme heat of summer and before the monsoons.
- The beneficiaries gained knowledge of building houses incorporating DRR features

Almost all respondents, i.e, 290 respondents said they were satisfied with the new house built / material support provided by the project. The reasons for their satisfaction were that - they could rebuild their house at the right time (before summer and monsoon), the houses had enough space for their families, the reconstructed houses were strong, and because they could save money for other needs. The respondents also rated their satisfaction on a scale of 1 to 5, with 5 being the highest level of satisfaction and 1 being the lowest level of satisfaction. 62.9% of respondents rated their satisfaction between 4 and 5, while 34.7% of respondents rated their satisfaction at 3.

Community Participation and Role of VDCs

The assessment indicates robust community participation in important processes such as the beneficiary selection process, model house construction and finalizing the design of their own house. A majority of the beneficiaries were aware of the selection criteria (77%), and 76.4% reported being involved in the decision making process. The key informants also reported being part of all project processes and that all the formulation of criteria for selecting beneficiaries and the final beneficiary selection process was done in consultation with the community members.

86.9% of respondents had participated in the demonstration of the model house. Among those who did not participate in the demonstration of the model house or in the reconstruction of their own house – nearly 30% were women who said that they were unable to rebuild their house.

Most beneficiaries also made changes in the design of the house as they changed floor heights, the number of posts, added extra rooms, placed bracings etc. They also contributed locally available materials (mostly worth between 10,000-3,00,000 Kyats) and labor for the reconstruction of their houses to their desired size.

In order to ensure better participation from the community the project had modified existing VDCs to include women. The VDC's were also active and supportive in the reconstruction process. Nearly 60 percent of respondents said that the VDC members visited their house during the reconstruction process. A majority of respondents (80.67%) who had asked for help from the VDC said that they had always received support whenever they had asked for help.

Interestingly, the VDC members themselves reported having gained knowledge of community mobilization and problem solving in the community.

Demonstration of Model House

The demonstration of the model house was highly appreciated as the communities learnt a new skill and also became aware of DRR features that could strengthen their house. 86.9% respondents had participated in the demonstration of the model house by the project and 96%

of them found it useful as they learnt about construction methods and disaster risk reduction features and with this knowledge, they could help others to rebuild their house.

Although, they appreciated the model house demonstration and training, a large section of the community felt that the materials used were not appropriate for the area where they normally used better quality materials and had a different style of construction with Nippa palms being used for the roof and bamboo mats being used for the walls. The project provided for Nippa palms for both the roof and the wall.

Quality and Quantity of Materials Provided for Re-Construction

Under the project, materials were provided for total reconstruction for 100 families and partial reconstruction for 500 families. The beneficiaries re-constructed their own houses with support from others. Most respondents (nearly 69%) required between 3-6days to repair their house. Overall, most respondents (99.3%) felt that the time period provided by the project for the entire reconstruction process was enough.

All respondents said that the materials received were useful for rebuilding or repairing their houses to a good quality. However, one fourth of the respondents (24%) said that the materials were not enough for rebuilding their house to the size of their original house. This is because the houses they had prior to Cyclone Giri were much larger than the size provided by the project. The materials that were insufficient were bamboo, nippa palm, nails and coconut fiber rope. Nearly 77% of the respondents said that they had to contribute additional construction materials over and above the materials provided by the project in order to re-construct their house to the size they desired. As mentioned earlier, several beneficiaries changed the core design of the house by adding more rooms, bracings etc and several families who only received partial support from the project contributed more materials on their own to complete the reconstruction of their house.

Regarding the quality of the materials, there is greater disparity in the responses from the beneficiaries arising out of a comparison of materials used before Giri and those used afterwards. 32.6% of the respondents said that the materials provided by the project were the same as what they had earlier and 19.2% of respondents said that the materials were of better quality than what they previously had. The reason cited was that the bamboo and nippa palm provided were of better quality and standard because they were cut and prepared at the right time ; the materials provided were new; the respondents had the opportunity to select good quality materials on their own and the materials were provided at the time when they needed it most.

However, 48.1% of respondents said that their pre-Giri housing materials were of better quality as compared to the materials supported by the project. The reason given was that the bamboo and nippa palm provided were not mature enough and could be easily destroyed by insects during the rains. A number of these respondents had wooden houses with galvanized iron sheets before Giri, while others used better quality wood for the house's posts and had bamboo matted walls.

Suggestions from the Community

The suggestions from the beneficiaries were mainly regarding the quality and quantity of materials provided for reconstruction. They preferred better quality materials similar to the ones that were used prior to the cyclone and that the materials be distributed in equal quantities among all affected households. Other suggestions included provision of WASH facilities and use of a cash for work method for reconstruction so as to help livelihood recovery as well.

Without the intervention from the project, these families would have faced further impoverishment as their main coping mechanism was to continue using tarpaulins or huts as shelters. Left to rebuild the shelters on their own they would have to continue living in poor housing conditions and face severe strain on livelihoods for survival.

5. Recommendations

Timing and Guidelines for shelter reconstruction

1. Shelter reconstruction support when provided immediately after a disaster is the most timely as it prevents further poverty and marginalization of affected communities by ensuring a safe shelter and saving of much needed cash, at a time when there are no sources of steady income.
2. Some form of external assistance in the form of materials and information goes a long way in supporting the rehabilitation of affected households who willingly contribute labor and other necessary materials. The absence of external assistance would have meant a much delayed recovery and continued vulnerability for an indefinite period.
3. Guidelines for shelter reconstruction needs to be formulated early on so as to ensure minimum standards are adhered to and so that there is uniformity in the kind of assistance provided. This will minimize conflict between agencies and among the community.

Community Participation

4. Community mobilization involving beneficiaries as well as village leaders is essential to ensure their participation in all aspects of the project implementation, to ensure that the persons most in need receive support, to ensure that the methods and designs used are locally appropriate, to maintain transparency and accountability and to minimize any conflict.
5. Women's participation is especially difficult to achieve and where present – it is tokenistic. Future project interventions need to have strategies to ensure women's participation in all aspects of the project implementation.
6. The messaging to the community about the kind of support to be provided needs to be very clearly stated so that there are no undue expectations. In this case the feedback from the community referred to the size and shape of the house being different from what they previously had. However, the project would only be able to support the core structure of the house and the beneficiaries could have built extensions as per their preference.
7. Instituting transparency and accountability mechanisms is essential in ensuring appropriate targeting and preventing conflicts in the community.

Design and Process of Reconstruction

8. The process of shelter re-construction needs to be a flexible process to allow for adjustments of the shelter design to meet the needs of the beneficiary.
9. The process of designing the shelter needs to be done after a rigorous study of the materials and designs used in the affected areas and in consultation with the affected communities.
10. The project design needs to incorporate components of material support, knowledge transfer as well as DRR features in order to assist in speedy recovery and to help the affected families to be prepared in case of any future disasters.
11. Ensuring standardization of construction in line with set standards is very important to prevent conflicts and poor quality construction.

6. Annexe

1. Total Number of Household (HH) Vs Damaged Household in Project Villages

Village Tract	Village	Total HH	Damaged HH	
			Freq	%
Kyauk Nga Nwar	Kyauk Nga Nwar	113	46	40.71
Shout Chon	Kyar Inn Taung	299	96	32.11
	Shout Chon	104	45	43.27
	Kyet Hnin Khar	127	46	36.22
Yo Sa Nwin	Taung Pyin	22	16	72.73
	Taung Shae	6	6	100.00
	Taung Gyi	65	28	43.08
	Yo Sa Nwin	234	121	51.71
	Din Gar Ya	66	59	89.39
	Oak Kan	234	169	72.22
	Nat Hla	62	32	51.61
	Myaing Thar Yar	182	139	76.37
	Maung Chaung	22	12	54.55
	Wet Yue	147	104	70.75
	Phoe The	7	7	100.00

2. Total Number of Damaged Household Vs Number of Supported Households in Project Villages

Village Tract	Village	Damaged HH	Supported HH						HH left unsupported	
			Totally supported		Partially supported		Total			
			Freq	%	Freq	%	Freq	%	Freq	%
Kyauk Nga Nwar	Kyauk Nga Nwar	46	5	10.87	24	52.17	29	63.04	17	36.96
Shout Chon	Kyar Inn Taung	96	10	10.42	52	54.17	62	64.58	34	35.42
	Shout Chon	45	5	11.11	24	53.33	29	64.44	16	35.56
	Kyet Hnin Khar	46	5	10.87	24	52.17	29	63.04	17	36.96
Yo Sa Nwin	Taung Pyin	16	2	12.50	9	56.25	11	68.75	5	31.25
	Taung Shae	6	1	16.67	3	50.00	4	66.67	2	33.33
	Taung Gyi	28	3	10.71	17	60.71	20	71.43	8	28.57
	Yo Sa Nwin	121	12	9.92	65	53.72	77	63.64	44	36.36
	Din Gar Ya	59	6	10.17	32	54.24	38	64.41	21	35.59
	Oak Kan	169	19	11.24	91	53.85	110	65.09	59	34.91
	Nat Hla	32	3	9.38	17	53.13	20	62.50	12	37.50

	Myaing Thar Yar	139	15	10.79	75	53.96	90	64.75	49	35.25
	Maung Chaung	12	2	16.67	6	50.00	8	66.67	4	33.33
	Wet Yue	104	11	10.58	57	54.81	68	65.38	36	34.62
	Phoe The	7	1	14.29	4	57.14	5	71.43	2	28.57