



## Rapid Shelter Needs Assessment of Temporary Shelters in Sittwe Township



January 2018

Shelter Cluster Rakhine State

## Executive Summary

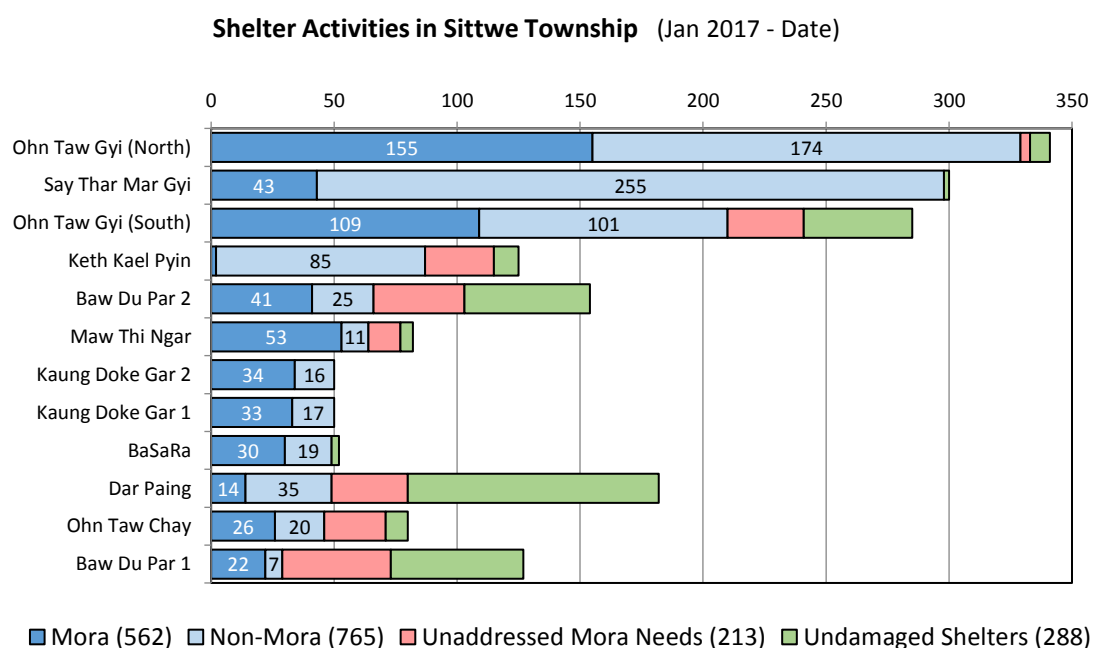
Muslim IDPs have been living in the IDP camps of rural Sittwe in eight and ten unit temporary shelters since the inter-communal violence of 2012. Unlike Kachin State where scantling timber is often used to construct temporary shelters in IDP camps, in Rakhine State, the Rakhine State Government (RSG) approves the use of myar posts (jungle wood) instead of scantling to maintain the temporary nature of the IDP camps.

Temporary shelters were designed with a 2-3 year lifespan. With minimal maintenance and repair conducted in the first 3 years after the camps were constructed, by early 2016, maintenance and repair needs were increasing rapidly. Shelter Cluster partners conducted a comprehensive shelter needs assessment of all IDP camps in Rakhine State in March 2016 which supported the prioritization of shelter activities through until the end of the 2017 when cyclone Mora hit Sittwe Township.

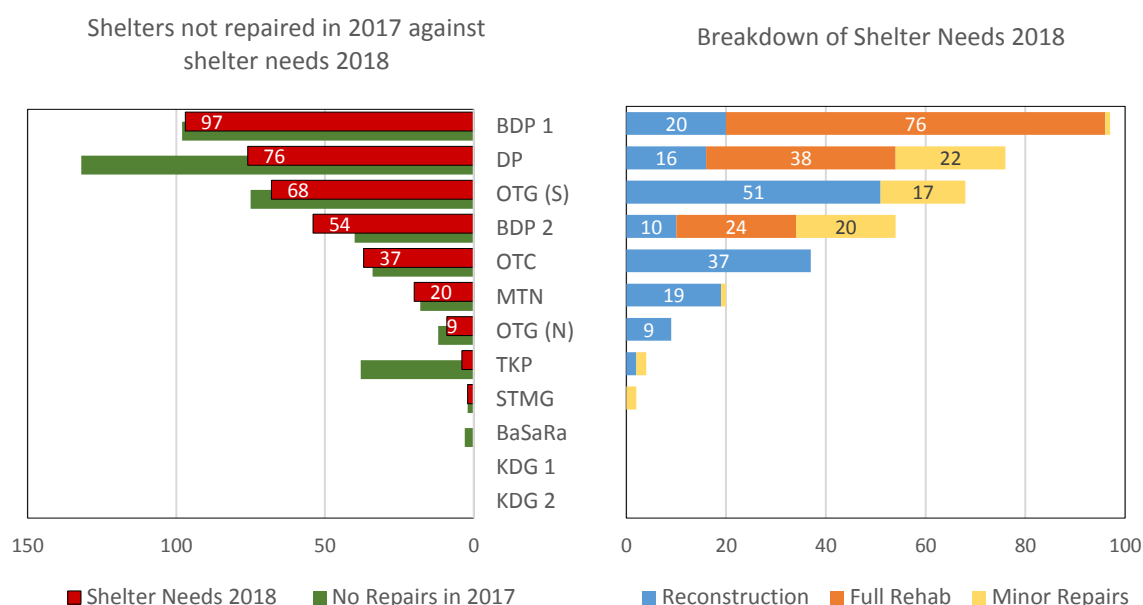
Cyclone Mora made landfall on the evening of the 30<sup>th</sup> May 2017 damaging 42% of all the temporary shelters in Sittwe Township. The joint RSG/UNHCR/OCHA rapid needs assessment (2<sup>nd</sup>-6<sup>th</sup> June 2017) identified 775 temporary shelters in urgent need of repair; 179 requiring reconstruction, 136 shelters requiring full rehabilitation and a further 460 shelters in need of relatively minor repair e.g. roofing, walling and flooring.

In June 2017, Shelter Cluster partners accelerated shelter programs to address the damage caused by cyclone Mora. Whilst shelters identified as requiring reconstruction and repair were almost all addressed, many of the shelters identified as requiring minor repair were not as the natural deterioration of aging shelters beyond their designed lifetime, shifted partners' targeting priorities.

By January 2018, the RSG and Shelter Cluster partners had addressed the needs of 73% of all temporary shelters in Sittwe Township (1,327 temporary shelters); 562 shelters identified in the Mora assessment (31% of shelters in Sittwe Township) and an additional 765 shelters identified after the Mora assessment (42% of shelters in Sittwe). These figures include the on-going commitments made by shelter Cluster partners. The table below presents the achievements of the RSG and Shelter Cluster partners in Sittwe Township since January 2017.



Despite the efforts of Shelter Cluster partners to address all the shelter needs of IDPs in 2017, as temporary shelters are designed for a limited lifespan, shelter needs continue to grow. The rapid shelter needs assessment (January 2018) identified a further 367 temporary shelters urgently requiring attention before the onset of the 2018 rainy season (20% of all shelters in Sittwe Township). One hundred and sixty-four of these shelters require reconstruction (9%), 138 require full rehabilitation (8%) and a further 65 shelters require minor repairs (3%). In line with the temporary lifespan of the shelters, these needs correspond closely with shelters that have not been repaired since January 2017.



In 2018, Shelter Cluster partners will reconstruct and rehabilitate temporary shelters using a new improved design to mitigate some of the protection risks associated with shelters. While the floor space and bamboo flooring remain the same, the new shelters include 3-layer plywood, internal walling to improve privacy, a bamboo mat ceiling to reduce daytime temperatures, an internal door and a stronger external door to improve security. In addition, to increase the resilience of temporary shelters to adverse weather conditions, UNHCR will provide high quality corrugated galvanised iron (CGI) roofing sheets and nails to all partners. These new design features increase the estimated unit cost of a temporary shelter by 50% from \$4,500 (\$675 per shelter unit) to \$6,600 per shelter (\$825 per shelter unit).

Addressing the needs of 367 temporary shelters identified by the rapid shelter needs assessment (Jan 2018) will cost approximately **\$2.1 million**. In addition to these needs, should funding be available, partners should also consider retrofitting the 981 temporary shelters which were either reconstructed or fully rehabilitated in 2017 with the improved design to reduce protection risks, improve privacy, safety and security. Retrofitting these shelters will cost an additional **\$5.5 million** dollars bringing the total budget requirement for Shelter Cluster partners for 2018 to **\$7.6 million**.

Recommendation 26 of the Rakhine Commissions Report (24<sup>th</sup> August 2017) states that “the government should ensure dignified living conditions in camps including improved shelter, addressing the current overcrowding by building additional or larger longhouses or individual houses in line with international humanitarian standards.” The recommendation continues by insisting that “when additional land is needed, host communities should be adequately compensated for the use of their land.” Whilst spending \$7.6 million dollars will improve the shelter conditions of 93% of the shelters

in Sittwe Township, it will not increase the floor space per shelter unit nor address the issue of overcrowding in IDP camps.

In 2012 and 2013, site planning was conducted in accordance with technical guidelines approved by the RSG. Temporary shelters of 45 feet by 30 feet were constructed in C-shaped clusters of five shelters with a fire break of 15 feet between shelters and 25 feet between clusters. Should a fire break out, it was assumed that a maximum of 5 temporary shelters would burn. However, the four large fires that have occurred since 2014 have raised entire sectors of IDP camps to the ground.

The current RSG approved design for temporary shelters provides 15.7m<sup>2</sup> per shelter unit; the floor space recommended for a family of 4.5 people<sup>1</sup>. With an average household size of 5.5 people per shelter unit and with 68% of IDPs living with less than 3.5m<sup>2</sup> of floor space, the majority of IDPs have constructed extensions to the front and side of their shelters encroaching dangerously into the fire break area, increasing the risk of major fires and creating a highly congested environment in IDP camps. Relieving this congestion and overcrowding requires the allocation of additional land. Without additional land, it will not be possible to improve the living conditions of IDP camps in line with international humanitarian standards.

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<sup>1</sup> SPHERE guideline indicator recommends that each family member should have a floor space of at least 3.5m<sup>2</sup>

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# **Rapid Shelter Need Assessment in IDP Camps of Sittwe Township**

January 2018

## **1.0 Background**

Cyclone Mora made land fall in Sittwe on 30<sup>th</sup> May 2017 causing considerable damage to temporary shelters located in the 11 IDP camps of the Township. A joint assessment of the damage was conducted by Shelter Cluster partners (RSG, UN agencies and INGOs) between 2<sup>nd</sup> and 8<sup>th</sup> June 2017 and the subsequent Mora Shelter Damage Assessment Report prioritized activities of shelter actors for the remainder of 2017.

The report, which was endorsed by the Union Ministry of Social Welfare (RRD), identified and prioritized temporary shelters for reconstruction and repair under three criteria: those requiring full reconstruction (100%) due to collapse or being structurally unsound, those requiring major rehabilitation (~65% rehabilitation) and those structurally sound but requiring relatively minor repairs e.g. walling and roofing sheets. Implementation of the Mora response was coordinated by the Shelter Cluster with shelter activities of the Rakhine State Government being led by the Sittwe Township Administrator.

Following the completion of the Mora response, the Union Government requested the Sittwe Township Administrator to conduct another joint shelter needs assessment to verify that the commitments made by Shelter Cluster partners were fulfilled and to support the effective planning and prioritization of shelter activities in Sittwe Township for 2018.

## **2.0 Scope, Objectives and Expected Results**

Scope:	All temporary shelters in 12 IDP camps of Sittwe Township
Objective 1:	To evaluate whether the shelter needs identified in the Mora Assessment (June 2017) were effectively responded to by shelter actors in 2017.
Objective 2:	To identify and prioritize the rehabilitation needs of temporary shelters in Sittwe Township (Jan 2018).
Result 1:	The rehabilitation and repair needs of temporary shelters in Sittwe Township (Jan 2018) are identified and prioritized
Result 2:	The response of Shelter Cluster partners to damages caused by cyclone Mora are tracked and documented
Result 3:	Shelter implementation conducted by Shelter Cluster partners in 2017 is tracked and documented

### 3.0 Definitions of Levels of Damage:

Three levels of damage were used in this assessment with the following definitions:

Damage Level	Description	Action Required
Destroyed	Shelters that have either collapsed, are missing or are structurally unsound i.e. leaning precariously	Full reconstruction (100%)
Major Damage	The structural frame remains sound. However, the shelter is significantly damaged requiring the replacement of over 50% of the materials.	Rehabilitation (+50%)
Minor Damage	Shelters are still fit to live in but have some missing elements requiring 20-50% replacement of materials	Repair (20-50%)
Undamaged	Whilst there may be very minor damage requiring less than 20% replacement of materials, these shelters will not be prioritized for repair by this assessment and will be classified as 'undamaged'	No action in 2018 by shelter partners. May be addressed by CMAs.

### 4.0 Methodology

An inspection of the current conditions of temporary shelters in the IDP camps of Sittwe Township was conducted by technical experts from the Rakhine State Government and other Shelter Cluster partners using a single assessment form. The assessment verified whether shelter commitments made to the RSG in 2017 were fulfilled, determined the current condition of all temporary shelters and provided recommendations to prioritize implementation in 2018

#### Monitoring of Shelter Care & Maintenance conducted in 2017

Details from the Mora Assessment (June 2017) were pre-filled into the assessment form. Surveyors inspected each temporary shelters discussing with IDPs and camp leaders whether any repairs were conducted in 2017. The quality of the construction was not assessed. However, the current status of repair was determined i.e. Complete (C), On-going (O) or Unaddressed (U).

As partners also addressed general maintenance and repair needs unconnected to cyclone Mora in 2017, this assessment tracked all shelter activities in the camp determining whether each temporary shelter was reconstructed, rehabilitated or whether minor repairs were conducted.

#### Identification of Care and Maintenance Needs (Jan 2018)

The assessment determined the level of damage for each temporary shelter using the terms presented in the section entitled 'definitions of levels of damage'. Engineers provided recommendations for addressing this damage i.e. whether to reconstruct, rehabilitate or to provide minor repairs in 2018.



## 5.0 Data Collection Team (43 surveyors)

Assessment Focal Point: Sittwe Township Administrator, General Administration Dept.

Technical Leader: Shelter Cluster Coordinator, UNHCR Sittwe

Field Leader: Shelter Associate, UNHCR Sittwe

Surveyors: The data collection teams consisted of 43 surveyors;  
12 engineers and 31 non-engineers.

Agency / RSG Dept.	Engineers	Non-Engineers	TOTAL
RSG (GAD)	4	30	34
UNHCR	6	1	7
LWF	1	-	1
IRW	1	-	1
	<b>12</b>	<b>31</b>	<b>43</b>

## 6.0 FINDINGS

The following section presents the findings in three parts. Firstly, the findings of the Mora assessment (2-8<sup>th</sup> June 2017) are presented and comparisons made to the activities of Shelter Cluster partners in 2017 to determine if the response addressed the needs. Finally, the current shelter needs are presented in order for partners to prioritize shelter interventions in 2018.

### 6.1 Mora Assessment

Cyclone Mora made landfall on the evening of 30<sup>th</sup> May 2017 causing damage to temporary shelters in IDP camps in Rakhine State. Whilst the camps in Sittwe Township were the most seriously affected, damages were also reported in IDP camps in Pauktaw.

A joint rapid shelter assessment was conducted in all IDP camps in rural Sittwe by RSG, UNHCR & OCHA on 2-8<sup>th</sup> June 2017. The assessment identified a total of 775 temporary shelters (42%) requiring urgent reconstruction, rehabilitation or repair. The actual damage caused by cyclone Mora was marginally higher than the assessment findings as surveyors did not include the pre-Mora commitments of Shelter Cluster partners in the findings, assuming that this damage would be addressed.

The heaviest damages were reported in the coastal IDP camps and the worst affected camps in terms of the number of shelters damaged were Ohn Taw Gyi (S) and Ohn Taw Gyi (N) where 299 shelters were damaged by cyclone Mora (40% of all damage). In the year prior to cyclone Mora, little rehabilitation, maintenance and repair had occurred in these camps leaving them more susceptible to adverse weather conditions.

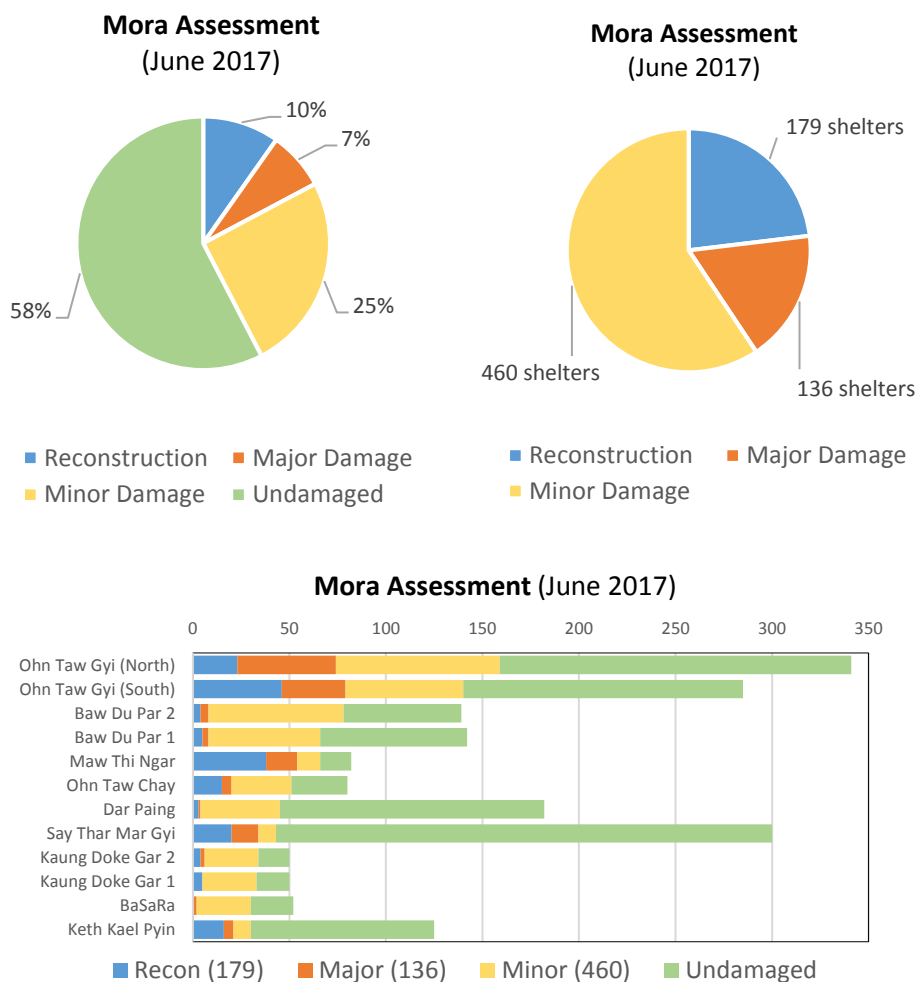
Other coastal camps such as BaSaRa, Baw Du Par 1&2, Da Paing and Ohn Taw Chay were also heavily affected (258 shelters; 33% of all damage). Damages were also severe in the inland IDP camps of Maw Thi Ngar and Kaung Doke Gar 1&2 where between 66% and 80% of shelters were damaged (133 shelters; 25% of all damage).

The table below presents a breakdown of the damages caused by cyclone Mora requiring immediate attention by Shelter Cluster partners.



IDP Camp	Total	Damage Summary		Type of Damage		
		Damaged	Undamaged	Reconstruction	Major Damage	Minor Damage
Ohn Taw Gyi (N)	341	159 47%	182	23	51	85
Ohn Taw Gyi (S)	285	140 49%	145	46	33	61
Baw Du Par 2	139	78 56%	61	4	4	70
Baw Du Par 1	142	66 46%	76	5	3	58
Maw Thi Ngar	82	66 80%	16	38	16	12
Ohn Taw Chay	80	51 64%	29	15	5	31
Dar Paing	182	45 25%	137	3	1	41
Say Thar Mar Gyi	300	43 14%	257	20	14	9
Kaung Doke Gar 2	50	34 68%	16	4	2	28
Kaung Doke Gar 1	50	33 66%	17	5	-	28
BaSaRa	52	30 58%	22	-	2	28
Thet Kael Pyin	125	30 24%	95	16	5	9
	<b>1,828</b>	<b>775 42%</b>	<b>1,053</b>	<b>179</b>	<b>136</b>	<b>460</b>
			<b>58%</b>	<b>10%</b>	<b>7%</b>	<b>25%</b>

Of the 42% of temporary shelters damaged by cyclone Mora (775 shelters), 10% required reconstruction (179 shelters), 7% required rehabilitation (136 shelters) and 25% required minor repairs (460 shelters). Shelters assessed as requiring minor repair damages tended to require replacement roofing and external walling. The charts below illustrate the degree of damages caused by Mora cyclone.



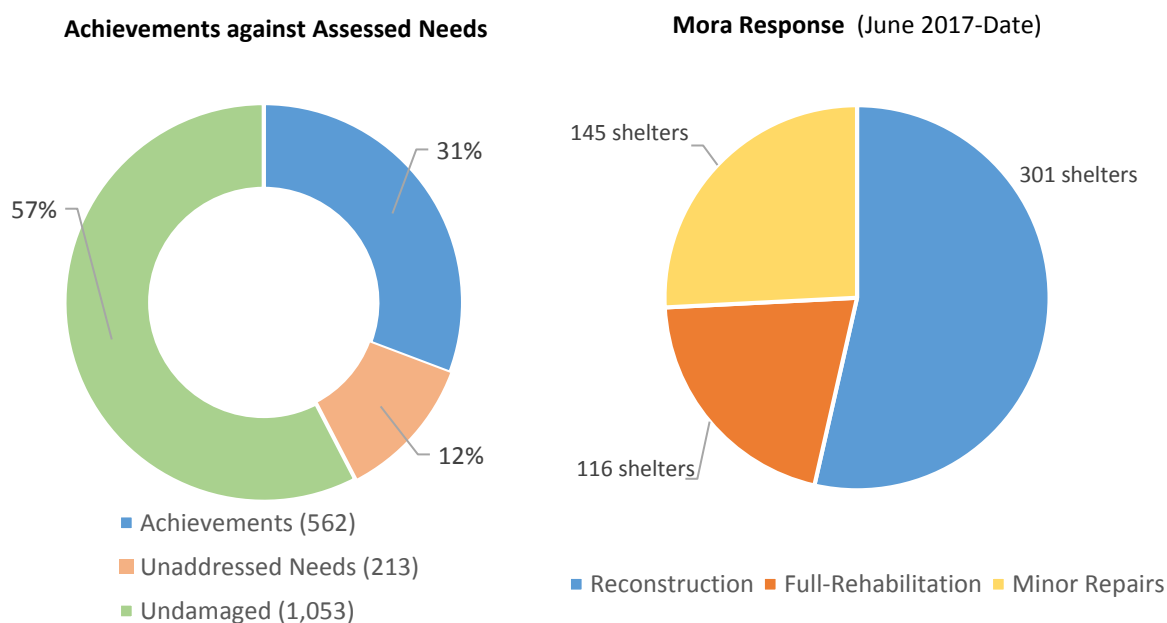
## 6.2 Mora Response

Prior to cyclone Mora, Shelter Cluster partners were conducting reconstruction and repairs of shelters identified during the joint shelter needs assessment of March 2016. Unfulfilled shelter commitments prior to cyclone Mora were excluded from the Mora damage assessment.

Of the 775 temporary shelters identified by the Mora assessment (42% of all shelters), partners successfully responded to 562 shelters (31% of all shelters; 73% of shelters identified in the Mora assessment). Collectively, the RSG and Shelter Cluster partners reconstructed 301 temporary shelters, fully rehabilitated 116 shelters and conducted minor repairs (mainly to roofing) on 145 temporary shelters.

Following the Mora assessment, further damage caused by the 2017 rainy season shifted the priorities of Shelter Cluster partners. Many of the 213 shelters (12% of all shelters) whose needs were not addressed in the Mora response were deprioritized and will be addressed in 2018. However, distributions of corrugated galvanized iron (CGI) roofing sheeting by some Cluster partners, successfully addressed many of the minor roofing repairs required by these shelters.

The charts below present a breakdown of the achievements in addressing the shelter needs identified by the Mora damage assessment.



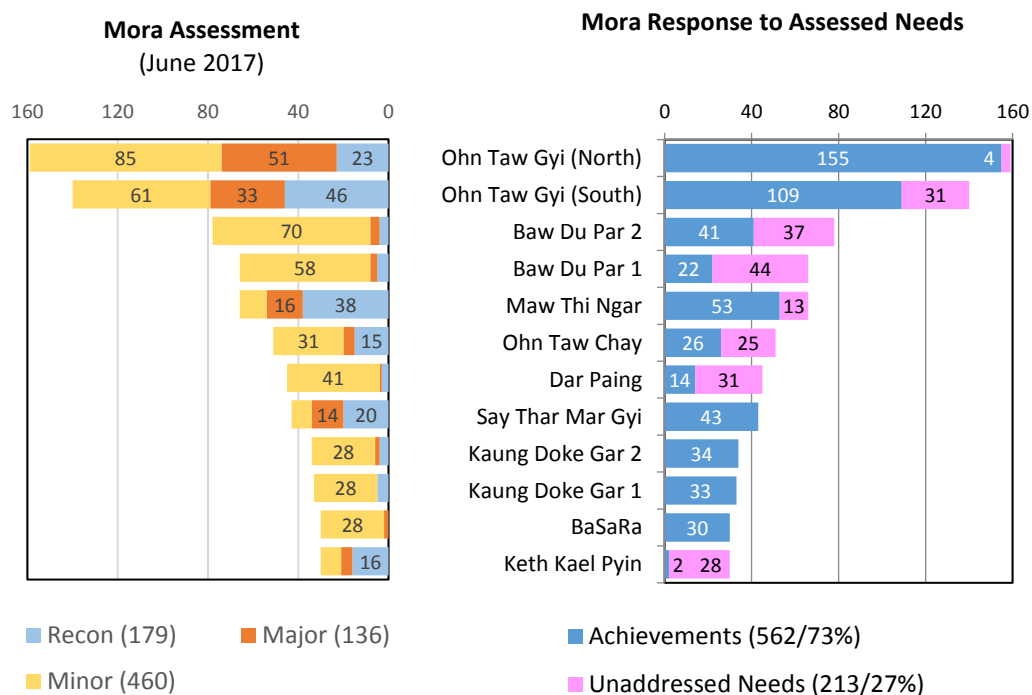
Shelter needs resulting from cyclone Mora were fully addressed in 4 of the 12 IDP camps in Sittwe Township; Say Tha Mar Gyi, Kaung Doke Gar 1&2 and BaSaRa, whilst in Ohn Taw Gyi (North), 97% of damage was addressed.

As mentioned above, with so many temporary shelters approaching the end of their 2-3 year design lifespan, damages from the 2017 rainy season combined with the natural deterioration of shelters shifted the priorities of Shelter Cluster partners to address the most critical needs of shelters with structural damage. Shelters with relatively minor damage were deprioritized and currently the

greatest unaddressed needs from the Mora assessment remain in the coastal IDP camps of Baw Du Par 1&2 IDP camps (81 shelters), Da Paing (31 shelters) and Ohn Taw Chay (25 shelters).

The table and charts below provide a breakdown of the achievements of shelter cluster partners in assessing the needs arising from Mora shelter needs assessment.

IDP Camp	Total Shelters	Mora Assessment		Mora Response			
				Achieved		Unaddressed Needs	
Ohn Taw Gyi (N)	341	159	47%	155	97%	4	3%
Ohn Taw Gyi (S)	285	140	49%	109	78%	31	22%
Baw Du Par 2	154	78	51%	41	53%	37	47%
Baw Du Par 1	127	66	52%	22	33%	44	67%
Maw Thi Ngar	82	66	80%	53	80%	13	20%
Ohn Taw Chay	80	51	64%	26	51%	25	49%
Dar Paing	182	45	25%	14	31%	31	69%
Say Thar Mar Gyi	300	43	14%	43	100%	-	-
Kaung Doke Gar 2	50	34	68%	34	100%	-	-
Kaung Doke Gar 1	50	33	66%	33	100%	-	-
BaSaRa	52	30	58%	30	100%	-	-
Thet Kael Pyin	125	30	24%	2	7%	28	93%
<b>1,828</b>		<b>775</b>	<b>42%</b>	<b>562</b>	<b>73%</b>	<b>213</b>	<b>27%</b>

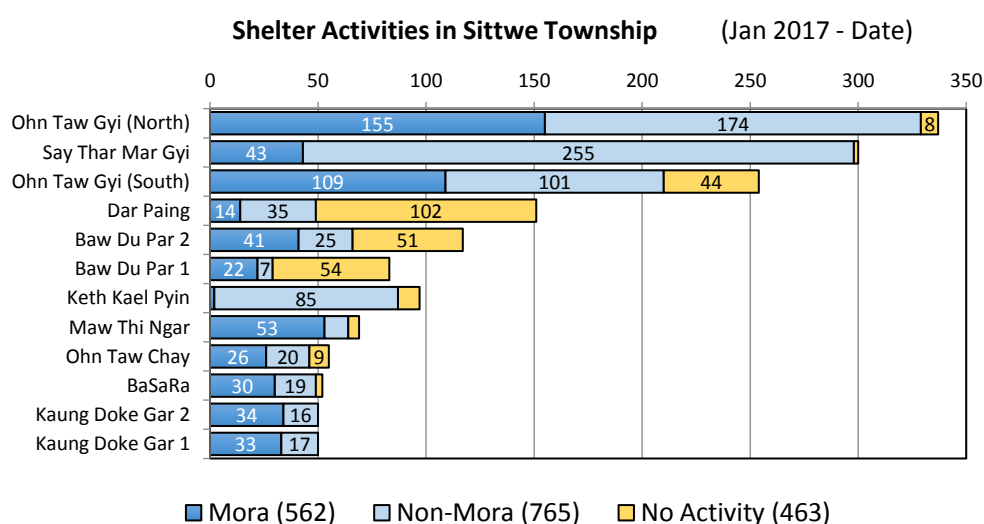


### 6.3 Shelter Activities (2017-Date)

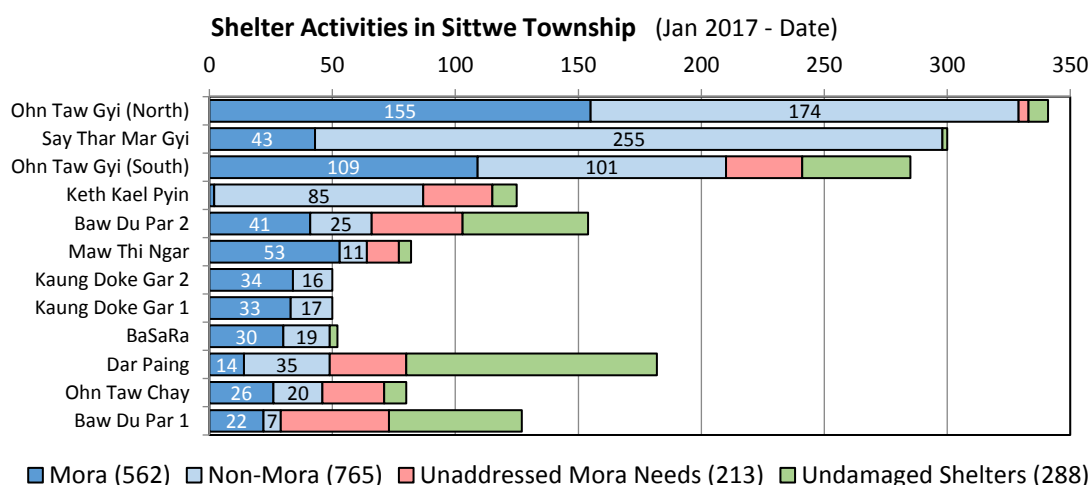
From January 2017 to date, Shelter Cluster partners have addressed or have committed to address the needs of 73% of all the temporary shelters in Sittwe Township (1,327 shelters). Almost two thirds of the shelters reconstructed or repaired in 2017 were in the 3 largest IDP camps in Sittwe Township; Ohn Taw Gyi (N), Say Thar Mar Gyi and Ohn Taw Gyi IDP camps. The needs of 90% of the shelters in these camps were addressed.

The table below presents a breakdown of Mora and Non-Mora shelter implementation in 2017 to date and includes ongoing reconstruction by Cluster partners.

IDP Camp	Total Shelters	Achievements (2017-Date)		Breakdown of Shelter Activities		
				Mora	Non-Mora	No Activity
Ohn Taw Gyi (N)	341	329	96%	155	174	8
Say Thar Mar Gyi	300	298	99%	43	255	2
Ohn Taw Gyi (S)	285	210	74%	109	101	44
Dar Paing	182	49	27%	14	35	102
Baw Du Par 2	154	66	43%	41	25	51
Baw Du Par 1	127	29	23%	22	7	54
Thet Kael Pyin	125	87	70%	2	85	10
Maw Thi Ngar	82	64	78%	53	11	5
Ohn Taw Chay	80	46	58%	26	20	9
BaSaRa	52	49	94%	30	19	3
Kaung Doke Gar 2	50	50	100%	34	16	-
Kaung Doke Gar 1	50	50	100%	33	17	-
<b>1,828</b>		<b>1,327</b>	<b>73%</b>	<b>562</b>	<b>765</b>	<b>288</b>
<b>100%</b>				<b>31%</b>	<b>42%</b>	<b>27%</b>



Although partners successfully addressed the shelter needs of 73% of shelters during 2017, significant needs remain high within the 23% of shelters that were not targeted (288 shelters). Many but not all of these needs correspond to shelters identified during the Mora assessment but not addressed by Shelter Cluster partners.



#### 6.4 Shelter Needs (2018)

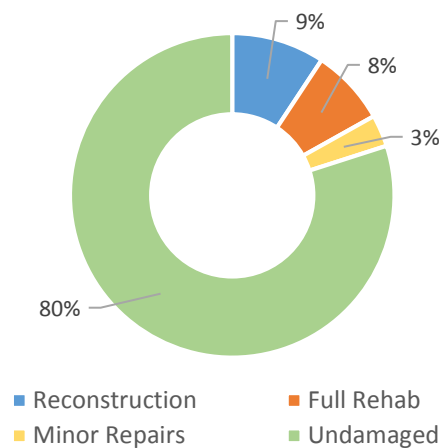
In addition to verifying partners' fulfilment of commitments to reconstruct and repair shelters in 2017, a comprehensive rapid needs assessment was made of all the temporary shelters in Sittwe Township. One of the objectives of this rapid shelter needs assessment was to obtain a snapshot of the current shelter conditions in the IDP camps of Sittwe in order to prioritize shelter activities and to advocate for additional Shelter Cluster funding. Further technical assessments should be conducted closer to the time of implementation to ensure additions needs have not arisen since this assessment.

The rapid assessment identified a total of 367 shelters requiring urgent attention before the 2018 rainy season (20% of all shelters). One hundred and sixty-four shelters require reconstruction (9% of all shelters), 138 require full rehabilitation (8%) whilst a further 65 shelters are in need of minor repairs (3%). These minor repairs generally refer to the replacement of roofing and damage to internal and external walls and flooring.

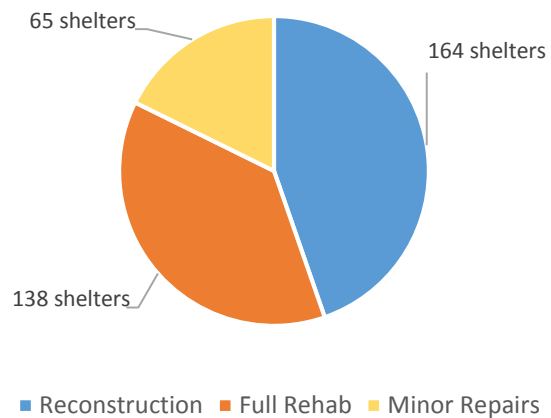
The table below present a breakdown of shelter needs for each IDP camp.

IDP Camp	Total Shelters	Total Critical Needs (2018)		Breakdown of Needs			Undamaged
				Reconstruction	Full Rehab	Minor Repairs	
Baw Du Par 1	127	97	76%	20	76	1	30
Dar Paing	182	76	49%	16	38	22	106
Ohn Taw Gyi (S)	285	68	37%	51	-	17	217
Baw Du Par 2	154	54	66%	10	24	20	100
Ohn Taw Chay	80	37	11%	37	-	-	45
Maw Thi Ngar	82	20	7%	19	-	1	62
Ohn Taw Gyi (N)	341	9	11%	9	-	-	332
Taet Kael Pyin	125	4	3%	2	-	2	121
Say Thar Mar Gyi	300	2	4%	-	-	2	298
BaSaRa	52	-	-	-	-	-	52
Kaung Doke Gar 1	50	-	-	-	-	-	50
Kaung Doke Gar 2	50	-	-	-	-	-	50
<b>Total</b>	<b>1,828</b>	<b>367</b>	<b>20%</b>	<b>164</b>	<b>138</b>	<b>65</b>	<b>1,454</b>

Critical Shelter Needs in Sittwe Township (2018)

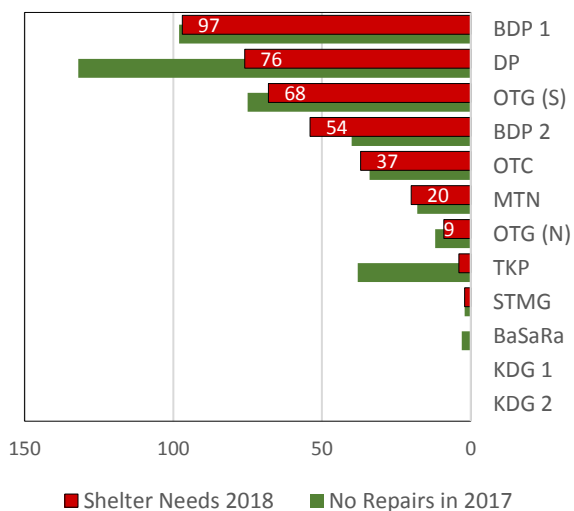


Critical Shelter Needs in Sittwe Township (2018)

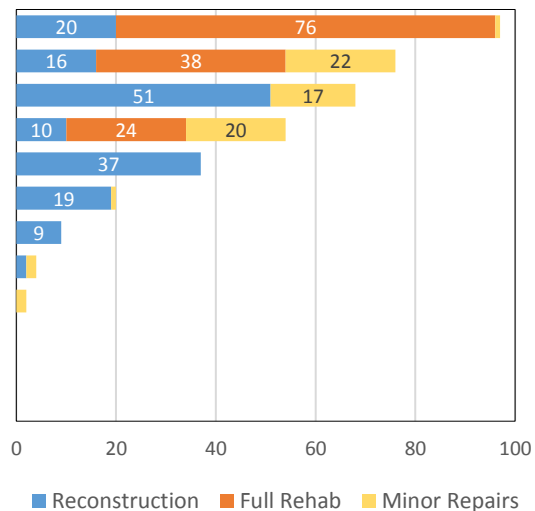


The rapid shelter needs assessment (Jan 2018) identified that 90% of the current shelter needs are in five coastal IDP camps (332 shelters); Baw Du Par 1 (97 shelters), Da Paing (76 shelters), Ohn Taw Gyi South (68 shelters), Baw Du Par 2 (54 shelters) and Ohn Taw Chay (37 shelters).

Shelters not repaired in 2017 against shelter needs 2018



Breakdown of Shelter Needs 2018



The temporary shelters identified as requiring urgent reconstruction and repair, correspond closely with shelters not receiving maintenance and repair during 2017 (see chart below left). This is in line with the expected 2-3 year lifespan of temporary shelters. If Shelter Cluster partners are able to address the identified needs in 2018, a total of 1,700 temporary shelters will have been either reconstructed, rehabilitated or repaired over a 2-year period (93% of all shelters). The remaining 7% of shelters would be expected to be included in the highest priority shelters for reconstruction and repair in 2019.

## 7.0 Improved Design for Temporary Shelters (2018)

In 2018, all Shelter Cluster partners will reconstruct and rehabilitate temporary shelters using an improved shelter design (see Annex 02). The design, intended to mitigate some of the protection concerns associated shelters, was developed by Shelter Cluster partners and approved by the Rakhine State Government in November 2017.

The new temporary shelter design will provide greater privacy, improve security, reduce room temperatures during the day and improved resilience to adverse weather conditions. Privacy has been improved by constructing the internal walling using 3-layer plywood instead of bamboo matting as well as by adding an internal door separating the sleeping area from the balcony area. The security of the external door will also be improved with doors being constructed using salvaged corrugated galvanised iron sheeting on a timber frame. The inclusion of bamboo mat ceilings will reduce the room temperature of the sleeping area during the day.

The resilience of shelters to adverse weather conditions has been improved by using high quality roofing sheets and slightly raising the pitch of the roof from 18 degrees to 23 degrees. Although the technical specifications for temporary shelter require 30-gauge corrugated galvanized iron roofing sheets, high quality roofing sheets are extremely difficult to source in Myanmar and consequently contractors have used lower quality roofing sheets; usually 34-gauge. This lighter roof has less resilience to tropical storms and cyclones. In order to ensure roofing sheets of acceptable technical specifications are used in the reconstruction and repair of temporary shelters, UNHCR will provide roofing sheets, in-kind, to all Shelter Cluster partners in 2018.

## 8.0 Estimated Shelter Budget Required in 2018

The bill of quantities estimates the total cost of an improved shelter to be \$6,600. Given that UNHCR will be providing roofing sheets and nails, Shelter Cluster partners should budget for \$5,850 per shelter.

The table below presents the estimated costs for the construction of a new improved temporary shelter, the full rehabilitation using the new design and the retrofitting of a structurally sound shelters.

Unit Costs	Total Cost	Without Roofing sheets & Nails	Roofing Sheets & Nails ONLY
Improved Shelter	\$ 6,600	\$ 5,850	\$ 750
Full Rehabilitation	\$ 4,100	\$ 3,350	\$ 750
Retrofit	\$ 4,700	\$ 3,950	\$ 750

To address the needs of the 367 temporary shelters identified in the rapid needs assessment, Shelter Cluster partners require an estimated budget of \$1.8 million. Estimate does not include the operational cost will raise the estimated cost for implementation to approximately \$2.2 million. The table below presents a summary by camp for the estimated costs.



IDP Camp	Total Shelters	Total Cost		Reconstruction (@ \$6,600)		Full Rehab (@ \$4,100)		Minor Repairs (@ \$2,000)	
Baw Du Par 1	127	97	\$445,600	20	\$132,000	76	\$311,600	1	\$2,000
Dar Paing	182	76	\$305,400	16	\$105,600	38	\$155,800	22	\$44,000
Ohn Taw Gyi (S)	285	68	\$370,600	51	\$336,600	-		17	\$34,000
Baw Du Par 2	154	54	\$204,400	10	\$66,000	24	\$98,400	20	\$40,000
Ohn Taw Chay	80	37	\$244,200	37	\$244,200	-		-	
Maw Thi Ngar	82	20	\$127,400	19	\$125,400	-		1	\$2,000
Ohn Taw Gyi (N)	341	9	\$59,400	9	\$59,400	-		-	
Teth Kael Pyin	125	4	\$17,200	2	\$13,200	-		2	\$4,000
Say Thar Mar Gyi	300	2	\$4,000	-		-		2	\$4,000
BaSaRa	52	-	-	-		-		-	
Kaung Doke Gar 1	50	-	-	-		-		-	
Kaung Doke Gar 2	50	-	-	-		-		-	
	<b>1,828</b>	<b>367</b>	<b>\$1,778,200</b>	<b>164</b>	<b>\$1,082,400</b>	<b>138</b>	<b>\$565,800</b>	<b>65</b>	<b>\$130,000</b>

Whilst the critical needs assessed by the rapid shelter needs assessment should be addressed first. If additional funding can be raised, Shelter Cluster partners should consider retrofitting the 981 shelter reconstructed (843 shelters) and fully rehabilitated (138 shelters) during 2017. Retrofitting these temporary shelters is estimated in the region of \$4.6 million (unit cost; \$4,100) without operational cost of an additional 20%.

To fully respond to the needs identified in the rapid shelter needs assessment (January 2018) as well as retrofitting all the shelters reconstructed and fully rehabilitated in 2017, Shelter Cluster partners require a budget of \$ 7.6 million. The table below presents a breakdown of the costs by the type of shelter activity required.

Shelter Activity	Number of Shelters	Unit Cost	Direct Costs	Operational Cost	Total Budget Required
Reconstruction	164 shelters	\$ 6,600	\$ 1,082,400	\$ 216,500	\$ 1,300,000
Rehabilitation	138 shelters	\$ 4,100	\$ 565,800	\$ 64,000	\$ 630,000
Minor Repairs	65 shelters	\$ 2,000	\$ 130,000	\$ 26,000	\$ 156,000
<b>Sub-Total</b>	<b>367 shelters</b>				<b>\$ 2.1 million</b>
Retrofitting	981 shelters	\$ 4,700	\$4,610,700	\$ 922,000	\$ 5,500,000
<b>GRAND TOTAL</b>	<b>1,348 shelters</b>				<b>\$ 7.6 million</b>

## 9.0 Other Shelter Considerations

Recommendation 26 of the Rakhine Commissions Report (24<sup>th</sup> August 2017) states that *“the government should ensure dignified living conditions in camps including improved shelter, addressing the current overcrowding by building additional or larger longhouses or individual houses in line with international humanitarian standards.”* The recommendation continues by insisting that *“when additional land is needed, host communities should be adequately compensated for the use of their land.”* Whilst spending \$7.6 million dollars will improve the shelter conditions of 93% of the shelters in Sittwe Township, it will not increase the floor space per shelter unit nor address the issue of overcrowding in IDP camps.

In 2012 and 2013, site planning was conducted in accordance with technical guidelines approved by the RSG. Temporary shelters of 45 feet by 30 feet were constructed in C-shaped clusters of five shelters with a fire break of 15 feet between shelters and 25 feet between clusters. Should a fire break out, it was assumed that a maximum of 5 temporary shelters would burn. However, the four large fires that have occurred since 2014 have raised entire sectors of IDP camps to the ground.

The current RSG approved design for temporary shelters provides 15.7m<sup>2</sup> per shelter unit; the floor space recommended for a family of 4.5 people<sup>2</sup>. With an average household size of 5.5 people per shelter unit and with 68% of IDPs living with less than 3.5m<sup>2</sup> of floor space, the majority of IDPs have constructed extensions to the front and side of their shelters encroaching dangerously into the fire break area, increasing the risk of major fires and creating a highly congested environment in IDP camps. Relieving this congestion and overcrowding requires the allocation of additional land. Without additional land, it will not be possible to improve the living conditions of IDP camps in line with international humanitarian standards.

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<sup>2</sup> SPHERE guideline indicator recommends that each family member should have a floor space of at least 3.5m<sup>2</sup>

## 9.0 Annexes

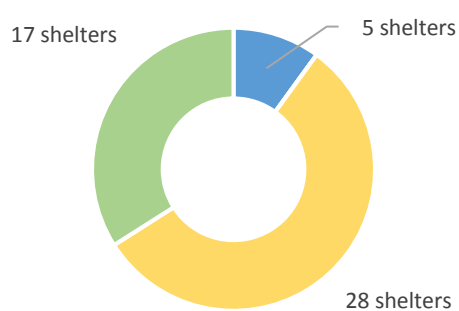
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## Annex 01: Shelter Activities (2017-Date) & Shelter Needs (2018) by IDP Camp

### Kaung Doke Gar 1 IDP Camp

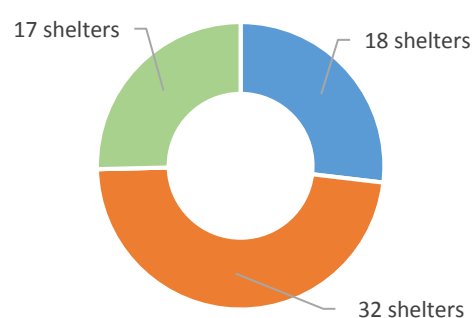
Damage Type	Mora Assessment (June 2017)		Activity Type	Achievements (2017-2018)				Needs Assessment (Jan 2018)
				Mora	Non-Mora	Total		
Reconstruction	5	10%	Reconstruction	1	17	18	36%	-
Major Damage	-		Full-Rehabilitation	32	-	32	64%	-
Minor Damage	28	56%	Minor Repairs	-	-	-		-
TOTAL	33	66%		33	17	50	100%	0
Undamaged	17	34%						50
GRAND TOTAL	50							50

Mora Assessment (June 2017)



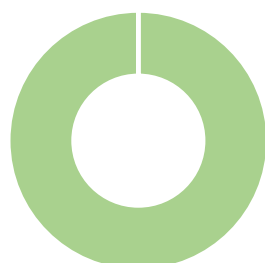
■ Reconstruction ■ Major Damage  
■ Minor Damage ■ Undamaged

Shelter Activities (2017-Date)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Shelter Needs (Jan 2018)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	
Full Rehabilitation	
Minor Repairs	



Shelter Cluster

## Rapid Shelter Needs Assessment ( January-2018) Khaung Doke Khar 1 Camp

Sittwe Township, Rakhine State



### Shelter Status

☐ Undamaged

Data Source: Shelter Cluster

Date of Production: 8 February 2018

## Kaung Doke Gar 2 IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	4	8%
Major Damage	2	4%
Minor Damage	28	56%

**TOTAL 34 68%**

Undamaged	16	32%
-----------	----	-----

**GRAND TOTAL 50**

Activity Type	Achievements (2017-2018)			
	Mora	Non-Mora	Total	
Reconstruction	11	13	24	48%
Full-Rehabilitation	21	-	21	42%
Minor Repairs	2	3	5	10%
	<b>34</b>	<b>16</b>	<b>50</b>	<b>100%</b>

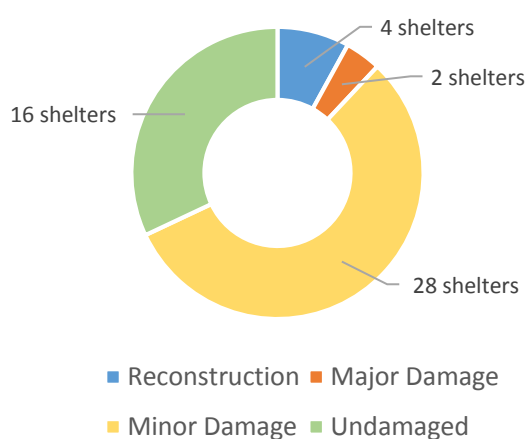
Needs Assessment (Jan 2018)
-
-
-

**0**

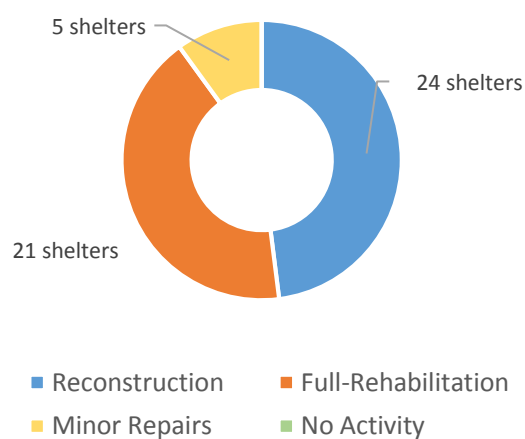
50	100%
----	------

**50**

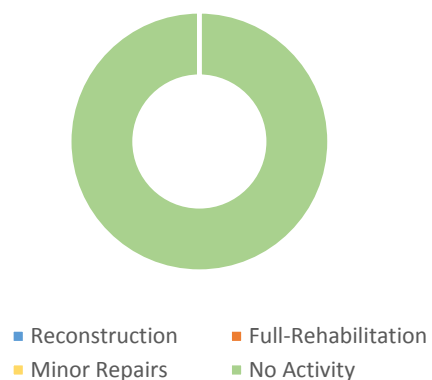
Mora Assessment (June 2017)



Shelter Activities (2017-Date)



Shelter Needs (Jan 2018)



Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	
Full Rehabilitation	
Minor Repairs	





## BaSaRa IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	-	
Major Damage	2	4%
Minor Damage	28	54%

**TOTAL 30 58%**

Undamaged	22	42%
-----------	----	-----

**GRAND TOTAL 52**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	28	19	<b>47</b>
Full-Rehabilitation	2	-	<b>2</b>
Minor Repairs	-	-	<b>-</b>

**30 19 49**

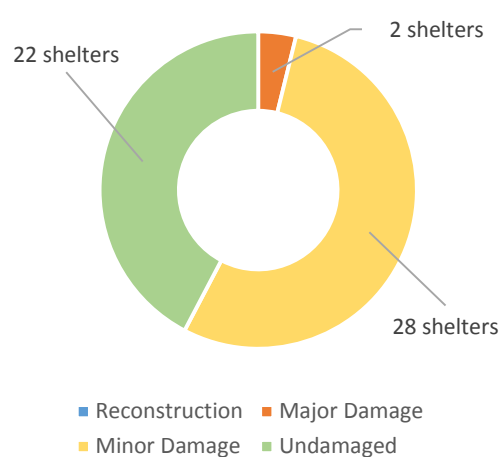
Needs Assessment (Jan 2018)
-
-
-

**0**

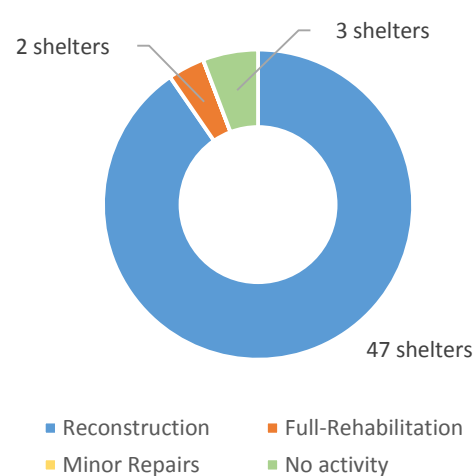
52	100%
----	------

**52**

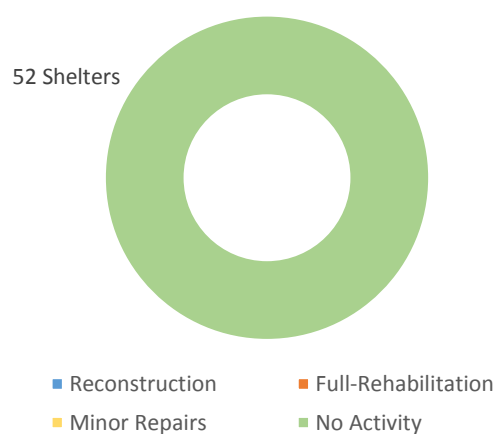
Mora Assessment (June 2017)



Shelter Activities (2017-Date)



Shelter Needs (Jan 2018)



Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	
Full Rehabilitation	
Minor Repairs	



**Shelter Status**  
☐ Undamaged

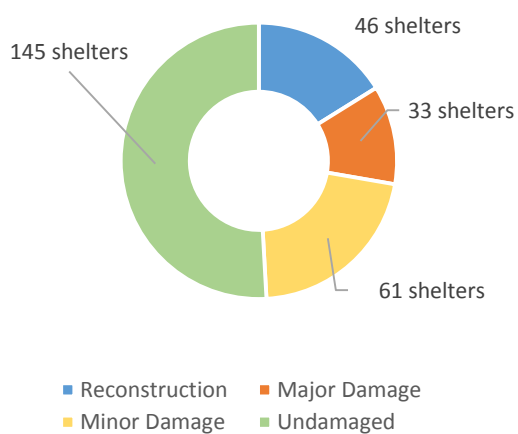
**Data Source : Shelter Cluster**  
**Date of Production: 8 February 2018**

Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.

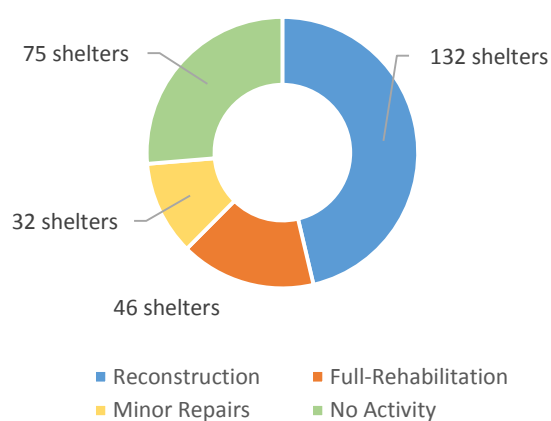
## Ohn Taw Gyi (South) IDP Camp

Damage Type	Mora Assessment (June 2017)		Activity Type	Achievements (2017-2018)			Needs Assessment (Jan 2018)	
				Mora	Non-Mora	Total		
Reconstruction	46	16%	Reconstruction	78	54	132	51	18%
Major Damage	33	12%	Full-Rehabilitation	-	46	46	1	5%
Minor Damage	61	21%	Minor Repairs	31	1	32	17	5%
<b>TOTAL</b>	<b>140</b>	<b>49%</b>		<b>109</b>	<b>101</b>	<b>210</b>	<b>68</b>	<b>24%</b>
Undamaged	145	51%					217	76%
<b>GRAND TOTAL</b>	<b>285</b>						<b>285</b>	<b>100%</b>

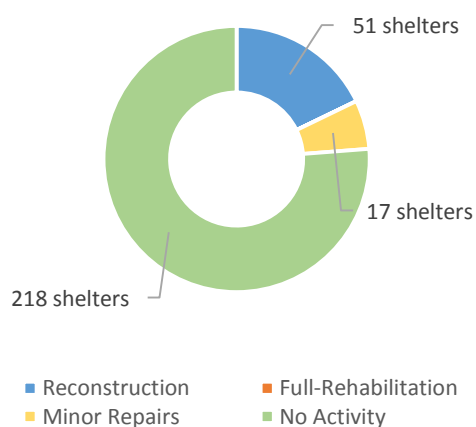
Mora Assessment (June 2017)



Shelter Activities (2017-Date)



Needs Assessment (Jan 2018)

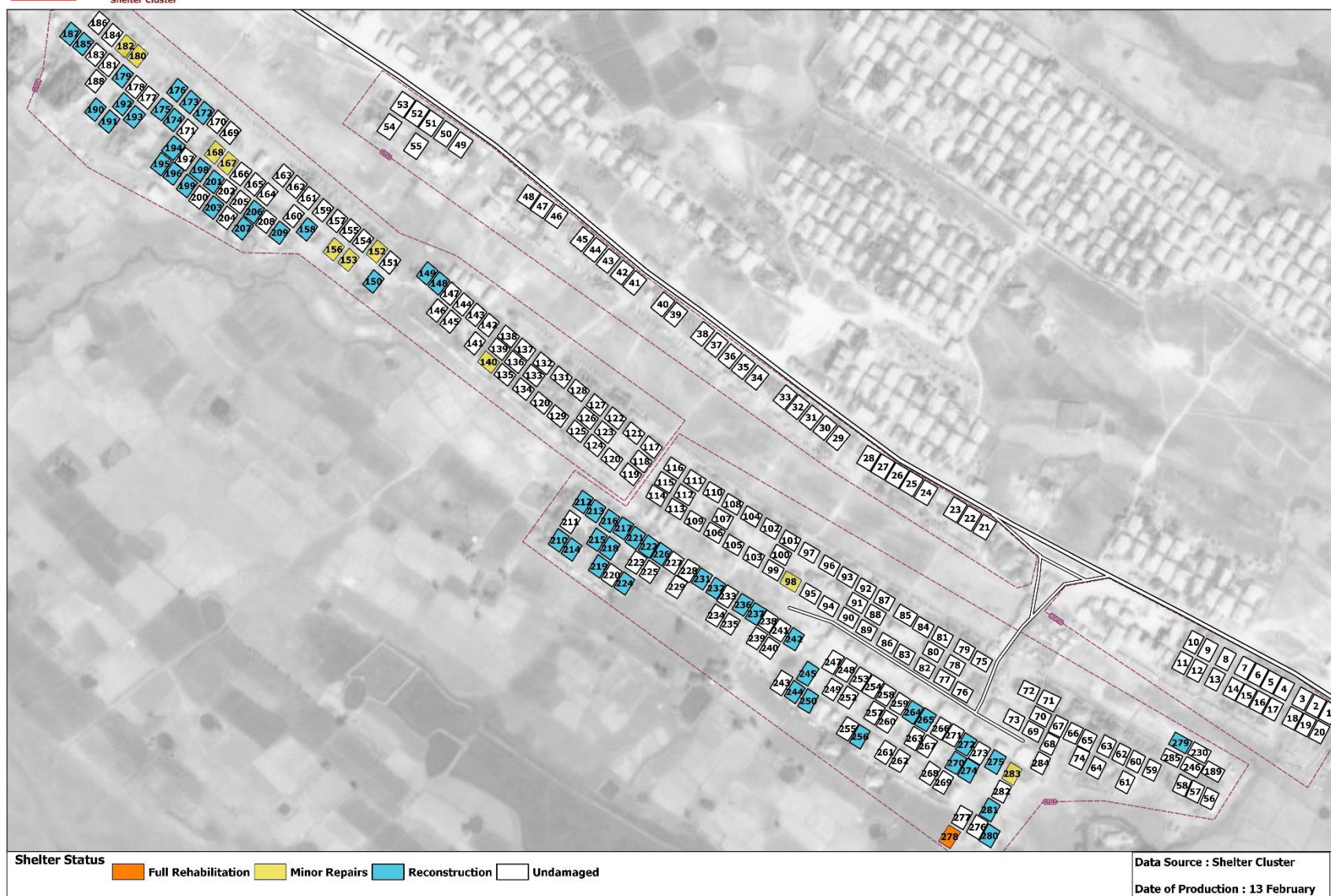


Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	148,149,150,158,170,172,173,174,175,176,170,185,187,190,191,192,193,194,195,196,198,199,201,203,206,207,209,210,212,213,214,215,216,217,218,219,221,222,224,231,232,236,237,242,244,245,250, 265,275,279,280
Full Rehabilitation	
Minor Repairs	98,140,152,153,156,167,168,180,182,226,256,264,270,274,278,281,283



# Rapid Shelter Needs Assessment ( January-2018) Ohn Taw Gyi (South) Camp

Sittwe Township, Rakhine State



## Baw Du Par 1 IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	5	4%
Major Damage	3	2%
Minor Damage	58	46%

**TOTAL 66 52%**

Undamaged	61	48%
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**GRAND TOTAL 127**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	1	7	8
Full-Rehabilitation	19	-	19
Minor Repairs	2	-	2

**22 7 29 23%**

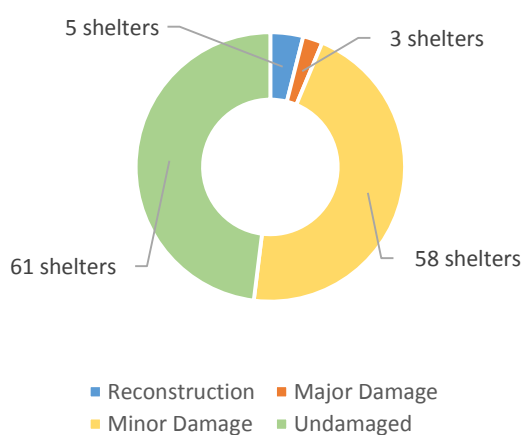
Needs Assessment (Jan 2018)	
20	16%
76	62%
1	1%

**97 76%**

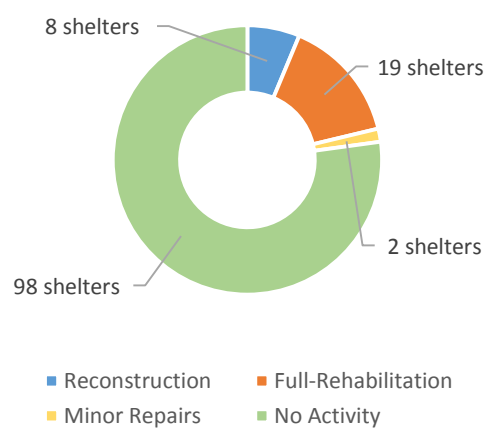
30	24%
----	-----

**127 100%**

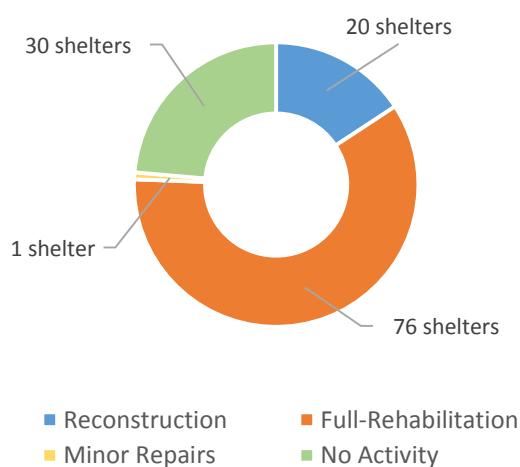
Mora Assessment (June 2017)



Shelter Activities (2017-Date)



Needs Assessment (Jan 2018)



Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	30,31,36,46,47,57,61,62,85,86,87,89,90,94,96,102,103,104,107,108
Full Rehabilitation	1,2,3,4,5,6,7,9,10,11,12,13,14,15,16,17,18,19,20,22,23,24,25,28,29,32,34,35,37,38,39,40,41,42,43,44,45,48,49,50,51,52,53,54,55,56,60,63,64,65,66,67,68,69,70,71,72,73,74,75,77,78,79,80,81,82,83,84,93,95,97,98,99,100,101
Minor Repairs	121





## Shelter Status

■ Full Rehabilitation
 ■ Reconstruction
 ■ Minor Repairs
 ■ Undamaged

Data Source : Shelter Cluster

Production Date : 6 February, 2018

Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.

## Baw Du Par 2 IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	4	3%
Major Damage	4	3%
Minor Damage	70	45%

**TOTAL 78 51%**

Undamaged	76	49%
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**GRAND TOTAL 154**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	11	24	35 23%
Full-Rehabilitation	1	-	1 1%
Minor Repairs	29	1	30 19%

**41 25 66 43%**

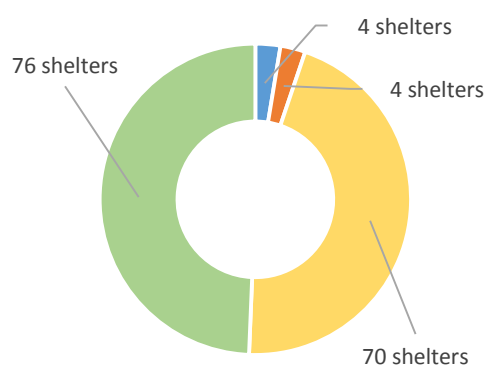
Needs Assessment (Jan 2018)	
10	6%
24	16%
20	13%

**54 36%**

100	65%
-----	-----

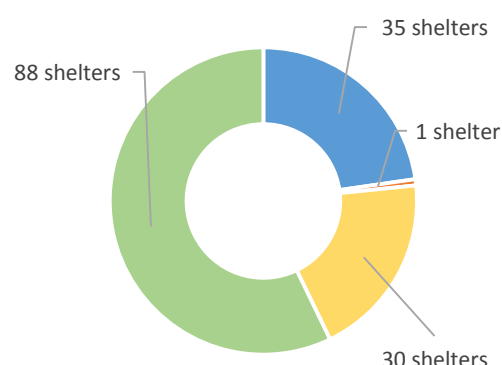
**154 100%**

Mora Assessment (June 2017)



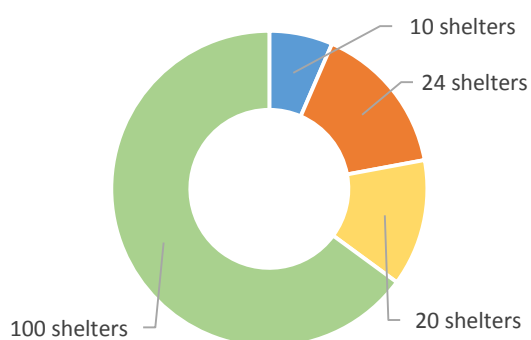
■ Reconstruction ■ Major Damage  
■ Minor Damage ■ Undamaged

Shelter Activities (2017-Date)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Needs Assessment (Jan 2018)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	58,64,75,76,77,78,80,97,142,149
Full Rehabilitation	57,59,60,61,62,66,68,72,73,74,79,81,82,88,90,93,98,99,100,141,144,150,152,154.
Minor Repairs	2,10,20,21,22,30,32,33,36,37,38,40,41,44,45,46,48,49,54,143





#### Shelter Status

- Full Rehabilitation
- Reconstruction
- Minor Repairs
- Undamaged

Data Source : Shelter Cluster

Date of Production: 6 February 2018

Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.

## Da Paing IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	3	2%
Major Damage	1	1%
Minor Damage	41	23%

**TOTAL 45 25%**

Undamaged	137	75%
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**GRAND TOTAL 182**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	3	35	38 21%
Full-Rehabilitation	-	-	-
Minor Repairs	11	-	11 6%

**14 35 49 27%**

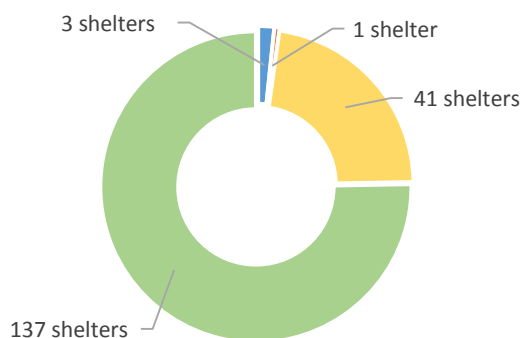
Needs Assessment (Jan 2018)	
16	9%
38	21%
22	15%

**76 42%**

106	58%
-----	-----

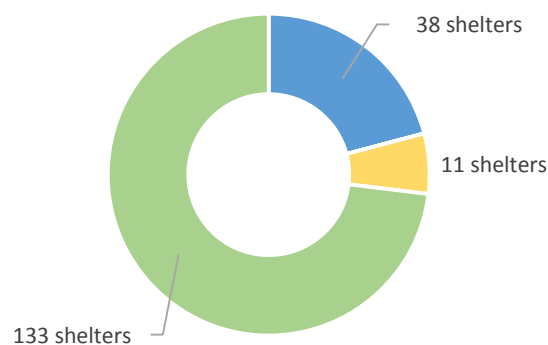
**182 100%**

Mora Assessment (June 2017)



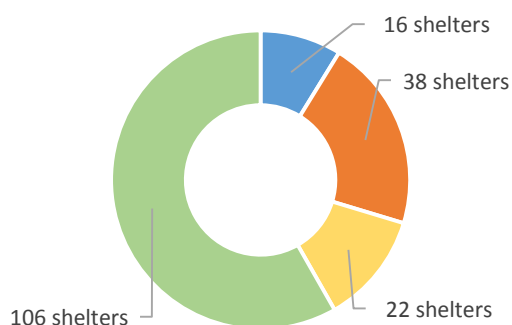
■ Reconstruction ■ Major Damage  
■ Minor Damage ■ Undamaged

Shelter Activities (2017-Date)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Needs Assesment (Jan 2018)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

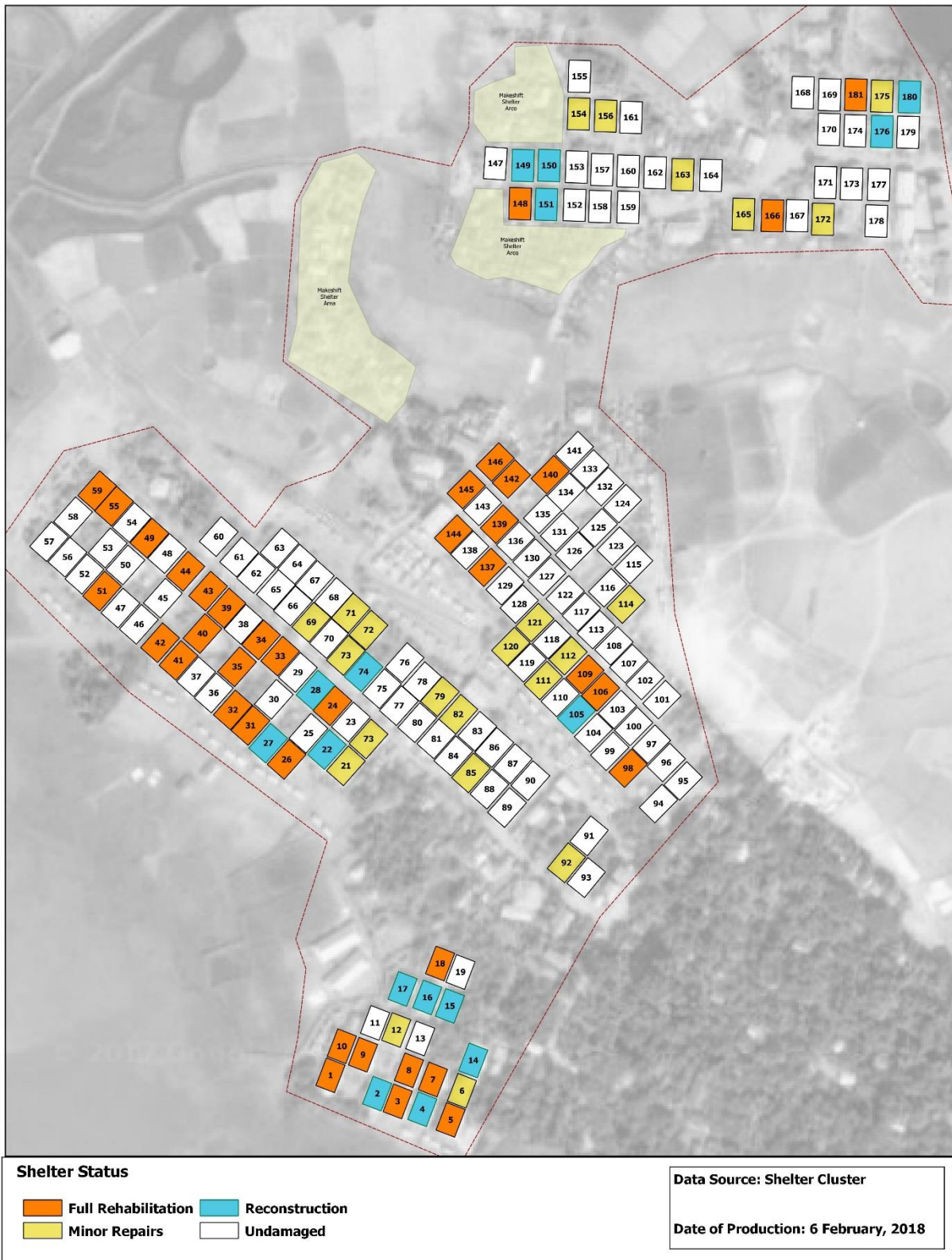
Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	2,4,14,15,16,17,22,27,28,74,105,149,150,151,176,180
Full Rehabilitation	1,3,5,7,8,9,10,18,24,26,31,32,33,34,35,39,40,41,42,43,44,49,51,55,59,98,106,109,137,139,140,142,144,145,146,148,166,181
Minor Repairs	6,12,21,69,71,72,73,79,82,85,92,111,112,114,120,121,154,156,163,165,172,175,



Shelter Cluster

## Rapid Shelter Needs Assessment ( January-2018) Dar Paing Camp

Sittwe Township, Rakhine State



## Ohn Taw Chay IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	15	19%
Major Damage	5	6%
Minor Damage	31	39%

**TOTAL 51 64%**

Undamaged	29	36%
-----------	----	-----

**GRAND TOTAL 80**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	18	20	37 46%
Full-Rehabilitation	-	-	-
Minor Repairs	8	-	8 10%

**26 20 45 56%**

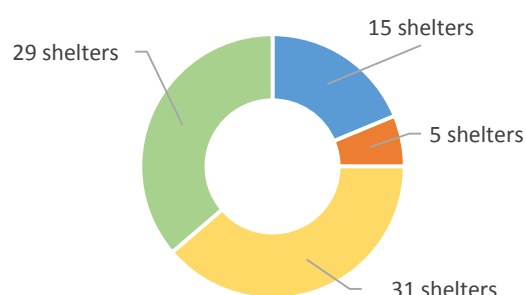
Needs Assessment (Jan 2018)	
37	46%
-	-
-	-

**37 46%**

43	54%
----	-----

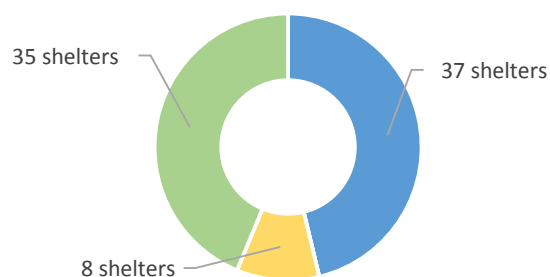
**80 100%**

Mora Assessment (June 2017)



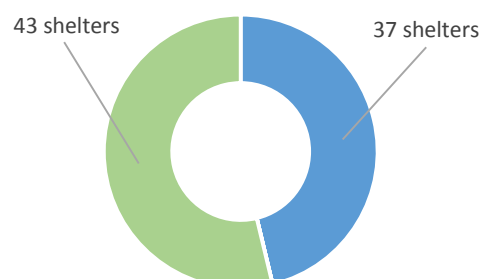
■ Reconstruction ■ Major Damage  
■ Minor Damage ■ Undamaged

Shelter Activities (2017-Date)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Needs Assessment (Jan 2018)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	6,17,21,38,39,41,43,44,45,46,47,48,49,50,51,53,55,58,59,60,61,62,63,64,65,67,68,69,70,72,73,74,76,77,78,79,80.
Full Rehabilitation	
Minor Repairs	





**Shelter Status**

 Reconstruction  Undamaged

Data Source: Shelter Cluster

Date of Production: 6 February 2018

Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.

## Ohn Taw Gyi (North) IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	23	7%
Major Damage	51	15%
Minor Damage	85	25%

**TOTAL 159 47%**

Undamaged	182	53%
-----------	-----	-----

**GRAND TOTAL 341**

Activity Type	Achievements (2017-2018)			
	Mora	Non-Mora	Total	
Reconstruction	71	166	237	70%
Full-Rehabilitation	34	7	41	12%
Minor Repairs	50	1	51	15%

**155 174 329 96%**

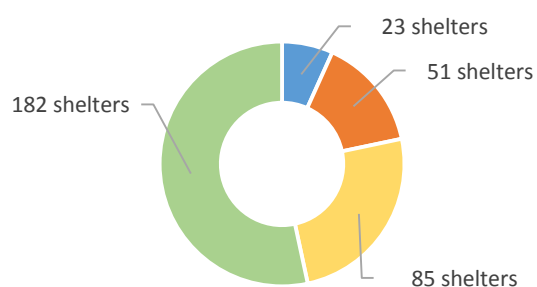
Needs Assessment (Jan 2018)	
9	3%
-	
-	

**9 3%**

332	97%
-----	-----

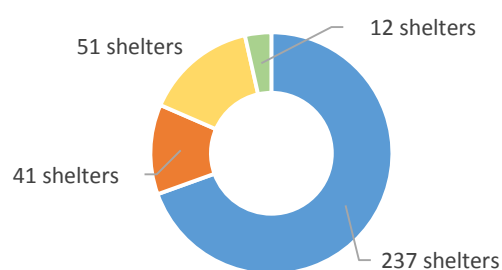
**341 100%**

Mora Assessment (June 2017)



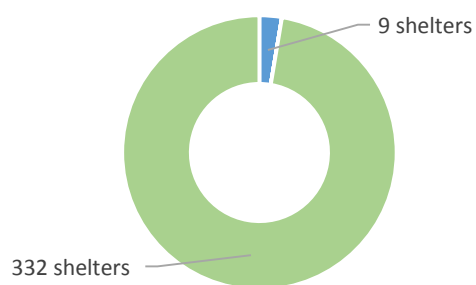
■ Reconstruction ■ Major Damage  
■ Minor Damage ■ Undamaged

Shelter Activities (2017-Date)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Needs Assessment (Jan 2018)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	8,52,162,204,254,255,261,325,334
Full Rehabilitation	
Minor Repairs	



Shelter Cluster

## Rapid Shelter Needs Assessment ( January-2018 ) Ohn Taw Gyi ( North ) Camp

Sittwe Township, Rahine State



### Shelter Status



Reconstruction



Undamaged

Data Source : Shelter Cluster

Date of Production: 6 February 2018

Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.



## Say Thar Mar Gyi IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	20	7%
Major Damage	14	5%
Minor Damage	9	3%

**TOTAL 43 14%**

Undamaged	257	86%
-----------	-----	-----

**GRAND TOTAL 300**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	31	92	123
Full-Rehabilitation	7	161	168
Minor Repairs	5	2	7

**43 255 298 99%**

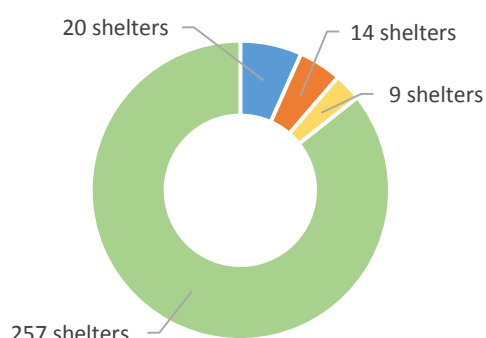
Needs Assessment (Jan 2018)	
-	
-	
2	

**2 1%**

298	99%
-----	-----

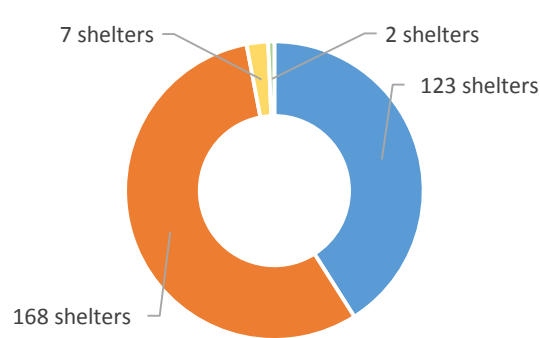
**300 100%**

Mora Assessment (June 2017)



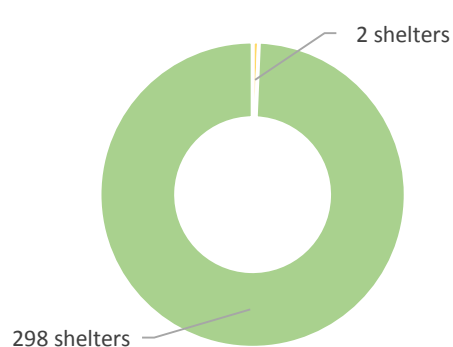
■ Reconstruction ■ Major Damage  
■ Minor Damage ■ Undamaged

Shelter Activities (2017-Date)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Needs Assessment (Jan 2018)



■ Reconstruction ■ Full-Rehabilitation  
■ Minor Repairs ■ No Activity

Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	
Full Rehabilitation	
Minor Repairs	28,31.

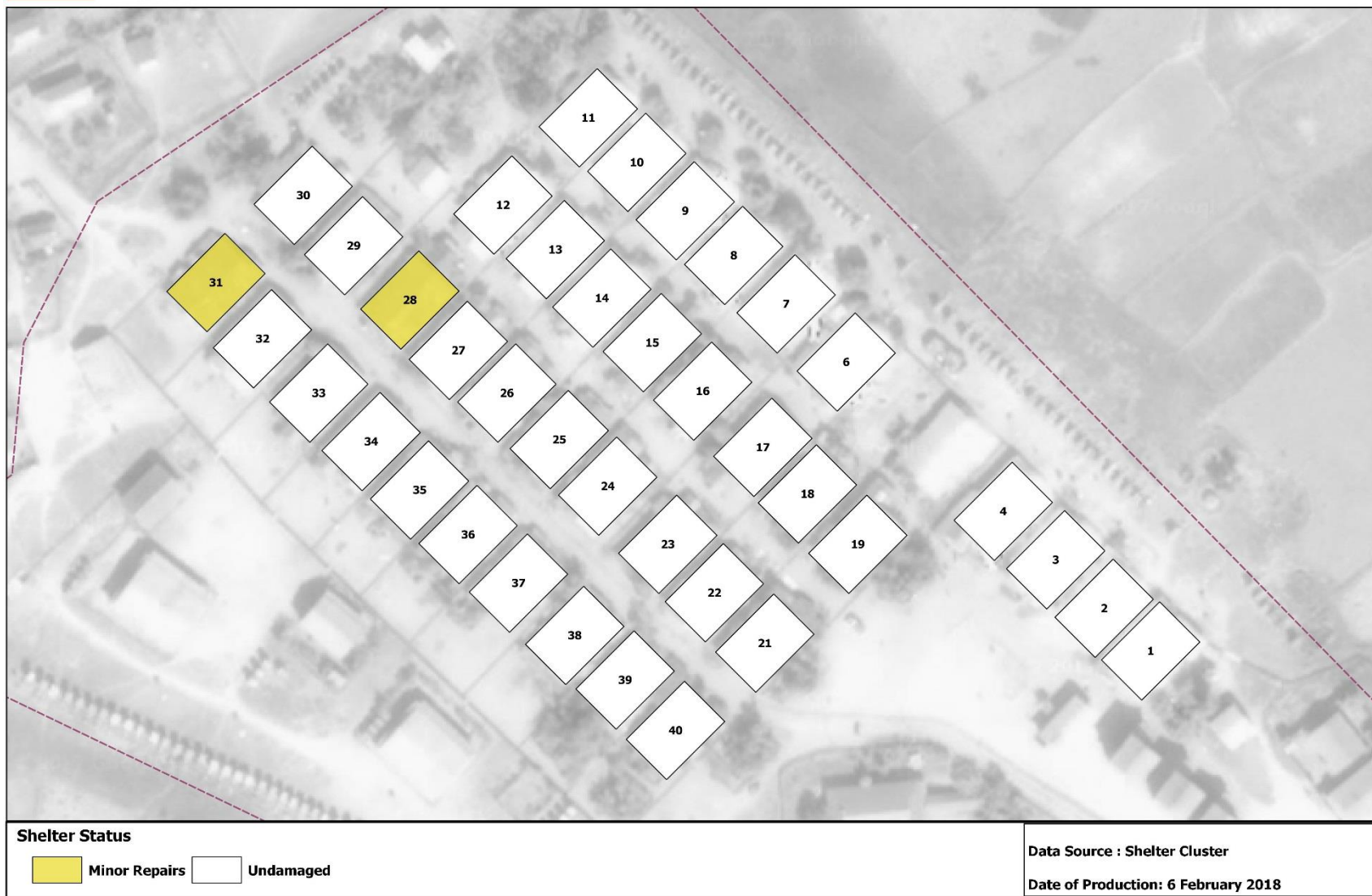


**Shelter Status**

☐ Undamaged

Data Source : Shelter Cluster

Date of Production : 6 February 2018



Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.

## Maw Thi Ngat IDP Camp

Damage Type	Mora Assessment (June 2017)	
Reconstruction	38	46%
Major Damage	16	20%
Minor Damage	12	15%

**TOTAL 66 80%**

Undamaged	16	20%
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**GRAND TOTAL 82**

Activity Type	Achievements (2017-2018)		
	Mora	Non-Mora	Total
Reconstruction	46	11	57 70%
Full-Rehabilitation	-	-	-
Minor Repairs	7	-	7 9%

**53 11 64 78%**

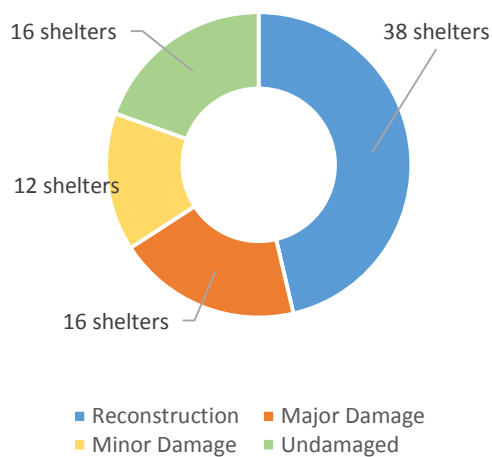
Needs Assessment (Jan 2018)	
19	23%
-	-
1	1%

**20 24%**

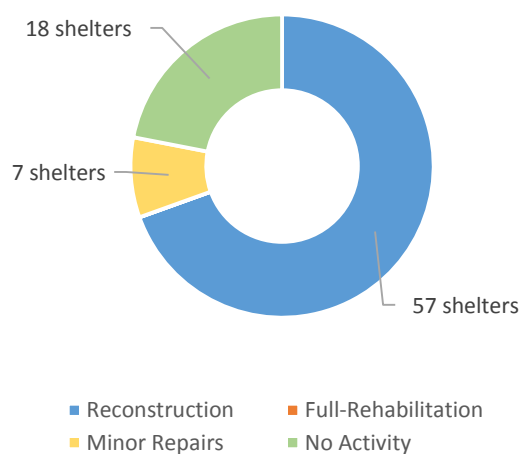
62	76%
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**82 100%**

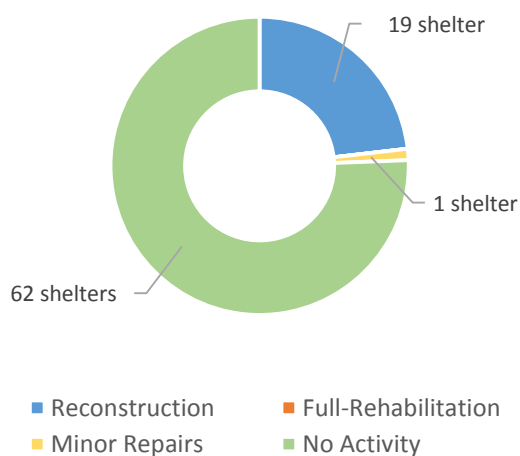
Mora Assessment (June 2017)



Shelter Activities (2017-Date)



Needs Assessment (Jan 2018)



Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	4,8,9,14,16,18,25,26,33,36,40,44,47,52,57,59,62,63,64
Full Rehabilitation	
Minor Repairs	76





# Rapid Shelter Needs Assessment ( January-2018) Maw Ti Ngar Camp

Sittwe Township, Rakhine State



## Shelter Status

- Minor Repairs
- Undamaged
- Reconstruction

Data Source : Shelter Cluster

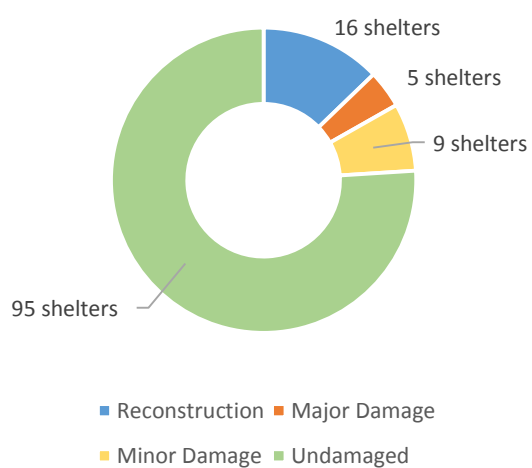
Date of Production: 6 February, 2018

Disclaimer: The names shown and the boundaries used on this map do not imply official endorsement or acceptance by the United Nations or humanitarian partners.

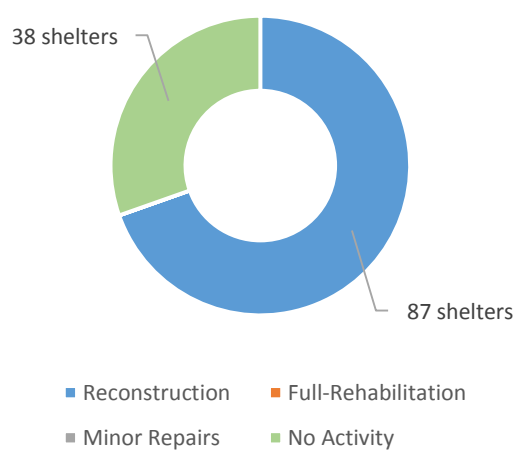
## Thet Kael Pyin IDP Camp

Damage Type	Mora Assessment (June 2017)		Activity Type	Achievements (2017-2018)			Needs Assessment (Jan 2018)	
				Mora	Non-Mora	Total		
Reconstruction	16	13%	Reconstruction	2	85	87	2	
Major Damage	5	4%	Full-Rehabilitation	-	-	-	-	
Minor Damage	9	7%	Minor Repairs	-	-	-	2	2%
<b>TOTAL</b>	<b>30</b>	<b>24%</b>		<b>2</b>	<b>85</b>	<b>87</b>	<b>4</b>	<b>3%</b>
Undamaged	95	76%					121	97%
<b>GRAND TOTAL</b>	<b>125</b>						<b>125</b>	<b>100%</b>

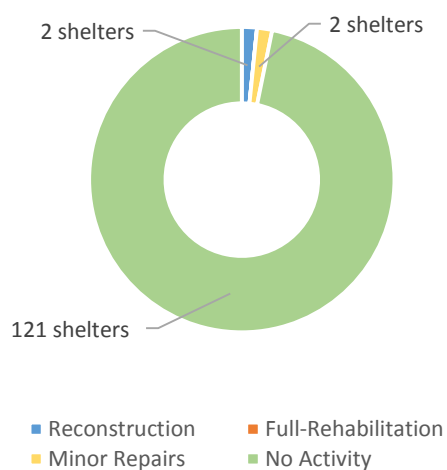
Mora Assessment (June 2017)



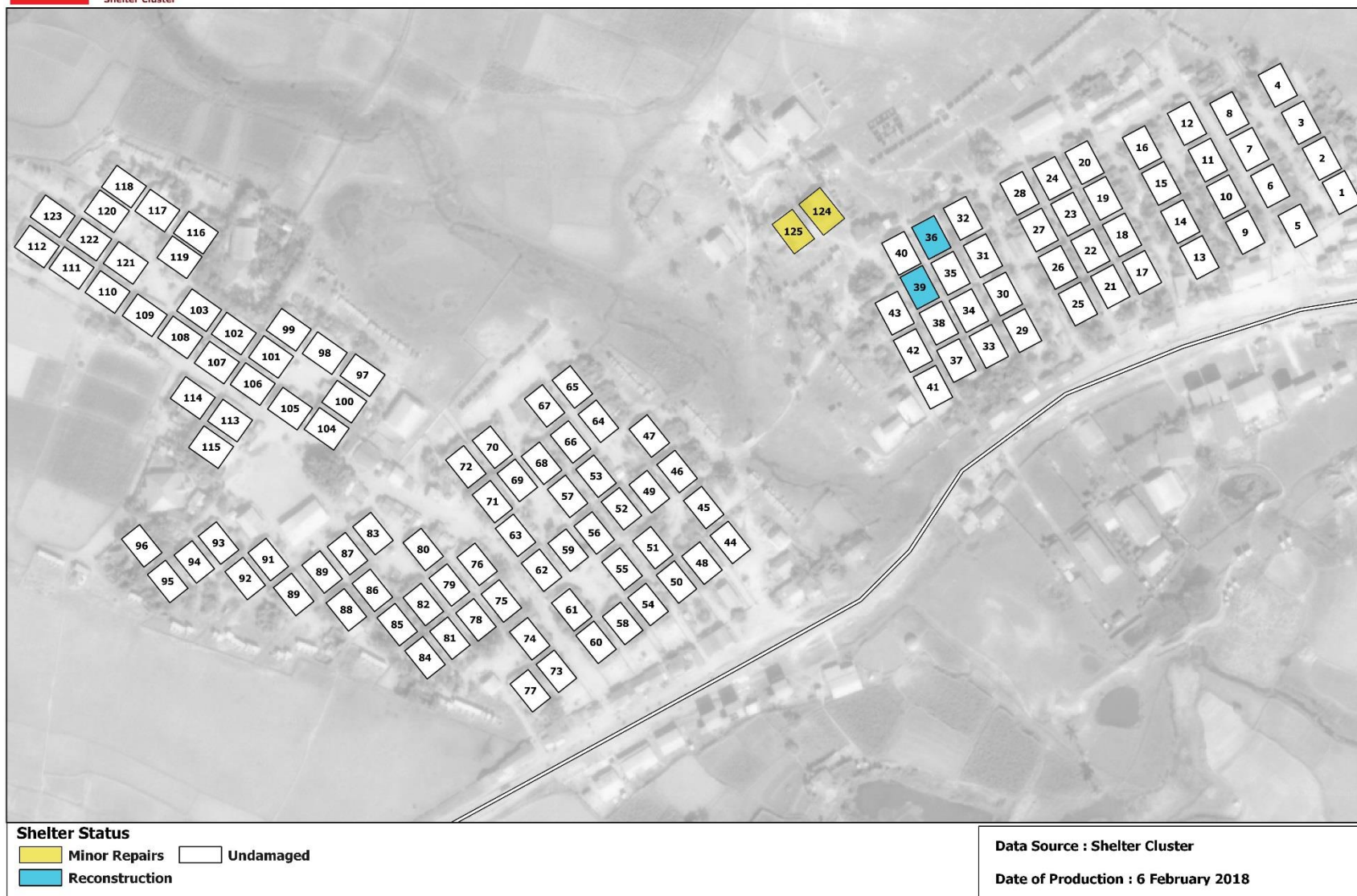
Shelter Activities (2017-Date)



Needs Assessment (Jan 2018)

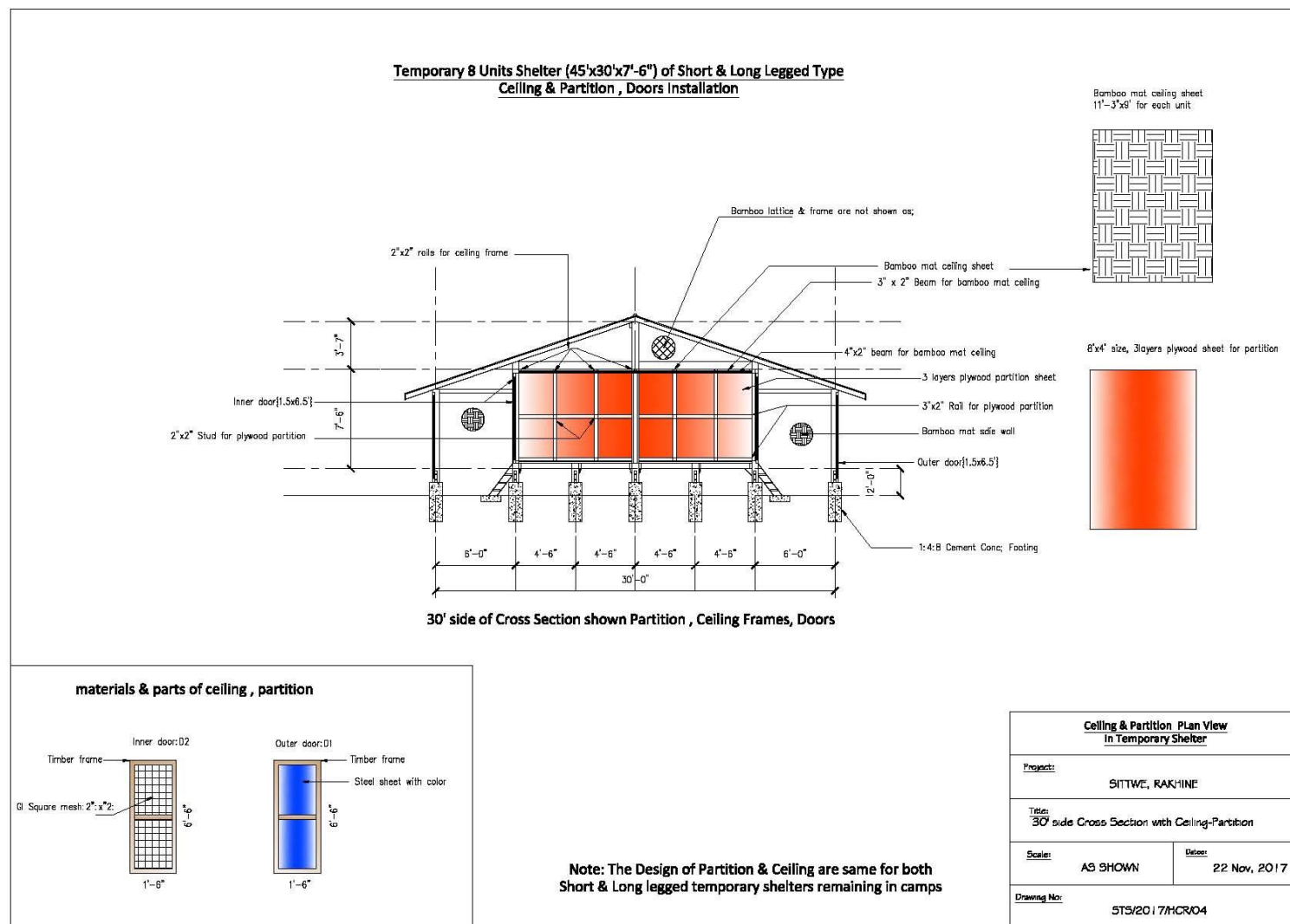


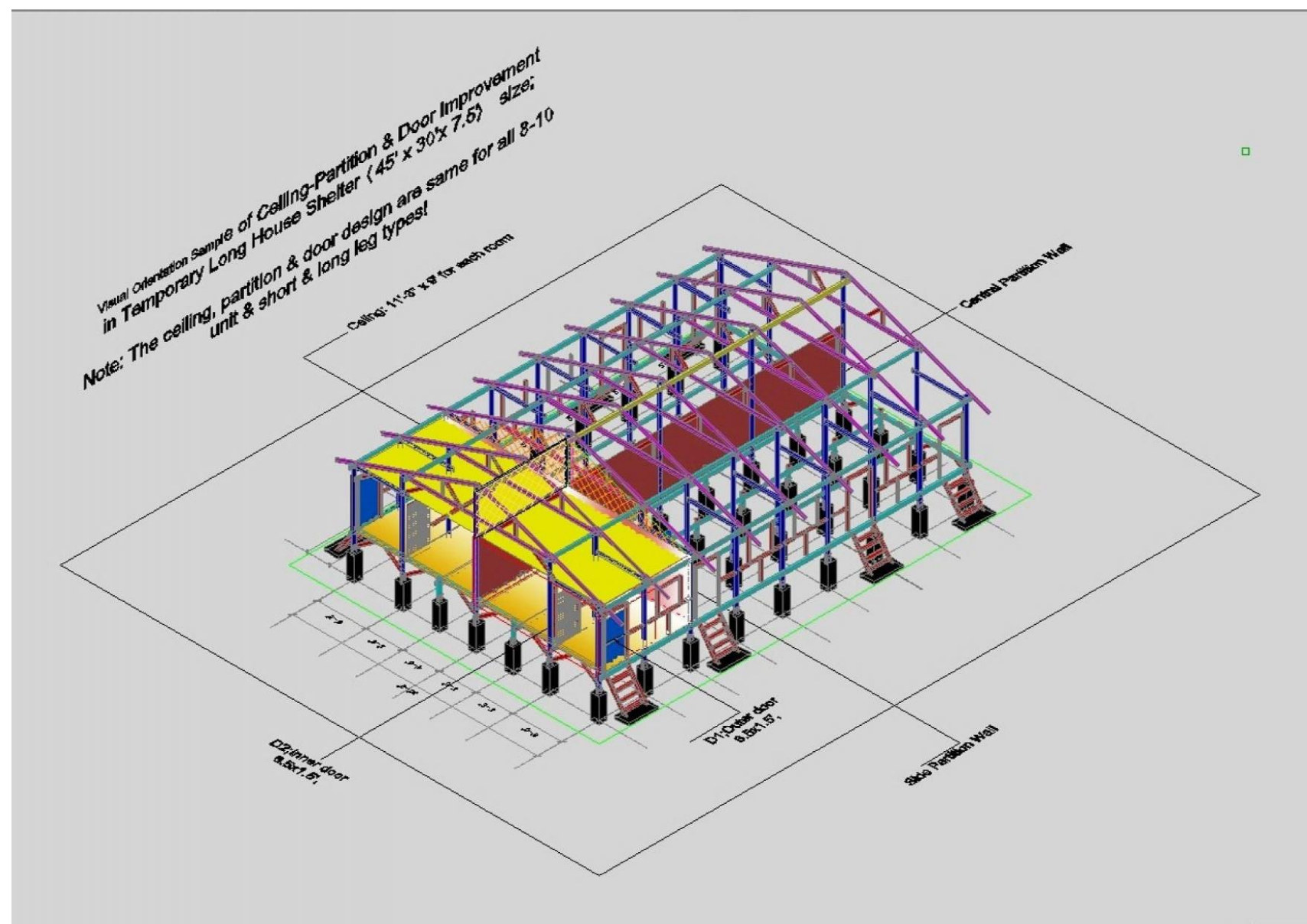
Shelter Needs 2018	Shelter Serial Numbers
Reconstruction	36,39.
Full Rehabilitation	
Minor Repairs	124,125

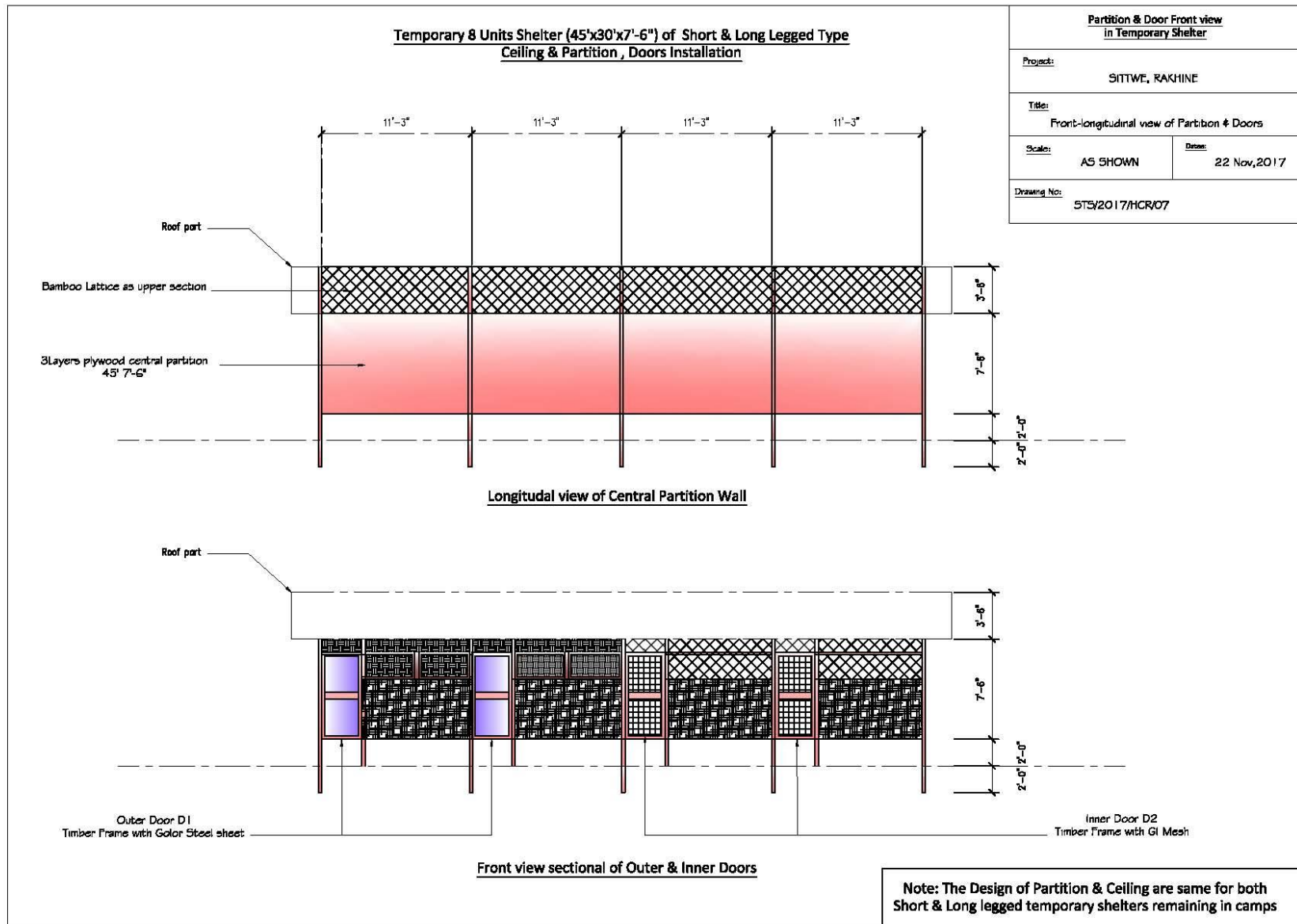




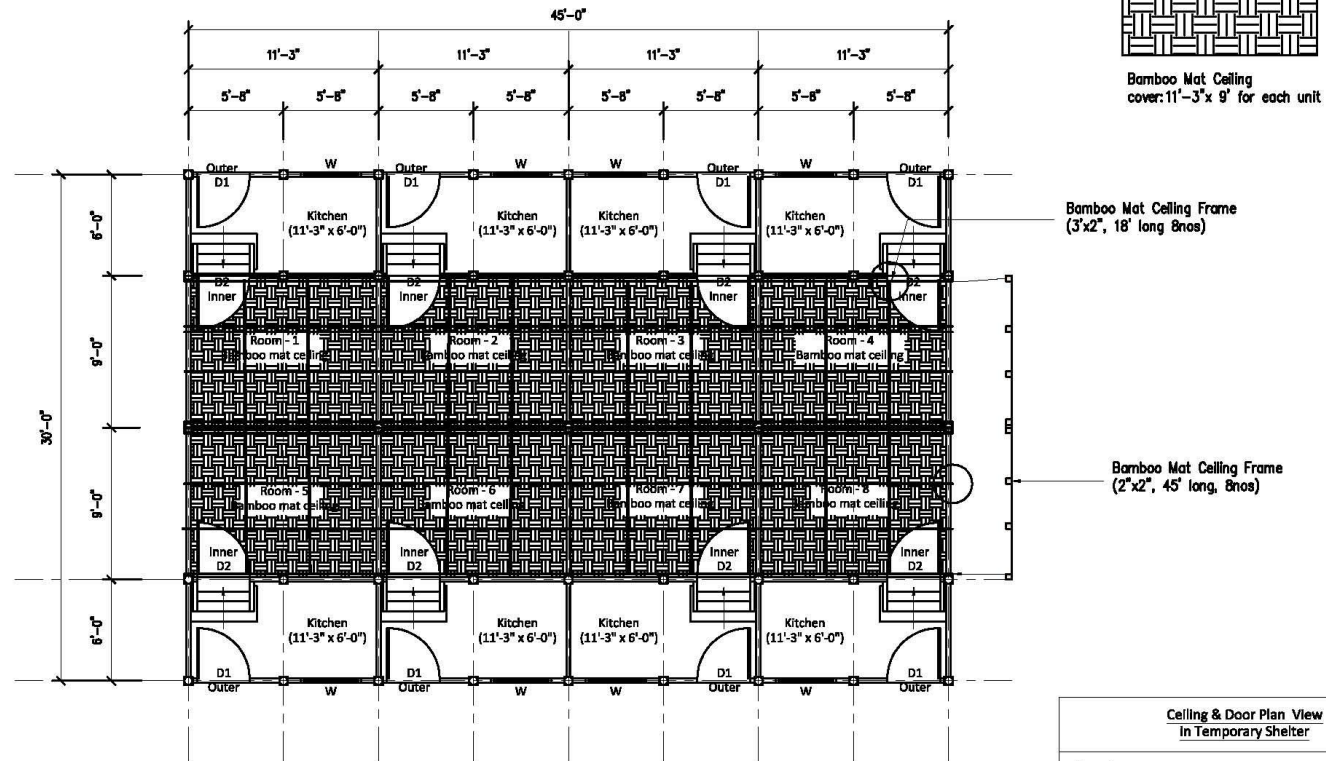
## Annex 02 Improved Design of Temporary Shelters (2018)







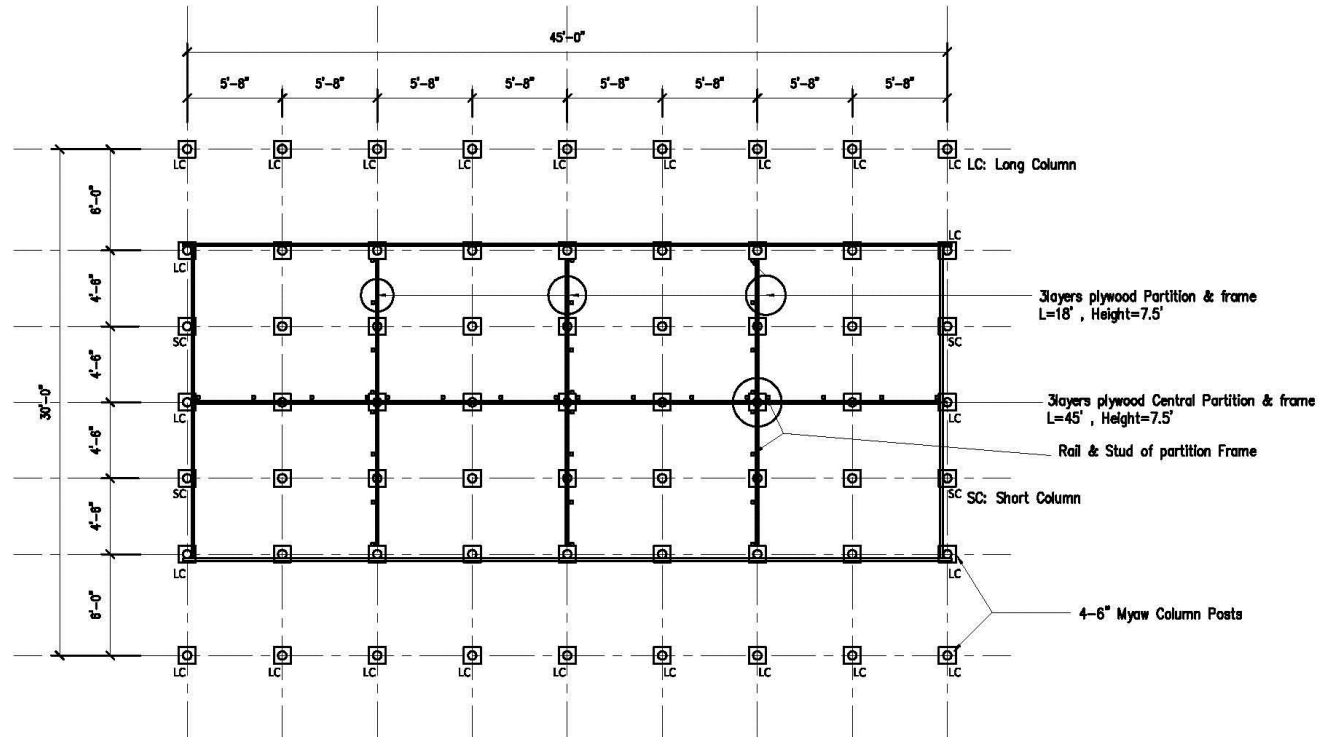
**Temporary Shelter (45'x30'x7'-6") of Short & Long Legged Type  
Ceiling & Partition , Doors Installation**



**Note: The Design of Partition & Ceiling are same for both  
Short & Long legged temporary shelters remaining in camps**

Ceiling & Door Plan View In Temporary Shelter	
Project:	SITTWE, RAKHINE
Title:	Plan View of Doors & Ceiling in Rooms
Scale:	A5 SHOWN
Date:	22 Nov, 2017
Drawing No:	STS/2017/HCR/05

Partition Wall-Frame in Temporary Shelter (45'x30'x7'-6")



Plan view of Partition & Frame

Note: The Design of Partition & Ceiling are same for both Short & Long legged temporary shelters remaining in camps

Partition wall-frame Plan view in Temporary Shelter	
Project: SITTWE, RAKHINE	
Title: PLAN View of Partition & Frame	
Scale: A5 SHOWN	Date: 22 Nov, 2017
Drawing No: STS/2017/MCR/06	

## Annex 03 Bill of Quantities for Improved Design of Temporary Shelters (2018)

### Bill of Quantities for Construction of Temporary 8 Units Shelter (With Partition, Ceiling and Doors) (45'-0"x30'-0"x7'-6")

Sr no	Particular	Unit	Qty	Rate	Amount	Unit Ks or \$	Remark
<b>A. Materials</b>							
1	Cement	Bag	20			Ks	
2	Aggregate	Cft	195			Ks	
3	Sand	Cft	98			Ks	
4	Hard wood	Cft	224.31			Ks	
5	Wire Nails (Various size)	Viss	19.78			Ks	
6	1/2" Φ bolt & nut	Set	63			Ks	
7	30 Gauge CGI Sheet 7'	Sheet	159			Ks	
8	Roofing Nails	Viss	7.35			Ks	
9	1" Φ bamboo	No	3509			Ks	
10	M.S Twisted Plate	No	160			Ks	
11	GI Plain Sheet 2' wide	Rft	55			Ks	
12	4"-6" Φ Myaw Post	No	45			Ks	
13	2"-4" Φ Myaw Post	No	68			Ks	
14	Earth Oil	Gal	4			Ks	
15	Paint Brush & Roller	No	4			Ks	
16	Plastic string	Coil	6			Ks	
17	3" Butt Hinge 4	No	48			Ks	
18	Tower Bolt	Set	48			Ks	
19	Bamboo mat lattice	Sft	337.832			Ks	
20	Bamboo mat	Sft	931.5			Ks	
21	GI square mesh	Sft	39			Ks	
22	Steel sheet	Sft	39			Ks	
23	3layers plywood	Sheets	30			Ks	
24	1'-0" sliding bolt	No	16			Ks	
25	Bow handle	No	24			Ks	
26	Wood screw	Gross	7			Ks	
27	Post Trap with Bolt & Nut (set)	Set	63			Ks	
<b>Total (A)</b>						Ks	
<b>B. Labour</b>							
1	Skilled Labour	No	242			Ks	
2	Worker	No	93			Ks	
<b>Total (B)</b>						Ks	
<b>C. Transportation</b>							
1		L.S				Ks	
<b>Total (C)</b>						Ks	
<b>D. Contingency &amp; supervision charges</b>							
		L.S				Ks	
<b>Total (D)</b>						Ks	
<b>Grand Total in MMK (A+B+C+D)</b>						Ks	
					Say	MMK	
					For 1 Shelter	US\$	

Note : Exchange rate 1 US\$ =

Estimated by

Ye Ko Oo  
Field Associate (Shelter)  
UNHCR/Sittwe

Verified by

U Aung Ze Ya  
Shelter Associate  
UNHCR/Sittwe

Approved by

Richard Tracey  
Site Engineer  
UNHCR/Sittwe



## Annex 04 Rapid Shelter Needs Assessment Work Plan (January 2018)

### Pre-Assessment

S/n	Location	Team	Action Date/WEEK	Status	Remark
1	UNHCR Sittwe Office	UNHCR Shelter CCCM & IM	Jan 2nd week (8 to 12 Jan, 2018)	Completed	Form-ToR Team set up
2	Sittwe TA Office	All teams	16 Jan, 2018	Completed	Orientation & Meeting of Plan

### Field Assessment Plan

S/n	Camp	Team	Action Date	Status	Remark
1	BDP-1	AZY-UNHCR, TAK-GAD, AHM-RRD, (4) pax	16.01.2018	Completed	Field work only & WA,VA- CMC are take part
	KDK 1-2	ALH-MPA, Staff-STDC Staff-LRD, (3) pax			
	DP	TZM-MPA, Staffs:Agri, GAD, Irrg: (4) pax			
	TKP	YKO-UNHCR, HMS-MPA, 3 Staff-Edu, GAD, Const; (5) apx			
	MTN	TMH-UNHCR, ATD-LWF, Staff-GAD, (3) pax			
	OTGS	Richard-UNHCR, KKS-UNHCR, YKO-UNHCR, HMS-MPA, Staff-Custom, (5) pax			
2	STMG	YKO-UNHCR, KKS-UNHCR, HMS-MPA, ALH-MPA,(4) pax	17.01.2018	Completed	Field work only & WA,VA- CMC are take part
	OTGN Part-1	AZY-UNHCR, MSH-GAD, TH-IRW, ALH-MPA, (4)pax			
	OTC	YKO-UNHCR, KKS-UNHCR, HMS-MPA, (3) pax			
3	OTGN Part-2	AZY-UNHCR, YKO-UNHCR, MSH-GAD,TH-IRW,(4)pax	18.01.2018	Completed	Field work only & WA,VA- CMC are take part
	BSRA	Gov Staffs:			

WA: Ward administrator, VA: Village administrator, CMC: Camp Committee