



Coverage Assessment (SLEAC Report)

Laghman Province, Afghanistan.

August 2015



Prepared by: Nikki Williamson
(SLEAC Program manager)

Action Contre la Faim

ACF is a non-governmental, non-political and non-religious organization

Executive Summary

The following report presents key findings from one of a series of five provincial coverage assessments in Afghanistan, undertaken as part of a UNICEF funded ACF coverage project¹. The project assessed the coverage of the treatment of severe acute malnutrition (SAM) services across five provinces: Laghman, Badakhshan, Jawzjan, Bamyan and Badghis.

In each province the standard SLEAC (Simplified LQAS² Evaluation of Access and Coverage) methodology was used in order to achieve coverage classifications at district level and coverage estimations at provincial level. The opportunity was also taken to collect qualitative information on the factors inhibiting access to SAM treatment services as well as those acting in favour of access.

SLEAC uses a two-stage sampling methodology (sampling of villages and then of SAM children) to classify the level of needs met in a province, i.e. to what extent severely acutely malnourished (SAM) children are reaching treatment services. By also administering questionnaires to each SAM case found, whether covered (undergoing treatment) or uncovered (not being treated), a SLEAC assessment also provides information regarding factors influencing access and coverage.

It was expected that, due to patterns of insecurity and varying administrative division of provinces across Afghanistan, sampling of villages and SAM cases by district would present both practical and methodological challenges to the implementation of these SLEAC assessments. Therefore, selected provinces were divided into zones for classification rather than each district being classified. This allowed for classification of coverage with a smaller, and therefore more practically feasible, sample size and also facilitated inclusion of provinces with many smaller districts where province-wide classifications would have been impractical. The districts were grouped together based on factors such as topography and settlement type (urban or rural).

The SLEAC assessment in Laghman, conducted in August 2015, was implemented in partnership with Swedish Committee for Afghanistan (SCA) – the Basic Package of Health Services (BPHS) implementing partner for the province. The following three sampling zones were decided upon:

	District(s)
Zone One	Mitherlam and Qargayi
Zone Two	Alingar
Zone Three	Alishing and Dawlat Shah

Coverage thresholds of low ($\leq 30\%$), moderate ($>30\%$, $\leq 50\%$) and high ($>50\%$) were agreed prior to the assessment and using the single coverage estimator, coverage was classified in the sampling zones. Coverage was found to be low in Zone One and Zone Two and moderate in Zone Three.

The coverage estimation for Laghman province is **31.2% (CI 95% 23.38%-39.02%)**. This estimation, as well as the classifications, should be considered as reflective only of the accessible areas within the sampling frame as a number of villages were removed due to insecurity.

Across the province, the most commonly cited barriers to access were the lack of awareness of the availability of treatment services, and that caregivers have little information or knowledge of malnutrition. Many facilities in Laghman have only recently begun to offer SAM treatment services (as recently as one month prior to the assessment), which partly explains why knowledge is not yet widespread.

¹ Measuring performance and coverage of IMAM programs in Afghanistan: rolling out of the SLEAC methodology

² Lot Quality Assured Sampling

Qualitative information also demonstrated the limited level of involvement of community health workers (CHWs) in nutrition activities, including sensitization, screening and referral. The experience of caregivers at clinic level also was found to have a bearing on coverage. In some areas of Zone One in particular, bad (unfair or rude) treatment by clinic staff was cited by informants a reason for not going to the health centre. The lack of support to care for other children in the family was also found to be an inhibiting factor.

The distance to the health centre was found to be a barrier to access across the province. This showed in distance relates to factors both economic, such as lack of finances for transportation, and geographic, such as the time taken to travel and inaccessibility (e.g. the poor condition of the roads, snowfall).

Findings that influence coverage positively related to the constructive roles of various community members in sharing information, indicating how important other villagers, friends and relatives are in facilitating a child reaching admission to SAM treatment. In addition, alternative health seeking pathways, such as the use of private doctors, pharmacists and mullahs, were also found to offer opportunities for effective information sharing and referral of SAM cases.

A set of recommendations based on the findings from this assessment were developed in order to support the implementing partner in overcoming the barriers identified, building on favourable factors and increasing coverage. First, improve the effectiveness and enlarge screening and referral, by both re-training CHWs in nutrition and engaging a wider range of actors (such as private doctors, mullahs and mothers) who are able to screen and refer. Second, utilize influential community figures (such as mullahs and teachers) to improve the awareness of malnutrition and treatment services by training them in key messaging and encouraging them to share these on a regular basis. Third, improve the quality of care provided at clinic level, by reviewing staff work load and resources for nutrition, training all staff in IMAM, ensuring at least minimum information is shared with mothers and improve the organisation and efficiency of clinics. Fourth, improve physical access to treatment services through the introduction of mobile clinics, SAM services at sub-centres and training CHWs to support caregivers in finding resources for access. Finally, it is recommended that a more in depth SQUEAC investigation, including an in depth community assessment to better understand community dynamics and tailor community mobilisation (communication, screening and defaulter follow-up) appropriately, is conducted in at least one district.

Acknowledgements

The authors would like to extend their thanks to all parties involved in conducting this SLEAC assessment. In particular:

- The core team from SCA and enumerators who worked conscientiously, often in difficult conditions
- The entire team at SCA in Jalalabad for facilities, logistics and administrative support as well as program staff in Mitherland for co-ordination and input
- The communities of Laghman province for welcoming and assisting the survey team at villages and clinics
- ACF Afghanistan for logistic and administrative support, and the Coverage Monitoring Network (based at ACF UK) for additional technical support
- UNICEF for their financial support

Acronyms

ACF	Action Contre le Faim
BHC	Basic Health Centre
BPHS	Basic Package of Health Services
CHC	Comprehensive Health Centre
CHS	Community Health Supervisor
CHW	Community Health Worker
EPHS	Emergency Package of Health Services
IMAM	Integrated Management of Acute Malnutrition
IPD	Inpatient Department
MUAC	Mid-Upper Arm Circumference
OPD	Outpatient Department
OTP	Outpatient Therapeutic Program
PNO	Provincial Nutrition Officer
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SCA	Swedish Committee for Afghanistan
SLEAC	Simplified LQAS Evaluation of Access and Coverage
SQUEAC	Semi-Quantitative Evaluation of Access and Coverage
UNICEF	United Nations Children's Fund

Contents

1. Background and Objectives	7
2. Context.....	7
3. Methodology.....	9
3.1. Sampling zones and estimation of required sample size.....	9
3.2. Stage One Sampling	10
4. Results.....	14
4.1. Coverage Classification	15
4.2. Provincial Coverage Estimation	18
4.3. Barriers to access	19
5. Analysis of factors affecting access and coverage	21
5.1. Key findings from covered questionnaires	21
5.2. Key findings from non-covered questionnaires.....	23
5.2.1. Lack of understanding about malnutrition	23
5.2.2. Lack of awareness of SAM treatment services	23
5.2.3. Health seeking behaviour	24
5.3. Security-related findings.....	25
5.4. Additional barriers and boosters	26
6. Conclusions	29
7. Recommendations	0
Annexes.....	0
Annex A - Full list of villages in Laghman Province	0
Annex B – Photograph of map with CHCs, BHCs, subcentres and selected villages marked by assessment team	16
Annex C - Questionnaire for cases in the programme (English version)	17
Annex D - Questionnaire for cases not in the programme (English version)	18
Annex E - Security Study Outline: Laghman.....	20
Annex F – Calculation of error ratios for reliability test of classifications	21
Annex G – Logical analysis for derivation of primary barriers from non-covered questionnaires.....	22

Tables and Figures

Figure 1 Map of Laghman Province with districts, villages and CHCs/BHCs labelled	8
Figure 2 Map with insecure villages marked	11
Figure 3 Map with sampled villages.....	14
Figure 4 Diagram showing coverage classification thresholds	16
Figure 5 Map showing coverage classification of districts in Laghman Province	17
Figure 6 Pareto chart showing primary barriers to access in Laghman Province (n=93)	20
Figure 7 Bar chart showing prior knowledge of condition of child and treatment services amongst caregivers of covered SAM cases (n=42).....	21
Figure 8 Bar chart showing the source of information about malnutrition and SAM services for covered cases (n= 42)	22
Figure 9 Treatments tried or considered by caregivers of SAM cases not admitted to the program (n=93) ...	24
Figure 10 Factors presenting a challenge to accessing health centres as cited by uncovered cases (n=93)	27
Table 1 Calculations for estimated caseloads, sample sizes required and no. of villages.....	10
Table 2 Estimated sample sizes required for classifications based on estimated caseload in service delivery unit (in this case zone)	10
Table 3 Sample sizes required and sample sizes achieved	15
Table 4 Age, MUAC and oedema cases per zone.....	15
Table 5 Table showing results from assessment Covered, uncovered and recovering cases found in each zone and the estimated recovering cases not in the program.....	16
Table 6 Applying decision rule to determine coverage classifications	17
Table 7 Table showing calculations of prevalence rate based on survey data.....	18
Table 8 Table showing calculations of weights awarded to each zone	18
Table 9 Table showing allocation of weights to each zone and calculation of coverage estimation	19
Table 10 Summary of responses to key questions from caregivers of uncovered cases (n=93)	23

1. Background and Objectives

Parts of Afghanistan have high rates of severe acute malnutrition (SAM) above emergency thresholds³, and therefore it is imperative that the health system, with the support of the international community, addresses this challenge. Since 2010 the Basic Package of Health Services (BPHS)⁴ system has included the treatment of SAM, however the response remains inadequate⁵. In 2015, strengthening the nutrition component of the BPHS/EPHS (Essential Package of Hospital Services) remains a challenge for the Ministry of Public Health (MoPH) and the implementing partners. Coverage assessments allow BPHS implementers to assess the performance of their SAM treatment services and to identify practical steps for reform.

The project, of which the current assessment is a part, intends to contribute to improving the performance of IMAM services in Afghanistan, through the provision of in-depth information on coverage, identification of barriers and boosters to access, and definition of recommendations for a durable scale up of nutrition service delivery. Provinces were identified for a SLEAC assessment according to several priority factors including: SAM prevalence rates, proportion of districts with SAM treatment services, existence of past or planned coverage assessments and geographical location.

The National Nutrition Survey (NNS) conducted in 2013 indicates a global acute malnutrition (GAM) rate of 16.0% with SAM at 5.1% in Laghman. National IMAM reporting⁶ also shows that all five districts in Laghman have inpatient department (IPD) or outpatient department (OPD) SAM treatment services, making the province an appropriate area for a coverage assessment. The province has also been selected for the implementation of a SQUEAC (semi-quantitative evaluation of access and coverage) assessment in January 2016 making it an ideal location for a SLEAC assessment, since the information will allow the most instructive selection of a district for the SQUEAC (a more profound investigation of access and coverage).

The main objectives of this assessment were to collaborate with the Swedish Committee for Afghanistan (SCA) in order to:

1. Classify coverage of each zone
2. Estimate coverage in the province
3. Identify key factors influencing coverage
4. Outline evidence based recommendations
5. Train partner staff in coverage methodologies

2. Context

Laghman province is made up of five districts (Alingar, Alishing, Dawlat Shah, Mitherlam and Qargayi) and the capital city is Mitherlam, located near the geographical centre of the province at the meeting of two large valleys. The majority language is Pashtu with some Dari and Pashaye spoken, although the latter only in some remote areas. Laghman province is more than half (c. 55%) of mountainous or semi-mountainous terrain of approximately 3,800km² situated between Kabul and Jalalabad. The total population is estimated to be 438,300⁷, of which just 15,000 (c. 3%) live in urban areas and up to 4% is nomadic⁸. Livelihoods are mostly agriculture based, especially cultivation of fruit crops, however there is often little water for irrigation and around 90,000 inhabitants are estimated to be severely food insecure.

³National Nutrition Survey 2013

⁴ A Basic Package of Health Services for Afghanistan – (2010/1389) Islamic Republic of Afghanistan, Ministry of Public Health

⁵ See Afghanistan: Back to the reality of needs, (ACF International, 2014) and European Union Final Report Nutrition Assessment (August 2014).

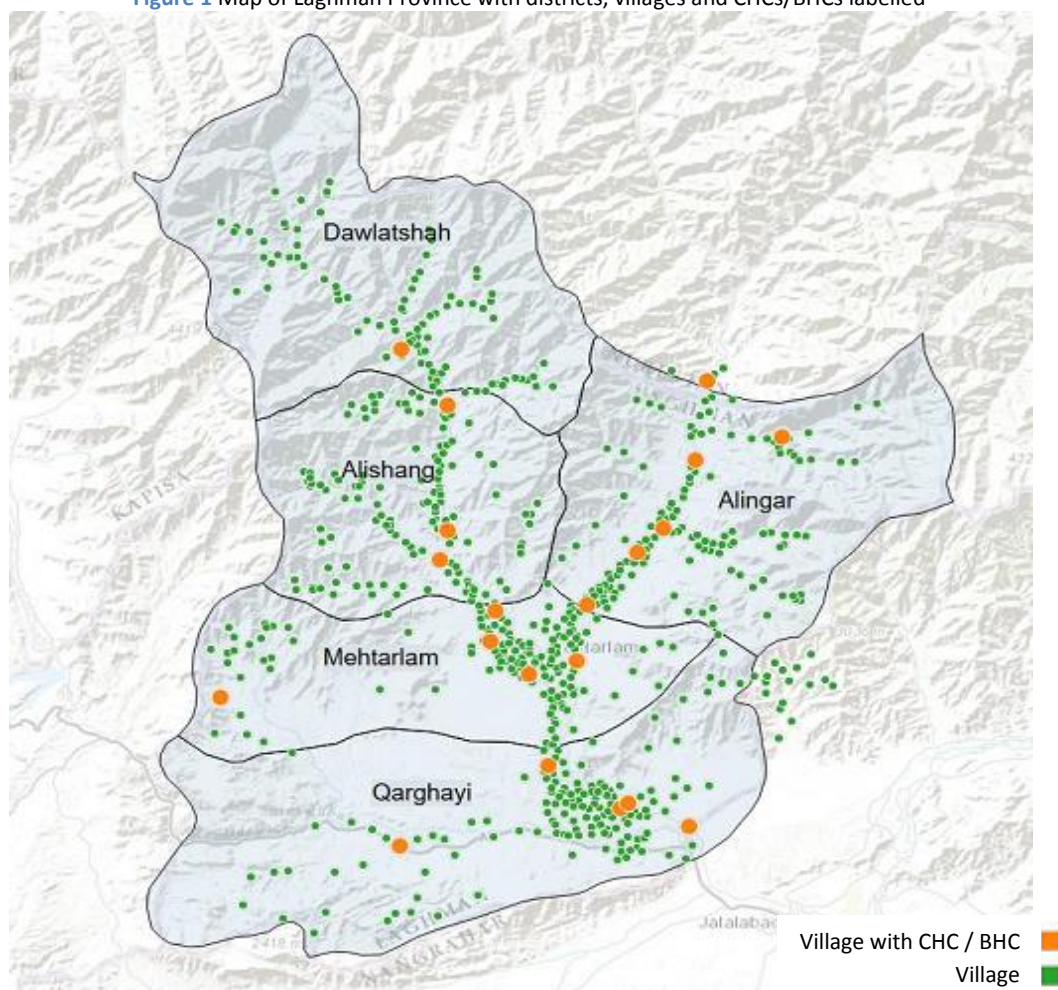
⁶ Source: UNICEF National Nutrition Cluster

⁷ Source: Population data. CSO, 2013

⁸ Ministry of Rural Rehabilitation and Development, Laghman province profile, 2012

Laghman is also prone to natural disasters such as flash flooding (4,700 at risk) and disease outbreak (six recorded in 2014⁹). Added complications due to long term insecurity also affect migration (c. 1,000 conflict displaced over 3 years) and humanitarian access, with Laghman province ranking sixth by overall need and vulnerability in HRP 2015.

Figure 1 Map of Laghman Province with districts, villages and CHCs/BHCs labelled



BPHS in Laghman province has been delivered by SCA since 2013 through a number of clinical sites including one provincial hospital, nine Comprehensive Health Centres (CHC), one with IPD SAM services, and 15 Basic Health Centres (BHC). These are labelled in Figure 1. There are also 16 sub-centres and 314 health posts. The health posts (each with one or a pair of CHWs) are supervised by 24 community health supervisors (CHS). However, until August 2015, OPD SAM services were only available at the hospital and five of the CHCs. SAM treatment has since been extended to all but one¹⁰ CHCs and BHCs (therefore there are now 24 sites) including the initiation of various activities, such as delivery of key messages about ready-to-use-therapeutic foods (RUTF) at new sites, and an IMAM training programme at all clinics. However, these activities may have been too recent to have impacted the communities consulted during this assessment.

⁹ Overall Needs and Vulnerability Analysis, HRP 2015

¹⁰ See 5.3 Security-related findings: Impact on provision of services

3. Methodology

SLEAC is a low-resource method for classifying coverage of feeding programs over wide areas. This methodology was therefore chosen to assess the level of SAM treatment coverage in five provinces across Afghanistan by mapping areas where very high or very low coverage is achieved, and identifying the factors affecting access¹¹.

SLEAC uses a two-stage sampling process. Stage one samples villages across the area to be classified (in this case zones). The sampling process ensures a random and spatially representative sample. Stage two samples SAM children at village level. This step ensures an exhaustive sampling of all SAM cases in each village selected. Some specific technical considerations were made to adapt the sampling to the Afghanistan context.

3.1. Sampling zones and estimation of required sample size

It was expected that, due to patterns of insecurity and varying administrative division of provinces across Afghanistan, sampling of villages and SAM cases by district would present both practical and methodological challenges to the implementation of these SLEAC assessments. Therefore, selected provinces were divided into zones for classification rather than each district being classified. This brought advantages such as lowering total number of cases needed, facilitating implementation in provinces with numerous small districts, and allowing inclusion of small secure parts of districts that are largely insecure and may otherwise have been excluded (e.g. Dawlat Shah).

In the case of Laghman, the zones were organised according to topography with Zone One comprised of two more urbanised and accessible districts with major roads (Qargayi and Mitherlam) and Zones Two and Three each of the two large valleys to the northeast (Alingar) and north northwest of the capital (Alishing and Dawlat Shah) resulting in the following three sampling zones:

District(s)	
Zone One	Mitherlam and Qargayi
Zone Two	Alingar
Zone Three	Alishing and Dawlat Shah

In order to confirm that we can still reliably estimate coverage at zonal level without having to find an impractical (given time and resources available) number of SAM cases, estimated caseloads were calculated for each zone using population data, SAM rates and % population 6-59 months of age and the following formula:

$$\text{Estimated caseload} = \text{total zone population} \times \text{population under 59 months} \times \text{SAM rate}$$

The SAM rate used for all calculations was intentionally cautious to ensure that sample sizes would be achieved. In this case, secondary analysis on the NNS data from Laghman was done assuming Standard Deviation (SD) of 1. Thus, the figure of 5.1% (95% CI: 3.61% - 7.27%) of Severe Wasting, having SD of outside recommended ranges (2.5¹²), was recalculated to a more conservative estimate of 1.83%.

¹¹ For more technical information see SLEAC/SQUEAC Technical Reference

¹² Recommendations from WHO expert panel in 1995 requires ranges of SD for weight-for-height Z-score of 0.85 to 1.10 (<http://www.who.int/nutgrowthdb/about/introduction/en/index5.html>)

The calculations for the estimated case load are presented in Table 1.

Table 1 Calculations for estimated caseloads, sample sizes required and no. of villages¹³

Zone	Ave. village population	Total population	Population <59 months	SAM rate	Estimated caseload	Sample size required	Required number of villages to sample
Zone One	745	222,860	40,115	1.83	734	40	16
Zone Two	956	108,000	59,555	1.83	356	33	10
Zone Three	527	110,043	19,808	1.83	362	33	19
Total	710	440,903	119,477	1.83	1,452	106	45

Subsequently, the required sample size was determined using the table provided in the SLEAC technical reference (Table 2) that offers guidance on the sample size required. These are the recommended sample sizes for when using 30% and 70% thresholds. We are using a narrower range (30%-50%) which requires greater accuracy and therefore a larger sample size. However these remain useful as an estimate. We also were knowingly more conservative when calculating the number of villages to sample.

Table 2 Estimated sample sizes required for classifications based on estimated caseload in service delivery unit (in this case zone)¹⁴

Estimated number of cases in the service delivery unit	500	250	125	100	80	60	50	40	30	20
70% standard or 30%/70% class thresholds	33	32	29	26	26	25	22	19	18	15

3.2. Stage One Sampling

The suggested sample size for a SLEAC, according to the technical reference, is 40 cases per delivery unit or unit of classification (zone in this case). However, if the estimated SAM caseload in the zone is small (less than 500) this can be reduced (See Table 2) and still allow for a reliable classification of coverage. Based on this it was calculated that we would require n=40 for Zone One and n=33 for Zones Two and Three.

In order to ensure this number of cases is reached, the number of villages required was calculated using the following formula:

$$n \text{ villages} = \left\lceil \frac{n}{\text{percentage of population} < 59\text{months} \times \text{SAM prevalence} \times \text{average village population}} \right\rceil$$

The numbers of villages that need to be sampled for each zone are also presented Table 1.

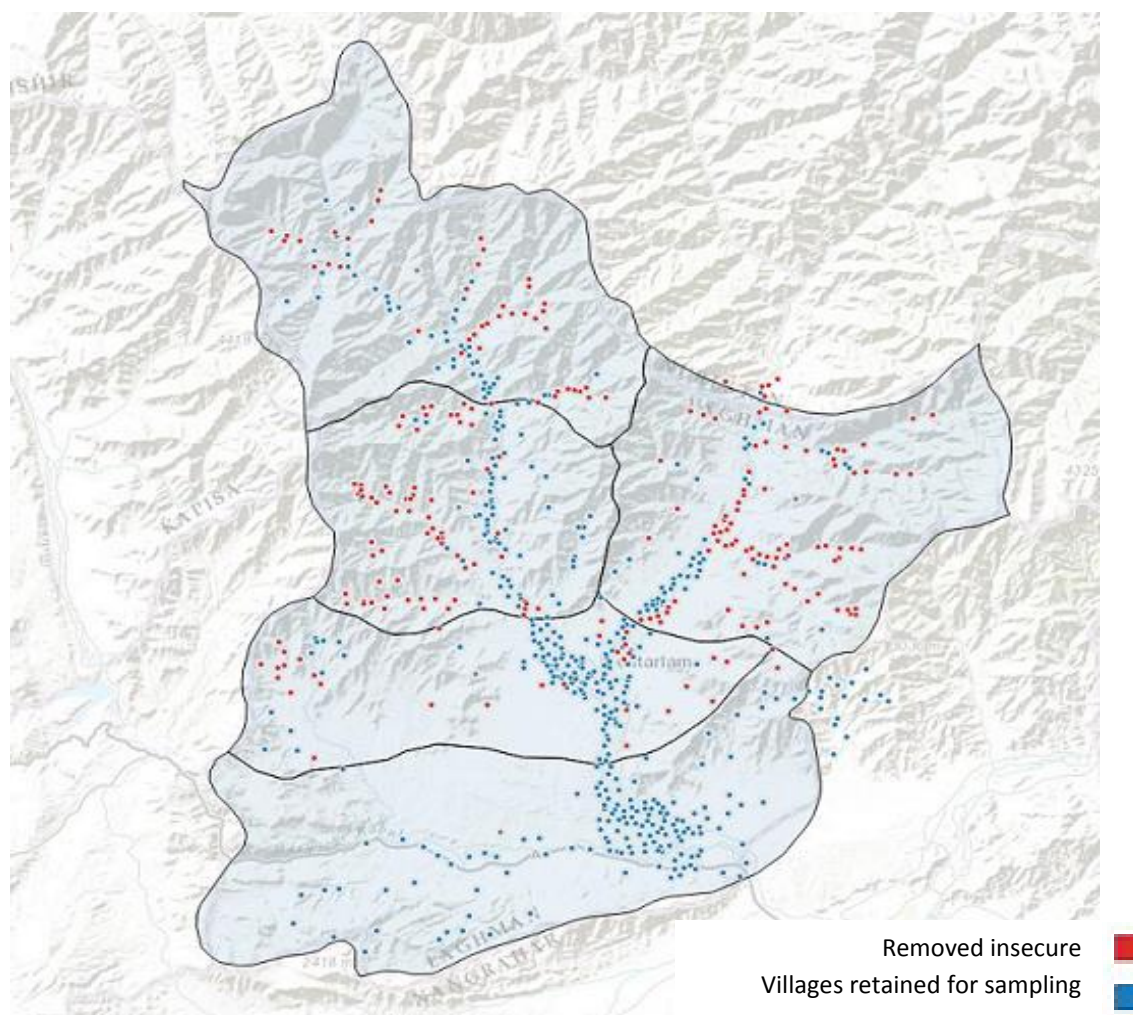
In normal conditions, an accurate map, or a comprehensive list of villages would then be used to randomly select the required number of villages to ensure spatially representative sample. However, due to the poor security conditions in Laghman, the list of villages was first reviewed by the partner's security focal point, in order to remove villages that were inaccessible. Villages that were in areas known to be controlled by AOGs hostile to government and outsiders were removed. In case of any doubt, additional information was sought and the program team (at community level) were consulted to determine if it would be safe to go to each village and conduct the assessment.

¹³ Source: Population data. CSO, 2013

¹⁴ Source : SLEAC/SQUEAC Technical Reference

By removing villages prior to selection it meant that inaccessible villages were not selected, and we were able to best ensure spatial representivity, albeit outside of the insecure areas. In Laghman this resulted in 40% of the villages in the province being removed from the sampling frame (Zone One 11%; Zone Two 84%; Zone Three 56%). See Annex A for a list of the villages and those removed indicated. Many of the villages removed were located in remote areas in the mountains and away from major roads and towns or cities as shown in Figure 2.

Figure 2 Map with insecure villages marked



This clearly presents a limitation to the current assessment, and must be considered when reading the coverage classification and estimations, and applying them to the whole of a district or the province. That said, perhaps more importantly, the qualitative information collected during caregiver interviews will still provide a useful set of information on factors affecting coverage.

Once the insecure villages had been removed, since a reliable and complete map was not available, the spatial systematic sampling method was used to select the required number of villages (See Table 1). With this method villages are ordered according to CHC/BHC catchment area, a sampling interval is then calculated as well as a random starting point on the list¹⁵. This allows for the correct amount of villages to be selected both randomly and produces a spatially representative sample. This process is done for each of the

¹⁵ See SQUEAC/SLEAC Technical Reference for more details.

three sampling zones. A list of villages and those selected can be found in Annex A. A photograph of the selected villages and CHCs/BHCs marked on a map by the team for planning purposes can also be found in Annex B.

3.3. Stage Two Sampling

Once the villages were selected, teams were sent to each village in order to find all SAM cases and to ascertain if they were in the program or not. Recovering cases were also sought and recorded.

A team of 10 enumerators divided into five teams of two were recruited. The enumerators were trained in both door-to-door and active and adaptive case finding. In village settings, active and adaptive case-finding was used. This involves teams using local knowledge to find suspected cases of SAM and therefore means that they do not need to go to each and every household. The sampling method assumes a level of social cohesion and that community members will know about the existence of SAM children in the village. Photos of malnourished children and packets of RUTF were used to assist the enumerators in finding SAM cases both in treatment and those not covered. In each village, teams continued searching for cases until they were certain that they had found all (or almost all) SAM cases.

Door-to-door case finding involves the teams going to each and every house in a given village. This is more appropriate in an urban setting, where it is assumed that due to the density of the population community members will be less aware of SAM children in the community, and therefore active and adaptive case-finding more difficult.

The case definition used was children 6-59 months old with a mid-upper arm circumference (MUAC) of <115mm or displaying bilateral pitting oedema, and children currently undergoing treatment. Enumerators were trained in measuring MUAC and testing for oedema. In each household, all children were screened in this way, and it was ensured no children 6-59 months were omitted (due to them sleeping for example). Non SAM cases that were still undergoing treatment (recovering cases) were also sought.

A recovering case is a child that is no longer SAM but has not yet been discharged from the treatment program. A SAM child is classified as a child with a MUAC of <115mm¹⁶, however cases are not discharged until a MUAC of ≥125mm has been achieved for 2 weeks¹⁷. This means that a child may still be under-going treatment although no longer be defined as SAM.

For each case found, the team ascertained whether the child was admitted into SAM treatment or not. If they were covered then the enumerator asked for proof. This meant they were required to show the packets of RUTF or a treatment card, or alternatively sufficiently describe details of the treatment and location of services (in the case RUTF and treatment cards were unavailable). Once proven, the caregiver was administered with a 'covered' questionnaire. If the SAM child was determined to not be covered the caregiver was administered with a 'non-covered' questionnaire and referred to their nearest treatment service. These questionnaire responses were used for qualitative data about what prevents or facilitates the child's admission to the program. Full versions of these questionnaires can be found in Annexes C and D.

Due to the security risk, close supervision of the teams by the survey leader was not possible during data collection at village level. In order to overcome this, and ensure the highest quality case-finding, certain measures were taken. First, during training were extra practical exercises such as role playing interviews, discussing possible scenarios (for example definitions of covered and uncovered cases) and running through, physically, the active and adaptive case-finding process. The team leaders were provided with telephone

¹⁶ SAM is also defined in terms of weight-for-height z-scores and the presence of bilateral pitting oedema, but MUAC is used here to illustrate a recovering case.

¹⁷ IMAM guidelines

credit so that they could call the survey leader when any issues or questions arose during case-finding. The survey leader also called the team leaders every morning and evening to plan and discuss their activities (such as key informants met, number of children screened and households visited, village size and how village boundaries were defined), relay findings and highlight security related information gathered to inform immediate and ongoing planning. After one full day of case-finding, the core team was brought together and each individual questionnaire reviewed to identify and discuss how they found each case and the caregiver's responses in the context of the assessment. It was not practically feasible to do this in every case but was done when appropriate or necessary.

3.4. Additional qualitative data collection

In order to go some way in overcoming limitations caused by inaccessibility, some additional qualitative information was also collected to allow some understanding of how coverage is affected in these areas¹⁸. This information was collected through three methods. First semi-structured interviews were conducted by the survey leader with key nutrition staff of SCA (such as Nutrition Manager and Monitoring Officer) and the Provincial Nutrition Officer from MoPH. These interviews focused on programming structure and overview, the informant's own activities and then further explored in detail information arising relating to challenges. Second, as the security situation further deteriorated during field work restricting access for the survey team, it was decided to conduct short structured interviews with selected clinical staff and visitors to clinics as close as possible to the affected areas, as outlined in Annex E. Last, detailed discussions took place at each meeting with the field team, and notes from this and telephone conversations were taken.

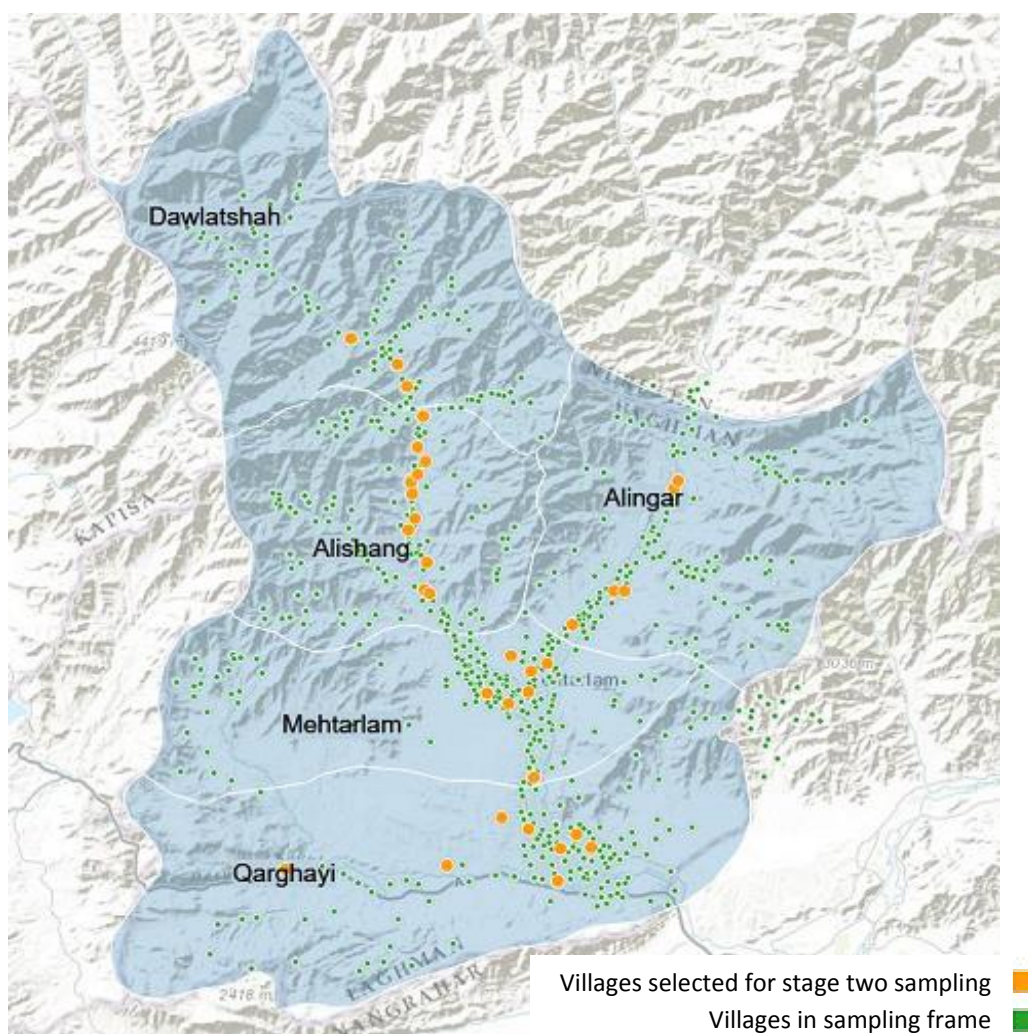
¹⁸ See Annex E for further details

4. Results

Having sampled all possible selected villages across the province a total of 127 SAM cases was found. Table 3 shows the sample sizes achieved for each zone, including required sample size, number of villages selected and number of villages reached.

Due to the changing security situation, the number of villages reached is less than the number of villages selected. Even though a total of 45 (at the time) secure villages were selected, 12 villages were not sampled, due to new information emerging and concerns over security. This usually meant that the team arrived in the village where the village leaders, concerned over the security of the team, advised them to turn away immediately. In other situations, information was received en route to the village and a decision was made to turn back. This would have further impacted the spatial representivity of the sample of villages. This reiterates that results (classifications and estimates) should be understood as relating only to accessible areas.

Figure 3 Map with sampled villages



For Zone Two the reduction in the number of villages was so severe (only 40% of intended villages reached) that the sample size achieved was particularly low ($n=24$). By analysing precision errors, as presented in Annex F, it was decided that this data could be used to classify coverage in the accessible areas of this zone.

Table 3 Sample sizes required and sample sizes achieved

Zone	SAM Sample size required	No. of villages selected	No. of villages reached	SAM Sample size achieved
Zone One	40	16	15	58
Zone Two	33	10	4	24
Zone Three	33	19	14	45
Total	106	45	33	127

In terms of the condition of cases, the median MUAC of the SAM cases found across the province was 110mm, without any variation from zone to zone (See Table 4). The low level of oedema cases is expected for Afghanistan. Median age of SAM cases found across the province is 17 months (1 year and 5 months), with cases from Zone One (the more urbanised area) showing a slightly lower age of SAM case (15.5 months) than Zones Two and Three (18 months).

Table 4 Age, MUAC and oedema cases per zone

	Zone One	Zone Two	Zone Three	Total Laghman
Median age of SAM cases (months)	15.5	18	18	17
Median MUAC (mm)	110	110	110	110
Number of oedema cases	4	0	1	5

4.1. Coverage Classification

Typically, a point coverage estimator is used to estimate coverage. This estimates coverage using only the SAM cases found with the following formula:

$$\text{Point Coverage} = \frac{\text{Covered SAM cases}}{\text{All SAM cases (covered + uncovered)}}$$

However this estimator is limited in use as it does not reliably estimate coverage in all types of program. For example, in a program that has good case-finding and retention as well as short lengths of stay, there would not be many SAM cases at any given time, but would be lots of recovering cases. Since the point coverage estimator does not include these recovering cases this would not be reflected, and will likely give a negatively distorted picture of coverage¹⁹.

The most reliable, and widely suited, coverage estimator currently available is the single coverage estimator. The single coverage estimator²⁰ estimates coverage using recovering cases still being treated (as found during the assessment) and estimates recovering cases not being treated. The number of recovering cases not in the program are estimated using the following formula where C_{in} = covered SAM cases, C_{out} = uncovered SAM cases and R_{in} = recovering cases in the program²¹.

¹⁹ For more information see Myatt, M et al, (2015) *A single coverage estimator for use in SQUEAC, SLEAC, and other CMAM coverage assessments*, p.81 Field Exchange 49.

²⁰ Ibid

²¹ $1/3$ is the correction factor calculated using the median length of stay for a treated SAM case (2.5 months) and an estimated length of an untreated episode of SAM (7.5 months). For more information see idem.

$$R_{out} \cong \frac{1}{3} \times (R_{in} \times \frac{C_{in} + C_{out} + 1}{C_{in} + 1} - R_{in})$$

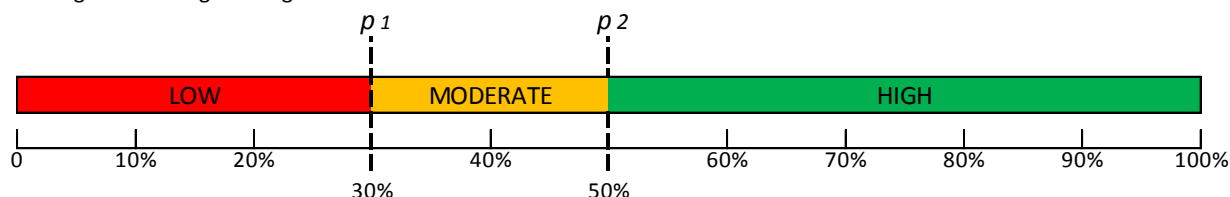
The table below presents results of covered and uncovered SAM cases and recovering cases for each zone. This shows the final total of cases used to classify coverage (in accessible areas of each zone).

Table 5 Table showing results from assessment Covered, uncovered and recovering cases found in each zone and the estimated recovering cases not in the program

Zone	Covered SAM cases (C_{in})	Uncovered SAM cases (C_{out})	Total SAM cases	Recovering cases (R_{in})	Recovering cases not in the program (R_{out})	Total cases ($C_{in} + C_{out} + R_{in} + R_{out}$)
Zone One	15	43	58	4	3	65
Zone Two	6	18	24	0	0	24
Zone Three	13	32	45	4	3	52

Classification thresholds were decided prior to the assessment. It was decided that a three tier classification method was most appropriate, providing classification of high, moderate and low. The thresholds were set at 30% (p_1) and 50% (p_2) (see Figure 4). It was determined that these thresholds would be the most useful in distinguishing between poorly performing districts and the better performing districts. Coverage estimations from previous assessments in Afghanistan were used to forecast what levels of coverage we would expect to find.

Figure 4 Diagram showing coverage classification thresholds



In order to determine the classification of coverage for each zone the decision rule (d_1 and d_2) for each classification is first calculated using the following formula where n = total cases ($C_{in} + C_{out} + R_{in} + R_{out}$), $p_1 = 30$ and $p_2 = 50$.

$$d_1 = \left\lfloor n \times \frac{p_1}{100} \right\rfloor \quad \text{and} \quad d_2 = \left\lfloor n \times \frac{p_2}{100} \right\rfloor$$

Then following algorithm is then used to determine the classification:

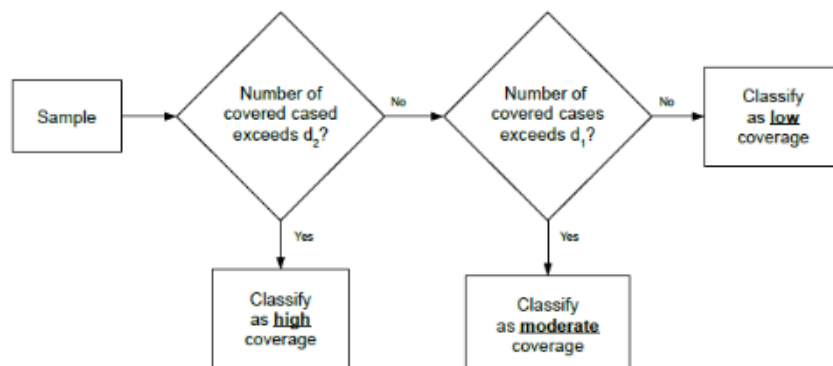


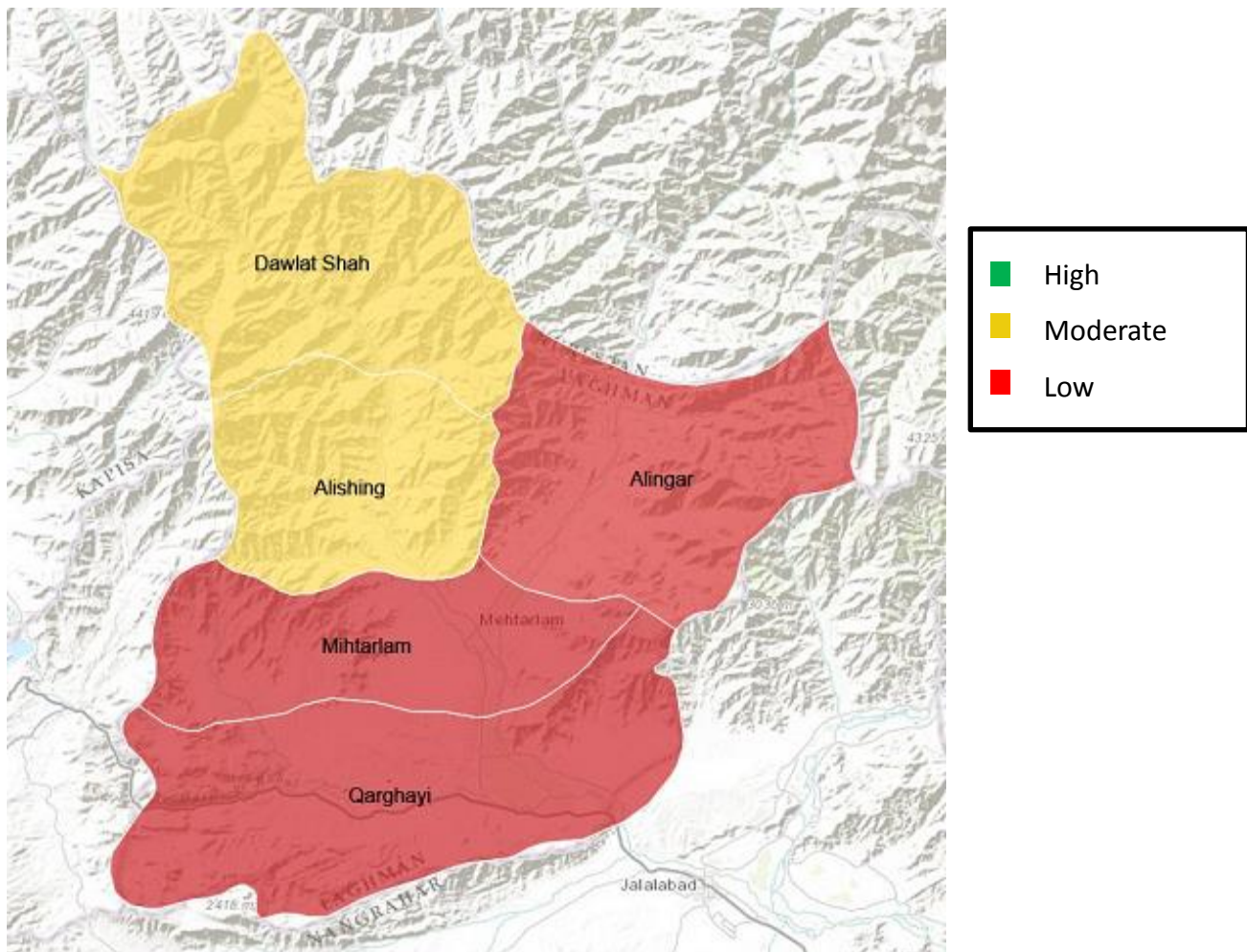
Table 6 illustrates the decision rules for each threshold, the total covered cases ($C_{in} + R_{in}$) and therefore the final classifications.

Table 6 Applying decision rule to determine coverage classifications

	Total cases (n)	d1	d2	Cases covered ($C_{in} + R_{in}$)	Coverage Classification
Zone 1	62	19	32	19	Low
Zone 2	24	7	12	6	Low
Zone 3	49	15	26	17	Moderate

The following map illustrates the classifications.

Figure 5 Map showing coverage classification of districts in Laghman Province



4.2. Provincial Coverage Estimation

A provincial coverage estimation (for the secure villages) can also be made. In order to make this more precise, we use a prevalence estimation based on the survey results:

Table 7 Table showing calculations of prevalence rate based on survey data

	Number of villages sampled	Average village population for sampling frame ²²	% population under 5 ²³	Under 5 population in sampled villages	Actual SAM (MUAC <115mm or oedema) cases found	Proportion of SAM cases by MUAC<115 or oedema
Zone One	15	620	0.2	1,860.00	58	3.118%
Zone Two	4	1,001	0.2	800.80	24	2.997%
Zone Three	14	646	0.2	1,808.80	45	2.488%
SUM	33		0.2	4,469.60	127	2.84%

Therefore based on the actual SAM cases found in the survey villages the % of SAM cases with MUAC <115mm is 2.84% in the surveyed villages.

In order to allocate a relevant weight to each zone based on the estimated SAM population in the surveyed areas, a weight is calculated. This takes into account the villages removed from the sampling frame due to insecurity.

Table 8 Table showing calculations of weights awarded to each zone

	Total number of villages	% Villages removed	No. villages after review	Average village population	Total population (surveyed)	U5 population	% MUAC <115	Estimated Point SAM case load (MUAC) ²⁴ (N)	weight=N/ΣN
Zone One	299	0.11	266	620	164,988	0.2	0.0284	937	0.680384923
Zone Two	113	0.84	18	1,001	18,098	0.2	0.0284	103	0.074633584
Zone Three	209	0.56	92	646	59,406	0.2	0.0284	337	0.244981493
SUM								1,377	1

Having allocated a weight to each zone, using the survey data we can estimate the coverage estimation based on the survey data.

²² Source: Population data. CSO, 2013

²³ Source: SCA management

²⁴ This estimation does not take the incidence rate into account.

Table 9 Table showing allocation of weights to each zone and calculation of coverage estimation

	Total cases (Cin+Rin+Cout+Rout)	Cases covered (Cin + Rin)	(Cin + Rin)/n	weight* Cin+Rin /n
Zone One	62	19	0.306452	0.20850506
Zone Two	24	6	0.25	0.0186584
Zone Three	49	17	0.346939	0.08499358
Total	135	42		31.2%

Finally, a credibility interval must be calculated using the following formula, where coverage = 31.2% and total SAM cases found = 127:

$$\text{Lower and upper credibility intervals} = \text{coverage} \mp 1.96 \times \sqrt{\frac{\text{Coverage} \times (1 - \text{coverage})}{\text{Total SAM cases found}}}$$

So the lower credibility interval = 23.38% and the upper credibility interval = 39.02%.

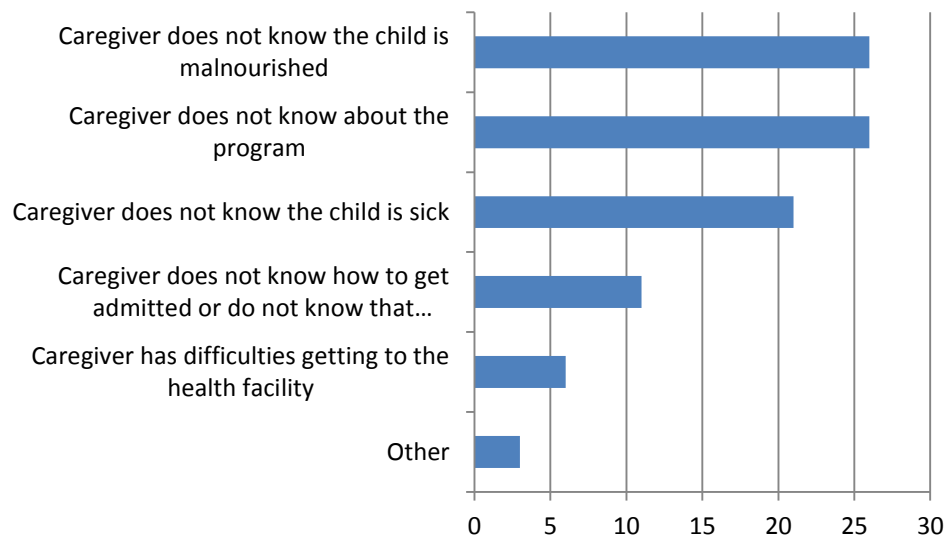
Therefore the coverage estimation for the accessible villages can be estimated at **31.2% (CI 95%: 23.38%-39.02%)**. It must be noted that this does not represent a coverage estimation for the 40% villages within the province that were removed from the sampling frame due to insecurity in these villages.

4.3. Barriers to access

Simple questionnaires, designed to determine reasons why a SAM child was not being treated, were administered to the caregiver of each uncovered case found. From these questionnaires, qualitative information related to how the caregiver accesses health services and the factors preventing them from accessing SAM treatment services is collected. This information is analysed in more detail in the following section. However in each case, primary barrier to access was determined from the responses using very simple decision logic.²⁵ This allows for the identification of the most common barriers in each zone and across the province, and therefore facilitating prioritization of the most important issues. Collectively (including all zones), the frequency of primary barriers can be shown as follows:

²⁵ See Annex G for analysis logic

Figure 6 Pareto chart showing primary barriers to access in Laghman Province (n=93)



This shows the top four barriers to access related to awareness of caregivers in terms of both the condition of their child (not knowing they are malnourished or even sick) and not knowing about the SAM treatment services (whether it exists or how it functions). 'Difficulties getting to the health facility' are those who are unable to travel to the facility (due to cost or distance for example). 'Other' includes those rejected last time they went and those who do not believe the treatment can help their child. The primary barriers are largely similar for the three zones with no significant differences between zones.

5. Analysis of factors affecting access and coverage

The following section presents an analysis of the key factors affecting access and coverage as described by findings from all available sources, including survey questionnaires to caregivers of SAM children, additional qualitative information collected to investigate the effect of security on coverage and supplementary interviews with staff.

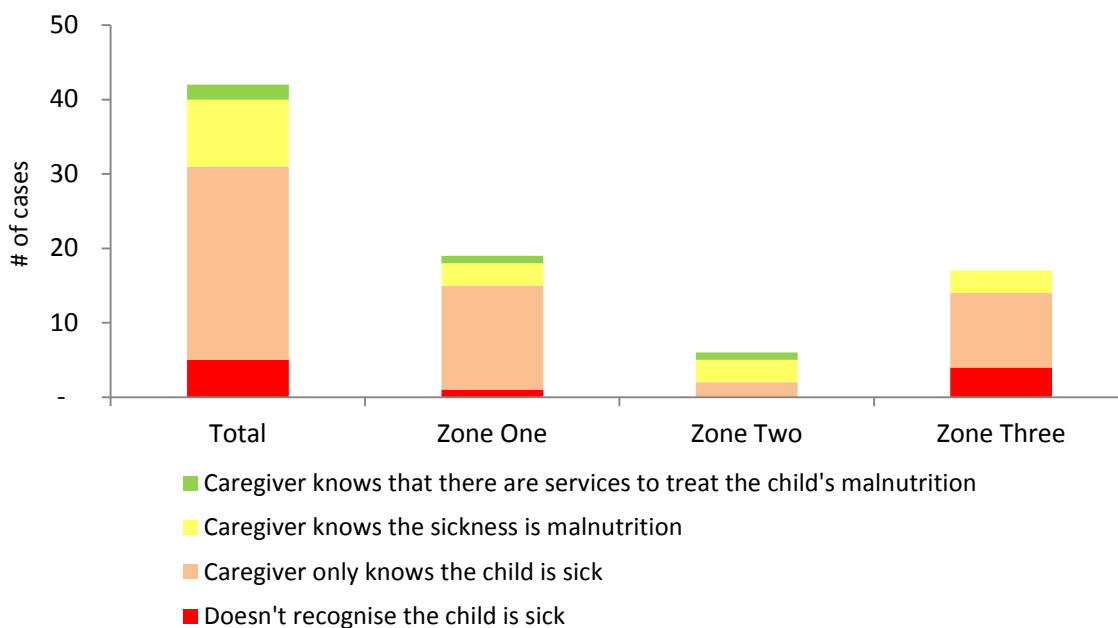
The barriers presented in Figure 6 clearly indicates that the lack of understanding about malnutrition, and the lack of awareness of the services to treat it, are negatively impacting access and coverage of SAM treatment services in Laghman. A more in depth analysis of the questionnaires administered to both covered and uncovered questionnaires allows for a more detailed view on these factors, and also the emergence of some additional elements related to coverage.

5.1. Key findings from covered questionnaires

The objective of the questionnaire administered for covered cases was to explore what factors influenced the child's admission to the treatment program. Particularly in terms of awareness, the covered questionnaires provide a means to ascertain whether caregivers had knowledge about the child's sickness and how to get treatment, and if not, how they received this information to facilitate admission.

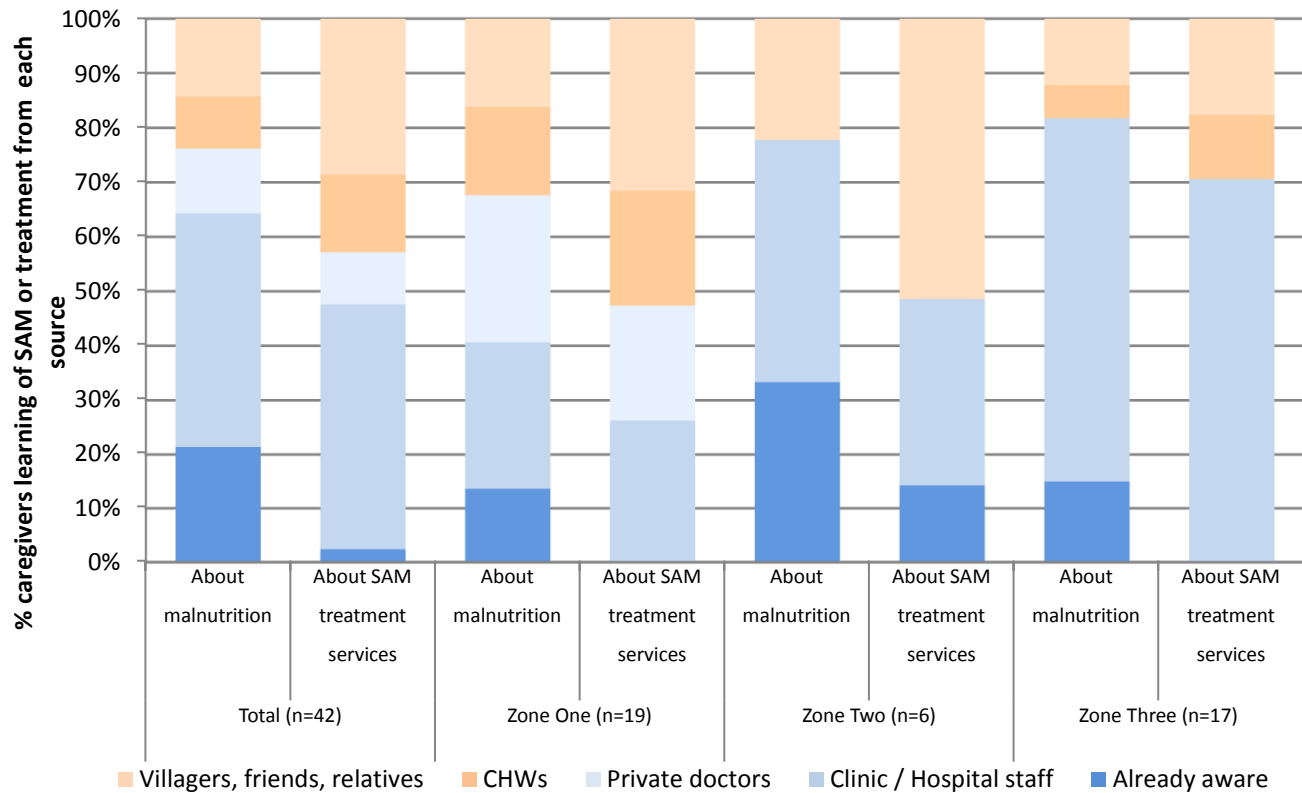
Figure 7 shows that in most cases, **the caregiver identifies that the child is sick**, but rarely knows that the child is malnourished or that there are services to treat malnutrition. This is similar across all three zones.

Figure 7 Bar chart showing prior knowledge of condition of child and treatment services amongst caregivers of covered SAM cases (n=42)



The question then remains of how the child came to be admitted if knowledge about malnutrition and treatment services was so poor. Figure 8 illustrates how covered cases were informed of the condition of their child and treatment services available.

Figure 8 Bar chart showing the source of information about malnutrition and SAM services for covered cases (n= 42)



This information reveals the range of informants susceptible to informing caregivers about malnutrition and treatment services. We can see that not only clinic/hospital staff inform about malnutrition and services but also private doctors. This indicates that in Zone One, which is less remote with urban centres and major roads, there is a **high presence of private doctors** who know about malnutrition and the treatment services.

The **limited information coming from CHWs** is also telling, indicating that CHWs play a small role in sensitising communities and referring SAM children to treatment. From staff interviews, it was found that CHWs have not yet received malnutrition specific training, such as taking MUAC measurements. Therefore, it is unsurprising that CHWs were the source of information for only a small amount of covered cases.

The **importance of villagers, friends and relatives in the sharing of information about malnutrition and about treatment services** available, is also evident. In all cases, this is a more common source of information than CHWs.

Finally, there is significant proportion of cases for which **information was received at the health facility**. We can therefore deduce that these **caregivers are visiting clinics recognising only that their child is sick** and then being diagnosed as malnourished by the staff who then inform the caregiver. It is encouraging that staffs at clinics are recognising that a child is malnourished and then referring for treatment.

5.2. Key findings from non-covered questionnaires

The objective of the non-covered questionnaires is to ascertain key factors preventing caregivers from admitting their child into the treatment program. From the responses the primary barrier for each case, as presented in Figure 6 above, provide an overview of the principal reason for not being treated at the time of the assessment. However, there may be several factors at play in each case that prevent the caregiver from admitting a SAM child for treatment.

In addition to the primary barriers, a summary of responses from uncovered cases presented in Table 10 shows that:

- Around a quarter (23%) of caregivers **do not recognise that their child is sick**
- Around half (49%) of caregivers **do not recognise that their child is malnourished**
- Around two thirds (67%) of caregivers are **not aware there are treatment services available**
- Around 84% of caregivers **have never been informed about nutrition** by a health worker (either at facility or by CHW)
- Around one third (31%) of caregivers reported **difficulties getting to the health facility** (for any ailment) and would likely remain a barrier even when knowledge about malnutrition and treatment services is improved. Reported difficulties include, lack of finances for journey, distance and insecurity.

Table 10 Summary of responses to key questions from caregivers of uncovered cases (n=93)

	Zone One (n=43)	Zone Two (n=18)	Zone Three (n=32)	Total (n=93)
Does not recognize the child is sick	23%	17%	25%	23%
Does not know the child is malnourished	51%	44%	50%	49%
Does not know there is a program for SAM treatment	77%	50%	63%	67%
Have never received information about nutrition	79%	100%	81%	84%
Reported difficulties getting to the health facility	33%	39%	25%	31%

5.2.1. Lack of understanding about malnutrition

Around 75% of caregivers of uncovered cases did understand that their child is sick. Although these respondents could list symptoms related to malnutrition (predominantly loss of appetite, weight loss, fever and diarrhoea), only 49% could recognise the child as malnourished.

16% of caregivers of SAM children found not to be in the program, when asked finally why they had not taken their child to the facility for treatment, said that they did not believe the problem was serious enough, even at this severe stage of the condition. All of these, however, demonstrated gaps in knowledge about treatment (see below) (e.g. that it is available) which may also discourage someone who is in doubt about the severity of the condition of their child from acting.

A significant number (84%) of participants said that they had never received any information about malnutrition and further, just five caregivers reported their child had ever been screened, showing the very low level of screening being practiced in the community or at health centres.

5.2.2. Lack of awareness of SAM treatment services

Two thirds (67%) of caregivers of uncovered SAM cases said that they were not aware there is a service to treat the condition. Since many OPD SAM sites were established within one month of the assessment, and there has been limited community mobilization activity yet (such as screening and sensitisation by CHWs), low awareness is expected. This explanation is supported by the encouraging results (six covered and no

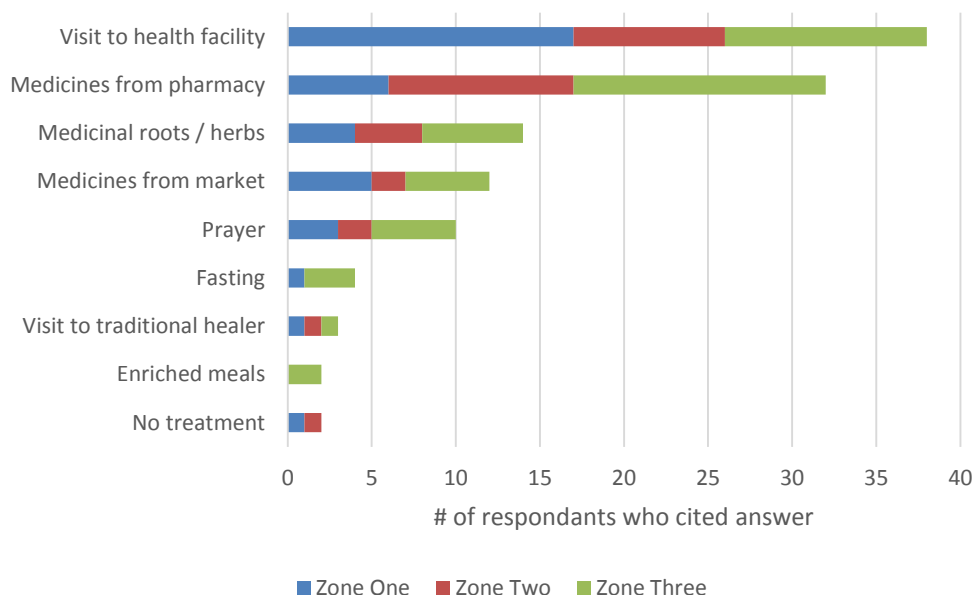
uncovered cases) in the village of Gar Gar in Alishing district, near Gamba Clinic, and at Qala Zaman Khan near the Qargayi Clinic (two covered and two uncovered cases), where these are two of the five long standing OPD SAM sites in Laghman.

The implementation of much of the existing programming has not yet been accompanied by effective community mobilisation activities. Even caregivers of uncovered cases who were aware of the SAM treatment services stated that they did not know how to get their child admitted or that they do not have finances to pay for treatment showing that, since treatment is free, information they have received is incomplete. SCA advised during the assessment that community mobilisation activities are planned as part of the expansion of the nutrition programming and will include all catchment areas, not only those with new SAM OPD sites.

5.2.3. Health seeking behaviour

The questionnaire also asked a question (What treatment have you tried, or what treatment are you going to try to recover the illness?) in order to determine the importance of other types of treatment compared the health facility. Figure 9 indicates that nine different treatment pathways were tried or considered across Laghman province.

Figure 9 Treatments tried or considered by caregivers of SAM cases not admitted to the program (n=93)



In trying to treat a child’s sickness, many (40%) of caregivers had tried or considered visiting the health facility with their child. This low proportion is unsurprising given knowledge of malnutrition and of treatment services was low.

In terms of alternative treatments, the use of medicines from the pharmacy was most common; notably in Zones Two and Three where the presence of private doctors is very low as compared with Zone One (see Figure 8). It could be that pharmacies are more common in more rural areas where private doctors are not available. Zones Two and Three also exhibit higher levels of traditional methods such as using traditional roots and herbs, prayer and visits to traditional healers. These figures suggest that these various actors play an important role in the treatment of children throughout the province and therefore present promising opportunities for increasing the timeliness of case-finding.

5.3. Security-related findings

The implementation of the assessment was clearly restricted due to insecurity. Specifically, there were violent clashes between armed opposition groups (AOG) and government forces at the time of implementation, and increased presence of groups in the community known to be hostile to outsiders (such as the assessment team). In Zone Two (Alingar district), this led to cessation of Stage Two sampling (case-finding). Before this decision was taken, four villages had been visited already resulting in 18 uncovered and 6 covered cases found. Using data from the questionnaires of caregivers of these cases, interviews with staff (at management and clinic level), interviews with visitors to clinics²⁶ and comprehensive field notes, an analysis of the effects insecurity has on access was made.

These investigations also revealed information about what types of insecurity are being experienced. This includes the clashes between armed groups and hostile presence in the community that impacted the assessment, as well as more long term effects of political instability and lack of government control causing a reluctance to pass checkpoints and make journeys because of unpredictable hostility. Results also revealed some information about the impact on community access to treatment services and the impact on the provision of treatment services.

Impact on community access

In the village level security review conducted before sampling, 84% of villages were removed from the list for Zone Two (Alingar district). Furthermore, at the time the district was visited AOG were reportedly attending the CHC in Alingar district. By comparison, in the same security review, 56% of villages in Zone Three were removed and 11% in Zone One. Although the review reflected the risk associated with the assessment team travelling to these villages, this still provides an indication of where AOG presence might influence access to clinics for the community. Therefore the level of insecurity is highest in Zone Two, then in Zone Three and relatively low in Zone One.

In Zone Two, even after removing villages as advised by this review, the security risk in six out of the ten villages sampled was later found to be too high to visit them. This was determined either through informants en route to the village or upon the advice of community leaders having arrived and stated the reason for the visit. One of the sampled villages reached (Muskin Abad) was found to be recently volatile but was surveyed with assistance from village elders. Muskin Abad (in Alingar district) is situated relatively close (within 1 hour) to the district CHC and 10 SAM cases were found there. Of these, 6 cases were uncovered. 4 caregivers stated that they could not get to the health facility because of insecurity – a significantly higher proportion than in other village or area.

Additional brief interviews with visitors to clinics in the more accessible zones (One and Three) allowed us to explore this further²⁷. In Zone Three all participants mentioned security issues, reflecting concerns about the unpredictable volatility in the area, including at home,

“I am worried about getting back to the village”

- a resident of AOG occupied Watan Gato returning from Gamba clinic, Alishing

Or about the risks of making the journey at this time,

“The security situation was not good when we were coming to the clinic in the way we saw the fight among Taliban and Government security staff”

- a visitor to Gamba Clinic, Alishing from Ghazi Abad

²⁶ See Methodology section

²⁷ See methodology and Annex E

By comparison, none of the information gathered regarding Zone One reported any difficulties relating to security.

Impact on provision of services.

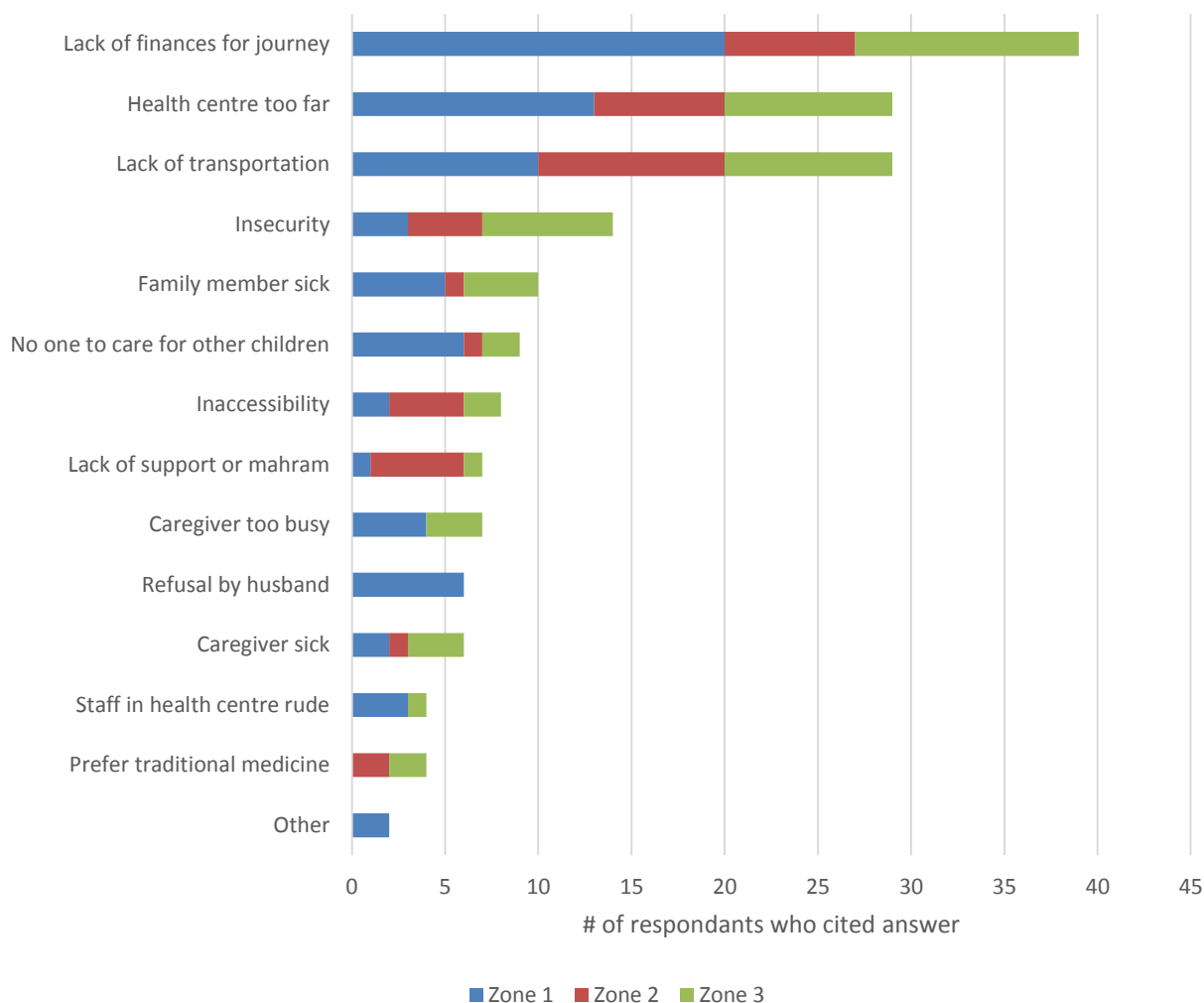
Interviews with staff at clinics and from SCA revealed that insecurity also inhibits a range of activities required for operating the OPD SAM sites, specifically those involving movement from provincial to district level, such as monitoring, training, supervision activities, and supply of RUTF. For monitoring or supervision to be conducted safely in parts of Alingar or Dawlat Shah districts, for example, long-term relationships with community members and groups facilitate safe visits for known staff. It is considered that personal risk is significantly increased when staff visit more remote and volatile areas where they are not known to local leaders. Therefore long-standing relationships with local leaders and networks comprise a crucial mechanism for access and activities.

Clinic staff also expressed concern that RUTF had not been available to them in the past because of insecurity in the area. When there is active fighting, movement between the provincial capital Mitheralam (where stock arrives) to district level OPD sites carries too much risk, and therefore clinics have been known to run out of RUTF. The decision whether to open new OPD SAM sites was also affected by security. The opening of three sites have been affected, due to AOGs (and in one case reportedly local police) warning that they would confiscate any supplementary foods and distribute independently. For one clinic (Qala e Najil in Alishing district), this continues to prevent opening of an OPD SAM service.

5.4. Additional barriers and boosters

Around 30% (29 caregivers) of the uncovered cases state that they were unable to easily take their children to the health centre. The reasons were also then collected. Since all caregivers may experience some challenges in reaching a health centre on some occasion all uncovered cases (n=93) were asked “When you cannot go [to the clinic], what are the main reasons?” Participants were able to give multiple reasons as to why they are not able to go to health facilities, with most participants citing at least 2. The responses are presented in Figure 10.

Figure 10 Factors presenting a challenge to accessing health centres as cited by uncovered cases (n=93)



This shows the extent to which lack of resources is a challenge for people to make the journey to a health facility with **cost and availability of transportation** being the first and third most cited reasons for experiencing difficulty attending the clinic.

Distance (health centre too far) was the second most commonly cited challenge. Where distance was given, the informant was asked the distance to the nearest clinic. The median **time to travel** to the nearest health centre for the informants was 2 hours. 2 hours is the recommended maximum time to travel according to IMAM guidelines and therefore approximately half the respondents are required to travel further than this. Many caregivers also made additional comments that they felt there should be more clinics closer to their villages.

Inaccessibility (for example poor roads, snowfall or seasonal flooding) and insecurity feature as important factors. These factors are ranked more highly in Zones Two and Three. This was supported by field notes from the assessment teams who reported poor road access and reluctance from drivers to visit volatile areas. The number of responses citing insecurity and inaccessibility as a problem is far lesser in Zone One, where there are urban settlements and major roads.

Factors related to the journey itself to the health centre represent the majority of the barriers cited. However **household level restrictions such, lack of support or mahram, carer to busy and refusal by husband** were also found.

The fact that there is **no one available to care for other children** and **family member sick** were the most important of the household level factors. This indicates that lack of support in other caring responsibilities (child and sick family member) presents significant difficulty for caregivers to access services and shows the need for the family to support the mother in order to allow her to take her malnourished child to the clinic and. It is also noteworthy that most of the cases that had no one to care for their children are situated in Zone One. These areas also have more economic opportunities (particularly in the urban centres of Chalmati, Haider Kana, Kutub Khil) and so families migrate for work. Therefore, it is likely that they do not have the wider family and social networks that may normally be able to support with childcare.

Rude staff at the health centre was only cited by four of the 93 uncovered cases however was raised as an issue elsewhere. Three of these responses were from Zone One where an additional eight respondents made comments about lack of care and attention to their children and asking for respect and equality at clinics. These comments were often added to the notes section of the questionnaire rather than in response to this question about access, and so are not reflected in Figure 10. Overall, staff behaviour was found to be an important factor discouraging caregivers from accessing health services which warrants attention.

A **preference for traditional medicine** was not strongly supported by this data set with only four respondents citing it as a reason they may not access treatment. This is likely because the previous question (What treatment have you tried, or what treatment are you going to try to recover the illness?) had already addressed this topic more explicitly. See Figure 9.

6. Conclusions

Overall, the findings show that, although many caregivers can identify that their child is sick, SAM cases are not being referred or admitted to the available treatment services because caregivers are not aware of the condition of the child or that there is free treatment available. This is the main contributing factor to the low to moderate coverage in Laghman, and an estimation of coverage in the province is **31.2% (CI 95% 23.38%-39.02%)**. However, this estimation incorporates results only for areas which were deemed secure enough for the assessment to access. Further analysis on insecure areas shows that coverage in those areas is very likely to be lower than in the more secure areas and therefore likely to reduce the overall coverage of SAM services.

Throughout the assessment various aspects of insecurity have arisen. These have revealed the impact on community access to health services generally inhibiting caregivers from making the journey to the health centre, the implementation and monitoring of SAM treatment activities, such as supervision visits and RUTF supply, and implementation of the SLEAC assessment itself. The latter also implies a limitation on the results of the assessment, particularly in the reading of the classifications and estimation, which should be understood as relating only to 56% of the villages that were not removed from the sampling frame due to insecurity. The villages removed were largely smaller settlements away from urban centres and main roads.

Physical challenges were also found to inhibit access to health facilities in more secure areas too, where the cost and distance of journeys also prevents visits. In Zone One which is more urban and secure, but where coverage is classified as low, childcare for other children and bad behaviour of staff at clinics also discourage caregivers from visiting to seek help.

The involvement of CHWs in nutrition activities is notably absent and, where there is a presence of private doctors, these could also be encouraged to better screen and refer to the OTP SAM treatment program. Further, since social networks (neighbours, friends and relatives) are shown to be important sources of information leading to admission, they could be utilised effectively for screening and referral. Caregivers also show a preference for seeking advice from actors such as community leaders, pharmacists, mullah who would therefore also be well placed to share key messages for better understanding of malnutrition and treatment.

With guidance from these findings, recommendations to improve community mobilisation, programming and monitoring activities are made in the following section.

7. Recommendations

Based on the findings above and further discussions with key stakeholders such as nutrition, management and assessment staff, the following recommendations for improving access and coverage for this newly implemented program have been developed. Clearly, many of the findings should be considered in the context of its novelty, and some recommendations will act only to reinforce activities already planned by SCA.

Recommendation	Rationale	Suggested Activities
Recommendation 1: <u>Screening and Referral</u> Improve and enlarge screening and referral at community level by improving systems to support and monitor CHW activities and engaging additional actors in screening	Limited involvement of CHWs in screening, referral or sensitization, and lack of engagement with community in screening and referral	- Train CHWs in MUAC and oedema screening, referrals and sensitization. - Redesign and distribute referral slips to enable follow up of referred cases to ensure admission and attendance. - Train community health actors including private doctors, pharmacists and mullahs in MUAC screening and referral. - Train mothers to regularly screen their children. Training can take place during visits to health centres and MUAC tapes should be distributed to them.
Recommendation 2: <u>Awareness of malnutrition and treatment</u> Utilize existing community networks and groups to increase awareness of malnutrition and SAM treatment services	Knowledge about malnutrition (signs and symptoms) and SAM treatment services is poor. Information is not effectively communicated by health staff and CHWs, nor effectively shared amongst community members although effective processes exist for the promotion of other diseases and treatment activities²⁸	- Train CHWs to conduct regular nutrition specific (condition and treatment) education sessions with mothers and fathers - Train and engage with key community figures such as maliks, mullahs and school teachers (similar to current sessions on malaria and hygiene practices) and encourage them to share key messages for recognizing the condition, screening and treatment within the community using sensitisation tools and materials. - Collaborate with religious leaders (mullahs) to share messages during prayer meetings.

²⁸ source: interviews with health centre staff

Recommendation 3: <u>Quality of care</u> Improve SAM treatment service delivery and patient care	Bad staff behaviour at clinics, poor delivery of RUTF, and over-worked staff	- Formally review and record workload of staff members, and ensure nutrition staff have sufficient time to fulfil obligations - Train clinic staff in nutrition and IMAM guidelines²⁹ - Ensure minimum information on treatment is shared with caregivers (e.g. dos and don'ts for treatment, duration of treatment, reasons for admission/non-admission/discharge) - Organise clinic so as to allow appropriate time for each visitor and improve experience at clinic for caregivers especially in Qargayi and Metherlam clinics
Recommendation 4: <u>Distance</u> Improve physical access to SAM treatment services in remote areas	Economic, geographic and security barriers prevent cases from being treated at current OPD SAM sites (source: questionnaires and field notes)	- Introduce additional mobile clinics that can visit more remote areas - Provide OPD SAM treatment services at sub-centres that are located in more remote areas - Train CHWs to support caregivers to source finances for transport and make arrangements that allow them to attend the OPD (for example finding someone else to look after other children).
Recommendation 5: <u>Monitoring</u> Conduct a SQUEAC assessment to investigate in-depth the barriers to access and coverage.	Currently limited knowledge of effective and efficient monitoring tools needed particularly to monitor effectiveness of activities currently being introduced (such as IMAM training), more in depth investigation of treatment flow and interface between clinic and community activities is required.	- SQUEAC assessment in Qargayi or Mitherlam, further building capacity of core team for SLEAC assessment - Include full community assessment to better understand community dynamics and key actors in order to develop a more sophisticated community mobilization (communication, screening and follow-up) plan. - PNO should be involved in training for capacity building and full engagement with recommendations

²⁹ This activity is currently underway

Annexes

Annex A - Full list of villages in Laghman Province

The highlighted villages are those that were sampled. NB, the villages are not ordered according to health centre catchment area as they were when the sampling was done.

Province Name	District Name	Village Name (in alphabetical order)	Population	Village removed from sample frame (1= yes, 2= no)	CHC (1= yes, 2= no)	BHC (1= yes, 2= no)	Initially selected for sampling ((1= yes, 2= no))	Removed from final sample (1= yes, 2= no)
Laghman	Alingar	Abelam	417	1	2	2	2	2
Laghman	Alingar	Alingar	900	2	1	2	1	2
Laghman	Alingar	Alinigar Makazi Wolluswaly	187	2	2	2	2	2
Laghman	Alingar	Alo Khail	1234	2	2	1	2	2
Laghman	Alingar	Azad Kala	0	2	2	2	2	2
Laghman	Alingar	Baba Qala	81	1	2	2	2	2
Laghman	Alingar	Bandak Che	133	1	2	2	2	2
Laghman	Alingar	Barikot Shamaly	197	1	2	2	2	2
Laghman	Alingar	Bayanlu	0	2	2	2	2	2
Laghman	Alingar	Baylam	1658	1	2	2	2	2
Laghman	Alingar	Bodlam (1)	285	1	2	2	2	2
Laghman	Alingar	Bodlam (2)	377	1	2	2	2	1
Laghman	Alingar	Cawarkhel Kalay	0	2	2	2	2	2
Laghman	Alingar	Chamtala	1584	1	2	2	2	2
Laghman	Alingar	Char Qala (1)	226	1	2	2	2	2
Laghman	Alingar	Char Qala (2)	455	2	2	2	1	1
Laghman	Alingar	Chopan	336	1	2	2	2	2
Laghman	Alingar	Dahan Mamor	267	1	2	2	2	2
Laghman	Alingar	Dak Kala	79	1	2	2	2	2
Laghman	Alingar	Dak Kalay	181	1	2	2	2	2
Laghman	Alingar	Dak Maly	646	1	2	2	2	2
Laghman	Alingar	Daman	173	1	2	2	2	2
Laghman	Alingar	Daryeng	213	1	2	2	2	2
Laghman	Alingar	Degar Qala Mandal	548	1	2	2	2	2
Laghman	Alingar	Dumbalak	253	1	2	2	2	2
Laghman	Alingar	Eshkamesh	1690	1	2	2	2	2
Laghman	Alingar	Gari	511	1	2	2	2	2
Laghman	Alingar	Garoch	900	2	2	2	2	2
Laghman	Alingar	Ghondi	329	1	2	2	2	2
Laghman	Alingar	Gorjen	474	1	2	2	2	2
Laghman	Alingar	Gul Makach	331	1	2	2	2	2

Laghman	Alingar	Gunbad Bela	950	1	2	2	2	2
Laghman	Alingar	Hal Hajeg	769	1	2	2	2	2
Laghman	Alingar	Haram Khail	1463	1	2	2	2	2
Laghman	Alingar	Hooghulam	854	1	2	2	2	2
Laghman	Alingar	Jalam	773	1	2	2	2	2
Laghman	Alingar	Kach Gard	600	1	2	2	2	1
Laghman	Alingar	Kachor	1061	2	2	2	1	1
Laghman	Alingar	Kaho	1215	1	2	2	2	2
Laghman	Alingar	Kalaram Payen Kalay	748	1	2	2	2	2
Laghman	Alingar	Kalatak	1080	2	2	2	1	2
Laghman	Alingar	Kalay	1068	1	2	2	2	2
Laghman	Alingar	Kampa	756	1	2	2	2	2
Laghman	Alingar	Kasar Dadga	1917	1	2	2	2	2
Laghman	Alingar	Khalila	148	1	2	2	2	2
Laghman	Alingar	Khorak	917	1	2	2	2	2
Laghman	Alingar	Khowja Kot	390	1	2	2	2	2
Laghman	Alingar	Kokar Mango	113	2	2	2	2	2
Laghman	Alingar	Kokhi	760	1	2	2	2	2
Laghman	Alingar	Kolag	936	2	2	2	2	2
Laghman	Alingar	Kota Khail	1536	2	2	2	2	2
Laghman	Alingar	Kotali	981	1	2	2	2	2
Laghman	Alingar	Koz Kahomar Khabi	678	1	2	2	2	2
Laghman	Alingar	Kunda	1643	2	2	2	2	2
Laghman	Alingar	Kunda Gal	1508	1	2	2	2	2
Laghman	Alingar	Kunda Gal Dahan Mamor	254	1	2	2	2	2
Laghman	Alingar	Kunda Lam	260	1	2	2	2	2
Laghman	Alingar	Kundalam	616	1	2	2	2	2
Laghman	Alingar	Lamteak	444	2	2	2	2	2
Laghman	Alingar	Lokar	919	2	2	1	1	1
Laghman	Alingar	Mach Kala	619	2	2	2	2	2
Laghman	Alingar	Mandol	961	1	2	2	2	2
Laghman	Alingar	Mandozai	470	1	2	2	2	2
Laghman	Alingar	Mango	1929	2	2	2	1	1
Laghman	Alingar	Manz Banda	110	1	2	2	2	2
Laghman	Alingar	Mazri	441	1	2	2	2	2
Laghman	Alingar	Meya Khail Hulya	1046	1	2	2	2	2
Laghman	Alingar	Meya Khail Sufla	829	1	2	2	2	2
Laghman	Alingar	Musken Abad	728	2	2	2	1	2
Laghman	Alingar	Naistak	71	1	2	2	2	2
Laghman	Alingar	Nem Nani	1588	2	2	2	1	1
Laghman	Alingar	Nooralam	1219	1	2	1	2	2
Laghman	Alingar	Nuralam	0	2	2	2	2	2
Laghman	Alingar	Paigal	164	1	2	2	2	2
Laghman	Alingar	Palwasa	478	1	2	2	2	2

Laghman	Alingar	Panj Kora	717	1	2	2	2	2
Laghman	Alingar	Parj	859	1	2	2	2	2
Laghman	Alingar	Parwa'i	0	2	2	2	2	2
Laghman	Alingar	Parwaye Hulya	2136	1	2	2	2	2
Laghman	Alingar	Parwaye Sufla	1754	1	2	2	2	2
Laghman	Alingar	Paryana	3018	1	2	2	2	2
Laghman	Alingar	Pash Khail	1616	1	2	2	2	2
Laghman	Alingar	Qala	1009	1	2	2	2	2
Laghman	Alingar	Qaltak	1060	1	2	2	2	1
Laghman	Alingar	Qasaba	1702	1	2	2	2	2
Laghman	Alingar	Rajahe	1381	1	2	2	2	2
Laghman	Alingar	Road Kalay	1020	1	2	2	2	2
Laghman	Alingar	Sahor	286	1	2	2	2	2
Laghman	Alingar	Sakhar	273	1	2	2	2	2
Laghman	Alingar	Salangar	623	1	2	2	2	2
Laghman	Alingar	Salawa	335	1	2	2	2	2
Laghman	Alingar	Salo Hulya	2032	1	2	2	2	2
Laghman	Alingar	Salo Sufla	1735	2	2	2	1	1
Laghman	Alingar	Sami	723	1	2	2	2	2
Laghman	Alingar	Sand Rowa	429	2	2	2	2	2
Laghman	Alingar	Sangarak	553	1	2	2	2	2
Laghman	Alingar	Saram Khail	781	1	2	2	2	2
Laghman	Alingar	See Tan	457	1	2	2	2	2
Laghman	Alingar	Shafalam Hazat Khail	537	1	2	2	2	2
Laghman	Alingar	Shah Abad	362	1	2	2	2	2
Laghman	Alingar	Shahi	517	1	2	2	2	2
Laghman	Alingar	Shaikhan (1)	640	1	2	2	2	2
Laghman	Alingar	Shaikhan (2)	1861	1	1	2	2	2
Laghman	Alingar	Sheki	431	1	2	2	2	2
Laghman	Alingar	Shengari	1097	2	2	2	2	2
Laghman	Alingar	Shor Aba	705	1	2	2	2	2
Laghman	Alingar	Shorot	744	2	2	2	2	2
Laghman	Alingar	Showar Khail	561	2	2	2	2	2
Laghman	Alingar	Sorak	349	1	2	2	2	2
Laghman	Alingar	Tag	1004	1	2	2	2	2
Laghman	Alingar	Tak Lam	685	1	2	2	2	2
Laghman	Alingar	Tangor Shor Abad	1392	2	2	2	1	2
Laghman	Alingar	Tapak Walech	752	1	2	2	2	2
Laghman	Alingar	Tapak Walech	752	1	2	2	2	2
Laghman	Alingar	Touri Qala	330	1	2	2	2	2
Laghman	Alingar	Warnata	1319	2	2	2	2	2
Laghman	Alingar	Wat Jabar Khail	952	1	2	2	2	2
Laghman	Alishang	Achak Zai	590	2	2	2	1	2
Laghman	Alishang	Ahangaroto	283	2	2	2	2	2

Laghman	Alishang	Ala Yughondi	201	1	2	2	2	2
Laghman	Alishang	Alishang	31872	2	2	2	2	2
Laghman	Alishang	Andar Wal	258	2	2	2	2	2
Laghman	Alishang	Andara	600	2	2	2	2	2
Laghman	Alishang	Andoli	79	1	2	2	2	2
Laghman	Alishang	Arena	632	2	2	2	1	2
Laghman	Alishang	Arwara	243	1	2	2	2	2
Laghman	Alishang	Awshotor	227	1	2	2	2	2
Laghman	Alishang	Baber Khandow	786	1	2	2	2	2
Laghman	Alishang	Bam Hussain Hulya	626	1	2	2	2	2
Laghman	Alishang	Bam Hussain Sufla	305	1	2	2	2	2
Laghman	Alishang	Banda	357	2	2	2	1	2
Laghman	Alishang	Bandow	22	1	2	2	2	2
Laghman	Alishang	Bar Kalay	613	1	2	2	2	2
Laghman	Alishang	Barakzai	723	1	2	2	2	2
Laghman	Alishang	Baran Gul	78	2	2	2	2	2
Laghman	Alishang	Barandak	199	1	2	2	2	2
Laghman	Alishang	Baz Khanda	193	1	2	2	2	2
Laghman	Alishang	Boteyan	471	1	2	2	2	2
Laghman	Alishang	Burawon	345	1	2	2	2	2
Laghman	Alishang	Chanar Now	180	1	2	2	2	2
Laghman	Alishang	Chera Khail	456	1	2	2	2	2
Laghman	Alishang	Dageyan	581	1	2	2	2	2
Laghman	Alishang	Dandar	106	2	2	2	2	2
Laghman	Alishang	Darwesh Abad	433	2	2	2	2	2
Laghman	Alishang	Darzi	448	1	2	2	2	2
Laghman	Alishang	Dawlat Khandow	315	1	2	2	2	2
Laghman	Alishang	Dera Meya Sahib	909	2	2	2	2	2
Laghman	Alishang	Do Burja	212	2	2	2	2	2
Laghman	Alishang	Domya	56	1	2	2	2	2
Laghman	Alishang	Doseya Say Sara	227	2	2	2	2	2
Laghman	Alishang	Dum Lam	562	2	2	2	1	2
Laghman	Alishang	Dum Leach	350	2	2	2	2	2
Laghman	Alishang	Gamba	243	2	1	2	2	2
Laghman	Alishang	Gar Gar	1340	2	2	2	1	2
Laghman	Alishang	Gardah	512	1	2	2	2	2
Laghman	Alishang	Gasgen	74	1	2	2	2	2
Laghman	Alishang	Ghazi Abad	1288	2	2	2	2	2
Laghman	Alishang	Gow Manda	596	2	2	2	2	2
Laghman	Alishang	Gul Ahmad Markaz Wolluswaly	534	2	2	2	2	2
Laghman	Alishang	Gul Ota	935	2	2	2	2	2
Laghman	Alishang	Gula Khail	128	1	2	2	2	2
Laghman	Alishang	Gumrahi	296	2	2	2	2	2
Laghman	Alishang	Haji Abad	330	2	2	2	2	2

Laghman	Alishang	Hassan Khail	346	1	2	2	2	2
Laghman	Alishang	Hussain Zai	645	2	2	2	2	2
Laghman	Alishang	Islam Abad	1888	2	2	1	2	2
Laghman	Alishang	Jamshed Abad	836	2	2	2	1	1
Laghman	Alishang	Kachra	111	2	2	2	2	2
Laghman	Alishang	Kakar Khail	533	1	2	2	2	2
Laghman	Alishang	Kam Shamakat	0	2	2	2	2	2
Laghman	Alishang	Kandon	370	1	2	2	2	2
Laghman	Alishang	Karandaly	485	2	2	2	2	2
Laghman	Alishang	Kasegar	539	2	2	2	2	2
Laghman	Alishang	Kasi Gar	472	2	2	2	1	2
Laghman	Alishang	Katoly	1171	2	2	2	2	2
Laghman	Alishang	Kawni	308	2	2	2	2	2
Laghman	Alishang	Khandly	1216	1	2	2	2	2
Laghman	Alishang	Khando	205	1	2	2	2	2
Laghman	Alishang	Khord Nagal	66	1	2	2	2	2
Laghman	Alishang	Khowol	390	1	2	2	2	2
Laghman	Alishang	Kohnna Ghazi Abad	248	2	2	2	2	2
Laghman	Alishang	Kotta	543	1	2	2	2	2
Laghman	Alishang	Kotwal Khando	715	1	2	2	2	2
Laghman	Alishang	Koz Kalay	481	1	2	2	2	2
Laghman	Alishang	Kunchan	487	1	2	2	2	2
Laghman	Alishang	Kundi	429	2	2	2	2	2
Laghman	Alishang	Lashte Bel	485	1	2	2	2	2
Laghman	Alishang	Lowar Khandow	190	1	2	2	2	2
Laghman	Alishang	Lowi Kalay	282	1	2	2	2	2
Laghman	Alishang	Mabain Dahi	95	2	2	2	2	2
Laghman	Alishang	Manjan	577	2	2	2	1	2
Laghman	Alishang	Manjela	963	2	2	2	2	2
Laghman	Alishang	Masmod Bala	1454	2	2	2	2	2
Laghman	Alishang	Masmod Payen	1131	2	2	2	2	2
Laghman	Alishang	Melam	252	1	2	2	2	2
Laghman	Alishang	Memol	38	1	2	2	2	2
Laghman	Alishang	Mohammad Kalam	122	1	2	2	2	2
Laghman	Alishang	Moka	509	1	2	2	2	2
Laghman	Alishang	Morcha Khail	431	2	2	2	2	2
Laghman	Alishang	Mustafa	192	2	2	2	2	2
Laghman	Alishang	Najel	502	2	2	2	2	2
Laghman	Alishang	Najlam	95	1	2	2	2	2
Laghman	Alishang	Nangi Show	300	1	2	2	2	2
Laghman	Alishang	Nolo	297	2	2	2	1	2
Laghman	Alishang	Nooram Hulya	371	2	2	2	1	2
Laghman	Alishang	Nooram Sufla	446	2	2	2	1	2
Laghman	Alishang	Noori Hulya	471	1	2	2	2	2

Laghman	Alishang	Noori Sufla	559	1	2	2	2	2
Laghman	Alishang	Palak Wato	98	1	2	2	2	2
Laghman	Alishang	Palayen	249	1	2	2	2	2
Laghman	Alishang	Panda	868	1	2	2	2	2
Laghman	Alishang	Pandaw	0	2	2	2	2	2
Laghman	Alishang	Paradoly	495	1	2	2	2	2
Laghman	Alishang	Pat Gana	385	2	2	2	2	2
Laghman	Alishang	Payenda Khail	426	1	2	2	2	2
Laghman	Alishang	Peya Khail	640	2	2	2	1	2
Laghman	Alishang	Poyen	701	2	2	2	2	2
Laghman	Alishang	Qachar Khandow	92	1	2	2	2	2
Laghman	Alishang	Qala Bay	379	2	2	2	2	2
Laghman	Alishang	Qala Halim	92	1	2	2	2	2
Laghman	Alishang	Qala Hussain	385	2	2	2	2	2
Laghman	Alishang	Qala Najel	1537	2	2	1	2	2
Laghman	Alishang	Qalage	463	2	2	2	2	2
Laghman	Alishang	Qalatak	910	2	2	2	2	2
Laghman	Alishang	Qandala	378	1	2	2	2	2
Laghman	Alishang	Rahen	1023	1	2	2	2	2
Laghman	Alishang	Rahmat Khail	141	1	2	2	2	1
Laghman	Alishang	Rajakott	241	1	2	2	2	1
Laghman	Alishang	Saber Abad	882	2	2	2	2	2
Laghman	Alishang	Salo	604	2	2	2	2	2
Laghman	Alishang	Samar Lam	267	1	2	2	2	2
Laghman	Alishang	Sar Bala Khana	242	1	2	2	2	2
Laghman	Alishang	Sarwar Khail	1522	1	2	2	2	2
Laghman	Alishang	Shaikh Ator	427	2	2	2	1	2
Laghman	Alishang	Shakar Man	1025	1	2	2	2	2
Laghman	Alishang	Shalako	288	1	2	2	2	2
Laghman	Alishang	Shama	645	2	2	2	1	2
Laghman	Alishang	Shamkat	878	1	2	2	2	2
Laghman	Alishang	Shamram	1571	2	2	2	2	2
Laghman	Alishang	Shamsha Khail	363	1	2	2	2	2
Laghman	Alishang	Sharbat Khail	630	1	2	2	2	2
Laghman	Alishang	Shegi	348	2	2	2	2	2
Laghman	Alishang	Shella Gul	414	1	2	2	2	2
Laghman	Alishang	Sobon	520	1	2	2	2	2
Laghman	Alishang	Sor Kalay	148	1	2	2	2	2
Laghman	Alishang	Swch	503	1	2	2	2	2
Laghman	Alishang	Taely	1222	1	2	2	2	2
Laghman	Alishang	Tamen	339	2	2	2	2	2
Laghman	Alishang	Tangi (1)	208	2	2	2	2	2
Laghman	Alishang	Tangi (2)	170	1	2	2	2	2
Laghman	Alishang	Tapa Kal	1032	1	2	2	2	2

Laghman	Alishang	Tarang	345	2	2	2	1	2
Laghman	Alishang	Tarawo	444	1	2	2	2	2
Laghman	Alishang	Toot Now (1)	37	1	2	2	2	2
Laghman	Alishang	Toot Now (2)	182	1	2	2	2	2
Laghman	Alishang	Wahd Toon	417	1	2	2	2	2
Laghman	Alishang	Waryan	394	2	2	2	2	2
Laghman	Alishang	Watan Gato	708	2	2	2	1	2
Laghman	Alishang	Wengal	127	1	2	2	2	2
Laghman	Alishang	Yakh Now	76	1	2	2	2	2
Laghman	Dawlatshah	Ab Too	169	2	2	2	2	2
Laghman	Dawlatshah	Angosh	292	1	2	2	2	2
Laghman	Dawlatshah	Ari Wa	263	1	2	2	2	2
Laghman	Dawlatshah	Atak Chakla	405	1	2	2	2	2
Laghman	Dawlatshah	Atorow	736	2	2	2	2	2
Laghman	Dawlatshah	Awalak	259	2	2	2	1	2
Laghman	Dawlatshah	Awdor Mak	1875	2	2	2	2	2
Laghman	Dawlatshah	Bala Dahi	306	1	2	2	2	2
Laghman	Dawlatshah	Bangari	614	1	2	2	2	2
Laghman	Dawlatshah	Baqoul Paya	199	1	2	2	2	2
Laghman	Dawlatshah	Bar Khando	352	1	2	2	2	1
Laghman	Dawlatshah	Bomby	687	2	2	2	2	2
Laghman	Dawlatshah	Chakar Kani Bala	718	1	2	2	2	2
Laghman	Dawlatshah	Chakar Katepayen	494	2	2	2	2	2
Laghman	Dawlatshah	Chandal	923	2	2	2	1	2
Laghman	Dawlatshah	Chashedar	1155	2	2	2	2	2
Laghman	Dawlatshah	Chasht Dara-i- Sufla	0	2	2	2	2	2
Laghman	Dawlatshah	Choshak Zar	410	1	2	2	2	2
Laghman	Dawlatshah	Dahan Geran	468	1	2	2	2	1
Laghman	Dawlatshah	Dahi Kalan	740	1	2	2	2	2
Laghman	Dawlatshah	Dala Dahi	1028	2	2	2	2	2
Laghman	Dawlatshah	Darangi	286	2	2	2	1	2
Laghman	Dawlatshah	Darata	501	2	2	2	2	2
Laghman	Dawlatshah	Darona Qala	388	1	2	2	2	2
Laghman	Dawlatshah	Darrah-e Nawia	0	2	2	2	2	2
Laghman	Dawlatshah	Daulatshahi	4974	2	2	2	2	2
Laghman	Dawlatshah	Dawlat Shah Markaz Wolluswaly	684	2	1	2	2	1
Laghman	Dawlatshah	Do Koh Chakla	203	1	2	2	2	2
Laghman	Dawlatshah	Domer	1087	2	2	2	2	2
Laghman	Dawlatshah	Gadyala	587	2	2	2	2	2
Laghman	Dawlatshah	Gaman Dok	995	2	2	2	2	2
Laghman	Dawlatshah	Ganda Gar	439	2	2	2	2	2
Laghman	Dawlatshah	Gosh Dor	380	1	2	2	2	2
Laghman	Dawlatshah	Jorkani Payan	0	1	2	2	2	2
Laghman	Dawlatshah	Kail	958	2	2	2	2	2

Laghman	Dawlatshah	Kalder	183	1	2	2	2	2
Laghman	Dawlatshah	Kark	303	2	2	2	2	2
Laghman	Dawlatshah	Kashlam	1075	2	2	2	2	2
Laghman	Dawlatshah	Khad Nekah	449	1	2	2	2	2
Laghman	Dawlatshah	Khanda Low	149	1	2	2	2	2
Laghman	Dawlatshah	Khando	687	1	2	2	2	2
Laghman	Dawlatshah	Khojal Khando	1037	2	2	2	2	2
Laghman	Dawlatshah	Kolal Kott	501	1	2	2	2	2
Laghman	Dawlatshah	Koshak	439	2	2	2	2	2
Laghman	Dawlatshah	Kulalan	316	1	2	2	2	2
Laghman	Dawlatshah	Lambri	697	2	2	2	2	2
Laghman	Dawlatshah	Maho	750	2	2	2	2	2
Laghman	Dawlatshah	Makel	347	1	2	2	2	2
Laghman	Dawlatshah	Malangani	736	2	2	2	2	2
Laghman	Dawlatshah	Manan Gor	777	2	2	2	2	2
Laghman	Dawlatshah	Mandor	488	2	2	2	2	2
Laghman	Dawlatshah	Mangal Pour	238	2	2	2	2	2
Laghman	Dawlatshah	Mara	310	2	2	2	2	2
Laghman	Dawlatshah	Mash Kundi	813	2	2	2	2	2
Laghman	Dawlatshah	Masmote	1081	2	2	2	2	2
Laghman	Dawlatshah	Menjaghan	987	2	2	2	2	2
Laghman	Dawlatshah	Meyou	391	2	2	2	2	2
Laghman	Dawlatshah	Nala	407	1	2	2	2	2
Laghman	Dawlatshah	Neil Khan	1870	2	2	2	2	2
Laghman	Dawlatshah	Noora	229	2	2	2	2	2
Laghman	Dawlatshah	Now Safa	136	1	2	2	2	2
Laghman	Dawlatshah	Obra	182	2	2	2	2	2
Laghman	Dawlatshah	Paitak	1027	2	2	2	2	2
Laghman	Dawlatshah	Rendi	286	1	2	2	2	2
Laghman	Dawlatshah	Sang Paitak	401	1	2	2	2	2
Laghman	Dawlatshah	Sar Mangalpour	375	1	2	2	2	2
Laghman	Dawlatshah	Sare Qol	0	2	2	2	2	2
Laghman	Dawlatshah	Sayak	488	1	2	2	2	2
Laghman	Dawlatshah	Shad Mir	747	1	2	2	2	2
Laghman	Dawlatshah	Shahi	259	2	2	2	2	2
Laghman	Dawlatshah	Shair Bakami	1081	1	2	2	2	2
Laghman	Dawlatshah	Suliman Kacha	392	1	2	2	2	2
Laghman	Dawlatshah	Tambala	423	1	2	2	2	2
Laghman	Dawlatshah	Wais	681	2	2	2	2	2
Laghman	Dawlatshah	Zhorandi	548	1	2	2	2	2
Laghman	Mehtarlam	Aba Khail	1152	2	2	2	2	2
Laghman	Mehtarlam	Adokhel	0	2	2	2	2	2
Laghman	Mehtarlam	Akhond Pate	113	1	2	2	2	2
Laghman	Mehtarlam	Akhund Zadagan	63	2	2	2	2	2

Laghman	Mehtarlam	Ali Khail	1023	2	2	2	2	2
Laghman	Mehtarlam	Alishing	3738	2	2	1	2	2
Laghman	Mehtarlam	Alkozai	463	2	2	2	2	2
Laghman	Mehtarlam	Arsallah Kalay	840	2	2	2	2	2
Laghman	Mehtarlam	Bad Peash Bar Kala	580	2	1	2	2	2
Laghman	Mehtarlam	Bad Peash Koza Kala	165	2	2	2	2	2
Laghman	Mehtarlam	Badddin Khail	623	2	2	2	2	2
Laghman	Mehtarlam	Badi Abad	1450	2	2	2	2	2
Laghman	Mehtarlam	Bagh Mirza	1370	2	2	2	2	2
Laghman	Mehtarlam	Baghaly	274	2	2	2	2	2
Laghman	Mehtarlam	Baila	86	2	2	2	2	2
Laghman	Mehtarlam	Basram	429	2	2	2	2	2
Laghman	Mehtarlam	Baz Khail	283	2	2	2	2	2
Laghman	Mehtarlam	Chalmate	6295	2	2	2	1	2
Laghman	Mehtarlam	Chanchar	692	2	2	2	2	2
Laghman	Mehtarlam	Chand Lam	663	2	2	2	2	2
Laghman	Mehtarlam	Chapar	403	2	2	2	2	2
Laghman	Mehtarlam	Chehelmati	0	2	2	2	2	2
Laghman	Mehtarlam	Dado Kalay	606	2	2	2	2	2
Laghman	Mehtarlam	Dahi Baghalak	470	2	2	2	2	2
Laghman	Mehtarlam	Dahi Malakh	779	2	2	2	2	2
Laghman	Mehtarlam	Dahi Zeyarat	687	2	2	2	2	2
Laghman	Mehtarlam	Daman Chand Lam	965	2	2	2	2	1
Laghman	Mehtarlam	Danda	896	2	2	2	1	2
Laghman	Mehtarlam	Dewa	536	2	2	1	2	2
Laghman	Mehtarlam	Dol Abad	339	2	2	2	2	2
Laghman	Mehtarlam	Dope	389	2	2	2	2	2
Laghman	Mehtarlam	Dope	591	2	2	2	2	2
Laghman	Mehtarlam	Durgi Panj Pai	104	1	2	2	2	2
Laghman	Mehtarlam	Gajawan	785	2	2	2	2	2
Laghman	Mehtarlam	Galoch	0	2	2	2	2	2
Laghman	Mehtarlam	Gamen	2911	2	2	2	2	2
Laghman	Mehtarlam	Ghorizhona	136	2	2	2	2	2
Laghman	Mehtarlam	Ghund Kohi	1020	2	2	2	2	2
Laghman	Mehtarlam	Ghundi	1187	2	2	2	2	2
Laghman	Mehtarlam	Gom Guluch	59	2	2	2	2	2
Laghman	Mehtarlam	Gul Baila	1232	2	2	2	2	2
Laghman	Mehtarlam	Gulkari	1769	2	2	2	2	2
Laghman	Mehtarlam	Gum Kor	254	2	2	2	2	2
Laghman	Mehtarlam	Gumayn	0	2	2	2	2	2
Laghman	Mehtarlam	Haidar Khani Hulya	711	2	2	2	2	2
Laghman	Mehtarlam	Haidar Khani Payen	1639	2	2	2	1	2
Laghman	Mehtarlam	Hakim Abad	1156	2	2	2	2	2
Laghman	Mehtarlam	Hand Road	207	1	2	2	2	2

Laghman	Mehtarlam	Harmal	1038	2	2	2	2	2
Laghman	Mehtarlam	Hussain Khail	142	2	2	2	2	2
Laghman	Mehtarlam	Kachi	321	2	2	2	2	2
Laghman	Mehtarlam	Kachi Qala Agha	507	2	2	2	2	2
Laghman	Mehtarlam	Kachor	841	2	2	2	2	2
Laghman	Mehtarlam	Kakar Mena	0	2	2	2	2	2
Laghman	Mehtarlam	Kala Kot	573	2	2	2	2	2
Laghman	Mehtarlam	Kandar	66	1	2	2	2	2
Laghman	Mehtarlam	Karaly Kas	43	2	2	2	2	2
Laghman	Mehtarlam	Karam Kol	46	2	2	2	2	2
Laghman	Mehtarlam	Karneach	610	2	2	2	2	2
Laghman	Mehtarlam	Karo	256	2	2	2	2	2
Laghman	Mehtarlam	Katal	2089	1	2	1	2	2
Laghman	Mehtarlam	Khair Abad	102	2	2	2	2	2
Laghman	Mehtarlam	Khak Zar	176	2	2	2	2	2
Laghman	Mehtarlam	Khala Khail	467	2	2	2	2	2
Laghman	Mehtarlam	Kharote Noori Khail	718	2	2	2	2	2
Laghman	Mehtarlam	Khusha Dand	85	1	2	2	2	2
Laghman	Mehtarlam	Kohestani	359	1	2	2	2	2
Laghman	Mehtarlam	Kota Tour	1514	2	2	2	2	2
Laghman	Mehtarlam	Koz Kalay Banda	802	2	2	2	2	2
Laghman	Mehtarlam	Kumaki	32	2	2	2	2	2
Laghman	Mehtarlam	Kunj	445	1	2	2	2	2
Laghman	Mehtarlam	Kutab Zai	459	2	2	2	1	2
Laghman	Mehtarlam	Lakri	186	2	2	2	2	2
Laghman	Mehtarlam	Landa Khail	350	2	2	2	2	2
Laghman	Mehtarlam	Latef Abad	12	2	2	2	2	2
Laghman	Mehtarlam	Lokhi	62	1	2	2	2	2
Laghman	Mehtarlam	Maidani	2053	2	2	2	2	2
Laghman	Mehtarlam	Manduzai	252	2	2	2	2	2
Laghman	Mehtarlam	Manjuma	308	2	2	2	1	2
Laghman	Mehtarlam	Mano	393	2	2	2	2	2
Laghman	Mehtarlam	Mano Kala	82	1	2	2	2	2
Laghman	Mehtarlam	Markaz Guluch	624	2	2	2	2	2
Laghman	Mehtarlam	Maryam	1144	2	2	2	2	2
Laghman	Mehtarlam	Maryam Kora	1023	2	2	2	2	2
Laghman	Mehtarlam	Maskura	0	2	2	2	2	2
Laghman	Mehtarlam	Mehtarlam	4200	2	1	2	2	2
Laghman	Mehtarlam	Meya Kalay	256	2	2	2	2	2
Laghman	Mehtarlam	Mira Khord	419	2	2	2	2	2
Laghman	Mehtarlam	Mohammad Khail	894	1	2	2	2	2
Laghman	Mehtarlam	Mohammad Pur	527	2	2	2	2	2
Laghman	Mehtarlam	Muskin Abad	452	2	2	2	1	2
Laghman	Mehtarlam	Mussa Khail	520	2	2	2	2	2

Laghman	Mehtarlam	Nallaye	1109	2	2	2	2	2
Laghman	Mehtarlam	Nangazi	1176	2	2	2	1	2
Laghman	Mehtarlam	Nanikzi	0	2	2	2	2	2
Laghman	Mehtarlam	Nelowat	453	2	2	2	2	2
Laghman	Mehtarlam	Noora	1401	1	2	2	2	2
Laghman	Mehtarlam	Now Abad	819	2	2	2	2	2
Laghman	Mehtarlam	Now Abad Chand Lam	232	2	2	2	2	2
Laghman	Mehtarlam	Now Lam	416	2	2	2	2	2
Laghman	Mehtarlam	Pacha Khail	201	2	2	2	2	2
Laghman	Mehtarlam	Pad Peash Mahmod	19	2	2	2	2	2
Laghman	Mehtarlam	Panj Padar	965	2	2	2	2	2
Laghman	Mehtarlam	Panj Pai Mir Ali Khail	235	1	2	2	2	2
Laghman	Mehtarlam	Pasha Ye	1103	2	2	2	2	2
Laghman	Mehtarlam	Purta Hand Road	682	1	2	2	2	2
Laghman	Mehtarlam	Qabela	623	1	2	2	2	2
Laghman	Mehtarlam	Qadzyan	0	2	2	2	2	2
Laghman	Mehtarlam	Qala Akhond Zada	393	1	2	2	2	2
Laghman	Mehtarlam	Qala Akhund	911	2	2	2	2	2
Laghman	Mehtarlam	Qala Baghal	165	2	2	2	2	2
Laghman	Mehtarlam	Qala Daman	3352	2	2	2	2	2
Laghman	Mehtarlam	Qala Fatahullah	940	2	2	2	1	2
Laghman	Mehtarlam	Qala Jamo	499	2	2	2	2	2
Laghman	Mehtarlam	Qala Jougi	545	2	2	2	2	2
Laghman	Mehtarlam	Qala Khan	812	1	2	2	2	2
Laghman	Mehtarlam	Qala Malik	425	2	2	2	2	2
Laghman	Mehtarlam	Qala Not	95	2	2	2	2	2
Laghman	Mehtarlam	Qala Now	423	2	2	2	2	2
Laghman	Mehtarlam	Qala Sahib	86	2	2	2	2	2
Laghman	Mehtarlam	Qala Salla	172	2	2	2	2	2
Laghman	Mehtarlam	Qala Sangi Dar Kunda	511	2	2	2	2	2
Laghman	Mehtarlam	Qala Shah Faqir	21	2	2	2	2	2
Laghman	Mehtarlam	Qala Shaikhan	4516	2	2	2	1	1
Laghman	Mehtarlam	Qala Sofi	353	2	2	2	2	2
Laghman	Mehtarlam	Qalacha	207	2	2	2	2	2
Laghman	Mehtarlam	Qal'eh-ye Mansur	0	2	2	2	2	2
Laghman	Mehtarlam	Qal'eh-ye Segeh	0	2	2	2	2	2
Laghman	Mehtarlam	Qarozi	346	2	2	2	2	2
Laghman	Mehtarlam	Qawal Khail	867	2	2	2	2	2
Laghman	Mehtarlam	Qazeyan	143	2	2	2	2	2
Laghman	Mehtarlam	Sahib Jamal	274	2	2	2	2	2
Laghman	Mehtarlam	Saiyid Mullah	944	2	2	2	2	2
Laghman	Mehtarlam	Sakora	814	2	2	2	2	2
Laghman	Mehtarlam	Sang Kash	302	2	2	2	2	2
Laghman	Mehtarlam	Sang Touda	731	2	2	2	2	2

Laghman	Mehtarlam	Saperi	836	1	2	2	2	2
Laghman	Mehtarlam	Sar Sayeda	2875	1	2	2	2	2
Laghman	Mehtarlam	Sayid Abad (1)	364	2	2	2	2	2
Laghman	Mehtarlam	Sayid Abad (2)	875	2	2	2	2	2
Laghman	Mehtarlam	Seh Sada	0	2	2	2	2	2
Laghman	Mehtarlam	Senzalay	0	2	2	2	2	2
Laghman	Mehtarlam	Sha Khail	707	2	2	2	2	2
Laghman	Mehtarlam	Shah Gulyan	759	1	2	2	2	2
Laghman	Mehtarlam	Shah Mangal	796	1	2	2	2	2
Laghman	Mehtarlam	Shahabad	0	2	2	2	2	2
Laghman	Mehtarlam	Shahda	1554	2	2	2	2	2
Laghman	Mehtarlam	Shahlatak	0	2	2	2	2	2
Laghman	Mehtarlam	Shahtoura	319	2	2	2	2	2
Laghman	Mehtarlam	Shai Khail	445	2	2	2	2	2
Laghman	Mehtarlam	Shaikh Abad	279	2	2	2	2	2
Laghman	Mehtarlam	Shaikh Atar	401	2	2	2	2	2
Laghman	Mehtarlam	Shamangal	0	2	2	2	2	2
Laghman	Mehtarlam	Shamte	648	2	2	1	2	2
Laghman	Mehtarlam	Shariullah Kalay	238	2	2	2	2	2
Laghman	Mehtarlam	Sheala Tak	611	1	2	2	2	2
Laghman	Mehtarlam	Shergar	0	2	2	2	2	2
Laghman	Mehtarlam	Shoraba	167	2	2	2	2	2
Laghman	Mehtarlam	Show Kala	64	1	2	2	2	2
Laghman	Mehtarlam	Somochan	402	2	2	2	2	2
Laghman	Mehtarlam	Sufi Qala	147	2	2	2	2	2
Laghman	Mehtarlam	Sultan Kalay	506	2	2	2	2	2
Laghman	Mehtarlam	Tajgari	866	2	2	2	2	2
Laghman	Mehtarlam	Takya	349	2	2	2	2	2
Laghman	Mehtarlam	Tangi Badrow	205	2	2	2	2	2
Laghman	Mehtarlam	Tanzeli	617	1	2	2	2	2
Laghman	Mehtarlam	Tapa Kunj	893	1	2	2	2	2
Laghman	Mehtarlam	Tara Khail	938	2	2	2	2	2
Laghman	Mehtarlam	Tarakay	0	2	2	2	2	2
Laghman	Mehtarlam	Tarakhel	0	2	2	2	2	2
Laghman	Mehtarlam	Tera Gar	1168	2	2	2	2	2
Laghman	Mehtarlam	Tingawar	0	2	2	2	2	2
Laghman	Mehtarlam	Tirgari	900	2	2	2	2	2
Laghman	Mehtarlam	Tundi	541	2	2	2	2	2
Laghman	Mehtarlam	Turki	460	1	2	2	2	2
Laghman	Mehtarlam	Umar Zayee	0	2	2	2	2	2
Laghman	Mehtarlam	Wakil Abad	855	1	2	2	2	2
Laghman	Mehtarlam	Wardak	633	1	2	2	2	2
Laghman	Mehtarlam	Zara Kalay	297	2	2	2	2	2
Laghman	Mehtarlam	Zargar Mala	437	2	2	2	2	2

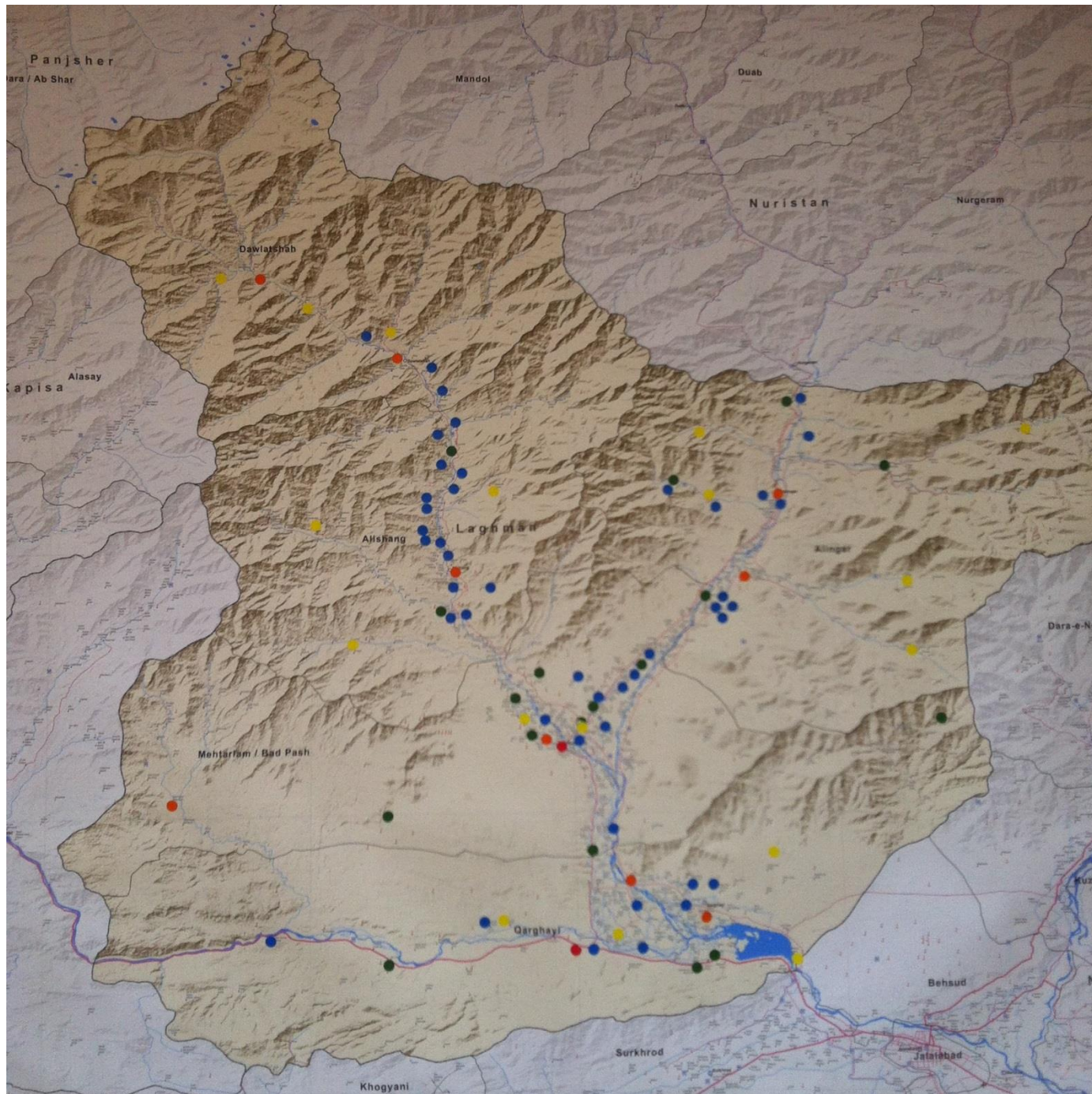
Laghman	Mehtarlam	Zarmany	33	1	2	2	2	2
Laghman	Mehtarlam	Zeyarat Kalay	1260	2	2	2	2	2
Laghman	Mehtarlam	Zor Kalay	0	2	2	2	2	2
Laghman	Qarghayi	Abdulrahim Zaye	193	2	2	2	2	2
Laghman	Qarghayi	Aghar Abad	968	2	2	2	2	2
Laghman	Qarghayi	Ahmad Zai Hulya	858	2	2	2	2	2
Laghman	Qarghayi	Ahmad Zai Sufla	397	2	2	2	2	2
Laghman	Qarghayi	Amber	358	2	2	2	2	2
Laghman	Qarghayi	Amir Kalay	1177	2	2	2	2	2
Laghman	Qarghayi	Andor	230	2	2	2	2	2
Laghman	Qarghayi	Aziz Khan Kalay	521	2	2	1	2	2
Laghman	Qarghayi	Bagheyen	370	2	2	2	2	2
Laghman	Qarghayi	Bala Kacha	59	2	2	2	2	2
Laghman	Qarghayi	Balo Kalay	318	2	2	2	2	2
Laghman	Qarghayi	Baloch Abad	786	2	2	2	2	2
Laghman	Qarghayi	Band Daronta	16	2	2	2	2	2
Laghman	Qarghayi	Band Wali Abdul Rahim Zaye	98	2	2	2	2	2
Laghman	Qarghayi	Banda Mahr Dail	255	2	2	2	2	2
Laghman	Qarghayi	Bar Kashmon	381	2	2	2	2	2
Laghman	Qarghayi	Barch Banda	576	2	2	2	2	2
Laghman	Qarghayi	Bela	182	2	2	2	2	2
Laghman	Qarghayi	Bolan	815	2	2	2	2	2
Laghman	Qarghayi	Chanar	196	2	2	2	2	2
Laghman	Qarghayi	Changi	122	2	2	2	2	2
Laghman	Qarghayi	Chapa Dara	597	2	2	2	2	2
Laghman	Qarghayi	Char Bagh	1493	2	1	2	2	2
Laghman	Qarghayi	Char Qala	199	2	2	2	2	2
Laghman	Qarghayi	Charbagh(laghman)	0	2	2	2	2	2
Laghman	Qarghayi	Cheno Kalay	175	2	2	2	2	2
Laghman	Qarghayi	Dahandar	0	2	2	2	2	2
Laghman	Qarghayi	Dahandar	467	2	2	2	2	2
Laghman	Qarghayi	Dahmazang	1123	2	2	2	2	2
Laghman	Qarghayi	Dara Ghar	529	2	2	2	2	2
Laghman	Qarghayi	Dara Lam	514	2	2	2	2	2
Laghman	Qarghayi	Darga	112	2	2	2	2	2
Laghman	Qarghayi	Darzeyan	226	2	2	2	2	2
Laghman	Qarghayi	Dogar	118	2	2	2	2	2
Laghman	Qarghayi	Farman Khail (1)	1692	2	2	2	2	2
Laghman	Qarghayi	Farman Khail (2)	1334	2	2	2	2	2
Laghman	Qarghayi	Gadaye Khail	221	2	2	2	2	2
Laghman	Qarghayi	Gadra	210	2	2	2	2	2
Laghman	Qarghayi	Gala Kunda	133	2	2	2	2	2
Laghman	Qarghayi	Gar Kash	182	2	2	2	2	2
Laghman	Qarghayi	Gardi Kas	283	2	2	2	2	2

Laghman	Qarghayi	Garoché	85	2	2	2	2	2
Laghman	Qarghayi	Ghondi	1494	2	2	2	2	2
Laghman	Qarghayi	Ghundi	276	2	2	2	2	2
Laghman	Qarghayi	Gula Khail	354	2	2	2	2	2
Laghman	Qarghayi	Gunda Ghar	817	2	2	2	2	2
Laghman	Qarghayi	Gundak	53	2	2	2	2	2
Laghman	Qarghayi	Haidar Banda	180	2	2	2	2	2
Laghman	Qarghayi	Haji Guldad	431	2	2	2	2	2
Laghman	Qarghayi	Halyas Khail	58	2	2	2	2	2
Laghman	Qarghayi	Harwa	235	2	2	2	2	2
Laghman	Qarghayi	Hazara Banda	33	2	2	2	2	2
Laghman	Qarghayi	Hussain Abad	678	2	2	2	2	2
Laghman	Qarghayi	Ibrahim Khail	526	2	2	2	2	2
Laghman	Qarghayi	Ka Kas	1537	2	2	1	2	2
Laghman	Qarghayi	Kachor Kalay	218	2	2	2	2	2
Laghman	Qarghayi	Kachra	89	2	2	2	2	2
Laghman	Qarghayi	Kala Lan	494	2	2	2	2	2
Laghman	Qarghayi	Kamal Pur	967	2	2	2	1	2
Laghman	Qarghayi	Kami Bargi	170	2	2	2	2	2
Laghman	Qarghayi	Karim Abad	544	2	2	2	2	2
Laghman	Qarghayi	Khairo Khail	509	2	2	2	2	2
Laghman	Qarghayi	Kharoti	2315	2	2	2	2	2
Laghman	Qarghayi	Kolalan	0	2	2	2	2	2
Laghman	Qarghayi	Kunda	799	2	2	1	2	2
Laghman	Qarghayi	Kutob Khail	836	2	2	2	1	2
Laghman	Qarghayi	Lal Khan Abad	155	2	2	2	2	2
Laghman	Qarghayi	Lal Khanabad	9545	2	2	2	2	2
Laghman	Qarghayi	Lamtak	180	2	2	2	2	2
Laghman	Qarghayi	Lamte	427	2	2	2	2	2
Laghman	Qarghayi	Lara Mora	663	2	2	2	2	2
Laghman	Qarghayi	Logar Lam	589	2	2	2	2	2
Laghman	Qarghayi	Lontawrak	0	2	2	2	2	2
Laghman	Qarghayi	Lontorak	63	2	2	2	2	2
Laghman	Qarghayi	Mandor	2114	2	2	2	2	2
Laghman	Qarghayi	Mansoor Kalay	905	2	2	2	2	2
Laghman	Qarghayi	Marwandi	310	2	2	2	2	2
Laghman	Qarghayi	Mashena	409	2	2	2	2	2
Laghman	Qarghayi	Meya Band	473	2	2	2	2	2
Laghman	Qarghayi	Meya Khail	890	2	2	2	2	2
Laghman	Qarghayi	Meya Khan Kas Sufla	186	2	2	2	2	2
Laghman	Qarghayi	Meya Khan Sal Hulya	251	2	2	2	2	2
Laghman	Qarghayi	Mir Alam Qala	333	2	2	2	2	2
Laghman	Qarghayi	Miran	106	2	2	2	2	2
Laghman	Qarghayi	Mohabat Banda	42	2	2	2	2	2

Laghman	Qarghayi	Mohammad Amin Banda	111	2	2	2	2	2
Laghman	Qarghayi	Mufte Qala	201	2	2	2	2	2
Laghman	Qarghayi	Mullah Khail	398	2	2	2	2	2
Laghman	Qarghayi	Myakhel	0	2	2	2	2	2
Laghman	Qarghayi	Nahr Karim	407	2	2	2	2	2
Laghman	Qarghayi	Najolak	45	2	2	2	2	2
Laghman	Qarghayi	Noor	278	2	2	2	2	2
Laghman	Qarghayi	Now Abad (1)	290	2	2	2	2	2
Laghman	Qarghayi	Now Abad (2)	291	2	2	2	2	2
Laghman	Qarghayi	Now Abad Safat Khan	825	2	2	2	2	2
Laghman	Qarghayi	Nowi Kanchra Kalay	105	2	2	2	2	2
Laghman	Qarghayi	Omar Khail	840	2	2	2	2	2
Laghman	Qarghayi	Omara Khan Kalay	598	2	2	2	2	2
Laghman	Qarghayi	Parch Bandeh	0	2	2	2	2	2
Laghman	Qarghayi	Pashah Gar (parak)	0	2	2	2	2	2
Laghman	Qarghayi	Pator Gamba	709	2	2	2	2	2
Laghman	Qarghayi	Payra Khail	357	2	2	2	2	2
Laghman	Qarghayi	Peroz Abad	498	2	2	2	2	2
Laghman	Qarghayi	Pul Surkhakan	60	2	2	2	2	2
Laghman	Qarghayi	Qabela	291	2	2	2	2	2
Laghman	Qarghayi	Qala	102	2	2	2	2	2
Laghman	Qarghayi	Qala Mahegeran	519	2	2	2	2	2
Laghman	Qarghayi	Qala Malik	259	2	2	2	2	2
Laghman	Qarghayi	Qala Mami	656	2	2	2	2	2
Laghman	Qarghayi	Qala Mirak	712	2	2	2	2	2
Laghman	Qarghayi	Qala Mufta	322	2	2	2	2	2
Laghman	Qarghayi	Qala Najaran	626	2	2	2	2	2
Laghman	Qarghayi	Qala Padshah	864	2	2	2	2	2
Laghman	Qarghayi	Qala Qazi (1)	206	2	2	2	2	2
Laghman	Qarghayi	Qala Qazi (2)	671	2	2	2	1	2
Laghman	Qarghayi	Qala Qazi Ya Seya Khail	1103	2	2	2	2	2
Laghman	Qarghayi	Qala Rahim	1152	2	2	2	2	2
Laghman	Qarghayi	Qala Tak	876	2	2	2	2	2
Laghman	Qarghayi	Qala Zaman Khan	231	2	2	2	1	2
Laghman	Qarghayi	Qalatak	0	2	2	2	1	2
Laghman	Qarghayi	Qal'eh Ye Mofti	0	2	2	2	2	2
Laghman	Qarghayi	Qarghaye	85	2	2	2	2	2
Laghman	Qarghayi	Qarghayi	9712	2	1	2	2	1
Laghman	Qarghayi	Qasim Abad	68	2	2	2	2	2
Laghman	Qarghayi	Qoul Qoul Abad	465	2	2	2	2	2
Laghman	Qarghayi	Sangeri	687	2	2	2	1	2
Laghman	Qarghayi	Sapo Khail	808	2	2	2	2	2
Laghman	Qarghayi	Sar Feraz Khan	550	2	2	2	2	2
Laghman	Qarghayi	Sar Kando Baba	696	2	2	2	1	2

Laghman	Qarghayi	Sar Ki Sapraye	110	2	2	2	2	2
Laghman	Qarghayi	Sarok	141	2	2	2	2	2
Laghman	Qarghayi	Sarwak	138	2	2	2	2	2
Laghman	Qarghayi	Sawatay	0	2	2	2	2	2
Laghman	Qarghayi	Sayate	926	2	2	2	2	2
Laghman	Qarghayi	Sayid Jan Banda	87	2	2	2	2	2
Laghman	Qarghayi	Shadi Bagh	122	2	2	2	2	2
Laghman	Qarghayi	Shahidan	949	2	2	2	2	2
Laghman	Qarghayi	Shamshir Abad	258	2	2	2	2	2
Laghman	Qarghayi	Shinzai	0	2	2	2	2	2
Laghman	Qarghayi	Shor Ghondi	444	2	2	2	2	2
Laghman	Qarghayi	Shoye	90	2	2	2	2	2
Laghman	Qarghayi	Surkh Abi	673	2	2	2	2	2
Laghman	Qarghayi	Surkhakan	2352	2	2	2	2	2
Laghman	Qarghayi	Surukh Sqangi	266	2	2	2	2	2
Laghman	Qarghayi	Taragar	307	2	2	2	2	2
Laghman	Qarghayi	Tarang	811	2	2	2	2	2
Laghman	Qarghayi	Walkank	88	2	2	2	2	2
Laghman	Qarghayi	Wara Gala	141	2	2	2	2	2
Laghman	Qarghayi	Wastagak	51	2	2	2	2	2
Laghman	Qarghayi	Zango Abdul Arhim Zai	232	2	2	2	2	2
Laghman	Qarghayi	Zara Qala	1167	2	2	2	2	2
Laghman	Qarghayi	Zerani Hulya	840	2	2	2	1	2
Laghman	Qarghayi	Zerani Sufla	375	2	2	2	2	2

Annex B – Photograph of map with CHCs, BHCs, subcentres and selected villages marked by assessment team



Annex C - Questionnaire for cases in the programme (English version)

SAM CASES IN THE PROGRAMME / COVERED SAM CASES

Date: _____ Name of Child: _____ MUAC: _____

District : _____ Age: _____ Oedema? (+, ++, +++): _____

Village : _____ Sex: _____

Enumerator/Supervisor name: _____

1 How did you first know that your child was malnourished?

2 Did you try to treat your child before visiting the OTP programme?

☐ No

☐ Yes, How?

3 How did you hear about the programme?

4 Which factors encouraged you to enrol your child in OTP programme?

5a Is this the first time your child has been admitted them into OTP/TSFP programme?

☐ If Yes (**go to 6**)

☐ No, how many times has your child been admitted before? _____

5b Why has s/he returned to the programme?

☐ A. The child discontinued treatment and then returned. Why discontinued? _____

☐ B. The child was cured and relapsed. Why was he relapsed? _____

5 Do you have other children admitted in the programme?

☐ Yes, how many children? (Sick)-----

☐ No

Annex D - Questionnaire for cases not in the programme (English version)

SAM CASES NOT IN THE PROGRAMME / NON-COVERED SAM CASES

Date: _____ Name of Child: _____ MUAC: _____

District : _____ Age: _____ Oedema? (+, ++, +++): _____

Village : _____ Sex: _____

Enumerator/Supervisor name: _____

1a Do you know that your child is malnourished?

☐ Yes ☐ No

2a Do you think that your child is sick

☐ No (**go to 3**) ☐ Yes, do you know what illness? _____

2b What are the symptoms your child is suffering from?

- | | | |
|---|--|---|
| ☐ i. Vomiting | ☐ ii. Fever | ☐ iii. Diarrhea |
| ☐ iv. Weight loss | ☐ v. Loss of appetite | ☐ vi. Apathy |
| ☐ vii. Swelling | ☐ viii. Hair loss | ☐ ix. Skin lesions |
| ☐ x. Other, specify: _____ | | |

2c What treatment have you tried, or what treatment are you going to try to recover the illness?

- | | | |
|--|---|---|
| ☐ i. Medicinal roots / herbs | ☐ ii. Enriched meals | ☐ iii. Fasting |
| ☐ iv. Medicinal products (bought at market) | ☐ v. Medicinal products (bought at pharmacy) | ☐ vi. Prayer |
| ☐ vii. Visit traditional healer | ☐ viii. Visit to health facility | ☐ ix. No treatment |
| ☐ x. PlumpyNut (RUTF) from market | | |
| ☐ xi. Other, specify: _____ | | |

3a Are you able to take your child(ren) to the health facility easily?

☐ No ☐ Yes

3b When was the last time? _____

3c What was that for? _____

3d When you cannot go, what are the main reasons?

- | | |
|--|--|
| ☐ i. Too far; Walking distance _____
How many hours? _____ | ☐ ii. Insecurity |
| ☐ iii. Inaccessibility (seasonal flooding, etc.) | ☐ iv. Lack of transportation |
| ☐ v. Lack of support / mahram | ☐ vi. Lack of finances for the journey cost |
| ☐ vii. Refusal by husband / family | ☐ viii. A family member is sick |

- | | |
|--|---|
| ☐ ix. Caregiver is sick | ☐ x. No one to take care of the other children |
| ☐ xi. Too busy; reason: _____ | ☐ xii. Prefer traditional medicine |
| ☐ xiii. Afraid to stay in the hospital (distance from home, cost) | ☐ xiv. Health Facility is always closed. |
| ☐ xv. Staff in Health Facility are rude and not welcoming | ☐ xvi. Other, specify: _____ |

4a Have you received any information about nutrition, malnutrition?

☐ No ☐ Yes

☐ If Yes which information? _____

From whom you have received this information? _____

4b has your child ever been screened? (MUAC, Weight / Height)

☐ No ☐ Yes, screened: Where? _____ By whom?

_____ When? _____

5 Has your child previously admitted in OTP or SFP or TFU programs?

☐ No (go to 6) ☐ Yes

Why are they no longer in the programme? _____

☐ Defaulter; Why? _____ When? _____

☐ Discharged cured ; ☐ Discharged non-cured ; When? _____

☐ Other reasons : _____

6 Do you know that there is a programme at the health facility to treat malnutrition? Do you know how it works?

☐ No ☐ Yes, how do you know? _____

7 Why have you not taken your child to be treated at the health facility?

- | | |
|---|---|
| ☐ i. Difficulty getting to the health facility (see 3b) | ☐ ii. Do not believe the programme will help |
| ☐ iii. Don't know how to get child admitted to the program. | ☐ iv. Lack of finances for the treatment |
| ☐ v. Ashamed to be admitted in the programme | ☐ vi. Prefer traditional medicine |
| ☐ vii. Afraid to stay in the hospital (distance from home, cost) | ☐ viii. The problem is not serious enough |
| ☐ ix. The child was previously rejected; when? _____ | ☐ x. Lack of RUTF at clinic |
| ☐ xi. Other, specify: _____ | |

Thank the carer and provide with a referral slip.

Any additional comments/observations:

Annex E - Security Study Outline: Laghman

Justification: Certain areas are inaccessible for the SLEAC team (due to insecurity), therefore in an effort to gain an understanding of coverage in these areas, and specifically if and how the insecure nature of these areas affects access to facilities for patients and the functioning of the facilities themselves.

Overall Question: How does insecurity affect access to health care (and in particular SAM treatment)?

Methodology

- Qualitative through structured interviews
- Two sets of informants at two CHC will be targeted including health facility staff and residents
- 2 CHC that provide IMAM services shall be visited. One in a secure area and one where surrounding villages are insecure
- 2 Staff members (ideally 1 nurse/midwife and 1 doctor who are engaged with IMAM) and 2-4 patients (men and women, preferably come for nutrition treatment) should be interviewed.

Ethics and considerations

- Security is a sensitive issue and these questions must not be administered if there is any risk is deemed to come to either the interviewees or interviewers.
- Interviewees must give verbal consent before the interview begins.

Key Questions

Mothers / clients

Are you here for the screening or nutrition program?

- Journey:
 - How did you get here today?
 - How long did it take?
 - How much did it cost you?
- What obstacles do you face in getting to the clinic?
- Is this the nearest clinic to your home?
- Why did you choose *this* clinic to come to today? (closest, safest, best staff, good programs)

Staff

Do you work with the nutrition programs here?

- How many people do you see in an average day in the screening and nutrition programs?
- Have you ever run out of RUTF? When? And for how long?
- Have you ever had to close the nutrition program or the facility? When? Why?
- Do many people come to this facility from other catchment areas?
 - If yes, which areas and why?

Annex F – Calculation of error ratios for reliability test of classifications

The suggested sample sizes in the SLEAC manual are suggested as such because it is known that with a certain SAM population (denominator) a certain sample sizes gives acceptable estimations. When the sample size is not met, the errors can be determined to see if they are acceptable and for transparency.

When calculating errors on the estimated case load we initially used, we calculate the ratios between the required and achieved sample sizes with 10% error as shown in the table below.

Table: Calculation of 10% error ratios by sampling zone

	Initial case load	Old n	actual n	SQRT old	SQRT actual	Ratio SQRT	10% Error
Zone One	734	40	40	6.32456	6.32456	1.00000	10.00000
Zone Two	356	33	26	5.74456	5.09902	1.12660	11.26601
Zone Three	356	33	32	5.74456	5.65685	1.01550	10.15505

In this case, as expected the 10% error is higher for Zone Two, but the error here is not significant.

Annex G – Logical analysis for derivation of primary barriers from non-covered questionnaires

The following diagram represents the hierarchy of barriers that prevent children from reaching admission to the SAM treatment program. This logic allows allocation of a single barrier to each case and is based on the flow of standard form non-covered questionnaires for coverage assessments.

