

ROTARIANS AGAINST MALARIA



LONG LASTING INSECTICIDAL NET DISTRIBUTION REPORT

MADANG PROVINCE Middle Ramu, Sumkar and Usino Bundi Districts

Carried Out In Conjunction With The Provincial Government And Church
Health Services Of Madang Province

With Support From The Global Fund

4th October to 12th December 2021



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Executive Summary

Madang Province is a coastal province on the north coast of mainland of Papua New Guinea (PNG). 95% of the population live in areas of permanent malaria transmission below 1200m, of which 87% of the population live along the coastal area in altitudes below 400m. A further 8% live in areas that people consider epidemic in nature (1200-1600m) with the remaining 4.5% in areas where only *P. vivax* is thought to exist (1600-2000m) and the remaining 0.5% living about 2000m where malaria is considered absent.

The family level survey and distribution of Long-Lasting Insecticidal Nets (LLINs) was carried out in Middle Ramu, Sumkar and Usino Bundi Districts between 4th October to 12th December when the last distribution took place.

Table One shows the estimated population to be covered by the program together with the actual population found along with the number of LLINs distributed by district. In total, 166,095 LLINs were distributed to a population of 325,760 people. This resulted in distribution of 51 nets for every 100 people in the province.

TABLE ONE – Population And Nets Distributed

District	Population from 2000 Census	Population Of Targeted Areas In 2018	Total Estimated Target Population 2021	Population Surveyed 2021	House Holds Surveyed 2021	Nets Issued 2021	Nets Distributed Per 100 People
Middle Ramu	57,879	108,151	121,305	110,821	19,885	56,981	51
Sumkar	67,052	117,335	131,606	122,986	23,972	62,569	51
Usino Bundi	40,079	93,001	104,312	91,953	16,935	46,545	51
Totals	165,010	318,487	357,222	325,760	60,792	166,095	51

A further 1,170 LLINs were donated to health centres as nets were surplus to requirement, were no longer in bales and in most cases could not be easily returned to a central location. These nets would be distributed to pregnant mothers and for use over hospital beds where needed.

The overall operational cost of the programme was 1,257,979.40 Kina (Approximately US\$ 349,438.72) resulting in a cost of about 3.12 Kina or US\$0.87 per net delivered. This was about 43.0% over the anticipated original budget. Most of the extra cost was in the hire of helicopters as RAM could only reach most locations in the Ramu Valley by helicopter as key airstrips used in the past were closed and RAM could no longer use airplanes to do the work.

Overall, the distribution went well in Madang Province with excellent collaboration from provincial health authorities which resulted in all targeted communities being reached and all household receiving nets. The only major difficulty was a delay caused by the late arrival of helicopters for the work in Middle Ramu.

Feedback from partners and communities suggest they were happy with the methodology used as the process appeared transparent to all concerned. However, as always, there were a few families who complained that they did not receive enough nets but for the most part it is believed that this was a result of families not fully understanding the allocation system used.

Global Fund supplied and donated all the nets for Madang Province as well as the distribution costs. The nets distributed in Madang Province are different from those in the past and are known as Yahe LLINs and we hope that these are better quality LLINs than those distributed in the last few years.

The history of LLIN distribution in PNG and Madang Province is discussed in Appendix One and the malaria situation and stratification of malaria in Madang Province are discussed in Appendix Two and Appendix Three. Historically it can be said that LLINs have had a tremendous impact on malaria in Papua New Guinea but recent distributions in lower lying provinces have not resulted in decreased malaria but we hope they are sufficient to keep malaria at bay in these areas for another three years.



Fig.1 – Initial Microplanning Meetings At Kwanga Health Centre (Left) And At Dusim (Right)

Background

Rotarians Against Malaria (RAM) is a nationally based organisation which was formed in 1997 by the Port Moresby Rotary Club in recognition of the tremendous burden that malaria imposes on the people of PNG.

RAM has an organizational mandate to work in malaria control and the distribution of LLINs in Papua New Guinea and has been working for many years with the National Department of Health (NDOH) and other partners including multilateral and bilateral agencies such as UNICEF and WHO (World Health Organisation), NGOs and church groups. (See Appendix One for full history of LLIN Distribution)

Since 2010, RAM has been coordinating the distribution of nets to all districts and provinces on a three-year recurrent cycle. This effectively means that RAM visits every village in PNG every three years. RAM has been funded by the Global Fund since 2009 and since 2017 also from Against Malaria Foundation (AMF) which supplied PNG with the majority of its nets in 2017 and from 2018 onwards to all areas below 1600m only where most of the malaria transmission can be found. During the period 2017 to 2020, the Global Fund resources were therefore mainly used to fund the LLIN distribution costs and other relevant administration costs. However, in 2020, PNG has been lucky to receive a donation of net from the Chinese Government and these were used for all areas between 1600-2000m of altitude. It should also be noted that since 2015, the National Malaria Control Program no longer distributes nets in areas above 2000m as these are now considered too cold for malaria transmission to occur. The situation has changed in 2021. AMF no longer is a donor to PNG and all costs have now reverted to Global Fund. With this change, RAM will have difficulties covering areas from 1600-2000m but we are very fortunate in that the Global Fund allowed savings from 2020 to be used to procure nets for 2021 for this altitude. At present, the situation for this altitude of 1600-2000 remains tenuous for 2022 and 2023.

Generally, LLINs have been distributed to household level throughout the country but when shortage of funds occurred, different strategies of distribution have been used as mentioned above.

PNG can be roughly divided into five epidemiological zones.

- a) Areas which lie above 2000m in altitude which no longer receive LLINs as malaria transmission is not considered likely at these altitudes.
- b) Low lying areas of the country up to 1200m which have stable malaria endemicity and often have poor access to health continue to have household distributions.
- c) Areas from 1200 to 1600m which are generally considered to be of low transmission potential but traditionally have had occasional malaria epidemics due to poor immunity and changing weather conditions. LLIN distribution continue in these settings.
- d) Highlands regions between 1600 to 2000m in altitude such as Mount Hagen which have low malaria endemicity and generally easy access to health services. These are low priority areas and when funding is not available are left out. However, to date, these areas have been covered. From 2015 to 2016, these areas received nets for Under Five children only, and since 2017, to date, RAM has managed to find alternative sources to cover these areas. For example, in 2020, nets for these areas have been sources from the Chinese Government and in other areas from the Global Fund. Fortunately, there was sufficient funds to cover these areas in 2021.
- e) In urban and peri-urban areas such as Port Moresby which are low lying areas with easy access to health, nets will not be distributed during funding constraints. Nets to these areas will be supplied through the private sector. Similarly, due to funding constraints in 2015, Lae City had Under Five Campaign LLINs only.



Fig.2 – Training Village Volunteers In Aiome (Left) And Kulubob (Right)

As a result of this stratification and when funds had been reduced such as at the end of 2014, areas above 2000m no longer received nets and areas from 1600 to 2000m only received under five campaigns in 2015 and 2016. However, fortunately, due to the LLIN donation from the Against Malaria Foundation (AMF) in 2017, all areas received household distribution of nets except areas above 2000m, and some urban areas such as NCD, Goroka, Mount Hagen and Mendi. After 2018, AMF only donated nets to areas below 1600m but the country has been lucky to find funding to fill this gap of between (1600-2000m) in 2019, 2020 and for 2021 through donations from the Global Fund (2018-2021) and the Chinese Government (2020). However, funding for areas between 1600-2000 metres now remains tentative after 2021 as AMF no longer supplies nets to PNG and funds from the Global Fund are not presently enough to cover these areas above 1600m.

One of the conditions of the AMF donation is that RAM would strengthen the way in which surveys are carried out. These new innovative processes are described in the Methodology Section. These methodologies are now being carried out since the beginning of 2017. The major change to the survey methodology suggested by AMF is that previously a village meeting was called after a survey was carried out where names of family members were read out to ensure that all households had been surveyed. Instead of this process, a summary of every village surveyed is posted for 24 hours in a public place so that villages can ensure that all their family members have been included in the survey. As a further verification process, members of RAM and local health staff team carry out random house surveys of 6% of households in every village to ensure that the survey process has been carried out correctly.

For household LLIN distributions, regardless of where they are carried out, they must include a survey and a distribution phase though implementation methods may considerably vary depending on specific circumstances. RAM's approach has been to concentrate on programme quality thus RAM develop methodologies that ensure that all recipients in an area actually receive nets and that this can be reported accurately.

The other major change to the original PNG programme of 2004 to 2009 carried out by the NDOH is that nets are allocated to families on a needs basis rather than simply the number of people in the family. Data analysis of National Capital District (NCD) data has shown that this gives a ratio of nets needed to be about 47 for every 100 people. In the previous LLINs distribution of Round-3 in 2006 to 2010, nets were allocated at a rate of one net to every 2.5 people. With the programme only receiving 80% of LLIN needs, and most provinces distributing for example two nets to families of three, in practically every province, nets ran out before the end of the distribution. The RAM programme makes all attempts to assure that this distribution anomaly does not happen by collecting all population information at the beginning of the program and then allocate the nets based on family needs. This strategy is practiced to ensure that all families receive nets throughout any given province. The only scenario where survey and net distribution may be done simultaneously is in very remote locations where it is not practically possible to return a second time to a location. This is particularly the case in remote villages which can only be reached by boat or very long treks and it is costly and impractical to return to the villages for a second time.



Fig.3 – Training Village Health Volunteers In Kwanga (Left) and Gusap (Right)

In terms of coordination, RAM officers are allocated to specific LLGs or health centres where they coordinate the programme together with local health staff. In this capacity, RAM officers act as facilitators in terms of technical guidance to district health teams in each LLG as well as acting as financial officers and assuring quality control of activities taking place.

Schedule

Referring to Table Two, it can be seen that the distribution in Madang started on the 4th October in Sumkar and Usino Bundi. It had been hoped to start at the same time in Middle Rumu but helicopters were not available at this time. The late date of finishing Middel Ramu was due to delayed helicopter availability, tribal fights and logistics difficulties in Middle Ramu.

TABLE TWO
General Timetable Of Activities In Madang Province

District	Survey		Distribution	
	Start	Finish	Start	Finish
Middle Ramu	03.11.21	06.12.21	05.11.21	12.12.21
Sumkar	04.10.21	19.10.21	13.10.21	25.10.21
Usino Bundi	04.10.21	27.11.21	08.10.21	27.11.21

Methodology

Prior to planning and implementation, a master list of all villages of Madang Province was drawn up using data from the 2000 Census and the last RAM survey of 2018 in Madang Province. Villages in the list were organised by LLG and Ward. In this master list, the estimated population for 2020 for each village was estimated and recorded in two ways. Firstly, the population of each village is estimated using population figures from the 2000 Census and the estimated annual growth rate for Madang Province and then secondly, by taking the population surveyed in 2017 and 2018 and applying the annual growth rate to each village.

In all areas, Health Centres form the hub from which distribution takes place to the respective villages in each health centre's catchment area. Therefore, with the planning data at hand, RAM staff work together with the Provincial Health Office to allocate every village to its nearest health centre (government or Church Based) and outlines how each village is reached from each health centre. From this it is possible to create a budget, estimate how many nets are needed to be sent to each health centre and work out any other logistic considerations such as use of airplanes or boats to deliver nets to some remote areas.

Once all logistical needs are calculated and nets delivered to the province or district, a RAM team will travel to the province. Once they are in the province, RAM officers are allocated to work with each health centre which becomes the centre of operations for that area.

With the arrival of RAM officers, each health facility identifies health staff members or non-health community volunteers to be involved with the programme. If local health staff are selected, then they are referred to as District Health Team (DHT) but if a non-health staff is selected then they are termed as a Team Leader. Both DHTs and Team Leaders are responsible for the survey and distribution of nets. Each DHT and Team Leader works only in the area in which the health facility is based.

Before any activities take place, RAM officers are expected to work with health staff and other team leaders to make detailed plans (micro-planning) of their activities for training, survey, verification and distribution of nets. This process involves making maps of the area, deciding how many teams are needed, and then making detailed work plans for each of the team members. This process also involves verifying that no villages have been left out of the census list and that the whole area is covered.

Also prior to field activities in any given LLG or health centre, a social awareness campaign was carried out in all villages informing villagers of the upcoming survey and distribution. This was also used as an opportunity for RAM officers to become familiar with each area. During this process, key malaria messages were also discussed with villagers such as the need to use LLINs every night.

During the social awareness campaign, a daylong training meeting is normally held at each health facility for all DHT members in that area who jointly carry out the micro-planning exercise. These training and micro-planning sessions as well as all other activities associated with the programme are coordinated by RAM project officers together with health counterparts at provincial and district levels. RAM officers also have the responsibility to ensure the LLINs operation is kept in line with the original budget.

Survey

The survey was carried out in the following way.

- 1) When arriving at a village and before starting the census process, a meeting was held with village elders explaining the process.
- 2) If village elders have an up to date list of all village occupants, the team would use this list to compile a census but still visit every household to confirm this information.
- 3) Where a village is small, e.g., less than 30 families, team members may carry out the census by themselves.



Fig.4 Survey Verification In Dusin (Left) And Kwanga (Right)

- 4) Where villages are large, village volunteers were identified with the assistance of the village chiefs, elders, health staff and councillors. One volunteer was chosen for each group of about 50 families with volunteers chosen by natural divisions in the village e.g., clans where one volunteer would make a list of only one clan. These volunteers were trained to carry out the survey by actually surveying houses with the team leaders supervising and assessing the recording. Once the team leader was confident that the volunteers knew the survey methodology, they were left to continue with the household survey with survey teams returning within an agreed period to verify the work of the survey volunteers, collect survey books and also to pay the survey volunteer, provided that the work was carried out correctly. The training of volunteers may occur in groups or individually depending on access to the village and its proximity to other villages.
- 5) For each household surveyed, all family members who normally reside at the household for a minimum of nine months were recorded by Name, Age, Sex and Relationship to head of household. All names and other information were recorded in the survey book with one survey form being used for each household.

- 6) After surveying a household, a white copy of the census form was given to the head of household or most senior person present in the household.
- 7) Where a whole household was absent, information was taken from the neighbours and the white survey form left with them.
- 8) In all cases, after the census/list was finished, all the information about the households and number of household members is entered into a summary sheet. This list is then hung in a public place where all villages can verify that the right number of family members for each household has been recorded and that all families have been included in the survey. After the list has been in a public place for 24 hours, then the volunteer requests for the RAM officer and or DHT to visit the village.
- 9) RAM officers and DHTs must visit three households randomly from each survey book (6%) and verify that the survey has been carried out correctly. Only when this has been done, then the volunteer can be paid.
- 10) If a village was surveyed by more than one volunteer, then volunteers were asked to work together so that lists can be hung together and the village volunteers can be verified at the same time. This process also ensures that households do not appear on more than one list. After this process, both the volunteers and the village elders sign a form to verify that this was done.
- 11) All village volunteers received a standard payment of 20 kina a day. Experience has shown that volunteers can usually only survey about 25 households a day, so for the most part, they would receive up to two days' allowance to complete a survey book (50 households).
- 12) All volunteers were also given a small training manual. Contained in this training manual are key health education messages about malaria which volunteers are expected to discuss with households. This perhaps is the only project in PNG that is able to reach down to potentially every household in the country.



Fig.5 – Village Survey List For Public View (Left) And Interviewing Household (Right) In Mugil

To aid with the survey, the master plan with names of all census units in all the wards in the district had been printed out and given to all the DHTs and team leaders. This document also provides the projected population per census unit as well as other information which might be useful to the area concerned.

After collecting survey data from each village, the information is immediately compared with the data on the master sheet. Where the surveyed population is very different from the projected population, the project staff make enquiries into the reasons for these discrepancies.

Following the survey, all data was entered into a computer where possible or entered into a master sheet of the area concerned. For each village, nets were allocated to each family on a needs basis and this is also entered into the computer or master sheet. This process ensured that all villages received nets and that there would be no shortfalls.

The needs basis in PNG is based on the assumption that children under the age of six sleep with their parents, after which boys and girls are grouped separately from their parents. Nets are also allocated based on the number of children in the house, their ages, and whether there are other dependents living in the households such as grandparents. A full description of the allocation system can be obtained from RAM officers but suffice to say a family of four could receive between one to four nets depending on the sex and age of family members.

Nets are allocated to each LLG based on assumed populations of each LLG and it was important prior to the distribution to ensure that when allocations had been carried out to families and villages that there were enough nets available to cover each and every family.

Distribution

There was no official launch for the LLINs distribution in Madang Province. However, prior to distribution there was a social awareness phase where the project teams informed communities about the arrival of the distribution teams, especially those accessible by road.

The LLINs were then distributed to teams depending on the needs of each village. The LLINs were then distributed by village or wards depending on whether villages were close together. In this latter case, a central location was identified in the ward and then distribution of nets was carried out. In terms of distribution sites, villages were organised in different ways to make the flow of nets easy and effective. However, the actual organisation depended on each team and the structure of the various groups receiving nets.

All net packaging was opened at distribution site with a district code printed on each net e.g., MD 21 meaning Madang Province 2021. This code is added to identify nets to assist in future monitoring exercises as well as discouraging householders from selling the nets on the open market.

Some examples of the process used to control the crowd includes;

- Arranging the people according to the serial numbers in the survey books e.g., 72001 - 72050 and then calling the names and the serial numbers.
- Call the names of the owners of the households, collect the white copy and give the nets.
- Wait for everyone to come to the distribution site, collect all the white copies and sort the copies with the pink copies. Call the names on the white copies and give the nets.

Some of the following control methods were used.

- Everyone who presented with a white copy was given LLINs at the distribution site with LLINs only given to the owner of the house or a member of the house whose name is written on the back of the survey form.
- Those people who lost the white receipts were left to the end of each distribution, with nets only being issued if the name of the person collecting the nets was found on the back of the pink copies.
- For those families who were absent at the time of distribution, their names were written in a form – MOSQUITO NETS HELD IN TRUST BY VILLAGE CHIEFS FORM and the nets allocated to missing families were given to chiefs or any person entrusted by the community with the forms for these families to collect their LLINs later.
- Householders are now being asked to make a thumb print as proof of delivery of nets to a household. The Global Fund had formally asked that householders should sign for delivery of nets. This was considered problematic as many householders are illiterate and even where householders can write, this process takes a long time in what is often a very chaotic and charged environment where speed is of the essence.

It should also be noted that surveys and distributions took place at more or less the same time in some remote places of Madang Province. This is particularly true for mountainous villages or small islands which might take several hours or days to reach. In these instances, estimations based on the 2000 Census data and local knowledge used to pre-allocate nets. Teams were then dispatched to these areas with nets. On arrival in these remote places, surveys took place and were immediately followed by a distribution based on the survey results.

Other details

In the case of Madang Province, all LLINs were ultimately delivered to Lae by ship from China in nine containers. These were a new type of nets known as Yahe. All these nets are light blue in colour. All nets arriving in Lae were first stored in the Mapai Transport yard before being sent by road to Madang with Rookes Marine Transport. Five containers were stored at the airport and four containers at the hospital.

Results

Table Three shows the estimated population to be covered by the program together with the actual population found along with the number of LLINs distributed by district. Table Four shows the same information by LLG. In total, 166,095 LLINs were distributed to a population of 325,760 people. This resulted in distribution of 51 nets for every 100 people in the province.

TABLE THREE
Nets Distributed At District Level In Madang Province

District	Population from 2000 Census	Population Of Targeted Areas In 2018	Total Estimated Target Population 2021	Population Surveyed 2021	House Holds Surveyed 2021	Nets Issued 2021	Nets Per 100 People	Growth Rate Against 2018 Survey	Growth Rate Against 2000 Census
Middle Ramu	57,879	108,151	121,305	110,821	19,885	56,981	51	0.82	3.14
Sumkar	67,052	117,335	131,606	122,986	23,972	62,569	51	1.58	2.93
Usino Bundi	40,079	93,001	104,312	91,953	16,935	46,545	51	-0.38	4.03
Totals	165,010	318,487	357,222	325,760	60,792	166,095	51	0.76	3.29

TABLE FOUR
Nets Distributed At LLG Level In Madang Province

LLG	District	Population from 2000 Census	Population Of Targeted Areas In 2018	Total Estimated Population 2021	Target Population 2021	Population Surveyed 2021	House Holds Surveyed 2021	Nets Issued 2021	Growth Rate Against 2018 Survey	Nets Per 100 People
Arbaka Rural	Middle Ramu	18,957	39,546	44,356	44,356	44,474	7,873	22,550	3.99	50.7
Josephstaal Rural	Middle Ramu	15,164	31,105	34,888	34,888	30,079	5,168	15,495	-1.11	51.5
Simbai Rural	Middle Ramu	23,758	37,500	42,061	42,061	36,268	6,844	18,936	-1.11	52.2
Karkar Rural	Sumkar	40,394	63,416	71,129	71,129	66,876	14,174	34,043	1.79	50.9
Sumgilbar Rural	Sumkar	26,658	53,919	60,477	60,477	56,110	9,798	28,526	1.34	50.8
Bundi	Usino Bundi	8,335	17,955	20,139	20,139	16,928	3,253	8,824	-1.94	52.1
Usino	Usino Bundi	31,744	75,046	84,173	84,173	75,025	13,682	37,721	-0.01	50.3
Totals		165,010	318,487	357,222	357,222	325,760	60,792	166,095	0.76	51.0

Referring to Table Three and Table Four, it can be seen that the overall population growth rate is less than compared with other years. From Table Four, it can be seen that since 2000, the growth rate has been 3.29% while as in the last three years it has only been 0,76%. It is not

clear why this is the case. From Table Four it suggests that only along the River Ramu in Arabaka LLG in Middle Ramu has population growth remained reasonably stable while the low growth rates, particularly in Usino Bundi suggest a population leaving the district for other places such as Madang town.

Table Five shows that 1,170 nets were left over at the end of the program and were donated to health centres. In general, these nets were left where the nets were loose and no longer in bales or the nets were very few or the nets could be difficult to return to a central location. In general, these nets would be used for hospital beds or for antenatal mothers.

TABLE FIVE
Nets Donated To Health Facilities

District	LLG	HC	Donated
Middle Ramu	Arabaka Rural	Gokto AP	73
Middle Ramu	Arabaka Rural	Aiome HC	83
Middle Ramu	Arabaka Rural	Annaberg HC	66
Middle Ramu	Josephstaal Rural	Wanuma HC	162
Middle Ramu	Simbai Rural	Dusim AS	19
Middle Ramu	Simbai Rural	Simbai HC	205
Middle Ramu	Simbai Rural	Sangapi HC	34
Sumkar	Karkar Rural	Mapor HC	36
Sumkar	Sumgilbar Rural	Mugil HC	79
Usino Bundi	Bundi Rural	Bundi HC	190
Usino Bundi	Bundi Rural	Brahman HC	45
Usino Bundi	Usino Rural	Gusap HC	48
Usino Bundi	Usino Rural	Sausi HC	10
Usino Bundi	Usino Rural	Walium HC	23
Usino Bundi	Usino Rural	Begesin HC	85
Usino Bundi	Usino Rural	Junkaral AS	12
TOTAL			1,170

TABLE SIX
Cost Of Programme In Madang Province (All Costs in Kina)

Expense Types	Budget	Actual	Variance	% Variance
Training	K17,360.00	K17,350.00	10.00	99.94
Human Resources	K336,095.01	K245,711.00	90,384.01	73.11
Fuel	38,998.00	K62,039.92	-23,041.92	-59.08
Vehicle Hire	153,600.00	K123,328.60	30,271.40	80.29
Boat Hire	29,100.00	K17,030.00	12,070.00	58.52
Aircraft Hire	258,001.00	K777,872.23	-519,871.23	-201.50
Stationary	3,000.00	K5,235.41	-2,235.41	-74.50
5% Contingency	41,807.70	K9,412.24	32,395.46	22.51
Totals	K877,961.71	K1,257,979.40	-380,017.69	-43.28

Referring to Table Six, the overall operational cost of the programme was 1,257,979.40 Kina (Approximately US\$ 349,438.72) resulting in a cost of about 3.12 Kina or US\$0.87 per net delivered. This was about 43.0% over the anticipated original budget. Most of the extra cost was in the hire of helicopters as RAM could only reach most locations in the Ramu Valley by

helicopter as key airstrips used in the past were closed and RAM could no longer use airplanes to do the work.

Referring to Table Seven, this shows the radio and cell phone coverage of Madang Province is generally very good, particularly Digicel Cell coverage which reaches even the remotest parts of Middel Ramu and Usino Bundi. Radio coverage is also very good in most places. Such coverage should make it reasonably easy to reach most of the province with health education messages.

TABLE SEVEN
Cell and Radio Coverage In Madang Province

District	Villages	House Holds Surveyed	Digicel	Bmobile	City Phone	Houses with Radios	Villages With Radio Networks
Middle Ramu	273	19,885	265	2	0	3,635	206
Sumkar	236	23,972	231	0	0	8,135	175
Usino Bundi	238	16,935	221	18	0	4,301	205
Total	747	60,792	717	20	0	16,071	586

Conclusions

Overall, it can be said that the LLIN distribution in Madang Province was generally a huge success both in terms of results and great collaboration between staff from RAM, provincial and district health authorities, and the Catholic Church, Lutheran Church, Nazarene Church, Evangelical Brotherhood Church Health Services who have a presence in the districts receiving nets. Through this collaboration, the data suggests that all villages and practically all families in those villages received nets despite any local challenges. More importantly the whole program was carried out in record time.

There were some challenges experienced during the operation and these include

- There was delay in the delivery of nets to Middle Ramu District due to the MIL8 helicopters of Heli Niugini not being available on time. This prolonged distributions as all officers had completed their surveys and had to wait for nets to arrive.
- Ethic clashes in some parts of Middle Ramu and Usino Bundi Districts delayed operations. Officers had to wait for these issues to be sorted out within the community themselves before they started distributions. For example, the RAM LLIN Officer stationed at Wanuma Health Centre could only leave Wanuma a day before close of the RAM office for Christmas break as he could not trek out due to Ethic clashes.
- Heavy rain causing slippery treks making it difficult for trekkers to arrive on scheduled dates which delayed survey process and prolonged distribution process

Other than this, as with other provinces in the country where RAM has operated in over the last ten years, the methodologies used this time, including survey verification processes appeared practical and were openly welcomed by both villagers and implementers, particularly the practice of hanging up the list of names in the middle of the village following a survey. This allowed communities to feel that they were part of a transparent process. This is not to say that perhaps some extra people managed to slip into the books, but in general, it was felt that the system was fair and included practically everyone concerned. The use of the master lists also ensured that all villages were reached and accounted for.

The review of the data prior to the distribution was also important. This ensured that all villages and families received the correct numbers of nets. The 2000 Census Lists were very important to ensure that survey teams reached all villages: without the complete list of villages, it would be very difficult to make a detailed report.



Fig.6 – Survey Household Verification In Miak (Left) And Summary Form Pinned Up In Miak (Right)

The greatest complaint still received from communities was the number of nets they received. Even though the team explained the logic of how the allocation of nets is calculated, some families still expect one net per person, others expect it to be based on a fixed allocation based on the number of people in the family, and yet others thought they would be given nets based on the number of nets they stated they already had. This highlights that a better system of explaining the allocation system still needs to be developed. In general, unlike some previous districts covered by RAM, DHTs of Madang Province assisted in the allocation of the nets which meant they were in a better position to explain the distribution system on the ground. Nevertheless, despite all the difficulties involved, it would appear that the vast majority of community members accepted the outcome and there were no real problems or complaints encountered.

Acknowledgements

On behalf of the Rotarians Against Malaria household distribution team who worked in Sumkar, Usino Bundi and Middle Ramu districts, we would like to sincerely acknowledge and thank the Madang Provincial Health Authority and the District Health Staff of the three districts for the excellent help and cooperation during the Long Lasting Insecticide Nets (LLINs) distribution programme.

In particular, we would like to thank at provincial level Mr Fidelis Waipma (Chief Executive Officer), Dr Martin Daimen (Director Public Health), Dr Sammy Thomas (Director Curative Health), Mr Wilbert Jake (TB Coordinator) and Mr Michael Rua (Logistics Officer).

For the district staff, we would like to sincerely thank all those who tirelessly took part in the programme, and in particular we would like to mention the following people who were instrumental in providing the local expertise and advice from planning to implementation of the programme in the three districts namely:

Sumkar District

Name	Occupation	Institution
Mrs. Christine Ururu	Officer in Charge	Mugil Health Centre
Mrs. Brigitte Nawali	Nursing Officer	Mugil Health Centre
Mr. Andrew Kaigul	Community Health Worker	Mugil Health Centre
Mr. Mathew Sibong	Officer in Charge	Mapor Health Centre
Mr. Willie Giong	Nursing Officer	Mapor Health Centre
Mr. Selan Kangol	Community Health Worker	Mapor Health Centre
Miss. Lynette Kamalo	Community Health Worker	Miak Health Centre
Mr. Sabek Gelagal	Community Health Worker	Bagabag Health Centre
Mr. Ayauman Mosobean	Officer in Charge	Kulubob Health Centre
Mr. Akth Kamugar	Community Health Worker	Kulubob Health Centre
Mr. Yang Letta	Administrator	Gaubin Hospital
Dr. Waikasa Kalala	Doctor	Gaubin Hospital
Mr. Mark Bull	Community Health Worker	Gaubin Hospital
Mr. Philip Kirarok	Community Health Worker	Gaubin Hospital

Usino Bundi District

Name	Occupation	Institution
Ms. Stella Garima	Officer in Charge	Brahman Health Centre
Mr. Felix Kapai	Officer in Charge	Gusap Health Centre
Mrs. Elisabeth	Health Extension Officer	Gusap Health Centre
Mr. Russel G	Community Health Worker	Gusap Health Centre
Mr. Sasal Soba	Community Health Worker	Walium Health Centre
Mrs. Daisy Soba	Community Health Worker	Walium Health Centre
Mr. Michael Gene	Community Health Worker	Bundi Health Centre
Mr. Simon Goro	Officer in Charge	Begesin Health Centre
Mr. John Mumuya	Community Health Worker	Begesin Health Centre
Mrs. Koil Seg	Community Health Worker	Begesin Health Centre
Mr. Sonny Sakua	Community Health Worker	Usino Health Centre
Mr. Levi Wiga	Community Health Worker	Usino Health Centre
Mr. Saark Mark	Community Health Worker	Sausi Health Centre

Middle Ramu District

Name	Occupation	Institution
Mr. Moses	Community Health Worker	Annaberg Health Centre
Ms. Gethrude Meregori	Community Health Worker	Aiome Health Centre
Mr. Issac Assen	Community Health Worker	Aiome Health Centre
Mr. Vincent Lazarus	Community Health Worker	Aiome Health Centre
Mr. Richard Ichav	Community Health Worker	Aiome Health Centre
Mr. Joel Funfun	Community Health Worker	Dusim Aid Post
Mr. Tmon Mimgai	Community Health Worker	Gokto Aid Post
Mr. Patrick Angria	Officer in Charge	Josephstaal Health Centre
Mr. Basil Kinatha	Station Manager	Kwanga Health Centre
Mr. Linus Luman	Community Health Worker	Kwanga Health Centre
Mr. Issac Kaupa	Officer in Charge	Sangapi Health Centre
Mr. Gibson Yarington	Community Health Worker	Sangapi Health Centre
Mrs. Sandy Dickson	Community Health Worker	Gebrau Aid Post
Mr. Ernest Yani	Officer in Charge	Simbai Health Centre
Mr. Billy Kou	Community Health Worker	Simbai Health Centre
Mr. Murray Golai	Nursing Officer	Simbai Health Centre
Mrs. Maret Jiwambe	Community Health Centre	Simbai Health Centre

RAM would like to specially acknowledge the support received from established and local service providers for logistical support namely; Rooks Marine for transporting twelve containers from Lae to Madang of which four were stationed at Madang PHA yard, three at Walium Health Centre yard and five at Heli Niugini Aviation yard for fly off areas in Middle Ramu District.

RAM also thanks Airport hire car, Pishon hire car, Fly hire car, Manawa hire car and all the local hire car owners for providing their service for this operation. We would not have reached many communities without the dedication of the drivers. RAM also extends its gratitude to Heli Niugini Aviation who provided us aircraft support to cover Middle Ramu District fly-off areas. RAM also thanks Linguan & Co Shipping Company for shipping nets and fuel drums from Madang wharf to Kinim Wharf for Karkar rural Operations . RAM would like to also thank Puma Energy for supplying bulk fuel for the operation.

RAM also thanks all the church run health facilities coordinated under Catholic Church, Lutheran Church, Nazarene Church, Evangelical Brotherhood Church and also to all the Government run facilities for allowing their staff to work with the RAM team.

Last but not the least, RAM would like to extend our acknowledgement and appreciation to all the hard working volunteers and other local community leaders for ensuring all homes were surveyed and assisted in distributing all the nets. RAM thanks you all very much for your hard work, support and local expertise in making the overall program a success.



Fig. 7 Trekkers preparing to carry nets to distant villages at Gokto Health Centre

Appendix One – History Of LLIN Distribution In PNG

The use of Insecticide Treated Nets (ITNs) started in PNG in 1985 when the PNG Institute of Medical Research (IMR) conducted one of the first trials demonstrating the health impact of treating mosquito nets with insecticide. The study, done near Madang, showed a reduction of *P. falciparum* incidence and prevalence in children below five years of age sleeping under permethrin-treated nets. The protective effect of insecticide-treated nets (ITNs) was also confirmed in many other trials around the world. As a consequence of such findings, the national malaria control program in PNG started emphasizing the use of ITNs in 1989. However, no regular or large-scale distribution of ITNs was carried out at this time.

In the following years, coverage with mosquito nets and other control interventions remained patchy and low in many parts of PNG. It was during this period that Rotarians Against Malaria (RAM) was created from the Port Moresby Rotary Club in 1997. Using a donation of 150,000 treated nets given to them from the National Department of Health (originally from AusAid), RAM successfully ran a revolving fund of nets in which nets were sold at a price which allowed the proceeds to buy more nets. RAM did this successfully for many years distributing about 45,000 treated nets a year from 2000 to 2004.

Prior to 2004, most treated nets had to be re-treated every six months or a year which requires a lot of work and organisation. In early 2004 everything changed with the introduction of Long-Lasting Insecticidal Nets (LLINs) which would last for 20 heavy duty washes and effectively no longer required to be treated repeatedly. This change in nets also coincided with the introduction of the Global Fund into PNG known as the Global Fund Round 3.

From 2005 to 2009 the malaria programme in PNG received and delivered about 2.3 million nets throughout the country at a rate of one net for every 2.5 people. The delivery of nets to village level was under the provincial health authorities and reached most parts of the country with Rotarians Against Malaria (RAM) being responsible in delivering the containers of nets to the provinces from Port Moresby and Lae where the nets arrived from overseas.

While the programme was very successful in some areas it was not so successful in others. Problems included slow release of funds from central to provincial level, some provinces not following technical guidelines given resulting in some areas not being covered, and technical and financial reporting leaving a lot to be desired in many of the provinces. When further funds became available in what is known as the Global Fund Round Eight, it was decided that Rotarians Against Malaria (RAM) would take over the coordination of the LLIN programme.

This change has resulted in RAM being responsible for the overall coordination of the LLIN distribution of LLINs in the country particularly in the areas of quantification, procurement, reporting and delivery to provincial and district level. However, the actual delivery of nets to village level is a collaboration between RAM, provincial health authorities and district health and health centre staff.

Fig.1 shows the distribution of nets to districts and provinces from 2006 to 2009 while Fig.2 shows the distribution of nets from 2010 to 2014 and Fig.3 shows the distribution from 2015 to 2017 which includes under five distributions in 2016 and 2017. Under Five distributions had been carried out in areas above 1600m and in Port Moresby and Lae City due to lack of funds. This situation changed when support from Against Malaria Foundation was received.

Up until December 2020, a total of 13.0 million LLINs had been distributed to household level under the coordination of RAM. Therefore, with the 2.5 million nets distributed from 2006 to 2009, this means that about 15.5 million nets have been delivered to household level in PNG since 2006. This is more than one net per every person in PNG. RAM has also distributed

about another 1.5 million nets to health centres for distribution to pregnant women and for prisons and boarding schools.

It should also be noted that alongside developments related to treated mosquito nets, the first cases of chloroquine-resistant malaria were reported in 1976. This progressed rapidly to widespread resistance of *P. falciparum*, and to a slightly lesser extent *P. vivax*, to chloroquine, amodiaquine and sulphadoxine-pyrimethamine (SP). In studies conducted between 2003 and 2005, even combination regimens of these drugs faced up to 29% resistance of *P. falciparum*². This situation together with Global Fund Round 8 also saw the introduction of artemether lumefantrine branded as Malawan and IPT (Intermittent Preventative Treatment) for antenatal women using Fansidar (Pyrimethamine Dapsone).

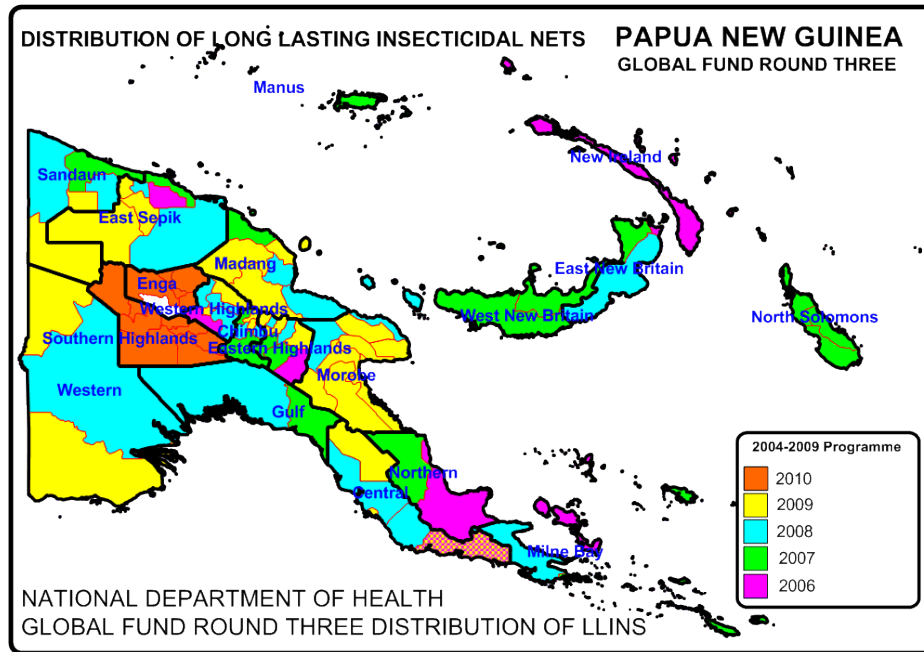


Fig. 1 Distribution Of Nets Under National Department Of Health From 2006 To 2010

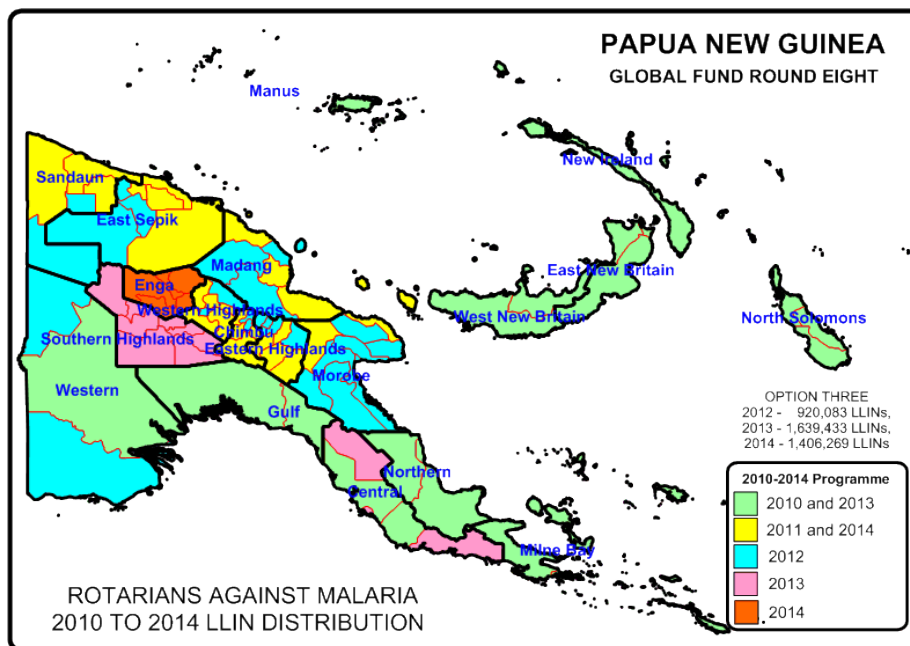


Fig.2 Distribution of LLIN Programme 2010 to 2014

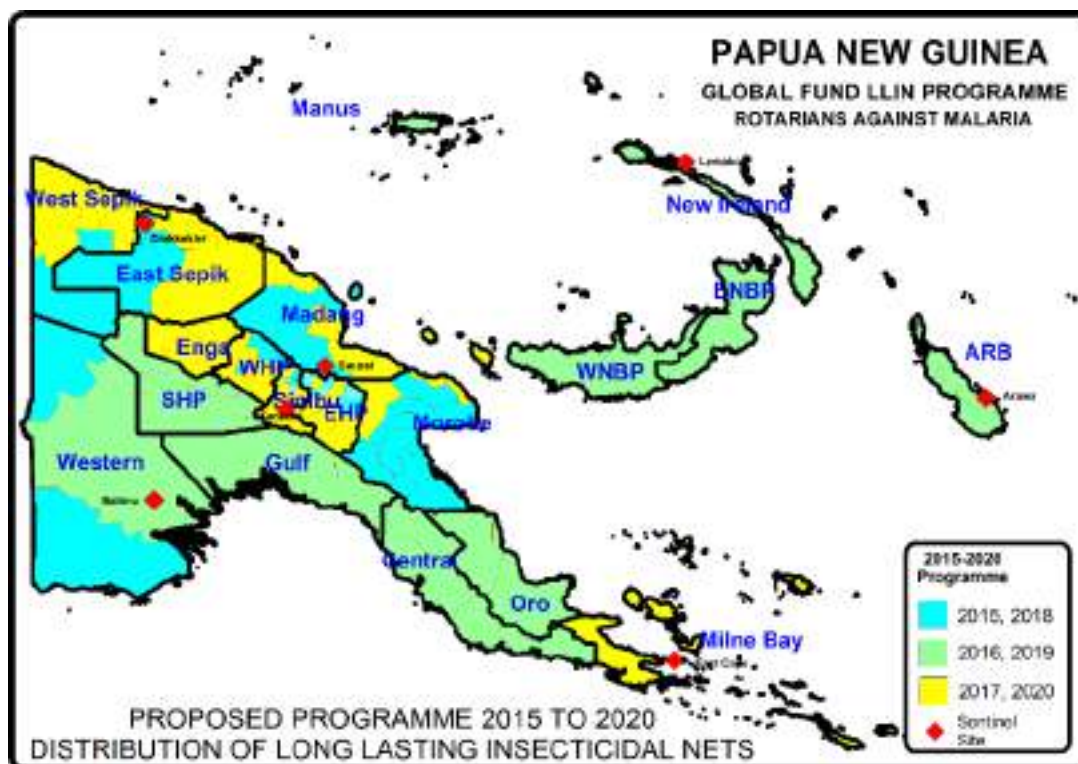


Fig.3 LLIN Distribution Programme 2015 to 2020

TABLE ONE - LLINs Delivered In PNG Under Coordination Of RAM From 2010

Period	Dates	Districts	Provinces	Nets Delivered
Phase One (2010-2011)	Nov 09 - Oct 11	50 Districts	18 Provinces	1,890,448
Year 3 (2012)	Nov 11 - Sep 12	27 Districts	10 Provinces	832,671
Year 4 (2013)	Oct 12 - Sep 13	28 Districts	12 Provinces	1,210,391
Year 5 (2014)	Oct 13 - Sep 14	23 Districts	11 Provinces	1,374,791
Year 5 (2014) No Cost Extension	Oct 14 - Dec 14	Okapa, Lufa, Madang, Angoram, Maprik, Yangoru Saussi, Wewak, Aitape Lumi, Nuku and Vanimo Green	EHP, Madang, East Sepik and Sandaun	454,806
Year 6 (2015)	Jan - Dec 2015	29 Districts	11 Provinces	932,822
Year 7 (2016)	Jan - Dec 2016	27 Districts	13 Provinces	805,597
Year 8 (2017)	Jan - Dec 2017	36 Districts	13 Provinces	1,543,947
Year 9 (2018)	Jan - Dec 2018	27 Districts	11 Provinces	1,211,922
Year 10 (2019)	Jan - Dec 2019	26 Districts	12 Provinces	1,266,525
Year 11 (2020)	Jan - Dec 2020	28 Districts	13 Provinces	1,495,368
	Jan - Mar 2021	Aitape Lumi, Nuku, Yangoru Saussi, Maprik, Angoram, Mount Hagen, Dei, Jimi	Sandaun, East Sepik, Western Highlands, Jiwaka,	232,042
	Apr - Jun 2021	Yangoru Saussi, Jimi, Gumine, Kundia a Gembogl, Sinasina, Yongomugl, Asaro, Kainantu and Ungai Benna	Jimi, Chimbu, EHP	377,865
	Jul - Sep 2021	Bulolo, Menyamya, Lae, Finschafen, Naw aeb, Huon Gulf, Kabw um, Usino Bundi, Karkar, Wosera Gaw i	Morobe, Madang, East Sepik	426,413
	Oct - Dec 2021	Middle Ramu, Ambunti Drekkekier	Madang, East Sepik	265,136
New Funding Model (2015-2021)				8,557,637
Round Eight (2010 - 2014)				5,763,107
Overall Total Phase One and Phase Two And NFM				14,320,744

Appendix Two – Malaria In Madang Province Compared With Other Provinces

Fig.1 shows the decrease of malaria from 2007 to 2015 in all provinces, Fig. 2 shows the actual malaria incidence in 2020 compared with other provinces and Fig.3 shows annual malaria trends from 2016 to 2020. In Madang, it can be seen from Fig.1 that malaria decreased from 2007 to 2015 by 65% which is similar to most of the coastal areas on the north coast of PNG. In Fig.2, in 2020 it can also be seen that in Madang the malaria incidence is 262 per 1000 which is one of the higher malaria incidences of malaria in the coastal areas of PNG. Fig. 3 and Fig.4 show the malaria incidence by year with Fig.4 showing malaria incidence compared with net distributions. It is clear that since LLIN distributions in 2014, malaria has continually risen in the province when Permanent LLINs were used until 2020 when a completely different type of net (Safenet and Royal Sentry in Yagaum) was distributed in Madang. It is hoped that after the present distributions and the new Yahe nets used, that malaria will continue to go down.

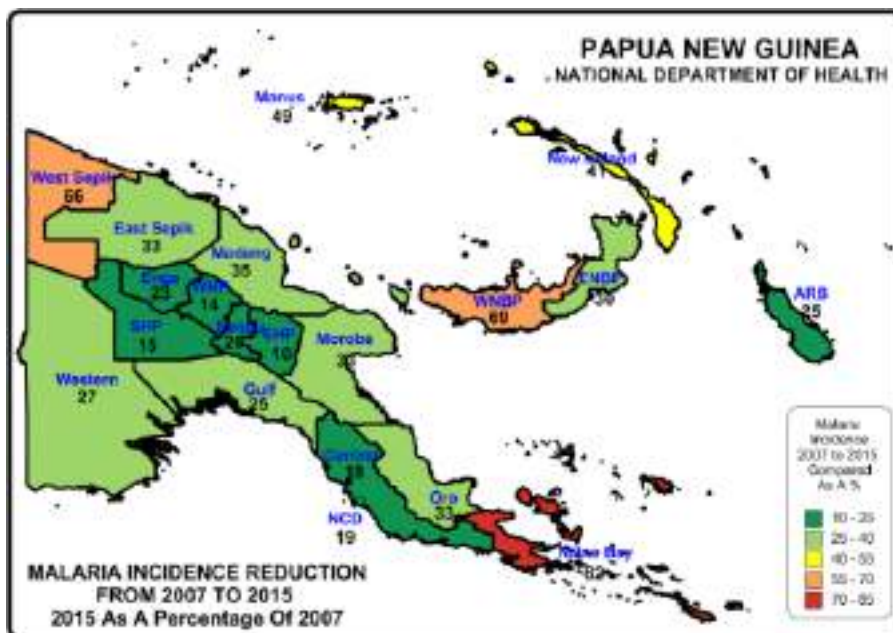


Fig.1 – Relative Reduction Of Malaria In Provinces Of PNG

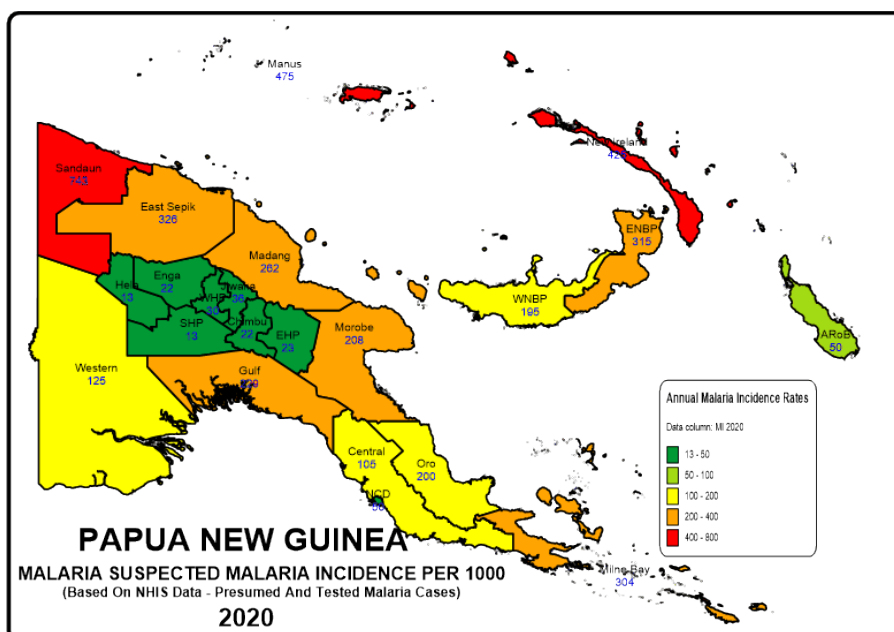


Fig.2 – Reported Malaria Incidence In 2020

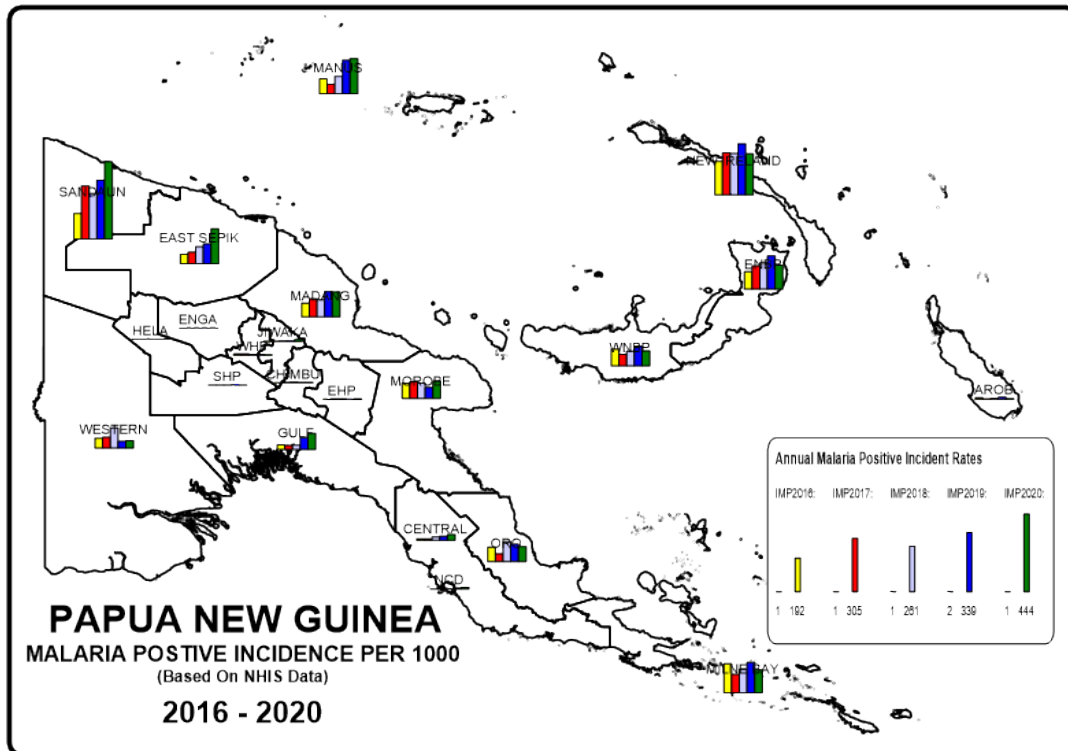


Fig. 3 - Reported Malaria Incidence In PNG From 2016 To 2020

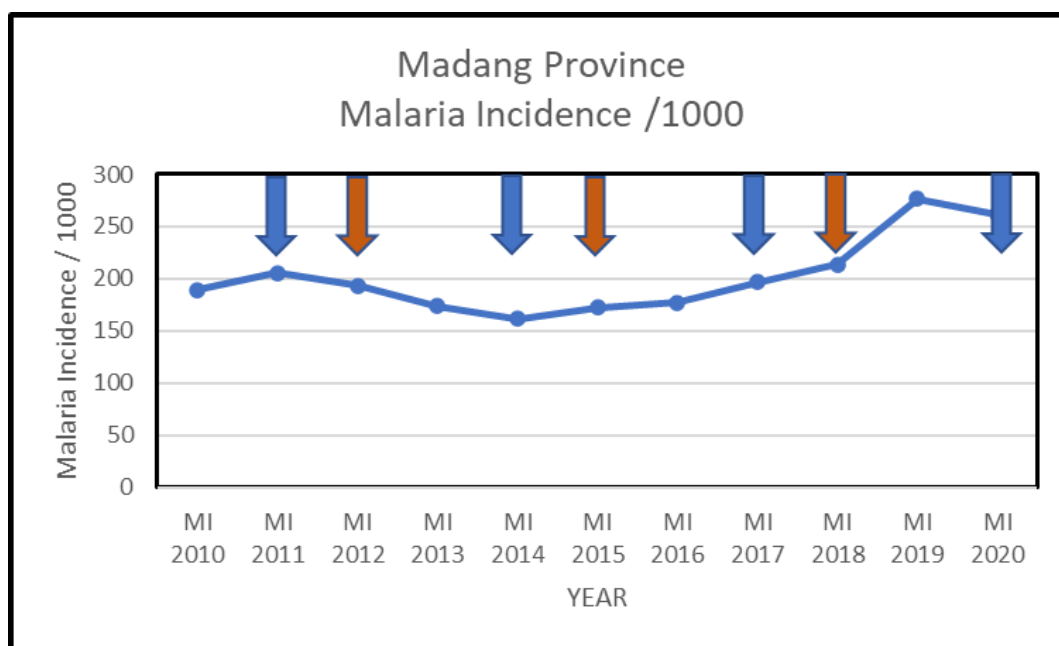
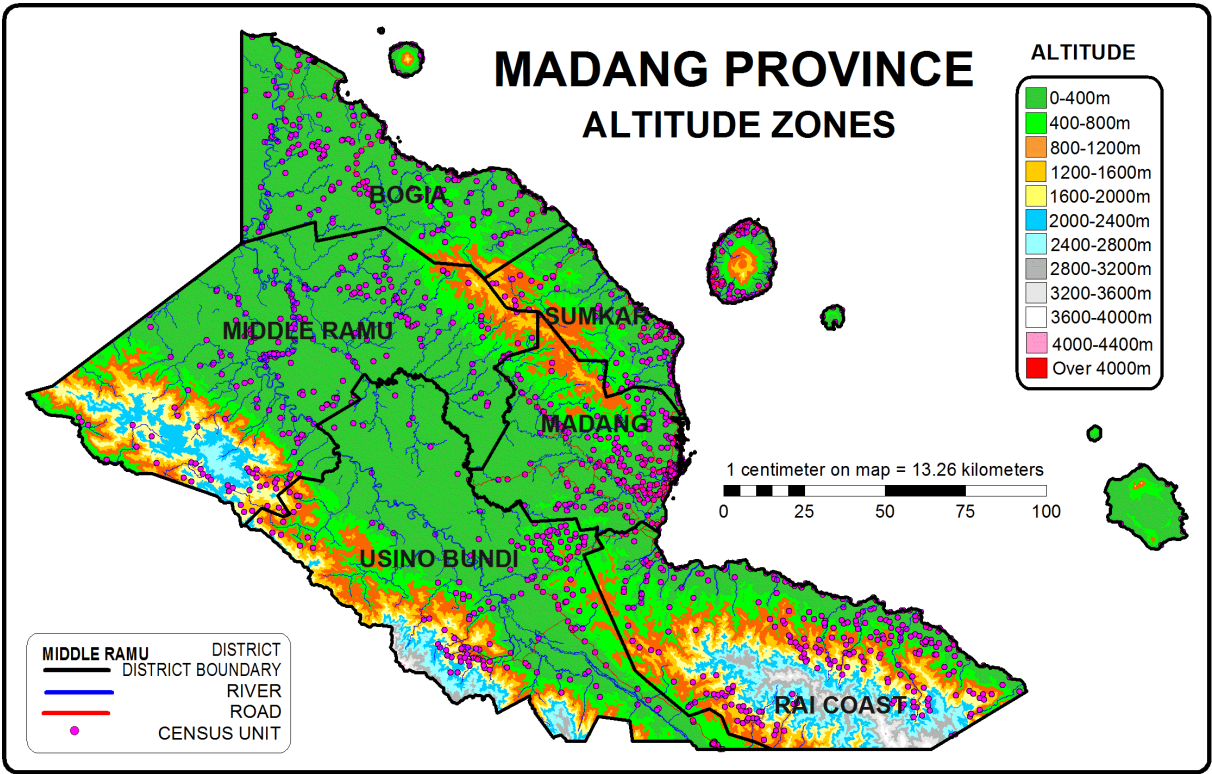


Fig. 4 – Suspected Malaria Incidence Versus Distribution Of Nets
 Large blue arrows represent LLIN distributions done in Bogia, Madang and Rai Coast in 2011, 2014, 2017 2020 and in Middle Ramu, Sumkar and Usino Bundi in 2012 and 2015, 2018.

Appendix Three - Malaria By Altitude

Madang Province is a coastal province on the north coast of mainland of Papua New Guinea (PNG). 87% of the population live in areas of permanent malaria transmission below 1200m, of which 76% live along the coastal area in altitudes below 400m. A further 8% live in areas that people consider epidemic in nature (1200-1600m) with 4.5% living in areas where only *P. vivax* is thought to exist (1600-2000m) and the remaining 0.5% living about 2000m where malaria is considered absent in the mountainous areas of Rai Coast. Middle Ramu and Usino Bundi.

Fig. 1 Altitude Zones In Madang Province



Appendix Four – Other Photographs



Distributions In Aiome (Left) And Josephstall (Right)



Distributions Of LLINs In Gokto (Left) And Annaberg (Right)



Distributions In Kwanga (Left) And Mugil (Right)

OTHER PICTURES



Transportation By Helicopter (Left) And Boat (Right) in Kwanga



Trekkers In Dusim (Left) And Container Delivery In Madang (Right)



Happy Customers In Gokto (Left) And Kwanga (Right)

Appendix Five - Map Of Madang Province Showing Census Points Of 2000 Census



The Boat Carrying Nets To Karkar Island

ANNEX ONE

MADANG PROVINCE
MIDDLE RAMU DISTRICT POPULATION 2021
LLIN DISTRIBUTION SUMMARY SHEET

LLG	WARD	VILLAGE	Estimated 2018 Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
MIDDLE RAMU			121,305	121,305		110,821	19,885	56,981		273	265	2	3,635	206	
ARABAKA RURAL			39,731	44,356		44,474	7,873	22,550		119	116	0	1,882	116	
1	WARD 1		1,920	2,226		1,794	505	995		7	6	0	18		
		1.Jongita	421	494	Gokto AP	427	100	208	06.11.21	1	1	0	2	Radio Madan	Trek
		2.Gokto	140	157	Gokto AP	197	50	100	06.11.21	1	1	0	0	Radio Madan	Trek
		3.Tasibk	260	430	Gokto AP	326	100	192	05.11.21	1	0	0	0	Radio Madan	Trek
		4.Gokto Str/School A/po	346	105	Gokto AP	99	36	52	05.11.21	1	1	0	3	Radio Madan	Trek
		5.Mui	350	374	Gokto AP	358	100	204	12.11.21	1	1	0	12	Radio Madan	Trek
		6.Pera	147	299	Gokto AP	126	36	78	20.11.21	1	1	0	1	Radio Madan	Trek
		7.Nomare	256	368	Gokto AP	261	83	161	12.11.21	1	1	0	0	Radio Madan	Trek
2	WARD 2		1,779	2,051		2,015	363	1,001		7	7	0	196		
		1.Jakipuat	107	157	Aiome HC	159	30	83	22.11.21	1	1	0	15	NBC Madang	Road/boat
		2.Litibu	539	587	Annaberg HC	462	72	225	25.11.21	1	1	0		NBC	River
		3.Unduvagu	128	266	Aiome HC	138	30	75	22.11.21	1	1	0	7	NBC Madang	Road/Trek
		4.Wobu	530	418	Annaberg HC	356	57	172	25.11.21	1	1	0	172	NBC	River
		6.Alongo	159	110	Annaberg HC	265	36	124	25.11.21	1	1	0		NBC	River
		7.Kolum	178	165	Annaberg HC	243	65	128	25.11.21	1	1	0	2	NBC	River
		8.Lorabu	138	349	Annaberg HC	392	73	194	25.11.21	1	1	0		NBC	River
3	WARD 3		962	1,048		1,141	200	588		4	4	0	61		
		1.Atiapi	268	260	Aiome HC	253	45	128	22.11.21	1	1	0	27	NBC Madang	Road/Trek
		2.Dobarat	400	472	Aiome HC	582	99	304	22.11.21	1	1	0	32	NBC Madang	Road/Trek
		3.Ambiat	117	76	Aiome HC	55	8	30	22.11.21	1	1	0	2	NBC Madang	Road/Trek
		4.Anigoim	176	239	Aiome HC	251	48	126	22.11.21	1	1	0	0	NBC Madang	Road/Trek
4	WARD 4		1,285	1,394		1,377	244	710		3	3	0	147		
		1.Djam	593	668	Annaberg HC	723	129	373	20.11.21	1	1	0	87	NBC	River
		2.Jitibu	602	597	Annaberg HC	536	96	276	20.11.21	1	1	0	44	NBC	River
		3.Annaberg Community C	90	129	Annaberg HC	118	19	61	20.11.21	1	1	0	16	NBC	River
5	WARD 5		1,304	1,709		1,761	348	930		4	4	0	206		
		1.Moibu	358	406	Annaberg HC	406	77	218	22.11.21	1	1	0	53	NBC	River
		2.Nambabu	197	183	Annaberg HC	220	59	123	22.11.21	1	1	0	42	NBC	River
		3.Wrebu	599	998	Annaberg HC	917	162	474	24.11.21	1	1	0	77	NBC	River/Trek
		4.Banggrobu	149	122	Annaberg HC	218	50	115	23.11.21	1	1	0	34	NBC	River
6	WARD 6		1,308	1,275		1,348	232	714		6	6	0	143		
		Gragebu	239	238	Annaberg HC	206	40	107	16.11.21	1	1	0	25	NBC	River
		Sabu	241	305	Annaberg HC	288	50	156	16.11.21	1	1	0	25	NBC	River
		Buramba	243	208	Annaberg HC	252	49	131	16.11.21	1	1	0	29	NBC	River
		Buro	124	102	Annaberg HC	95	12	52	16.11.21	1	1	0	8	NBC	River
		Wukibu	342	329	Annaberg HC	375	59	192	16.11.21	1	1	0	44	NBC	River
		Bitobu	119	94	Annaberg HC	132	22	76	17.11.21	1	1	0	12	NBC	River
7	WARD 7		1,283	1,338		1,268	239	662		5	5	0	101		
		1.Nodabu	394	543	Annaberg HC	361	77	185	17.11.21	1	1	0	41	NBC	River
		2.Igratibu	149	147	Annaberg HC	147	24	77	17.11.21	1	1	0	7	NBC	River
		3.Jotabu	153	178	Annaberg HC	164	31	86	17.11.21	1	1	0	18	NBC	River
		4.Lingribu	553	404	Annaberg HC	435	82	233	17.11.21	1	1	0	24	NBC	River
		5.Nodabu Government S	34	66	Annaberg HC	161	25	81	17.11.21	1	1	0	11	NBC	River
8	WARD 8		964	1,079		1,223	228	633		3	3	0	76		
		1.Paibu	564	178	Annaberg HC	303	53	151	18.11.21	1	1	0	13	NBC	River
		2.Badobu & Balabu S/ch	306	523	Annaberg HC	475	82	246	18.11.21	1	1	0	47	NBC	River
		3.Goribu	94	378	Annaberg HC	445	93	236	18.11.21	1	1	0	16	NBC	River
9	WARD 9		1,105	1,318		1,362	222	723		2	2	0	97		
		1.Dibu	501	680	Annaberg HC	633	98	335	19.11.21	1	1	0	36	NBC	River
		2.Watabu	604	638	Annaberg HC	729	124	388	19.11.21	1	1	0	61	NBC	River
10	WARD 10		1,167	1,297		1,276	202	625		4	3	0	20		
		1.Grengabu	478	541	Kwanga HC	560	92	278	26.11.21	1	1	0	0	FM	Previously covered under Annaberg HC
		2.Kwetobu	254	296	Kwanga HC	313	46	153	26.11.21	1	1	0	10	FM	Previously covered under Annaberg HC
		3.Truma	86	460	Kwanga HC	403	64	194	26.11.21	1	1	0	10	FM	Previously covered under Annaberg HC
		4.Wleta	350	0	Kwanga HC					1					Non existent
11	WARD 11		1,595	1,687		1,542	225	757		5	5	0	5		
		1.Chungribu	415	464	Kwanga HC	438	66	214	26.11.21	1	1	0	0	FM	Previously covered under Annaberg HC
		2.Banum	300	215	Kwanga HC	218	33	114	26.11.21	1	1	0	0	FM	Previously covered under Annaberg HC
		3.Pakingasu	631	612	Kwanga HC	633	85	306	26.11.21	1	1	0	0	FM	Previously covered under Annaberg HC
		4.Ronebu	182	306	Kwanga HC	225	35	109	26.11.21	1	1	0	5	FM	Previously covered under Annaberg HC
		5.Chrungribu C/sch/miss	67	89	Kwanga HC	28	6	14	26.11.21	1	1	0	0	FM	Previously covered under Annaberg HC
12	WARD 12		1,645	1,865		1,899	324	938		5	5	0	3		
		1.Limbubu	555	631	Kwanga HC	689	124	342	20.11.21	1	1	0	0	FM	Boat
		2.Wangebu	283	418	Kwanga HC	328	50	158	20.11.21	1	1	0	0	FM	Boat
		3.Chungri	247	186	Kwanga HC	279	50	141	20.11.21	1	1	0	3	FM	Boat
		4.Nuibu	210	304	Kwanga HC	314	50	152	20.11.21	1	1	0	0	FM	Boat
		5.Wanka	350	325	Kwanga HC	289	50	145	20.11.21	1	1	0	0	FM	Boat
13	WARD 13		2,129	2,285		2,056	314	1,032		4	4	0	0		
		1.Kwanga	509	651	Kwanga HC	579	96	288	19.11.21	1	1	0	0	FM	River
		2.Larebu	631	722	Kwanga HC	748	100	379	19.11.21	1	1	0	0	FM	River
		3.Vinanda	845	706	Kwanga HC	495	80	248	19.11.21	1	1	0	0	FM	River

LLG	WARD	VILLAGE	Estimated 2018 Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
		4.Kwanga Station	145	206	Kwanga HC	234	38	117	19.11.21	1	1	0	0	FM	River
14	WARD 14		2,194	2,224		2,332	434	1,180		5	5	0	0		
		1.Askunka	138	645	Kwanga HC	755	135	382	22.11.21	1	1	0	0	FM	Boat/Trek/Boat
		2.Igana	419	241	Kwanga HC	401	74	204	22.11.21	1	1	0	0	FM	Boat/Trek/Boat
		3.Kominimung	532	376	Kwanga HC	490	100	251	22.11.21	1	1	0	0	FM	Boat/Trek/Boat
		4.Bvoasma	750	590	Kwanga HC	397	75	197	22.11.21	1	1	0	0	FM	Boat/Trek/Boat
		5.Nema	354	372	Kwanga HC	289	50	146	22.11.21	1	1	0	0	FM	Boat/Trek/Boat
15	WARD 15		2,586	3,250		3,214	528	1,570		2	2	0	0		
		1.Misingi	1,262	1,306	Kwanga HC	1,309	222	645	20.11.21	1	1	0	0	FM	Boat
		2.Romkun	1,325	1,945	Kwanga HC	1,905	306	925	20.11.21	1	1	0	0	FM	Boat
16	WARD 16		1,341	2,099		2,383	327	1,168		3	3	0	0		
		1.Nabringi	509	276	Kwanga HC	332	37	149	21.11.21	1	1	0	0	FM	Boat/Trek
		2.Zumbar	832	1,527	Kwanga HC	1,719	247	868	20.11.21	1	1	0	0	FM	Boat
		3.Manvik		296	Kwanga HC	332	43	151	22.11.21	1	1	0	0	FM	Boat/Trek
17	WARD 17		1,140	1,008		1,120	207	588		4	4	0	38		
		1.Bumbera	549	374	Annaberg HC	575	97	308	23.11.21	1	1	0	17	NBC	River/Trek
		2.Jabis	128	139	Annaberg HC	184	37	94	23.11.21	1	1	0	3	NBC	River/Trek
		3.Nagru	333	371	Annaberg HC	314	65	162	22.11.21	1	1	0	12	NBC	River/Trek
		4.Bumbera Community s	130	125	Annaberg HC	47	8	24	23.11.21	1	1	0	6	NBC	River/Trek
18	WARD 18		767	771		803	140	419		2	2	0	23		
		1.Bunungom	381	361	Annaberg HC	347	53	183	23.11.21	1	1	0	7	NBC	River/Trek
		2.Boro	386	409	Annaberg HC	456	87	236	23.11.21	1	1	0	16	NBC	River/Trek
19	WARD 19		1,203	1,570		1,643	289	899		6	6	0	112		
		1.Gosingi	199	267	Annaberg HC	301	50	161	22.11.21	1	1	0	13	NBC	River/Trek
		2.Naresa	178	274	Annaberg HC	281	46	143	22.11.21	1	1	0	9	NBC	River/Trek
		3.Briti	260	343	Annaberg HC	400	70	215	22.11.21	1	1	0	37	NBC	River/Trek
		4.Jelto	189	195	Annaberg HC	204	42	114	22.11.21	1	1	0	11	NBC	River/Trek
		5.Zuto & Zango	182	237	Annaberg HC	181	31	118	22.11.21	1	1	0	14	NBC	River/Trek
		6.Womrom	195	255	Annaberg HC	276	50	148	22.11.21	1	1	0	28	NBC	River/Trek
20	WARD 20		960	980		994	244	503		4	4	0	0		
		1.Brokoto	237	187	Gokto AP	237	50	112	20.11.21	1	1	0	0	Radio Madang	Previously covered under Annaberg HC
		2.Melete	168	250	Gokto AP	223	39	113	20.11.21	1	1	0	0	Radio Madang	River/Trek
		3.Mimsi	419	387	Gokto AP	363	105	189	20.11.21	1	1	0	0	Radio Madang	River/Trek
		4.Kikibu	136	156	Gokto AP	171	50	89	20.11.21	1	1	0	0	Radio Madang	River
21	WARD 21		516	1,247		1,065	166	520		2	2	0	1		
		1.Akurukai	243	365	Kwanga HC	372	66	186	20.11.21	1	1	0	1	FM	Boat
		2.Andamang	272	883	Kwanga HC	693	100	334	20.11.21	1	1	0	0	FM	Boat
22	WARD 22		459	729		753	148	373		3	3	0	0		
		1.Wawapi	153	237	Kwanga HC	232	48	116	20.11.21	1	1	0	0	FM	Boat/Trek
		2.Bunapi	54	149	Kwanga HC	283	50	142	20.11.21	1	1	0	0	FM	Boat/Trek
		3.Pinamara	251	343	Kwanga HC	238	50	115	20.11.21	1	1	0	0	FM	Boat/Trek
23	WARD 23		773	925		1,087	184	527		1	1	0	26		
		1.Ipikondor	773	925	Aiome HC	1,087	184	527	24.11.21	1	1	0	26	NBC Madang	Road/Boat/Trek
24	WARD 24		639	672		574	93	281		1	1	0	31		
		1.Irarapi	639	672	Aiome HC	574	93	281	26.11.21	1	1	0	31	NBC Madang	Road/Boat/Trek
25	WARD 25		690	917		810	129	394		3	3	0	22		
		1.Awam	268	315	Aiome HC	243	36	116	23.11.21	1	1	0	4	NBC Madang	Road/Boat/Trek
		2.Isowak	289	374	Aiome HC	306	50	151	23.11.21	1	1	0	15	NBC Madang	Road/Boat/Trek
		3.Iwam	132	229	Aiome HC	261	43	127	23.11.21	1	1	0	3	NBC Madang	Road/Boat/Trek
26	WARD 26		956	958		916	158	453		6	6	0	16		
		1.Akavangu	86	99	Aiome HC	117	20	58	23.11.21	1	1	0	0	NBC Madang	Road/Boat/Trek
		2.Longar	92	58	Aiome HC	69	11	34	23.11.21	1	1	0	0	NBC Madang	Road/Boat/Trek
		3.Nambinj	210	213	Aiome HC	186	27	91	23.11.21	1	1	0	5	NBC Madang	Road/Boat/Trek
		4.Pasinkap	316	313	Aiome HC	322	62	159	23.11.21	1	1	0	4	NBC Madang	Road/Boat/Trek
		5.Iriwas	203	192	Aiome HC	176	26	86	23.11.21	1	1	0	0	NBC Madang	Road/Boat/Trek
		6.Pasinkap Community S	48	83	Aiome HC	46	12	25	23.11.21	1	1	0	7	NBC Madang	Road/Boat/Trek
27	WARD 27		715	754		838	137	366		2	2	0	16		
		1.Astangu	275	319	Aiome HC	378	62	183	24.11.21	1	1	0	5	NBC Madang	Road/Boat/Trek
		2.Itarangu	440	435	Aiome HC	460	75	183	24.11.21	1	1	0	11	NBC Madang	Road/Boat/Trek
28	WARD 28		690	298		501	83	247		2	1	0	53		
		1.Atembie	690	298	Aiome HC	501	83	247	27.11.21	1	1	0	53	NBC Madang	Road/Boat/Trek
		2. Iwam		0	Aiome HC					1					River
29	WARD 29		775	645		583	114	301		3	3	0	62		
		1.poraitz	270	213	Aiome HC	175	34	89	20.11.21	1	1	0	23	NBC Madang	Road
		2.Kurakem	226	211	Aiome HC	156	30	80	20.11.21	1	1	0	11	NBC Madang	Road/Trek
		3.Mauachich	279	221	Aiome HC	252	50	132	20.11.21	1	1	0	28	NBC Madang	Road/Trek
30	WARD 30		1,264	1,020		970	192	499		1	1	0	161		
		1.Iragarat	1,264	1,020	Aiome HC	970	192	499	20.11.21	1	1	0	161	NBC Madang	Road
31	WARD 31		1,144	1,225		1,206	210	611		2	2	0	143		
		1.Animuk	413	706	Aiome HC	677	110	342	20.11.21	1	1	0	56	NBC Madang	Road
		2.Aiome Govt. Station	731	519	Aiome HC	529	100	269	20.11.21	1	1	0	87	NBC Madang	Road
32	WARD 32		1,232	785		806	149	407		2	2	0	69		
		1.Apanam	666	504	Aiome HC	636	119	320	22.11.21	1	1	0	49	NBC Madang	Road
		2.Mombasap	566	282	Aiome HC	170	30	87	22.11.21	1	1	0	20	NBC Madang	Road
33	WARD 33			538		554	95	293		2	2	0	36		
		Jogoi 1		320	Annaberg HC	284	50	153	15.11.21	1	1	0	17	NBC	Previously covered under Aiome
		Jogoi 2		219	Annaberg HC	270	45	140	15.11.21	1	1	0	19	NBC	Previously covered under Aiome
34	WARD 34		1,241	1,166		1,260	200	643		4	4	0	0		
		1.Sotobu	553	426	Kwanga HC	462	71	240	22.11.21	1	1	0	0	FM	Boat
		2.Gramapon	272	385	Kwanga HC	512	81	260	22.11.21	1	1	0	0	FM	Boat
		3.Potebu	415	356	Kwanga HC	219	36	108	22.11.21	1	1	0	0	FM	Boat
		4.Kmokmo		0	Kwanga HC	67	12	35	22.11.21	1	1	0	0	FM	Boat

LLG	WARD	VILLAGE	Estimated 2018 Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
JOSEPHSTAAL RURAL			31,781	34,888		30,079	5,168	15,495		101	96	0	163	65	
1	WARD 1		1,945	2,003		1,584	254	764		4	4	0	0		
		1.Ingawaia	545	551	Josephstaal HC	489	85	232	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
		2.Isaraken	660	644	Josephstaal HC	470	69	237	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
		3.Mutungu	375	384	Josephstaal HC	336	50	159	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
		4.Oyemken	365	425	Josephstaal HC	289	50	136	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
2	WARD 2		1,519	1,953		1,614	234	838		3	3	0	7		
		1.Bogen	784	805	Josephstaal HC	779	100	394	19.11.21	1	1	0	0	Radio Madang	Trek 10 Hours
		2.Misivindi	304	321	Josephstaal HC	229	41	125	19.11.21	1	1	0	7	Radio Madang	Trek 10 Hours
		3.Ungei	432	827	Josephstaal HC	606	93	319	19.11.21	1	1	0	0	Radio Madang	Trek 10 Hours
3	WARD 3		1,312	1,143		1,144	184	587		4	4	0	15		
		1.Osum	266	247	Josephstaal HC	259	31	125	16.11.21	1	1	0	7	Radio Madang	Trek 4 Hours
		2.Pondoma	365	268	Josephstaal HC	226	36	118	16.11.21	1	1	0	0	Radio Madang	Trek 2 Hours
		3.Suanjambi	404	329	Josephstaal HC	341	67	165	16.11.21	1	1	0	6	Radio Madang	Trek 2 Hours
		4.Yigibugor	277	299	Josephstaal HC	318	50	179	16.11.21	1	1	0	2	Radio Madang	Trek 4 Hours
4	WARD 4		1,362	1,348		1,392	231	680		4	4	0	11		
		1.Avunmakai	222	216	Josephstaal HC	209	31	107	16.11.21	1	1	0	0	Radio Madang	Trek 3 Hours
		2.Makapai	243	232	Josephstaal HC	261	50	134	16.11.21	1	1	0	0	Radio Madang	Trek 3 Hours
		3.Purpur	176	377	Josephstaal HC	323	65	165	16.11.21	1	1	0	0	Radio Madang	Trek 3 Hours
		4.Uvorai	721	523	Josephstaal HC	599	85	274	16.11.21	1	1	0	11	Radio Madang	Trek 3 Hours
5	WARD 5		2,117	2,123		2,296	357	1,169		7	7	0	28		
		1.Evuar	254	265	Josephstaal HC	237	47	125	20.11.21	1	1	0	2	Radio Madang	Trek 4 Hours
		2.Ikundun	340	399	Josephstaal HC	363	50	186	20.11.21	1	1	0	0	Radio Madang	Trek 4 Hours
		3.Mindivi	449	417	Josephstaal HC	508	67	250	20.11.21	1	1	0	4	Radio Madang	Trek 4 Hours
		4.Timandapuar	176	126	Josephstaal HC	177	34	92	20.11.21	1	1	0	5	Radio Madang	Trek 4 Hours
		5.Hutar	474	248	Josephstaal HC	243	39	129	20.11.21	1	1	0	6	Radio Madang	Trek 4 Hours
		6.Armind	425	407	Josephstaal HC	476	74	231	20.11.21	1	1	0	2	Radio Madang	Trek 4 Hours
		7.Dogodogo		261	Josephstaal HC	292	46	156	20.11.21	1	1	0	9	Radio Madang	Trek 4 Hours
6	WARD 6		2,502	2,446		2,381	390	1,254		6	6	0	24		
		1.Mandugar	247	345	Josephstaal HC	265	50	167	20.11.21	1	1	0	13	Radio Madang	Trek
		2.Tumbudugui	499	389	Josephstaal HC	403	68	220	20.11.21	1	1	0	0	Radio Madang	Trek
		3.Osum	704	736	Josephstaal HC	676	116	353	20.11.21	1	1	0	0	Radio Madang	Trek
		4.Waiateng	394	482	Josephstaal HC	464	56	226	20.11.21	1	1	0	0	Radio Madang	Trek
		5.Waititangu	304	292	Josephstaal HC	330	67	174	20.11.21	1	1	0	11	Radio Madang	Trek
		6.Josephstaal Station	354	202	Josephstaal HC	243	33	114	20.11.21	1	1	0	0	Radio Madang	Trek
7	WARD 7		1,262	1,445		1,132	166	538		3	3	0	4		
		1.Arimbugor	446	520	Josephstaal HC	417	58	195	18.11.21	1	1	0	2	Radio Madang	Trek 4 Hours
		2.Pangasap	570	545	Josephstaal HC	547	79	260	18.11.21	1	1	0	1	Radio Madang	Trek 8 Hours
		3.Ibubue	245	379	Josephstaal HC	168	29	83	18.11.21	1	1	0	1	Radio Madang	Trek 8 Hours
8	WARD 8		627	513		458	79	219		1	1	0	0		
		1.Kisila/Simbar	627	513	Josephstaal HC	458	79	219	17.11.21	1	1	0	0	Radio Madang	Trek 3 Hours 45 Mins
9	WARD 9		945	929		956	175	503		3	3	0	3		
		1.labaranga	184	164	Josephstaal HC	154	33	77	18.11.21	1	1	0	1	Radio Madang	Trek 12 Hours
		2.Kokopogosa	239	268	Josephstaal HC	269	46	130	18.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
		3.Tindiginai	522	497	Josephstaal HC	533	96	296	18.11.21	1	1	0	2	Radio Madang	Trek 2 Hours 30 Mins
10	WARD 10		566	482		258	48	135		2	2	0	12		
		1.Kangaragate	344	319	Josephstaal HC	154	29	80	18.11.21	1	1	0	10	Radio Madang	Trek 2 Days
		2.Sisilika	222	164	Josephstaal HC	104	19	55	18.11.21	1	1	0	2	Radio Madang	Trek 2 Days
11	WARD 11		516	472		516	94	249		2	2	0	0		
		1.Yamamuk	247	174	Josephstaal HC	229	44	108	18.11.21	1	1	0	0	Radio Madang	Trek
		2.Makrandama	268	298	Josephstaal HC	287	50	141	18.11.21	1	1	0	0	Radio Madang	Trek
12	WARD 12		262	271		330	48	164		1	1	0	10		
		1.Inasi	262	271	Josephstaal HC	330	48	164	20.11.21	1	1	0	10	Radio Madang	Trek
13	WARD 13		1,060	1,164		1,203	200	694		3	3	0	0		
		1.Amjaivuvu	503	316	Josephstaal HC	273	50	152	21.11.21	1	1	0	0	Radio Madang	Trek
		2.Maumeko	419	433	Josephstaal HC	646	100	378	21.11.21	1	1	0	0	Radio Madang	Trek
		3.Mavundi	138	415	Josephstaal HC	284	50	164	21.11.21	1	1	0	0	Radio Madang	Trek
14	WARD 14		1,320	1,798		1,749	238	853		5	5	0	0		
		1.Angasa	205	412	Josephstaal HC	341	48	157	19.11.21	1	1	0	0	Radio Madang	Trek 1 Hr 30 Mins
		2.Katiati	560	500	Josephstaal HC	586	81	293	19.11.21	1	1	0	0	Radio Madang	Trek 3 Hours
		3.Niksapai	176	241	Josephstaal HC	167	32	82	19.11.21	1	1	0	0	Radio Madang	Trek 1 hr 45 Mins
		4.Imunangai	153	165	Josephstaal HC	235	34	113	19.11.21	1	1	0	0	Radio Madang	Trek
		5.Muiamgumgu	226	480	Josephstaal HC	420	43	208	19.11.21	1	1	0	0	Radio Madang	Trek 6 Hours
15	WARD 15		849	4,194		1,011	188	538		3	3	0	0		
		1.Kaibugu	300	172	Josephstaal HC	201	34	101	19.11.21	1	1	0	0	Radio Madang	Trek 6 Hours
		2.Mranget	331	3,625	Josephstaal HC	384	73	208	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
		3.Tevari	218	397	Josephstaal HC	426	81	229	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
16	WARD 16		710	654		670	123	323		4	4	0	0		
		1.Iwarai	145	132	Josephstaal HC	145	29	76	18.11.21	1	1	0	0	Radio Madang	Trek
		2.Turagiri	205	255	Josephstaal HC	243	42	108	18.11.21	1	1	0	0	Radio Madang	Trek
		3.Wgowind	199	138	Josephstaal HC	79	18	45	18.11.21	1	1	0	0	Radio Madang	Trek
		4.Aiwgor	161	129	Josephstaal HC	203	34	94	18.11.21	1	1	0	0	Radio Madang	Trek
17	WARD 17		1,165	1,023		1,057	186	570		2	2	0	0		
		1.Kinbugor	549	532	Josephstaal HC	541	98	302	19.11.21	1	1	0	0	Radio Madang	Trek 2 Hours
		2.Kundibingi	616	491	Josephstaal HC	516	88	268	19.11.21	1	1	0	0	Radio Madang	Trek 2 Hours
18	WARD 18		543	723		790	120	391		3	3	0	33		
		1.Aragnam	249	371	Josephstaal HC	319	50	149	19.11.21	1	1	0	19	Radio Madang	Trek 10 Hours
		2.Indawaia	203	233	Josephstaal HC	218	30	108	19.11.21	1	1	0	0	Radio Madang	Trek 8 Hours
		3.Awanzy	90	119	Josephstaal HC	253	40	134	19.11.21	1	1	0	14	Radio Madang	Trek 8 Hours
19	WARD 19		2,358	2,519		2,385	400	1,321		5	5	0	16		
		1.Ambok	560	457	Josephstaal HC	383	69	202	19.11.21	1	1	0	1	Radio Madang	Trek 12 Hours
		2.Gotepuk	486	460	Josephstaal HC	511	87	301	19.11.21	1	1	0	0	Radio Madang	Trek
		3.Yangaret	371	400	Josephstaal HC	428	77	223	19.11.21	1	1				

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20	WARD 20		826	1,481		1,507	323	752		8	3	0	0		
		1.Kamambu	205	203	Wanuma HC	173	49	85	26.11.21	1	0	0	0		Trek
		2.Kumbuna	163	126	Wanuma HC	194	34	98	10.11.21	1	0	0	0		Trek
		3.Sereven	285	522	Wanuma HC	241	50	117	10.11.21	1	0	0	0		Trek
		Sereven 2			Wanuma HC	296	67	151	23.11.21	1	0	0	0		
		4.Kavai	172	126	Wanuma HC	165	31	84	10.11.21	1	0	0	0		Trek
		5.Iringi		177	Wanuma HC	93	29	49	26.11.21	1	1	0	0		Trek
		6.Imam		98	Wanuma HC	213	38	98	26.11.21	1	1	0	0		Trek
		7.Babaran		230	Wanuma HC	132	25	70	26.11.21	1	1	0	0		Trek
21	WARD 21		1,077	857		795	205	386		5	5	0	0		
		1.Sangur Sangur	256	107	Wanuma HC	168	37	83	10.11.21	1	1	0	0		1 hour Trek
		2.Ubriyautau	293	261	Wanuma HC	263	73	120	10.11.21	1	1	0	0		1 hour Trek
		3.Wanuma	310	112	Wanuma HC	161	44	80	10.11.21	1	1	0	0		1 hour Trek
		4.Wanuma Station	218	220	Wanuma HC	85	27	44	10.11.21	1	1	0	0		1 hour Trek
		5.Sarime		157	Wanuma HC	118	24	59	10.11.21	1	1	0	0		1 hour Trek
22	WARD 22		1,234	863		614	146	335		4	4	0	0		
		1.Munimataman	132	151	Wanuma HC	77	19	38	24.11.21	1	1	0	0		3 hours Trek
		2.Jabsau 1&2	415	308	Wanuma HC	222	47	119	24.11.21	1	1	0	0		3 hours Trek
		3.Kawat	279	162	Wanuma HC	139	32	82	24.11.21	1	1	0	0		3 hours Trek
		4.Amamit	409	241	Wanuma HC	176	48	96	24.11.21	1	1	0	0		3 hours Trek
23	WARD 23		690	372		347	65	165		2	2	0	0		
		1.Atitau	455	227	Wanuma HC	206	39	97	17.11.21	1	1	0	0		Whole Day Trek
		2.Yaria	235	146	Wanuma HC	141	26	68	17.11.21	1	1	0	0		Whole Day Trek
24	WARD 24		1,201	1,092		1,141	206	570		5	5	0	0		
		1.Arimtau	409	408	Wanuma HC	432	75	210	24.11.21	1	1	0	0		6 Hour Trek
		2.Megilan 1	235	228	Wanuma HC	247	46	123	17.11.21	1	1	0	0		6 Hour Trek
		3.Megilan 2	239	279	Wanuma HC	93	15	47	17.11.21	1	1	0	0		6 Hour Trek
		4.Sirausi	319	177	Wanuma HC	154	33	83	17.11.21	1	1	0	0		6 Hour Trek
		5. Irim		NEW	Wanuma HC	215	37	107	10.11.21	1	1	0	0		
25	WARD 25		2,492	1,883		1,696	322	918		7	7	0	0		
		1.Abasakul 1	805	275	Wanuma HC	388	82	217	12.12.21	1	1	0	0		3 Days Trek
		2.Abasakul 2	390	515	Wanuma HC	272	45	148	11.12.21	1	1	0	0		3 Days Trek
		3.Avatamur	180	185	Wanuma HC	185	32	103	12.12.21	1	1	0	0		3 Days Trek
		4.Evechil	394	256	Wanuma HC	249	46	126	03.12.21	1	1	0	0		3 Days Trek
		5.Utergum	279	196	Wanuma HC	237	46	128	03.12.21	1	1	0	0		3 Days Trek
		6.Kokoma	239	208	Wanuma HC	185	40	96	03.12.21	1	1	0	0		3 Days Trek
		7.Pusilai	205	249	Wanuma HC	180	31	100	04.12.21	1	1	0	0		3 Days Trek
26	WARD 26		1,320	1,136		1,053	186	579		5	5	0	0		
		1.Kokomasak	327	119	Wanuma HC	259	34	131	12.12.21	1	1	0	0		3 Days Trek
		2.Kumbubua	266	184	Wanuma HC	222	50	115	04.12.21	1	1	0	0		3 Days Trek
		6.Kumbubua 2		232	Wanuma HC										Same village as above
		3.Kaukaval	128	107	Wanuma HC	130	24	73	12.12.21	1	1	0	0		3 Days Trek
		4.Porosae	348	266	Wanuma HC	214	43	124	04.12.21	1	1	0	0		3 Days Trek
		5.Mutuvav	251	229	Wanuma HC	228	35	136	12.12.21	1	1	0	0		3 Days Trek
				0											
SIMBAI RURAL			49,793	42,061		36,268	6,844	18,936		53	53	2	1,590	25	
1	SALEMP		1,710	1,756		1,984	321	1,009		7	7	0	17		49,793
		1.Salemp (008)	1,710	668	Dusim AS	514	83	259	24.11.21	1	1	0	8	NBC & FM	1 hr Trek
		2. Dusin		1,088	Dusim AS	461	69	239	22.11.21	1	1	0	8	NBC & FM	2-3 hrs Trek
		3 Wilim			Dusim AS	244	37	123	26.11.21	1	1	0	0	Nil	2 hrs Trek
		4 Yend			Dusim AS	55	17	28	22.11.21	1	1	0	1	NBC & FM	2 hrs Trek
		5 Wulmil			Dusim AS	161	25	85	23.11.21	1	1	0	0	NBC & FM	2 hrs Trek
		6 Halabang			Dusim AS	207	40	105	26.11.21	1	1	0	0	NBC & FM	2 hrs Trek
		7 Ganzil			Dusim AS	342	50	170	27.11.21	1	1	0	0	NBC & FM	2 hrs Trek
2	SONGUAK		1,402	1,728		1,569	241	805		1	1	0	15		
		1.Songuak (009)	1,402	1,728	Dusim AS	1,569	241	805	23.11.21	1	1	0	15	NBC & FM	1 hr Trek
3	ARANAM		1,652	1,272		1,232	211	625		2	2	0	1		
		1.Aranam (003)	713	699	Dusim AS	525	91	272	25.11.21	1	1	0	1	NBC & FM	2 hrs Trek
		2.Wowo (001)	939	573	Dusim AS	707	120	353	25.11.21	1	1	0	0	NBC & FM	2 hrs Trek
4	AINONG		1,448	766		735	149	374		1	1	0	20		
		1.Ainong (001)	1,448	766	Dusim AS	735	149	374	23.11.21	1	1	0	20	NBC & FM	2-3 hrs Trek
5	WOMUK		2,257	1,633		1,122	200	591		1	1	0	21		
		1.Womuk (010)	2,257	1,633	Simbai HC	1,122	200	591	21.11.21	1	1	0	21		5hrs Trek
6	KAIRONK		1,612	999		855	157	456		1	1	0	157		
		1.Kaironk	1,612	999	Simbai HC	855	157	456	21.11.21	1	1	0	157		5hrs Trek
7	FUNGOI		1,199	681		457	80	236		1	1	0	22		
		1.Fungoi	1,199	681	Simbai HC	457	80	236	21.11.21	1	1	0	22		4hrs Trek
8	FUNDUM		1,522	1,044		1,190	233	619		1	1	0	30		
		1.Fundum	1,522	1,044	Simbai HC	1,190	233	619	25.11.21	1	1	0	30		1hr Trek
9	GAVUN		2,567	2,283		1,709	314	894		1	1	0	149		
		1.Gavun (002)	2,567	2,283	Simbai HC	1,709	314	894	23.11.21	1	1	0	149		1hr Trek
10	NUGUNT		2,695	2,758		2,543	503	1,323		1	1	0	79		
		1.Nugunt (010)	2,695	2,758	Simbai HC	2,543	503	1,323	25.11.21	1	1	0	79		1hr Trek
11	KOKI		1,769	1,417		1,321	313	718		1	1	0	258		
		1.Koki (006)	1,769	1,417	Simbai HC	1,321	313	718	22.11.21	1	1	0	258		4 hrs Trek
12	YAMBUNGLEM		1,325	994		751	148	381		1	1	0	35		
		1.Yambunglem (011)/Ya	1,325	994	Simbai HC	751	148	381	24.11.21	1	1	0	35		8 hrs Trek
13	KREVIN		1,723	1,341		1,194	242	614		2	2	0	107		
		1.Krevin (007)	1,406	1,018	Simbai HC	965	192	487	21.11.21	1	1	0	98		10 hrs Trek
		2.Muriki (009)	316	323	Simbai HC	229	50	127	21.11.21	1	1	0	9		10 hrs Trek
14	KURUMDEK		1,685	1,302		1,074	209	564		2	2	0	122		
		1.Kurumdek (008)	1,249	783	Simbai HC	621	109	330	21.11.21	1	1	0	68		8 hrs Trek
		2.Yomineki	436	519	Simbai HC	453	100	234	21.11.21	1	1	0	54		5hrs Trek
15	KANDUM		1,727	2,102		1,967	366	1,025		3	3	0	66		
		1.Alunk (002)	625	583	Simbai HC	585	98	300	21.11.21	1	1	0	30		8hrs Trek

LLG	WARD	VILLAGE	Estimated 2018 Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
		2.Kandum (005)	1,102	727	Simbai HC	774	150	418	21.11.21	1	1	0	9		6 hours Trek
		3.Imnalem		792	Simbai HC	608	118	307	22.11.21	1	1	0	27		2 Days Trek
16	TINAM		1,138	966		986	174	510		2	2	0	21		
		1.Gringi (004)	604	427	Simbai HC	561	100	294	22.11.21	1	1	0	0		8 hours Trek
		2.Tinam (010)	534	538	Simbai HC	425	74	216	22.11.21	1	1	0	21		6hrs Trek
17	AIGRAM		1,467	2,077		1,007	223	550		4	4	0	26		
		1.Aigram (010)	606	731	Simbai HC	591	150	332	21.11.21	1	1	0	0		1day Trek
		2.Karap (006)	340	361	Simbai HC	122	22	62	22.11.21	1	1	0	0		1day Trek
		3.Amar	319	571	Simbai HC	137	21	70	23.11.21	1	1	0	11		1day Trek
		4.Mambasap	203	414	Simbai HC	157	30	86	22.11.21	1	1	0	15		2 days Trek
18	KAMBANENG		1,580	1,684		1,073	255	597		1	1	0	65		
		1.Kambeneng (005)	1,580	1,684	Simbai HC	1,073	255	597	23.11.21	1	1	0	65		2 hours Trek
19	BABAIMP		1,597	1,417		1,554	286	817		1	1	0	89		
		1.Babaiimp/Komerau	1,597	1,417	Simbai HC	1,554	286	817	25.11.21	1	1	0	89		5 hours Trek
20	KUMBRUF		2,844	2,514		2,122	468	1,139		1	1	0	112		
		1.Kumbruf (008)	2,844	2,514	Simbai HC	2,122	468	1,139	23.11.21	1	1	0	112		4 hrs Trek
21	Tsungup		2,115	1,843		1,442	246	756		3	3	0	138		
		1.Kongrau (003)	840	646	Simbai HC	503	90	256	22.11.21	1	1	0	68		7 hrs (1day Trek)
		2.Tsungup (011)	771	815	Simbai HC	398	69	218	22.11.21	1	1	0	22		8hrs 30 mins (1day Trek)
		3.Kokangi	503	381	Simbai HC	541	87	282	22.11.21	1	1	0	48		7hrs Trek (1 Day)
22	HANGAPLE		1,706	1,179		1,019	197	501		2	2	0	2		
		1.Hangaple (001)	1,706	566	Sangapi HC	481	97	233	23.11.21	1	1	0	2	NBC Madang	4-5Hrs Trek
		2. Yumb		612	Dusim AS	538	100	268	24.11.21	1	1	0	0	NBC & FM	Air Stript
23	ARADEP		1,452	1,396		1,403	211	707		3	3	0	12		
		1.Aradep (002)	794	684	Sangapi HC	704	103	350	24.11.21	1	1	0	12	NBC Madang	2-3hrs Trek
		2.Fankfank/Fitako	658	228	Sangapi HC	281	44	147	23.11.21	1	1	0	0	NBC Madang	3-4Hrs Trek
		3.Fatako		485	Sangapi HC	418	64	210	23.11.21	1	1	0	0	NBC Madang	3-4Hrs Trek
24	SANGAPI		1,939	1,597		1,636	298	813		1	1	0	26		
		1.Sangapi (012)	1,939	1,597	Sangapi HC	1,636	298	813	21.11.21	1	1	0	26	NBC Madang	Aifield Here
25	WARD 25		989	822		902	157	452		3	3	0	0		
		1.Dangu (003) Kauro	233	182	Sangapi HC	174	42	90	24.11.21	1	1	0	0	NBC Madang	1 Day Trek
		2.Goimbam (011)	627	432	Sangapi HC	638	92	316	23.11.21	1	1				4-5hrs Trek
		3.Urubu	130	209	Sangapi HC	90	23	46	22.11.21	1	1	0	0	NBC Madang	1 Day Trek
26	WARD 26		3,429	2,987		2,252	401	1,169		1	1	0	0		
		1.Gebrau	3,429	2,987	Sangapi HC	2,252	401	1,169	24.11.21	1	1	0	0	NBC Madang	3-4 hrs Trek
27	Dundulomp		1,748	556		370	73	191		1	1	0	0		
		1.Tingi	1,748	556	Sangapi HC	370	73	191	24.11.21	1	1	0	0	NBC Madang	4-5hrs Trek
28	YILU		1,496	947		799	168	500		4	4	2	0		
		1.Mangamanu	117	59	Mamusi AS	77	19	46	09.11.21	1	1	0	0	nbc madang	Trek - Sangapi HC
		2.Yilu (Hagahai)	618	291	Mamusi AS	238	47	143	09.11.21	1	1	0	0	nbc madang	Trek - Sangapi HC
		3.Mamusi	660	499	Mamusi AS	441	90	285	07.11.21	1	1	2	0	nbc madang	Trek - Sangapi HC
		4.Penale	101	98	Mamusi AS	43	12	26	09.11.21	1	1	0	0	nbc madang	Trek - Sangapi HC

ANNEX TWO

MADANG PROVINCE
SUMKAR DISTRICT POPULATION 2021
LLIN DISTRIBUTION SUMMARY SHEET

LLG	WARD	VILLAGE	Estimated 2021 Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmoble	Houses With Radios	Radio Networks	Comments
SUMKAR			131,606	131,606		122,986	23,972	62,569		236	231	0	8,135	175	
KARKAR RURAL			79,283	71,129		66,876	14,174	34,043		109	109	0	5,530	87	
1	WARD 1		1,091	1,124		1,089	213	608		2	2	0	0		Bagabag HC - Lutheran
		1.Badiliu	758	809	Bagabag HC	765	147	437	13.10.21	1	1	0	0		Sea
		2.Yau Pltn	334	315	Bagabag HC	324	66	171	13.10.21	1	1	0	0		Sea
2	WARD 2		1,735	1,501		1,518	302	748		2	2	0	0		
		1.Matiu 2	1,023	887	Bagabag HC	912	192	403	13.10.21	1	1	0	0		Sea
		2.Matiu 1	712	614	Bagabag HC	606	110	345	13.10.21	1	1	0	0		Sea
3	WARD 3		1,564	1,327		1,207	220	597		3	3	0	152		
		1.Apare	508	487	Miak HC	396	73	201	17.10.21	1	1	0	37	93 FM	Sea/Road
		2.Sikentika	569	431	Miak HC	414	78	204	17.10.21	1	1	0	71	93 FM	Sea/Road
		3.Tarak	487	409	Miak HC	397	69	192	18.10.21	1	1	0	44	93 FM	Sea/Road
4	WARD 4		3,270	2,685		2,610	430	1,280		4	4	0	359		
		1.Dorokatam	524	428	Miak HC	489	71	239	15.10.21	1	1	0	44	93 FM	Sea/Road
		2.Kaviak	1,437	1,179	Miak HC	1,125	200	552	15.10.21	1	1	0	193	93 FM	Sea/Road
		3.Kinim	732	657	Miak HC	600	99	296	15.10.21	1	1	0	64	93 FM	Sea/Road
		4.Kavaik Pltn	577	421	Miak HC	396	60	193	15.10.21	1	1	0	58	93 FM	Sea/Road
5	WARD 5		1,148	837		580	97	289		3	3	0	92		
		1.Karkar High Sch	69	233	Miak HC	174	29	85	18.10.21	1	1	0	27	93 FM	Sea/Road
		2.Kinim Sttn	424	333	Miak HC	223	36	105	18.10.21	1	1	0	32	93 FM	Sea/Road
		3.Miak Sttn&kkhs	656	270	Miak HC	183	32	99	18.10.21	1	1	0	33	93 FM	Sea/Road
6	WARD 6		2,133	1,815		1,298	249	644		2	2	0	189		
		1.Narer	2,081	1,779	Miak HC	1,209	232	598	17.10.21	1	1	0	175	93 FM	Sea/Road
		2.Narer Primary Sch	53	36	Miak HC	89	17	46	17.10.21	1	1	0	14	93 FM	Sea/Road
7	WARD 7		3,254	2,700		2,736	549	1,365		3	3	0	308		
		1.Urara	459	457	Miak HC	446	100	223	17.10.21	1	1	0	64	93 FM	Sea/Road
		2.Urogen	2,756	2,200	Miak HC	2,053	405	1,018	17.10.21	1	1	0	201	93 FM	Sea/Road
		3.Malagu Com.Sch	39	44	Miak HC	237	44	124	17.10.21	1	1	0	43	93 FM	Sea/Road
8	WARD 8		2,045	1,676		1,618	272	805		4	4	0	251		
		1.Bangme	1,370	933	Miak HC	733	114	372	18.10.21	1	1	0	100	93 FM	Sea/Road
		2.Langlang	646	428	Miak HC	447	92	222	18.10.21	1	1	0	89	93 FM	Sea/Road
		3.Langlang Com.Sch	29	175	Miak HC	117	16	58	18.10.21	1	1	0	13	93 FM	Sea/Road
		4. Ilu Primary School		139	Miak HC	321	50	153	18.10.21	1	1	0	49	93 FM	Sea/Road
9	WARD 9		2,373	1,810		1,432	299	714		2	2	0	289		
		1.Gial	1,445	985	Miak HC	748	150	368	18.10.21	1	1	0	148	93 FM	Sea/Road
		2.Koropak	928	826	Miak HC	684	149	346	18.10.21	1	1	0	141	93 FM	Sea/Road
10	WARD 10		2,024	1,827		1,910	579	1,014		3	3	0	0		
		1.Deldigu	500	540	Mapor HC	705	200	347	14.10.21	1	1	0	0		Sea/Road
		2.Tugutugu	722	639	Mapor HC	528	222	316	14.10.21	1	1	0	0		Sea/Road
		3.Kulili Pltn	801	648	Mapor HC	677	157	351	14.10.21	1	1	0	0		Sea/Road
11	WARD 11		2,628	2,156		1,942	550	1,011		3	3	0	0		
		1.Dimer	1,164	785	Mapor HC	505	131	267	13.10.21	1	1	0	0		Sea/Road
		2.Sangana	1,397	1,271	Mapor HC	1,354	400	701	13.10.21	1	1	0	0		Sea/Road
		3.Taleng Prim.Sch	67	100	Mapor HC	83	19	43	13.10.21	1	1	0	0		Sea/Road
12	WARD 12		2,316	2,075		1,864	435	951		3	3	0	0		
		1.Kaul 1	1,299	1,210	Mapor HC	1,068	250	539	14.10.21	1	1	0	0		Sea/Road
		2.kaul 2	948	804	Mapor HC	727	173	378	14.10.21	1	1	0	0		Sea/Road
		3.Dor Comm. Sch	69	61	Mapor HC	69	12	34	14.10.21	1	1	0	0		Sea/Road
13	WARD 13		3,307	3,211		3,130	785	1,546		4	4	0	0		
		1.Kaul 3	1,244	738	Mapor HC	581	150	288	15.10.21	1	1	0	0		Sea/Road
		2.Kaul 4&5	824	684	Mapor HC	749	167	367	15.10.21	1	1	0	0		Sea/Road
		3.kaul 6	1,197	1,450	Mapor HC	1,382	369	677	16.10.21	1	1	0	0		Sea/Road
		4.Bumsol Com.Sch	41	339	Mapor HC	418	99	214	15.10.21	1	1	0	0		Sea/Road
14	WARD 14		2,579	2,539		2,192	641	1,102		4	4	0	0		
		1.Mapor	1,152	1,068	Mapor HC	934	282	472	15.10.21	1	1	0	0		Sea/Road
		2.Ngor	881	913	Mapor HC	829	218	394	15.10.21	1	1	0	0		Sea/Road
		3.Bulu Pltn	332	255	Mapor HC	202	66	114	15.10.21	1	1	0	0		Sea/Road
		4.Gaum Pltn	214	304	Mapor HC	227	75	122	15.10.21	1	1	0	0		Sea/Road
15	WARD 15		2,924	2,491		2,482	478	1,298		5	5	0	217		
		1.Muluk	815	856	Kulubob HC	812	140	411	18.10.21	1	1	0	66	NBC	Sea/Road
		2.Wadau	995	834	Kulubob HC	811	162	423	18.10.21	1	1	0	120	NBC	Sea/Road
		3.Kurubek	783	550	Kulubob HC	445	100	238	18.10.21	1	1	0	24	NBC	Sea/Road
		4.Abisan Com. Sch	59	70	Kulubob HC	136	26	81	18.10.21	1	1	0	0	NBC	Sea/Road
		5.Wadau Plnt	273	182	Kulubob HC	278	50	145	18.10.21	1	1	0	7	NBC	Sea/Road
16	WARD 16		2,342	2,403		2,275	430	1,135		3	3	0	127		
		1.kubam	1,127	984	Kulubob HC	1,004	177	491	19.10.21	1	1	0	91	NBC	Sea/Road
		2.Burag	601	617	Kulubob HC	544	118	287	19.10.21	1	1	0	0	NBC	Sea/Road
		3.Yukyuk	614	802	Kulubob HC	727	135	357	19.10.21	1	1	0	36	NBC	Sea/Road
17	WARD 17		2,228	2,103		2,435	513	1,275		6	6	0	329		
		1.Katom	905	842	Kulubob HC	1,089	250	587	20.10.21	1	1	0	44	NBC	Sea/Road
		2.kavaiilo	608	497	Kulubob HC	491	118	254	20.10.21	1	1	0	166	NBC	Sea/Road
		3.Baulik	167	293	Kulubob HC	300	50	146	20.10.21	1	1	0	33	NBC	Sea/Road
		4.Kaivailo Hamlet	171	202	Kulubob HC	213	33	113	18.10.21	1	1	0	42	NBC	Sea/Road
		5.kavilo Plnt	263	230	Kulubob HC	267	50	134	19.10.21	1	1	0	33	NBC	Sea/Road
		6.Taab Pltn	114	39	Kulubob HC	75	12	41	19.10.21	1	1	0	11	NBC	Sea/Road
18	WARD 18		1,920	2,195		1,821	357	924		4	4	0	121		
		1.Pain	269	477	Kulubob HC	376	82	191	20.10.21	1	1	0	37	NBC	Sea/Road
		2.Ulun 1&2	1,156	1,264	Kulubob HC	1,010	181	510	21.10.21	1	1	0	58	NBC	Sea/Road
		3.Warat	461	406	Kulubob HC	381	87	196	20.10.21	1	1	0	19	NBC	Sea/Road

LLG	WARD	VILLAGE	Estimated 2021 Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmoble	Houses With Radios	Radio Networks	Comments
		4.Kavilo Com.Sch	33	48	Kulubob HC	54	7	27	20.10.21	1	1	0	7	NBC	Sea/Road
19	WARD 19		1,723	1,614		1,547	376	840		1	1	0	36		
		1.komorria 1&2	1,723	1,614	Kulubob HC	1,547	376	840	21.10.21	1	1	0	36	NBC	Sea/Road
20	WARD 20		2,785	2,848		2,752	622	1,395		6	6	0	318		
		1.Dangsai	553	513	Gaubin Hosp	367	100	202	22.10.21	1	1	0	52	NBC	Sea/Road
		2.Daup	636	555	Gaubin Hosp	506	148	263	22.10.21	1	1	0	41	NBC	Road/2 Hr Trek
		3.Patilo	921	755	Gaubin Hosp	701	140	355	22.10.21	1	1	0	71	NBC	Sea/Road
		4.Babel	540	581	Gaubin Hosp	747	150	351	22.10.21	1	1	0	104	NBC	Sea/Road
		5.Dangsai Com.Sch	53	112	Gaubin Hosp	204	37	107	22.10.21	1	1	0	32	NBC	Sea/Road
		6.Biabi Pltn	82	332	Gaubin Hosp	227	47	117	22.10.21	1	1	0	18	NBC	Sea/Road
21	WARD 21		2,665	2,351		2,151	499	1,100		2	2	0	173		
		1.Biu	1,025	951	Gaubin Hosp	856	219	462	22.10.21	1	1	0	99	NBC	Sea/Road
		2.Dumad	1,641	1,400	Gaubin Hosp	1,295	280	638	22.10.21	1	1	0	74	NBC	Sea/Road
22	WARD 22		1,914	1,708		1,434	368	750		2	2	0	164		
		1.Did	1,578	1,414	Gaubin Hosp	1,216	318	632	23.10.21	1	1	0	128	NBC	Sea/Road
		2.Rigen	336	294	Gaubin Hosp	218	50	118	23.10.21	1	1	0	36	NBC	Sea/Road
23	WARD 23		3,474	2,736		2,667	534	1,408		3	3	0	312		
		1.Boroman	2,035	1,541	Gaubin Hosp	1,456	286	759	23.10.21	1	1	0	185	NBC	Sea/Road
		2.Gamog	1,384	1,112	Gaubin Hosp	1,057	207	561	23.10.21	1	1	0	94	NBC	Sea/Road
		3.Nitlon Com.Sch	55	83	Gaubin Hosp	154	41	88	23.10.21	1	1	0	33	NBC	Sea/Road
24	WARD 24		2,412	1,810		1,633	391	906		3	3	0	169		
		1.Kurum	1,745	1,521	Gaubin Hosp	1,391	349	780	24.10.21	1	1	0	138	NBC	Sea/Road
		2.Mileng Memorial	265	63	Gaubin Hosp	49	7	23	24.10.21	1	1	0		NBC	Sea/Road
		3.Gaubin Hosp.	402	227	Gaubin Hosp	193	35	103	24.10.21	1	1	0	31	NBC	Sea/Road
25	WARD 25		2,830	2,747		2,669	505	1,357		2	2	0	156		
		1.Liloi	1,876	1,873	Gaubin Hosp	1,797	361	934	24.10.21	1	1	0	121	NBC	Sea/Road
		2.Wakon	954	874	Gaubin Hosp	872	144	423	24.10.21	1	1	0	35	NBC	Sea/Road
26	WARD 26		3,083	2,932		2,963	592	1,445		4	4	0	268		
		1.Marup 1	1,027	913	Gaubin Hosp	1,146	250	582	21.10.21	1	1	0	91	NBC	Sea/Road
		2.Marup 2	1,356	1,320	Gaubin Hosp	981	200	496	21.10.21	1	1	0	143	NBC	Sea/Road
		3.Midan	334	407	Gaubin Hosp	722	121	309	21.10.21	1	1	0	30	NBC	Sea/Road
		4.Numau Com.Sch	367	292	Gaubin Hosp	114	21	58	21.10.21	1	1	0	4	NBC	Sea/Road
27	WARD 27		1,872	1,543		1,642	344	822		2	2	0	158		
		1.Kevasop	1,835	1,440	Gaubin Hosp	1,373	294	687	21.10.21	1	1	0	144	NBC	Sea/Road
		2.Susuve Com.Sch	37	103	Gaubin Hosp	269	50	135	21.10.21	1	1	0	14	NBC	Sea/Road
28	WARD 28		1,570	1,512		1,476	288	745		3	3	0	63		
		1.Mangar 1	934	957	Gaubin Hosp	862	180	440	21.10.21	1	1	0	56		Sea/Road
		2.Mandar 2	524	526	Gaubin Hosp	568	100	282	21.10.21	1	1	0	2	NBC	Sea/Road
		3.Wokilon Pltn	112	29	Gaubin Hosp	46	8	23	21.10.21	1	1	0	5	NBC	Sea/Road
29	WARD 29		2,636	2,631		2,543	516	1,233		3	3	0	172		
		1.Bafor	1,484	1,422	Gaubin Hosp	1,423	273	674	25.10.21	1	1	0	88	NBC	Sea/Road
		2.Kilden	919	1,000	Gaubin Hosp	904	193	455	25.10.21	1	1	0	64	NBC	Sea/Road
		3.Sabai	234	209	Gaubin Hosp	216	50	104	25.10.21	1	1	0	20	NBC	Sea/Road
30	WARD 30		2,648	2,535		2,433	470	1,215		3	3	0	290		
		1.Kuduk	1,633	1,437	Gaubin Hosp	1,376	300	708	25.10.21	1	1	0	187	NBC	Sea/Road
		2.Moban	944	967	Gaubin Hosp	968	161	460	25.10.21	1	1	0	89	NBC	Sea/Road
		3.Tabel Cath.miss&P/Sch	71	131	Gaubin Hosp	89	9	47	25.10.21	1	1	0	14	NBC	Sea/Road
31	WARD 31		3,038	3,021		2,372	490	1,346		6	6	0	303		
		1.Buson	846	836	Miak HC	752	150	361	14.10.21	1	1	0	113	93 FM	Sea/Road
		2.Kuburne	520	481	Miak HC	421	70	207	14.10.21	1	1	0	46	93 FM	Sea/Road
		3.Kulkul	573	528	Miak HC	515	78	248	15.10.21	1	1	0	15	93 FM	Sea/Road
		4.Kurumlang	508	538	Miak HC	577	90	233	14.10.21	1	1	0	50	93 FM	Sea/Road
		5.Kurumtaur	546	605	Miak HC	54	94	272	14.10.21	1	1	0	74	93 FM	Sea/Road
		6.Kuburne Com.Sch	45	33	Miak HC	53	8	25	14.10.21	1	1	0	5	93 FM	Sea/Road
32	WARD 32		3,500	2,538		2,362	406	1,155		5	5	0	278		
		1.Marangis	1,189	847	Miak HC	650	114	324	14.10.21	1	1	0	109	93 FM	Sea/Road
		2.Mom 1,2&3	1,519	1,187	Miak HC	974	164	477	16.10.21	1	1	0	84	93 FM	Sea/Road
		3.Kulkul Pltn	510	224	Miak HC	168	28	83	16.10.21	1	1	0	8	93 FM	Sea/Road
		4.Marangis Pltn	281	233	Miak HC	269	50	128	16.10.21	1	1	0	42	93 FM	Sea/Road
		5. Mom P School		47	Miak HC	301	50	143	16.10.21	1	1	0	35	93 FM	Sea/Road
33	WARD 33		2,249	2,129		2,093	374	1,020		4	4	0	236		
		1.Keng	1,148	1,013	Miak HC	1,117	203	553	15.10.21	1	1	0	115	93 FM	Sea/Road
		2.Mater	921	917	Miak HC	760	130	364	15.10.21	1	1	0	87	93 FM	Sea/Road
		3.Dokte	149	179	Miak HC	188	37	88	18.10.21	1	1	0	30	93 FM	Sea/Road
		4.Mater com.Sch	31	19	Miak HC	28	4	15	15.10.21	1	1	0	4	93 FM	Sea/Road
				0											
SUMGILBAR RURAL			52,323	60,477		56,110	9,798	28,526		127	122	0	2,605	88	
1	WARD 1		2,534	5,241		5,247	1,040	2,766		8	8	0	0		
		1.Asumbin	243	325	Bunabun HC	252	61	129	19.10.21	1	1	0	0		Road
		2.Pepaur	652	560	Bunabun HC	1,138	239	568	18.10.21	1	1	0	0		Road
		3.Bunabun	687	707	Bunabun HC	609	131	320	17.10.21	1	1	0	0		Road
		4.Tavulte	292	471	Bunabun HC	444	79	233	17.10.21	1	1	0	0		Road
		5.Garum	300	417	Bunabun HC	402	67	203	15.10.21	1	1	0	0		Road
		6.Sevakre	149	206	Bunabun HC	196	29	101	15.10.21	1	1	0	0		Road
		7.Bunabun H/C&Sch	57	135	Bunabun HC	221	31	116	19.10.21	1	1	0	0		Road
		8.Mangem Pltn	153	2,420	Bunabun HC	1,985	403	1,096	21.10.21	1	1	0	0		Road
2	WARD 2		1,227	1,991		2,114	316	1,076		8	8	0	0		
		1.Erenduk	357	691	Bunabun HC	518	103	265	16.10.21	1	1	0	0		Road
		2.Seremben	208	196	Bunabun HC	180	33	92	16.10.21	1	1	0	0		Road
		3.Sarisabu	82	131	Bunabun HC	84	9	41	15.10.21	1	1	0	0		Road
		4.Soberam	194	288	Bunabun HC	246	35	121	15.10.21	1	1	0	0		Road
		5.Sevan	273	335	Bunabun HC	630	76	326	15.10.21	1	1	0	0		Road
		6.Eregereg	90	122	Bunabun HC	140	15	73		1	1	0	0		Road
		7.Sevan Sch&Aidpost	22	227	Bunabun HC	72	12	38	15.10.21	1	1	0	0		Road
		8. Suapin	NEW	NEW	Bunabun HC	244	33	120	18.10.21	1	1	0	0		Road

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3	WARD 3		1,431	1,912		2,159	374	1,114		3	3	0	0		
		1.Murukanam	1,405	1,621	Bunabun HC	1,149	210	599	18.10.21	1	1	0	0		Road
		2.Murukanam sch&Aidpost	26	292	Bunabun HC	59	11	32	18.10.21	1	1	0	0		Road
		3. Dibor	NEW	NEW	Bunabun HC	951	153	483	16.10.21	1	1	0	0		Road
4	WARD 4		2,232	2,924		2,583	426	1,391		5	5	0	0		
		1.Malas	997	1,522	Bunabun HC	820	149	502	16.10.21	1	1	0	0		Road
		2.Tokain	899	775	Bunabun HC	998	149	500	17.10.21	1	1	0	0		Road
		3.Ameng	285	283	Bunabun HC	308	53	155	20.10.21	1	1	0	0		Road
		4.Tokain Sch&Aidpost	51	344	Bunabun HC	269	35	135	17.10.21	1	1	0	0		Road
		5. Malas Block	NEW	NEW	Bunabun HC	188	40	99	16.10.21	1	1	0	0		Road
5	WARD 5		457	527		398	56	205		2	2	0	0		
		1.Imbab	279	316	Bunabun HC	179	12	92	20.10.21	1	1	0	0		Road
		2.Yambrik	179	211	Bunabun HC	219	44	113	20.10.21	1	1	0	0		2 Hr Trek From Imbab
6	WARD 6		1,529	1,697		1,565	293	780		2	2	0	6		
		1.Mirap	1,488	1,573	Mugil HC	1,513	285	754	21.10.21	1	1	0	5	NBC Madang	Road
		2.Mirap P/Sch&Aidpost	41	125	Mugil HC	52	8	26	21.10.21	1	1	0	1	NBC Madang	Road
7	WARD 7		1,315	1,675		1,513	238	753		1	1	0	18		
		1.Karkum	1,315	1,675	Mugil HC	1,513	238	753	17.10.21	1	1	0	18	NBC Madang	Road
8	WARD 8		4,265	3,996		3,085	518	1,583		4	4	0	97		
		1.Sarang No.1	1,182	1,309	Mugil HC	1,125	177	570	17.10.21	1	1	0	27	NBC Madang	Road
		2.Sarang No.2/Ikarem	1,154	1,202	Mugil HC	964	176	507	17.10.21	1	1	0	61	NBC Madang	Road
		3.Sakul P/Sch&A/post	61	102	Mugil HC	942	156	477	17.10.21	1	1	0	1	NBC Madang	Road
		4.Dylup Pltn	1,869	1,383	Mugil HC	54	9	29	17.10.21	1	1	0	8	NBC Madang	Road
9	WARD 9		1,458	1,364		1,313	241	652		1	1	0	57		
		1.Basken	1,458	1,364	Mugil HC	1,313	241	652	17.10.21	1	1	0	57	93.5 FM	Road
10	WARD 10		1,213	1,366		776	132	376		2	1	0	29		
		1.Budum	659	1,129	Mugil HC	776	132	376	18.10.21	1	1	0	29	NBC Madang	Road
		2.Elebe	553	237	Mugil HC					1					Covered under Bulal
11	WARD 11		2,239	2,608		2,368	421	1,168		3	3	0	148		
		1.Garup	1,180	1,116	Mugil HC	968	179	475	18.10.21	1	1	0	106	NBC Madang	Road
		2.kurum	559	946	Mugil HC	834	142	417	18.10.21	1	1	0	5	NBC Madang	Road
		3.Zizi	500	546	Mugil HC	566	100	276	18.10.21	1	1	0	37	NBC Madang	Road
12	WARD 12		1,549	1,383		1,259	186	648		3	3	0	14		
		1.Megjar	1,329	1,009	Mugil HC	1,003	146	510	21.10.21	1	1	0	14	NBC Madang	Road
		2.Megjar P/sch&Miss.	139	135	Mugil HC	134	18	69	21.10.21	1	1	0	0	NBC Madang	Road
		3.Megja works camp	80	239	Mugil HC	122	22	69	21.10.21	1	1	0	0	NBC Madang	Road
13	WARD 13		1,639	2,067		1,980	327	1,004		6	6	0	45		
		1.Baranis	709	611	Mugil HC	497	83	257	18.10.21	1	1	0	20	NBC Madang	Road
		2.Waimas	226	345	Mugil HC	280	44	138	18.10.21	1	1	0	2	NBC Madang	Road
		3.Marut	173	368	Mugil HC	258	46	132	18.10.21	1	1	0	9	NBC Madang	Road
		4.Kabugam	312	468	Mugil HC	551	90	285	18.10.21	1	1	0	7	NBC Madang	Road
		5.Tandai	137	139	Mugil HC	138	22	69	18.10.21	1	1	0	0	NBC Madang	Road
		6.Sungilbar Govt Stn	82	136	Mugil HC	256	42	123	18.10.21	1	1	0	7	NBC Madang	Road
14	WARD 14		2,795	3,009		2,620	551	1,334		6	5	0	254		
		1.Liksal	769	731	Mugil HC	568	150	297	22.10.21	1	1	0	77	NBC Madang	Road
		2.Udisis	764	874	Mugil HC	885	170	445	22.10.21	1	1	0	51	NBC Madang	Road
		3.Bedas/Saulis	671	832	Mugil HC	674	148	343	22.10.21	1	1	0	52	NBC Madang	Road
		4.Kusang	310	262	Mugil HC	240	50	123	22.10.21	1	1	0	45	NBC Madang	Road
		5.Mugil Cath.Miss.&H/cn	75	310	Mugil HC	253	33	126	22.10.21	1	1	0	29	NBC Madang	Road
		6.Mugil Pltn	206	0	Mugil HC					1				Non Existence	Road
15	WARD 15		2,589	2,973		2,734	451	1,334		7	7	0	31		
		1.Barag	457	627	Mugil HC	460	88	223	18.10.21	1	1	0	2	NBC Madang	Road
		2.Kani	222	264	Mugil HC	213	44	109	19.10.21	1	1	0	3	NBC Madang	Road
		3.Mudo/Sawinay	430	435	Mugil HC	581	98	275	18.10.21	1	1	0	5	NBC Madang	Road
		4.Mulon/Kajem	412	305	Mugil HC	299	48	144	18.10.21	1	1	0	0	NBC Madang	Road
		5.Nom	530	408	Mugil HC	405	64	203	18.10.21	1	1	0	16	NBC Madang	Road
		6.Barikas	336	490	Mugil HC	348	46	168	18.10.21	1	1	0	4	NBC Madang	Road
		7.Banana Bus/Multon	202	444	Mugil HC	428	63	212	18.10.21	1	1	0	1	NBC Madang	Road
16	WARD 16		1,770	1,780		1,851	328	943		4	4	0	224		
		1.Bunu No.1	1,025	893	Mugil HC	951	168	492	19.10.21	1	1	0	116	NBC Madang	Road
		2.Sugar	530	560	Mugil HC	572	100	287	19.10.21	1	1	0	63	NBC Madang	Road
		3.Sulumai	132	233	Mugil HC	256	49	129	19.10.21	1	1	0	35	NBC Madang	Road
		4.Wadu P/Sch	84	94	Mugil HC	72	11	35	19.10.21	1	1	0	10	NBC Madang	Road
17	WARD 17		1,572	1,632		1,298	204	652		4	4	0	121		
		1.Kudas	402	476	Mugil HC	344	50	171	19.10.21	1	1	0	36	NBC Madang	Road
		2.Matukar	589	561	Mugil HC	497	85	252	19.10.21	1	1	0	46	NBC Madang	Road
		3.Surumarang	263	268	Mugil HC	255	35	128	19.10.21	1	1	0	25	NBC Madang	Road
		4.Matukar Pltn	318	328	Mugil HC	202	34	101	19.10.21	1	1	0	14	NBC Madang	Road
18	WARD 18		1,633	1,838		1,716	251	881		6	6	0	23		
		1.Wasab	414	253	Mugil HC	426	46	250	21.10.21	1	1	0	11	NBC Madang	Road
		2.Wasabamal	642	653	Mugil HC	549	84	261	18.10.21	1	1	0	2	NBC Madang	Road
		3.Yab	236	303	Mugil HC	323	50	154	18.10.21	1	1	0	0	NBC Madang	Road
		4.Gabagsal	285	336	Mugil HC	280	50	133	18.10.21	1	1	0	1	NBC Madang	Road
		5.Wasab reforestry Cam	39	253	Mugil HC	80	11	53	21.10.21	1	1	0	4	NBC Madang	Road
		6.Komindor Com.Sch	18	39	Mugil HC	58	10	30	18.10.21	1	1	0	5	NBC Madang	Road
19	WARD 19		424	445		629	142	327		3	2	0	114		
		1.Burbura	281	313	Mugil HC	236	49	121	16.10.21	1	1	0	36	NBC Madang	Road
		2.Bemdik	55	132	Mugil HC	393	93	206	16.10.21	1	1	0	78	NBC Madang	Road
		3.Burog	88	0	Mugil HC					1				Non Existence	Road
20	WARD 20		4,253	4,887		4,551	928	2,316		15	14	0	658		
		1.Bagildik	524	709	Mugil HC	755	188	386	19.10.21	1	1	0	150	NBC Madang	Road
		2.Banap	695	782	Mugil HC	750	149	382	19.10.21	1	1	0	109	NBC Madang	Road
		3.Yoidik	285	298	Mugil HC	295	68	154	19.10.21	1	1	0	46	NBC Madang	Road
		4.Yal	206	262	Mugil HC	264	50	134	19.10.21	1	1	0	35	NBC Madang	Road

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		5.Galauyan	285	99	Mugil HC	144	27	75	19.10.21	1	1	0	14	NBC Madang	Road
		6.Girau	175	268	Mugil HC	210	43	105	19.10.21	1	1	0	28	NBC Madang	Road
		7.Muad	141	227	Mugil HC	200	39	102	19.10.21	1	1	0	20	NBC Madang	Road
		8.Sama-ab/Waden	102	203	Mugil HC	187	31	93	19.10.21	1	1	0	22	NBC Madang	Road
		9.Roab	65	407	Mugil HC	284	39	141	19.10.21	1	1	0	30	NBC Madang	Road
		10.Sibsibab	92	174	Mugil HC	154	29	77	19.10.21	1	1	0	23	NBC Madang	Road
		11.Sildig	220	293	Mugil HC	153	50	87	19.10.21	1	1	0	11	NBC Madang	Road
		12.Talidig Tech,H/S&Pri	304	353	Mugil HC	352	49	177	19.10.21	1	1	0	45	NBC Madang	Road
		13.Talidig Police St	230	0	Mugil HC	81	17	42	19.10.21	1	1	0	15	NBC Madang	Road
		14.Murunas Pltn	599	664	Mugil HC	722	149	361	19.10.21	1	1	0	110	NBC Madang	Road
		15.Madang Timbers	332	148	Mugil HC					1				Non Existence	Road
21	WARD 21		1,808	1,698		1,884	344	961		4	4	0	245		
		1.Deda	135	470	Mugil HC	478	97	251	21.10.21	1	1	0	67	NBC Madang	Road
		2.Sempi	1,174	743	Mugil HC	865	148	432	21.10.21	1	1	0	99	NBC Madang	Road
		3.Hululang Pltn	485	344	Mugil HC	263	50	135	21.10.21	1	1	0	33	NBC Madang	Road
		4.Sempi works Camp	14	141	Mugil HC	278	49	143	21.10.21	1	1	0	46	NBC Madang	Road
22	WARD 22		2,610	3,276		3,058	518	1,530		4	3	0	260		
		1.Bomasse	822	906	Mugil HC	935	167	473	21.10.21	1	1	0	62	NBC Madang	Road
		2.Kauwe	997	957	Mugil HC	1,129	190	560	21.10.21	1	1	0	61	NBC Madang	Road
		3.Maik	320	584	Mugil HC					1					Same as Moik in Ward 24
		4.Vidar Pltn	471	829	Mugil HC	994	161	497	21.10.21	1	1	0	137	NBC Madang	Road
23	WARD 23		536	894		785	200	402		3	3	0	0		
		1.Anhabak	100	188	Mugil HC	191	50	100	15.10.21	1	1	0		NBC Madang	Road/1 Hr Trek
		2.Badimfok	27	270	Mugil HC	199	50	100	15.10.21	1	1	0		NBC Madang	Road/1 Hr Trek
		3.Balabak	408	435	Mugil HC	395	100	202	15.10.21	1	1	0		NBC Madang	Road/1 Hr Trek
24	WARD 24		389	279		546	87	274		4	4	0	33		
		1.Asiwo	51	71	Mugil HC	93	14	46	16.10.21	1	1	0	1	NBC Madang	Road/Trek
		2.Balbe	192	145	Mugil HC	230	37	115	16.10.21	1	1	0	0	NBC Madang	Road/Trek
		3.Moik	116	0	Mugil HC	79	13	41	16.10.21	1	1	0	12	NBC Madang	Road
		4.Sigu	29	64	Mugil HC	144	23	72	16.10.21	1	1	0	20	NBC Madang	Road/Trek
25	WARD 25		538	1,307		1,139	244	615		2	2	0	198		
		1.Abab	251	487	Mugil HC	416	94	223	16.10.21	1	1	0	64	NBC Madang	Dry Season Road Only or 4 Hr Trek
		2.Dudula	287	820	Mugil HC	723	150	392	16.10.21	1	1	0	134	NBC Madang	2 Hr Trek From Abad
26	WARD 26		2,607	3,370		2,907	456	1,401		2	2	0	20		
		1.Dimar	2,218	2,976	Mugil HC	2,538	398	1,229	17.10.21	1	1	0	19	NBC Madang	Road
		2.Gamenken	389	395	Mugil HC	369	58	172	17.10.21	1	1	0	1	NBC Madang	1 Hr Trek From Dimer
27	WARD 27		730	664		794	151	397		4	4	0	10		
		1.Bilakura	82	119	Mugil HC	64	26	32	13.10.21	1	1	0	4	NBC Madang	Trek From Dimer
		2.Bubno	108	137	Mugil HC	82	15	42	13.10.21	1	1	0	0	NBC Madang	Trek From Dimer
		3.Mosimo	98	129	Mugil HC	115	26	60	13.10.21	1	1	0	3	NBC Madang	Trek From Dimer
		4.Bulal	442	279	Mugil HC	533	84	263	13.10.21	1	1	0	3	NBC Madang	Trek From Dimer
28	WARD 28		875	833		661	101	333		2	2	0	0		
		1.Embor	338	395	Bunabun HC	263	34	133	22.10.21	1	1	0	0		2 Days Trek From Sevan
		2.Kumbu	538	439	Bunabun HC	398	67	200	22.10.21	1	1	0	0		2 Days Trek From Sevan
29	WARD 29		1,264	1,017		560	63	290		2	2	0	0		
		1.Perene	919	756	Bunabun HC	330	35	172	22.10.21	1	1	0	0		2 Days Trek From Sevan
		2.Yaure	345	261	Bunabun HC	230	28	118	22.10.21	1	1	0	0		2 Days Trek From Sevan
30	WARD 30		1,156	1,820		867	125	437		4	4	0	0		
		1.Katekot	169	193	Bunabun HC	145	26	73	17.10.21	1	1	0	0		1 Day Trek From Sevan
		2.Mabet	359	257	Bunabun HC	243	29	126	22.10.21	1	1	0	0		2 Days Trek From Sevan
		3.Tinami	188	223	Bunabun HC	250	41	120	17.10.21	1	1	0	0		1 Day Trek From Sevan
		4.Wanambre	440	259	Bunabun HC	229	29	118	22.10.21	1	1	0	0		2 Days Trek From Sevan
31	WARD 31		1,686	0		1,150	86	583		3	3	0	0		
		1.Hinihon	538	439	Bunabun HC	282	21	145	22.10.21	1	1	0	0		3 Days Trek From Sevan
		2.Henengawe	663	0	Bunabun HC	542	38	269	22.10.21	1	1	0	0		3 Days Trek From Sevan
		3.Meskor	485	450	Bunabun HC	326	27	169	22.10.21	1	1	0	0		3 Days Trek From Sevan

ANNEX THREE

MADANG PROVINCE
USINO BUNDI DISTRICT POPULATION 2021
LLIN DISTRIBUTION SUMMARY SHEET

LLG	WARD	VILLAGE	Estimated 2021 Population Based On 2000 Census	Estimated Population Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
USINO BUNDI			104,312	104,312		91,953	16,935	46,545		238	221	18	4,301	205	
BUNDI RURAL			21,693	20,139		16,928	3,253	8,824		76	65	8	835	49	
1	WARD 1		914	435		324	70	177		1	1	0	25		
		1.Bundikara	914	435	Bundi HC	324	70	177	18.10.21	1	1	0	25	NBC	Trek/ Helicopter
2	WARD 2		1,114	630		520	86	283		4	4	0	61		
		1.Kurinogobu	148	81	Bundi HC	87	15	47	19.10.21	1	1	0	10	NBC	Trek/ Helicopter
		2.Mendi	128	107	Bundi HC	66	11	36	19.10.21	1	1	0	8	NBC	Trek/ Helicopter
		3.Sno Pas	479	238	Bundi HC	241	36	127	19.10.21	1	1	0	34	NBC	Trek/ Helicopter
		4.Areratara	359	205	Bundi HC	126	24	73	19.10.21	1	1	0	9	NBC	Trek/ Helicopter
3	WARD 3		1,044	638		397	96	214		1	1	0	33		
		1.Bononi	1,044	638	Bundi HC	397	96	214	20.10.21	1	1	0	33	NBC	Trek/ Helicopter
4	WARD 4		1,270	619		412	149	238		1	1	0	39		
		1.Karisokara	1,270	619	Bundi HC	412	149	238	20.10.21	1	1	0	39	NBC	Trek/ Helicopter
5	WARD 5		487	343		303	91	166		1	1	0	14		
		1.Gogubagu	487	343	Bundi HC	303	91	166	20.10.21	1	1	0	14	NBC	Trek/ Helicopter
6	WARD 6		1,265	1,336		1,213	221	648		1	1	0	92		
		1.Yandara	1,265	1,336	Bundi HC	1,213	221	648	20.10.21	1	1	0	92	NBC	Trek/ Helicopter
7	WARD 7		416	455		132	20	72		1	1	0	5		
		1.Kindaukevi	416	455	Bundi HC	132	20	72	20.10.21	1	1	0	5	NBC	Trek/ Helicopter
8	WARD 8		458	332		395	58	208		1	1	0	7		
		1.Karamukei	458	332	Bundi HC	395	58	208	19.10.21	1	1	0	7	NBC	Trek/ Helicopter
9	WARD 9		825	579		499	94	273		3	3	0	4		
		1.Bau	102	141	Bundi HC	118	20	69	20.10.21	1	1	0	2	NBC	Trek/ Helicopter
		2.Marum	724	128	Bundi HC	182	33	98	20.10.21	1	1	0	2	NBC	Trek/ Helicopter
		Marum Lower		310	Bundi HC	199	41	106	20.10.21	1	1	0	0	NBC	Trek/ Helicopter
10	WARD 10		661	426		386	78	201		1	1	0	6		
		1.Mokinangi	661	426	Bundi HC	386	78	201	20.10.21	1	1	0	6	NBC	Trek/ Helicopter
11	WARD 11		528	321		317	51	165		2	2	0	13		
		1.Bogai	146	52	Bundi HC	111	17	61	20.10.21	1	1	0	7	NBC	Trek/ Helicopter
		2.Guiebi	383	269	Bundi HC	206	34	104	20.10.21	1	1	0	6	NBC	Trek/ Helicopter
12	WARD 12		932	642		346	73	184		4	4	0	9		
		1.Emegari	115	196	Bundi HC	63	16	36	20.10.21	1	1	0	6	NBC	Trek/ Helicopter
		2.Bogonogoi	320	181	Bundi HC	105	20	57	20.10.21	1	1	0	1	NBC	Trek/ Helicopter
		3.Magukoro	250	107	Bundi HC	81	17	41	20.10.21	1	1	0	0	NBC	Trek/ Helicopter
		4.Orobomarai	247	158	Bundi HC	97	20	50	20.10.21	1	1	0	2	NBC	Trek/ Helicopter
13	WARD 13		599	473		416	89	221		4	0	0	28		
		1.Kobum	96	136	Bundi HC	127	27	67	19.10.21	1	0	0	20	NBC	Road/Trek
		2.Dauri	323	102	Bundi HC	80	13	41	19.10.21	1	0	0	1	NBC	Road/Trek
		3.Aimambo	107	85	Bundi HC	65	11	34	19.10.21	1	0	0	5	NBC	Road/Trek
		4.Kumi	73	150	Bundi HC	144	38	79	19.10.21	1	0	0	2	NBC	Road/Trek
14	WARD 14		1,182	695		564	101	299		4	4	0	52		
		1.Aranam	263	176	Bundi HC	121	27	66	18.10.21	1	1	0	6	NBC	Trek/ Helicopter
		2.Mondinongra	549	200	Bundi HC	184	26	95	18.10.21	1	1	0	24	NBC	Trek/ Helicopter
		3.Mikainamba/Pisigami	211	159	Bundi HC	151	28	80	18.10.21	1	1	0	4	NBC	Trek/ Helicopter
		4.Bundi cath.miss.	159	160	Bundi HC	108	20	58	18.10.21	1	1	0	18	NBC	Trek/ Helicopter
15	WARD 15		1,353	677		423	84	231		4	4	0	47		
		1.Dagamaru	463	282	Bundi HC	136	28	73	18.10.21	1	1	0	19	NBC	Trek/ Helicopter
		2.Pupuneri	286	113	Bundi HC	77	16	42	18.10.21	1	1	0	0	NBC	Trek/ Helicopter
		3.Kueri bana	310	100	Bundi HC	91	25	54	18.10.21	1	1	0	18	NBC	Trek/ Helicopter
		4.Bundi Patrol Post	294	183	Bundi HC	119	15	62	18.10.21	1	1	0	10	NBC	Trek/ Helicopter
16	WARD 16		237	223		208	53	115		2	0	0	7		
		1.Biom	135	119	Bundi HC	120	27	64	19.10.21	1	0	0	4	NBC	Road/Trek
		2.Yai koro	102	104	Bundi HC	88	26	51	19.10.21	1	0	0	3	NBC	Road/Trek
17	WARD 17		458	638		486	97	249		5	4	0	36		
		1.Omkwisi	370	0	Brahman HC					1					Non-Existent
		2.Promisi	88	87	Brahman HC	76	15	40	12.10.21	1	1	0	14		Road/Trek 4hrs
		3.Mom 1		273	Brahman HC	330	63	166	12.10.21	1	1	0	10		Road/Trek 4hrs
		4.Kuato		165	Brahman HC	35	10	20	12.10.21	1	1	0	3		Road/Trek 4hrs
		5.Werex		113	Brahman HC	45	9	23	12.10.21	1	1	0	9		Road/Trek 4hrs
18	WARD 18		2,631	2,078		1,812	346	962		6	6	0	166		
		1.Tereni	698	502	Brahman HC	258	66	147	11.10.21	1	1	0	0		Road
		2.Usema	651	356	Brahman HC	293	67	159	12.10.21	1	1	0	42		Road/Trek
		3.Wege/Imbrum	435	440	Brahman HC	395	71	196	11.10.21	1	1	0	54		Road/Trek
		4.Brahman High School	848	495	Brahman HC	404	59	216	12.10.21	1	1	0	59		Road/Trek
		5. Opi		286	Brahman HC	272	46	140	12.10.21	1	1	0	0		Road/Trek
		6. Mom 2		0	Brahman HC	190	37	104	12.10.21	1	1	0	11		Road/Trek
19	WARD 19		1,018	1,569		1,164	254	623		4	4	0	71		
		1.Teri	458	264	Brahman HC	231	57	123	11.10.21	1	1	0	10		Road/4hrsTrek
		2.Tauya	560	610	Brahman HC	384	66	208	10.10.21	1	1	0	24		Road/4hrs Trek
		3. Wofa		344	Brahman HC	312	74	166	10.10.21	1	1	0	23		Road 45 mins
		4. Sitau/Puha		351	Brahman HC	237	57	126	11.10.21	1	1	0	14		Road/4hrs Trek
20	WARD 20		635	563		433	83	223		3	3	0	14		
		1.Genari	135	167	Brahman HC	100	28	55	11.10.21	1	1	0	11		1 day Trek
		2.Safi	500	188	Brahman HC	303	50	153	14.10.21	1	1	0	3		1 day Trek
		3. Samiri		208	Brahman HC	30	5	15	14.10.21	1	1	0	0		1 day Trek
21	WARD 21		604	1,828		1,481	287	767		6	6	0	78		
		1.Faita	284	321	Usino HC	264	50	135	15.10.21	1	1	0	0	NBC & FM	Road/Trek
		2.Ginam	320	453	Usino HC	444	98	234	15.10.21	1	1	0	16	NBC & FM	Road/Trek
		3. Baia		374	Brahman HC	129	30	67	11.10.21	1	1	0	12		Road 1hr
		4. Tais 1		77	Brahman HC	99	18	49	11.10.21	1	1	0	5		Road 45 mins

LLG	WARD	VILLAGE	Estimated Population Based On 2000 Census	Estimated Population 2021 Based On 2018 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digital	Emobile	Houses With Radios	Radio Networks	Comments
		5. Tais 2		131	Brahman HC	112	20	56	11.10.21	1	1	0	3		Road 1hr
		6. Pendiba/Dry Wara		472	Brahman HC	433	71	226	11.10.21	1	1	0	42		Road 45 mins
22	WARD 22		3,063	4,636		4,697	772	2,305		17	13	8	28		
		1.Daunagar	476	916	Usino HC	723	150	365	17.10.21	1	1	0		NBC & FM	Road/Trek
		2.Kurumbukari	62	0	Usino HC					1					Road/Trek
		3.Enekuai	268	1,329	Usino HC	1,671	235	795	18.10.21	1	1	1	10	NBC & FM	Road/Trek
		4.Gaizai	187	160	Usino HC	76	18	39	18.10.21	1	1	1	0	NBC & FM	Road/Trek
		5.Gazibani	109	33	Usino HC	140	22	72	18.10.21	1	1	0	3	NBC & FM	Road/Trek
		6.kinimati	310	777	Usino HC	628	101	309	18.10.21	1	1	1	1	NBC & FM	Road/Trek
		7.Dengekevi	268	321	Usino HC	408	61	200	18.10.21	1	1	0	1	NBC & FM	Road/Trek
		8.Miai	151	53	Usino HC					1					Road/Trek
		9.Mokimi	185	59	Usino HC	58	7	28	18.10.21	1	1	1	0	NBC & FM	Road/Trek
		10.Mondisipiri	117	255	Usino HC	238	41	123	18.10.21	1	1	0	5	NBC & FM	Road/Trek
		11.Moriuam	125	249	Usino HC					1					Road/Trek
		12.Sipaip	109	137	Usino HC	199	33	98	18.10.21	1	1	1	1	NBC & FM	Road/Trek
		13.Tiugari	151	90	Usino HC	256	50	125	17.10.21	1	1	0	0	NBC & FM	Road/Trek
		14.Vianive	182	85	Usino HC					1					Road/Trek
		15.Bonombu	187	103	Usino HC	172	23	83	18.10.21	1	1	1	7	NBC & FM	Road/Trek
		16.Kaunakoro	174	68	Usino HC	85	21	45	18.10.21	1	1	1	0	NBC & FM	Road/Trek
		17. Waguwagi			Usino HC	43	10	23	18.10.21	1	1	1	0	NBC & FM	Road/Trek
				0											
		USINO RURAL	82,619	84,173		75,025	13,682	37,721		162	156	10	3,466	156	
1	BUMBU		2,158	7,225		6,007	1,103	2,917		2	2	0	405		
		1.Bopirumpun	1,143	1,183	Gusap HC	775	176	364	17.10.21	1	1	0	33	NBC	Road/Trek
		2.Bumbu	1,015	6,042	Gusap HC	5,232	927	2,553	18.10.21	1	1	0	372	NBC	Road/Trek
2	SANKIAN		2,322	2,680		2,723	484	1,325		3	3	0	251		
		1.Musuam	906	709	Gusap HC	699	129	352	17.10.21	1	1	0	43	NBC	Road/Trek
		2.Sankain	1,278	1,777	Gusap HC	1,494	265	718	19.10.21	1	1	0	154	NBC	Road/Trek
		3.Simuak	138	194	Gusap HC	530	90	255	19.10.21	1	1	0	54	NBC	Road/Trek
3	DUMPU		2,210	5,008		4,233	769	1,988		8	7	0	591		
		1.Abikal	133	351	Gusap HC	337	46	160	22.10.21	1	1	0	36	NBC	Road/Trek
		2.Bembe	406	366	Gusap HC	254	42	120	20.10.21	1	1	0	36	NBC	Road/Trek
		3.Dumpu	789	1,384	Gusap HC	1,798	328	858	21.10.21	1	1	0	186	NBC	Road/Trek
		4.Menia Downa camp	882	391	Gusap HC	461	66	217	20.10.21	1	1	0	54	NBC	Road/Trek
		5.Tatarapo		320	Gusap HC	219	50	104	20.10.21	1	1	0	42	NBC	Road/Trek
		6.Surinam		588	Gusap HC					1					The same village in number 8 Ward 3.
		7.Tatarapo		378	Gusap HC	205	37	98	20.10.21	1	1	0	37	NBC	Road/Trek
		8.Surinam		1,230	Gusap HC	959	200	431	20.10.21	1	1	0	200	NBC	Road/Trek
4	KESAWAI		1,288	1,127		1,013	195	523		1	1	0	25		
		1.Kesawai 1	1,288	1,127	Sausi HC	1,013	195	523	14.10.21	1	1	0	25	FM 96	Road/Trek
5	ALIVETI		1,007	1,094		741	176	392		4	4	0	22		
		1.Aliveti	193	267	Sausi HC	172	42	92	15.10.21	1	1	0	5	FM 96	Road/Trek
		2.Korigel	323	326	Sausi HC	193	50	106	15.10.21	1	1	0	4	FM 96	Road/Trek
		3.Waimeriba	193	184	Sausi HC	153	43	86	15.10.21	1	1	0	12	FM 96	Road/Trek
		4.Maria	299	316	Sausi HC	223	41	108	15.10.21	1	1	0	1	FM 96	Road/Trek
6	KOROBA		1,804	2,632		2,707	468	1,446		3	3	0	66		
		1.Asas	768	1,774	Sausi HC	1,466	237	756	15.10.21	1	1	0	15	FM 96	Road/Trek
		2.Koroba	1,036	858	Sausi HC	817	152	428	15.10.21	1	1	0	36	FM 96	Road/Trek
		3.Saiba	NEW	NEW	Sausi HC	424	79	262	15.10.21	1	1	0	15	FM 96	Road/Trek
7	SAUSI		2,525	2,055		2,058	455	1,133		4	4	0	26		
		1.Sausi	760	662	Sausi HC	517	105	271	16.10.21	1	1	0	23	FM 96	Road/Trek
		2.Sausi 2	1,765	1,393	Sausi HC	1,074	218	598	16.10.21	1	1	0	2	FM 96	Road/Trek
		3.Mauno	NEW	NEW	Sausi HC	324	86	182	16.10.21	1	1	0	1	FM 96	Road/Trek
		4.Masi	NEW	NEW	Sausi HC	143	46	82	16.10.21	1	1	0	0	FM 96	Road/Trek
8	KORONA		1,934	1,660		1,390	323	726		4	4	0	18		
		1.Korona	737	541	Sausi HC	337	85	175	16.10.21	1	1	0	16	FM 96	Road/Trek 1 Hr
		2.Matoloi	455	416	Sausi HC	423	95	225	16.10.21	1	1	0	1	FM 96	Road/Trek 1 Hr
		3.Sana	367	299	Sausi HC	283	50	149	15.10.21	1	1	0	1	FM 96	Road/Trek 1 Hr
		4.Ongoru	375	404	Sausi HC	347	93	177	16.10.21	1	1	0	0	FM 96	Road/Trek 1 Hr
9	YAKOMBU		2,657	3,148		2,941	478	1,477		3	3	0	28		
		1.Origina	1,512	1,837	Walium HC	1,709	284	855	18.10.21	1	1	0	16	NBC Madang	Road/Trek
		2.Yakumbu	1,145	1,311	Sausi HC	794	113	400	17.10.21	1	1	0	5	FM 96	Road/Trek
		3.Asmabu	NEW	NEW	Sausi HC	438	81	222	17.10.21	1	1	0	7	FM 96	Road/Trek
10	WALIUM		1,434	1,851		1,998	265	949		1	1	0	28		
		1.Walium St	1,434	1,851	Walium HC	1,998	265	949	18.10.21	1	1	0	28	NBC Madang	Road
11	KURAGINA		1,814	2,011		2,122	346	1,048		8	5	0	27		
		1.Kuragina	237	229	Walium HC	247	44	126	19.10.21	1	1	0	0	NBC Madang	Road/Trek
		2.Pieri	42	0	Walium HC	298	48	147	19.10.21	1	1	0	0	NBC Madang	Road/Trek
		3.Raimabana	341	141	Walium HC	228	43	113	19.10.21	1	1	0	7	NBC Madang	Road/Trek
		4.Uria	552	684	Walium HC	436	77	214	19.10.21	1	1	0	0	NBC Madang	Road/Trek
		5.Wiyae	265	321	Walium HC					1					Included under Naru
		6.Yapie	81	323	Walium HC					1					Included under Naru
		7.Orumuge	297	313	Walium HC					1					Included under Naru
		8. Naru	NEW	NEW	Walium HC	913	134	448	14.10.21	1	1	0	20	NBC Madang	Road
12	WAPUT		2,223	2,223		2,293	432	1,142		3	3	0	10		
		1.Danaru	669	520	Walium HC	660	117	320	17.10.21	1	1	0	0	NBC Madang	Road
		2.Waput	874	892	Walium HC	781	160	385	17.10.21	1	1	0	10	NBC Madang	Road
		3.Koiye Camp	679	811	Walium HC	852	155	437	16.10.21	1	1	0	0	NBC Madang	Road
13	PUKSAK		1,359	1,769		1,500	312	776		3	3	0	37		
		1.Igurue	617	682	Walium HC	666	145	349	15.10.21	1	1	0	9	NBC Madng	Road/Trek
		2.Puksak	344	423	Walium HC	412	68	197	15.10.21	1	1	0	2	NBC Madng	Road
		3.Tabobo	398	664	Walium HC	422	99	230	15.10.21	1	1	0	26	NBC Madng	Road/Trek
14	NARU		1,707	1,917		1,480	250	717		3	3	0	53		
		1.Biribirie	565	639	Walium HC	418	72	195	15.10.21	1	1	0	13	NBC Madang	Road
		2.Nugu	471	520	Walium HC	504	81	248	15.10.21	1	1	0	23	NBC Madang	Road/Trek

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15	SOMAU	3.Poine	671	757	Walium HC	558	97	274	15.10.21	1	1	0	17	NBC Madang	Road/Trek
			1,822	1,440		1,632	256	789		4	4	0	34		
		1.Iwaiwa	463	288	Walium HC	407	50	190	14.10.21	1	1	0	9	NBC Madang	Road/Trek
		2.Sumau	565	394	Walium HC	554	88	266	14.10.21	1	1	0	4	NBC Madang	Road/Trek
16	MOPO	3.Uria	617	396	Walium HC	433	76	212	14.10.21	1	1	0	16	NBC Madang	Road/Trek
		4.Iwam	177	362	Walium HC	238	42	121	14.10.21	1	1	0	5	NBC Madang	Road/Trek
			1,585	1,612		2,149	300	1,000		3	3	0	34		
		1.Ibinoro	448	544	Walium HC	886	100	382	14.10.21	1	1	0	18	NBC Madang	Road/Trek
17	ANIMINIK	2.Totopa	807	519	Walium HC	593	100	292	14.10.21	1	1	0	1	NBC Madang	Road/Trek
		3.Mopo	331	548	Walium HC	670	100	326	14.10.21	1	1	0	15	NBC Madang	Road/Trek
			1,460	917		825	143	403		3	3	0	28		
		1.Amasua	570	384	Begesin HC	337	59	165	10.10.21	1	1	0	14	NBC Madang	Road/Trek
18	NEGERI	2.Animinik	440	218	Begesin HC	261	47	127	10.10.21	1	1	0	4	NBC Madang	Road/Trek
		3.Inamtap	450	316	Begesin HC	227	37	111	10.10.21	1	1	0	10	NBC Madang	Road/Trek
			2,436	1,805		1,663	256	810		7	7	0	29		
		1.Aigut	351	0	Begesin HC	228	39	112	09.10.21	1	1	0	1	NBC Madang	Road/Trek
19	BEGESIN	2.Negeri	508	525	Begesin HC	288	46	141	10.10.21	1	1	0	5	NBC Madang	Road/Trek
		3.Gasua	411	333	Begesin HC	293	38	141	10.10.21	1	1	0	5	NBC Madang	Road/Trek
		4.Omawa	294	135	Begesin HC	79	16	38	09.10.21	1	1	0	2	NBC Madang	Road/Trek
		5.Tutua Kumusi	502	242	Begesin HC	286	47	141	09.10.21	1	1	0	4	NBC Madang	Road/Trek
		6.Yarwea	260	374	Begesin HC	235	36	115	09.10.21	1	1	0	4	NBC Madang	Road/Trek
		7.Negeri Com.Sch	109	196	Begesin HC	254	34	122	09.10.21	1	1	0	8	NBC Madang	Road/Trek
			1,343	904		944	167	462		3	3	0	33		
20	KOINEGUL	1.Aupio	455	389	Begesin HC	365	58	178	10.10.21	1	1	0	9	NBC Madang	Trek
		2.Begesin	544	286	Begesin HC	308	58	151	10.10.21	1	1	0	12	NBC Madang	Trek
		3.Bokwa	344	229	Begesin HC	271	51	133	08.10.21	1	1	0	12	NBC Madang	Trek
			1,140	872		760	177	373		4	4	0	47		
21	BAISOP	1.Ensoru	200	212	Begesin HC	212	50	105	08.10.21	1	1	0	31	NBC Madang	Trek
		2.Sai	291	311	Begesin HC	288	57	141	08.10.21	1	1	0	2	NBC Madang	Trek
		3.Urirai	403	135	Begesin HC	136	34	66	08.10.21	1	1	0	6	NBC Madang	Trek
		4.konengul	245	214	Begesin HC	124	36	61	09.10.21	1	1	0	8	NBC Madang	Trek
22	KUNDUK		742	583		593	101	292		3	3	0	16		
		1.Baisop	396	289	Begesin HC	200	37	99	08.10.21	1	1	0	4	NBC Madang	Trek
		2.Olsok	232	145	Begesin HC	253	41	124	08.10.21	1	1	0	7	NBC Madang	Trek
		3.Manipur Luth.Miss.	115	149	Begesin HC	140	23	69	08.10.21	1	1	0	5	NBC Madang	Road/Trek
23	EUNIME		841	824		857	134	422		2	2	0	39		
		1.Kasual	596	658	Begesin HC	723	115	356	09.10.21	1	1	0	36	NBC Madang	Trek
		2.Kunduk	245	166	Begesin HC	134	19	66	09.10.21	1	1	0	3	NBC Madang	Trek
24	KOMAS		1,986	1,497		1,331	187	652		3	3	0	32		
		1.Eunime	580	430	Begesin HC	306	50	150	11.10.21	1	1	0	17	NBC Madang	Trek
		2.Owour	690	516	Begesin HC	476	54	233	12.10.21	1	1	0	4	NBC Madang	Trek
		3.Sanawai	716	552	Begesin HC	549	83	269	11.10.21	1	1	0	11	NBC Madang	Trek
25	IGOI		1,715	1,152		853	185	430		5	5	4	0		
		1.Beire	742	418	Usino HC2	459	91	225	20.10.21	1	1	1	0	NBC & FM	Road/Trek
		2.Komas	307	241	Usino HC2	108	27	58	21.10.21	1	1	1	0	NBC & FM	Road/Trek
		3.Suatoboro	276	87	Usino HC2	134	26	68	20.10.21	1	1	0	0	NBC & FM	Road/Trek
		4.Merioi	390	264	Usino HC2	60	16	30	21.10.21	1	1	1	0	NBC & FM	Road/Trek
26	USINO STATION	5.Kiktere		141	Usino HC2	92	25	49	20.10.21	1	1	1	0	NBC & FM	Road/Trek
			1,244	1,131		1,025	179	513		5	5	1	11		
		1.Arimori	442	405	Usino HC2	432	84	221	20.10.21	1	1	0	9	NBC & FM	Road/Trek
		2.Dunuba	224	167	Usino HC2	130	19	64	20.10.21	1	1	1	0	NBC & FM	Road/Trek
		3.Igoi	380	370	Usino HC2	321	49	158	20.10.21	1	1	0	0	NBC & FM	Road/Trek
27	BOKO	4.Kepsau	198	140	Usino HC2	90	18	47	20.10.21	1	1	0	0	NBC & FM	Road/Trek
		5.Saisob		48	Usino HC2	52	9	23	20.10.21	1	1	0	2	NBC & FM	Road/Trek
			1,720	3,747		3,466	590	1,707		11	11	3	70		
		1.Aurarag,Naurag	458	215	Usino HC2	151	32	76	16.10.21	1	1	0	6	NBC & FM	Road
		2.Usino station	1,262	980	Usino HC2	1,068	182	535	16.10.21	1	1	1	11	NBC & FM	Road
		4.Gomodo		104	Usino HC2	79	18	40	16.10.21	1	1	0	0	NBC & FM	Road
		5.Asam		240	Usino HC2	186	35	84	16.10.21	1	1	0	9	NBC & FM	Road
		6.Garia Camp		119	Usino HC2	137	21	68	18.10.21	1	1	0	2	NBC & FM	Road
		7.Tutere		404	Usino HC2	318	50	154	19.10.21	1	1	0	0	NBC & FM	Road
		8.Urox		95	Usino HC2	133	18	66	19.10.21	1	1	1	0	NBC & FM	Road
		9. Aiome Camp		166	Usino HC2	167	36	80	14.10.21	1	1	0	7	NBC & FM	Road
		10. Yati		385	Usino HC2	201	27	100	15.10.21	1	1	1	15	NBC & FM	Road
11. Banu		894	Usino HC2	862	133	420	15.10.21	1	1	0	19	NBC & FM	Road		
12. Yamagi		145	Usino HC2	164	38	84	14.10.21	1	1	0	1	NBC & FM	Road		
28	GARALIGUT		2,741	1,694		1,942	349	964		4	4	1	65		
		1.Bigei	606	178	Usino HC2	125	24	62	19.10.21	1	1	0	2	NBC & FM	Road/Trek
		2.Boko	682	232	Usino HC2	254	44	128	15.10.21	1	1	1	0	NBC & FM	Road/Trek
		3.Usino	968	795	Usino HC2	1,149	200	559	15.10.21	1	1	0	63	NBC & FM	Road/Trek
29	MUSAK	4.Manikara	484	488	Usino HC2	414	81	215	14.10.21	1	1	0	0	NBC & FM	Road/Trek
			1,346	1,082		1,095	203	558		2	2	1	48		
		1.Bil	549	557	Usino HC2	541	91	272	16.10.21	1	1	0	0	NBC & FM	Road/Trek
		2.Garaligut	796	525	Usino HC2	554	112	286	16.10.21	1	1	1	48	NBC & FM	Road/Trek
30	KUKAPANG		1,642	2,102		1,457	286	721		5	5	0	0		
		1.Banam	154	178	Usino HC2	113	20	57	21.10.21	1	1	0	0	NBC & FM	Road/Trek
		2.Kikirai	260	476	Usino HC2	326	65	161	21.10.21	1	1	0	0	NBC & FM	Road/Trek
		3.Musak	684	894	Usino HC2	649	135	316	21.10.21	1	1	0	0	NBC & FM	Road/Trek
		4.Sepu	278	415	Usino HC2	299	53	151	21.10.21	1	1	0	0	NBC & FM	Road/Trek
31	YIMA (FOROGO)	5.Lainbui	265	139	Usino HC2	70	13	36	21.10.21	1	1	0	0	NBC & FM	Road/Trek
			888	1,039		824	208	437		4	4	0	49		
		1.Kukapang	148	380	Junkaral AS	194	49	102	07.11.21	1	1	0	29	NBC Madang	River/Trek/Usino HC
		2.Yangar	138	365	Junkaral AS	147	31	78	08.11.21	1	1	0	5	NBC Madang	River/Trek/Usino HC
		3.Wukul	601	294	Junkaral AS	279	81	149	07.11.21	1	1	0	9	NBC Madang	River/Trek/Usino HC
		3.Kinder			Junkaral AS	204	47	108	08.11.21	1	1	0	6	NBC Madang	River/Trek/Usino HC
			1,228	995		884	162	487		1	1	0	55		

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		1.Aingdai	1,228	995	Kanainj AS	884	162	487	25.11.21	1	1	0	55	NBC	Helicopter/Trek
32	AMBISIBA		2,202	1,435		1,474	241	792		2	2	0	97		
		1.Ambisiba	1,062	631	Kanainj AS	648	95	345	25.11.21	1	1	0	49	NBC	Helicopter/Trek
		2.Komaraga	1,140	803	Kanainj AS	826	146	447	25.11.21	1	1	0	48	NBC	Helicopter/Trek
33	KANAINJ		2,145	1,409		1,127	218	621		3	3	0	83		
		1.Kanaij	791	763	Kanainj AS	413	94	230	24.11.21	1	1	0	20	NBC	Helicopter/Trek
		2.Kanaij Ang.Miss.	734	523	Kanainj AS	464	74	255	25.11.21	1	1	0	31	NBC	Helicopter/Trek
		3.Kanaij Com.Sch	619	123	Kanainj AS	250	50	136	24.11.21	1	1	0	32	NBC	Helicopter/Trek
34	KINIBONG		2,082	1,481		1,463	300	773		1	1	0	9		
		1.Kinibong	2,082	1,481	Kombaku AS	1,463	300	773	25.11.21	1	1	0	9	Fm 100	Trek
35	GAI		3,589	1,619		1,397	302	733		2	2	0	37		
		1.Tsembaga	1,452	867	Kombaku AS	843	180	445	24.11.21	1	1	0	31	Fm 100	Trek
		2.Gai	2,137	751	Kombaku AS	554	122	288	25.11.21	1	1	0	6	Fm 100	Trek
36	BANK		1,130	1,026		907	177	481		1	0	0	0		
		1.Bank	1,130	1,026	Kombaku AS	907	177	481	26.11.21	1	0	0	0	Fm 100	Trek
37	USERUK		796	222		615	107	302		3	3	0	29		
		1.Asmisin	364	0	Aiome HC	92	16	44	27.11.21	1	1	0	7	NBC Madang	Road/Trek
		2.lai	125	222	Aiome HC	219	41	112	23.11.21	1	1	0	5	NBC Madang	Road/Trek
		3.Useruk	307	0	Aiome HC	304	50	146	27.11.21	1	1	0	17	NBC Madang	Road/Trek
38	WABU		1,421	1,015		899	153	450		3	3	0	8		
		1.Andiku	526	384	Aiome HC	178	37	96	27.11.21	1	1	0	7	NBC Madang	Road/Trek
		2.Kwaringuru	468	389	Aiome HC	424	66	205	23.11.21	1	1	0	1	NBC Madang	Road/Trek
		3.Wabu	427	242	Aiome HC	297	50	149	23.11.21	1	1	0	0	NBC Madang	Road/Trek
39	GARISAKAN \ UMERUM		1,398	1,959		2,296	388	1,249		5	5	0	135		
		1.Galikasan	544	587	Utu HC	895	144	480	13.11.21	1	1	0	53	Nbc	Road / trek
		2.Gaum	239	323	Utu HC	238	48	137	14.11.21	1	1	0	26	Nbc	Road / trek
		3.Mange	109	146	Utu HC	376	64	203	13.11.21	1	1	0	8	Nbc	Road
		4.Singep	318	476	Utu HC	362	61	194	13.11.21	1	1	0	14	Nbc	Road
		5.Umerum	187	428	Utu HC	425	71	235	13.11.21	1	1	0	34	Nbc	Road
40	GUNTS		1,804	2,648		2,024	469	1,073		3	2	0	29		
		1.Gundai	737	1,540	Kombaku AS	1,063	262	563	25.11.21	1	0	0	29	Fm 100	Trek
		2.Gunts	750	852	Kombaku AS	583	138	316	25.11.21	1	1	0	0		Trek
		3.Fogaikimp	318	256	Kombaku AS	378	69	194	25.11.21	1	1	0	0		Trek
41	RAMU SUGAR URBAN		13,734	11,564		7,317	1,388	3,668		20	20	0	862		
		1.Saksak,Saroa,Gobuani	770	121	Gusap HC	257	43	122	23.10.21	1	1	0	42	NBC	Road
		2.Perinda Hamlet	463	204	Gusap HC	138	27	73	23.10.21	1	1	0	1	NBC	Road
		3.Kanai Hamlet	455	208	Gusap HC	111	20	60	23.10.21	1	1	0	20	NBC	Road
		4.Muruk A&B	1,067	702	Gusap HC	449	79	213	23.10.21	1	1	0	68	NBC	Road
		5.Kumul/Malalo	1,390	829	Gusap HC	274	55	139	23.10.21	1	1	0	49	NBC	Road
		6.Koki Village	1,707	684	Gusap HC	503	100	258	23.10.21	1	1	0	96	NBC	Road
		7.Lanu Village	992	1,362	Gusap HC	233	57	110	19.10.21	1	1	0	51	NBC	Road
		8.Tarangau	661	442	Gusap HC	230	49	141	23.10.21	1	1	0	49	NBC	Road
		9.Warias	1,158	265	Gusap HC	174	28	81	20.10.21	1	1	0	0	NBC	Road
		10.Bora	440	2,247	Gusap HC	2,030	396	994	17.10.21	1	1	0	167	NBC	Road
		11.Sios Compound	1,611	1,064	Gusap HC	784	115	395	20.10.21	1	1	0	92	NBC	Road
		12.Popo	239	120	Gusap HC	140	26	87	23.10.21	1	1	0	8	NBC	Road
		13.Kavar	260	160	Gusap HC	165	37	92	23.10.21	1	1	0	0	NBC	Road
		14.Kapul/Pilipino	547	150	Gusap HC	189	19	90	23.10.21	1	1	0	35	NBC	Road
		15.Sembao	221	98	Gusap HC	248	50	127	23.10.21	1	1	0	50	NBC	Road
		16.Kaukau	508	166	Gusap HC	128	24	63	23.10.21	1	1	0	22	NBC	Road
		17.Pukpuk village	252	153	Gusap HC	178	38	91	23.10.21	1	1	0	19	NBC	Road
		18.Kulao/Kanda/kiap	489	160	Gusap HC	201	43	106	23.10.21	1	1	0	43	NBC	Road
		19.Rai Coast Sttlmnt	502	2,429	Gusap HC	786	132	376	19.10.21	1	1	0	0	NBC	Most of the villages were covered under Tauta HC, Raicost District.
		20: Lanu (Guard Dog Comp	NEW	NEW	Gusap HC	99	50	50	24.10.21	1	1	0	50	NBC	Road