

ROTARIANS AGAINST MALARIA



LONG LASTING INSECTICIDAL NET DISTRIBUTION REPORT

GULF PROVINCE Kerema and Kikori Districts

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

With Support From The Global Fund

24th April to 7th August 2022



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Executive Summary

Gulf Province is a coastal province on the southern coast of mainland Papua New Guinea (PNG). Most of the province lies below 400m where malaria is endemic and stable where 73% of the population live. A further 12% live between 400m and 1200m where malaria is also endemic. A further 13.5% live in epidemic areas between 1200 and 1600 metres with the remaining 1.5% living at altitudes from 1600-2000m where malaria is very low or absent. Much of the province is made up of coastal swamps which are only accessible by boat.

The family level survey and distribution of Long-Lasting Insecticidal Nets (LLINs) was carried throughout the two districts of Kerema and Kikori from 24 April to the 7th August. Due to high levels of malaria in Kerema District early in the year, RAM started LLIN distribution in Kerema District before RAMs operations in Central Province had finished with the remaining parts in Gulf being started once Central Province had been finished.

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, 94,326 LLINs were distributed to a population of 187,753 people. This resulted in distribution of 50 nets for every 100 people in the province.

TABLE ONE – Population And Nets Distributed

District	Population from 2000 Census	Population Of Targeted Areas In 2019	Total Estimated Population 2022	Population Surveyed 2022	House Holds Surveyed 2022	Nets Issued 2022	Nets Distributed Per 100 People
Kerema	63,879	106,207	114,708	117,138	19,463	58,337	49.8
Kikori	41,400	65,198	70,417	70,615	11,472	35,989	51.0
Totals	105,279	171,405	185,125	187,753	30,935	94,326	50.2

A further 517 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 460,249.53 Kina (Approximately US\$ 94,840) resulting in a cost of about 4.85 Kina or US\$1.35 per net delivered. This was about 5% over the anticipated budget with large overspends in aircraft charters, fuel and car hire, the latter due to many delays which were suffered during the course of the program.

Overall, the distribution went well in Gulf Province with excellent collaboration from provincial and district health authorities which resulted in all targeted communities being eventually reached and all household receiving nets.

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 donated, supplied and covered all distribution costs for all the nets for Gulf Province. The nets distributed in Gulf Province were Magnet nets which came from India. This is the first time this type of net has been used in Papua New Guinea and RAM hopes that these are better quality LLINs than those distributed in the last few years.

The history of LLIN distribution in PNG and Gulf Province is discussed in Appendix One and the malaria situation and stratification of malaria in Gulf 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 malaria appears to have been practically eliminated from the highlands of PNG. We hope that these nets are sufficient to keep malaria at bay in all these areas of Gulf for another three years.



Fig.1 – Initial Meetings With PHA In Kerema (Left) And Microplanning In Kanabea HC (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 targeted village in PNG every three years. RAM has been funded by the Global Fund since 2009 and from 2017 to 2020 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 was 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 saving from 2020 to be used to procure nets for 2021 for this altitude. At present, the funding situation for LLIN distribution to altitudes of 1600-2000 remains tenuous for 2022 and 2023 and it appears at this moment that all distributions in the future will be limited to 1600m only.

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 sourced from the Chinese Government and in other areas from the Global Fund. Fortunately, there was sufficient funds to cover these areas in 2021. Sadly, from 2022 there are no funds to cover these areas.
- 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 – Microplanning Meetings In Ihu Health Centre (Left) And Malalaua Health Centre (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 has now stopped as the Global Fund allocations 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 Survey Volunteers At Kapuna Hospital (Left) And Hawabango Health Centre (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 main distribution in Gulf Province started at the end of April in Kerema before Central Province was finished due to elevated level of malaria being reported in Kerema. The program then continued up to July and August due to difficulties in finding aircraft and getting nets into Kikori by boat. The highlands of Kerema and western part of Kikori were mainly done in July.

TABLE TWO
General Timetable Of Activities In Gulf Province

District	Survey		Distribution	
	Start	Finish	Start	Finish
Kerema	25.04.22	15.07.22	16.05.22	27.07.22
Kikori	07.05.22	04.08.22	27.05.22	07.08.22

Methodology

Prior to planning and implementation, a master list of all villages of Gulf Province was drawn up using data from the 2000 Census and the last RAM survey of 2019 in Gulf 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 Gulf Province and then secondly, by taking the population surveyed in 2017 and 2018 and applying the annual growth rate to each village. In addition to this, based on altitude maps, all villages in highlands provinces are categorised and colour coded by altitude zones of below 1200m, 1200 to 1600 metres, 1600 to 2000 metres and lastly those villages above 2000 metres. Only those villages below 1600 metres will receive nets.

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 – Training Village Survey Volunteers In Kerema Hospital (Left) And Kamina HC (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 – Household Survey Volunteer Training In Malalaua (Left) and Kanabea HC (Right)

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 Gulf 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., GP22 meaning Gulf Province 2022. 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 Gulf Province. This is particularly true for mountainous villages or villages at the end of rivers which might take several hours or days to reach. In these instances, estimations based on the 2019 population 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 Gulf Province, all LLINs were ultimately delivered to Port Moresby by ship from India in seven containers. These nets are known as Magnet are light blue in colour and made from polyethylene. All nets arriving in Port Moresby were custom cleared by Express Freight Management and then stored primarily in the premises of GFS transport yard in Baruni which is just outside of Port Moresby. After this, containers were moved to Malalaua (2) and Kerema (2) and for the western part of Kikori, nets were sent by two different boats to Kikori with a private company and with a Total barge to Kapuna. Nets were also flown into a number of airstrips in the mountains of Kerema by North Coast Aviation from Kerema.

Results

Table Three shows the LLIN distribution data by district and Table Four by Local Level Government (LLG). These table give the actual population surveyed together with the number of LLINs distributed by district. In total, 94,326 LLINs were distributed to a population of 187,753 people in the two districts. This resulted in distribution of 50.2 nets for every 100 people in the province.

TABLE THREE
Nets Distributed At District Level In Gulf Province

District	Population from 2000 Census	Population Of Targeted Areas In 2019	Total Estimated Population 2022	Population Surveyed 2022	House Holds Surveyed 2022	Nets Issued 2022	Growth Rate Against 2019 Survey	Nets Per 100 People
Kerema	63,879	106,207	114,708	117,138	19,463	58,337	3.32	49.8
Kikori	41,400	65,198	70,417	70,615	11,472	35,989	2.70	51.0
Totals	105,279	171,405	185,125	187,753	30,935	94,326	3.08	50.2

TABLE FOUR
Nets Distributed At LLG Level In Gulf Province

LLG	District	Population from 2000 Census	Population Of Targeted Areas In 2019	Total Estimated Population 2022	Population Surveyed 2022	House Holds Surveyed 2022	Nets Issued 2022	Growth Rate Against 2019 Survey	Nets Per 100 People
Kerema Central	Kerema	12,864	24,719	26,698	28,609	4,968	14,128	4.99	49.4
East Kerema Rural	Kerema	11,479	16,578	17,905	18,177	2,949	9,406	3.12	51.7
Kaintiba Rural	Kerema	9,171	13,859	14,968	14,107	2,583	6,997	0.59	49.6
Kerema Urban	Kerema	5,124	7,202	7,778	7,712	1,159	3,881	2.31	50.3
Kotidanga Rural	Kerema	16,652	24,016	25,938	26,044	4,412	13,003	2.74	49.9
Lakekamu-Tauri Rural	Kerema	8,589	19,833	21,421	22,489	3,392	10,922	4.28	48.6
Baimuru Rural	Kikori	10,468	14,507	15,668	15,117	2,482	7,811	1.38	51.7
East Kikori Rural	Kikori	8,788	15,552	16,797	16,986	2,635	8,793	2.98	51.8
Ihu Rural	Kikori	14,569	21,515	23,237	23,052	4,045	11,367	2.33	49.3
West Kikori Rural	Kikori	7,575	13,624	14,715	15,460	2,310	8,018	4.30	51.9
Totals		105,279	171,405	185,125	187,753	30,935	94,326	3.08	50.2

Table Five shows that 517 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
Kerema	Kotidanga Rural	Kamina HC	23
Kikori	Baimuru Rural	Kapuna HC	36
Kikori	Ihu Rural	Orokolo HC	21
Kikori	Ihu Rural	Ihu HC	24
Kikori	West Kikori Rural	Kikori DH	413
TOTAL			517

With reference to Table Six, it can be seen that the overall operational cost of the programme was 460,249.53 Kina (Approximately US\$ 94,840) resulting in a cost of about 4.85 Kina or US\$1.35 per net delivered. This was about 5% over the anticipated budget with large overspends in aircraft charters, fuel and car hire, the latter due to many delays which were suffered during the course of the program.

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

Expense Types	Budget	Actual	Variances	% Variance
Human Resources	K141,527.38	K146,859.00	-5,331.62	-3.8
Fuel Cost	K42,840.00	K67,300.94	-24,460.9	-57.1
Car Hire Cost	K63,000.00	K108,135.02	-82,935.02	-71.6
Boat Hire Cost	K78,000.00	K41,802.00	36,198.00	53.6
Aircraft Hire Cost	K51,250.00	K89,090.91	-37,840.91	-73.8
Stationeries/Supplies	K3,000.00	K254.75	2,745.25	8.5
5% Contingency	K56,942.61	K6,806.91	10,283.96	12.0
Total	K436,559.99	K460,249.53	-23,689.54	-5.4

TABLE SEVEN
Cell and Radio Coverage In Gulf Province

District	Villages	House Holds Surveyed	Digicel	Bmobile	Houses with Radios	Villages With Radio Networks
Kerema	275	19,463	237	70	3,050	138
Kikori	230	11,472	155	10	422	141
Total	505	30,935	392	80	3,472	279

Referring to Table Seven, this shows the radio and cell phone coverage for Gulf Province in the area covered is reasonably good in most place and has increased considerably since 2019 when the last survey was carried out. Nevertheless, some areas still remain with very poor coverage with either radio or cell phones making communication in these areas very difficult.



Fig.6 – Survey Verification In Orokolo (Left) And Malalaua (Right)

Conclusions

Overall, it can be said that the LLIN distribution in Gulf 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, United Church and Gulf Christian Health Services who have a presence in the districts receiving nets. Through this collaboration, the data suggests that all villages were reached and practically all families in those villages received nets despite any local challenges.

There were some challenges which include:

- It was very difficult to access areas accessible by sea due to very strong wind and rough sea. At one instance our officer travelling from Ihu Health Centre to Kerema through Vailala river on 13th June to load nets had an accident along the mouth of the sea where the boat capsized. Fortunately, nothing serious happened and they managed to travel to Kerema.
- Air operations were similarly delayed due to very bad weather in the mountains which did not allow the airplanes to land.
- Operations halted for a week due to delay in delivery of survey books and stationeries by Tropic Air in Kikori. However, we managed to delivery this cargo by boat from Kerema to Baimuru
- The shipment of nets and fuel for Baimuru and Kapuna delayed for three weeks when nets were offloaded from the Total barge.
- Survey process was prolonged and disrupted due to National Election campaigning causing people to move around often.
- We had an incident with a local hire where it was bogged and flooded by an incoming tide from the sea.

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.

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 and DHTs of Gulf 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.

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On behalf of the Rotarians Against Malaria household distribution team who worked in Kerema and Kikori districts, we would like to sincerely acknowledge and thank the Gulf Province Health Authority and the District Health Staff of the two 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 Lari Mefaramu (Director Public Health), Mrs Magaret Malaisa (Matron Family Health Services) and Mr Luke Willet (Coordinator Promotive and Preventative Health).

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Kerema District

Name	Occupation	Institution
Mr. Richard Yaro	Officer in Charge	Kanabea Health Centre
Miss. Jenny Willie	Community Health Worker	Kanabea Health Centre
Mr. Mark Yudaina	Community Health Worker	Kanabea Health Centre
Mr. Rodney Namepa	Community Health Worker	Kanabea Health Centre
Mrs. Magaret Malaisa	Matron Family Health Services	Kerema District
Mrs. Jenny Sau	Officer in Charge	Malalaua Health Centre
Mr. Herman Posu	Community Health Worker	Malalaua Health Centre
Mr. Akita Kurua	Community Health Worker	Malalaua Health Centre
Mr. Eustin Torot	Health Extension Officer	Malalaua Health Centre
Mr. Mathew Kambi	Community Health Worker	Malalaua Health Centre
Ms. Catherine Kipi	Officer in Charge	Kamina Health Centre
Ms. Marica Moses	Community Health Worker	Kamina Health Centre
Mr. Moses Guio	Nursing Officer	Kamina Health Centre
Mr. Patrick Indeve	Community Health Worker	Kamina Health Centre
Mr. Jack Palagi	Officer in Charge	Kaintiba Health Centre
Me. Eddie Merea	Community Health Worker	Kaintiba Health Centre
Mr. Peter Nawasing	Officer in Charge	Berna Sub Health Centre

Kikori District

Name	Occupation	Institution
Mr. Kunsy Donnie	District Health Manager	Kikori District
Mr. Timothy Ananias	Officer in Charge	Kikori District Hospital
Mr. Koivi Kaivila	Community Health Worker	Kikori District Hospital
Mrs. Rhonda Gera	Officer in Charge	Ihu Health Centre
Mr. Mairau Viai	Officer in Charge	Orokolo Health Centre
Mr. Jacob Ovia	Community Health Worker	Orokolo Health Centre
Mrs. Diane Haihe	Community Health Worker	Orokolo Health Centre
Mr. Jerry Daii	Community Health Worker	Karati Health Centre
Mrs. Kamia Vaieke	Sister in Charge	Baimuru Health Centre
Mr. Ieme Vaieka	Community Health Worker	Baimuru Health Centre
Mr. Makky Perry	Community Health Worker	Baimuru Health Centre
Mr. Manu Laiko	Community Health Worker	Kapuna Health Centre

RAM would like to specially acknowledge the support received from established and local service providers for logistical support namely; GFS for transporting six containers from Port Moresby GFS yard to Gulf and for having four stationed in Kerema hospital yard and two at Malalaua Health Centre yard. Also, one container of LLINs and fuel were transported by TOTAL shipping company from Port Moresby to Kapuna while another ship from Rosana Investments delivered nets to Kikori Town for Operations in Kikori district.

RAM also thanks Airport hire car, Pishon hire car, Fly hire car and all the local hire car and boat owners for providing their service for this operation. We would not have reached many communities without the dedication of the drivers and the boat operators. RAM also extends its gratitude to North Coast Aviation who provided us aircraft support to reach remote areas. 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, United Church and Gulf Christian Health Services and lastly 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.

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 Western, 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 repeated. 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 been 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).

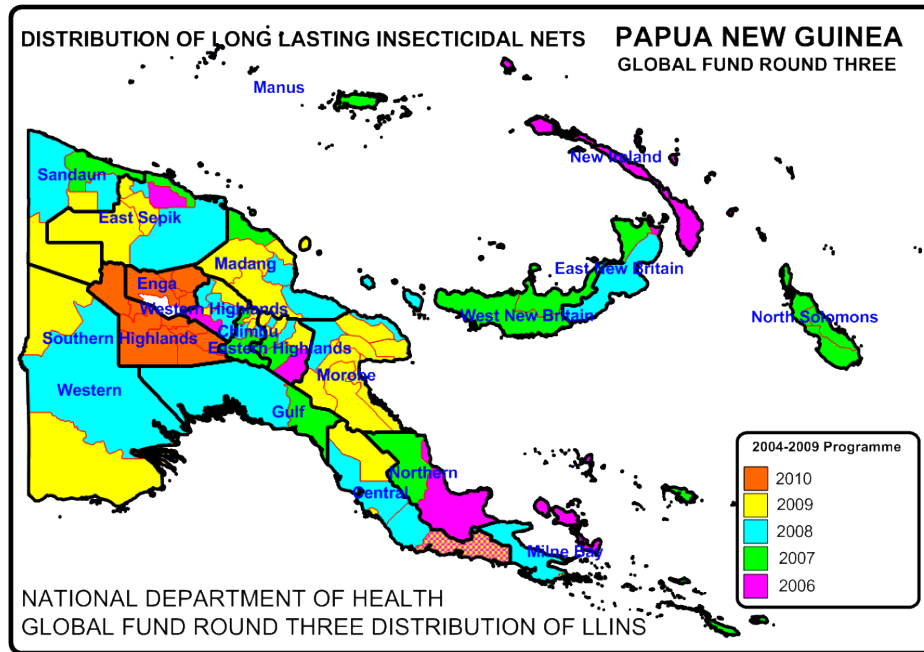


Fig. 1 Distribution Of Nets Under National Department Of Health From 2006 To 2010

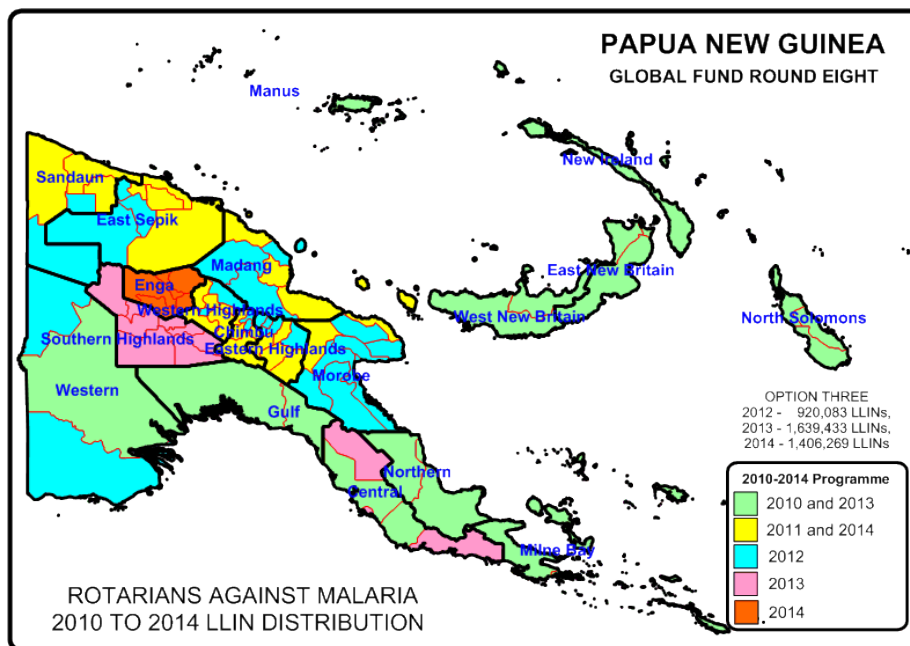


Fig.2 Distribution of LLIN Programme 2010 to 2014

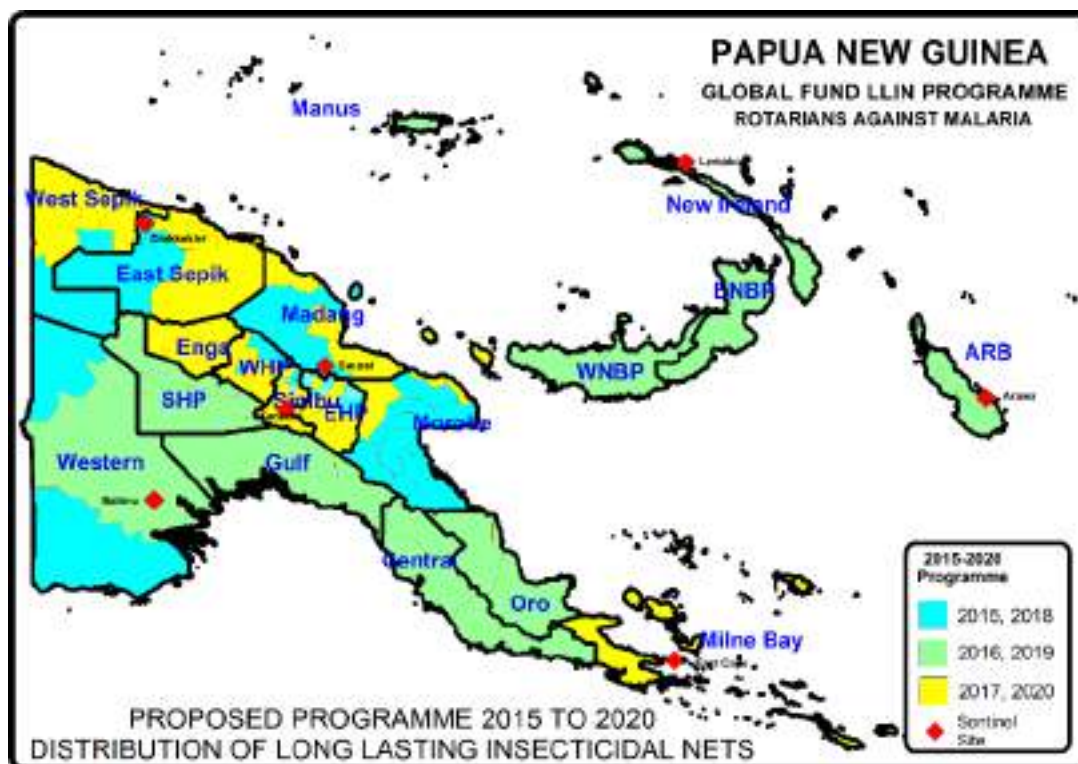


Fig.3 LLIN Distribution Programme 2015 to 2020

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, Del, 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, Menyamy, 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 Drekkiekier	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 Gulf 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 2017 to 2021. In Gulf Province, it can be seen from Fig.1 that malaria decreased from 2007 to 2015 by 75% which was one of the greatest reduction of malaria in the coastal areas of PNG after Central and NCD provinces. In Fig.2, in 2020 it can also be seen that in Gulf Province the malaria incidence is 230 per 1000 which is similar to Morobe 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 can be noted that in general, LLIN distributions in the 2010 and 2013 resulted in significant decreases in malaria but distributions that occurred in 2016 and 2019 actually resulted in increased malaria. This is believed to be because of changes to the LLINs PNG received which resulted in the nets no longer working as they did in the past. It can only be hoped that the nets distributed in 2022 have a better impact than those of 2016 and 2019.

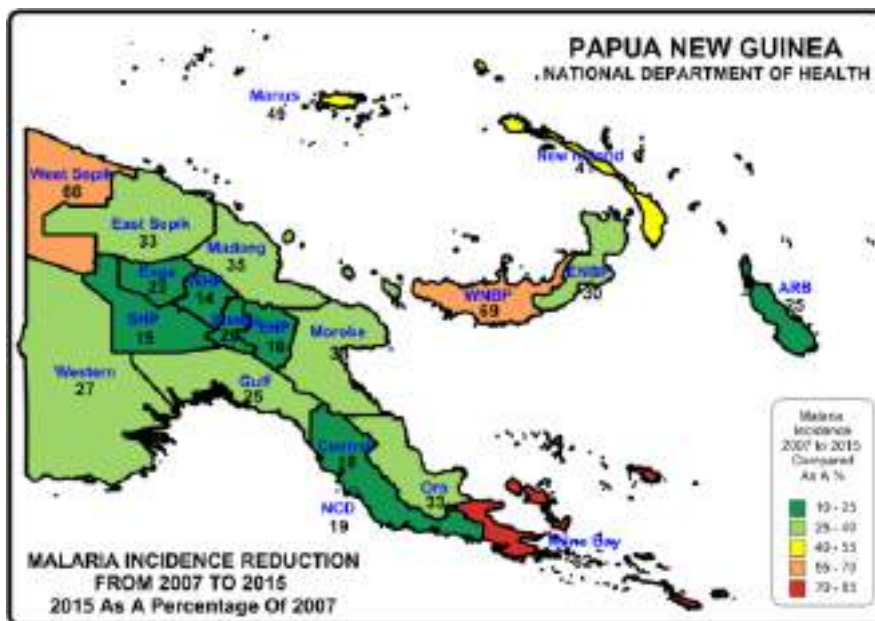


Fig.1 – Relative Reduction Of Malaria In Provinces Of PNG

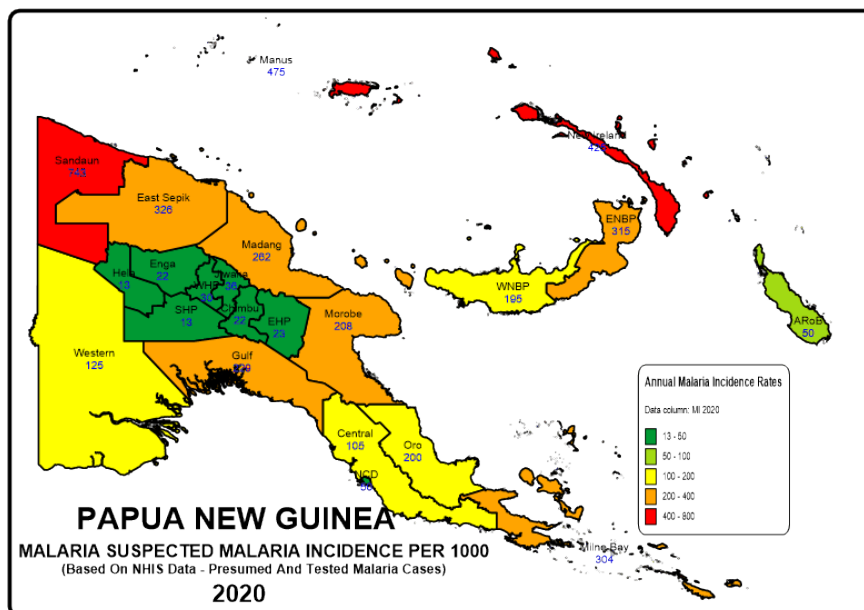


Fig.2 – Reported Malaria Incidence In 2020

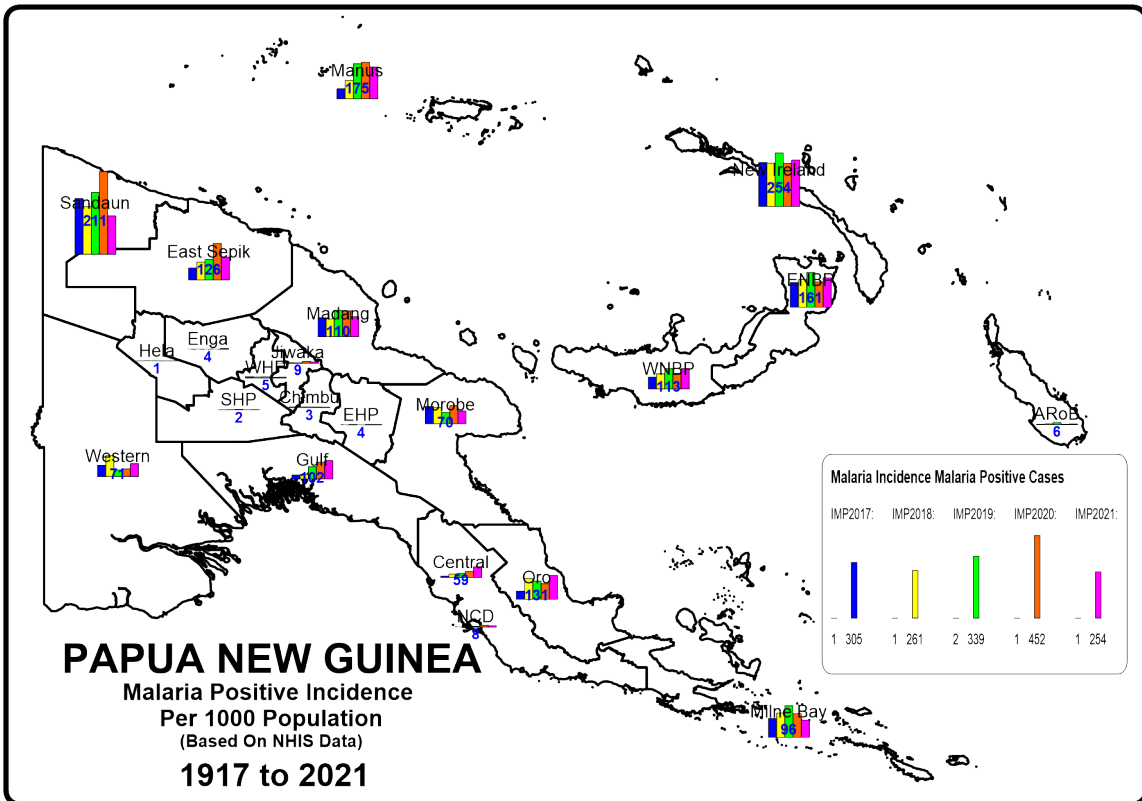


Fig. 3 - Reported Malaria Incidence In PNG From 2016 To 2020

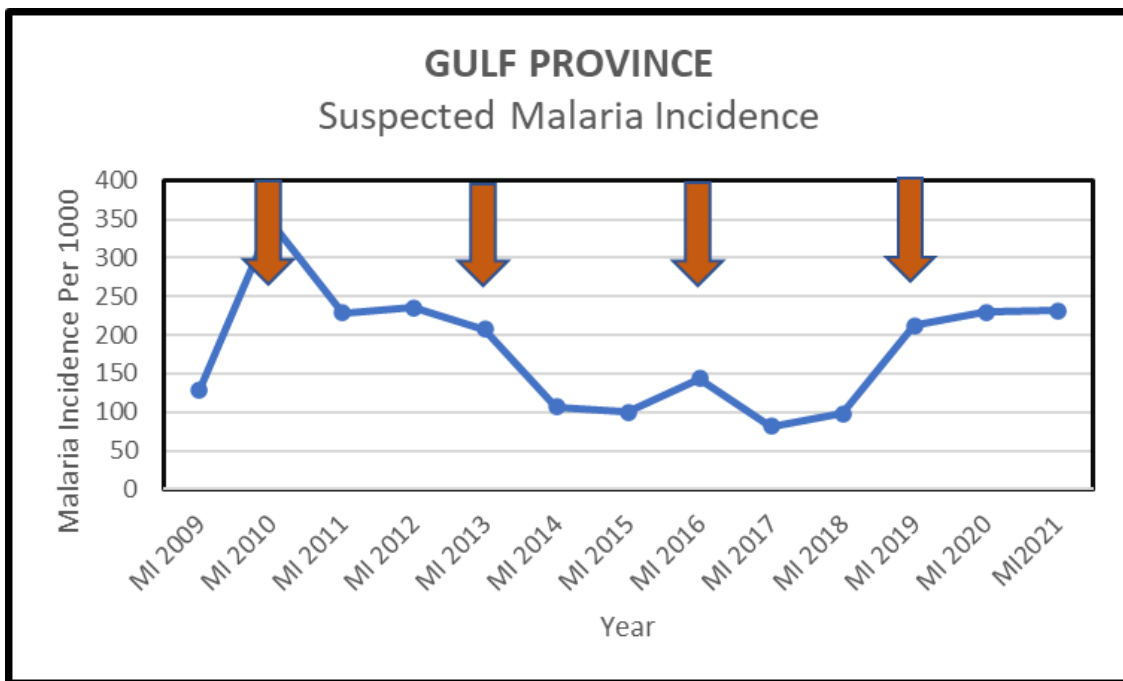
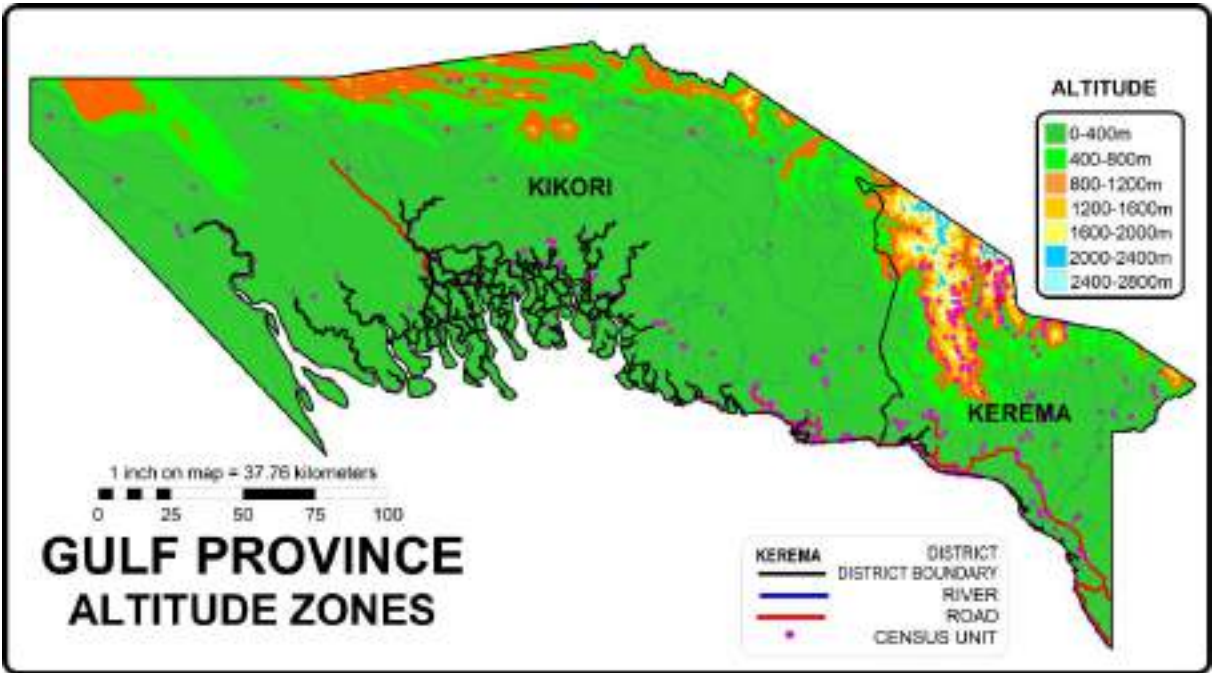


Fig. 4 – Malaria Incidence Versus Distribution Of Nets
Orange represents LLIN distributions done in Gulf Province in 2010 and 2013, 2016 and 2019

Appendix Three - Malaria By Altitude

Gulf Province is a coastal province on the southern coast of mainland Papua New Guinea (PNG). Most of the province lies below 400m where malaria is endemic and stable where 73% of the population live. A further 12% live between 400m and 1200m where malaria is also endemic. A further 13.5% live in epidemic areas between 1200 and 1600 metres with the remaining 1.5% living at altitudes from 1600-2000m where malaria is very low or absent.

Fig. 1 Altitude Zones In Gulf Province



Appendix Four – Other Photographs



Provincial Meeting In Kerema (Left) And Distribution In Ihu (Right)



Distributions In Malalaua (Left) And Kerma (Right)



Distributions of LLIN in Kamina (Left) And Kapuna (Right)

OTHER PICTURES



Boat Transport In Malalaua (Left) And Airplane Delivery In Kamina (Right)



Net Delivery By Container In Malalaua (Left) And Boat Delivery In Kapuna (Right)



Vehicle Difficulties In Malalaua

ANNEX ONE

**Rotarians Against Malaria
Gulf Province: Kerema Distict
LLIN Distribution Summary Sheet**

LLG	WARD	VILLAGE	Estimated 2022 Population Based On 2000 Census	Estimated 2022 Population Based On 2019 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Emobile	Houses With Radios	Radio Networks	Comments
Kerema		241	114,708	114,708		117,138	19,463	58,337		275	237	70	3,050	138	
Kerema Central			22,529	26,698		28,609	4,968	14,128		55	51	45	1,670	49	
	1.Uaripi		979	928		924	176	457		2	2	2	128		
		Petoi	308	396	Kerema HC	377	76	185	30.05.22	1	1	1	57	NBC	Boat
		Uaripi	671	531	Kerema HC	547	100	272	30.05.22	1	1	1	71	NBC	Boat
	2.Me'i		1,508	1,482		1,424	275	736		2	2	2	138		
		Mei'l No 1	571	426	Kerema HC	416	79	225	31.05.22	1	1	1	32	NBC	Boat
		Mei'l No 2	937	1,056	Kerema HC	1,008	196	511	31.05.22	1	1	1	106	NBC	Boat
	3.Lapari		1,625	1,458		1,700	345	848		5	5	4	66		
		Amuipi	264	208	Kerema HC	337	68	171	01.06.22	1	1	1	34	NBC	Boat
		Houpoe	303	160	Kerema HC	274	50	139	01.06.22	1	1	1	32	NBC	Boat
		Havehuhu	294	255	Kerema HC	253	61	124	03.06.22	1	1	0	0	NBC	Boat
		Ilavapare	271	287	Kerema HC	283	50	138	03.06.22	1	1	1	0	NBC	Boat
		Lapari	492	548	Kerema HC	553	116	276	04.06.22	1	1	1	0	NBC	Boat
	4.Mirakere		1,988	2,236		1,938	366	949		4	4	4	119		
		Hevaviri	236	305	Kerema HC	259	50	127	03.06.22	1	1	1	30	NBC	Boat
		Kapiri	685	959	Kerema HC	785	141	393	03.06.22	1	1	1	22	NBC	Boat
		Mirakera	690	738	Kerema HC	610	125	298	06.06.22	1	1	1	21	NBC	Boat
		Namohoroi	377	234	Kerema HC	284	50	131	03.06.22	1	1	1	46	NBC	Boat
	5.Didimaua		2,296	2,886		2,918	455	1,403		6	4	3	30		
		Didimaua	165	278	Kerema HC	77	11	39	02.06.22	1	0	0	0	NBC	Boat
		Mamuro	226	354	Kerema HC	292	50	139	02.06.22	1	0	0	12	NBC	Boat
		Sori	257	299	Kerema HC	543	70	260	04.06.22	1	1	1	0	NBC	Boat
		La'ari	72	256	Kerema HC	226	43	109	02.06.22	1	1	1	0	NBC	Boat
		Asepo	373	545	Kerema HC	618	98	300	04.06.22	1	1	1		NBC	Boat
		Muruu Setlmnt	1,203	1,153	Kerema HC	1,162	183	556	04.06.22	1	1	0	18	NBC	Boat
	6.Uiriri		1,560	2,922		3,707	649	1,850		5	5	5	460		
		Lou	280	219	Kerema HC	282	50	142	23.05.22	1	1	1	14	NBC	Road
		Lovera	95	297	Kerema HC	233	33	113	23.05.22	1	1	1	14	NBC	Road
		Uriri	522	278	Kerema HC	374	85	183	23.05.22	1	1	1	37	NBC	Road
		Epo Plantation	457	1,895	Kerema HC	2,525	438	1,258	23.05.22	1	1	1	361	NBC	Road
		Kufala Setlmnt	207	232	Kerema HC	293	43	154	23.05.22	1	1	1	34	NBC	Road
	7.Silo		2,053	1,973		1,979	319	964		2	2	2	58		
		Silo No. 1	974	970	Kerema HC	763	126	363	17.05.22	1	1	1	10	NBC	Road
		Silo No. 2	1,079	1,003	Kerema HC	1,216	193	601	17.05.22	1	1	1	48	NBC	Road
	8.Uamai No.1		1,319	1,503		1,415	250	702		4	4	4	134		
		Avere	349	288	Kerema HC	369	56	183	18.05.22	1	1	1	28	NBC	Road
		Parakau	299	566	Kerema HC	376	62	182	18.05.22	1	1	1	44	NBC	Road
		Kavako	636	649	Kerema HC	635	125	320	18.05.22	1	1	1	55	NBC	Road
		Uamai Com Sch	35	0	Kerema HC	35	7	17	18.05.22	1	1	1	7	NBC	Road
	9.Uamai No.2		1,716	1,493		1,758	304	878		3	3	3	158		
		Pomara	883	666	Kerema HC	791	141	408	23.05.22	1	1	1	36	NBC	Road
		Lavare	385	393	Kerema HC	481	97	232	23.05.22	1	1	1	81	NBC	Road
		Mora'a	448	433	Kerema HC	486	66	238	23.05.22	1	1	1	41	NBC	Road
	10.Karama		2,722	1,551		1,530	260	756		3	3	3	101		
		Karama No.1	953	302	Kerema HC	563	99	270	21.05.22	1	1	1	23	NBC	Road/Boat
		Toare	492	291	Kerema HC	388	61	202	21.05.22	1	1	1	45	NBC	Road/Boat
		Karama No.2	1,249	958	Kerema HC	579	100	284	21.05.22	1	1	1	33	NBC	Road/Boat
		Wina	28	0	Kerema HC										Non Existant
	11.Pukari		2,590	2,281		2,062	370	995		5	5	5	63		
		Mamavu	135	256	Kerema HC	290	50	143	18.05.22	1	1	1	16	NBC	Boat
		Elava	646	569	Kerema HC	433	82	208	29.05.22	1	1	1		NBC	Boat
		Pukari	669	592	Kerema HC	523	93	254	24.05.22	1	1	1	28	NBC	Boat
		Aru/Uru	545	606	Kerema HC	561	95	267	24.05.22	1	1	1	19	NBC	Boat
		Moroi	595	258	Kerema HC	255	50	123	24.05.22	1	1	1	0	NBC	Boat
	12.Koaru		1,552	996		1,075	163	527		2	0	0	0		
		Koaru	1,478	996	Koaru AP	877	135	436	17.05.22	1	0	0	0		Boat
		Koaru H.Centre	74	0	Koaru AP	198	28	91	17.05.22	1	0	0	0		Boat
	13.Meporo		622	1,954		2,374	442	1,183		4	4	1	0		
		Ipihia	305	301	Malalaua HC2	259	50	122	18.05.22	1	1	0	0		Road
		Anita 1 & 2	84	307	Malalaua HC2	232	50	113	18.05.22	1	1	0	0		Road
		Meporo	233	1,236	Malalaua HC2	1,758	311	885	18.05.22	1	1	1	0		Road
		Saoto		110	Malalaua HC2	125	31	63	18.05.22	1	1	0	0		Road
	14. Moroi 2			3,036		3,805	594	1,880		8	8	7	215		
		Mupa		451	Kerema HC	505	100	244	17.05.22	1	1	1	16	NBC	Road
		Mahouja (Karama Bridge)		314	Kerema HC	429	77	212	17.05.22	1	1	1	28	NBC	Road
		Lekikipi (Pohou)		320	Kerema HC	412	50	208	17.05.22	1	1	1	5	NBC	Road
		Kepamai		680	Kerema HC	1,122	150	546	17.05.22	1	1	1	107	NBC	Road
		Wina		484	Kerema HC	574	100	285	17.05.22	1	1	0	0	NBC	Road
		Kite		276	Kerema HC	337	54	174	17.05.22	1	1	1	37	NBC	Road
		Parava		394	Kerema HC	253	37	123	17.05.22	1	1	1	11	NBC	Road
		Javora		116	Kerema HC	173	26	88	16.05.22	1	1	1	11	NBC	Road
East Kerema Rural			20,103	17,905		18,177	2,949	9,406		34	19	7	0	2	
	1.Lelefiru		1,559	1,293		1,335	204	663		2	0	0	0		
		Hamuhamu	613	522	Malalaua HC	536	85	264	20.05.22	1	0	0	0		Boat
		Lelefiru	946	771	Malalaua HC	799	119	399	20.05.22	1	0	0	0		Boat

LLG	WARD	VILLAGE	Estimated 2022 Population Based On 2000 Census	Estimated 2022 Population Based On 2019 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Emobile	Houses With Radios	Radio Networks	Comments
	2.Kukipi		1,263	1,166		1,024	190	531		4	2	2	0		
		Kukipi	697	590	Malalaua HC	353	67	187	22.05.22	1	0	0	0		Road/Boat
		Marekea	443	326	Malalaua HC	317	50	156	22.05.22	1	1	1	0	FM	Road/Boat
		Tova Firu	74	82	Malalaua HC	117	23	61	22.05.22	1	1	1	0	FM	Road/Boat
		Kukipi H. Centre	49	168	Malalaua HC	237	50	127	22.05.22	1	0	0	0		Road/Boat
	3.Uritai		3,264	2,749		3,473	425	1,610		6	1	1	0		
		Isapeape	429	301	Malalaua HC	294	50	153	19.05.22	1	0	0	0		Road/Boat
		Lalapipi	433	676	Malalaua HC	949	104	444	19.05.22	1	0	0	0		Road/Boat
		Mirivase	361	700	Malalaua HC	688	95	319	19.05.22	1	1	1	0		Road/Boat
		Uritai	1,506	716	Malalaua HC	1,389	155	621	19.05.22	1	0	0	0		Road/Boat
		Ela Hauta	513	355	Malalaua HC	153	21	73	19.05.22	1	0	0	0		Road/Boat
		Lalavaipi P. Sch	23	0	Malalaua HC					1					Included Under Lalapipi
	4.Popo		1,849	2,048		1,398	281	1,043		4	0	0	0		
		Popo Kaisava	54	134	Malalaua HC	99	10	49	23.05.22	1	0	0	0		Road/Boat
		Popo Luluapo	683	868	Malalaua HC	530	107	458	23.05.22	1	0	0	0		Road/Boat
		Popo Mikafiru	825	730	Malalaua HC	480	114	390	23.05.22	1	0	0	0		Road/Boat
		Huripi	287	315	Malalaua HC	289	50	146	23.05.22	1	0	0	0		Road/Boat
	5.Lese		4,145	4,170		3,893	713	2,026		7	6	4	0		
		Lese Havihara	946	727	Malalaua HC	689	134	326	18.05.22	1	0	0	0		Road/Boat
		Lese Ilava	450	402	Malalaua HC	271	54	143	18.05.22	1	1	1	0		Road/Boat
		Lese Kavora	961	642	Malalaua HC	525	148	291	18.05.22	1	1	0	0		Road/Boat
		Lese Oalai	1,242	1,414	Malalaua HC	1,113	148	566	18.05.22	1	1	1	0		Road/Boat
		Lese Keharo	214	416	Malalaua HC	394	83	234	18.05.22	1	1	1	0		Road/Boat
		Hapa	333	0	Malalaua HC										Now under Marekea
		Lese Highway		570	Malalaua HC	704	100	360	18.05.22	1	1	1	0		Road/Boat
		Hapa/Lese Marekea		NEW	Malalaua HC	197	46	106	18.05.22	1	1	0	0		Road/Boat
	6.Miaru		2,065	2,012		2,440	399	1,213		2	2	0	0		
		Miaru	1,480	1,310	Malalaua HC	1,991	312	973	25.05.22	1	1	0	0		Road/Boat
		Hake Reapa	249	431	Malalaua HC	449	87	240	25.05.22	1	1	0	0		Road/Boat
		Houpoe/Miaru	336	271	Malalaua HC					1					Included Under Miaru
	7.Ilokea		3,359	2,673		2,716	433	1,361		2	2	0	0		
		Ilokea	2,949	2,309	Malalaua HC	2,382	380	1,193	24.05.22	1	1	0	0		Road
		Mirapo	410	364	Malalaua HC	334	53	168	24.05.22	1	1	0	0		Road
	8.Sarota		2,599	1,794		1,898	304	959		6	6	0	0		
		Laurirava	357	187	Malalaua HC	288	37	141	24.05.22	1	1	0	0		Road/Boat
		Lourovo	342	325	Malalaua HC	297	50	152	24.05.22	1	1	0	0		Road/Boat
		Moroi	525	294	Malalaua HC	309	48	153	24.05.22	1	1	0	0		Road/Boat
		Rove	336	258	Malalaua HC	281	37	134	24.05.22	1	1	0	0		Road/Boat
		Sarota	744	509	Malalaua HC	508	83	267	24.05.22	1	1	0	0		Road/Boat
		Mavaru	294	221	Malalaua HC	215	49	112	24.05.22	1	1	0	0		Road/Boat
				0											
	Kaintiba Rural		16,061	14,968		14,107	2,583	6,997		52	52	0	562	12	
	1.Bema		1,226	1,180		1,020	184	497		4	4	0	94		
		Bema	308	254	Kaintiba HC	212	38	103	25.07.22	1	1	0	18		2 Hr Trek
		Yambona	639	586	Kaintiba HC	470	89	230	23.07.22	1	1	0	39		3 Hr,20 Mins Trek
		Keatanga	154	188	Kaintiba HC	191	32	92	23.07.22	1	1	0	12		2 Hr Trek
		Bema Cath Mission	124	152	Kaintiba HC	147	25	72	23.07.22	1	1	0	25		2 Hr Trek
	2.Mine		853	787		636	110	307		3	3	0	40		
		Mine	406	275	Kaintiba HC	266	50	133	25.07.22	1	1	0	26		2 Hrs Trek
		Sangane	361	396	Kaintiba HC	273	47	129	25.07.22	1	1	0	11		3 Hrs Trek
		Puluanga	86	116	Kaintiba HC	97	13	45	23.07.22	1	1	0	3		5 Hrs Trek
	3.Wimka		1,932	1,576		1,448	266	701		6	6	0	133		
		Hambuini	608	336	Kaintiba HC	257	50	126	23.07.22	1	1	0	21		3 Hrs Trek
		Wimka	357	268	Kaintiba HC	224	46	108	23.07.22	1	1	0	19		3 Hrs Trek
		Wandava	401	257	Kaintiba HC	275	40	132	23.07.22	1	1	0	17		4 Hrs Trek
		Kefayu	235	247	Kaintiba HC	163	34	83	24.07.22	1	1	0	23		5 Hrs Trek
		Mepa	331	215	Kaintiba HC	253	50	120	24.07.22	1	1	0	35		6 Hrs Trek
		Koengo		253	Kaintiba HC	276	46	132	23.07.22	1	1	0	18		3 Hrs Trek
	4.Wempango		993	839		798	149	393		3	3	0	74		
		Wempango	655	500	Kaintiba HC	500	86	244	26.07.22	1	1	0	36		4 Hrs Trek
		Haiyekini	145	195	Kaintiba HC	163	29	80	26.07.22	1	1	0	15		1 Day Trek
		Hava	193	144	Kaintiba HC	135	34	69	26.07.22	1	1	0	23		4 Hrs Trek
	5.Kaingo		860	557		533	100	258		1	1	0	63		
		Kaingo	860	557	Kaintiba HC	533	100	258	23.07.22	1	1	0	63		4 Hrs Trek
	6.Hambia		1,690	1,650		1,458	339	705		3	3	0	0		
		Hambia	221	487	Hawabango HC	383	86	170	20.07.22	1	1	0	0		4 Hr Trek
		Titamunga	1,469	920	Hawabango HC	832	211	413	19.07.22	1	1	0	0		4 Hr Trek
		Autenga		243	Hawabango HC	243	42	122	19.07.22	1	1	0	0		4 Hr Trek
	7.Yemepango		1,242	998		1,040	196	551		3	3	0	0		
		Iwau	468	235	Hawabango HC	353	75	208	17.07.22	1	1	0	0	FM	1Hrs Trek
		Hawabango No.2	189	170	Hawabango HC	154	41	92	13.07.22	1	1	0	0	FM	45mins Trek
		Yemepango	585	593	Hawabango HC	533	80	251	20.07.22	1	1	0	0	FM	3Hrs Trek
	8.Haubango		1,257	1,141		1,044	186	620		5	5	0	0		
		Hwabango	177	189	Hawabango HC	160	20	101	13.07.22	1	1	0	0	FM	1hrs Trek
		Yeplepai	389	476	Hawabango HC	488	87	268	15.07.22	1	1	0	0	FM	2hrs Trek
		Mapuhuyua	359	214	Hawabango HC	166	30	109	14.07.22	1	1	0	0	FM	1hrs Trek
		Suwata	226	156	Hawabango HC	108	28	69	16.07.22	1	1	0	0	FM	2hrs Trek
		Haubango Cath Mission	107	106	Hawabango HC	122	21	73	18.07.22	1	1	0	0	FM	Trek
	9.Karangea		667	851		809	130	376		2	2	0	0		
		Karangea	212	255	Hawabango HC	253	34	116	16.07.22	1	1	0	0	FM	2 Hr Trek
		Iwawia	455	596	Hawabango HC	556	96	260	16.07.22	1	1	0	0	FM	2 Hr Trek
	10.Kwoi'amunga		1,366	1,495		1,623	241	793		2	2	0	0		
		Kwoi'amunga	746	926	Hawabango HC	1,141	171	566	17.07.22	1	1	0	0	FM	6 Hr Trek

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		Hata	620	569	Hawabango HC	482	70	227	19.07.22	1	1	0		FM	6 Hr Trek
	11.Kengo		823	1,313		1,003	188	484		4	4	0	0		
		Teingama	713	518	Kaintiba HC	477	96	229	27.07.22	1	1	0	0		6 Hr Trek
		Manganaiawa		NEW	Kaintiba HC	174	30	84	27.07.22	1	1	0	0		6 Hr Trek
		Muoe	51	530	Kaintiba HC	199	31	94	27.07.22	1	1	0	0		6 Hr Trek
		Kapa	60	265	Kaintiba HC	153	31	77	27.07.22	1	1	0	0		6 Hr Trek
	12.Hapataewa		1,060	923		1,000	197	487		6	6	0	85		
		Hapataewa	271	207	Kaintiba HC	299	50	145	22.07.22	1	1	0	24		3 Hr Trek
		Kamaini	77	148	Kaintiba HC	149	50	71	25.07.22	1	1	0	24		3 Hr Trek
		Palengauwa	231	198	Kaintiba HC	137	25	68	22.07.22	1	1	0	24		3 Hr Trek
		Imendu	212	171	Kaintiba HC	153	24	73	25.07.22	1	1	0	1		3 Hr Trek
		Paya	215	119	Kaintiba HC	105	23	54	25.07.22	1	1	0	0		3 Hr Trek
		Imanagini	53	81	Kaintiba HC	157	25	76	25.07.22	1	1	0	12		3 Hr Trek
	13.Kaintiba Station		548	406		338	59	167		2	2	0	0		
		Kaintiba Station	448	338	Kaintiba HC	294	50	144	22.07.22	1	1	0	0		Trek
		Yoe Lutheran Mission	100	68	Kaintiba HC	44	9	23	25.07.22	1	1	0	0		Trek
	14.Ikose		883	701		807	141	392		5	5	0	35		
		Ikose	354	203	Kaintiba HC	332	48	157	22.07.22	1	1	0	12		Trek
		Uyahawa	175	227	Kaintiba HC	155	36	76	26.07.22	1	1	0	0		Trek
		Iauyetebeu	88	91	Kaintiba HC	127	22	63	24.07.22	1	1	0	9		Trek
		Katopa	130	143	Kaintiba HC	103	15	50	22.07.22	1	1	0	2		Trek
		Wabi	137	38	Kaintiba HC	90	20	46	22.07.22	1	1	0	12		Trek
	15.Yakitangwa		662	550		550	97	266		3	3	0	38		
		Kavaini	194	260	Kaintiba HC	200	33	94	22.07.22	1	1	0	30		3 Hr Trek
		Itikoeta	187	68	Kaintiba HC	139	25	69	22.07.22	1	1	0	5		3 Hr Trek
		Yakitangwa	280	221	Kaintiba HC	211	39	103	22.07.22	1	1	0	3		3 Hr Trek
				0											
	Kerema Urban		8,974	7,778		7,712	1,159	3,881		9	9	9	789	9	
	1.Kerema Town		8,974	7,778		7,712	1,159	3,881		9	9	9	789		
		Kerema 1	1,229	1,234	Kerema HC2	1,018	130	519	23.05.22	1	1	1	0	NBC	Road
		Kerema 2	611	1,723	Kerema HC2	1,591	240	774	24.05.22	1	1	1	136	NBC	Road
		Kerema 3	890	0	Kerema HC2										Non Existant
		Kerema 4	702	901	Kerema HC2	1,072	130	538	24.05.22	1	1	1	112	NBC	Road
		Kerema 5	562	502	Kerema HC2	752	100	365	23.05.22	1	1	1	71	NBC	Road
		Kerema 6	865	0	Kerema HC2										Non Existant
		Luluitera	967	811	Kerema HC2	724	118	364	23.05.22	1	1	1	105	NBC	Road
		Rabia Camp Sttlmnt	431	723	Kerema HC2	692	119	364	23.05.22	1	1	1	92	NBC	Road
		Siviri	923	738	Kerema HC2	728	139	369	23.05.22	1	1	1	125	NBC	Road
		Kerema Bay	557	448	Kerema HC2	393	64	200	23.05.22	1	1	1	46	NBC	Road
		Karaeta	788	699	Kerema HC2	742	119	388	23.05.22	1	1	1	102	NBC	Road
		Kerema 17	448	0	Kerema HC2										Non Existant
				0											
	Kotidanga Rural		29,163	25,938		26,044	4,412	13,003		75	72	0	29	65	
	1.Kiamdia		2,292	1,586		1,736	299	905		8	8	0	0		
		Kopi'awa	569	301	Kanabea HC	312	69	166	20-21.07.22	1	1	0	0	Seagul FM	Close to Station
		Kanabea/Yapa/Kopia	471	179	Kanabea HC	224	34	123	24-25.07.22	1	1	0	0	Seagul FM	Close to Station
		Kiamdia	545	300	Kanabea HC	218	35	122	19-20.07.22	1	1	0	0	Seagul FM	Close to Station
		Mine	371	137	Kanabea HC	191	30	81	25-26.07.22	1	1	0	0	Seagul FM	Close to Station
		Kanabea Cath. Mission	336	213	Kanabea HC	238	40	116	24-25.07.22	1	1	0	0	Seagul FM	Close to Station
		Naina		214	Kanabea HC	277	44	148	19-20.07.22	1	1	0	0	Seagul FM	Close to Station
		Uhu		102	Kanabea HC	164	28	89	18-19.07.22	1	1	0	0	Seagul FM	Close to Station
		Adave		139	Kanabea HC	112	19	60	19-20.07.22	1	1	0	0	Seagul FM	Close to Station
	2.Ipaiyu		1,508	1,412		1,219	194	647		3	3	0	0		
		Yomba/Piopi	452	368	Kanabea HC	233	36	125	18-19.07.22	1	1	0	0	Seagul FM	4 Hr Trek
		Ipaiyu	506	537	Kanabea HC	438	64	242	19-20.07.22	1	1	0	0	Seagul FM	4 Hr Trek
		Tikiani	550	507	Kanabea HC	548	94	280	19-20.07.22	1	1	0	0	Seagul FM	4 Hr Trek
	3.Manimango		2,632	1,619		1,923	314	1,019		3	3	0	0		
		Akewa	462	481	Kanabea HC	674	93	358	21-22.07.22	1	1	0	0	Seagul FM	6 Hr Trek
		Manimango	469	510	Kanabea HC	588	100	313	23-24.07.22	1	1	0	0	Seagul FM	6 Hr Trek
		Yeka	1,701	629	Kanabea HC	661	121	348	22-23.07.22	1	1	0	0	Seagul FM	6 Hr Trek
	4.Wemawa		2,277	1,851		1,958	308	965		2	2	0	0		
		Iwaina	960	807	Kanabea HC	621	88	330	23-24.07.22	1	1	0	0	Seagul FM	1 Day Trek
		Wemawa	1,317	1,044	Kanabea HC	1,337	220	635	23-24.07.22	1	1	0	0	Seagul FM	1 Day Trek
	5.Komako		2,063	1,459		1,508	296	793		2	2	0	0		
		Komako No.1 & 2	2,063	1,269	Komako AP	1,250	250	656	22-27.07.22	1	1	0	0		Vicinity
		Pake		190	Komako AP	258	46	137	23-24.07.22	1	1	0	0		1 Day Trek
	6.Kwaiyu		893	868		1,032	142	540		1	1	0	0		
		Kwaiyu	893	868	Komako AP	1,032	142	540	25-27.07.22	1	1	0	0		1 Day Trek
	7.Bu'u		1,858	1,688		1,903	377	989		5	4	0	0		
		M'bu'u	835	487	M'bu'u AP	392	100	224	25-27.07.22	1	1	0	0		Vicinity
		Sinde	91	165	M'bu'u AP	263	50	140	24-25.07.22	1	1	0	0		4-5 days Trek
		Ukundi	564	224	M'bu'u AP	289	50	156	24-25.07.22	1	1	0	0		3 Days Trek
		Hangkai	368	369	M'bu'u AP	361	100	193	25-27.07.22	1	1	0	0		1 Day Trek
		Yauka		443	M'bu'u AP	598	77	276	25-26.07.22	1	0	0	0		1 Day Trek
	8.Pio		1,175	516		664	128	362		4	3	0	0		
		Pio	727	83	Kanabea HC	204	40	114	22-23.07.22	1	1	0	0	Seagul FM	Trek
		Wagi	448	83	Kanabea HC					1					Included Under Wake
		Kaminakawa		350	Kanabea HC	208	39	111	23-24.07.22	1	1	0	0	Seagul FM	Trek
		Pangoe		NEW	Kanabea HC	252	49	137	25-26.07.22	1	1	0	0	Seagul FM	Trek
	9.Anea		1,282	1,382		1,022	171	524		4	4	0	0		
		Anea	299	345	Kanabea HC	280	40	150	22-23.07.22	1	1	0	0	Seagul FM	Trek
		Famfa	359	260	Kanabea HC	138	24	77	22-23.07.22	1	1	0	0	Seagul FM	Trek
		Tamdekengo	482	356	Kanabea HC	259	44	129	26-27.07.22	1	1	0	0	Seagul FM	Trek

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		Wake	142	421	Kanabea HC	345	63	168	26-27.07.22	1	1	0		Seagul FM	Trek
	10.Aminauwa		2,011	2,317		1,714	227	842		4	4	0	0		
		Paingoba	280	311	Kanabea HC	353	50	166	25-26.07.22	1	1	0		Seagul FM	Trek
		Wotapaiyu	187	974	Kanabea HC	487	69	244	25-26.07.22	1	1	0		Seagul FM	Trek
		Aminauwa	1,166	602	Kanabea HC	613	69	299	20-21.07.22	1	1	0		Seagul FM	Trek
		Waikuna	377	430	Kanabea HC	261	39	133	25-26.07.22	1	1	0		Seagul FM	Trek
	11.M'bauya		1,664	3,273		2,794	476	1,202		12	11	0	29		
		Ivanawaiya	44	298	Kamina HC	317	47	157	22.07.22	1	1	0	0	NBC Gulf	2 Day Trek
		M'bauya	363	525	Kamina HC	314	55	153	22.07.22	1	1	0	18	NBC Gulf	2 Day Trek
		Tipingawa	200	286	Kamina HC	296	46	172	22.07.22	1	1	0	0	NBC Gulf	2 Day Trek
		Mutua	487	170	Kamina HC					1					Included Under Murua-Simga
		Muru-Simga	142	337	Kamina HC	240	43	118	25.07.22	1	1	0	11	NBC Gulf	2 Day Trek
		Maiwakata	429	473	Kamina HC	522	89	220	22.07.22	1	1	0	0	NBC Gulf	2 Day Trek
		Tapa		265	Kamina HC	160	30	63	27.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Yauya		245	Kamina HC	307	44	94	27.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Waipa		326	Kamina HC	99	19	49	21.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Adiya		121	Kamina HC	233	50	67	25.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Akaiwea (Makaiwa)		227	Kamina HC	160	31	70	25.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Taimanga		NEW	Kamina HC	146	22	39	25.07.22	1	1	0	0	NBC Gulf	1 Day Trek
	12.Ivandu		1,562	1,008		1,382	232	654		4	4	0	0		
		Ivandu	490	424	Kamina HC	444	90	210	25.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Merapo	778	416	Kamina HC	486	78	228	21.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Kwemina	294	75	Kamina HC	106	14	42	21.07.22	1	1	0	0	NBC Gulf	1 Day Trek
		Yone		93	Kamina HC	346	50	174	22.07.22	1	1	0	0	NBC Gulf	1 Day Trek
	13.Hawakabia		1,923	1,030		1,203	206	557		4	4	0	0		
		Hawakabia	622	234	Kamina HC	263	46	144	17.07.22	1	1	0	0	NBC Gulf	Trek
		Ikoake	1,009	677	Kamina HC	614	109	251	27.07.22	1	1	0	0	NBC Gulf	Trek
		Wauwa (Wapua)	292	119	Kamina HC	142	21	61	18.07.22	1	1	0	0	NBC Gulf	Trek
		Wauwa (Hoti)		NEW	Kamina HC	184	30	101	22.07.22	1	1	0	0	NBC Gulf	Trek
	14.Kamina		639	898		1,036	153	522		3	3	0	0		
		Moiwa	413	228	Kamina HC	298	42	145	18.07.22	1	1	0	0	NBC Gulf	Trek
		Kamina Cath Mission	226	267	Kamina HC	260	36	132	17.07.22	1	1	0	0	NBC Gulf	Trek
		Wawa		403	Kamina HC	478	75	245	18.07.22	1	1	0	0	NBC Gulf	Trek
	15.Tiawa		1,219	1,272		1,385	292	653		4	4	0	0		
		Tiawa	513	637	Kamina HC	783	142	327	16.07.22	1	1	0	0	NBC Gulf	Trek
		Wanuya/Wauwe	291	177	Kamina HC	200	50	104	16.07.22	1	1	0	0	NBC Gulf	Trek
		Mamabua/Yongipanga	415	285	Kamina HC	197	50	110	16.07.22	1	1	0	0	NBC Gulf	Trek
		Atamana		173	Kamina HC	205	50	112	16.07.22	1	1	0	0	NBC Gulf	Trek
	16.Paina		657	743		1,030	164	465		4	4	0	0		
		Paina	657	313	Kamina HC	333	50	184	23.07.22	1	1	0	0	NBC Gulf	Trek
		Kemu		270	Kamina HC	216	36	121	23.07.22	1	1	0	0	NBC Gulf	Trek
		Suwatoa		160	Kamina HC	150	28	69	23.07.22	1	1	0	0	NBC Gulf	Trek
		Wathuwea		NEW	Kamina HC	331	50	91	23.07.22	1	1	0	0	NBC Gulf	Trek
	17.Meiwari		1,070	824		685	105	373		2	2	0	0		
		Meiwari	989	433	Kanabea HC	461	66	254	20-21.07.22	1	1	0	0	Seagul FM	Trek
		Titikamina	81	391	Kanabea HC	224	39	119	22-23.07.22	1	1	0	0	Seagul FM	Trek
	18.Kutumbaiwa		1,035	774		517	71	276		1	1	0	0		
		Kutumbaiwa	1,035	774	Kanabea HC	517	71	276	20-21.07.22	1	1	0	0	Seagul FM	Trek
	19.Kotidanga		771	802		531	101	283		3	3	0	0		
		Kotidanga	394	370	Kanabea HC	232	41	123	18-19.07.22	1	1	0	0	Seagul FM	Trek
		Kotidanga Sub District	377	243	Kanabea HC	98	17	51	18-19.07.22	1	1	0	0	Seagul FM	Trek
		Kunai		189	Kanabea HC	201	43	109	18-19.07.22	1	1	0	0	Seagul FM	Trek
	20.Ipaea		632	616		802	156	432		2	2	0	0		
		Ipaea	389	308	Kanabea HC	397	85	213	18-19.07.22	1	1	0	0	Seagul FM	Trek
		Nagabaiwa	243	308	Kanabea HC	405	71	219	19-20.07.22	1	1	0	0	Seagul FM	Trek
				0											
	Lakekamu-Tauri Rural		17,878	21,421		22,489	3,392	10,922		50	34	9	0	1	
	1.Iphia/Titikaini		750	1,507		2,161	359	1,028		5	5	5	0		
		Kukia	371	325	Malalaua HC3	435	77	213	19.05.22	1	1	1	0		Road/Trek
		Hydavia	173	556	Malalaua HC3	582	78	273	18.05.22	1	1	1	0		Road/Trek
		Hibawaia	205	625	Malalaua HC3	869	139	409	17.05.22	1	1	1	0		Road/Trek
		Hamandaia		NEW	Malalaua HC3	129	50	65	19.05.22	1	1	1	0		Road/Trek
		Kemboa		NEW	Malalaua HC3	146	15	68	20.05.22	1	1	1	0		Road/Trek
	2.Wanto		2,221	1,876		1,410	269	653		7	7	0	0		
		Aiyota	338	274	Malalaua HC3	166	33	77	22.05.22	1	1	0	0		Boat/Trek
		Wande	306	387	Malalaua HC3	345	64	162	22.05.22	1	1	0	0		Boat/Trek
		Kasuve	587	256	Malalaua HC3	269	50	107	23.05.22	1	1	0	0		Boat/Trek
		Opawe	212	191	Malalaua HC3	44	11	24	25.05.22	1	1	0	0		Boat/Trek
		Hoka	301	291	Malalaua HC3	141	29	69	23.05.22	1	1	0	0		Boat/Trek
		Yeve	266	206	Malalaua HC3	264	45	125	23.05.22	1	1	0	0		Boat/Trek
		Mosangi	210	271	Malalaua HC3	181	37	89	22.05.22	1	1	0	0		Boat/Trek
	3.Kakiva		1,161	1,624		1,063	186	502		5	4	0	0		
		Kakiva	294	244	Malalaua HC3	164	33	73	05.06.22	1	1	0	0		Boat/Trek
		Sammans Givepa	343	308	Malalaua HC3	275	40	133	05.06.22	1	1	0	0		Boat/Trek
		Nonombo	308	541	Malalaua HC3	504	93	239	05.06.22	1	1	0	0		Boat/Trek
		Tagoa	51	296	Malalaua HC3	120	20	57	05.06.22	1	1	0	0		Boat/Trek
		Uyemga	165	235	Malalaua HC3					1					Included Under Nonombo
	4.Putei		1,792	2,529		3,928	576	1,862		9	4	0	0		
		Piria	327	567	Malalaua HC3	418	57	199	21.05.22	1	0	0	0		Boat
		Marukapota	201	274	Malalaua HC3	539	82	280	16.05.22	1	0	0	0		Boat
		Putei	520	430	Malalaua HC3	704	100	334	21.05.22	1	1	0	0		Boat
		Autapea	126	98	Malalaua HC3	243	50	107	21.05.22	1	0	0	0		Boat
		Kotai	107	179	Malalaua HC3	230	50	106	21.05.22	1	0	0	0		Boat

LLG	WARD	VILLAGE	Estimated 2022 Population Based On 2000 Census	Estimated 2022 Population Based On 2019 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
		Santo Maria	324	625	Malalaua HC3	611	56	284	21.05.22	1	0	0	0		Boat
		Sirori	186	355	Malalaua HC3	400	50	180	21.05.22	1	1	0	0		Boat
		Fish Creek		NEW	Malalaua HC3	654	96	302	16.05.22	1	1	0	0		Boat/Trek
		Karai		NEW	Malalaua HC3	129	35	70	16.05.22	1	1	0	0		Boat
		5.Kakoro	769	1,374		1,040	123	496		6	0	0	0		
		Kakoro	133	171	Malalaua HC3	139	18	67	27.05.22	1	0	0	0		Boat
		Mirimas	166	405	Malalaua HC3	260	34	123	27.05.22	1	0	0	0		Boat
		Iruki	215	225	Malalaua HC3	192	31	95	27.05.22	1	0	0	0		Boat
		Bundi Camp	96	200	Malalaua HC3	182	19	84	27.05.22	1	0	0	0		Boat
		Poyang	128	0	Malalaua HC3					1					Included Under Kakoro
		Meri Camp	30	374	Malalaua HC3	267	21	127	27.05.22	1	0	0	0		Boat
		6.Okaivai	1,329	2,600		2,257	415	1,094		6	3	0	0		
		Keremahaua	95	154	Malalaua HC3	46	10	24	27.05.22	1					Boat
		Okaivai	531	811	Malalaua HC3	724	136	355	27.05.22	1	1	0	0		Boat
		Nukeva/Parata	170	825	Malalaua HC3	571	102	278	27.05.22	1	1	0	0		
		Urulau	370	601	Malalaua HC3	472	87	226	27.05.22	1	1	0	0	FM	Boat
		Nanmoto/Yaito	47	0	Malalaua HC3	211	40	94	27.05.22	1	0	0	0		Boat
		Ungima	117	208	Malalaua HC3	233	40	117	27.05.22	1	0	0	0		Boat
		7.Heavala	4,790	5,038		4,969	633	2,467		3	3	2	0		
		Heavala	2,637	2,242	Malalaua HC3	1,686	241	827	25.05.22	1	1	0	0		Road/Boat
		Lalafuru	618	540	Malalaua HC3	668	61	327	20.05.22	1	1	1	0		Road/Boat
		Terepo	1,534	2,256	Malalaua HC3	2,615	331	1,313	21.05.22	1	1	1	0		Road/Boat
		8.Heatoare	2,835	1,951		2,407	367	1,214		2	2	0	0		
		Heatoare	1,937	1,349	Malalaua HC3	1,641	233	837	25.05.22	1	1	0	0		Road/Boat
		Savaiviri	898	602	Malalaua HC3	766	134	377	20.05.22	1	1	0	0		Road/Boat
		9.Malalaua Urban	2,231	2,922		3,254	464	1,606		7	6	2	0		
		Malalaua	536	1,134	Malalaua HC3	1,404	184	713	22.05.22	1	1	1	0		Road
		Malalaua	371	0	Malalaua HC3					1					Included Under Malalaua
		Keke Settlement	405	461	Malalaua HC3	697	91	296	23.05.22	1	1	1	0		Road
		Tapala	468	240	Malalaua HC3	151	24	84	23.05.22	1	1	0	0		Road
		Uto	180	670	Malalaua HC3	540	98	280	23.05.22	1	1	0	0		Road
		Mura	100	302	Malalaua HC3	234	32	117	22.05.22	1	1	0	0		Road
		Malalaua High School	172	114	Malalaua HC3	228	35	116	22.05.22	1	1	0	0		Road

ANNEX TWO

**Rotarians Against Malaria
Gulf Province: Kikori District
LLIN Distribution Summary Sheet**

LLG	WARD	VILLAGE	Estimated 2022 Population Based On 2000 Census	Estimated 2022 Population Based On 2019 Survey	Health Centre	Population Surveyed	House Holds Surveyed	Nets Issued	Date Of Distribution	Villages	Digicel	Bmobile	Houses With Radios	Radio Networks	Comments
Kikori			70,417	70,417		70,615	11,472	35,989		230	155	10	422	141	
	Baimuru Rural		17,805	15,668		15,117	2,482	7,811		46	25	0	208	23	
	1.Ipiko		587	672		561	86	280		2	2	0	5		
		Ipiko	410	500	Baimuru HC	408	61	206	30.07.22	1	1	0	2		Boat
		Pakemba	177	172	Baimuru HC	153	25	74	30.07.22	1	1	0	3		Boat
	2.Karurua		1,436	1,291		1,251	175	620		3	3	0	15		
		Karurua	1,214	874	Baimuru HC	899	129	438	31.07.22	1	1	0	15		Boat
		Inaua	221	281	Baimuru HC	274	36	146	31.07.22	1	1	0	0		Boat
		Viriviri		136	Baimuru HC	78	10	36	31.07.22	1	1	0	0		Boat
	3.Bekoro		480	478		528	90	261		2	2	0	25		
		Bekoro	437	363	Baimuru HC	341	52	169	30.07.22	1	1	0	0		Boat
		Pivara/Kuporo	43	116	Baimuru HC	187	38	92	30.07.22	1	1	0	25		Boat
	4.Mariki		796	697		600	105	318		3	2	0	0		
		Mariki	337	264	Baimuru HC	201	39	108	29.07.22	1	1	0	0		Boat
		Upaia	311	271	Baimuru HC	279	45	147	29.07.22	1	1	0	0		Boat
		Aiere	148	162	Baimuru HC	120	21	63	29.07.22	1	0	0	0		Boat
	5.Varia		556	583		619	105	314		2	2	0	0		
		Varia	556	510	Baimuru HC	530	84	266	29.07.22	1	1	0	0		Boat
		Koporo		73	Baimuru HC	89	21	48	29.07.22	1	1	0	0		Boat
	6.Korovake		1,237	1,210		1,169	170	576		1	1	0	24		
		Korovake	1,237	1,210	Baimuru HC	1,169	170	576	30.07.22	1	1	0	24		Boat
	7.Ara'ava		912	844		828	135	436		1	0	0	21		
		Ara'ava	912	844	Kapuna HC	828	135	436	29.07.22	1	0	0	21	NBC	Boat
	8.Kairimai		575	536		517	130	296		2	0	0	1		
		Kaiaravi	139	114	Kapuna HC	107	43	87	30.07.22	1	0	0	1	NBC	Boat
		Kairimai	435	421	Kapuna HC	410	87	209	29.07.22	1	0	0	0	NBC	Boat
	9.Kapuna		556	260		151	30	156		1	0	0	0		
		Kapuna Hosp & School	556	260	Kapuna HC	151	30	156	02.08.22	1	0	0	0	NBC	Boat
	10.Kinipo		738	563		500	86	255		1	1	0	4		
		Kinipo	738	563	Baimuru HC	500	86	255	29.07.22	1	1	0	4		Boat
	11.Ikinu		469	383		362	51	181		3	3	0	10		
		Ikinu	310	383	Baimuru HC	192	27	98	29.07.22	1	1	0	5		Boat
		Mirimailau	160	0	Baimuru HC	97	13	48	29.07.22	1	1	0	0		Boat
		Araureremiri		NEW	Baimuru HC	73	11	35	29.07.22	1	1	0	5		
	12.Akoma		612	520		534	83	253		1	1	0	25		
		Akoma	612	520	Baimuru HC	534	83	253	29.07.22	1	1	0	25		Boat
	13.Mapaio		1,189	1,233		1,038	208	569		3	0	0	6		
		Mapaio	651	637	Kapuna HC	545	100	281	30.07.22	1	0	0	2	NBC	Boat
		Old Lare	156	92	Kapuna HC	127	24	64	30.07.22	1	0	0	3	NBC	Boat
		Evare	381	504	Kapuna HC	366	84	224	31.07.22	1	0	0	1	NBC	Boat
	14.Aikavaravi		609	645		539	104	282		2	0	0	1		
		Aikavaravi	609	426	Kapuna HC	406	76	210	30.07.22	1	0	0	1	NBC	Boat
		Kaevaria		219	Kapuna HC	133	28	72	31.07.22	1	0	0	0	NBC	boat
	15.Maipenairu		492	449		493	75	256		2	0	0	5		
		Maipenairu	468	449	Kapuna HC	444	67	229	01.08.22	1	0	0	5	NBC	Boat
		Urika Mission Station	24	0	Kapuna HC	49	8	27	01.08.22	1	0	0	0	NBC	Boat
	16.Kapai		492	408		370	77	186		1	0	0	9		
		Kapai No.2	492	408	Kapuna HC	370	77	186	01.08.22	1	0	0	9	NBC	Boat
	17.Apiope		441	475		672	109	355		3	0	0	6		
		Apiope (Aioke)	328	370	Kapuna HC	382	62	202	01.08.22	1	0	0	0	NBC	Boat
		Kereia	49	0	Kapuna HC	139	26	74	01.08.22	1	0	0	5	NBC	Boat
		Kapai No.1 (Lakipairi)	63	105	Kapuna HC	151	21	79	01.08.22	1	0	0	1	NBC	Boat
	18.Aumu		444	249		296	53	147		1	0	0	0		
		Aumu	444	249	Kapuna HC	296	53	147	01.08.22	1	0	0	0	NBC	Boat
	19.Poroi		253	837		884	118	450		3	1	0	33		
		Poroi 1	155	71	Kapuna HC	169	24	89	10.07.22	1	0	0	7	NBC	Boat
		Poroi 2		480	Kapuna HC	483	62	245	10.07.22	1	1	0	18	NBC	boat
		Subu	99	286	Kapuna HC	232	32	116	10.07.22	1	0	0	8	NBC	Boat
	20.Wabo		827	959		1,006	144	512		2	2	0	6		
		Wabo/Uri (Luri)	614	657	Kapuna HC	700	96	358	09.07.22	1	1	0	3	NBC	Boat
		Ura	213	302	Kapuna HC	306	48	154	09.07.22	1	1	0	3	NBC	Boat
	21.Uraru		88	288		320	60	169		2	0	0	2		
		Uraru	88	288	Kapuna HC	139	26	74	09.07.22	1	0	0	2	NBC	Boat
		Siarsino		NEW	Kapuna HC	181	34	95	09.07.22	1	0	0	0	NBC	Boat
	22.Haia		1,609	0											
		Haia	1,294	0	Kikori DH										Done from Chimbu
		Japramaru	315	0	Kikori DH										Done from Chimbu
	23.Baimuru Station		2,408	2,088		1,879	288	939		5	5	0	10		
		Baimuru	687	459	Baimuru HC	919	146	465	31.07.22	1	1	0	0		Boat
		Baimuru	39	392	Baimuru HC										Same as above
		Koki Settlement	429	318	Baimuru HC	306	42	152	31.07.22	1	1	0	0		Boat
		Middletown Settlement	248	396	Baimuru HC	160	21	75	31.07.22	1	1	0	0		Boat
		Mix Settlement	755	217	Baimuru HC	140	31	77	31.07.22	1	1	0	0		Boat
		Nenegau Is. Settlement	250	306	Baimuru HC	354	48	170	31.07.22	1	1	0	10		Boat
				0											
	East Kikori Rural		14,947	16,797		16,986	2,635	8,793		53	36	0	1	22	
	1.Negebare		503	717		727	129	397		6	0	0	0		
		Negebare	163	448	Kikori DH	174	25	89	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
		Tekerapo	107	43	Kikori DH	55	10	30	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek

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		Tetrebare	233	226	Kikori DH	240	41	126	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
		Biake		NEW	Kikori DH	117	23	65	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
		Sagetau		NEW	Kikori DH	70	12	44	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
		Sirigini		NEW	Kikori DH	71	18	43	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
	2.Tobare		473	454		499	100	275		2	0	0	0		
		Tobare	473	454	Kikori DH	284	63	164	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
		Kena			Kikori DH	215	37	111	05.09.22	1	0	0	0	NBC	Helicopter/Boat & Trek
	3.Sera		49	73		110	25	68		2	0	0	0		
		Sera	49	73	Kikori DH	66	15	39	02.08.22	1	0	0	0	NBC	Boat/Trek
		Kare/Kuru		NEW	Kikori DH	44	10	29	02.08.22	1	0	0	0	NBC	Shifted from Wd 4
	4.Omo		238	328		301	45	175		1	0	0	0		
		Kare	53	55	Kikori DH	301	45	175	02.08.22	1	0	0	0	NBC	Boat
		Omo	185	273	Kikori DH										Shifted to Wd 3
	5.Kabarau		435	577		560	96	281		4	3	0	1		
		Kabarau	289	349	Kikori DH	358	57	180	19.07.22	1	1	0	0	NBC	Boat
		Waira	128	183	Kikori DH	156	30	78	19.07.22	1	1	0	0	NBC	Boat
		Middle Town	19	0	Kikori DH	25	5	13	19.07.22	1	1	0	0	NBC	Boat
		Serebi Logging Camp		45	Kikori DH	21	4	10	19.07.22	1	0	0	1	NBC	Boat
	6.Irimuku		259	376		341	59	173		2	2	0	0		
		Irimuku	242	356	Kikori DH	314	54	158	19.07.22	1	1	0	0	NBC	Boat
		Kitomave SDA Mission	17	19	Kikori DH	27	5	15	19.07.22	1	1	0	0	NBC	Boat
	7.Morere		349	125		151	19	75		1	0	0	0		
		Morere	218	0	Kikori DH	151	19	75	20.07.22	1	0	0	0	NBC	Boat
		Morere Tfi Camp	131	125	Kikori DH										Abandoned
	8.Ero		1,954	1,703		1,564	274	768		3	0	0	0		
		Ero	1,281	1,079	Kikori DH	977	199	484	20.07.22	1	0	0	0	NBC	Boat/Trek
		Samoa	427	414	Kikori DH	456	57	218	19.07.22	1	0	0	0	NBC	Boat/Trek
		Wowou	247	211	Kikori DH	131	18	66	20.07.22	1	0	0	0	NBC	Boat/Trek
	9.Veraibari		565	727		1,037	111	466		1	1	0	0		
		Veraibari	565	727	Kikori DH	1,037	111	466	20.07.22	1	1	0	0	NBC	1 Day Boat
	10.Kivaumai		2,728	2,947		3,041	525	1,554		8	8	0	0		
		Kivaumai No.1	296	270	Karati HC	293	48	155	18.07.22	1	1	0	0		Boat
		Kivaumai No.2	197	197	Karati HC	227	36	119	18.07.22	1	1	0	0		Boat
		Aibigai	395	338	Karati HC	354	56	183	18.07.22	1	1	0	0		Boat
		Mirimairau	260	310	Karati HC	270	54	133	18.07.22	1	1	0	0		Boat
		Gauri	342	432	Karati HC	521	100	234	13.07.22	1	1	0	0		Boat
		Larimia	505	547	Karati HC	598	88	309	18.07.22	1	1	0	0		Boat
		Kinomere	617	449	Karati HC	520	93	284	13.07.22	1	1	0	0		Boat
		Gauri Turama ForeSt Log Pond	116	405	Karati HC	258	50	137	13.07.22	1	1	0	0		Boat
	11.Morovamu		651	802		741	103	387		2	2	0	0		
		Mairipepea	282	365	Karati HC	393	59	204	29.07.22	1	1	0	0		Boat
		Morovamu	369	437	Karati HC	348	44	183	20.07.22	1	1	0	0		Boat
	12.Wowoubo		2,337	2,660		3,052	456	1,615		6	6	0	0		
		Buri	335	516	Karati HC	543	74	270	13.07.22	1	1	0	0		Boat
		Tovie	361	403	Karati HC	444	100	227	14.07.22	1	1	0	0		Boat
		Wowoubo	367	440	Karati HC	511	92	274	13.07.22	1	1	0	0		Boat
		Oumaumere	71	230	Karati HC	321	42	181	29.07.22	1	1	0	0		Boat
		Mirgoiravi	437	525	Karati HC	622	72	332	13.07.22	1	1	0	0		Boat
		Ubuo	611	547	Karati HC	611	76	331	13.07.22	1	1	0	0		Boat
		Maoli Logging Camp	155	0	Karati HC										Non Existant
	13.Waitari		2,619	3,031		2,631	340	1,336		7	6	0	0		
		Epegau	90	178	Karati HC	173	24	85	13.07.22	1	1	0	0		Boat
		Meagoma	488	377	Karati HC	428	65	234	17.07.22	1	1	0	0		Boat
		Homobavi	532	518	Karati HC	623	77	296	17.07.22	1	1	0	0		Boat
		Tethui	189	249	Karati HC	267	31	138	13.07.22	1	1	0	0		Boat
		Waitari	276	265	Karati HC	268	46	146	13.07.22	1	1	0	0		Boat
		Gibi/Karault	723	877	Karati HC	872	97	437	17.07.22	1	1	0	0		Boat
		Teredau Base Camp	321	566	Karati HC					1					Included under Tethui
	14.Nahoromere		947	1,337		1,316	223	714		6	6	0	0		
		Aimei	233	253	Karati HC	223	33	115	18.07.22	1	1	0	0		Boat
		Gigori	204	255	Karati HC	216	52	133	18.07.22	1	1	0	0		Boat
		Imeia	204	221	Karati HC	211	38	106	11.07.22	1	1	0	0		Boat
		Nahoromere	216	341	Karati HC	373	50	208	18.07.22	1	1	0	0		Boat
		Vaiamu	90	132	Karati HC	140	24	72	18.07.22	1	1	0	0		Boat
		Era Goiravi		135	Karati HC	153	26	80	11.07.22	1	1	0	0		Boat
	15.Era Maipua		839	939		915	130	509		2	2	0	0		
		Era Maipua	679	444	Karati HC	722	100	394	18.07.22	1	1	0	0		Boat
		Aurai	160	495	Karati HC	193	30	115	11.07.22	1	1	0	0		Boat
			0	0											
	Ihu Rural		24,780	23,237		23,052	4,045	11,367		76	72	10	47	43	
	1.Avavu		1,291	1,374		1,443	215	708		6	6	0	0		
		Avavu	315	324	Orokolo HC	319	46	158	13.06.22	1	1	0	0		
		Ere	190	158	Orokolo HC	161	27	80	13.06.22	1	1	0	0		
		Huruta	211	237	Orokolo HC	283	50	134	13.06.22	1	1	0	0		
		Kilavi	230	269	Orokolo HC	271	35	134	13.06.22	1	1	0	0		
		Hepere	311	301	Orokolo HC	304	40	150	13.06.22	1	1	0	0		
		Muro Station	34	85	Orokolo HC	105	17	52	13.06.22	1	1	0	0		
	2.Harevavo		1,597	1,141		1,108	199	526		2	2	0	0		
		Harevavo	951	653	Orokolo HC	638	104	302	16.06.22	1	1	0	0		
		Marea	646	487	Orokolo HC	470	95	224	16.06.22	1	1	0	0		
	3.Kaivakavu		1,485	1,062		1,042	229	516		2	2	0	0		
		Kaivakavu	893	659	Orokolo HC	668	144	324	16.06.22	1	1	0	0		
		Larihairu	592	403	Orokolo HC	374	85	192	16.06.22	1	1	0	0		
	4.Arehava		1,029	986		992	185	482		4	4	0	0		

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		Arehava No.2	117	122	Orokolo HC	124	19	59	14.06.22	1	1	0	0		
		Iuku	515	524	Orokolo HC	501	100	242	16.06.22	1	1	0	0		
		Paevera	208	183	Orokolo HC	203	34	99	14.06.22	1	1	0	0		
		Laekoro	189	158	Orokolo HC	164	32	82	14.06.22	1	1	0	0		
	5.Kavava		1,049	920		956	223	474		3	3	0	0		
		Kavava	490	500	Orokolo HC	522	129	266	17.06.22	1	1	0	0		
		Hururu	196	168	Orokolo HC	213	44	105	17.06.22	1	1	0	0		
		Mirimurua	364	252	Orokolo HC	221	50	103	17.06.22	1	1	0	0		
	6.Harilarewa		973	834		816	129	410		2	2	0	0		
		Harilarewa	551	505	Orokolo HC	513	79	258	17.06.22	1	1	0	0		
		Hopaiku	422	328	Orokolo HC	303	50	152	17.06.22	1	1	0	0		
	7.Lariau		1,058	895		946	179	463		3	3	0	0		
		Larirau	589	423	Orokolo HC	480	100	241	16.06.22	1	1	0	0		
		Herakela	393	353	Orokolo HC	383	61	179	16.06.22	1	1	0	0		
		Hohoro	77	119	Orokolo HC	83	18	43	17.06.22	1	1	0	0		
	8.Pakovavu		968	971		916	151	458		3	3	0	0		
		Haeari	321	265	Ihu HC	331	50	165	20.06.22	1	1	0	0	adio Gulf F	Boat
		Miae	163	180	Ihu HC	152	21	74	20.06.22	1	1	0	0	adio Gulf F	Boat
		Pakovavu	483	526	Ihu HC	433	80	219	20.06.22	1	1	0	0	adio Gulf F	Boat
	9.Haruape		1,095	862		876	167	461		6	6	0	0		
		Auma	279	197	Ihu HC	183	42	101	20.06.22	1	1	0	0	adio Gulf F	Boat
		Vailala/Hiloi	391	287	Ihu HC	170	28	90	20.06.22	1	1	0	0	adio Gulf F	Boat
		Vailala Kukii	168	184	Ihu HC	170	28	89	20.06.22	1	1	0	0	adio Gulf F	Boat
		Haruape	257	194	Ihu HC	188	41	98	20.06.22	1	1	0	0	adio Gulf F	Boat
		Vailala Keoa		NEW	Ihu HC	120	19	58	20.06.22	1	1	0	0	adio Gulf F	Boat
		Miae		NEW	Ihu HC	45	9	25	20.06.22	1	1	0	0	adio Gulf F	Boat
	10.Ihu Sattion		320	1,071		937	173	465		4	4	0	0		
		Aro	151	181	Ihu HC	140	28	70	21.06.22	1	1	0	0	adio Gulf F	Boat
		Maiviri Plantation	168	275	Ihu HC	190	27	91	21.06.22	1	1	0	0	adio Gulf F	Road
		Ihu Station		615	Ihu HC	534	105	267	20.06.22	1	1	0	0	adio Gulf F	Road
		Ihu High School		NEW	Ihu HC	73	13	37	21.06.22	1	1	0	0	adio Gulf F	Road
	11.Lovehoho		964	1,312		1,277	253	629		4	4	4	0		
		Lovehoho	289	486	Kerema HC	446	95	216	05.06.22	1	1	1	0		Boat
		Pekoe	111	199	Kerema HC	161	33	83	05.06.22	1	1	1	0		Boat
		Hiru	396	469	Kerema HC	415	75	205	05.06.22	1	1	1	0		Boat
		Aruruhu	168	159	Kerema HC	255	50	125	05.06.22	1	1	1	0		Boat
	12.Ovahuu		1,089	995		1,323	232	656		3	3	3	22		
		Ovahuu	424	405	Kerema HC	528	100	259	05.06.22	1	1	1	1		Boat
		Ova'a	565	471	Kerema HC	632	100	313	03.06.22	1	1	1	22		Boat
		Lakovu	100	119	Kerema HC	163	32	84	05.06.22	1	1	1	0		Boat
	13.Vailala		1,373	1,265		1,024	174	523		2	2	0	0		
		Vailala East No.1	616	649	Ihu HC	478	88	238	21.06.22	1	1	0	0	adio Gulf F	Boat
		Vailala East No. 2	757	616	Ihu HC	546	86	285	21.06.22	1	1	0	0	adio Gulf F	Boat
	14.Karokaro		1,325	1,065		980	167	483		4	4	0	0		
		Harona	391	319	Ihu HC	280	50	134	19.06.22	1	1	0	0	adio Gulf F	Boat
		Karokaro	461	266	Ihu HC	227	43	113	19.06.22	1	1	0	0	adio Gulf F	Boat
		Lui	318	245	Ihu HC	252	35	124	19.06.22	1	1	0	0	adio Gulf F	Boat
		Poiva	155	235	Ihu HC	221	39	112	19.06.22	1	1	0	0	adio Gulf F	Boat
	15.Herehere		548	697		744	131	353		1	1	1	25		
		Herehere No.1	548	697	Kerema HC	744	131	353	27.05.22	1	1	1	25		Boat
	16.Koialahu		1,811	1,452		1,451	260	730		4	4	0	0		
		Aivau	442	388	Ihu HC	372	65	191	21.06.22	1	1	0	0	adio Gulf F	Boat
		Koialahu	619	426	Ihu HC	358	69	181	21.06.22	1	1	0	0	adio Gulf F	Boat
		Keakea	502	408	Ihu HC	464	76	229	22.06.22	1	1	0	0	adio Gulf F	Boat
		Epemiavo	248	230	Ihu HC	257	50	129	22.06.22	1	1	0	0	adio Gulf F	Boat
	17.Lepokare		1,294	1,300		1,248	210	602		4	4	0	0		
		Iori	546	644	Ihu HC	294	55	144	22.06.22	1	1	0	0	adio Gulf F	Boat
		Lepokera	748	657	Ihu HC	419	60	204	22.06.22	1	1	0	0	adio Gulf F	Boat
		Vailala Karu		NEW	Ihu HC	354	60	169	22.06.22	1	1	0	0	adio Gulf F	Boat
		Noveipi		NEW	Ihu HC	181	35	85	21.06.22	1	1	0	0	adio Gulf F	Boat
	18.Akapiru		973	1,091		1,159	198	574		2	2	2	0		
		Akapiru	762	1,091	Kerema HC	1,109	189	548	27.05.22	1	1	1	0		Boat
		Bluff Logging Camp	211	0	Kerema HC	50	9	26	27.05.22	1	1	1	0		Boat
	19.Hepe		211	390		367	71	190		3	0	0	0		
		Pivo	156	174	Ihu HC	141	31	74	28.06.22	1	0	0	0	adio Gulf F	Boat
		Hamaba	54	63	Ihu HC										Non Existant
		Kakomiri		106	Ihu HC	80	14	36	25.06.22	1	0	0	0	adio Gulf F	Boat
		Koko		48	Ihu HC	146	26	80	26.06.22	1	0	0	0	adio Gulf F	Boat
	20.Heawa		753	974		1,031	151	495		6	6	0	0		
		Heawa	192	266	Ihu HC	284	36	134	24.06.22	1	1	0	0	adio Gulf F	Boat
		Kerovo	141	156	Ihu HC	152	24	75	24.06.22	1	1	0	0	adio Gulf F	Boat
		Lohiki	155	119	Ihu HC	131	19	62	25.06.22	1	1	0	0	adio Gulf F	Boat
		Opumiri	56	124	Ihu HC	104	20	50	24.06.22	1	1	0	0	adio Gulf F	Boat
		Lakoro	88	177	Ihu HC	187	29	89	24.06.22	1	1	0	0	adio Gulf F	Boat
		Ahia Com School	121	133	Ihu HC	173	23	85	25.06.22	1	1	0	0	adio Gulf F	Boat
	21.Mairava		1,419	758		744	107	349		2	2	0	0		
		Mairava	330	365	Ihu HC	300	49	147	23.06.22	1	1	0	0	adio Gulf F	Boat
		Hepea	536	319	Ihu HC	444	58	202	24.06.22	1	1	0	0	adio Gulf F	Boat
		Vailala Camp	553	0	Ihu HC										Non Existant
		Evore		75	Ihu HC										Non Existant
	22.Belepa		1,286	1,823		1,672	241	820		6	5	0	0		
		Belepa	274	337	Ihu HC	505	81	246	23.06.22	1	1	0	0	adio Gulf F	Road/Trek
		Hiloi	208	359	Ihu HC	374	49	177	23.06.22	1	1	0	0	adio Gulf F	Road/Trek
		Opa	204	248	Ihu HC	322	46	158	23.06.22	1	1	0	0	adio Gulf F	Road/Trek
		Opularia	589	675	Ihu HC	394	50	201	24.06.22	1	1	0	0	adio Gulf F	Road/Trek

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		Maira Plantation	12	65	Ihu HC										Non Existant
		Kire		139	Ihu HC					1					Included Under Opularia
		Moreova		NEW	Ihu HC	77	15	38	23.06.22	1	1	0	0	adio Gulf F	Boat
	23.Ihu	Station	869	0											
		Ihu Station	869	0	Ihu HC										Same as in Ward 10
West Kikori Rural			12,884	14,715		15,460	2,310	8,018		55	22	0	166	53	
	1.Haivaro		1,150	1,111		585	109	340		3	0	0	0		
		Haivaro	316	318	Kikori DH2	291	54	163	04.08.22	1	0	0	0	NBC	1 Day Boat
		Kuri Settlement	337	307	Kikori DH2	223	44	136	04.08.22	1	0	0	0		1 Day Boat
		Kuri Logging Camp	497	487	Kikori DH2										Abandoned
		Sumakarimo		NEW	Kikori DH2	71	11	41	04.08.22	1	0	0	0	NBC	1 Day Boat
	2.Moka		282	298		381	52	230		2	0	0	0		
		Moka No.1	187	298	Kikori DH2	272	36	164	05.08.22	1	0	0	0	NBC	Boat
		Moka No.2	95	0	Kikori DH2	109	16	66	05.08.22	1	0	0	0	NBC	Boat
	3.Komaio		595	1,544		1,714	174	887		5	0	0	0		
		Komaio	340	123	Kikori DH2	504	40	212	05.08.22	1	0	0	0	NBC	Boat
		Faia	136	554	Kikori DH2	388	35	198	05.08.22	1	0	0	0	NBC	Boat
		Saragi	27	68	Kikori DH2	187	30	117	05.08.22	1	0	0	0	NBC	Boat
		Sorobo	92	114	Kikori DH2	168	23	105	03.08.22	1	0	0	0	NBC	Boat
		Faia Logging Camp		685	Kikori DH2	467	46	255	05.08.22	1	0	0	0	NBC	Boat
	4.Masusu		333	287		375	53	180		3	0	0	0		
		Meagio	153	134	Kikori DH2	215	29	106	03.08.22	1	0	0	0	NBC	Boat
		Misiki	77	105	Kikori DH2	120	18	56	03.08.22	1	0	0	0	NBC	Boat
		Masusu	104	49	Kikori DH2	40	6	18	03.08.22	1	0	0	0	NBC	Boat
	5.Gibu		226	597		370	57	184		3	0	0	0		
		Gibu No.1 & 2	27	323	Kikori DH2	111	21	57	04.08.22	1	0	0	0	NBC	Boat
		Haragu	80	73	Kikori DH2	125	16	62	04.08.22	1	0	0	0	NBC	Boat
		Mapoia	119	201	Kikori DH2	134	20	65	04.08.22	1	0	0	0	NBC	Boat
	6.Ekairau		219	188		372	45	186		3	0	0	0		
		Dadebi	156	188	Kikori DH2					1	0	0	0	NBC	Included Under Erehere
		Erehehe	63	0	Kikori DH2	132	17	65	02.08.22	1	0	0	0	NBC	Boat
		Ekarau		NEW	Kikori DH2	240	28	121	05.08.22	1	0	0	0	NBC	Boat
	7.Kebeni		546	269		266	42	130		3	0	0	0		
		Pepehe	41	0	Kikori DH2	19	2	9	07.08.22	1	0	0	0	NBC	Boat
		Kibeni	223	95	Kikori DH2	86	14	41	07.08.22	1	0	0	0	NBC	Boat
		Gibidai	282	174	Kikori DH2	161	26	80	07.08.22	1	0	0	0	NBC	Boat
	8.Omati-Gihiteri		922	543		619	123	316		2	0	0	0		
		Omati-Gihiteri	922	314	Kikori DH2	437	94	216	20.07.22	1	0	0	0	NBC	Boat
		Road 6		229	Kikori DH2	182	29	100	06.08.22	1	0	0	0	NBC	Boat
	9.Kaiam		492	848		957	148	495		3	0	0	0		
		Kaiam No. 1 & 2	417	754	Kikori DH2	687	107	345	18.07.22	1	0	0	0	NBC	Boat
		Siawiti	75	94	Kikori DH2										Same as in Ward 10
		Kaiam Ferrie		NEW	Kikori DH2	197	28	102	20.07.22	1	0	0	0	NBC	Boat
		Tone Camp		NEW	Kikori DH2	73	13	48	05.08.22	1	0	0	0	NBC	Boat
	10.Baina		679	490		721	127	386		3	0	0	0		
		Baina	359	319	Kikori DH2	339	54	163	20.07.22	1	0	0	0	NBC	Boat
		Gobe	320	172	Kikori DH2	260	45	156	06.08.22	1	0	0	0	NBC	Boat
		Siawiti			Kikori DH2	122	28	67	23.07.22	1	0	0	0	NBC	Boat
	11.Kemei		165	261		319	41	147		2	0	0	0		
		Ai'dio	80	58	Kikori DH2	82	13	41	29.07.22	1	0	0	0	NBC	Boat
		Kemei	85	203	Kikori DH2	237	28	106	19.07.22	1	0	0	0	NBC	Boat
	12.Dopima		170	135		336	41	167		3	3	0	0		
		Dopima	65	135	Kikori DH2	109	17	51	29.07.22	1	1	0	0	NBC	Boat
		Goare	105	0	Kikori DH2	104	8	55	29.07.22	1	1	0	0	NBC	Boat
		Babai		NEW	Kikori DH2	123	16	61	29.07.22	1	1	0	0	NBC	Boat
	13.Babaguina		679	748		861	130	432		2	2	0	0		
		Babaguina	306	327	Kikori DH2	411	65	207	21.07.22	1	1	0	0	NBC	Boat
		Bisi	372	421	Kikori DH2	450	65	225	16.07.22	1	1	0	0	NBC	Boat
	14.Apeawa		415	518		494	59	233		1	1	0	0		
		Aveoa/Apeawa	415	518	Kikori DH2	494	59	233	21.07.22	1	1	0	0	NBC	Boat
	15.Doibo		478	470		519	69	254		3	3	0	0		
		Doibo	122	130	Kikori DH2	144	21	66	21.07.22	1	1	0	0	NBC	Boat
		Babeio	230	262	Kikori DH2	305	38	154	21.07.22	1	1	0	0	NBC	Boat
		Veiru	126	78	Kikori DH2	70	10	34	21.07.22	1	1	0	0	NBC	Boat
	16.Kopi		961	838		935	167	475		3	2	0	0		
		Kopi	534	470	Kikori DH2	548	80	275	15.07.22	1	1	0	0	NBC	Road/Boat
		Ogomabu	274	327	Kikori DH2	387	87	200	19.07.22	1	1	0	0	NBC	Boat
		Chevron/Kopi Base Camp	153	41	Kikori DH2					1					Included Under Kopi
	17.Kikori Urban		4,572	5,567		5,636	873	2,976		11	11	0	166		
		Kikori-Duhuma	1,289	767	Kikori DH2	401	78	208	23.07.22	1	1	0	0	NBC	Boat
		Kikori- Kekea 1&2	998	699	Kikori DH2	778	114	408	23.07.22	1	1	0	0	NBC	Road/Boat
		Primary School/Hospital		NEW	Kikori DH2	539	77	310	24.07.22	1	1	0	0	NBC	Road
		Delta	913	1,380	Kikori DH2	655	100	338	25.07.22	1	1	0	0	NBC	Road
		CDI/Boiyo		NEW	Kikori DH2	418	60	222	24.07.22	1	1	0	0	NBC	Road
		Kikori-Jacksons	179	321	Kikori DH2	561	86	295	25.07.22	1	1	0	0	NBC	Road
		Kikori-Katatai	1,192	264	Kikori DH2	321	50	166	25.07.22	1	1	0	0	NBC	Boat
		Kikori-Bank/Post office/Clinic/council Chamber	0	644	Kikori DH2	504	80	287	24.07.22	1	1	0	54	NBC	Road
		Boubou Council Camps	0	766	Kikori DH2	812	109	401	24.07.22	1	1	0	0	NBC	Road
		Kikori-Papake/High school	0	413	Kikori DH2	539	99	274	24.07.22	1	1	0	97	NBC	Road
		Foroba Settlement	0	314	Kikori DH2	108	20	67	24.07.22	1	1	0	15	NBC	Road