

Global Minimum and the Minus Malaria Initiative's Mosquito Net Distribution in July 2009 in the Malen chiefdom, Sierra Leone.



The GMin team: Faez, Lauge, Jacob, David, Mathias, Justin, Carlos, Clem, Sam and Jamie (L-R)

During 6 weeks in the summer of 2009, the Global Minimum team distributed 4,000 long lasting insecticide-treated mosquito nets in the Malen Chiefdom in Sierra Leone. Our partner, The Minus Malaria Initiative funded by the Project Pericles Fund at Swarthmore College, carried out the majority of the fundraising for the nets.

The distribution took our team to a new village each day where we visited each individual household. We held town meetings, performed malaria education skits and provided nets to cover every sleeping space.

The result of our distribution by the numbers:

<b>Mosquito nets distributed:</b>	<b>4000</b>
<b>Villages covered:</b>	<b>35</b>
<b>Team Members:</b>	<b>12</b>
<b>Miles walked by each member:</b>	<b>&gt;110</b>
<b>People covered:</b>	<b>8891</b>
<b>Under-fives covered:</b>	<b>2257</b>
<b>People per net:</b>	<b>2.3</b>
<b>Average Nets per household:</b>	<b>3.8</b>
<b>Population of largest village:</b>	<b>850</b>
<b>Population of smallest village:</b>	<b>25</b>
<b>Years of follow-up:</b>	<b>3</b>

### ***Stage 1 June 14<sup>th</sup> - June 30<sup>th</sup>: Freetown***

In Freetown, we coordinated the distribution with three key partners: UNICEF, the Red Cross (RC) and the National Malaria Control Program (NMCP). We shipped our nets to Sierra Leone together with those for the RC's November distribution. The RC cleared the nets and stored them at the NMCP's storage facility. The RC also put us in touch with their volunteers in the Pujehun district, who would be part of our distribution team. The NMCP agreed that we could use one of their trucks to transport the nets from Freetown to the Malen chiefdom if we covered fuel expenses and provided a stipend for the driver. Our own nets were scheduled to arrive July 5<sup>th</sup>, but we were eager to start earlier. So we made an agreement with the NMCP that we could use 4,000 of their nets and then replace

them with the 4,000 we would be receiving later. This arrangement was made easy by the fact that the RC and NMCP were already working together on other malaria projects and that the RC store their nets with the NMCP.



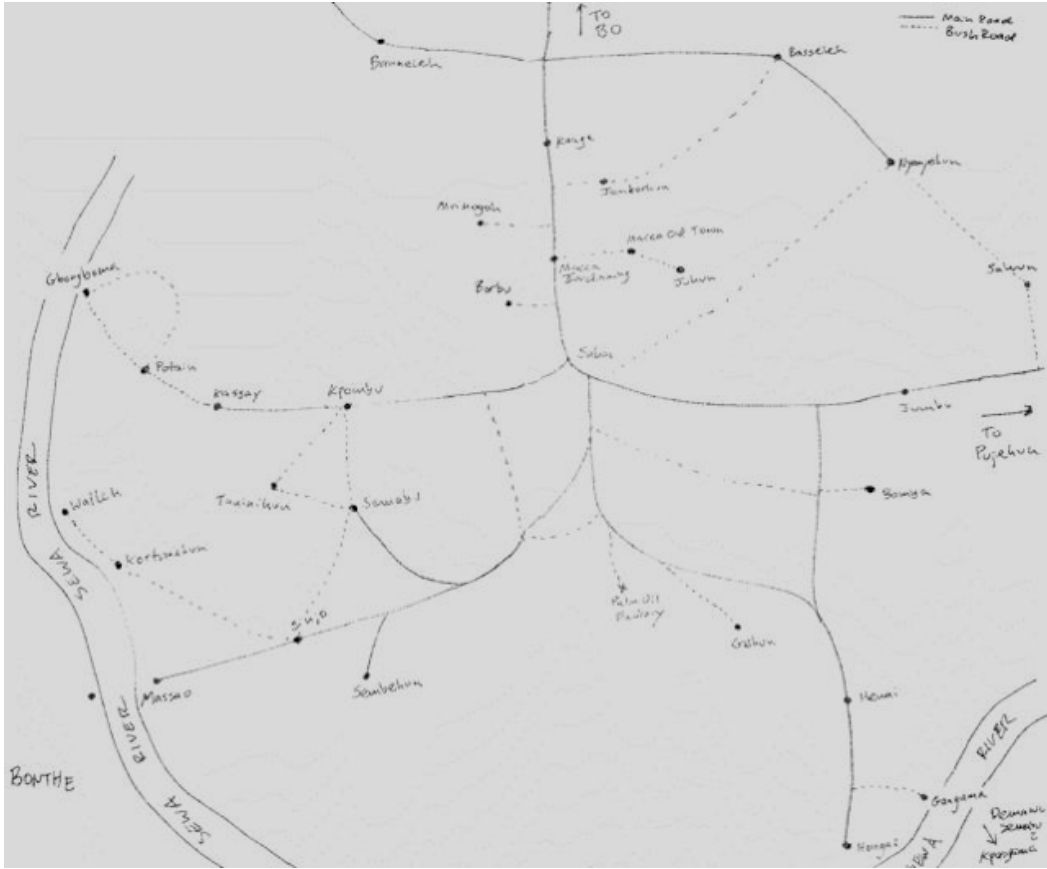
Loading the truck in Freetown

## ***Stage 2 July 1st - July 5<sup>th</sup>: Preparing in Sahn***

Sahn is the main village in the Malen Chiefdom, and it's the site of GMin's first distribution in 2007. It is a remote village located approximately 8 hours from Freetown with no electric grid, running water or paved roads. It is a charming and full of friendly people who are mainly farmers. We have built a strong relationship with the locals over the last 2 years, and it was a great boost that everyone in Sahn and in all the other villages considered this project theirs.

After the nets were delivered to Sahn, we still had to distribute the nets among the different recipient villages. We met with the paramount chief, Victor S. Kebbie, and we agreed to cover every village in the southern half of the chiefdom. We mapped out the chiefdom, estimated populations and created a couple of drop-off points from where we could get nets for each day of distribution. The Pujehun District Health Management team (DHMT) – our main partner from the first distribution in 2007 — provided the vehicle. We created this map of the chiefdom:





Map of lower Malen



Dropping off the nets at various villages throughout the chiefdom

### **Stage 3 July 6<sup>th</sup> - July 18th: The Distribution**

Each day, we would walk to a new village. We would wake up at 6:00 AM, wash our faces, eat a few loaves of bread and pack some water and stationery for the journey. Then we would trek up to 5 miles across streams, in the pouring rain or in the baking sun, usually in a single file to a new village where the people and the nets would be waiting for us.



On the road to Nyanyahun

Immediately after our arrival, a town meeting was called to order. The Chiefdom Speaker walked with us each day and he would introduce us to the Chief of the village. After the introductions, we would explain that we are from the organization Global Minimum, which was started by David Sengeh whose family hails from this chiefdom. We would also appoint one of the GMin members to introduce the rest of team, in Mende, before proceeding to a skit that demonstrates the purpose and method of using a mosquito net.

**The Skit:** The GMin team and locals often acted as mosquitoes, bed bugs and cockroaches that bit a person who was not sleeping under a net. This person got sick and eventually died. When the person used a net, the mosquitoes died and the person was healthier. The skit was narrated by a local Red Cross volunteer in Mende and the community members often participated with questions or answers to questions posed.





Performing the skit – getting sick from malaria



Safe under the mosquito net

## **Distributing the Nets:**

In every village, we formed multiple teams. Each team would have a GMin member and a local Red Cross volunteer, a representative of the DHMT – usually a Traditional Birth Attendant – or a high school student with a good command of English. A volunteer from the village would show each group around the different parts of the village. We visited each individual house to distribute the nets, do a demonstration over a bed if necessary and reinforce the lessons from the town meeting. We would answer any questions about the nets, and then unpack them from the plastic and hang them to air out for the day for excess insecticide to wear off. Since we usually arrived before noon, the nets were ready for use that same night. The teams conducted a small survey – approved by the Princeton Institutional Review Board – collecting demographic information and they kept a record of how many nets were handed out to each household.



Kpombu village: A GMin team doing their job – educating on the doorstep, unpacking the nets and leaving the nets to hang in the shade for a day..





Yet another house. We visited each one in each village.



The end result: A net over a bed. This is what GMin has been working towards since 2007. A donor in our international network funds this net, it travels from East Asia to Sahn Malen and is now hanging over a bed protecting the inhabitants of this household from malaria. “GMin: *Global Input, Local Output.*”



The house visits were the key part of the distribution where we ensured that each net went to a family that needed it. We would talk to the head of the household, look around each house (when invited in) and then hand out nets corresponding to the number of sleeping spaces. There were some nets in place already, but they were old, not treated with insecticide or riddled with holes. In very few cases did we find nets that were new and insecticide-treated and those were duly not replaced.



An old linen tent. It's hot to sleep under and not insecticide-treated yet it is testimony to the fact that this community took the lead in the fight against malaria even before GMin arrived.

### **Rapid Diagnostics Test:**

With the help of UNICEF-Sierra Leone and the NMCP, we were able to secure rapid diagnostic tests (“*paracheck*”) and ACT to treat positive malaria cases during the testing. We worked with the DHMT to test all the under-fives and pregnant women (sick or not) in 4 of the 35 villages that we visited. 60% of all under-fives tested positive for malaria. When broken down by age, 30% of under-ones were positive while an incredible 87% of five year olds were positive for malaria. Rapid Diagnostic tests overstate the number of positive cases, but these figures nevertheless further indicates the need to cover every sleeping space rather than just give the nets for vulnerable groups, because children only rarely sleep on the beds with nets. Instead they sleep on the floor or on mats.

We worked with local high school students identified by the president of GMin, David Sengeh, and their support was invaluable. To rally even more support in the chiefdom, GMin organized a soccer tournament for 10 big villages that received nets. The tournament was very popular with huge crowds, “Kick Out Malaria” cheers and heated discussions about who would end up as the ultimate winner.



Mathias Esmann with two high school students, Anthony (L) and Chris (R). Their efforts with translation and education were invaluable.





Soccer is serious in Sierra Leone. And a seriously good way to connect with people.



Moinina (center) was one of the stars of the tournament. He plays for the District team too.

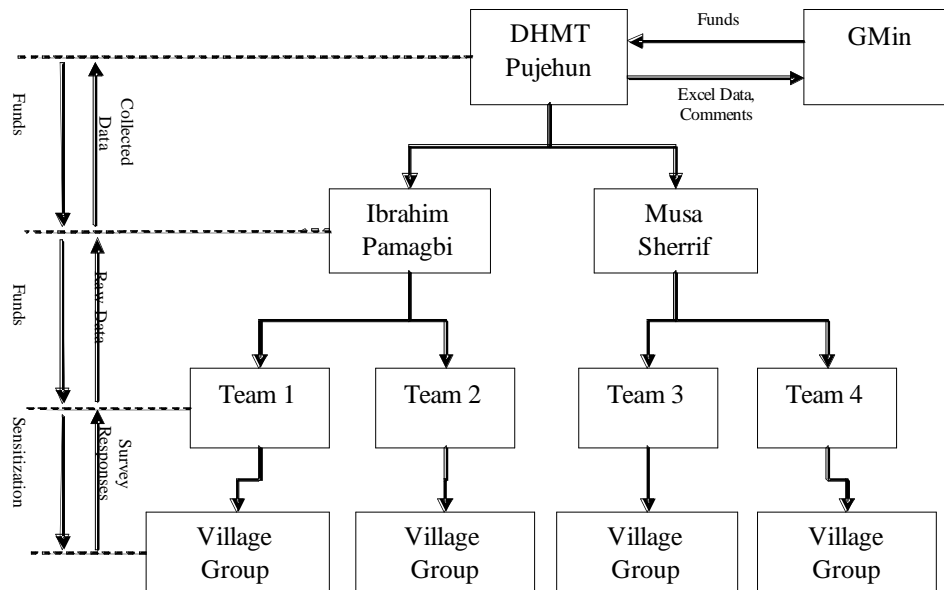
### ***Follow-up July 19<sup>th</sup> – August 1st:***

In order to find out whether the nets were being used, we agreed with the head of the local health clinic and a Red Cross volunteer coach to do follow-up. They will supervise four teams who will visit each house in the villages each month for the first three months following the distribution, and then every other month for a total of 3 years. The supervisors will report to the Pujehun DHMT who will then forward the reports to GMin. One GMin member stayed in Sierra Leone for two months after the distribution to follow the teams around and ensure that they collected and reported the data properly.



Training Session for the volunteers who will take over where GMin left





Flow chart for the work of the follow up teams

## Successes:

We reached all villages in the southern part of the Malen chiefdom no matter how big or small and covered every sleeping space with an insecticide-treated mosquito net

We had no expenses for vehicles – we walked, and the incentives to our local team members were low by Western standards (2 \$ a day). That made our distribution incredibly economical, as the only major expense was the nets.

We made a connection with the local members of the chiefdom and created a framework for following up on the project.

We successfully cooperated with the National Malaria Control Program thus integrating our project into national efforts to control malaria, for example by incorporating our distribution data into the national statistics.

We established working relationships with the local chief, local government, the Red Cross-Sierra Leone, UNICEF-SL and the local District Health Medical Team.

## **Challenges**

We found that children normally slept on the floor rather than in beds. We also found that mosquito nets were mainly used to cover beds, so many children were effectively uncovered by a family's mosquito net even though they are the most vulnerable group. Our response was to give enough mosquito nets so that even floor spaces were covered.

However, some people tended to exaggerate the number of people in the household, and some increased the number of sleeping spaces by putting out extra mats on the floor. Some also took down old nets prior to our arrival. Our best shot at countering this was to stress that this was a community project initiated by a community member, and that we only had a limited number of nets so that any hoarding would take nets away from others. Our local team members questioned any suspicious household figures and urged people to be honest. This generally worked well.

We told people to go to the local health clinic when they felt the symptoms of malaria (as advised by the NMCP), but these clinics were not always stocked with enough drugs and they charged a small fee for registration that deterred many community members from going. We forwarded this issue to the NMCP and UNICEF.



### Distribution Data

Town	Date	Households	Pop.	Nets Given	Sleeping Spaces	Under-fives	Pregnant Women
Nyanyahun	7/6/09	73	800	417	403	243	20
Basseleh	7/7/09	79	850	390	401	221	29
Banneleh	7/8/09	46	356	164	164	96	10
Kanga	7/8/09	5	59	27	27	21	1
Jomborhun	7/8/09	16	134	54	54	33	6
Monogoh	7/9/09	6	52	20	20	17	0
Juhun	7/9/09	6	46	21	20	10	0
Macca Old Town	7/9/09	17	83	38	38	23	3
Macca Junction	7/9/09	10	111	48	48	19	3
Borbu	7/9/09	4	54	25	23	19	1
Kpombu	7/10/09	52	465	179	176	111	6
Kassay	7/10/09	39	412	162	162	97	7
Taninihun	7/10/09	14	0	45	43	26	2
Bamba	7/11/09	55	524	217	213	139	26
Gambia	7/11/09	10	130	44	44	22	0
Gangama	7/11/09	8	56	31	30	27	4
Hongai	7/11/09	69	593	245	244	141	18
Henai	7/11/09	61	473	205	201	70	18
Sembehun	7/13/09	10	89	37	36	16	2
Sinjo	7/13/09	39	364	153	152	82	10
Semabu	7/13/09	63	511	218	219	107	35
Gehun	7/13/09	3	25	9	9	6	1
Jumbu	7/14/09	55	481	180	180	138	15
Kpetewoma	7/14/09	0	0	0	0	0	0
Sahuun	7/14/09	20	141	63	62	30	1
Demawu	7/15/09	30	186	79	79	66	11
Semabu 2	7/15/09	12	90	39	38	23	7
Kpangama	7/15/09	7	61	26	26	22	9
Kortumahun	7/16/09	41	332	151	150	72	9
Massao	7/16/09	18	148	71	69	43	9
Walleh	7/16/09	3	36	17	17	4	0
Fakaba	7/17/09	24	222	89	89	74	12
Potain	7/17/09	17	126	65	65	25	1
Gbongboma	7/17/09	24	133	77	77	45	3
Gondorhun	7/18/09	61	484	212	214	107	13
Kpangba	7/18/09	33	264	99	106	62	12
		1030	8891	3917	3899	2257	304

This is the breakdown of nets per village in the chiefdom. The total is not 4000 due to the fact that some of the distributors forgot to record some households, and other inaccuracies. A few nets also “disappeared” during distribution in villages. This is regrettable, but not a significant problem and the nets will still end up hanging over a bed somewhere in the chiefdom.

## ***Appreciation***

The Minus Malaria Initiative funded by the Project Pericles Fund at Swarthmore College ([www.globalhealthforum.org](http://www.globalhealthforum.org)) raised funds for the majority of the nets purchased. We are grateful for their partnership. Their executive board member Lois Park even paid us a visit in the Sahn village!

We would like to thank the Against Malaria Foundation, without them this distribution would not have been possible. They provided us with a trustworthy fundraising site, they ordered the nets for us, and they ensured that we could ship them free of charge to Sierra Leone.

In addition we would like to thank:

Our many donors who funded nets from all over the world;

UNICEF-Sierra Leone for providing advice on how to best distribute nets and for providing extra malaria drugs for the health centers in the Malen Chiefdom;

The Red Cross for allowing us to ship our nets in their container for free;

The Red Cross Sierra Leone for providing volunteers for our distribution;

The National Malaria Control Program of Sierra Leone for lending their truck for the transport of the nets from Freetown to Sahn, for providing the *paracheck* and lots of advice;

The DHMT of Pujehun for lending us their truck for the drop off of nets and for leading the follow up program for the next 3 years;

The Pujehun District Government Council for supporting our project and providing funds to repair the motorbikes of the follow-up supervisors;

And finally, the people of the Malen Chiefdom for warmly hosting us.

## Post-Distribution Summary Report for Global Minimum Inc:

During 6 weeks in the summer of 2009, the Global Minimum (GMin) team distributed **4,000** long lasting insecticide-treated mosquito nets in the Malen Chiefdom in Sierra Leone. Our partner, The Minus Malaria Initiative funded by the Project Pericles Fund at Swarthmore College, carried out the majority of the fundraising for the nets. The distribution activities including preparation and follow-up lasted from June 14th to August 1st.

12 GMin members traveled to Sierra Leone, and we worked in the Malen chiefdom in the southern part of Sierra Leone. The distribution itself lasted 13 days from July 6<sup>th</sup> to July 18<sup>th</sup>, and it took our team to a new village each day where we visited each individual household. We held town meetings, performed malaria education skits and provided nets to cover every sleeping space.

In every village, we formed multiple teams. Each team would have a GMin member and a local Red Cross volunteer, a representative of the DHMT – usually a Traditional Birth Attendant – or a high school student with a good command of English. A volunteer from the village would show each group around the different parts of the village. We visited each individual house to distribute the nets, do a demonstration over a bed if necessary and reinforce the lessons from the town meeting. We would answer any questions about the nets, and then unpack them from the plastic and hang them to air out for the day for excess insecticide to wear off. Since we usually arrived before noon, the nets were ready for use that same night. The teams conducted a small survey – approved by the Princeton Institutional Review Board – collecting demographic information and they kept a record of how many nets were handed out to each household.

We coordinated the distribution with the National Malaria Control Program who, along with the Red Cross, is planning a nation wide campaign in November. Now they will not distribute additional nets to the lower part of the chiefdom because our data has been incorporated into their statistics.

In order to find out whether the nets were being used, we agreed with the head of the local health clinic and a Red Cross volunteer coach to do follow-up. They will supervise four teams who will visit each house in the villages each month for the first three months following the distribution, and then every other month for a total of 3 years. The supervisors will report to the Pujehun DHMT who will then forward the reports to GMin. One GMin member stayed in Sierra Leone for two months after the distribution to follow the teams around and ensure that they collected and reported the data properly.