

**From:** "Rob Mather" <rmather@againstmalaria.com>  
**Subject:** RE: Survey results, net need Yirimadjo  
**Date:** June 15, 2011 4:14:35 AM EDT  
**To:** "Ari Johnson" <ari@projectmuso.org>  
**Cc:** "Eliezer Shinnar" <eliezer.shinnar@gmail.com>, 'djourmé diakité' <djoume@projectmuso.org>, "ichiaka" <ichiaka@projectmuso.org>, "Jessica" <jessica@projectmuso.org>, "Rebecca Palmer" <palmer@projectmuso.org>, "agladney" <agladney@projectmuso.org>  
▶ 2 Attachments, 136 KB

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Dear Ari-

Thanks for this.

As a final check, please can you look at the attached and review the rows we have picked out as likely/possible to indicate (from our experience across 142 distributions in 36 countries) an overestimate of nets. It is not unheard of to have ratios of 1.75 ppl/net but we ask you to do some checking. If you can get back to me as soon as possible that would be good.

Rgds

Rob

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See where the nets go: [www.AgainstMalaria.com/NetDelivery](http://www.AgainstMalaria.com/NetDelivery)

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**From:** aridjohnson@gmail.com [mailto:aridjohnson@gmail.com] **On Behalf Of** Ari Johnson

**Sent:** 15 June 2011 06:59

**To:** Rob Mather

**Cc:** Eliezer Shinnar; djourmé diakité; ichiaka; Jessica; Rebecca Palmer; agladney

**Subject:** Re: Survey results, net need Yirimadjo

Dear Rob,

Thank you for your message and for your excellent catch regarding zone 18. We had missed an outlier cell with a significant typographical error. I have found this error and corrected it. In doing so, I determined a couple of additional data cleaning steps we could do to try to catch additional outliers, which I implemented. I am attaching the most updated version of the data.

With regard to our methodology for calculation, this is drawn directly from our conversations and from AMF's guidelines. Our survey collected information on the age and sex of every person who slept in every sleeping space of every household.

1. In our analysis, we first calculated how many nets were needed for each sleeping space.
2. We did this by calculating first the number of people in each sleeping space.
3. Then we determined whether there was a usable net for that sleeping space (a net was determined to be usable if it was less than 3 years old, long term impregnated type).
4. For every usable net, we counted two usable net sleeping spaces.
5. We then calculated the difference between the total number of people sleeping in that space and the number who could be effectively covered by a net. We divided that number by two to yield the number of nets needed for that sleeping space. So if there were 3 people in a sleeping space and there was one usable net for that sleeping space, one person would still not be protected, and the net need for that sleeping space would be 0.5.
6. We then summed the net need for all sleeping spaces in the household, and rounded up to the nearest net.
7. The one exception which we treated differently is the case of an individual sleeping alone. For these individuals, we asked "could you share a sleeping space with another person?" If the answer was "no", that they, for various cultural reasons, needed to sleep in a separate space, and they did not have a usable net to sleep under, their net need was calculated by our algorithm to be "1" rather than 0.5, because they could not share a net.

Thus, all this to elaborate and confirm that yes, we did follow carefully the guidelines with our algorithm for calculating nets needed, to maximize the number of people sleeping two to a net, while also taking into account special cases in which certain

people could not sleep two to a net. I would be happy to walk through the calculations in greater technical detail, to explain how we set up the algorithm, if that would be helpful.

Thank you for your partnership.

Best Wishes  
Ari

On Tue, Jun 14, 2011 at 1:24 AM, Rob Mather <[rmather@againstmalaria.com](mailto:rmather@againstmalaria.com)> wrote:  
Hi Ari-

Thanks for sending this across. The reason for requesting this information was to gain a better understanding of the data behind the top line numbers ie the nets per zone figures. Most look fine. Can you take a look at zone 18 where the numbers look odd: Pop 5,290; usable nets in place 287; new nets required 688 giving a total ratio of ppl to nets of 5.43.

The number of sleeping spaces requiring a net or 'the number of sleeping spaces from a bednet perspective' simply counts the total number of sleeping spaces from the consideration of 'how many double nets does that imply?' rather than the physically separate sleeping locations that might exist. An example may help illustrate this. Mum and dad sleep together in one double bed. Daughter aged 10, son aged 8, son aged 4, daughter aged 2 (so 4 children) and grandma aged 55 all sleep in single beds/spaces with variously a table, curtain or chair separating one sleeping space from another. In this situation one could (erroneously) assess this family as needing 6 nets: 1 double net for the parents and 5 single nets for the 4 children and grandmother. As we discussed, this is not the way net requirement would be assessed as double nets are the nets of choice for reasons of cost and space and in most situations two people share a net be that mum and dad, two siblings, mother and baby etc. This means fewer nest are required overall to bednet a family. So, for the family described here there would be 4 sleeping spaces ('for the purpose of nets'): mum and dad, two older children together, two younger children together, (or two girls together, two boys together) and grandma (who could be given a single rather than a double). Hope that clarifies. You may remember we had a significant conversation about this definition as it underlies the accurate counting/assessment of how many nets are required. Please can you confirm this is consistent with the way you have collected the data?

Regarding the number of nets we can provide, we are looking at those numbers now as the number of nets requested is significantly more than those for which we had allocated funds.

I hope to get back to you on this tomorrow.

Rgds  
Rob

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**From:** [aridjohnson@gmail.com](mailto:aridjohnson@gmail.com) [mailto:[aridjohnson@gmail.com](mailto:aridjohnson@gmail.com)] **On Behalf Of** Ari Johnson  
**Sent:** 13 June 2011 19:23

**To:** Rob Mather  
**Cc:** Eliezer Shinnar; djoumé diakité; ichiaka; Jessica; Rebecca Palmer; agladney  
**Subject:** Re: Survey results, net need Yirimadjo

Dear Rob,

I am attaching the information requested, in particular, per zone

1. Population
2. Total Nets Needed
3. Of which Single Nets Needed
4. Number of Usable Nets Already in Place

"Number of sleeping spaces requiring a net"--this I do not quite understand. Some sleeping spaces require 1 net, others require half a net, others require 2 nets, depending on the number of people sleeping in the space and the number of usable nets available. I am happy to walk you through the way we calculated all this if that would be helpful.

Best Wishes

Ari

On Mon, Jun 13, 2011 at 12:25 AM, Rob Mather <[rmather@againstmalaria.com](mailto:rmather@againstmalaria.com)> wrote:

Thanks Ari-

Can you also send me the following information for each zone. Sorry if that wasn't clear from the previous email:

- Population
- Number of sleeping spaces requiring a net
- Number of usable nets in place already
- Number of nets required

We are looking at net allocation now. The above information will help.

It would help if we could have that today.

Rgds

Rob

Robert Mather

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**From:** [aridjohnson@gmail.com](mailto:aridjohnson@gmail.com) [mailto:[aridjohnson@gmail.com](mailto:aridjohnson@gmail.com)] **On Behalf Of** Ari Johnson

**Sent:** 13 June 2011 05:03

**To:** Rob Mather

**Cc:** Eliezer Shinnar; djoumé diakité; ichiaka; Jessica; Rebecca Palmer; agladney

**Subject:** Re: Survey results, net need Yirimadjo

Hi Rob,

I hope this message finds you well. I am attaching here a 50 de-identified records from the survey. I am attaching the entire de-identified dataset as well.

Where are things on your end in terms of organizing and placing the order? What do you think is the feasibility of being able to mobilize the total net need for universal coverage?

Best Wishes

Ari

On Fri, Jun 10, 2011 at 5:50 AM, Rob Mather <[rmather@againstmalaria.com](mailto:rmather@againstmalaria.com)> wrote:

Hi Ari/Other

Please can you send a sample of the data you have collected – maybe 50 records? This is so we can look at the sort of information gathered and refine the high level (summary) data we will request from you, but it is likely to be (or include) the

following information for each zone:

- Population
- Number of sleeping spaces requiring a net
- Number of usable nets in place already
- Number of nets required

Kind regards  
Rob

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**From:** [aridjohnson@gmail.com](mailto:aridjohnson@gmail.com) [mailto:[aridjohnson@gmail.com](mailto:aridjohnson@gmail.com)] **On Behalf Of** Ari Johnson

**Sent:** 08 June 2011 02:47  
**To:** Rob Mather  
**Cc:** Eliezer Shinnar; djoumé diakité; ichiaka; Jessica; Rebecca Palmer; agladney  
**Subject:** Re: Survey results, net need Yirimadjo

Dear Rob,

I just completed another round of data cleaning and also calculated # of singles nets needed per zone. Please see the results below and attached. I am happy to share the de-identified data and explain all methods in detail as needed. I will be away from email for the next two days, so if you need something urgently, contact Jessica Beckerman or Rebecca Palmer, both cc-ed on this message.

Thanks and Best Wishes  
Ari

Zone	Nets Needed	Of Which Single Nets Comprise	
1	967		16
2	2951		319
3	563		61
4	710		41
5	1441		38
6	779		31
7	1366		29
8	1497		41

9	1049	84
10	1166	8
11	933	14
12	576	5
13	1153	166
14	764	41
15	738	137
16	1737	114
17	707	4
18	688	1
19	974	2
20	1624	146
Total	22383	1298

On Tue, Jun 7, 2011 at 9:18 AM, Ari Johnson <[ari@projectmuso.org](mailto:ari@projectmuso.org)> wrote:

Hi Rob,

If it can get us closer toward our goal of universal access, we will want to make it happen. I have a very packed day today but will try to get to it at some point today.

best wishes

ari

On Tue, Jun 7, 2011 at 9:12 AM, Rob Mather <[rmather@againstmalaria.com](mailto:rmather@againstmalaria.com)> wrote:

Hi Ari-

The reason for the question is there are some smaller nets in Mali – as well as other sizes – and if you have the knowledge and ability to identify definite single bed recipients ie where a double net is simply not required given one person in sleeping space, then we know we have the possibility of usefully taking some of those nets as well. What we do not want you to do of course is change a household that would otherwise receive 3 doubles to 21 double and 4 singles. If you can let me know either the numbers (if can easily be pulled from the data) on a zone basis then that would give the most detailed level of info and would allow us to refining the size order.

Can you let me know what some of data you can provide in this area and by when? If it is not relatively quick we might have to say don't worry and can the idea of accessing the single nets.

Rgds

Rob

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**From:** [aridjohnson@gmail.com](mailto:aridjohnson@gmail.com) [mailto:[aridjohnson@gmail.com](mailto:aridjohnson@gmail.com)] **On Behalf Of** Ari Johnson

**Sent:** 07 June 2011 16:42

**To:** Rob Mather

**Cc:** Eliezer Shinnar; djoumé diakité; ichiaka; Jessica; Rebecca Palmer; agladney

**Subject:** Re: Survey results, net need Yirimadjo

Dear Rob,

I can tell you that we have the data to determine who would get single nets, and as we will be doing distribution based on

recipient lists, we could potentially do a distribution of one and two person sized nets. It will take me a little bit of time to put together that analysis--we will of course do our best to get this to you ASAP. Would you be able to provide some more detail on this situation and scenarios?

best wishes  
ari

On Tue, Jun 7, 2011 at 1:24 AM, Rob Mather <[rmather@againstmalaria.com](mailto:rmather@againstmalaria.com)> wrote:

Hi Ari-

We are now considering quantity of nets, size of nets (range) and where the nets should come from.

To help with these decisions, please can you let me know the following:

1. Is there any benefit in you receiving some single bed nets?

We suspect the answer will be yes if both of the following apply:

- i) you have accurate records on a household by household basis that identifies where there is an elderly relative where a single bednet is appropriate and adequate (We do not include single or three children households as this removes the possibility of a single net subsequently being shared with an additional child should that become the case)
- ii) you have the operational capability to manage a combination of single and double nets during the distribution process

Only if the answer is yes, to the question above:

2. What proportion of the nets would be single nets?

Rgds  
Rob

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**From:** [aridjohnson@gmail.com](mailto:aridjohnson@gmail.com) [mailto:[aridjohnson@gmail.com](mailto:aridjohnson@gmail.com)] **On Behalf Of** Ari Johnson

**Sent:** 06 June 2011 21:02

**To:** Rob Mather

**Cc:** Eliezer Shinnar; djoumé diakité; ichiaka; Jessica; Rebecca Palmer; agladney

**Subject:** Re: Survey results, net need Yirimadjo

Great. I am on Pacific Standard Time (GMT-8hrs) and I will look for your message first thing tomorrow morning.

On Mon, Jun 6, 2011 at 1:00 PM, Rob Mather <[rmather@againstmalaria.com](mailto:rmather@againstmalaria.com)> wrote:

Thank you Ari-

I will get to this early tomorrow morning.

Rgds  
Rob

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**From:** [aridjohnson@gmail.com](mailto:aridjohnson@gmail.com) [mailto:[aridjohnson@gmail.com](mailto:aridjohnson@gmail.com)] **On Behalf Of** Ari Johnson  
**Sent:** 06 June 2011 20:27  
**To:** Rob Mather; Eliezer Shinnar; djoumé diakité; ichiaka; Jessica; Rebecca Palmer; agladney  
**Subject:** Survey results, net need Yirimadjo

Dear Rob,

I am happy to be able to share with you the results of our survey of every household in Yirimadjo, accounting for all 60,567 residents of Yirimadjo. Dr. Diakite put together a map outlining each of the 20 zones, attached.

I want to recognize and thank Dr. Kone, Dr. Diakite and the entire team of 30 surveyors, 2 supervisors, 2 capacity building fellows, and 4 data entry technicians who put in an enormous amount of work to make this possible. I also want to thank Eliezer Shinnar for his work on data cleaning and confirming the calculations that went into this analysis.

Please let me know what you think. We look forward to the next steps.

Solidarity and Gratitude,  
Ari

Zone	Nets Needed
1	1261
2	3439
3	576
4	768
5	1898
6	972
7	1500
8	1686
9	1109
10	1313
11	1048
12	756
13	1291
14	846
15	838
16	1908
17	859
18	890
19	1211
20	1799
	25968

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