



USAID | DELIVER PROJECT

FROM THE AMERICAN PEOPLE

Opération Moustiquaires

Results of Phase II of the Madagascar LN Recycling Pilot Project



PRESIDENT'S MALARIA INITIATIVE



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Why Conduct This LN Recycling Pilot Project?

In Africa, an estimated 300 million LNs were in use by the end of 2010. Over 85 million of them will need to be replaced, which raises the question of what to do with the used nets.

Phases of the Madagascar Pilot Project

- Phase I – Feasibility Study
- Phase II – Collection Process
- Phase III – Recycling Process



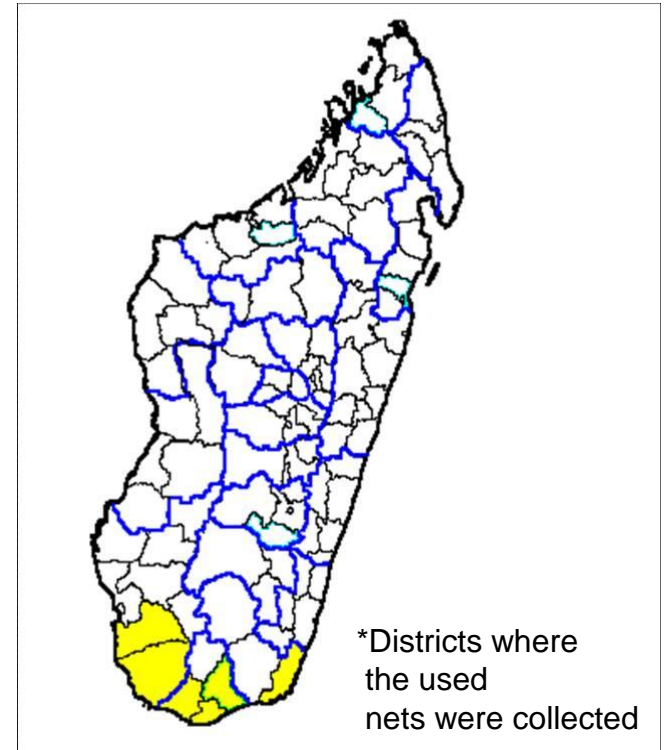
Overview

- **Conduct “green logistics“ pilot project**
- **Identify country and net distribution history**
- **Identify the right partners**
- **Identify a mechanism for consolidation**
- **Determine what will be done with the collected nets**



Results

- **Nets collected:** 22,132
- **Sites collected from:** 394 out of 489 in six districts
- **The district with the highest number of nets collected did not have the largest population, but it had the largest number of distribution/ collection sites. Over 8,000 nets were collected from this district.**
- **Types of nets collected—50 percent of nets were polyethylene and 50 percent were polyester.**
- **Most of the nets collected were from the 2007 campaign and were in very poor condition.**



Transporting, sorting, compacting and shipping



Logistics Cycle



Reverse (Green) Logistics Cycle

Logistics Management



Reverse (Green) Logistics Challenges

- **Difficult to forecast and plan**
- **Products we deliver are paid for; products we collect are not**
- **Products we deliver come from one vendor; products we collect come from multiple sources (each household is a potential client)**
- **Level of equipment required to collect is uncertain as final quantities are not known until the last minute**
- **Need to identify and contract a new set of vendors (i.e. compacting company)**
- **Reverse (green) logistics can be more costly than regular distribution**



Reverse (Green) Logistics – Additional Key Challenges

- **How to do a pilot without benchmarks**
- **Gain momentum**
- **Establish a budget**
- **Deal with difficult-to-access areas**
- **Address the lack of security**



Awareness/Communication Campaign

- **Challenge:** Inform the largest number of households possible prior to the distribution campaign even though 85 percent of the population lives in rural areas
- **Key partners:** chief of the village (Chief Fuktan), collection site managers, community workers
- **Timeline:** conduct training as close as possible to the distribution campaign
- **Message:** must be clear and focused
- **Tools**
 - Use the chief FKT and the community workers as advocates
 - Send key messages through local radio
 - Ensure that behavior change and communication materials are easy to understand and properly displayed



Why are people reluctant to give back their old nets?

- Believe that since someone wants to collect their old nets, they must be worth something and should be exchanged for money
- Not enough new nets have been received to protect the entire family
- First time receivers
- Old net was purchased so it has some value
- Old net was given by a donor other than USAID/PMI
- Old nets are too dirty
- Gave their old nets to family members who did not receive one
- Don't want to give back something that has protected them from malaria
- Old nets are used for many other purposes



What are old nets used for?

We received the following answers to our survey:

- As fishing nets
- To make wedding dresses
- To stuff or cover mattresses
- To protect or transport vegetables
- As a rope
- As a perimeter around the house
- As a blanket
- As a tent for kids
- To ease the rotation of cart wheels
- As a shower curtain



Lessons Learned

- **More nets are collected if the “Chef de Site” is a local person**
- **Local radios can be a good tool to spread the message in remote areas, and may be more effective than brochures**
- **Pre-campaign messaging is key**
- **The timing and content of the message is critical to the success of the campaign**



continued ...

Lessons Learned

- **Part of the population will participate in the exchange program; another part will wait to have the new nets installed before giving back the old one(s)**
- **Vendors' pricing should include variable rather than fixed costs to account for difficulty in forecasting**
- **The success of the collection depends on the success of the distribution campaign; they should be handled as one project**



Next Steps/Phase III

- **240 (50 KG) bales of nets are currently in transit; they will reach Baltimore some time in March 2011 in a 40 ft shipping container**
- **Nets will be fumigated at the port**
- **Trex will have to evaluate the netting for processing**
- **Dedicated production run will be done only using the nets**
- **Densified plastic pellets and flakes will be tested for pesticide residue**
- **Based on additional testing results, various construction materials will be formulated using recycled plastic from the nets**
- **Cost effectiveness analysis**

THANK YOU

