

USAID | DELIVER PROJECT

Final Country Report

Madagascar



A person wearing a white t-shirt and a white cap with a logo is sitting on a large white sack. Another person in a white t-shirt is standing behind them. They are in a warehouse or storage area with many more large white sacks. The image is semi-transparent and serves as a background for the text.

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USAID | DELIVER PROJECT, Task Order 4

The USAID | DELIVER PROJECT, Task Order 4, is funded by the U.S. Agency for International Development (USAID) under contract number GPO-I-00-06-00007-00, order number AID-OAA-TO-10-00064, beginning September 30, 2010. Task Order 4 is implemented by John Snow, Inc., in collaboration with PATH; Crown Agents USA, Inc.; Eastern and Southern African Management Institute; FHI 360; Avenir Health for Development, LLC; LLamasoft, Inc; The Manoff Group, Inc.; Imperial Health Sciences; Asociasion Benefica PRISMA; and VillageReach. The project improves essential health commodity supply chains by strengthening logistics management information systems, streamlining distribution systems, identifying financial resources for procurement and supply chain operation, and enhancing forecasting and procurement planning. The project encourages policymakers and donors to support logistics as a critical factor in the overall success of their healthcare mandates.

USAID | DELIVER PROJECT, Task Order 7

This document was prepared by staff of the USAID | DELIVER PROJECT, Task Order 7, which is funded by the U.S. Agency for International Development (USAID) under contract number GPO-I-00-06-0007-00, order number AID-OAA-TO-11-00012, beginning on March 28, 2011. Task Order 7 is implemented by John Snow, Inc., in collaboration with 3i Infotech, Inc.; Crown Agents USA, Inc.; FHI 360; Foundation for Innovative New Diagnostics; Logenix International, LLC; The Manoff Group, Inc.; MEBS Global Reach, LC; PATH; Imperial Health Sciences; Population Services International; Social Sectors Development Strategies, Inc.; UPS Supply Chain Solutions, Inc.; and VillageReach. Task Order 7 supports USAID's goal of reducing the malaria burden in sub-Saharan Africa by procuring and delivering safe, effective, and high-quality malaria commodities; by providing technical assistance and on-the-ground logistics expertise to strengthen in-country supply systems and build capacity for managing commodities; and by improving the global supply and long-term availability of malaria commodities.

Recommended Citation

USAID | DELIVER PROJECT, Task Orders 4 and 7. 2016. *USAID | DELIVER PROJECT Final Country Report: Madagascar*. Arlington, Va.: USAID | DELIVER PROJECT, Task Orders 4 and 7.

Abstract

This report summarizes the work carried out in Madagascar by the USAID | DELIVER PROJECT from 2008–2016. The project provided support to the private sector, nongovernmental organization providers, and community organizations in family planning, maternal and child health, and malaria prevention and treatment, by strengthening the health supply chains and improving the environment for commodity security.

Unless otherwise stated, all photos in this document are credited to the USAID | DELIVER PROJECT.

Cover photo: Women receive bed nets during a 2010 routine distribution campaign in southern Madagascar.

USAID | DELIVER PROJECT

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TABLE OF CONTENTS

01

Project Overview and Context

Pages 7-10

- ‡ Project Overview
- ‡ Investment in
Commodity Support
and Technical
Assistance
- ‡ Malaria Commodities

02

Technical Assistance

Pages 11-22

- ‡ Technical Assistance
Overview
- ‡ Strengthen Logistics
System Performance
- ‡ Increase National
Commitment to
Commodity Security
- ‡ Build Sustainable
Capacity

03

The Way Forward

Pages 23-24

- ‡ The Way Forward

04

Additional Resources

Pages 25-28

- ‡ Acronyms
- ‡ Further Reading



Photo Credit: Allison Belemvire

Project Overview and Context

Project Overview

The USAID | DELIVER PROJECT (the project), in partnership with ministries of health and other organizations, improves health outcomes in developing countries by increasing the availability of health supplies. For more than 30 years, USAID has been a world leader in providing health commodities to field programs—a critical component of health program success.



In October 2008, USAID/Madagascar requested the support of the USAID | DELIVER PROJECT (the project) to help strengthen family planning and malaria commodity management. As activities began in-country, a political crisis in March 2009 led to the suspension of foreign assistance by many donor countries, including the United States (U.S.).

All U.S. Government public health supply chain support to the Government of Madagascar (GOM), from the central level to the primary care health facility level, was suspended. In response, the project focused on procuring, managing, and making malaria commodities available to nongovernmental organization (NGO) and faith-based organization (FBO) partners, supporting community-based distribution, and supporting the

National Malaria Control Program (NMCP) in distributing long-lasting insecticide-treated bed nets (LLINs) nationwide.

In October 2014, restrictions were lifted and the project returned to working directly with the government health system. In support of the Global Health Initiatives, the project focused on reinforcing the national supply chain at the central medical store (SALAMA), district pharmacies (PhaGDis), and health center pharmacies (PhaGeComs).

Key activities since July 2014 included reviewing and redesigning the existing distribution channels; establishing a logistics management unit; coordinating quantification of health commodities and essential medicines; improving commodity storage and distribution at all levels; and strengthening storage and distribution of commodities from SALAMA to PhaGDis and PhaGeComs, and supply chain management (SCM) training for central-level staff.

The project collaborated closely with the Directorate of Pharmacy, Laboratory and Traditional Medicines (DPLMT), SALAMA, and other partners, including USAID/Madagascar; PSI; the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria (GFATM); and the United Nations Population Fund (UNFPA).

Investment in Commodity Support and Technical Assistance



From 2008–2016, the project shipped health supplies and strengthened supply chains in Madagascar. From 2009–2014, the project, with support from the President’s Malaria Initiative (PMI), procured and managed USAID-funded malaria commodities, making them available to four FBOs/ NGOs and community organizations. The project’s interventions were organized around the following PMI priorities:

Improve System Performance to Ensure Malaria Product Availability

The project conducted monitoring and supervision activities with NGOs and FBOs to ensure proper use of tools and training.

Improve Visibility at All Levels of the Supply Chain

The project, with the NGOs and FBOs, developed a training database to document the location of health facilities and the number of personnel in commodity logistics; introduced a comprehensive data collection tool for monthly stock on hand, deliveries, consumption, and orders; and implemented a mobile phone data collection pilot program.

Strengthen the Accountability of in-Country Malaria Supply Chains

The project served as lead facilitator of the Procurement and Stock Management Committee, improving tracking and accuracy of stock status data as well as partners’ ability to conduct accurate procurement planning.

Beginning in 2014, the project worked closely with the Ministry of Public Health (MOPH) and the DPLMT to restructure the national commodity supply chain, including—



advocating for and establishing a national logistics management unit



redefining the logistics parameters and inventory control system for an integrated supply chain



developing management tools usable by all programs



analyzing and proposing commodity delivery options from SALAMA to the PhaGeComs



improving product availability, logistics capacity, and use of malaria commodities



distributing LLINs.

Malaria Commodities



The project provided support to the MOPH and NMCP to improve commodity availability for antimalarial drugs and LLINs through the procurement and delivery of high quality products; and by strengthening the supply systems that manage them.

The project helped the MOPH design a malaria system that incorporates recommendations to integrate the public health supply chains and improve the logistics management information system (LMIS). In collaboration with the Procurement and Stock Management Committee and Roll Back Malaria (RBM), the project monitored stock levels and investigated commodity stockouts at the community level.



USAID | DELIVER PROJECT
has procured commodities for
Madagascar to

Protect against malaria with
16 million LLINs

Treat 2.8 million
malaria cases with ACTs

Test 10.2 million
suspected cases of malaria with
RDT kits

Prevent malaria in pregnancy with
2.25 million SP tablets



Photo Credit: Allison Belemvire

Technical Assistance

Technical Assistance Overview

Delivering high-quality health care to patients and clients requires health facilities and dispensaries to have a full supply of medicines and other health products. This necessitates a well-functioning supply chain.

Using best practices and innovative approaches, the USAID | DELIVER PROJECT develops and implements robust logistics solutions, fosters supportive commodity security environments, procures and ships health commodities, and partners with local organizations to build sustainable capacity.

In Madagascar, these interventions include—

Strengthen Logistics System Performance

- Distributing LLINs Nationwide
- Piloting an LLIN recycling project
- Conducting a national supply chain system review and pilot



Increase National Commitment to Commodity Security

- Monitoring malaria and family planning commodities in the national supply chain
- Collaborating with NGO/FBO partners for malaria activities
- Strengthen coordinated quantification and supply planning of MCH and family planning commodities



Build Sustainable Capacity

- Build central-level supply chain expertise
- Establish the logistics management units as a key component of logistics system strengthening





Strengthen Logistics System Performance

To improve health outcomes in the countries where we work, the USAID | DELIVER PROJECT increases the availability of health products by strengthening supply chains and creating global commitment. These efforts are guided by the project's supply chain integration framework.

In the public health setting, an integrated supply chain links everyone involved in managing essential health commodities into one cohesive supply chain management organization, ultimately helping clients access quality healthcare services and supplies.

Distributing LLINs Nationwide

From 2009–2015, the project's distribution of LLINs expanded to cover 92 of Madagascar's 112 health districts.

From 2009-2015, the project worked closely with the NMCP and the National Coordination Committee (CNC) to support strategic planning and execution of nationwide LLIN distribution campaigns.

The project monitored the design for data collection during each phase of the LLIN distribution campaigns; worked with the CNC to convene strategic planning workshops in 2011 and 2014 (for the 2012 and 2015 nationwide campaigns, respectively); and managed the distribution to the districts.

In fiscal year 2013, with support from PSI, the project managed the distribution of more than 2 million LLINs to 19 districts in Madagascar. The project sub-contracted PSI to implement the distribution, which began in November 2013. During the distribution, supervision teams visited 81 distribution sites in 12 of the districts that received LLINs.

In October-November 2015, the project distributed LLINs in 92 of 112 health districts, for an intended coverage of 82 percent. The project supervised eight districts.

Mobile Phone Data Collection Pilot

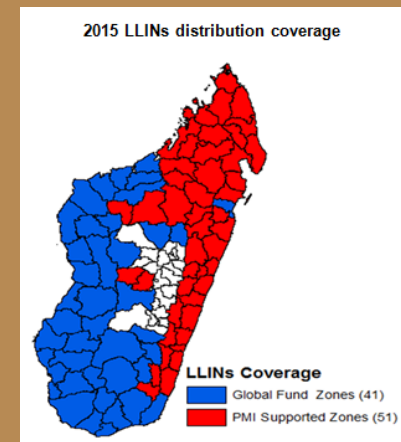
The project, with Health Network International (HNI), piloted an innovative mobile phone data collection process for the LLIN campaign. The initiative aimed to increase the speed and efficiency of data collection through a five-phase process that included household census, essential data for micro-planning, LLINs received at distribution sites, LLINs distributed and remaining stock, and hang-up visit data.

At the end of the pilot, 15 of 19 targeted districts achieved a combined reporting rate of 86 percent.

Challenges included network coverage, motivating data senders, and insufficient training of data senders. In the end, the average completion rate for all phases of the activity was 78 percent.

LLIN Distribution Methods

- Free distribution at antenatal clinics and child immunizations.
- National distribution campaigns for households every three years.
- Emergency response after hurricanes.
- Heavily subsidized distribution through the social marketing program for CHWs and rural shops.
- Distribution to households through CHWs.



Piloting an LLIN Recycling Project

Through the pilot program, the project successfully shipped collected LLINs to the U.S. for recycling.

In 2010, the project conducted an LLIN recycling pilot project—the first of its kind—in six districts in Madagascar to examine the viability of recycling LLINs that had been retired from use.



The pilot project was divided into three phases:

- ❑ Phase I took place in March 2010, with the objective of determining the feasibility of conducting the recycling activity.
- ❑ Phase II took place in November 2010 alongside an LLIN distribution campaign, during which 22,559 retired LLINs were collected and sorted for recycling.
- ❑ Phase III took place from December 2010 to January 2011. The project compacted and transported the LLINs to the port at Fort Dauphin. Trex, a composite wood manufacturer shipped them to the U.S. for recycling. In partnership with the project, Trex used the recycled plastic from the nets in its manufacturing process.

Overall, the cost of reverse logistics and transportation of the used nets to a recycling facility pushed the cost above the price of other plastic on the market to the findings.

Observations and Lessons Learned



- The population was extremely willing to give back their retired LLINs.
- Distance and poor road access greatly affected the ability to ensure that all LLINs were collected from all potential collection sites.
- Developing and using a communication strategy was critical, including which messages are disseminated, and when and to whom.
- Combine collections with an LLIN replacement distribution campaign.
- Ensure availability of accompanying measures, such as appropriate warehouses for collected LLINs, compactor equipment, and transportation to higher levels.

Conducting a National Supply Chain System Review and Pilot

By designing and piloting a unified supply chain system, the project enabled improvements in the flow of health commodities to service delivery points.

Following the resumption of cooperation between the U.S. Government and the GOM, USAID Madagascar requested technical support from the project to conduct a national supply chain strategic review from SALAMA (the country's central medicines store) to the facilities. A qualitative assessment was held in July 2014 and a quantitative assessment in November-December 2014.

The management of health commodities in Madagascar is driven by funding sources. Apart from essential medicines that are procured, stored, managed, and distributed from SALAMA to district and health facility pharmacies, donated commodities such as malaria commodities are managed by each vertical program. This resulted in parallel inventory control systems by commodity type with differing standard operating procedures (SOPs).

The USAID | DELIVER PROJECT organized a system design review workshop to harmonize the various stock management procedures, reviewed the logistics management information system, the inventory control system—including resupply frequency, stock minimum/maximum levels—warehousing, and transportation requirements.

Following the system design review, the project, the DPLMT, and the LMU developed a harmonized SOP for operational management of health commodities, a supervision guide, a trainers' guide, and a participant handbook.

From July 2015 to March 2016, the newly designed system was piloted in 102 health facilities in five districts of Atsimo-Andrefana region in the southwest and Boeny region in the northwest.

Path to a Redesigned Supply Chain System



Defined key assumptions through an optimization analysis workshop



Presented optimization analysis findings to stakeholders through a forum



Conducted a cost analysis for the distribution network from the central warehouse to community health facilities



Made recommendations for an integrated supply chain distribution system



Designed an LMIS and an inventory control system



Increase National Commitment to Commodity Security

Commodity security exists when every person is able to choose, obtain, and use quality contraceptives and other reproductive health products whenever they need them. Strong supply chains alone cannot ensure the availability of, and access to, these commodities.

To help countries create an enabling environment for reproductive health commodity security, the USAID | DELIVER PROJECT, in collaboration with its counterparts, undertakes a variety of policy and advocacy activities at the global , regional , and country levels.

Quantification and Monitoring of Malaria and Family Planning Commodities

By monitoring commodities in the national supply chain, the project was able to improve availability of ACTs and strengthen the coordination of procurement planning.

To improve visibility at all levels of the supply chain, the project participated in joint field visits to sites with malaria commodity management challenges. Project staff taught field staff to ensure availability of targeted commodities through the appropriate use of management tools; waste management; coordination between central- and regional-levels; and coaching staff at community service points (CSPs) and community health workers (CHWs).

In September 2014, the project began helping the National Malaria Control Program (NMCP) monitor the status of artemisinin-based combination therapy (ACT) and other malaria commodities by using the PipeLine software to update the needs and procurement plans.

In addition, the project—in collaboration with the MOHP, the Procurement and Stock Management Committee, and other partners—conducted quantifications and

quarterly procurement plan review exercises for family planning and malaria commodities. The results were used to coordinate procurement processes across different supply sources.

The project was tasked with leading the Procurement and Stock Management Committee to improve coordination and supply chain management skills among partners. The project helped the Committee track stock on hand, including private- and public-sector pipeline products, consumption, orders, and deliveries on a monthly basis.

This improved the accuracy of stock status data and partners' ability to place timely orders for sufficient quantity of commodities; it helped improve coordination among members, strategize overall commodity management, and enhance the coordination of procurement planning for the country.



Avoiding an ACT Shortage

The procurement plan update in December 2014 highlighted a critically low level of ACTs at the national level, pending procurement by GFATM. Based on PipeLine data, the project strongly recommended that the PMI send an emergency order of 408,700 ACTs. The ACTs were delivered in early February 2015, averting major shortages of this life saving medicine.

Natural Disaster Emergency Response

After a tropical hurricane led to an increase in malaria cases during February and March 2015, ACTs became stocked out at some health facilities. The project and the NMCP investigated the stock status at the district level and procured enough ACT to last through May 2015, when a procurement from the GFATM was expected.

Collaborating with NGO/FBO Partners for Malaria Interventions

By collaborating with NGOs/FBOs, malaria has been treated effectively at higher rates and products are available when and where they are needed.

In 2011, the USAID | DELIVER PROJECT identified four NGOs/FBOs—ECAR, SALFA, SAF, and FISA—to diagnose malaria using RDTs and to treat people in their respective communities. In 2011, the project trained 31 trainers from the NGOs/FBOs on malaria case management, handling and correct use of RDTs, the LMIS, and resupply and stock management.

Those trainers then trained 223 health care providers from 168 health facilities. The facilities were provided an initial stock of RDTs for malaria case management. The project also trained 164 logistics focal points in the same 168 facilities in the use of the public sector monthly activity report to harmonize the data collection process and to strengthen coordination between NGO and the public health sector.

The project organized quarterly supervision visits to the health facilities to monitor use of the LMIS and malaria case management progress. The results of the supervision were presented at quarterly coordination meetings. Through that collaboration, the four NGOs/FBOs tested 95 percent of fever cases with RDTs, and treated 99 percent of confirmed malaria cases in 2015.

The project's collaboration with NGO/FBO partners at the central- and health-facility levels improved commodity needs evaluation and helped ensure that products were available when and where they were needed.





Photo Credit: USAID | DELIVER PROJECT

Build Sustainable Capacity

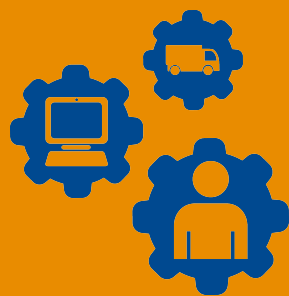
An essential component of a robust health supply chain is the staff that implements the logistics tasks. To run effectively, public health supply chains require motivated, trained, and skilled staff who have competency in the various essential logistics functions and who are also empowered to make decisions that positively impact health supplies and supply chains.

The goal of the project's capacity building activities is to strengthen human resources (HR) in public health supply chain systems in the developing world. A focus on developing a superior workforce enables organizations and individual staff to accomplish their customer service goals, ensuring higher performance among public health personnel and; as a result, increased availability of contraceptives and other essential health products.

Establishing an LMU as a Key Component of Logistics System Strengthening

Establishing an LMU strengthened the organizational capacity of the DPLMT, improving their ability to make health products available.

When the MOPH decided to integrate the management of all health commodities, it also recognized that it was essential to have a Logistics Management Unit (LMU) that could organize, monitor, and support all activities of the national supply chain.



The Directorate of Pharmacy, Laboratory and Traditional Medicines (DPLMT) is responsible for the continuous availability of products in health facilities nationwide. The DPLMT's Management Division for Health Products allocates and monitors the supply of essential medicines and consumables to all public health facilities, including hospitals, and monitors the management of products at all levels of the health system, although program/donated commodities are excluded.



The project helped the MOPH design the LMU during a three-day technical workshop in late 2014. Participants drafted the LMU strategic and operational mandates, functions, job descriptions, and an organizational chart. Shortly after this workshop, the LMU was implemented.



In January 2015, the project began working with the DPLMT to conduct logistics activities nationwide. Establishing an LMU strengthened the organizational capacity of the DPLMT, improving their ability to make health products available to users.



Building Central-Level Supply Chain Expertise

In 2014, the project trained key family health malaria authorities and partners in numerous areas in order to strengthen human resources needed by the public health supply chain in Madagascar.



As part of its commitment to strengthen the human resource needs of the public health supply chain in Madagascar, the project—with in-country

partners—provided support for capacity building initiatives at the central level of the supply chain.

In 2014, the project trained 32 key family health and malaria authorities and partners (UNICEF, UNFPA, MAHEFA, MIKOLLO, PSI) in maternal and child health, family planning, and malaria commodity quantification methodologies and procurement planning using the PipeLine monitoring and procurement planning system.

Following the supply chain system design, the project, with the LMU, developed an SOP manual for supply chain activities that all partners would use during the implementation phase. The project led a

training-of-trainers workshop for 27 central- and district-level staff. These trainers supported the implementation and monitoring of the system in 102 health facilities in the five pilot districts in Atsimo-Adrefana and Boeny.

With the establishment of the LMU, and the existing logistics committee—whose mandate includes addressing issues related to all commodities—the need to train counterparts in supply chain management was also evident. In 2015, under the leadership of the DPLMT, the project organized a central-level commodity security course to teach both the LMU and logistics committee members the supply chain principles and monitoring and evaluation strategies. Twenty people attended.

Types of Training Conducted



Maternal and child health



Family planning



Malaria commodity quantification and methodologies



Procurement planning with PipeLine Monitoring and Procurement Planning System



Logistics Management System



Photo Credit: Ralph Rack

The Way Forward

The Way Forward

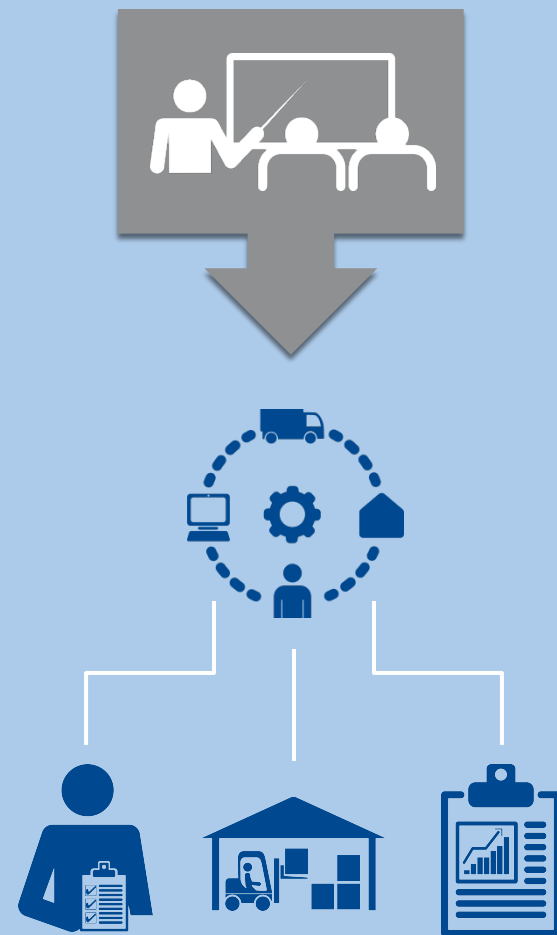
During recent years, the USAID | DELIVER PROJECT has been a key player in meeting Madagascar's needs for health commodities, especially for malaria prevention, diagnosis, and treatment. Strengthening the supply chain is crucial to improving access to health commodities. Going forward, we recommend continuing to support and strengthen—

- ❑ the national supply chain system for all public health medicines
- ❑ SALAMA's storage and distribution processes
- ❑ the integration of all health commodities into one national supply chain
- ❑ the LMU.

In addition, the project recommends several follow-up activities to advance the state of the supply chain in Madagascar.

Activity Recommendations

1. Take the pilot distribution system to scale, nationwide. Pharmacy staff from all facilities in all districts must be trained in the new reporting methods so they are confident in their ability to complete the new forms properly and consistently. This will ensure that the integrated system has the highest quality data available for decisionmaking at all levels.
2. Continue monitoring and supervision visits for all districts.
3. Analyze and propose distribution options from SALAMA to the pharmacy units at the commune level.





Additional Resources

Acronyms

ACT	artemisinin-based combination therapy	MOH	Ministry of Health
AL	artemether/lumefantrine	MOPH	Ministry of Public Health
AS/AQ	artesunate/amodiaquine	NGO	nongovernmental organization
CHW	community health worker	NMCP	National Malaria Control Program
CNC	National Coordinating Committee	PhaGeCom	pharmacy unit at commune level
CSP	community supply point	PMI	President's Malaria Initiative
DPLMT	Directorate of Pharmacy, Laboratory and Traditional Medicines	PSI	[use acronym only]
FBO	faith-based organization	RDT	rapid diagnostic test
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria	SALAMA	[central drug store]
GOM	Government of Madagascar	SOP	standard operating procedure
HMIS	health management information system	SP	sulfadoxine-pyrimethamine
HR	human resource	TOT	training-of-trainers
LIAT	Logistics Indicator Assessment Tool	UNFPA	United Nations Population Fund
LLIN	long-lasting insecticide-treated bed net	U.S.	United States
LMIS	logistics management information system		
LMU	Logistics Management Unit		

Further Reading

Impact Brief: Madagascar. *Saving and Improving Lives through Increased Access to Contraceptives*. 2014 Update. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 4. (available in English and French)

Nelson, Michelle, and Ralph Rack. 2012. *Madagascar: LLIN Recycling Pilot Project, Report on Phase III*. Arlington, Va.: USAID | DELIVER PROJECT, Task Order 7.

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For more information, please visit deliver.jsi.com.



Photo Credit: Ralph Rack

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