

# **Independent End-of-Project Review of the Accelerating Scale-up of Long Lasting Insecticide-Treated Nets (LLINs) Project**

June 2012

## **Acknowledgements**

The Dalberg team would like to thank all those who have generously given their time and expertise in guiding this review process during five intensive weeks in May and June 2012. In particular, we would like to thank the UNITAID Secretariat and UNICEF Project Management representatives, as well as all the experts outside these organizations who provided important inputs into the review.

All views represented in this evaluation are those of Dalberg and do not represent the views of UNITAID, UNICEF, or other entities quoted herein.

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## Abbreviations

HIC	High income country
ITN	Insecticide-treated nets
LIC	Low income country
LLIN	Long lasting insecticide-treated nets
MIC	Middle income country
MOU	Memorandum of understanding
RBM	Roll Back Malaria Partnership
SWOT	Strengths, Weaknesses, Opportunities, Threats
UNICEF	United Nations Children’s Fund
WHO	World Health Organization
WHOPES	World Health Organization Pesticide Evaluation Scheme

## Executive Summary

The Accelerating Scale-up of Long Lasting Insecticide-Treated Nets (LLINs) project was launched by UNITAID and UNICEF in February 2009 in response to shortages of LLINs across nine<sup>1</sup> malaria plagued countries. The main goals of the project were: (i) to increase access to LLINs for the prevention of malaria in nine countries in sub-Saharan Africa, and (ii) to reduce global market price of quality LLINs through the injection of secured funding and support to market stabilization. UNICEF had three objectives:

1. Support nine African countries to achieve Roll Back Malaria Partnership (RBM) targets of 80% insecticide treated net (ITN) utilization by 2010.
2. Secure the additional up-front financing to procure and distribute 20 million WHOPES-recommended nets in 2009, to support LLIN needs identified by the national plans of nine malarious countries.
3. Introduce stability to the global LLIN market through increased investment and appropriate procurement strategies, leading to increased competition and lower prices.

By the scheduled end of the project in December 2010, the project had financed the purchase of 20,000,000 WHOPES-recommended nets and had delivered 19,528,000 to nine selected beneficiary countries in sub-Saharan Africa (97.6% of goal). By the end of the January 2011, all 20,000,000 WHOPES-recommended nets had been delivered to their final beneficiaries.

## End of Project review

In May 2012 the UNITAID Secretariat initiated an independent post-project review of the Accelerating Scale-up of LLINs project to be conducted by Dalberg Global Development Advisors. The purpose of the review is to (i) assess the success of the project in achieving the goals and objectives it set out to achieve and (ii) to provide recommendations and insights to inform future projects and help UNITAID serve as an ever stronger partner by learning how to improve systems for structuring and executing partnerships.

## Findings

Detailed findings can be found in Section 4. In summary, the evaluation team found that:

- The Accelerating Scale-up of LLINs project was a highly relevant intervention in endemic malarious countries that addressed critical market needs
- The project was highly effective in executing its planned activities, even though the project targeted difficult regions to operate in and faced several challenges
- The project was highly efficient in some areas, although the contracting process took too long. The reporting structure and collaboration between teams, while adequate, could be improved
- The project was highly impactful by reaching approximately 40 million people across nine African countries who are at-risk for malaria with high quality LLINs;

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<sup>1</sup> The project originally targeted eight countries, but South Sudan, who was served as a beneficiary by the project, officially split from the Republic of Sudan (North Sudan) and became an independent state on July 9, 2011. For the sake of consistency, throughout this evaluation report we will refer to the beneficiaries as a group of nine, not eight.

additionally, several significant positive impacts in the LLIN market can be wholly or somewhat attributed to the project

### **Recommendations**

Through our extensive desk research and interviews with more than twenty project stakeholders, our evaluation team has synthesized four primary recommendations going forward. We outline these recommendations below but provide a more in-depth explanation in Section 5.

- Shorten the process between project approval and MOU finalization through process standardization
- In appropriate contexts, UNITAID should consider embedding staff with project partners to create a more flexible reporting structure without placing additional burdens on partners
- Mid-project collaboration with partners can be improved through additional communication, particularly in the form of periodic in-person meetings
- UNITAID should review where funding by implementing partners could become a bottleneck to project implementation and consider ways of reducing risks of such bottlenecks, for example by supporting partners in securing funds for implementation
- Continued rapid disbursement of project funds must remain the top priority<sup>2</sup>

### **Conclusion**

This evaluation has shown the Accelerating Scale-up of LLINs project was highly successful by increasing access to LLINs across nine endemic malarious African countries and providing increased stability into a young and at times unstable LLIN manufacturing market.

The project was highly relevant at the time of execution. Many stakeholders even believe similar interventions may be needed now and/or in the future. We believe a similar future intervention should be investigated thoroughly and weighed heavily against alternative considerations UNITAID is considering for future projects, taking into account the recommendations we have included in this report.

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<sup>2</sup> This does not infer disbursement of project funds was not the top priority in this project. In fact, project funds were disbursed either on time or early in two installments. Our findings simply indicate this must remain a top priority going forward.

## 1 Introduction

In 2009, the Accelerating Scale-up of Long Lasting Insecticide-Treated Nets (LLINs) project was created through a partnership between UNITAID and UNICEF to purchase and distribute 20 million LLINs across nine malaria endemic countries in sub-Saharan Africa.

Malaria represents one of the greatest global health challenges of our time. Approximately 3.3 billion people worldwide are at-risk of contracting malaria. In 2010 there were an estimated 216 million malaria cases worldwide. More than 80% of those cases occurred in Africa. In addition, approximately 655,000 of global malaria cases in 2010 resulted in death. More than 90% of that burden fell on Africa<sup>3</sup>.

Many interventions have been employed to treat and prevent malaria. One of the cheapest and most effective prevention techniques in recent years has been the dissemination of insecticide treated nets (ITNs) in at-risk communities. A review of five community-randomized ITN trials found that when full coverage is achieved ITNs reduce clinical episodes of malaria by 50% on average<sup>4</sup>. As the technology has progressed, LLINs have emerged as a more effective option relative to traditional ITNs due to their longer lifespan. The more recently developed LLINs can maintain their effectiveness for ~3 years without requiring retreatment with insecticide<sup>5</sup>.

In 2008, RBM estimated in its Malaria Global Action Plan that the distribution of between 250 and 300 million LLINs would be necessary over the course of 2009 and 2010 to achieve their 80% LLIN coverage goal across Africa by the end of 2010<sup>6</sup>.

Prior to 2008, limited production capacity of LLINs constrained rapid scale-up of net distribution. However, by 2008, production capacity had ramped while funding for LLINs lagged. This led to a situation where global production of LLINs exceeded funded demand. Meanwhile, RBM's stated global need for LLINs exceeded both production capacity and available funding. Thus, the market was faced with not just the challenge of continuing production capacity growth to meet the RBM stated LLIN need, but the additional challenge of securing additional capital into the LLIN market to procure and distribute the growing LLIN manufacturing capacity.

With the ultimate goals of increasing access to and reducing prices of LLINs, UNITAID agreed to provide up to USD 109.3 million to finance the procurement and delivery of 20 million LLINs by UNICEF across nine selected sub-Saharan countries. The project lasted from February 2009 through December 2010.

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<sup>3</sup> Roll Back Malaria Partnership.

<sup>4</sup> "Long Lasting Insecticidal Nets for Malaria Prevention: A manual for malaria programme managers". WHO. 2007.

<sup>5</sup> Lengeler, C. (2004). Insecticide-treated bed nets and curtains for preventing malaria. Cochrane Database of Systematic Reviews, Issue 2,

<sup>6</sup> Malaria Global Action Plan, 2008. Roll Back Malaria Partnership.



## **2 Context**

### **2.1 Background**

In June 2008, UNICEF proposed the Accelerating Scale-up of LLINs project to the UNITAID Board. The project was approved by the UNITAID Board at a session held July 2-3, 2008. The project officially began on February 25, 2009 and both UNICEF and WHO (acting for the benefit of UNITAID) had signed a memorandum of understanding by February 25, 2009.

Under the partnership, UNITAID was responsible for the provision of funding to UNICEF for the purchase, quality assurance, freight and insurance, and related procurement management of LLINs in the nine beneficiary countries covered by the project within a budget not exceeding \$109,250,000.00. In addition, UNITAID was responsible for an ongoing review of the financial and programmatic progress of the project, and to provide strategic advice for realization of all project objectives.

UNICEF was responsible for developing a procurement strategy, coordinating and managing procurement and timely delivery of high quality LLINs, submitting interim progress reports at predetermined junctures, engaging and negotiating with industry to stimulate an increase of high quality LLIN availability at lower prices, collaborating with WHOPES to encourage suppliers to submit LLINs they produce for technical evaluation and recommendation of LLINs, and facilitating technical support in LLIN supply and management for beneficiary countries if required and/or facilitating technical support to help ensure successful implementation of the project.

### **2.2 Objectives of the review**

In May 2012 the UNITAID Secretariat initiated an end of project review to assess the performance of the Accelerating Scale-up of LLINs project and to gain insights and recommendations to improve future projects. Dalberg Global Development Advisors, an international development consultancy, has been selected to complete this review through a competitive bidding process. The objectives of this independent evaluation are:

- To assess the project's success in achieving stated goals and objectives
- To provide recommendations on what UNITAID can learn from this experience and how it can continue to improve in future projects and partnerships

This report is structured to reflect these objectives. The sections that follow summarize the methodology of this evaluation, present key findings of the Accelerating Scale-up of LLINs project, and provide recommendations to inform future efforts.

### **3 Methodology**

This section provides an overview of the scope of the post-project review along with the approach taken and constraints encountered while pursuing the previously stated objectives.

#### **3.1 Scope**

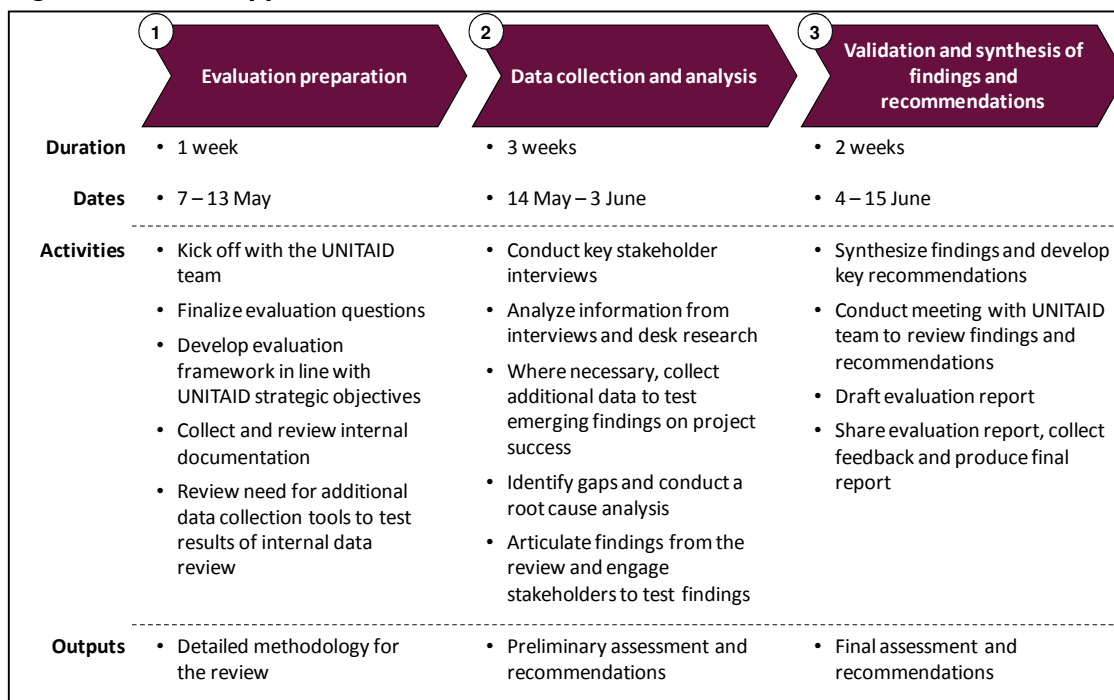
In order to provide an evaluation of Accelerating Scale-up of LLINs project and its performance in achieving stated goals prescribed at the outset of the project, Dalberg was engaged to perform the following activities:

- Review all project documentation, including periodic progress reports and financial statements
- Review the current reporting templates for both project activity and project financial reporting in order to suggest improvements to routine project reporting and processes
- Interview relevant stakeholders
- Assess project management strengths, weaknesses, opportunities, and threats; and provide strategic recommendations for UNITAID to ensure continued learning and improvement in the execution of future projects and partnerships

#### **3.2 Approach**

The end-of-project review has been implemented in three phases. In the first phase, the evaluation team worked closely with the UNTAID Secretariat to finalize the evaluation framework, including the evaluation questions, methodology and approach. Also during this phase, the evaluation team requested project documents and other relevant materials from the UNTAID Secretariat and UNICEF team. During the second phase, the team conducted interviews with key stakeholders and a desk review of project documents in order to establish a preliminary assessment and form initial recommendations. In the final phase, final interviews have been completed, findings have been summarized and recommendations have been drafted for submission to the UNTAID Secretariat. Figure 1 below provides an overview of this approach.

**Figure 1: Review approach**



To assess the progress made towards the Accelerating Scale-up of LLINs project objectives, the evaluation team reviewed 21 project related documents and interviewed 22 stakeholders. A complete list of documents reviewed and interviews conducted as part of this review can be found in Annex 1 and Annex 2.

A summary of findings from this evaluation is found in Section 4. These findings have been grouped in the following categories:

- **Relevance.** Assessment of whether or not the activities and outputs of the project are consistent with the objectives and expected outcomes as described in the project plan. In addition, assessment of whether or not the project has contributed to WHO/UNITAID’s overall goal of contributing to the scale-up of and access to treatment for malaria for the most disadvantaged populations in low and middle incomes countries using innovative global market based approaches
- **Effectiveness.** Assessment of project outputs completed against those envisioned in the project plan and partner agreements
- **Efficiency.** Assessment of whether project outputs completed were completed on-time and within stipulated budgets. In addition, an assessment of whether the structure of the partnership was optimal (e.g., appropriateness of reporting requirements)
- **Impact.** Assessment of what lasting change, if any, was created by the project activities and outputs

For each category, a high, medium, or low rating is provided by the evaluation team. This rating is based on interpretation of key findings and demonstrated achievement of agreed

project objectives. Recommendations for the Accelerating Scale-up of LLINs project are presented in Section 5.

### **3.3 Constraints**

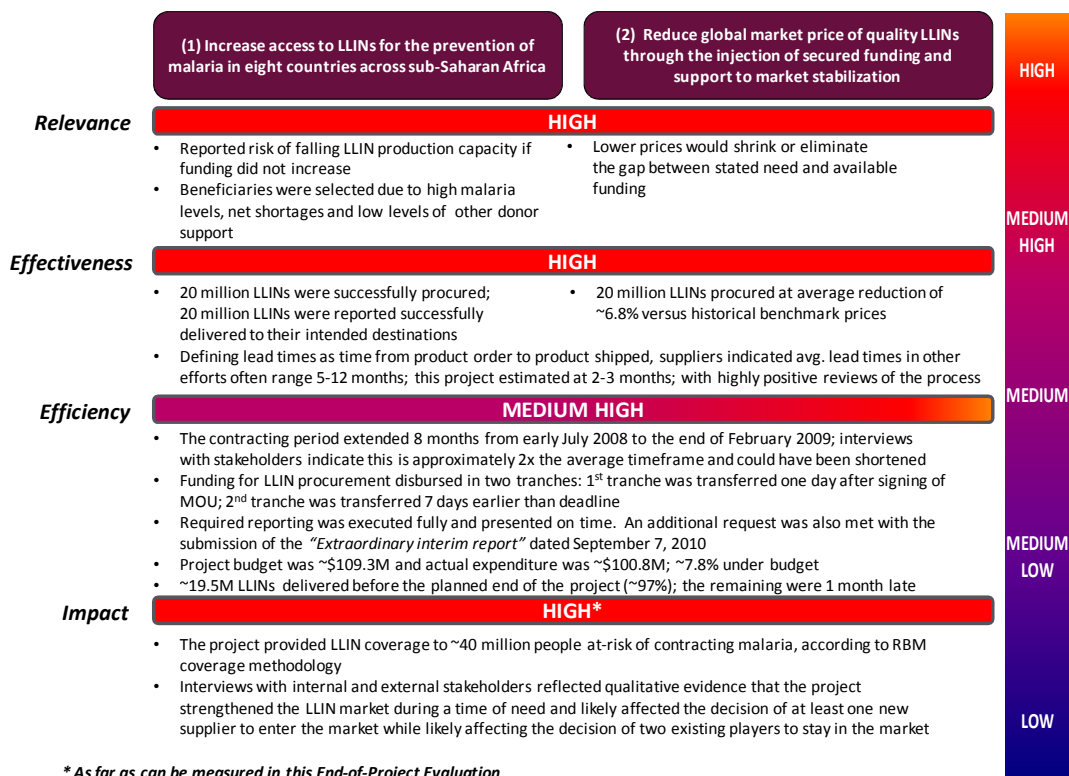
Our findings and recommendations in this short evaluation depend highly on the accuracy of the materials provided to our team and the objectiveness and accuracy of feedback provided by stakeholders in our interviews.

Additional constraints in this evaluation relate to the high difficulty in several instances of proving a counterfactual. Much of our evaluation focused on assessing the impact of the Accelerating Scale-up of LLINs project, and what would or would not have happened had it not been implemented. This effort can be at best difficult and at worst impossible and thus our findings on project impact should be viewed as estimates derived from the available evidence.

## 4 Findings

This section presents the key findings of the end of project review of the Accelerating Scale-up of LLINs project. These findings have been organized into four categories: relevance; effectiveness; efficiency and impact. Figure 2 below presents a high-level summary of key findings and post-project review ratings for each of these categories, aligning them to the two primary project goals.

**Figure 2: Summary of key findings and ratings by project objectives**



Interviews conducted and documents reviewed do not indicate any unintended negative externalities as part of the project.

We have constructed a strengths, weaknesses, opportunities and threats (SWOT) analysis of our findings to provide a high level overview of the findings we explore in detail throughout the report. The SWOT analysis is presented in Figure 3 below.

**Figure 3: SWOT analysis**

<p style="text-align: center;"><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• A clear project plan and MOU with clearly defined roles and responsibilities</li> <li>• Prompt and streamlined transfer of project funds</li> <li>• A highly effective procurement model employed by UNICEF</li> <li>• Successful cooperation between teams and a relevant reporting structure</li> </ul>	<p style="text-align: center;"><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• The contracting process took longer than was necessary to finalize, particularly for a time sensitive project</li> </ul>
<p style="text-align: center;"><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• The success of the project lends strength to the brand of UNITAID as an effective funder that can get things done</li> <li>• The project contributed to a growing relationship with UNICEF as a likeminded and trusted partner and collaborator</li> </ul>	<p style="text-align: center;"><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Stakeholders interviewed indicated the LLIN supplier market is facing future market uncertainty</li> <li>• Lack of net standardization by size, shape, color, etc. continues to create challenges for LLIN suppliers, leading to delays and market inefficiency</li> <li>• Interviewed suppliers indicate the LLIN market does not appropriately differentiate between low vs. high quality and that procurement cost calculations should more accurately weigh quality considerations when purchasing to incentivize market innovation and higher quality nets</li> </ul>

## 4.1 Relevance

*End of project review rating: HIGH*

The Accelerating Scale-up of LLINs project was highly relevant. First, the criteria for selecting the project beneficiaries aligned closely with the goals and objectives of the project: a) beneficiary countries should have high malaria transmission and burden; b) they should suffer from significant LLIN coverage gaps; c) they should have difficulty in raising resources from other sources; and d) UNICEF should have a strong country office presence and malaria control programming experience<sup>7</sup>.

Second, a large-scale injection of funding into the LLIN market was needed for several reasons in early 2009. Broad gaps existed between stated LLIN needs and available funding. Suppliers interviewed agreed this contributed to low visibility into future market demand and created a situation where suppliers were ramping capacity based on global LLIN needs but were uncertain if demand would emerge soon enough for them to continue producing at such levels. Finally, LLIN prices remained detrimentally high as noted in a 2008 WHO report entitled, *Long-Lasting Insecticidal Nets for Malaria Prevention: A manual for malaria programme managers*. The report noted, “Indeed, the commercial market may be problematic for LLINs: genuine LLINs are more expensive than the untreated nets widely available on the retail market...” Targeted at appropriate beneficiaries, and addressing

<sup>7</sup> UNICEF/UNITAID Final Project Plan

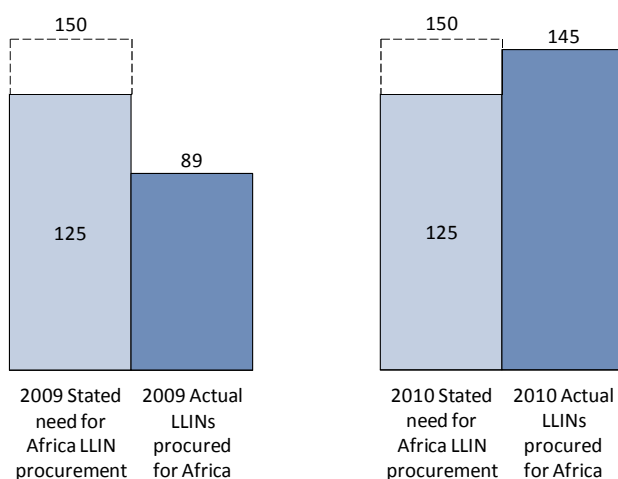
several market issues at a critical time, the injection of UNITAID funds into the LLIN market through the Accelerating Scale-up of LLINs project was both highly relevant and timely<sup>8</sup>.

#### 4.1.1 Need for LLINs outpaced funds committed to securing LLINs

According to, *The Global Malaria Action Plan: For a malaria-free world*, published by RBM in 2008, approximately 250 to 300 million additional LLINs were needed by the end of 2010 to achieve malaria transmission control across sub-Saharan Africa<sup>9</sup>. The report estimated the cost of the intervention at \$959 million annually in both 2009 and 2010, amounting to more than \$1.9 billion over two years. While malaria spending increased steadily across Africa between 2004 and 2007, RBM’s stated need of \$959 million annually for LLINs alone would have represented a 54% increase over the entire amount of malaria funding (i.e., LLINs, IRS, diagnostics, anti-malarial treatments, etc.) in Africa in 2007. This highlights a significant gap between available and necessary funding levels at the time.

In retrospect, we can definitively judge the project met a significant need. The number of LLINs procured for Africa *did* rise dramatically from ~60 million in 2008 to ~89 million and ~145 million in 2009 and 2010, respectively, amounting to a two year total of 234 million. However, this total still did not reach even the low end of RBM’s stated LLIN need in the period of 250 million. Depending on whether RBM’s low or high need estimates are cited, somewhere between 6% and 22% of the LLIN need in Africa remained unfilled by the end of 2010, even with the 20 million nets provided by the Accelerating Scale-up of LLINs project. Had the Accelerating Scale-up of LLINs project not taken place, the unfilled need at the end of 2010 would have been much greater, between 14% and 29% of the stated RBM need. This information is presented below in Figure 4.

**Figure 4: LLINs in Africa: RBM stated needs vs. actual procurement, 2009 & 2010<sup>10</sup>**



<sup>8</sup> “Long-Lasting Insecticidal Nets for Malaria Prevention: A manual for malaria programme managers.” WHO. 2008.

<sup>9</sup> According to the 80% coverage target set by RBM.

<sup>10</sup> RBM Malaria Action Plan, 2008. Net Mapping Project, 2012.

#### **4.1.2 Production capacity of LLINs had grown by 2008, but uncertainties in market demand and the relatively weak position of the suppliers gave rise to fears that production capacity might not last**

While global LLIN production capacity was growing at the time of the project launch, post-project interviews with relevant stakeholders indicate that much of this production capacity was “fragile” and it’s “sustainability was reliant on the emergence of significant and immediate market demand”<sup>11</sup>. Several of those interviewed stated there was a real possibility at the time of suppliers being forced to dramatically cut production, if not leave the market completely. One interviewee indicated that at least two LLIN producers had revealed their contemplations<sup>12</sup> of leaving the market at the time due to the uncertain future LLIN market demand. In addition, another player who was developing an LLIN product for the market at the time was considering cancelling their development of the product until they were presented with proof that the Accelerating Scale-up of LLINs project was moving forward. One interviewee described the intervention as, “an amazing market signal that provided the necessary encouragement to suppliers to keep producing at the levels that were needed then and in the future.” It is not possible to say definitively whether those suppliers described would have actually left the market without the Accelerating Scale-up of LLINs project, but there is strong consensus from different stakeholder groups that there was a significant risk.

#### **4.1.3 With LLIN need outweighing available funding, lower LLIN prices would help eliminate part or all of the gap between stated need and available funding**

As mentioned previously in this report, RBM’s stated need for 250-300 million LLINs across Africa in 2009 and 2010 outpaced available donor funding in 2008 for such nets. A stated target of the Accelerating Scale-up of LLINs project was thus to secure LLINs at a 5-20% discount to historical prices. Although a broad range, it reflects the uncertainty at the time of what could be achieved in the market. If achieved, this would hypothetically enable more nets to be bought with the available funding in the market. For example, if the budget for this project of \$109,246,140 was available to purchase as many LLINs as possible in a similar project, a 5% discount in LLIN price would allow for the purchase of more than 1.1 million additional LLINs<sup>13</sup>. With an estimated LLIN gap between 16 and 66 million at the end of the 2010, these 1.1 million additional nets would be able to cover ~2% to ~7% of the LLIN need gap in Africa. In section 4.2.3 of this evaluation we present a more detailed analysis of LLIN pricing.

#### **4.1.4 The selected beneficiary countries displayed clear, strong need for the planned procurement and distribution of the 20 million LLINs**

According to World Bank classifications at the time of the original proposal in June 2008, 94% of the project budget targeted low income countries (LICs), with the remaining 6% targeting low middle income countries. This breakdown fits within the UNITAID geographical eligibility criteria which states that project funds must dedicated at least 85%

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<sup>11</sup> LLIN manufacturer interviewed

<sup>12</sup> These producers were identified at Tana Netting and Clarke Mosquito Control. Please be advised this claim was neither verified nor refuted by the named parties.

<sup>13</sup> Assuming the same benchmark price of \$4.98 per LLIN used in the pricing analysis of this evaluation in Section 4.2.3.



for LICs, no more than 10% for lower middle income countries (LMICs), and no more than 5% for upper middle income countries (UMICs). At least 95% of the population of each beneficiary was defined at the time as living in malarious areas, classifying each as an endemic country. In addition, each selected beneficiary country had reported estimated LLIN coverage between 14% and 66% prior to the project, indicating each country could experience significant improvement towards the RBM 2010 goal of 80% coverage across all sub-Saharan African countries with the support of the Accelerating Scale-up of LLINs project. Stakeholders indicated the final selection of beneficiary countries included a vetting process consisting of discussions between UNICEF country teams and the UNICEF headquarters where the appropriateness of potential beneficiaries was weighed by several key criteria before final selection. The criteria were reported to our team as: a) beneficiary countries should have high malaria transmission and burden; b) they should have significant LLIN coverage gaps; c) they should have difficulty in raising resources from other sources; and d) UNICEF should have a strong country office presence and malaria control programming experience<sup>14</sup>. Our interviews with stakeholders support the claim that appropriate vetting went into the process for selecting project beneficiaries. The beneficiaries and select data are presented in Figure 5 below.

**Figure 5: Selected beneficiary country comparison**

Country	LIC/MIC/HIC classification as of June 2008 <sup>15</sup>	Project budget (% of total) <sup>16</sup>	% population living in malarious areas <sup>17</sup>	% estimated LLIN coverage before project <sup>18</sup>	Pre-project estimate of LLIN coverage after project <sup>19</sup>
<i>Angola</i>	LMIC	\$4.5M (4%)	99%	66%	77%
<i>Cen. Afr. Rep.</i>	LIC	\$5.8M (5%)	100%	66%	100%
<i>Congo</i>	LMIC	\$2.5M (2%)	100%	14%	38%
<i>Dem. Rep. Congo</i>	LIC	\$29.2M (27%)	95%	38%	40%
<i>Guinea</i>	LIC	\$9.9M (9%)	100%	16%	43%
<i>Nigeria</i>	LIC	\$34.5M (32%)	100%	21%	31%
<i>South Sudan</i>	LIC	\$8.5M (8%)	100%	37%	69%
<i>North Sudan</i>	LIC	\$12.0M (11%)	100%	37%	55%
<i>Zimbabwe</i>	LIC	\$2.3M (2%)	99%	19%	26%

## 4.2 Effectiveness

*End of project review rating: HIGH*

<sup>14</sup> UNICEF/UNITAID Final Project Plan

<sup>15</sup> World Bank

<sup>16</sup> UNICEF/UNITAID Project Plan

<sup>17</sup> UNICEF/UNITAID Project Plan

<sup>18</sup> Alliance For Malaria Prevention estimates (cited in UNICEF/UNITAID Project Plan)

<sup>19</sup> Assumes 1 LLIN covers 2 people

The Accelerating Scale-up of Access to LLINs project has been highly effective in completing the three project objectives originally stated in the MOU on February 25, 2009. Per these objectives, UNICEF secured 20 million WHOPES-recommended LLINs with UNITAID funding and distributed them in coordination with partners across nine beneficiary countries in sub-Saharan Africa. These activities directly supported the stated objective of supporting nine African countries to achieve RBM targets of 80% ITN utilization by 2010. Finally, project data and interviews with internal and external stakeholders have confirmed that through these increased investments and procurement strategies, the project did increase competition in the LLIN supplier market and was able to procure LLINs at a significant discount to historical prices.

#### 4.2.1 20 million WHOPES-recommended LLINs were secured and distributed to the specified beneficiaries

Between the dates of March 31, 2009 and June 25, 2009, UNICEF placed purchase orders totaling 20 million WHOPES-recommended LLINs for the nine targeted beneficiaries. All orders were of WHOPES-recommended products. In addition, according to project documents and stakeholder interviews, all 20 million LLINs were eventually distributed to their intended beneficiaries. This information is presented in Figure 6 below.

**Figure 6: Effectiveness of procurement and reported distribution**

Country	Quantity ordered	Quantity distributed <sup>20</sup>	Product(s)	Quantity distributed equals distribution target?
<i>Angola</i>	850,000	850,000	Permanet	✓
<i>Cen. Afr. Rep.</i>	1,100,000	1,100,000	Interceptor, OlysetNet	✓
<i>Congo</i>	470,000	470,000	Permanet, Interceptor	✓
<i>Dem. Rep. Congo</i>	5,500,000	5,500,000	Permanet, OlysetNet, Interceptor	✓
<i>Guinea</i>	1,300,000	1,300,000	Permanet	✓
<i>Nigeria</i>	6,500,000	6,500,000	OlysetNet, Duranet	✓
<i>South Sudan</i>	1,600,000	1,600,000	Permanet	✓
<i>North Sudan</i>	2,250,000	2,250,000	Permanet	✓
<i>Zimbabwe</i>	430,000	430,000	OlysetNet	✓

#### 4.2.2 Project activities directly supported the efforts of the specified beneficiary countries to achieve the RBM targets of 80% ITN utilization by 2010

Overall, the Accelerating Scale-up of LLINs project covered approximately 13%<sup>21</sup> of the more than 310 million at risk people within the nine beneficiary countries, contributing significantly to supporting each country reach the RBM 80% global coverage goal by the end of 2010.

<sup>20</sup> Distributed defined as reaching intended final destination in targeted beneficiary countries

<sup>21</sup> According to the RBM formula of 1 LLIN covers 2 people.

Utilizing the RBM methodology which assumes each LLIN covers two people, the Accelerating Scale-up of LLINs project directly covered 40 million at risk people in malarious areas. This amounted to delivering LLINs to as much as 50%, in the case of the Central African Republic, of the in-country at risk population of the project’s targeted beneficiaries. This information is presented in Figure 7 below.

**Figure 7: Effectiveness of supporting beneficiaries to achieve 80% coverage**

Country	LLINs distributed	Estimated people covered	Total at risk population <sup>22</sup>	Estimated % of at risk population covered by project
Angola	850,000	1,700,000	19,100,000	8.9%
Cen. Afr. Rep.	1,100,000	2,200,000	4,400,000	50.0%
Congo	470,000	940,000	4,040,000	23.3%
Dem. Rep. Congo	5,500,000	11,000,000	65,980,000	16.7%
Guinea	1,300,000	2,600,000	9,980,000	26.1%
Nigeria	6,500,000	13,000,000	158,000,000	8.2%
South Sudan	1,600,000	3,200,000	9,110,000	35.1%
North Sudan	2,250,000	4,500,000	34,090,000	13.2%
Zimbabwe	430,000	860,000	6,290,000	13.7%
Total -		40,000,000	310,990,000	12.9%

#### **4.2.3 The project was able to achieve the project target of procuring LLINs at 5% discounts to historical benchmarks, though the historical benchmarks were not optimally selected and the goal itself conflicts with another project objective**

According to the 2<sup>nd</sup> Interim Progress Report (September 7, 2010) UNITAID and UNICEF aimed to procure 20 million LLINs at prices 5% lower than the average LLIN prices in December 2007. It should be noted that setting a baseline for average global LLIN prices at any given time is extremely difficult. As USAID acknowledged in a similar effort, “Every LLIN procurement is unique – volumes, delivery locations, specifications – and price has varied considerably over the past five years. Given this, it [is] difficult to determine both trends over time and whether there [are] any predictable cost drivers”<sup>23</sup>. The LLIN market is composed of a wide variety of net sizes, shapes and qualities, all of which are variables that can significantly affect price. Considering this, we propose using historical prices at which UNICEF has procured LLINs previously as a baseline measure and compare them by shape and size to the prices of LLINs procured in this project. This information was provided by UNICEF in its own analysis in the previously mentioned 2<sup>nd</sup> Interim Progress Report. The Accelerating Scale-up of LLINs procured three shapes of nets in varying quantities. Our price analysis is presented below in Figure 8.

<sup>22</sup> WHO World Malaria Report, 2011; utilizes 2010 data, defined as anyone in a non-malaria free zone

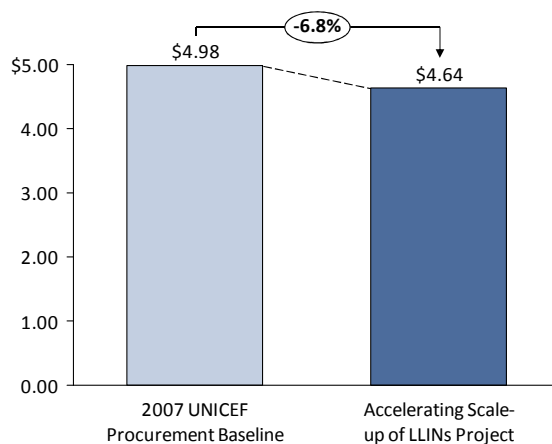
<sup>23</sup> “Long-Lasting Insecticide-Treated Net Market and Data Analysis-2011 Addendum”. USAID. 2012.

**Figure 8: LLIN price discount analysis**

Shape / Size	% of Nets Procured	Median Project Price Per Net	2007 UNICEF Procurement Median Price Per Net	Weighted Project Price Per Net	Weighted 2007 UNICEF Procurement Price Per Net	% Price Decrease
Rectangular 190x180x150	61.8%	\$4.62	\$4.96	<b>\$2.86</b> <i>(61.8% x \$4.62)</i>	<b>\$3.07</b> <i>(61.8% x \$4.96)</i>	6.9%
Rectangular 180x160x150	31.7%	\$4.36	\$4.47	<b>\$1.38</b> <i>(31.7% x \$4.36)</i>	<b>\$1.42</b> <i>(31.7% x \$4.47)</i>	2.5%
All conical nets <sup>24</sup>	6.5%	\$6.21	\$7.51	<b>\$0.40</b> <i>(6.5% x \$6.21)</i>	<b>\$0.49</b> <i>(6.5% x \$7.51)</i>	17.3%
	<b>100%</b>			<b>\$4.64</b>	<b>\$4.98</b>	<b>6.8%</b>

When weighting the median prices of the three shapes of nets for the project we arrived at a median price of \$4.64 per net. This amounts to a 6.8% decrease in prices relative to the weighted median of \$4.98 for UNICEF procurements of the same size and shaped nets in 2007. This information is presented below in Figure 9.

**Figure 9: LLIN weighted median price-per-net discount analysis**



However, while this does surpass the stated project goal of a 5% discount, we believe the methodology was not optimal. When the original project was proposed in June 2008, comparing prices to the end of 2007 seemed appropriate. However, by the time the MOU was signed and the project launched, it was early 2009 and a more appropriate measure would have been to use UNICEF’s 2008 procurement prices as the benchmark<sup>25</sup>.

<sup>24</sup> Not enough data to break out sizes of conical nets

<sup>25</sup> The 2007 benchmark number was calculated by UNICEF specifically for this project so when asked whether we could use a 2008 benchmark it was stated that it does not readily exist

In addition, it should be noted the project objective of decreasing LLIN procurement prices conflicts with the project objective of shortening LLIN production lead times. According to interviewees, if price declines were the top priority, the project could have leveraged the large size of the procurement to drive market prices lower than they actually did. However, the structure of the UNICEF procurement strategy (and its long-term agreements with suppliers) is actually positioned better to prioritize decreases in lead times due to its ability to provide suppliers with demand visibility. Due to a lack of ordering these objectives in the project plan, it is difficult to provide recommendations as to how the project could have achieved either greater price discounts or shorter lead times because they would have likely come at the expense of the other objective. Our perception of the project execution is that the project did somewhat prioritize shorter lead times over lower prices. A consequence of prioritizing lead times was the spread of LLIN orders across several suppliers. Although spreading orders across multiple suppliers was not explicitly cited in interviews as part of a strategy to help stabilize the market, interviews with suppliers indicate it did have a stabilizing effect. This outcome aligned with the project mission and serves to validate a prioritization of shortening lead times over further price discounts.

#### **4.2.4 Lead times were significantly decreased due to the UNICEF procurement strategy**

In conducting interviews with net manufacturers, the procurement process executed by UNICEF in the Accelerating Scale-up of LLINs project was universally praised as more efficient, clearer and entirely superior to processes employed by other procurement agents. Several interviewees explicitly called it the “*number one procurement process*” in the market. Citing key variables such as order size, interviewed suppliers noted that lead times, defined as beginning at the moment of receiving a purchase order and ending at the time goods arrived at port for shipping, have often ranged with other procurement agents from 5 to 12 months, historically.

However, these same manufacturers claim the UNICEF model often shortened the process significantly. According to the available data reported by UNICEF for this project, the mean lead time between the date the product order was issued and the date LLINs went under pre-deliver inspection was approximately 26 days<sup>26</sup>. Manufacturers cited several success factors leading to a better experience and significantly shortened lead times: i) UNICEF offered greater visibility into future needs, providing suppliers with the ability to plan ahead; ii) UNICEF had UNITAID’s funds in hand and thus paid promptly and fully whereas other procurement agents are reported to have paid for goods as much as 2 years late or more, creating significant operational issues for suppliers; iii) UNICEF is said to emphasize standardization of net orders when negotiating with beneficiaries more than other procurement agents do, allowing for more stock production by suppliers and thus greater ability to plan and turnaround orders faster when they are received.

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<sup>26</sup> Data was available for ~80% of nets procured for the project. The remaining nets had no pre-delivery inspection date because they were waived due to “urgency of shipments and good supplier record”.

#### 4.2.5 WHOPEs-recommended LLIN products have increased +70% since the launch of the project in 2009, however, proving the Accelerating Scale-up of LLINs project is directly responsible is difficult

According to the final project plan, there were 7 WHOPEs recommended LLIN products as of the start of the Accelerating Scale-up of LLINs project. As of the latest published WHOPEs recommended list (from July 2011), there are now 12 WHOPEs recommended LLIN products. This represents an increase in the number of WHOPEs recommended LLIN products of 71% since the start of the Accelerating Scale-up of LLINs project. This information is presented in Figure 10 below.

**Figure 10: Latest WHOPEs recommended LLIN product list<sup>27</sup>**

Legend		
WHOPEs Recommended pre-project		
Not WHOPEs Recommended pre-project		
Product	Status of WHOPEs Recommendation	Recommendation achieved before Accelerating Scale-up of LLINs project?
<i>Duragnet</i>	Interim	Yes
<i>Interceptor</i>	Interim	Yes
<i>Netprotect</i>	Interim	Yes
<i>Olyset</i>	Full	Yes
<i>PermaNet 2.0</i>	Full	Yes
<i>PermaNet 2.5</i>	Interim	Yes
<i>PermaNet 3.0</i>	Interim	Yes
<i>DawaPlus 2.0</i>	Interim	No
<i>LifeNet</i>	Interim	No
<i>MAGNet</i>	Interim	No
<i>Royal Sentry</i>	Interim	No
<i>Yorkool LN</i>	Full	No

However, it should be noted that attributing increased WHOPEs recommended products to this project is quite difficult as it can be subjective and qualitative. With that caveat, one key stakeholder claimed he had private discussions with one company that was considering cancelling development of an LLIN product in 2009 before being presented with proof the Accelerating Scale-up of LLINs project was moving forward. This company subsequently continued development of their product and it is now a WHOPEs recommended LLIN product. In addition, this key stakeholder claimed two LLIN suppliers had privately discussed with him considerations of leaving the LLIN market in 2009 before ultimately staying in the market after being convinced the Accelerating Scale-up of LLINs project was approved.

<sup>27</sup> As of July 2011.

### 4.3 Efficiency

*End of project review rating: MEDIUM HIGH*

Project funds were transferred by UNITAID to UNICEF in two tranches in early 2009. These transfers were executed either in-line with timing expectations or early, relative to targets set in the MOU agreement. The procurement of 20 million LLINs was executed successfully and although in-country obstacles emerged in several of the beneficiary countries, more than 97% of the LLINs successfully reached their final destination by the close of the project in December 2010. Although delayed, the remaining ~2% of LLINs reached their final destinations in January 2010, within 30 days following the planned end of the project.

#### 4.3.1 The contracting process between project approval and actual signing of the MOU took too long, particularly for a time sensitive project

The project was approved by the UNITAID Board during a session held July 2-3, 2008. The MOU was signed by both parties February 24-25, 2009. This represents an approximate gap of 8 months between project approval and project launch. We are aware the process requires several steps, including internal discussions, face-to-face negotiations, and multiple iterations among several parties. Through interviews we were informed this process today generally takes 2-4 months with familiar partners, with an additional 1 or 2 months expected for new partners. As one of the first UNITAID projects, it was suggested that an understaffed UNITAID team and a lack of institutional-wide experience with the negotiation process were partially to blame for the 8 month process during the Accelerating Scale-up of LLINs project. We were also informed this process has taken up to one year in a rare case, but that an estimated average timeframe is approximately 2-5 months. Particularly due to the time sensitivity of the types of projects UNITAID undertakes, our team believes 8 months is too long a period to finalize contracting. In our discussions we learned that while the process has improved significantly at UNITAID since 2008, the process is still approached in a somewhat “*ad hoc*” manner. We provide a recommendation to more efficiently systemize this process in Section 5.

#### 4.3.2 Project funding disbursements were executed rapidly

Funding for the project was disbursed in two tranches of \$55M and ~\$54M, respectively. The first tranche was transferred by UNITAID on February 26, 2009, the day following the signing of the MOU, and received by UNICEF March 5, 2009. The timing of this disbursement was in line with MOU expectations. The second tranche was transferred by UNITAID March 19, 2009 and received by UNICEF March 20, 2009. This second tranche was actually disbursed approximately one week early, relative to MOU expectations. This information is presented below in Figure 11.

**Figure 11: Project funding disbursement tracker**

Tranche	Amount	MOU estimated disbursement date	Actual disbursement date	On time or Early?

1	\$55,000,000.00	On or about February 25, 2009	February 26, 2009	✓ <sup>28</sup>
2	\$54,246,140.00	On or about March 27, 2009	March 20, 2009	✓

#### 4.3.3 More than 97% of the secured LLINs were distributed within the specified dates of the project, despite unanticipated obstacles in beneficiary countries

Within the specified dates of the project, February 2009 through the end of December 2010, 19,528,000 LLINs were distributed, accounting for more than 97% of the overall goal. However, the remaining 472,000 nets were not fully distributed until January 2011 due to the scheduling of other core health campaigns across the Central African Republic in the final quarter of 2010. The LLIN campaign was paired with the measles campaign and planned for the last quarter of 2010 but was postponed to the first quarter of 2011 due to “limited funding and to some extent, the campaign fatigue of implementing bodies running the various campaigns within a short time frame”<sup>29</sup>. This is presented below in Figure 12.

**Figure 12: Reported LLIN distribution tracker**

Country	Region/Zone/State/ Prefecture/Province	Quantity distributed by end of project	Distribution dates
<i>Angola</i>	All 18 provinces	850,000	December 2009 – September 2010
<i>Cen. Afr. Rep.</i>	Bangui, Ouham, Ouham Pende, Basse Kotto, Nana Gribizi, Kemo	628,000	June 2010 – July 2010
	Lobaye, Mambere Kadei, Nana Mambere, Sangha Mbaere, Mbomou, Haut Mbomou, Haute Kotto, Ouaka, Bamingui Bangoran, Vakaga	(472,000) <sup>30</sup>	January 2011
<i>Congo</i>	All 12 departments	142,929	September 2009
		327,071	January 2010 – April 2010
<i>Dem. Rep. Congo</i>	Maniema and Orientale	5,500,000	December 2009 – May 2010
<i>Guinea</i>	All 7 regions	1,300,000	November 2009
<i>Nigeria</i>	Sokoto	1,452,560	December 2009
	Kebbi	1,424,201	December 2009
	Kaduna	2,202,480	June 2010
	Adamawa	1,420,759 <sup>31</sup>	August 2010

<sup>28</sup> Although the disbursement is actually 1 day after February 25<sup>th</sup>; we understand “on or about” to include a week before and after the stated date. In addition, As the MOU was signed only one day previous to disbursement, we believe the disbursement of funds was handled promptly and diligently and thus qualify as “on time”

<sup>29</sup> UNICEF Final Programmatic Report, Accelerating Scale-up of LLINs Project. December 31, 2010.

<sup>30</sup> Were not distributed until after the project end date of December 31, 2010.

<sup>31</sup> As part of the planned distribution in Nigeria, not all nets were given directly to beneficiaries upon initial distribution. Included in the above, the following numbers of nets were distributed in November and December 2010 as planned “mop up/routine upkeep”: Sokoto: 152,560; Kebbi 87,383; Kaduna 21,303; Adamawa 78,104.



South Sudan	Central Equatoria	463,500	November 2009
	Unity	564,600	March 2010
	Upper Nile	571,900	March 2010
North Sudan	All 9 states	850,000	May 2010
		650,000	June 2009
		750,000	August 2009
Zimbabwe	11 targeted districts	430,000	September 2009 – November 2009
<i>Totals -</i>		<b>19,528,000 LLINs distributed on time (98% of goal)</b>	

Through interviews with multiple stakeholders, we heard consistent feedback on the appropriateness of the timeline of the project. Relative to experience with other interventions, interviewees believed the timeline was relatively short, particularly because the beneficiary countries were selected largely because of the difficulty of operating within them. Several factors raised contributing to uncertainty in the beneficiary countries that could lead to significant delays were: i) broad geographical diffusion of communities within countries; ii) lack of adequate road infrastructure; iii) lack of Health Ministry operations in many areas; iv) logistics of net storage at the port of entry and in country; and v) the ability to time distribution cycles to match other interventions. Estimates for a more appropriate timeframe for the project ranged from an additional 3 to 12 months. Nobody interviewed suggested the timeframe of the project should have been shortened.

#### 4.3.4 Project reporting requirements were executed fully and presented on time

Per the project agreement, UNICEF submitted an interim progress report, an annual progress report, a financial utilization report and a final project report. These reports were submitted on time and were found to accurately convey the activities and outputs of the project. This information is presented below in Figure 13.

**Figure 13: Reporting requirement tracker**

Reporting requirement	Estimated reporting date	Submitted?	Submitted on time? (Date submitted)	Additional Comments
Receipt of 1 <sup>st</sup> interim progress report by the UNITAID Executive Secretary	August 30, 2009	✓	✓ (August 30, 2009)	
Receipt of Annual Programmatic, Procurement and Financial Report by the UNITAID Executive Secretariat	March 15, 2010	✓	✓ (March 15, 2010)	
Final Project and Financial Report	90 days after settlement of all obligations (target date end December 2010)	✓	✓ (December 31, 2010) (June 11, 2010)	The utilization report was submitted in June and the final project report in December
Extraordinary interim report	-	✓	✓	Report was not required in MOU but

			(September 7, 2010)	was requested by UNITAID during the project to provide additional project updates and details
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**4.3.5 The reporting structure captured valuable information but was not optimally flexible or dynamic. Communication could have been improved through more frequent and in person interactions**

Interviews with multiple stakeholders revealed both strengths and weaknesses to the project reporting structure and communications between UNITAID and UNICEF throughout the project. Both the timing and content of the reports were deemed relevant and useful. In addition, they were not deemed unnecessarily burdensome.

However, it is evident neither the reporting structure itself nor the communication channels during the project were perceived to be optimally dynamic or collaborative. Interviews indicate the UNICEF team approached the reporting from a perspective that it would only be based on the content and timeline stated in the MOU. The UNITAID team believed that clarification or additional information on issues that arose from the report itself should have been addressed anytime irrespective of the MOU stipulations. UNICEF subsequently argued the project was not adequately staffed to provide such requests for additional information and clarification. It is evident that the project lacked sufficient team-to-team interaction, particularly in person, which would have helped build trust and streamline discussions around the appropriate level of ongoing reporting (however it was indicated ongoing phone conferences did strengthen trust and build the partnership). In support of this, interviews indicated there were instances during the project when UNITAID had additional questions arising from the reports and found the interaction structure of the UNITAID and UNICEF teams less than optimal to get their questions answered quickly and fully. In our Recommendations section, we put forth several recommendations as to how reporting and communication channels can be improved in future UNITAID partnerships.

**4.4 Impact**

*End of project review rating: HIGH*

Project outcomes indicate the Accelerating Scale-up of LLINs project contributed significantly to LLIN access across its nine targeted beneficiary countries. In addition, interviews with internal and external stakeholders confirm the project served as an “essential bridge” to keep the “momentum going at a critical time” by filling a significant demand gap in the young and fragile LLIN industry at the time. In multiple instances, the project was cited as saving suppliers from needing to cut production and downsize staff.

In addition to increasing access and supporting LLIN supplier growth, the project was described as “a major success” by external interviewees because the project significantly strengthened the industry by building trust between manufacturers and procurers. Several manufacturers described repeated instances of previous bad experiences with other

procurers due to significantly delayed payments, lack of production visibility, etc. By building stakeholder trust through operating as a professional, fast moving and cooperative operation, the Accelerating Scale-up of LLINs project built supplier confidence and improved lines of communication within the industry during the project and afterwards.

#### **4.4.1 The Accelerating Scale-up of LLINs project is expected to have significantly decreased the vulnerability of approximately 40 million at risk people of contracting malaria**

Stakeholder interviews confirm that the project delivered 20 million high quality LLINs to vulnerable populations living in malarious countries. Utilizing the RBM formula for quantifying coverage, which is that two people are considered covered by each one net delivered, the project provided coverage for approximately 40 million at-risk people across nine endemic African countries.

#### **4.4.2 The Accelerating Scale-up of LLINs project significantly strengthened the LLIN industry at a point when production capacity was growing and strong demand was needed to keep capacity from leaving the market**

According to interviewees, the project launched at a time when several LLIN manufacturers had recently ramped their production capacity and felt exposed if anticipated market demand did not materialize. The project was described as “*a major success*” by one supplier, coming at a time when “*the injection of funding was essential to maintaining the momentum that had been built up. It was critical at the time.*”

One supplier informed us that they had experienced significant growth over the year prior to project launch but were growing fearful about a demand void in the market. If the Accelerating Scale-up of LLINs project had not emerged to fill the demand void the supplier claimed they would have most likely been forced to cut staff significantly, resulting in greatly diminished production capacity.

In addition, as mentioned in Section 4.2.5, there is evidence the Accelerating Scale-up of LLINs project contributed to both influencing new suppliers to enter the LLIN market and existing players to stay in the market. As noted earlier in this report, definitively linking the outcome of a rise in WHOPES recommended products to this project is quite difficult. This is due to the fact that in such a complex environment with many variables moving at once, it is virtually impossible to prove a counterfactual. The most reliable information comes from the stakeholders themselves but it should be noted these viewpoints are qualitative and can be subjective. With that in mind, existing evidence does suggest the project had an impact on decision making for a few players. One key stakeholder claimed he had private discussions with one company that was considering cancelling development of an LLIN product in 2009 before being presented with proof the Accelerating Scale-up of LLINs project was moving forward. This company subsequently continued development of their product and it is now a WHOPES recommended LLIN product. In addition, this key stakeholder claimed two LLIN suppliers had privately discussed with him considerations of leaving the LLIN market in 2009 before ultimately staying in the market after being convinced the Accelerating Scale-up of LLINs project had been approved.



## **5 Recommendations**

### **5.1 Recommendations on what to continue and how to improve as a partner in future projects**

From our research and interviews, we have developed the following recommendations as to how UNITAID can continue to serve as a strong partner and how it can serve as a better partner in future endeavors.

#### **5.1.1 Shorten the process between project approval and MOU finalization through process standardization**

The project was approved by the UNITAID Board during a session held July 2-3, 2008. The MOU was signed by both parties February 24-25, 2009. This represents an approximate gap of 8 months between project approval and project launch. Particularly due to the time sensitivity of the types of projects UNITAID undertakes, we believe 8 months should be considered too long a time period to finalize this process. Through interviews with stakeholders we gathered that the Accelerating Scale-up of LLINs project was one of the first UNITAID projects and that understaffing at the time exacerbated delays. Interviewees indicated that as the UNITAID staff has grown and gained experience, this process can now be completed in 2-3 months with a familiar partner, with an additional month or two expected when negotiating with new partners. However, interviewees also indicated this process is still rather “*ad hoc*” and that the greatest delays can often be blamed on a lack of clear roles and responsibilities or a clear plan for action once a project has board approval.

We recommend UNITAID build a standard process map for the period following project approval through the signing of the MOU. The process map would deliver two concrete things: (i) set clear delineation of responsibilities; and (ii) set discrete milestones to reflect progress. Interviewees indicated the greatest risks of delay in the process result from uncertainty of deadlines and who is responsible for what. The installation of a systematic process would clearly define roles and provide milestones to signify progress towards completion of the process. For example, the process map could designate portfolio managers as the point people responsible for coordinating internal teams and ensuring input is provided by certain dates. The first milestone could require a face-to-face meeting be held with the project partner within 2 weeks of project approval to set the expectations for how the process would unfold. If the UNITAID team can develop an appropriate process map internally, they can minimize the risk of delays and ensure the negotiation process following project approval is a learning one.

#### **5.1.2 In appropriate contexts, UNITAID should consider embedding staff with project partners to create a more flexible reporting structure without placing additional burdens on partners**

Throughout the Accelerating Scale-up of LLINs project it seemed the UNITAID team wanted to be able to evolve to a more dynamic reporting structure that reacted to changing conditions and answered new and more detailed questions as the project moved forward. However, the UNICEF team was perceived as focusing more intently on delivering the reporting obligations agreed upon in the MOU, which they delivered fully and on time. We believe a dynamic reporting structure that answers new questions as the project evolves

can be a superior option to the static option presented in the MOU. However, it is not fair nor is it realistic to agree upon one reporting structure before the project and expect it to evolve smoothly to a new standard as a project unfolds, particularly if it involves placing additional burdens on one partner.

We suggest considering embedding a UNITAID staff member with project partners in similar projects in the future. In the context of this project, embedding a staff member with UNICEF would have been an efficient way to streamline project reporting and communication with the UNITAID team without placing significant additional burdens on UNICEF. The embedded staff member could serve as a direct line of communication with the UNITAID team to reflect project progress, answer additional questions as the project evolves and gather requested data. The embedded staff member could also gather valuable field experience and information to bring back to UNITAID to help inform future decision making and project development. Our team believes the investment in an extra expense of one embedded staff member would be more than returned in the value created through new information and streamlined communication. To clarify, we do not believe this would be necessary or appropriate for all projects, but would be a relevant consideration in future projects similar to the Accelerating the Scale-up of LLINs project, particularly large scale projects.

#### **5.1.3 Mid-project collaboration with partners can be improved through more formalized and additional communication, particularly in the form of periodic in-person meetings**

While general feedback on team-to-team relations was highly positive during the Accelerating Scale-up of LLINs project, the general perception was that mid-project interactions were viewed primarily through the lens of a reporting obligation, and did not always necessarily drive collaboration. These interactions occurred primarily through emails and conference calls. Periodic in-person meetings would not only have increased trust and clarified any miscommunication faster, they would have built a greater sense of collegiality and teamwork between the UNICEF and UNITAID teams. With a project that spanned almost two full years and a budget of nearly \$110 million, we believe this would have been a highly reasonable request of the partner teams. In addition, we found in our research that multiple project stakeholders supported this change and expressed a strong desire for such interactions to take place in future projects. We do believe, however, that with cost effectiveness in mind, this recommendation should be decided between partner teams on a case-by-case basis.

#### **5.1.4 UNITAID should consider review where funding by implementing partners could become a bottleneck to project implementation and consider ways of reducing risks of such bottlenecks**

Our evaluation in no way holds UNITAID responsible for any of UNICEF's challenges in securing operational funding for the project. However, we believe the issues arising due to an underestimation on behalf of UNICEF regarding the funds they would need created an operational risk for the implementation of the project. This is a situation that is likely to arise again in the future due to uncertainties facing implementation of this type of project. It presents a risk to future UNITAID collaborations if implementing partners underestimate

their project costs. UNITAID should evaluate the risks that partners' issues with funding pose to project implementation and evaluate possibilities to mitigate such risks within the boundaries of its mandate..

In the 2<sup>nd</sup> Extraordinary Interim Project Report (September 7, 2010), UNICEF reported mobilizing more than \$23 million to support the operational costs necessary for implementation of the project. Since much of these funds were mobilized during the project, we believe this is a less than optimal structure that could have jeopardized the success of the project. In addition to distracting efforts from actual implementation of the project, had the efforts to mobilize the necessary funding failed the project could have faced significant delays and stoppages.

A potential way forward for UNITAID may be to use a “challenge” model where UNITAID and their implementation partner could get other partner donors to guarantee full or partial funding of the operational costs once UNITAID has committed to funding the project. This would minimize funding risks to the project and would allow implementation teams to focus solely on their project responsibilities.

#### **5.1.5 Continued rapid disbursement of project funds must remain the top priority**

The Accelerating Scale-up of LLINs project was characterized by rapid transmission of funding, both from UNITAID to UNICEF and from UNICEF to LLIN suppliers. Through our research and interviews it became apparent this seemingly straightforward variable quite often faces delays but is one of the most important deciding factors in the perceived success of similar interventions. At times funders have delayed funds transfer to procurement agents and procurement agents have delayed payment to suppliers for several months or more – and in one case more than two years. In addition, there are instances where funders pay incrementally, delaying partial payment by weeks and months at a time. These delays have occurred even once the movement of goods is out of the hands of the manufacturers. Operating in a space where suppliers are often pressured by tight margins and a lack of substantial resource buffers, this can weaken the efficiency of the market and can even lead to distrust and adversarial relationships, damaging the ability to get projects done and/or done on time. To continue to serve as a strong and constructive partner, UNITAID must continue to make prompt and full fund disbursement a top priority.

### **5.2 Thoughts on topical findings from the evaluation**

From our research and interviews, we have synthesized some of the key information extracted that we believe can help inform future decision making or drive initial thinking for new initiatives.

#### **5.2.1 More competition, lower prices and uncertainty of funding has suppliers as anxious about their future as ever**

Feedback from interviewees indicates LLIN manufacturers are worried about their future. Increased competition has been good for global production capacity but has meant less for each player, and continually falling prices has meant shrinking margins. In addition, uncertainty surrounds the next round of Global Fund money and thus the LLIN supplier

market appears vulnerable. Multiple supplier and non-supplier interviewees confirmed the uncertainty surrounding the timing of more Global Fund money casts a shadow over demand visibility in the market. One interviewee mentioned a supplier that has not produced nets year to date due to a lull in demand. Several interviewees explicitly stated, particularly if Global Fund money does not emerge soon, a similar intervention to the Accelerating Scale-up of LLINs project could be a positive intervention.

### **5.2.2 Lack of net standardization by size, shape, color, etc. has created substantial challenges for LLIN suppliers and leads to significant unnecessary delays**

Feedback from interviewees indicates suppliers feel procurement agents have not pushed back enough when beneficiary countries demand custom alterations to nets. While increased variety for beneficiary communities is certainly a desirable feature, it can come at significant cost to production efficiency. Additionally, in many cases the custom alterations are self-serving and do not serve any additional practical purpose (i.e. an image of the president, an obscure color or size). This can create unnecessary challenges that slow production, create bottlenecks, and thus increase lead times. With “decreasing lead times” as a core objective of this project and a key issue in the LLIN market, we believe the benefits of standardization across LLIN sizes, shapes, etc. currently outweighs the benefits of increased variety across these characteristics. Feedback suggests UNICEF is better than most procurement agents at addressing this issue, but it is still a large concern of suppliers. This issue could potentially be addressed through educating the industry at large of the implications of the current dynamic.

### **5.2.3 The current market structure does not incentivize the production of higher quality nets**

Several interviewees reflected frustration with the fact that procurement agents do not place premiums on higher quality nets. Specifically, they noted that higher deniers or superior adhesives used in ensuring nets are truly longer lasting, are more expensive. However, they claim that cheap generic producers create inferior nets with inferior bonding materials or lower deniers for the same prices the better crafted nets demand. In a competitive market where future demand is uncertain, they claim this provides them more incentive to cut corners and create inferior products to survive, not dedicate resources to innovate longer lasting and more effective nets.

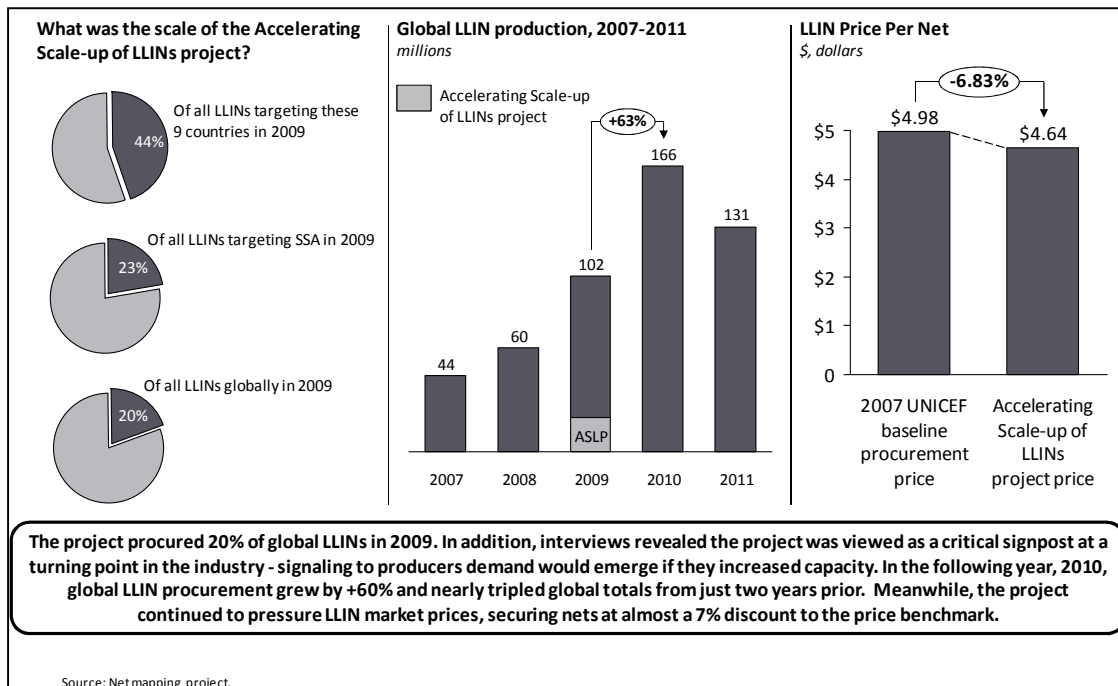


## 6 Conclusion

The need remains for interventions such as the Accelerating Scale-up of LLINs project to stabilize the global LLIN production industry and meet global LLIN needs. This evaluation has shown that the Accelerating Scale-up of LLINs project has been a highly effective intervention that increased access to LLINs for its intended beneficiaries while strengthening and increasing stability in the LLIN supply market.

Success factors of the project included: i) a clear project plan and MOU with clearly defined roles and responsibilities; ii) prompt and streamlined transfer of project funds; iii) a highly effective procurement model employed by UNICEF and; iv) successful cooperation between teams and a relevant reporting structure. A summary of project impact is included below in Figure 14.

Figure 14: Summary of project impact



**Annex 1: List of documents reviewed**

<b>Document Name</b>	<b>Date</b>
UNICEF Proposal to UNITAID Board: Accelerating Scale-up of LLINs	1-Jun-08
Resolution No. 3: The Board of UNITAID authorizes the Exec. Secretary to commit up to US\$109.25M for the Project <i>Accelerating Scale-up of LLINs</i>	3-Jul-08
MOU for the Accelerating Scale-up of LLINs Project 2009-2010	25-Feb-09
Annex I: Accelerating Scale-up of LLINs 2009-2010; Exec. Summary of Project - Summary of timing and sequence of actions in project plan	25-Feb-09
Update on UNITAID Accelerating Scale-up of LLINs Project for Central African Republic	10-Mar-09
Update on UNITAID Accelerating Scale-up of LLINs Project for Democratic Republic of Congo	10-Mar-09
Update on UNITAID Accelerating Scale-up of LLINs Project for Guinea	10-Mar-09
Update on UNITAID Accelerating Scale-up of LLINs Project for Nigeria	10-Mar-09
Update on UNITAID Accelerating Scale-up of LLINs Project for North Sudan	10-Mar-09
Update on UNITAID Accelerating Scale-up of LLINs Project for Southern Sudan	10-Mar-09
Implementation letters to Governments - UNITAID accelerating scale-up of LLINs	12-Mar-09
1st Interim Progress Report: UNITAID Accelerating Scale-up of LLINs Project	30-Aug-09
Annual Programmatic, Procurement and Financial Report: UNITAID Accelerating Scale-up of LLINs Project	15-Mar-10
Utilization Report for UNITAID Projects as of June 11 2010	11-Jun-10
2nd Interim Progress Report: UNITAID Accelerating Scale-up of LLINs Project (Extraordinary interim report)	7-Sep-10
Final Programmatic Report: UNITAID Accelerating Scale-up of LLINs Project	31-Dec-10
End of Project Evaluation UNITAID Core Team Interview Response	29-May-12
End of Project Evaluation UNITAID Guinea Team Interview Response	28-May-12
End of Project Evaluation UNITAID Congo Brazzaville Team Interview Response	28-May-12
End of Project Evaluation UNITAID Sudan Team Interview Response	27-May-12
End of Project Evaluation UNITAID Nigeria Team Interview Response	1-Jun-12

## Annex 2: Summary of Interviews Conducted

<b>Name</b>	<b>Organization</b>	<b>Title / Position</b>
Alan Court	UNSE	Senior Advisor to UN Secretary General Special Envoy for Malaria
Ambachew Yohannes	UNITAID	Technical Officer, Malaria Operations
Atsuko Hirooka	Sumitomo Chemical	Manager, Vector Control Division (Japan)
Claude-Emile Rwagacondo	RBM	West Africa RBM Network Coordinator
Congo Brazzaville Team	UNICEF	Administrator in Charge of Maternal and Child Health, Congo
Dr. Kate Strong	UNITAID	Monitoring and Evaluation Officer
Dr. Khalid Siddeeg and Hassan Sugulle	UNICEF	UNICEF Health Specialist and UNICEF Health Manager
Egon Weinmueller	BASF	Head of Business Management Global Public Health Pest Control Solutions
Elena Trajkovska	UNICEF	Contracts Specialist
Guinea Team	UNICEF	National Officer in Charge of Maternal and Child Health, Guinea
Helene Moller	UNICEF	UNICEF Supply Division
Issa Matta	WHO	Senior Legal Officer
Jan Van Erps	WHO	Coordinator Supply Chain Support at the Roll Back Malaria Partnership Secretariat
Joaquim Da Silva	RBM	East Africa Regional Network Coordinator
Jose Nkuni	RBM	Central Africa RBM Network Coordinator
Kaka Mudambo	RBM	South Africa RBM Network Coordinator
Klaus Ostergaard	Vestergaard-Frandsen	Regional Director
Lorenzo Witherspoon	UNITAID	Supply Manager
Nigeria Team	UNICEF	Health Specialist in Charge of Malaria Control, Nigeria
Susan Struck	UNICEF	Director's Office
Terry Phillips	Clarke Mosquito Control	General Manager International
Valentina Buj	UNICEF	Health Specialist

**Annex 3: Summary of Key Project Activities and Reporting Requirements (Page 1/2)**

The following presents a list of select key project activities in chronological order. For those events that occurred over a single day, the date is specified. For those activities that took place over the course of more than one month, they are placed in chronological order based on when the activity was completed. Project activities continue onto the next page.

<b>Activity Name</b>	<b>Date</b>
UNICEF signs MOU	24-Feb-09
UNITAID signs MOU	25-Feb-09
1st tranche of \$55,000,000 in project funding sent by UNITAID to UNICEF	26-Feb-09
2nd tranche of \$54,246,140 in project funding sent by UNITAID to UNICEF	20-Mar-09
650,000 LLINs distributed in North Sudan	Jun 09
750,000 LLINs distributed in North Sudan	Aug 09
Receipt of 1st interim progress report by UNITAID from UNICEF	30-Aug-09
142,929 LLINs distributed in Congo Brazzaville	Sep 09
430,000 LLINs distributed in Zimbabwe	Sep 09 - Nov 09
1,300,000 LLINs distributed in Guinea	Nov 09
463,500 LLINs distributed in South Sudan	Nov 09
2,876,761 LLINs distributed in Nigeria	Dec 09
Receipt of annual programmatic, procurement and financial report by UNITAID from UNICEF	15-Mar-10
1,136,500 LLINs distributed in South Sudan	Mar 10
327,071 LLINs distributed in Congo Brazzaville	Jan 10 - Apr 10
5,500,000 LLINs distributed in Democratic Republic of Congo	Dec 09 - May 10

**Annex 3: Summary of Key Project Activities and Reporting Requirements (Page 2/2)**

The following presents a list of select key project activities in chronological order. For those events that occurred over a single day, the date is specified. For those activities that took place over the course of more than one month, they are placed in chronological order based on when the activity was completed.

<b>Activity Name</b>	<b>Date</b>
850,000 LLINs distributed in North Sudan	May 10
Receipt of financial utilization report by UNITAID from UNICEF	11-Jun-10
2,202,480 LLINs distributed in Nigeria	Jun 10
628,000 LLINs distributed in Central African Republic	Jun 10 - July 10
1,420,759 LLINs distributed in Nigeria	Aug 10
Receipt of extraordinary interim report by UNITAID from UNICEF	7-Sep-10
850,000 LLINs distributed in Angola	Dec 09 - Sep 10
Receipt of final project report by UNITAID from UNICEF	31-Dec-10
Last day of project according to MOU	11-Dec-10
472,000 LLINs distributed in Central African Republic	Jan 11