

# LLIN Supply Update

UNICEF Supply Division

April 2013

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children

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## LLIN Supply Update – April 2013

### 1. Summary

- In 2012, UNICEF procured 18 million Long Lasting Insecticidal Nets (LLINs). Annual LLIN procurement volume has dropped 60% since 2009's peak and has returned to 2007 levels.
- By contrast, UNICEF's Weighted Average Price (WAP) has decreased by 25%, from \$5 in 2010 to ~\$3.70 in 2012, making bednets more affordable.
- UNICEF's procurement decline mirrors recent global trends. Against the backdrop of an annual target requirement of 150 million LLINs, global procurement for Sub-Saharan Africa has dropped 52% from a peak of 145 million LLINs in 2010 to 70 million in 2012.
- UNICEF is concerned that the current rate of decline in LLIN procurement is far greater than the slowdown envisaged by the Roll Back Malaria (RBM) partnership, and risks undermining gains made towards achieving Universal Coverage. Current global procurement levels are not sufficient to replace nets bought in 2009-2010 and which are now due for replacement in 2013.
- Additionally, the decline in LLIN procurement and the uncertain funding environment may jeopardize the accuracy of LLIN forecasts and the stability / security of the market.

### 2. Background & Recent Procurement Trends

Globally, in 2010, 200 million annual cases of malaria led to 650,000 fatalities, of which 90% occurred in 30 countries in Sub-Saharan Africa (SSA). Substantial advocacy campaigns at the turn of the millennium expanded global funding for malaria control programmes from \$100 million to \$1.84 billion during 2000-2012. The funding expansion supported countries' increased access to malaria prevention programmes, in addition to diagnostic and treatment services. The distribution of Insecticide Treated Nets (ITNs) is a cornerstone of these programmes. In Sub-Saharan Africa, the percentage of households that own an ITN increased from 3% to 53% during 2000-2011<sup>1</sup> contributing to 17% and 26% global reductions through 2010 in malaria incidence and attributable mortality, respectively.<sup>2</sup>

A key objective of malaria control programmes is to achieve and sustain universal coverage of control intervention by 2015.<sup>3</sup> To achieve this goal in Sub-Saharan Africa, countries and partners must distribute 150 million LLINs annually.<sup>4</sup>

UNICEF's 2012 procurement quantities have decreased to 2007 levels and are down 60% from the 43 million LLINs procured in 2009. The surge in procurement in 2009 and 2010 was due to collaboration with UNITAID. 20 million LLINs destined for countries in Sub-Saharan Africa were procured following the Millennium Development Goals (MDGs) Malaria Summit (2008), at which world leaders renewed their endorsement for malaria programmes.

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Note: This briefing provides our assessment of LLIN supply as of 31 March 2013.

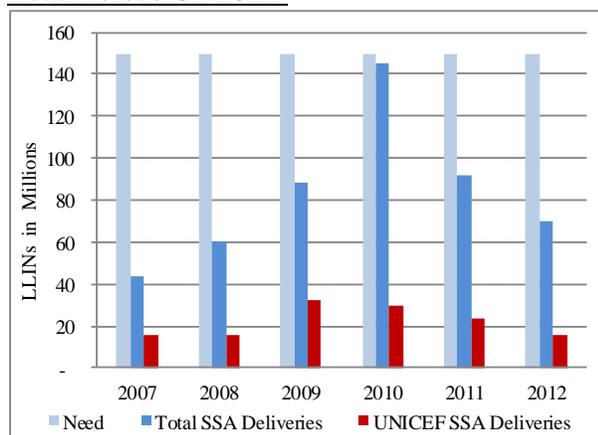
<sup>1</sup> WHO, *WHO Global Malaria Programme, World Malaria Report 2012*, Geneva, 2012 at [http://www.who.int/entity/malaria/publications/world\\_malaria\\_report\\_2012/wmr2012\\_full\\_report.pdf](http://www.who.int/entity/malaria/publications/world_malaria_report_2012/wmr2012_full_report.pdf).

<sup>2</sup> WHO, *WHO Global Malaria Programme, World Malaria Report 2011*, Geneva, 2011 at [http://apps.who.int/iris/bitstream/10665/44792/2/9789241564403\\_eng\\_full.pdf](http://apps.who.int/iris/bitstream/10665/44792/2/9789241564403_eng_full.pdf).

<sup>3</sup> The Roll Back Malaria Partnership at <http://www.rbm.who.int/gmap/1-2.html>.

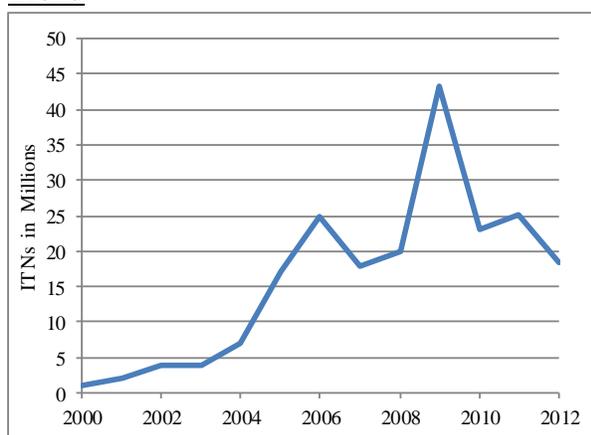
<sup>4</sup> WHO, *World Malaria Report 2012*, Geneva, 2012.

**Figure 1 Sub-Saharan Africa Deliveries: Total versus UNICEF**



Source: Net Mapping Project / UNICEF SD.

**Figure 2 UNICEF's Global ITN Procurement Trend**



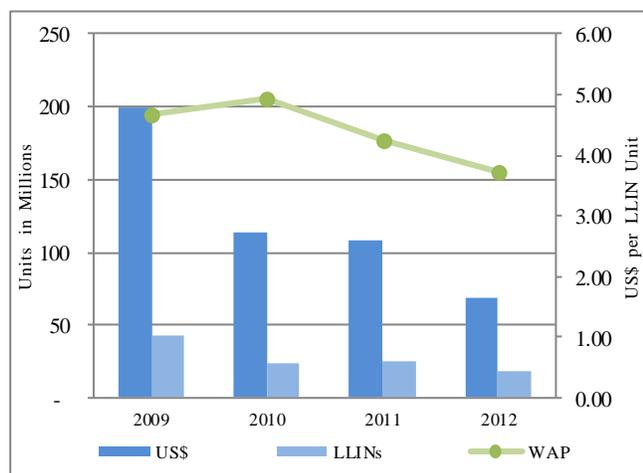
Source: UNICEF SD.

UNICEF on average accounts for 25-30% of Sub-Saharan Africa deliveries (Figure 1), and its global LLIN procurement trend mirrors recent global data. The Net Mapping Project data suggests that only 70 million LLINs were distributed across Sub-Saharan Africa in 2012, accounting for half the annual target requirement of 150 million LLINs. 2012 UNICEF procurement data similarly highlights a steep decline from a peak in procurement registered in 2009 (Figure 2). The overall decrease in LLIN global procurement and subsequent deliveries risks undermining progress towards universal coverage.

### 3. Current Market Update

#### 3.1. Supplier Base and Capacity

**Figure 3 UNICEF Procurement and Weighted Average Price (WAP) Data**



Source: UNICEF SD.

Note: This data is based on all LLIN products (standard and customized) and has not been adjusted to account for rebates or other product costs.

Increased LLIN demand over the past decade has catalysed an increase in UNICEF suppliers from one to ten in 2000 and 2011, respectively. LLIN manufacturing capacity had increased to an estimated 220 million LLINs a year in order to meet the 150 million annual target. Improved visibility of demand, the abovementioned expanded capacity, and increased competition have all supported substantially improved pricing. Consequently, from 2010 to 2012, the weighted average price of an LLIN (of all nets UNICEF procured) declined by 25% from \$5 to ~\$3.70 (Figure 3). However, despite lower prices, fewer nets are funded. The current decreased procurement trend has already resulted in the closure of some production lines. Should this trend continue, there is a risk of further loss in manufacturing capacity.

WHO's Pesticide Evaluation Scheme (WHOPES) currently lists [13 LLINs from 11 suppliers](#). The products differ in size, shape, material, insecticide and price.

In March 2012, UNICEF issued a Request for Proposals (RFP) to supply 25 million LLINs covering the period June 2012 to May 2013 and 27 million LLINs covering June 2013 to May 2014. UNICEF currently has Long Term Arrangements (LTAs) with 7 suppliers, signed in June 2012. LTA renewal for a subsequent year will be dependent upon the stability of the market, LLIN price levels, new product entrants, and market forecasts.

**Figure 4 Suppliers to UNICEF and the Different Products Offered<sup>5</sup>**

Supplier	Product	Material	Size cm (L x W x H)	Price in 2011 (US\$)	Price in 2012 (US\$)
BASF*	Interceptor	Polyester	190 x 180 x 150	4.68	3.17
			180 x 160 x 150	4.28	2.86
			1250 x 250	7.26	4.61
BAYER*	Life Net	Propropylene	190 x 180 x 150	-	-
Bestnet	Netprotect	Polyethylene	190 x 180 x 150	3.99	-
			180 x 160 x 150	3.65	-
			1250 x 250	5.75	-
Clarke	Duranet	Polyethylene	190 x 180 x 150	4.55	-
			180 x 160 x 150	4.40	-
			1250 x 250	6.35	-
Disease Control Technologies*	Royal Sentry	Polyethylene	190 x 180 x 150	Not on market	3.19
			180 x 160 x 150	Not on market	2.92
NetHealth*	Olyset Plus	Polyethylene	190 x 180 x 150	4.25	3.12
			180 x 160 x 150	4.10	2.92
			1250 x 250	8.50	4.90
Sumitomo Chemical	Olyset	Polyethylene	190 x 180 x 150	-	-
			180 x 160 x 150	-	-
			1250 x 250	-	-
Tana Netting	Dawa Plus 2.0	Polyester	190 x 180 x 150	4.99	-
			180 x 160 x 150	4.50	-
			1250 x 250	No proposal	-
Vestergaard* Frandsen	PermaNet 2.0	Polyester	190 x 180 x 150	3.78	3.32
			180 x 160 x 150	3.44	3.00
			1250 x 250	6.64	5.58
	PermaNet 2.5	Polyester (strengthened border)	190 x 180 x 150		-
			180 x 160 x 150		-
			1250 x 250		-
PermaNet 3.0	Polyester (sides) Polyethylene (top)	190 x 180 x 150	5.20	5.24	
		180 x 160 x 150	4.65	4.70	
Yorkool*	Yorkool	Polyester	190 x 180 x 150	4.03	2.85
			180 x 160 x 150	4.03	2.60
			1250 x 250	6.90	4.27
V.K.A. Polymers*	MAGNet	Polyethylene	190 x 180 x 150	Not on market	3.32
			180 x 160 x 150	Not on market	3.15
			1250 x 250	Not on market	-

[-] Supplier has not agreed to the publication of prices.

[\*] Suppliers with existing LTAs with UNICEF.

<sup>5</sup> UNICEF, *Long Lasting Insecticidal Net (LLINs) Price Data*, Copenhagen, 2012.

### 3.2. UNICEF's View of Demand

Recipient countries from 2009 and 2010 have been entering their replacement cycle in 2012 and 2013. LLINs can last between two to five years depending upon the insecticide treatment and materials used (WHO's required standard is three years). In order to sustain current coverage levels, there is a need to replace the record number of 145 million LLINs delivered in 2010, in addition to closing the gap generated by delayed funding in 2011 and 2012. Current global levels of procurement and delivery are insufficient to meet the needs of these countries. UNICEF is more than three-quarters through the procurement year of its June 2012- May 2013 LTA for 25 million LLINs. During Q3 and Q4 of 2012, UNICEF procured half of the 12-month forecasted quantity.

Figure 5 UNICEF Q1 and Q2 Country Procurement and Forecast for 2013

Countries	LLIN Procurement Q1	LLIN Forecast Q2
Angola	305,135	524,865
Bolivia	10,000	3,050
Burundi	10,000	99,065
Burkina Faso	-	50,000
CAR	-	3,045,000
Chad	534,400	1,716,050
Djibouti	-	20,000
DRC	53,000	400,000
Ethiopia	47,053	3,500,000
Guinea	-	282,000
India	-	1,123,400
Iran	100,000	-
Kyrgyzstan	-	35,000
Madagascar	150,000	-
Mauritania	500	5,000
Mozambique	826,860	-
Niger	-	75,000
Nigeria	-	330,000
Pakistan	13,280	-
Philippines	-	72,000
Rwanda	4,000	-
Senegal	-	65,000
Sierra Leone	250,000	-
Sudan	-	3,245,900
South Sudan	-	230,000
Tanzania	-	1,000
Togo	23,683	300,000
<b>Total</b>	<b>2,327,911</b>	<b>15,122,330</b>

2.3 million LLINs were procured in Q1 2013. During Q2 2013, UNICEF anticipates procuring an estimated 15.1 million LLINs. (Several large orders from Q1 slipped into the first week of April, but have already been placed). Prompt and available funding supports UNICEF's ability to procure additional LLINs to cover the needs of country plans (or unplanned *ad hoc* requests). However, the *actual* availability of funding for LLINs remains unpredictable, despite high levels of pledged or committed funds and efforts to ensure greater accuracy in forecasting. Wider stakeholder coordination has been encouraged as well as active engagement in sharing regular needs updates. The lack of an effective coordinated procurement approach is challenging manufacturers to use their production lines optimally. As some manufacturers have reduced capacity due to the decline in procurement, their resilience to respond if demand rebounds is being compromised. Similarly, when high demand from multiple procurers is concentrated or converges during the same time period, purchasers including UNICEF can be locked out of the market for extended periods.

During 2010 and 2011, UNICEF and partners arranged bridge financing to cover delays in the funding availability for Zambia and Sierra Leone. These financings enabled timely procurement of LLINs, which otherwise would have risked a reversal in progress in vulnerable populations. These transactions were performed on an *ad hoc* basis and required a mobilization of resources and partners that is difficult to re-create on a routine basis. A

more systematic approach is required. In order to streamline such transactions and work on making them more efficient, UNICEF suggests the following be considered:

- Grant agreements are signed or amended to allow for retroactive funding ceilings for previous procurement activities. Retroactive funding ceilings would facilitate more timely procurement, particularly given the lengthy shipping time for LLIN orders and time-sensitivity of delivery ahead of seasonal peaks of malaria transmission.
- Donors, such as GFATM and WB, consider an allowance of a separately funded facility which allows a stockpile of standard nets ahead of country-specific disbursement in order to improve distribution.

#### **4. Issues / Challenges**

- On an annual basis, UNICEF, government counterparts and development partners collaborate on constructing LLIN forecasts. These forecasts are updated on a regular basis. Despite UNICEF's overall 90% forecast accuracy, the forecasting process remains very unstable due to unpredictable LLIN funding and country-specific variance. These forecasts are not based on confirmed funding. In addition, fewer countries are sharing their forecasts. In 2012, only 23 forecasts were received compared to the procurement for 37 countries. As a result, the accuracy of the forecasts remains a challenge which contributes to reduced efficiency of the market.
- UNICEF continues to work towards a harmonised and streamlined forecast model and its use as a quantification tool. However, the lack of commensurate sustained procurement and funding threatens LLIN supply security. Chronic under-procurement risks further supplier response to reduce their current manufacturing scale, increase prices and even to potentially exit the market.
- The importance and cost of secondary supply chain distribution is often underestimated. An estimated \$2.50 per net is required to support adequate in-country distribution platforms for bednets, to include behaviour change communication and monitoring and evaluation. Measures aimed at cost-savings include, for example, pre-packed containerised shipments targeting country district distribution plans which can minimise transport and storage costs.

#### **5. Steps Forward**

- UNICEF will engage with partners (such as the UN Secretary General's Special Envoy for Malaria, ALMA, GFATM, WB, RBM, UNITAID, PMI, ADB and African regional economic communities and others) and their funding plans to enhance the procurement outlook and funding for greater LLIN coverage.
- UNICEF will explore with partners and suppliers the potential attractiveness of supply arrangements that give suppliers the confidence of the continued importance of the LLIN market, to include stockpiling based upon allocated, but as of yet, non-disbursed funds.
- Country offices and donors should continue to monitor stock levels and wastage and provide early indication if support is required.
- UNICEF will follow this market update with an information piece on UNICEF's perspective of quality and durability.
- UNICEF will further engage partners to develop evidence-based Value for Money durability studies to support the selection of appropriate products with a longer life-span, and include a reduced cost per year of durability.

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