



# Procedural Audit of School Net Program (SNP) Round 3

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Prepared by Kazi Services Limited for the VectorWorks Project

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## List of Acronyms

CBO	Community Based Organisation
CCP	Johns Hopkins University Center for Communication Programs
CDO	Community Development Officer
CHMT	Council Health Management Team
DC	District Commissioner
DED	District Executive Director
DEO	District Education Officer
DMO	District Medical Officer
FGD	Focus Group Discussion
GoT	Government of Tanzania
HMIS	Health Management Information System
HT	Head Teacher
LLIN	Long Lasting Insecticidal Net
KIIs	Key Informant Interviews
KSL	Kazi Services Limited
MC	Municipal Council
M&E	Monitoring and Evaluation
MFP	Malaria Focal Person
MoHSW	Ministry of Health and Social Welfare
PMO RALG	Prime Minister's Office Regional Administration and Local Government
PSI	Population Services International
RAS	Regional Administrative Secretary
REO	Regional Educational Officer
RMO	Regional Medical Officer
SHC	School Health Coordinator
SOP	Standard operating Procedures
SMS	Short Message
SNP	School Net Program
TC	Town Council
TDHS	Tanzania Demographic and Health Survey
TMIS	Tanzania Malaria Indicators Survey
TSHS	Tanzania Shillings
VEO	Village Educational Officer
WEC	Ward Education Coordinator
WEO	Ward Executive Officer

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## I. Introduction

### Background

Many African countries, including Tanzania, are in the midst of intensifying efforts to rapidly scale up the coverage of malaria prevention interventions. Malaria remains a major public health problem in Tanzania, especially for pregnant women and children below 5 years (TDHS-2010); and a leading cause of morbidity and mortality amongst outpatient and inpatient admissions. It accounts for up to 40% of all outpatient attendance (MoHSW, 2006). In Tanzania, there are an estimated 17 to 20 million cases of malaria per year and approximately 100,000 deaths (THMIS, 2008). According to the Tanzania Malaria Mid Term Strategic Plan of 2008-13, about 90% of the population is considered to be at high risk of getting malaria (TMIS report 2008).

Through a committed national leadership under the Ministry of Health and Social Welfare (MoHSW), and with support from multilateral and bilateral development partners, the Government of Tanzania (GoT) is implementing all four malaria control initiatives of the Roll Back Malaria program whose goal was set to reach 80% of its target population by 2010 (Bonner et al. 2011).

These initiatives are:

- Promotion of Long Lasting Insecticidal Net (LLIN) ownership and use
- Intermittent treatment of pregnant women with malaria

- Artemisinin based combination treatment strategy
- Indoor residual spraying

The use of LLINs has been a primary intervention adopted by the Ministry of Health and Social Welfare (MoHSW) under the National Malaria Control Program (NMCP) to reduce malaria transmission (TDHS-2010). The national goal was to improve the population's access to LLINs as a rapid strategy to reduce malaria, while ensuring affordability and acceptability. The Tanzania Demographic and Health Survey (TDHS) report also states the following as strategies that are used to increase access of the population to ownership and use of LLINs:

- Social marketing of LLITs through the private sector
- Distribution of LLINs through public-sector institutions such as health facilities through application of voucher schemes
- Universal Coverage Campaigns
- Private initiatives by Non-Governmental Organisations (NGOs) and Community Based Organizations (CBO) directly into communities

These strategies were implemented under a coordinated national LLIN program (NATNETs), supported by different partners and centrally managed by the NMCP under the MoHSW.

The School Net Program (SNP) involves free annual distribution of LLINs targeting primary school and/or secondary school children in selected classes in selected regions and based on application of scientific models that provide rational alternative scenarios for the selection of eligible classes.

The SNP was first piloted in the Southern Zone (Lindi, Mtwara, and Ruvuma Regions) in 2013 with the distribution of nets to primary and secondary schools. A second phase of net distribution (SNP-2) was completed in 2014 in the same regions targeting both Primary and Secondary schools and the third phase (SNP-3) was conducted in 2015 and targeted distribution in primary schools only. The targeting of primary schools is based on the fact that a greater proportion of households have children in primary schools, making primary schools a more efficient channel through which to increase net access in the community than secondary schools.

As part of its global project goal of supporting countries in achieving and maintaining high rates of coverage and use of LLINs, VectorWorks supported the GOT to distribute 500,000 LLINs in the Southern Zone (Lindi, Mtwara and Ruvuma regions) between January and August, 2015 for SNP-3. This project was designed to be implemented in close collaboration and leadership of the NMCP, the Prime Minister's Office Regional Administration and Local Government (PMO-RALG), and the Ministry of Education and Vocational Training (MoEVT). Johns Hopkins University Center for Communication Programs (CCP) is the lead and managing partner while Population Services International (PSI) is a subcontractor in training and logistics management.

Under the leadership of NMCP and PMO-RALG, the SNP-3 started with planning, training, and advocacy at national level led by CCP. Participants were MoEVT and Regional Technical Teams selected from the Regional Secretariats in the 3 regions.

Standard Operating Procedures (SOP) were reviewed during planning based on SNP-2 SOP. The main output from this planning session was a more refined SOP for use in 2015 operations and the development of national and regional specific macro-plans.

Once the review of SOP and macro-plans were developed, regional- and district-based advocacy meetings were held in each of the regions. Target participants for advocacy meetings were regional and district leaders as well as interested parties such as regional security members to ensure wide inclusion and

awareness of SNP-3 activities. Advocacy efforts were led by teams composed of officials from PMO-RALG, MoHSW/NMCP, and VectorWorks. This was followed by the training of District Technical Teams from all district councils within the 3 regions. Training, coordinated by PSI and CCP, aimed at orienting trainees on SOP for SNP-3 and included a discussion on the development of district micro-logistics implementation plan. Trained district Technical Teams then trained Ward Education Coordinators (WECs) on their roles in implementation, who in turn oriented head teachers (HTs) in the primary schools within their wards. The roles of WECs and HTs were crucial and involved data quantification of all pupils in all primary schools. WECs were charged with primary schools within the authority of control in a given ward.

National teams supported by both regional and district technical team members completed a data validation process unique to SNP-3. This was a planned activity in anticipation of discrepancies in quantified data, and was meant to ensure quality data was used for planning delivery of LLINs to eligible primary school children. Transportation of LLINs from national to district level was done by transporters selected by PSI through a competitive procurement process. Security and safety of LLINs was ensured by accompanying documentation and safe storage.

At the district level, bales of LLINs were re-bundled and grouped according to each school's need. They were then transported to respective schools. On arrival at the schools, HTs signed a waybill to acknowledge receipt and condition of nets. These nets were then distributed to eligible classes: Class 1,2,3,5,7 for Mtwara and Ruvuma regions and classes 1,2,3,5,6,7 for Lindi region according to the validated quantification data. Class teachers distributed nets to pupils in their respective classes; students acknowledged receipt through a signature or thumbprint in the distribution booklet.

## Procedural Audit Objectives

The purpose of this procedural audit is to identify lessons and best practices from SNP-3 by assessing the extent to which the SNP-3 protocols and SOPs were applied and provide recommendations for improving the design of future SNP plans. Overall, the goals and objectives of the procedural audit are the following:

### Goals

- Inform stakeholders about the management and distribution of LLINs during SNP-3
- Contribute to a cost analysis to be conducted by VectorWorks that may inform the scale up program in future SNP plans

### Specific Objectives

More specifically, the procedural audit was planned to assess the extent to which:

- Implementation of SNP-3 was carried out in accordance with prescribed protocols and Standard Operating Procedures (SOP) developed
- Adequate tools were used for proper tracking of LLINs and control of operations
- Recording was done at each step during transportation and the distribution process
- Detailed and consolidated reports were produced to provide accountability
- LLINs reached targeted beneficiaries
- Explore lessons and recommendations for improvement

## II. Methodology

Due to the involvement of various stakeholders in SNP-3, the procedural audit assessment was conducted through a combination of both qualitative and quantitative research methods. **Qualitative methods were applied at national, regional, and district levels while quantitative methods were applied at district, ward, and school levels.** The study was limited to Lindi, Mtwara, and Ruvuma regions since these are the areas where the School Net Program is currently being implemented.

### Quantitative Methods

#### Sampling

Within the three regions, a total of 15 districts (5 in each region) were selected to be included in the study. Sampling of the 5 districts for each region entailed listing all districts for each region and drawing five districts randomly (one after the other) using random number tables.

Similarly at ward level: the corresponding list of wards was compiled for each of the selected fifteen (15) districts and 1 ward in each district was randomly picked using random number tables.

In each of the 15 selected wards, 2 schools were randomly selected in the same manner for a total of 30 schools. In each school, 3 classes were picked and 6 pupils from the classes selected were randomly drawn. Of the 6 pupils interviewed in each in each school, three were girls and three were boys. In each school, the head teacher was to be interviewed, as well as the classroom teacher from each of the three classes.

List of areas visited for the study are summarised in the table below:

**Table 1. List of areas visited**

	Region	District	Ward	Village	Primary Schools
1	Lindi	Lindi DC	Milola	Nantamba	Nantamba
				Ruchemi	Ruchemi
		Lindi MC	Ng'apa	Ng'apang'apa	Cheleweni
				Mkupama	Mkupama
		Kilwa	Njinjo	Kisimamkika	Kisimamkika
				Njinjo	Njinjo
		Nachingwea	Mitumbati	Maziwa	Maziwa
				Mwenge	Mwenge
		Ruangwa	Mandawa	Mchichili	Mandawa
				Nahanga	Nahanga
2	Mtwara	Masasi DC	Sindano	Sindano	Sindano
				Ng'uni	Ng'uni
		Masasi TC	Mwengemtapika	Mbonde	Mbonde
				MwengeMtapika	Mwengemtapika
		Mtwara DC	Njengwa	Hinju	Hinju
				Nang'awanga	Nang'awanga
		Nanyumbu	Mnanje	Mikuva	Mikuva

				Holola	Holola
		Newala	Makukwe	Makukwe	Makukwe II
				Mnamunjelele	Nankong'o
3	Ruvuma	Mbinga	Myangayanga	Kindimba	Kindimba
				Mateka	Mateka
		Namtumbo	Kitanda	Naikesi	Karume
				Naikesi	Naikesi
		Songea DC	Gumbiro	Ngadinda	Ngadinda
				Gumbiro	Sokoine
		Songea MC	Mshangano	Chandarua	Chandarua
				Mshangano	Luhira
		Tunduru	Mchuluka	Mchuluka	Matika
				Mwongozo	Mwongozo

## Participants

For the quantitative methods of this audit, stakeholders interviewed at various levels included:

- **School level:** 30 head teachers, 85 class teachers and 180 pupils
- **Ward level:** 15 Ward Education Coordinators
- **District level:** 15 District Technical Team inclusive of malaria focal person, education officers, school health coordinators and community development officers

## Data Collection Tools

Two main tools were used for quantitative data collection. These are the audit and costing tools. Both tools were designed and shared with VectorWorks for approval before commencement of fieldwork. The tools were translated into Kiswahili language and scripted on to devices for simplified management of data before fieldwork.

- **Audit Tool**

This tool focused at investigating the extent of involvement of WECs, head teachers, class teachers and targeted pupils during the SNP-3 program.

WECs were interviewed on the training they received and associated working tools together with instructions relayed to head teachers. They were also interviewed on delivery of forms and booklets to head teachers, and the collection of the same and delivery of compiled data to the districts. Their level of involvement during validation, supervision, and net distribution exercises was assessed.

Head teachers were interviewed about the instructions they received before net distribution and assessed if they were aware of their responsibilities of stock verification, net distribution in classes during the process, completing booklets for compilation of reports at the end of the distribution exercise, and their level of involvement.



Class teachers were similarly assessed on the quality of orientation they had received from the head teachers, if they received nets, received forms, registered pupils who received nets and signed off booklets, effectively communicated with pupils, and distributed flyers as well as nets.

Pupils were assessed on the information they had received regarding the proper use of nets and whether they were currently using their nets.

- **The Costing Tool**

This tool assessed various costs associated with SNP-3 program at both school and district levels. At the district level, the tool assessed whether districts received the right number of nets, storage facilities prepared for nets and associated security, and cost and involvement of participants during coordination meetings together with level of effort required during both quantification and supervision exercises.

Similarly at school level the costing tool-assessed level of involvement and costs incurred by teachers during quantification, supervision exercise and issuance of nets, planning meetings held, storage facilities, and accompanying security.

## Data Analysis

Quantitative data analysis was done through the use of Statistical Package for Social Scientists (SPSS), which entailed computations of means, descriptive statistics, and cross tabulations.

## Qualitative Methods

### Sample Group

Focus Groups Discussions (FGDs), key informant interviews (KIIs), and observation were the main qualitative methods applied to assess the management and distribution of nets.

The FGDs were conducted with Technical Teams from the Regional Secretariat and District Councils involved in implementation of SNP-3. KIIs were done with stakeholders at national level who are decision makers and responsible for policy development and guidance. In addition stores at district level were observed through the use of a checklist.

Eligible respondents for FGDs and KIIs were members of established Technical Teams from Regional Secretariat in 3 regions and from 15 District Councils in 15 districts selected for the audit. These Technical Teams were purposely selected because of their involvement in the management of SNP-3. A total of 18 FGDs (3 regional Groups and 15 district groups) were conducted; and 8 KIIs were done with national stakeholders.

**Table 2. Summary of focus group discussions and key informant interviews**

Participants	Number of Focus Group Discussions	Key informant Interviews
Lindi technical teams	6 (5 district FGDs and 1 regional FGD)	0
Mtwara technical teams	6 (5 district FGDs and 1 regional FGD)	0
Ruvuma technical teams	6 (5 district FGDs and 1 regional FGD)	0
National level stakeholders	0	8
Total	18	8

## **Participants**

Each focus group was expected to be composed of 5 Technical Team members from the District council inclusive of the District Medical Officer (DMO), District Education Officer (DEO), Malaria Focal Person (MFP), School Health Program coordinator and Community Development Officer (CDO). Regional Technical team composed of a minimum of 4-5 members. The table below shows the designation and number of participants at regional level.

**Table 3. Number of focus group participants at regional level**

Lindi	Mtwara	Ruvuma
Acting Regional Administrative secretary (RAS)	Acting Regional Administrative Secretary	Acting Regional Administrative secretary
Regional Education Officer (REO)	Regional Medical Officer	Regional Medical Officer
Regional Medical Officer (RMO)	Malaria Control Program Officer	Regional Malaria Focal Person
Community Development Officer (CDO)	Regional School Coordinator	Regional Education Officer
	Regional Information Officer	Regional Health Officer
	Regional School Program Coordinator	

Expected number of participants at district level were 5 however not all were available during the time of the study. Participants in district focus groups are shown below:

**Table 4. Number of focus group participants per district (15 districts selected)**

Region	District	Number of participants
Lindi	Lindi Municipal Council	4
	Lindi District Council	4
	Kilwa	4
	Nachingwea	5
	Ruangwa	6
Mtwara	Masasi DC	3
	Masasi TC	3
	Mtwara DC	3
	Nanyumbu DC	2
	Newala DC	3
Ruvuma	Mbinga	5
	Songea MC	5
	Songea DC	5
	Namtumbo	3
	Tunduru	5

### Data Collection Tools

The data collection guides with questions focused on prescribed protocols were developed and used for FGDs and KIs. Each data collection guide reflected the main roles of the partner in SNP-3 implementation. For example, the FGD for PSI specifically focused on their roles in training and logistics management; for Regional and District Technical Teams, it focused on all areas of coordination and micro-planning, net distribution, issuing, reporting, and supervision. Stores Observation Checklists were used to observe net storage facilities.

## **Data Analysis**

A thematic approach was applied in the analysis of qualitative data. Themes were established based on prescribed procedures for the implementation of SNP-3. These themes were entered according to regions and districts into a matrix. All data from FGDs with district and regional teams and KIIs from national level were then entered into this matrix and under the sub-themes. A close observation and frequency of responses under each sub-theme led to conclusions that led to compilation of results and supported by quotations.

## **Data Collectors and Training**

A total of 22 experienced data collectors were selected from the rich pool of enumerators that Kazi Services maintains. The minimal level of education of data collectors was high school diploma. 12 data collectors were used in quantitative data collection and 10 in qualitative data collection. The qualitative team additionally ensured quality checks and provided a supervisory role to the quantitative team.

Interviewers for the study were taken through a four-day training during which they were acquainted with study objectives, study protocol, ethics and proper treatment for respondents, tools for the study, and proper use of electronic data collection tablets. During the data collection tools training session, each question was clarified and possible answers discussed. The team was divided into pairs of two to conduct mock interviews for each tool as part of training session.

Furthermore during training, interviewers were subjected to pre- and post-tests. Candidates who scored higher than others in both tests were made supervisors. Those who scored below 70% were disqualified since more interviewers than required were trained as buffer.

## **Study Limitations**

### **Representation of Technical Teams**

Every attempt was made to schedule interviews and focus groups to ensure participation of those involved with SNP-3. However, the absence of some members of the Technical Teams due to other duties during the interview process was inevitable, and as a result, respondents who were less knowledgeable about the SNP-3 process were unable to provide information on every question asked.

### **Subjectivity in Transcribing and Translating**

The quality of qualitative data partly depends on the ability of facilitators and moderators to understand and transcribe responses without changing the meaning. After producing the first draft of the qualitative data analysis matrix, there was a meeting with all moderators and team supervisors to clarify some responses where there was no adequate probing or where there were no responses at all.

### III. Audit Findings

This procedural audit assessed the management and distribution of LLINs during SNP-3 and specifically looked into the extent to which prescribed procedures for SNP-3 were applied in the management process; cost estimates, resources used and staff time at all levels. Results are presented according to the following phases in the SNP-3 process:

- Planning and Program Design
- Advocacy and Engagement
- Training and supervision
- Quantification and Validation
- Logistics
- Issuing
- Monitoring and Evaluation

#### Planning and Program Design

##### National Level

Meetings of the LLIN Task Force for the NATNET steering committee are organized monthly and chaired by the Program Manager of the NMCP. These were the main coordination forums for managing routine activities on the malaria control program and therefore included in SNP-3. A steering committee meets quarterly and there are ad hoc meetings organized as important issues for decision making arise. Eligible members of these committees are GoT representatives from Ministries of Health, Education and PMO-RALG, and support partners. Implementing partners are invited as co-opted members.

The SNP-3 started with a planning meeting at national level. Participants were national level stakeholders and representatives from Lindi, Ruvuma and Mtwara regions representing the Regional Administrative Secretary (RAS).

As a key partner of SNP-3, responsible for training and logistics management, PSI led efforts in organizing this meeting with support from CCP. The main components on the agenda were advocacy and dissemination of strategies for SNP-3, review of SNP-2 to develop SOPs for SNP-3, logistics planning for net distribution, and the sequence of training at district and ward level.

Planning continued at regional level in a one-day advocacy meeting chaired by the RAS in each region and with support from national team members from NMCP, PMO-RALG, VectorWorks, and PSI.

Generally, coordination within the national team e.g. PSI, NMCP, PMO-RALG and CPP etc. was perceived as smooth with all members participating in ITN Task Force and regional advocacy meetings. Coordination with the regions worked well, meetings were held with SNP as agenda items. Each member of the technical team knew their responsibilities and actively participated in program activities.

##### Challenges

Although collaboration amongst national stakeholders has worked well, a major challenge reported by all partners interviewed is the continuous absence of representation from the Ministry of Education and Vocational Training (MoEVT) in all coordination meetings. In part, this is explained as resulting from recent restructuring within the MoEVT where most of the operational units have been transitioned to PMO-RALG, which now has institutionalized a directorate that deals with both secondary and primary education issues.

## Recommendations

The PMO-RALG and NMCP recognize the importance of having the MoEVT represented in all coordination meetings and should be supported to ensure this happens in future SNP plans.

### Regional Level

The team interviewed in each region include the Regional Administrative secretary (RAS), Regional Medical Officer (RMO), Regional Education Officer (REO), Malaria Focal Person, and School Program Coordinator. They were all active in planning and coordination of SNP activities at regional level and provided adequate support to district teams. Meetings with SNP and Malaria Focal Person as agenda items were organized regularly through existing regional secretariat meetings an existing platform.

*“Coordination worked very well with school net distribution. Good team involvement with each member assigned specific tasks. It is different from SNP-2 because the regional team was more involved in the program from the beginning and this is creating a sense of ownership”*(Lindi, Regional SNP-3 Team)

Collaboration with implementing NGOs (PSI and CCP) was also appreciated by regional teams, especially on support with guidance on implementation. However, issues of poor collaboration were reported with late payment of allowances and the fact that initial implementation timelines were delayed. There were delays in starting some activities with difficulties in remote areas. This is supported by the statement below:

*“There were problems when it came to payment of the training allowances. Mobile money transfer was not effective; some WECs have not yet received their allowances until now and were not reimbursed for their expenditure on the validation exercise; we also received the reporting template very late and were expected to complete it within 4 days. This was impossible for distant areas.”*(Lindi, Regional SNP-3 Team)

Although regional teams provided advisory and supervisory support to district teams, more supportive supervision was recommended by regional teams to enhance district commitment in implementation of SNP activities. This is supported by the quote below:

*“There is a need for close supervision of districts especially with data management and the district level should be more involved in future SNP activities.”*(Masasi, Regional SNP-3 team).

## Recommendations

The shift towards more involvement of the Regional Administrative Secretariat and District Councils in planning and program design was the emphasis during SNP-3 and aimed at facilitating ownership of the program by local government to support scale-up. This approach is strongly supported by PMO-RALG and thus recommended to continue for future programs. In addition to having a Malaria Focal Person within the regional teams, an implementing partner representative may have to be part of the regional team to ensure quality training, the development of effective logistics plans for net distribution, and for supervision in general.

### District Level

Responses from FGDs with the district technical teams across the selected 15 districts revealed they organized planning meetings. They mentioned their roles to be advisory and providing guidance to ward

teams and school teachers, data collection and compilation of reports, transport and logistics management, re-bundling, net distribution, and budget preparation.

The table below shows the frequency of meetings organized at district level, participants and approximate costs as reported by district teams.

**Table 5. Frequency, duration and cost of district level meetings**

Region	District	Number of SNP-3 Meetings	Length of SNP-3 Meetings (Hours)	Total Number of Participants	Total Sitting Allowance (Tshs)	Total Travel Cost (Tshs)	Total Training Material Cost (Tshs)
Lindi	Lindi DC	5	4	24	0	0	0
Lindi	Lindi MC	2	2	20	0	0	0
Lindi	Kilwa	5	5	43	0	0	0
Lindi	Nachingwea	2	8	55	1,800,000	0	0
Lindi	Ruangwa	4	3	74	0	0	0
Mtwara	Masasi DC	1	1	3	0	120,000	50,000
Mtwara	Masasi TC	4	2	3	0	20,000	10,000
Mtwara	Mtwara DC	3	7	5	200,000	40,000	0
Mtwara	Nanyumbu	3	2	5	0	30,000	10,000
Mtwara	Newala	5	5	6	300,000	0	0
Ruvuma	Mbinga	4	6	7	0	0	0
Ruvuma	Namtumbo	3	3	19	1,400,000	0	0
Ruvuma	Songea DC	3	10	4	0	0	0
Ruvuma	Songea MC	4	8	56	0	0	0
Ruvuma	Tunduru	3	4	5	0	0	0

In 73% of districts, meetings had no per diem however 27% district meetings had per diems ranging from Tshs. 200,000/- to 1,800,000/-. Furthermore 93% districts donated rooms for meetings while only 7% hired meeting rooms at Tshs. 30,000/- per day. These costs were footed from district budgets. Participants also reported to have incurred transport costs to attend meetings as they hailed from different locations as well as various stationary costs including printing, photocopying etc. Most transport and stationary costs were covered by individuals themselves.

Responses from almost all district technical teams revealed good coordination and collaboration within team members but poor communication between ward education coordinators (WECs) and school head teachers. This was perceived as contributing to incorrect information to school head teachers and based on that, the district teams recommended orientation of school head teachers should be done by the district (instead of the WECs) to ensure correct information is delivered.

Responses on the extent of collaboration between district teams and WECs showed there was good collaboration between these teams in all districts. This is supported by a typical statement from Songea Municipal Council Team as follows:

*"...good collaboration helped us to send nets to schools on time and have accurate data..."*  
(Songea, Municipal SNP-3 team)

### **Costs Related to SNP-3 Implementation**

When respondents at district and school level were prompted to give feedback on costs that were incurred but not budgeted for during implementation of school net program, the following cost concerns were raised:

- District teams reported that they incurred several costs for which they were to be reimbursed including communication allowance (telephone costs), re-bundling stationary costs (such as marker pens, tapes, ropes and scissors), and insufficient fuel allowance during supervision together with costs related to storage inclusive of storekeeper allowance & repairing of stores door locks were not allocated.
- At school level, personal costs were incurred when delivering documents to WEC, incentives to teachers for time and effort spent implementing the project was a concern, communication allowances for phone calls to WECs and class teachers, direct and indirect costs related to security during storage of nets.

### **Training and Orientation**

Training and orientation was done at different levels from Regional to Ward level. The SOPs outlined training at district level for District Technical Teams, at ward level for WECs, and orientation for head teachers and classroom teachers. Pupils were also expected to be oriented on the use of LLIN in class by their teachers.

Results in this section are presented for training done at all these levels.

#### **Training of District Teams**

District Technical Teams from all districts were pulled together in a joint training at the region. They were in turn supposed to return and organize orientation sessions for WECs whose role was to orient head teachers in schools and head teachers to orient classroom teachers.

District training was organized for one day and perceived by all district and regional participants as being clear and useful. The duration of one day was perceived in all groups as enough and training materials were clear. FGD responses from almost all districts indicated that training from district teams to WECs was useful but the duration of one day was too short and with the many tasks they had to perform there wasn't enough time for detail during training. There were also concerns that the long communication chain of the cascade training model might distort the message to the end user.

*"...The training of WECs went well but some of them did not understand some issues due to time. Communication chain is too long having district coordinators to train WECs and WECs train teachers will distort messages in the end".* (Nanyumbu, district SNP-3 team)

#### **Training for Ward Education Coordinators (WECs)**

All 15 WECs that were included in the procedural audit received orientation about School Net Program and in turn reported to have oriented all head teachers in their respective wards, which ranged between 2 to 6 head teachers. WECs further reported that orientation instructions were clear to them. Orientation for WECs took one day and all WECs were informed prior in good time (2-14 days in advance) about the



orientation either through text messages, phone calls or in-person communication with the district education officer or district health officer. During training, all WECs reported to have signed off documentation for receipt of training, however documentation was unable to be verified by our research assistants in the wards because the sign off sheets were retained by PSI who are the responsible partners for training.

Upon completion of training, WECs were provided with several supporting materials, some of which were to be distributed to schools and some of which were to be used as working aids. Of the 15 WECs interviewed for the study, the percentage of materials they report receiving are indicated in the table below:

**Table 6: Support materials provided to WECs during training**

Supporting Material Checklist	(%) of WECs Interviewed who Reporting Receiving the Materials
Copy of the standard operating procedures/training guide	80
Registration forms	100
Booklets for net distribution	100
Flyers	80
Transport refund	47
Supervision checklist	53

WECs reported that flyers are particularly important as they provided reference and further explanations on malaria and suggest more flyers to be distributed in the next round as they were insufficient in numbers during SNP-3. They also suggest registration forms and booklets to be color-coded for ease of differentiation. During training, forms were color-coded and they could be easily distinguished, however during implementation, forms were in black and white (photocopied), hence difficult to differentiate.

### Orientation for Head Teachers

Orientation of head teachers was held between early May and middle of August 2015. The session took between 30 minutes to 2 hours. Although each WEC had a maximum of 6 schools within their wards, 80% of WECs took 1-2 days to instruct all head teachers within their wards while a minority (20%) took 3-8 days to orient all head teachers in their ward. The variation in orientation days is due to long distances between schools and availability of head teachers.

Although WECs self-reported to have oriented all teachers, 93% of the teachers who participated in this audit, acknowledged to have received the orientation and this information was validated by repeatedly asking teachers to confirm whether or not they had received the training and verifying content knowledge of the training.

Head teachers in some schools did not receive orientation. When probed WECs stated reasons being bad roads and long distances. In other instances, head teachers were not keenly motivated to pay full attention during the orientation because there were no allowances for them.

Seventy-five percent (75%) of head teachers who participated in this audit were informed prior that they were going to receive instructions with the majority (59%) being informed in good time 2-14 days ahead. The minority (16%) were informed on the same day of visitation or a just day earlier. Information on training was shared through WEC or teacher's committee. Forty-three percent (43%) of teachers reported

to have signed-off documentation for receipt of instructions however only 58% of documentation was reviewed; proof of documentation included WECs' signatures on school guest book.

Generally orientation from WECs to head teachers was reported to be poorly done because it was not comprehensive (not done in all schools), was abrupt (with no prior notification), and done in a rush (few minutes without enough details). Furthermore, some head teachers reported to have received training via phone calls versus physical visits from WECs.

The use of WECs to orient head teachers provides an inexpensive solution for VectorWorks. This solution however was not efficient during SNP-3 due to lack of proper controls of WECs. Should VectorWorks wish to continue with this structure for cost saving purposes, district teams should be trained to supervise the quality of WEC deliverables. Alternatively if the budget allows, teachers should be centrally trained at ward level by district training team followed by a pilot test to ensure unanimous understanding since head teachers are key elements in SNP-3.

### Orientation for Class Teachers

Ninety-four percent (94%) of the class teachers who were interviewed reported to have received instructions on SNP from head teachers between early June and end August 2015. Instructions from head teachers to class teachers were delivered in 95% of cases in collective sessions lasting a maximum of one hour. Head teachers did not only train class teachers but other teachers, as well as including health teacher (60%) and subject teacher (33%). Out of the 85 class teachers interviewed for the study, instruction content they report as delivered by the head teacher varied as indicated in the table below:

**Table 7: Orientation to class teachers**

Instruction Content Recalled by Class Teachers	Number (n=85)	%
Eligibility	78	97%
Use of quantification forms	52	65%
Messages on malaria, LLIN use and care	45	56%
Procedure of distributing nets	65	81%
Use of distribution reporting booklets	52	64%

After distribution of LLINs, 85% (n=72) of class teachers thought the instruction was sufficient. The other 15% thought it was insufficient because:

- There was no education given to pupils rather than just the mere distribution of nets.
- There was no formal seminar given to teachers: it was abrupt and explanations were scant.
- There was not ample time for preparations; some teachers reported to have been given instructions during net arrival date.

Only 91% (n=77) of class teachers interviewed reporting that they received forms to register eligible students. When prompted to explain what the forms contained, 98% of class teachers who reported to have received forms, were able to mention at least three components of the form. Class teachers took mostly one day (87%) to fill in form and submit to head teachers and 2-3days (13%) to complete registration of students and submit the same.

Orientation from head teachers to class teachers was not properly done partly due to trickledown effect of poor quality orientation received by head teachers from WEC. To avoid distortion of messages, head teachers should be closely supervised on their roles and responsibilities to class teachers.

Head teachers and classroom teachers are at the forefront of net distribution and thus their training and orientation should be carefully planned, implemented, and supervised. Their role is crucial in quality distribution data. If WECs are too busy to reach all schools to orient head teachers, they could be supported by the District Malaria Focal Person/District Training Team.

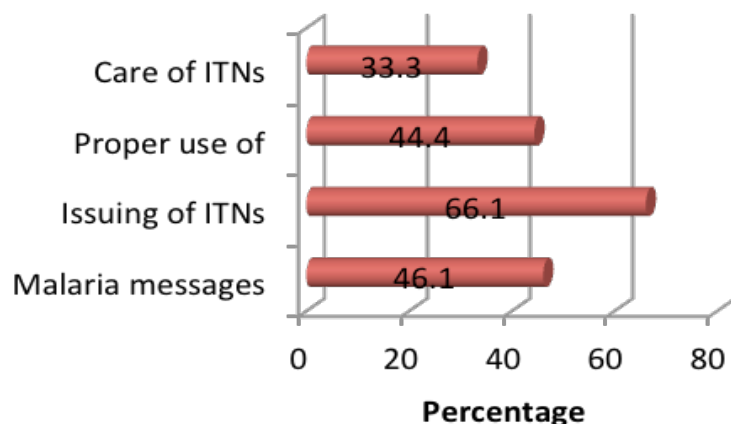
## **Discussions on SNP and Malaria with Pupils**

### **Eligible Pupils**

Seventy class teachers (82% of class teachers interviewed) discussed with pupils the school net program between early June and end August 2015. The majority received instructions between August 10 and 26, 2015. Seventy percent (70%) of information sessions were conducted in less than 15 minutes and 30% between 20-60mins.

Discussions were mostly held before distribution of LLINs (81.4%). Other discussions were held during distribution (17.4%) and after distribution (1.4%). Class teacher Information to students included care of LLINs, proper use of LLINs, issuing instructions, and messages on malaria prevention as presented in the chart below.

**Figure 1: Information provided to students by class teachers**



The majority of discussions with students included issuance of nets (66%). Other discussions included proper use of nets (44%), care of nets (33%), and malaria messages (46%). A few other discussions were around the importance of using nets and disadvantages of not using nets.

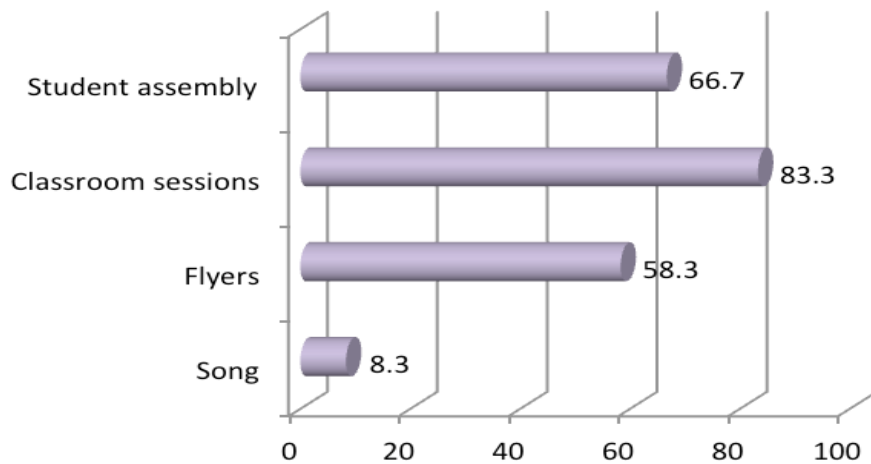
Some students reported they did not receive information due to absenteeism while others professed to not having been taught at all. Discussions held were done through student assemblies (71%), classroom sessions (41%), through issuance of flyers (33%), and songs (1%). Some students, especially those in lower classes, are very young and their level of understanding is still quite low. They may not have understood the lessons comprehensively and most are too shy to speak up and ask questions in case of confusion; this was reported by class teachers.

Furthermore, flyers were not friendly to students because students at different classes have different levels of comprehension. For lower classes, it was reported that pupils did not easily understand the language used. Flyers were also not made available on time. Class teachers prefer pupil orientation to be coupled by flyers however this was not always done and flyers either did not arrive at all or arrived at a later date after the orientation to students.

### **Discussions with Non-eligible Pupils**

Classes that did not receive nets were told that they will get nets in the following year when they advance to eligible classes as this is the procedure that has been set aside by higher authorities. Eighty percent (80%) of schools gave some education about malaria prevention to non-eligible classes.

**Figure 2: Malaria learning channels for classes not eligible for SNP-3 as reported by class teachers**



## Quantification and Validation

### Quantification

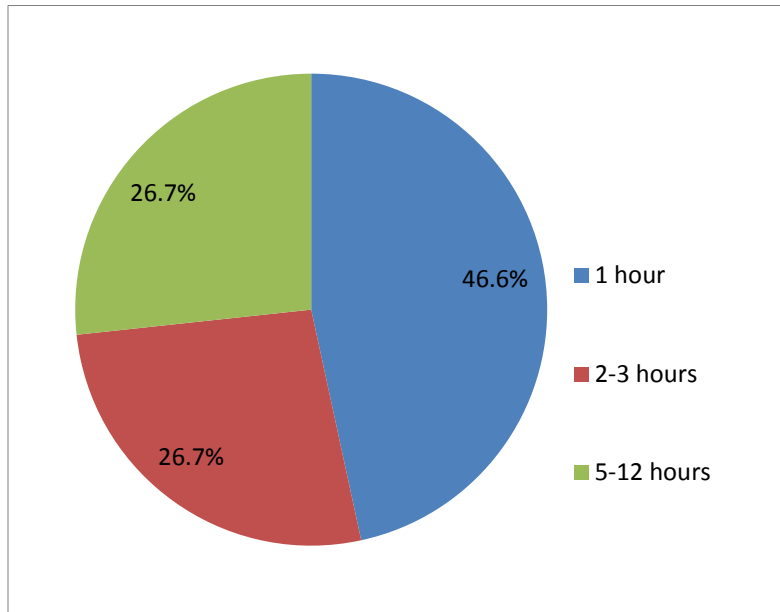
The shift towards more involvement of the Regional Secretariat and District Councils in planning and quantification was the emphasis during SNP-3 and aimed at facilitating ownership of the program by local government during scale up. This approach is strongly supported by PMO-RALG due to the fact that it facilitates program ownership by local government.

Training was followed by initial quantification, which was done by head teachers with guidance from WEC. To arrive at total nets needed in each school, head teachers calculated this figure by counting the number of pupils in each class from the class attendance register.

Our research assistant physically verified that this number tallied with individual classroom attendance in 25 of 30 schools visited. In 5 cases, numbers did not tally because of shifts in students between schools.

More than five teachers were involved in the student registration task in 86.7% (n=26) of schools visited, while in a few instances (13.3%) two to four teachers were involved in the task. Hours dedicated for registration varied between schools ranging from 0-12 hours as can be seen in the table below.

**Figure 3: Hours dedicated for student registration by both head teachers and class teachers in schools**



No single teacher was paid for this activity. Responses from the FGDs similarly indicated that initial quantification data was extracted from the school enrollment and class attendance registers.

Wrong figures reported in the process were as a result of lack of flow of correct information from the district to the Ward and consequentially to the school level. The quote below is feedback from the respondents.

*“Teachers and WECs participated in the quantification process and classes to be skipped were not known to us so we did like last year so data was wrong. Correct information should be given out during training.”* (Response from Lindi DC)

The major challenge faced during the SNP-3 quantification exercise was change of criteria for eligible classes creating some confusion, as well as some cheating/overstating of number of enrolled students.

Some recommendations to improve upon quantification are listed here. There should be quality controls in place to check the validity of the reported data. One way of doing so is by recording phone numbers of head teachers and class teachers and telephonically asking them to confirm the reported data after a period of time. It is recommended that at least 20% of all schools should be validated. In case of cheating VectorWorks should devise measures of naming the school in an important committee to act as a learning point for others.

### **Validation**

Respondents from all districts understood the process of validation as an important step to obtain correct figures of eligible pupils to receive nets. This was a unique process for SNP-3 that contributed to improving the quality of data. The quote below is a supportive statement from respondents.

*"[Validation] was good. It helped in discovering mistakes from the initial quantification....we had a recheck of data and comparing to school registration data..."* (Response from Mbinga District Technical Team)

Despite the challenge that validation was not in the budget for district personnel direct costs, there was still active participation of district and ward teams. District Technical Teams, participating NGOs, WECs and Teachers were all mentioned as participating in the process. The majority of responses revealed that district teams were very involved and led in the validation process.

*"District team role was to visit schools & compare data received from WECs to data in registers."* (Tunduru District Technical Team)

Regional leaders were committed and provided support to district teams. They appreciated the validation exercise and perceived it as a process that had improved the quality of data and stated that it could be applied in other similar programs within the region as quoted below.

*"... Was effective and good and should always be done. It reduced cheating and increased accountability even beyond the project."* (Lindi, regional SNP-3 technical team)

*"The process is good and will be helpful for other programs to ensure reliable data."* (Ruvuma, Regional SNP-3 technical team)

The validation exercise took between 1-10 days at the district level with 67% of districts accomplishing in less than 3 days while 33% of districts took more than 3 days. The exercise involved as little as 4 people per district to as many as 14 people in other districts.

Validation uncovered data gaps in nearly all of over 300 schools that were visited for validation. As a result, the regional authorities decided to conduct a re-quantification of all schools and replace the original quantification data with revised data collected by all WECs at their own expense. With these efforts VectorWorks obtained final quantification numbers for use in SNP-3. Procedural audit respondents reported investing the following resources into requantification.

**Table 8: Regional level of effort employed during requantification exercise**

Region	Number of people involved	Number of schools that required requantification as reported by districts	Transport Costs in TSHS*
Lindi	82	440	377,140
Mtwara	218	338	150,000
Ruvuma	108	236	280,000
Total	408	1014	807,140

\*Transport costs were incurred by WECs themselves.

## Recommendation

Validation was an important process that improves the quality of the data and the program, however the process was costly as reported through the FGDs. In this context, it could also be avoided in the future through adequate planning and supervised implementation of the initial quantification process.

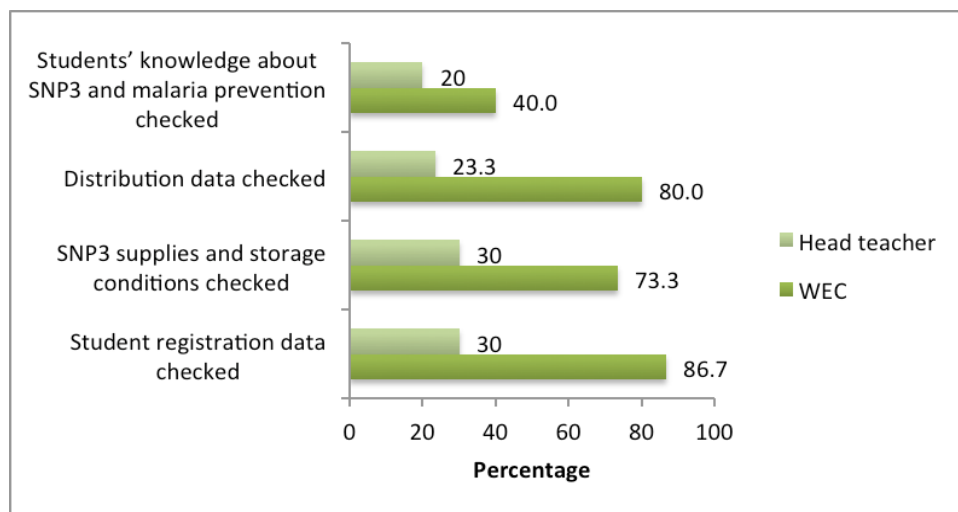
## Supervision

The net distribution process was supervised by both regional and district technical teams and aimed at providing support to WECs and head teachers in the distribution process while ensuring that distribution was done according to prescribed procedures.

### At School Level

At school level, supervision was led by WECs and assisted by head teachers. Within the 15 wards included in this study 48 out of 60 schools (80%) were supervised by WEC. Supervision was done at different stages of the program as follows: 17 schools reported receiving supervision visits during registration from WECs and head teachers; 19 schools received supervision to validate registration of data while 7 schools received supervision visits during issuing of nets by WEC. During issuing of nets the tasks in the chart below were checked during supervision.

**Figure 4: Distribution activities head teachers and WECs reported being checked during supervision**



In addition to the above, during supervision, supervisors stressed to class teachers that nets should be distributed to eligible students only and also parents should be made aware that their children are receiving nets whenever possible. Additionally supervisors should also check the condition of nets.

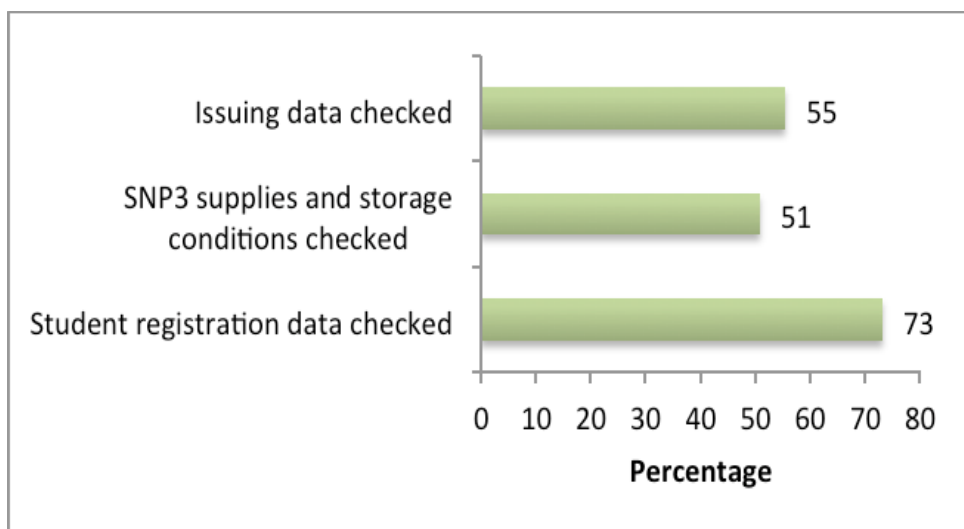
Seventy-three percent (73%) of WECs interviewed reporting they had a tool to conduct supervision. Out of the 26% who did not have a tool, 50% felt the tool was important while the other half thought otherwise.

### At Classroom Level

Out of the 85 classes visited during the study, 82.4% of classrooms got supervision during the distribution process. Supervisors being 71% of head teachers, 17% WECs, and 12% were supervised by higher authorities including district and regional teams others included class prefects. Not all class teachers reported supervision from higher authorities including district, regional and national representatives during net issuance because higher authorities were unable to reach all schools. Activities done during this supervision included checking of net issue data, supplies and storage facilities, and verification of student data.

**Figure 5: Activities checked during supervision**





Other activities done during supervision included validating whether or not students got nets. This was done by talking to eligible students after distribution and providing education on proper use of nets.

**Table 9: Level of effort during supervision (issuing nets)**

Region	No of people involved	No of vehicles involved	No of days	Total Per diem (TSH)	Fuel (TSH)
Lindi	83	14	14	5,640,000	12,587,320
Mtwara	150	10	17	8,400,000	1,882,200
Ruvuma	176	24	18	10,010,000	5,051,150
<b>TOTAL</b>	<b>409</b>	<b>48</b>	<b>49</b>	<b>24,050,000</b>	<b>19,520,670</b>

Source: District teams

Challenges related to supervision as reported through the FGDs by Technical Teams were the following:

- More eligible but unregistered pupils showed up during net distribution but could not be given nets.
- Some head teachers were observed not following instructions because they were not well oriented by WECs though some claimed that errors were due to the interval between training and net distribution as a result, some nets were issued to non-eligible classes.
- In some schools nets arrived before the distribution booklets.

### Recommendation

Period of time between training, quantification and distribution of nets should be shortened to ensure that teachers have a fresh memory of the procedures to follow during net issuance.

## Logistics

### Transportation and Safety of Nets

Nets procured at national level were stored in a safe warehouses at the national level, and transported directly to the districts by transporters who were selected by PSI through a tender process. Safety and security were ensured through transportation with accompanying documents that included delivery notes

and receipt forms to the districts. No major security issues with transportation of nets and missing nets were reported during the transportation process. However, payment process for transporters was not very clear and caused some delays in the delivery of nets to some districts. For instance in Mbinga district Ruvuma region, selected transporters did not have the required capacity and therefore resorted to outsourcing the service to a third party. The third party transporting nets to schools and demanded to be paid by the district council before off-loading the nets. This caused some delays of arrival of nets in schools.

### Recommendation

Service contracts with transporters should consider transporters capacity including timely delivery of services, as well as ensuring expectations are clear regarding payment timelines at the time of contracting.

### Information Dissemination Prior to Net Distribution

Only 56.7% (17 out of 30) head teachers interviewed were informed about the arrival of nets prior to distribution. Information was through SMS (35.3%), phone calls (35.3%), and face-to-face (23.5%), and verified through physical observation of text messages, call history, and guest books. The information was disseminated 1 day prior (13%), 2-3 days prior (27%), and 4-7days prior (17%) to delivery of nets to the schools. The information disseminated was on the number of nets to be sent to schools, the date of delivery, details of the sender, and eligible classes.

**Table 10: Information content disseminated to head teachers prior to net distribution**

Content	n	%
Number of nets	14	82.4
Date of delivery	14	82.4
Details of sender	9	52.9
Class eligibility	15	88.2

*The exercise involved as little as 4 people per district to as many as 14 people in other districts*

In some cases information prompted head teachers to prepare storage room and facilitate security arrangements. Information delivered through different channels or even through the same channel was not consistent.

### Recommendation

Information related to the program should be relayed early enough and should be comprehensive and consistent. Some teachers were displeased with getting information of arrival of nets the same day and told to distribute the same day.

VectorWorks needs to incorporate this process as part of SOP. VectorWorks needs to design a checklist of information to be delivered to school teachers and have a recommended primary mode of communication to relay the information (e.g. SMS) to be complemented by a secondary mode of communication (e.g. Phone calls or physical visits).

## Net Storage

### Transportation and Safety of Bed Nets

In 25 out of 30 (83%) schools visited for this audit, nets were stored prior to issuance while in 5 schools nets were distributed on the same day they were delivered. Nets were stored between 1-6 days before being completely distributed. Of 25 schools that stored nets, 83% of these stored for 1 day; 13% of the schools stored between 2 and 3 days and only 3% stored for 6 days.

Storage was provided for free in all schools. Security guards were rarely hired. Only 20% of schools hired between 1 and 2 security guards. 17% security guards were hired between 1-2 days and 3% were hired for 6 days. At school level, 21 schools prepared a room for storage of nets, which had the following characteristics:

**Table 11: School level storage facility conditions of the 21 schools (of 30) that prepared a room for storage of nets**

Desired Qualities of Net Storage Facilities	N = 21
There was sufficient space for the number of nets the school received	19
Nets are protected from direct sunlight	20
Nets are protected from water	18
Storage area is visually free from harmful insects and rodents	20
Storage area is secured with a lock and key	14
Storage area is accessible during normal working hours	21
Storage area is limited to authorized personnel	0

Only 7 out of 21 schools that prepared storage spaces had all desirable storage characteristics: 5 schools in Mtwara and 2 in Lindi region. In the storage rooms number of nets available was also crosschecked against stock card and in 95% it tallied the record on that particular day of visit. In instances where numbers did not tally it was due to lack of updating of data. In the event where rooms were not prepared, nets were stored mostly in the house or office of the head teacher.

### Net storage at district level

At district level, all districts prepared storage rooms, of which 60% were hired spaces while 40% were donated storage rooms. The storage time ranged between 18 -31 days and the total cost for hiring a room within that period ranged from Tshs 40,000-150,000. Types of rooms used for storage included hospital/school rooms (60%), warehouses (33%), and stores (7%).

Storage facilities at the district level were inadequate. In some instances storage facilities were shared between districts, they were also not free from pests and direct sunshine could easily penetrate.

### Recommendation

Information on net distribution should be timely to enable districts and schools to plan for adequate storage areas accordingly. The storage budget should also be disbursed in a timely manner.

## Issuing

### District Level

In the 15 districts included in the study, nets arrived between middle July and end of August 2015. Of all districts, 50% received surplus nets, 26% received just enough nets, and 13% had a deficit as shown in the table below. District representatives were asked to mention the number of eligible students they reported

and number of nets received. The difference between the two is the number of surplus or deficit net amounts.

**Table 12: Surplus or deficit of nets at district level, based on 15 districts audited**

Region	District	Surplus/Deficit amount
Lindi	Lindi DC	1,440
Lindi	Lindi MC	143
Lindi	Kilwa	-23
Lindi	Nachingwea	722
Lindi	Ruangwa	-2,564
Mtwara	Masasi DC	0
Mtwara	Masasi TC	0
Mtwara	Mtwara DC	140
Mtwara	Nanyumbu	1,277
Mtwara	Newala	1,165
Ruvuma	Mbinga	0
Ruvuma	Namtumbo	575
Ruvuma	Songea DC	0
Ruvuma	Songea MC	592
Ruvuma	Tunduru	32

Out of 9 districts that received additional nets, 5 districts transferred nets to other districts while other districts returned nets to the regions. Nets were delivered in surplus because in some districts students had moved, while in others nets were delivered purposely to be distributed to neighboring districts. In one district however there was a miscalculation; nets were received for all classes (1-7) instead of only eligible classes. In all districts storage time was between 18 and 31 days.

### **School Level**

By the time of distribution, all head teachers were aware of classes that were eligible to get nets in all regions and all had received nets. Of the schools visited, 20 got just enough nets, 7 got a surplus and 3 got a deficit. Schools that got surplus nets stored them and relayed information to WECs regarding surplus nets of which some have been collected while some are awaiting further instructions. In one school however surplus nets were distributed among class teachers violating SOP. Up to 97% of head teachers or deputy head teachers supervised issuing of nets to students in at least one classroom.

During net distribution in 26 schools more than 5 teachers were involved and in 4 schools, 3-4 teachers were involved. Majority of teachers (90%) distributed nets between 1-2 days and minority (10%) took 3-6 days to accomplish this task due to absenteeism of students.

### **Class Level**

All class teachers who were interviewed received LLINs from head teachers but only 44.7% were informed in advance. Out of 85 classes visited, 6 classes got surplus nets while 3 classes had a deficit either due to an error during quantification or influx of students after quantification exercises. Sixty-seven percent (67%) of class teachers signed off documentation for handover of nets with head teachers. Further discussion with

students revealed 100% received LLIN from class teachers. Out of those students who received nets 154 (93%) signed off/put a thumbprint in the booklet to acknowledge receipt.

### Challenges Faced During Issuing at School Level

- Absenteeism of some students made it difficult to distribute within the proposed one day. Teachers resorted to calling in parents to receive nets on behalf of their children or gave the nets to neighboring students to deliver the same.
- Students together with parents of students of non-eligible classes and those who joined after quantification exercise complained a lot about not getting nets. They felt segregated especially ones who repeated classes.
- It was difficult to convince teachers to conduct the exercise without allowance; also it was oddly perceived for teachers not to receive nets since they live in the same areas as the students and are equally affected by malaria.

### Recommendations

- Community Based Organizations should be mobilized to sensitize the community on net distribution before, during, and after the exercise.
- As an incentive, teachers should be given nets.
- Teachers propose nets to arrive during daytime for proper management and time allocated for distribution should be increased to 2 days to cater for absentees.

## Monitoring and Evaluation

### Prior to Distribution Phase: Data Collection for Quantification

According to the SOPs, several forms were designed to collect data on the number of eligible pupils in each school. At ward level all selected schools filled Form A. The WECs compiled data from all schools in the ward into Form B and sent to the District. The District Technical Team led by the Malaria Focal Person compiled all ward data into Form C and sent to the region. The region compiled district data into Form D and sent to NMCP and VectorWorks. Some school Teachers reported having received unclear instructions on the right procedure to follow after filling the forms.

### Distribution Phase: Distribution Booklets and Delivery Notes of LLINs

- ***Distribution Booklets***  
Similarly to data collection forms, net issuing forms were designed to report the number of nets issued in each school. The Class Form A indicated the number of nets issued in that class. Form B tallied the total number of nets issued in each school. Form C tallied the totals from all schools within the ward and sent to district to compile in Form D and sent to the region. The region also compiled data from all districts into Form E and sent to PMO-RALG. The responsible persons for submitting district and regional data were Malaria Focal Persons.

93% of schools received sufficient copies of class distribution booklets; those schools that didn't receive booklets were either missing booklets due to delays or because booklets were out of stock, however head teachers sought for missing booklets from WEC. In 83% of schools, research

assistants were able to verify presence of booklets, the rest were unable to be verified as copies were kept at WEC office.

Compilation of data at school level took 1-2 days and submission of compiled data to WEC took 1-5 days after completion. 80% of WECs in turn compiled distribution data from 19<sup>th</sup> to 28<sup>th</sup> August 2015. The exercise took 1-5 days to complete and submission followed in a span of 1-7 days. The booklets observed at school level were signed either by a signature or fingerprint. It was noticeable that some students signed on behalf of others hence a replica in signatures. This happened when a student was absent and a neighboring student took the net on his/her behalf.

- ***Delivery Notes of LLINs***

Delivery notes of net receipts were verified in 93% of the 30 schools. Receipts were stored in special files with other SNP documents in the head teacher’s office. There was at least one delivery note in each school. In other instances they were not filed but rather kept in drawers.

**Table 13: Delivery notes content from various schools**

Content	N	%
Sender	20	71.4
School name	27	96.4
Item type (nets, booklets)	23	82.1
Quantity of LLINs	25	89.3
Quantity of bales	12	42.9
Condition	10	37.0
Signature of sender	19	67.9
Date of sender	23	82.1
Name of driver or conveyor	26	86.7
Signature of driver or conveyor	24	80.0
Name of receiver	26	86.7
Signature of receiver	27	96.4
Date of receipt	27	96.4

Research assistants also verified for sign off of distributed nets documentation between head teacher and class teachers; these were available in 90% of schools, although not in all classes in any particular school, meaning that in a school, some class teachers signed off with head teacher for net receipts while other class teachers within the same school did not sign off.

**Recommendation**

There was inconsistency in completion of delivery notes; emphasis should be made with regards to completion of delivery note sections. This key information should be conveyed when teachers are being oriented.

**IV. Conclusion**

Procedures outlined in the SOP were followed to a large extent despite the numerous challenges that were faced during implementation of some of the procedures. This section summarizes key issues encountered and proposed recommendations.

- i. A planning framework was developed and shared with all districts. This included guidance to logistics planning for transportation, distribution of nets, and estimated budgets. Despite this, micro-plans were prepared and submitted late in the process (by July). This led to delays in transportation from national to district level, re-bundling exercise and distribution of nets in schools.

#### **Recommendation**

It is recommended that plans should be prepared and approved on time to enable timely transportation and distribution of nets.

- ii. To a large extent, coordination at all levels was adequate; however, the absence of active participation of the MoEVT was lacking at national level. Since it is a school program, we suggest active participation from the MoEVT through the Directorate of Education under the PMO-RALG. This Directorate is currently led by the Deputy Permanent Secretary PMO-RALG dealing with education.
- iii. Training and orientation was adequately conducted to regional, district, and ward stakeholders, however the duration was reported to be short at WEC level. This was probably due to the fact that training activities were centrally conducted for the above-mentioned stakeholders. Orientation by WECs to head teachers and head teachers to Class teachers and consequently class teachers to students was not adequate. It was reported to have been done in a rush and not structured. For example, the use of text messages and telephone calls to give instructions. In addition, it was also observed that due to the long chain of communication from national through regional to district, ward and eventually head teachers information might have been distorted.

#### **Recommendation**

It is recommended that orientation of head teachers should be done centrally at ward level and supervised closely by district technical teams.

- iv. The validation and requantification exercise was unique and improved the quality of data for SNP-3. However, it was a costly exercise, which would have been avoided if proper training and M&E would have been carefully done during the initial quantification phase. District technical team should be trained and tasked with the role of data surveillance and M&E.
- v. There were no major issues with transportation and safety. However, there was a delay in payment for one of the transporters who delayed in off-loading nets in Mbinga district of Ruvuma region, demanding payment from local authorities. This transporter was a subcontractor to one of the two transporters who won the bid.

#### **Recommendation**

It is recommended that the capacity of transporters should be assessed before awarding contracts and payment terms clearly defined.

- vi. Distribution of nets to pupils was successfully completed. However, there were issues of absenteeism and transfers of pupils from one school to another. This led to over and under estimation.

#### **Recommendation**

It is recommended that the interval between quantification and distribution of nets should be shortened to minimize under or excess nets. It is recognized, however, that reducing this interval also

reduces the interval for district teams to produce and implement micro-plans, as final quantification figures are required to finalize micro-plans. In addition, information on the net distribution schedules should be disseminated to schools on time so that head teachers, class teachers, and students can be adequately prepared.

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