



## U.S. President's Malaria Initiative



### Technical Brief

# The Proof Is In Planning, Monitoring and Supervision

## *PMI VectorLink Ensures Efficiency, Quality & Sustainability in Vector Control Operations*

Vector Control Operations require rigorous planning, supervision, and monitoring. The PMI VectorLink Project has developed standardized planning tools, job aids, and supervisory checklists to ensure efficiency, quality, and consistency. With standardized tools, the project supports host-country governments at all levels – national, district, and local – to execute and sustain indoor residual spray (IRS) and other vector control activities.

### Planning Tools

Determining quantities of resources and where to distribute them requires significant planning efforts. The PMI VectorLink Project uses a **Quantification Tool**, developed under the PMI Africa Indoor Residual Spraying Project (AIRS) to calculate the total



amounts of the various resources, such as seasonal worker labor, spray equipment, insecticide quantities, and personal protective equipment (PPE) (i.e. overalls, gloves, masks, helmets) required for a successful IRS campaign. This tool is used at government and stakeholder meetings to support planning efforts at both the national and sub-national levels, and contributes to annual work planning efforts for the country programs.

Once the total amounts are decided, micro-planning meetings are held at the district level with all the relevant stakeholders, including technical officials, political leaders, and other key influencers to determine where and how resources will be allocated. A **Micro-Planning Tool**, developed under PMI

VectorLink, guides the process. This tool is more detailed than the Quantification Tool as it calculates the quantities of each resource needed at each IRS operations site by district. The Micro-Planning Tool also determines the number of seasonal workers needed to carry out the campaign – spray operators, team leaders, supervisors, storekeepers, mobilizers, washers, security guards, pump technicians, etc.

To guide planning activities throughout the year, PMI VectorLink uses a standardized **Operational Plan** across all country programs. This tool translates the strategies and approaches written in an annual country work plan into the year-round field activities that lead to successful vector control interventions. This standardized tool ensures that activities take place in the same way, at the right time, and in the right order,

As the date for the launch of an IRS campaign approaches, logistics preparations intensify. To support in-country teams, PMI VectorLink developed the **Electronic Race to the Starting Line (eRSL)** Tool, which automates the critical milestones that must be achieved in the final nine weeks before the start of an IRS campaign to ensure it begins on time. The eRSL reflects the project's standardized checklist of minimum criteria that must be met for a successful IRS campaign, and the tool sends weekly reminders to ensure pre-spray planning activities are completed successfully, on-time, and along the right critical path.

PMI VectorLink developed **Spray Calendars** to reduce the length of IRS campaigns and promote operational and cost efficiency while maximizing IRS coverage. Spray calendars provide spray teams with daily itineraries throughout the spray period to ensure all households targeted for a vector control intervention are visited comprehensively and efficiently. Daily transportation is one of the biggest contributors to the cost of IRS operations in all countries. Spray Calendars enable field teams to develop accurate and efficient transportation plans, which for example, ensure vehicles are rented and fueled only on days when they are absolutely required.



## Community Mobilization

The PMI VectorLink Project balances the need to ensure target communities—most often hundreds of thousands of households—are informed, prepared, and ready to receive IRS with the project's cross-cutting objectives of cost effectiveness and sustainability.



This duality drives innovation as PMI VectorLink employs novel mobilization strategies across countries including radio talk shows, community self-mobilization, and the targeted use of social media. These approaches complement or even replace traditional mobilization strategies such as door-to-door visits and engaging traditional leaders, but consistent across approaches the project works with local partners to inform community members about malaria, the benefits of vector control, and how to



prepare for and participate in IRS campaigns. This allows PMI VectorLink to achieve high coverage rates.

## Capacity Building & Training

The PMI VectorLink Project has made major strides in capacity building for planning, implementation, and monitoring of IRS to prevent malaria. Leaders and managers at all levels of planning and implementation (central, regional, district and community) have acquired skills and knowledge to effectively and independently conduct high quality IRS campaigns. For example, while PMI VectorLink leads IRS implementation in Malawi in one district, the project provides routine technical assistance to local health ministries and NGOs in spray planning, supervision, monitoring and evaluation to support government-funded IRS in three districts. In addition to the leaders, tens of thousands of community-level workers have been equipped to deliver IRS at the household level.

The project has created and rolled out various tools to sustain skills development and retention. Key among these was the development of an advanced new standard **Training Curriculum for IRS**. The curriculum contains modules for all the different activities and positions involved with the planning and implementation of IRS. For the first time, training modules were developed for leadership and supervisory positions such as District IRS Managers. All the modules contain accompanying training materials, such as facilitator guides, participant handouts, and tools to measure training progress. The curriculum takes into account the latest global best practices and developments. It incorporates modern teaching techniques, such as adult learning methods.

PMI VectorLink has led the way to build and leverage capacity across different IRS programs. One vehicle through which this is happening are the **Capacity Building Workshops** (“boot camps”) that the project has conducted in several countries, with participants representing relevant stakeholder groups and partners in each country. The ultimate objective of capacity building is to ensure the long-term

sustainability of vector control activities and their corresponding reductions in malaria cases. PMI VectorLink assists National Malaria Control Programs, local ministries of health, and other partners to prepare and execute vector control sustainability plans to ensure the malaria gains made through IRS endure after interventions end or rotate to other target areas, protecting communities in the long-term.

## Supervision

VL trains and supports district officials and other relevant stakeholders in the supervision of spray activities in the communities. **Supervision Checklists** were developed for supervisors of spray campaigns. The supervisors include project staff and Government/District officials. The user-friendly checklists cover all the key aspects of spray operations, such as compliance with safety procedures, spray personnel conduct in the community, and insecticide application techniques. The checklists, which come in both paper and digital (e-) formats for use with mobile phones, include:

1. Spray Operator Morning Mobilization & Transportation Vehicle Inspection
2. Storekeeper Performance
3. Homeowner Preparation & Spray Operator Performance
4. End-of-Day Cleanup



PMI VectorLink recognized the importance of supervising spray activities by direct observation. The project mandated the practice of supervising directly observing spray actors at work, and developed a tool to support this. The **Directly Observed Supervision (DOS)** checklist is administered by Spray Team Leaders and other supervisors as they work with teams in the community.

## Monitoring Performance

IRS requires strict supervision and monitoring to ensure spray activities are carried out safely, efficiently, and successfully. The PMI VectorLink Project introduced a performance culture in the implementation of IRS operations among spray personnel to guarantee the objectives of spray campaigns are achieved. The introduction of the performance culture has resulted in operational efficiencies, such as the overall reduction of the length of spray campaigns (which in turn has resulted in lower overall costs of items such as vehicle and warehouse rentals).

The **Spray Performance Tracking Sheet** was developed to enable supervisors and spray teams at an operation site to measure their performance against set targets on a day-to-day basis. The tool allows all cadres of spray campaign supervisors, including Team Leaders and even Spray Operators themselves, to have access to performance data in real time. This enables them to promptly address any issues that may arise in the course of a spray day, and to take relevant remedial actions to ensure the success of a spray campaign.

The Spray Performance Tracking Sheet measures performance against various key performance indicators including:

1. The number of structures sprayed per spray operator per day,
2. The number of structures sprayed per unit (sachet or bottle) of insecticide, and
3. Spray progress and coverage rates.

PMI VectorLink developed and rolled out a mobile, SMS-based version of the performance tracker. The **Performance Monitoring Tool (PMT)** enables daily monitoring of spray performance and the insecticide stock by all partners and stakeholders involved in supervision of spray activities, including district and MOH officials. As a mobile summary of the Spray Performance Tracking Sheet across IRS operations sites, the PMT enables prompt decision making during spray campaigns using daily IRS data.

## Logistics & Warehouse

The project's logistics, supply chain, and warehousing procedures conform to the guidelines and requirements of the PMI Best Management Practices. On average, a country will have around 30-50 stores spread across the target spray area, but some countries use hundreds of stores as part of a community-based approach. Seasonal storekeepers are trained to promptly record all stock movements, and to ensure that stock balances on the ledger and stock cards for all items are accurate at all times.

PMI VectorLink developed and standardized a digital supply chain for insecticide stock management. All insecticide is serialized upon receipt from the manufacturer, and storekeepers are trained to scan digital barcodes to record the stock movement along the supply chain. This practice allows storekeepers to accurately account for individual insecticide units at all times, from the project's central warehouse to the point of use at the household level, and back. Team Leaders also account for insecticide stock movement when issuing and collecting daily insecticide from spray operators using the **Team Leader Serialized Insecticide Tracker**, a tool that takes stock management practices to the 'last mile.'

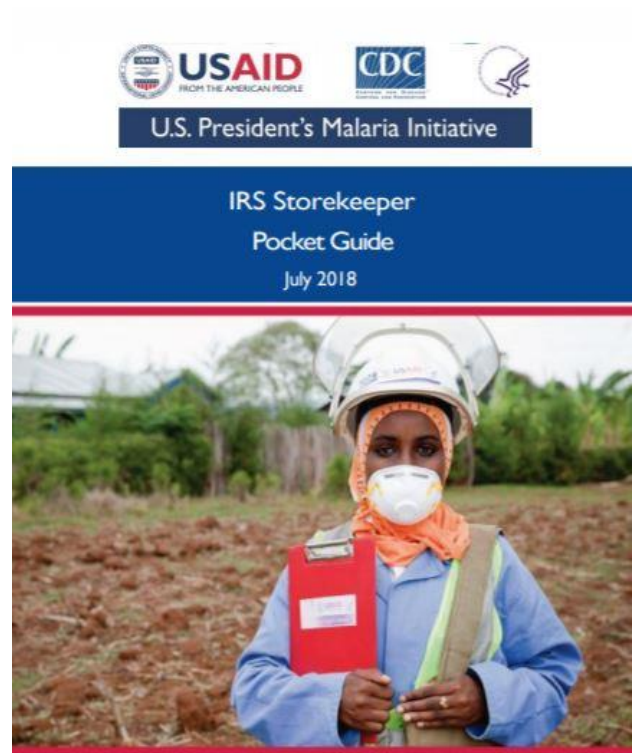


PMI VectorLink also uses an **e-Inventory** tool to enable storekeepers and warehouse managers to track day-to-day stock movements to avoid costly commodity stock-outs during spray campaigns.

## Job Aids

With 400 – 900 spray operators in the field during a campaign, standard procedures are essential to ensuring success. The project uses job aides for the different positions held by temporary employees of spray campaigns to achieve a higher level of standardization in operational performance.

The **Spray Operator Pocket Guide**, **Team Leader Guide**, and the **IRS Storekeeper Pocket Guide** can be referenced quickly in the field should any operational or safety questions and concerns arise, and help personnel perform their jobs successfully.



## Alternative Models for IRS



The project uses alternative models of IRS implementation to ensure cost-effectiveness and sustainability. With the new models, alternative transport means have been explored, such as having spray teams travel through the community on foot and

by bicycle – or both depending on the day’s needs. In many countries, the project has leveraged Community Health Volunteer networks to deliver IRS. The project also makes itself available as a laboratory for manufacturers to field test new products and spray equipment, often assisting with study design and evaluation to enhance objectivity, rigor, and relevance. PMI VectorLink focuses on continuous improvement in its IRS approach, constantly collaborating with partners to reduce costs and imbed skills within communities to drive localization and sustainability.

## **ITN Activities**

PMI VectorLink conducts insecticide-treated net (ITN) durability monitoring; assessments of and technical assistance for continuous and/or mass ITN distribution; and supports social behavior change communication to promote the correct use and handling of ITNs. We work closely with donors, partners and National Malaria Control Programs (NMCP) and the growing cadre of local vector control and ITN distribution experts to facilitate joint planning, implementation, supervision, monitoring and evaluation of activities, supporting NMCP and in-country malaria partner capacity building, national ownership, and sustainability.