



PRESIDENT'S MALARIA INITIATIVE

## INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL



# Rwanda FY08 Work Plan

Indoor Residual Spraying (IRS) Indefinite Quantity Contract (IQC)  
Task Order 1

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# I. Introduction, Summary and Background of Rwanda Malaria Operational Plan (MOP)

The U.S. Agency for International Development (USAID) has identified Rwanda as one of the countries to receive funding under the President's Malaria Initiative (PMI). The National Malaria Control Program (PNILP) would like to make greater use of indoor residual spraying (IRS) as an intervention for malaria prevention and control. As indicated in the FY 2008 Malaria Operational Plan (MOP) for Rwanda, USAID and the PNILP agreed to continue with IRS operations in the 3 Kigali districts (Nyarugenge, Gasabo, and Kicukiro) and expand coverage to 2 additional districts (Kirehe and Nyanza) for July 2008 spray operations. Following the first round of IRS operations from August-October 2007 and recent discussions, PNILP and PMI have agreed to focus FY 2008 spray operations in targeted sectors in the 3 Kigali districts, Kirehe, and Nyanza. The PNILP has agreed to provide the PMI and RTI International (RTI) team with additional information on specific areas for focal spray operations.

PMI funds will be used to procure lambda-cyhalothrin and provide technical and management assistance to the Rwanda Ministry of Health (MoH) for its August 2008 IRS campaign. The insecticide is to be used in the targeted areas prior to the season of highest transmission. USAID has identified RTI to serve as its implementing partner responsible for management and provision of technical assistance to support the Rwanda IRS Program.

This work plan covers the period from November 1, 2007 to March 31, 2009. This work plan includes operational planning and budget for the February spray round which was cancelled and 2 spray rounds scheduled from August-October 2008 and January-March 2009. The August 2008 spray round will cover approximately 202,000 households in selected sectors identified by the PNILP in the 5 districts.

The January-March 2009 spray round will cover approximately 202,000 households in the selected sectors within the 5 districts, which were agreed upon by PNILP and PMI.

## Objective & Expected Results

As indicated in the Malaria Operational Plan FY 2008 for Rwanda, RTI with direction from USAID will provide:

- Strategic, technical, management, and operations support to implement USAID's goal of reducing malaria-associated mortality in FY 2008 targeted areas (focal areas agreed upon by PMI and the PNILP to be shared with the RTI Team).
- Capacity building activities at the district level to manage indoor residual spraying activities through the provision of a field entomology course.
- Provision of technical support to Rwanda's National Malaria Control Program to strengthen its integrated vector control program.
- Technical assistance to support PNILP's Epidemic Surveillance Response Strategy and System.

- Technical assistance to support PNILP's entomological surveillance in up to nineteen sentinel sites.

Specific support for IRS implementation for FY08 will include:

- Procurement of the selected insecticide and equipment for IRS (e.g. spray pumps and personal protection equipment).
- Technical and financial support for IRS implementation, including training of spray operators, store keepers, supervisors, and district program managers.
- Support for environmental assessments and monitoring in line with United States Code of Federal Regulations CFR 216, and the establishment of capacity for best practices in the target districts for pesticide handling and usage for IRS.
- Technical support for program planning and implementation, data collection, protocol/guideline development, and logistics capacity for IRS.

## II. Overview of Strategy for IRS Country Support

RTI is the prime contractor for USAID's Indoor Residual Spraying Indefinite Quantity Contract (IRS IQC), under which it has supported IRS activities in Angola, Ethiopia, Ghana, Mozambique, Madagascar, Senegal, Uganda and Zambia. Under the IRS IQC Task Order 1, USAID has requested that RTI provide similar support to the anticipated IRS program in Rwanda.

We understand the importance of including key stakeholders during planning and implementation and emphasize an approach that is collaborative and participatory. RTI will work in partnership with the Treatment and Research AIDS Centre including Malaria and Tuberculosis (TRACplus) and the PNILP to plan and implement IRS operations in the targeted districts. In addition, RTI's IRS program will collaborate with:

- Rwanda's TRACplus/PNILP and other stakeholder institutions to establish and maintain a national IRS coordinating committee.
- A senior entomologist within the PNILP to co-manage entomology monitoring and surveillance activities for IRS operations.
- The IEC Steering Committee to plan and implement information, education and communication (IEC) activities in coordination with spray operations.

RTI will also work in collaboration with other USAID partners as directed by USAID/Rwanda and PMI staff to ensure comprehensive and coordinated support for the implementation of IRS.

## III. IRS Activities

RTI has developed an effective methodology designed to provide the technical management and operational support to implement indoor residual spraying operations in the targeted districts. RTI's methodology includes a well managed and country tailored approach in planning and implementing IRS operations. RTI will work to expand the methodology utilized during the last spray round through the improvement of training, technical management, creation of operational efficiencies, and enhancement of environmental monitoring and compliance for the program.

## **IRS Program Planning and Assessment**

Building on experiences, lessons learned, and best practices from 2007 round 1 spray operations, RTI's Chief of Party (COP) and M&E/Environmental Health Director will initiate preliminary discussions with the PMI Rwanda Health Advisor, the Mission Cognizant Technical Officer (CTO) and PNILP to discuss planning for round 2 spray operations. District level planning of IRS operations will be carried out in collaboration with the Kigali Mayor's Office and District Health and Environmental Health Authorities. During the program planning phase, the COP will conduct field visits to meet with the District Management Team and District Authorities. Discussions at the central and districts level will lead to the development of work plans for IRS operations in the targeted districts and an agreement to launch IRS operations.

- Logistics needs assessment: RTI will review the logistics assessment conducted for 2007 IRS operations to assess the need for additional IRS commodities, including quantities of insecticide required for July spray operations in the targeted areas. The logistics needs assessment will determine the material, logistical and financial support required for the IRS program and associated environmental compliance activities. The logistics needs assessment will include assessments of additional storage facilities required, human resource requirements for the implementation of spray activities, operational arrangements and determination of financial resources for the implementation of spray operations.
- Environmental monitoring and compliance: RTI conducted a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP) in January 2007 to support USAID's environmental review as required under 22 CFR 216. In addition and per Rwandan environmental regulations, RTI conducted a local Environmental Impact Assessment. The environmental assessments focused on examining environmental assessments for other donor's vector control interventions and a situational analysis of IRS activities in the country, including pesticide use (chemical, toxicological and ecotoxicological features). The IRS program received approval from the Rwanda Environmental Management Agency (REMA) following submission of chemical, toxicological, ecotoxicological information on the insecticide to be used.

The PERSUAP report was prepared and submitted as required by REMA.

The choice of insecticide, ICON WP, was selected by the PNILP using the following threshold criteria:

- Pesticide registration in Rwanda

- Acceptability of the pesticide to the PNILP
- Risk to human health: Pesticide(s) must be approved by WHO and should be preferred based on their safety as described in USAID's Programmatic Environmental Assessment for Integrated Vector Management.
- Risk to the environment, livestock and/or agricultural trade

Additional technical and logistics considerations include:

- Vector susceptibility/resistance
  - Appropriateness of surface for spraying
  - Duration of effectiveness (and implications for cost)
  - Cost of insecticide
  - Rwanda's capacity to prevent pilferage
- Disposal of Empty Sachets: The Rwanda PERSUAP stipulates that “RTI will work with Crown Agents and Syngenta to negotiate a contract whereby empty Icon sachets will be returned to Syngenta [the pesticide supplier] for disposal” (Page 32). Although the PERSUAP recommendation to retrieve and export the empty sachets was based on information available at the time, based on recent findings, RTI will explore opportunities for local disposal of the empty sachets provided the necessary environmental safety standards are met. To this end, RTI will investigate a number of options for local disposal of empty sachets and will present its recommendations to the PMI Rwanda Team, the PNILP and REMA for approval. The local incineration will be the most cost-effective and suitable option as it will eliminate the recurrent need to export the hazardous waste at great expense and uncertainty, and improves the overall sustainability of the Rwanda IRS program.

Should RTI's findings determine that local options for incineration are inadequate, RTI will engage in dialogue with the PNILP, PMI Rwanda Team and REMA to seek viable options for developing capacity in-country for local incineration as well facilitate discussions on waste disposal by the manufacturer within the limitations of The Basel Convention.

## **Procurement and Logistics**

Using information from the first round of spray operations in 2007, RTI will conduct a logistics needs assessment to determine the IRS commodities required for spray operations in targeted areas. RTI will arrange all procurement, shipping, delivery, and storage of compression sprayers, spare parts, sprayer maintenance kits, insecticides and personal protective equipment.

## **Mobilization of IRS Districts Team and Training**

- Mobilization of district team : RTI will mobilize its district management team to manage and set up IRS operational sites within the targeted areas for focal spraying. Together with RTI's M&E/Environmental Officer, the district

management team will ensure that environmental mitigation activities such as set up of soak pits, progressive rinse systems, secure dedicated storage facilities and detail planning to retrieve and store empty insecticide sachets are instituted at each district and operational site. In addition, the district management team will oversee logistics management and transport arrangements to support spray activities. Spray operators will be recruited within the targeted districts by district health authorities, local leaders and other key stakeholders based on operational requirements per each district.

- **Training:** RTI will utilize a mentoring and “training of trainers” approach to develop increased operational capacity of the MOH/PNILP at the central and district levels to conduct effective, safe, and well-managed IRS activities on a wider national scale. RTI will work to increase technical skills and capability of PNILP staff and district teams through short and long term technical assistance. RTI will identify technical needs to strengthen national capacity for vector control and malaria epidemiology. Additionally, RTI will provide support for training opportunities for district officials such as district environmental managers in the form of “learning by doing” on environmental monitoring and entomological surveillance.

RTI’s IRS Technical Director, John Chimumbwa, will lead a training of trainers program on IRS operations in collaboration with PNILP. Participants from PNILP and the District Health Directorate as well as Environmental Health Officers will serve as trainers of spray operators recruited within each district and will be requested to plan and manage spray operator training. The training of trainers and spray operators serves as a critical aspect of the program to ensure trainers and spray operators are trained in application techniques including environmental monitoring and compliance and use and maintenance of spray equipment.

The training and final selection of spray operators will precede the start of IRS operations in all districts.

RTI will engage the PNILP and District Authorities throughout the planning phase and supervision to encourage ownership of the program and oversight of spray operations in the targeted districts.

## **IEC Development and Implementation**

A critical aspect of the IRS program is IEC to inform the beneficiaries about the IRS program; what they should expect; how it is beneficial to them and their families’ health; and what precautions they need to take. The intention of the program is to prepare households and ensure their willingness to get their houses sprayed. Using experiences and lessons learned from the last round of spray operations, RTI will support the establishment of an IEC Steering Committee with representatives from TRACplus, HCC, RTI, PSI, PMI Rwanda, and other partners to lead and finalize the IEC strategy for second round IRS operations, mobilize communities, develop IEC materials, and manage education and training programs for the promotion of spraying activities.

Specific objectives of the IRS IEC campaign are to:

- Create long term sustainability of the program by involving and engaging key stakeholders.
- Inform the beneficiaries about the positive benefits of IRS in controlling and preventing malaria and malaria related deaths.
- Inform the beneficiaries about their role before, during and after the spray operations.
- Inform the key stakeholders and beneficiaries about the environmental safety issues and allay fears related to environmental and health effects of using the insecticide of choice.

Recognizing the expertise of key stakeholder representatives within the Steering Committee and experiences managing several health promotional activities in Rwanda through the well established system of local governance, RTI will work closely with the IEC Steering Committee to carry out an effective IEC campaign. RTI will propose the following activities for the Steering Committee's involvement:

- Finalize the development of the IRS IEC strategy in the targeted districts including a proposed plan for monitoring and evaluating the IEC campaign.
- Manage the media strategy for the IEC strategy including outlining a plan to address the Kigali sector and communities not targeted for upcoming IRS operations.
- Outline key activities prior to commencement of IRS, including timelines and detailed budgets and other resource inputs, such as personnel, transportation, material production, etc.
- In collaboration with the PNILP and the IRS program, manage IRS communications and education activities with key stakeholders including government officials and donors prior to IRS operations, for IRS launch activities, during spray operations and following spray operations.
- Obtain PNILP/MOH approval and sign off for the strategy and plan from the MOH.
- Organize a stakeholder forum involving MOH, USAID and other organizations to share and obtain approval for the plan and budget.

RTI will lead the following activities to support the IEC Campaign:

- Provide technical and financial support for training of IEC implementers
- Produce brochures and supervisory stickers for spray operators
- Provide daily wages for IEC implementers
- Ensure coordination of IEC activities with spray operations

It is anticipated that the IEC campaign for Rwanda will begin at least one month prior to the start of the spray operations.<sup>1</sup> RTI will utilize the following channels of communication: print media, radio communication, mobile vans, and interpersonal communications. Material development for print and radio will be reviewed and approved by the USAID Rwanda Communications Officer and the IEC Steering Committee. Radio spots will be primarily in Kinyarwanda and English and/or French.

<sup>1</sup> The commencement of IEC activities is dependent on agreement of targeted areas for spray operations and finalization and approval of the IEC strategy and campaign.

RTI, with assistance from PNILP and HCC, will involve the Kigali Mayor's office and district authorities to:

- Sensitize the local leaders and government functionaries. The IEC team will work with districts and local chiefs to mobilize communities and educate them about IRS.
- Make arrangements for a series of briefing meetings at the district and sector levels.
- Facilitate the selection and use of community volunteers as IEC implementers.
- Facilitate community meetings with local leaders, arrange for announcements, radio discussions, and mobile vans.

RTI will undertake the following IEC activities:

Use of IEC implementers: RTI will work with PNILP and District Authorities to recruit volunteers in the targeted districts experienced at mobilizing communities and sharing district related health activities. These volunteers will serve as full time IEC implementers trained by the RTI IEC Officer, PNILP and HCC Communications Officers to conduct door-to-door communication about the IRS program and preparatory activities required of the community. These IEC implementers will be divided into several teams based on systematic grouping of communities within each district. Each IEC implementer will be requested to target at least 30 households per day and will serve as a part of an IEC team supervised by a team leader/supervisor. The supervisor will report to the IEC Assistant and will be responsible for the scheduling, route planning, and monitoring of the activities of the IEC implementers. IEC assistants in each district will be responsible for maintaining oversight of IEC activities at district level and ensuring coordination of spray operations with IEC activities.

A week in advance of the arrival of the spray team IEC implementers will intensify door-to-door communications in coordination with the spray operational plan. IEC implementers will conduct door-to-door dissemination of IEC messages, reminding targeted spray communities 3 days, 1 day and a few hours before spraying operations. IEC implementers will continue to work in this capacity throughout the duration of the spray operations.

Since the intention is to conduct focal spraying instead of blanket spraying in the targeted Kigali districts, RTI will work closely with HCC to implement a well planned media strategy to address anticipated community concerns regarding focal spraying of IRS operations.

## **IRS Spray Operations**

RTI will divide spray operators into teams of 4 spray operators and 1 team leader to ensure strict supervision during the implementation phase. Spray teams will be managed and monitored by supervisors at the sector level. District Management Teams will provide oversight to ensure RTI's goal of providing day-to-day operational management and support for IRS implementation, including all aspects of monitoring and quality

assurance. Each district will maintain an operational spray plan indicating sub districts, sectors and villages to be sprayed from the first day to the last day of operations. During the first week, spray leaders at each operational site will meet at the end of the day to discuss the day's events, challenges faced and recommendations for resolving problems. The operational site leadership team will continue to have these meetings frequently and will meet at the end of each week to review the week's achievements and to plan for the following week. Where necessary, the spray leadership team will make adjustments to the spray operational plan. RTI will maintain records of program performance reports which demonstrate adherence to WHO technical standards quality of training and supervision, procurement activities and environmental compliance.

### **Round III Planning**

RTI's Chief of Party will build on best practices and lessons learned from round 2 spray operations to initiate discussions and planning for round 3 spray operations in selected districts with the PMI Rwanda team and TRACplus/PNILP. Discussions at the central and districts level will lead to the development of work plans for IRS operations in the targeted districts and agreement on the launch of IRS operations. During the program planning phase, the COP will conduct field visits to the targeted districts to meet with District Authorities and to coordinate geographical reconnaissance visits of the targeted areas for operational planning purposes.

TRACplus/PNILP has expressed interest in expanding IRS operations to four additional districts. To this end, RTI will conduct an environmental assessment to expand the PERSUAP to new districts and obtain approval of the supplemental environmental assessment from USAID and REMA.

Building on the last round, RTI will conduct a logistics needs assessment to determine additional IRS commodities required for spray operations in January 2009. The logistics needs assessment will include assessments of additional storage facilities required, human resource requirements for the implementation of spray activities, operational arrangements and determination of financial resources for the implementation of spray operations.

### **Collaboration with key stakeholders and building in country capacity**

A key objective is to build in-country capacity to manage IRS operations. To that end, RTI has recruited and trained Rwandans to manage spray operations at district level including logistics management and environmental monitoring and compliance. RTI will continue to work with central level PNILP officials and district authorities in planning and monitoring spray operations at district level to increase capacity within the targeted districts.

During the training of trainers, RTI will train district authorities (health and environmental officers), and the National Malaria Program personnel in spray application techniques with the intention of requesting their lead in training spray operations for subsequent spray rounds. Through these activities, RTI intends to increase stakeholder enthusiasm to lead training and operational management of IRS activities.

The PNILP has played a greater role in leading a number of IRS activities following the end of the first round of IRS operations. These have included playing a leadership role in joint planning for IRS activities, IEC, training and entomological surveillance activities related to the spray operations. At the end of the January 2009 spray operations, RTI will work with the PNILP to identify areas in which the PNILP and key stakeholders will take a lead role during the planning and implementation phase of future spray operations.

RTI will continue to improve coordination and communication with the PNILP during to ensure successful implementation of the IRS Program and other technical activities assigned to RTI under the PMI program. To this end, RTI's Technical Director Dr. John Chimumbwa will continue to engage in dialogue with the PNILP to provide technical assistance and technical and operational guidance to IRS operations in Rwanda. Dr. John Chimumbwa, together with RTI's COP, will ensure that the malaria program's needs and concerns are addressed.

During the planning and implementation phase, RTI's COP will work closely with the PNILP entomologist assigned to work with RTI and the PNILP coordinator to plan IRS operations, seek guidance on selected sectors for spray operations, provide programmatic planning updates, share best practices, and seek to address program challenges faced.

## **IV. Management Plan**

RTI will establish an effective and efficient management structure in Rwanda to implement the IRS program with quality control measures in conformity with international standards as described in WHO guidelines on IRS. RTI's COP, Adama Kone, will ensure that all USAID and RTI corporate systems and procedures are mobilized appropriately to support management of this project. Mr. Kone will serve as the principal point of contact with USAID and will bear ultimate responsibility for all project management tasks, including quality and cost control, performance monitoring, reporting, and client relations. Mr. Kone will be based in Kigali and will retain overall responsibility for managing RTI and partner activities in Rwanda. He will work with the in-country team, district authorities and key stakeholders to implement recommendations and experiences based on the first round of IRS operations. He will be supported by a Logistics Officer, Finance Officer and M&E/Environmental Health Director.

The Logistics Officer will manage procurement and logistics requirements for the IRS Program. He will ensure rational and timely procurement, storage and distribution of insecticides and IRS related commodities. In addition, the Logistics Officer will monitor the distribution of insecticides and other IRS related commodities to warehouses and other storage facilities. He will ensure adherence to RTI's standard procurement operating procedures for IRS related commodities ordering and distribution. In addition, each district will hire an Assistant Logistics Officer who will work closely with the Logistics Officer to oversee the district level logistics needs.

The Finance Manager will provide the financial management to the program and ensure compliance with USAID and that RTI's standard operating procedures (SOPs) are followed. Each district will have a finance assistant to support the Finance Manager. The M&E/Environmental Health Director will provide overall technical oversight of the program and ensure environmental monitoring and compliance for IRS operations in the targeted districts.

RTI will also hire a District Operations Manager for each district. The District Operations Manager will be supported by district Logisticians, Finance Assistants and Data Managers. The operations team will provide support to the program by ensuring logistical needs are addressed and quality assurance and compliance to the IRS SOPs are achieved. Each Operations manager will visit the spray sites during training and in the first week of spraying, and also provide support for the development of subsequent IRS rounds. RTI will work to ensure that each level within the IRS structure is connected to counterparts within the Government of Rwanda (GOR). The COP will interface with top level staff at PNILP and other GOR agencies.

- Strategic technical assistance: In FY 2008, RTI intends to improve collaboration and coordination of IRS operations with TRACplus/PNILP. The in-country team will also receive technical and administrative support from RTI staff in Nairobi led by RTI's IRS Technical Director, Dr. John Chimumbwa and from RTI Staff in Washington, DC. Lenna Neat (RTI/Washington) will serve as home office technical manager and will provide home-office backstop functions.

Dr. Chimumbwa will provide overall technical oversight of the IRS program in Rwanda. In his capacity as Technical Director, Dr. Chimumbwa will analyze lessons learned from round one spray operations and identify areas for the improvement of technical management of spray operations. He will provide technical assistance remotely during the preparatory phase as well as during the second and third round of spray operations. Dr. Chimumbwa will also provide on the ground support to RTI's Rwanda team during the training of trainers for round 2 and 3 spray operations in the targeted districts. Dr. Chimumbwa will conduct technical visits to Rwanda to discuss and reach consensus on the scopes of work for other technical areas (such as the development of an insectary, epidemic surveillance needs assessment and the support to sentinel sites). Dr. Chimumbwa's visits will also serve the dual purpose of improving collaboration between RTI and TRACplus/PNILP. Finally, Dr. Chimumbwa will conduct technical management visits to IRS operations in the targeted districts to observe and monitor spray operations and provide recommendations as needed.

Lenna Neat will provide overall financial and program management support to RTI's Rwanda team to ensure lessons learned and best practices from the last round of spray operations are incorporated into the planning and implementation phase. She will visit Kigali and the targeted districts during the initial planning phases and prior to the commencement of spray operations to provide additional technical and management support to improve collaboration, coordination, and efficiencies within the program and make certain spray operations are carried out effectively. Through FY 2008, Ms. Neat will work with the Rwanda team to address the PMI and PNILP's concerns.

**Table 1: Strategic Technical Assistance and TDY Plan**

Name	Type of TA (consultant, RTI employee, local, international)	Coming from (USA or Nairobi)	Tasks to be undertaken or activities to be supported	Number of visits
John Chimumbwa	RTI employee, international	Nairobi	Round II & III IRS planning visit - May/June Training of Trainers (Kigali) – July and January Technical Management Visit – September 2008 and February 2009	5
Lenna Neat	RTI employee, international	USA	Round I lessons learned, round II & III planning/start up visit	3
Tito Kodiaga	RTI employee, international		Environmental compliance visit.	2
TBD	Consultant	TBD	Field entomology training.	1
TBD	Consultant	TBD	Support for the development of an insectary.	1
TBD	Consultant	TBD	Epidemic surveillance needs assessment.	2
TBD	Consultant	TBD	Support for entomological surveillance at up to 19 sentinel sites.	2

The proposed STTA plan for Rwanda was developed based on in country needs during the specified work plan period. The proposed trips have been planned to provide support for:

- IRS operational management:
  - IRS planning trip and support to RTI Rwanda team for the cancelled February 2008 spray operations.
  - Operational support provided by RTI’s IRS Nairobi Operations Manager for upcoming August 2008 spray operations given the change in RTI’s IRS leadership
  - IRS planning and management trips for August 2008 and January 2009 spray operations
- Technical management trips by RTI’s IRS Technical Director, Dr. John Chimumbwa at the Mission and PNILP’s request:
  - to strengthen the relationship between RTI in-country team and the PNILP.
  - to work with the PNILP on selection of sites for upcoming spray operations and anticipated operational support required.
- Environmental monitoring and compliance trip:
  - Environmental compliance: 2 TBD for August 2008 and January 2009 spray operations
  - Pre-Environment inspection, extension of Rwanda Environmental Assessment and technical discussions on waste disposal of empty ICON sachets

- Other technical activities: technical assistance for field entomology training, support for the development of an insectary, epidemic surveillance needs assessment and support to sentinel sites.

## V. Monitoring and Evaluation Plan

RTI will plan, implement and document a monitoring and evaluation (M&E) component for IRS operations. RTI will review indicators, methods, and data sources for M&E of IRS operations with the PMI Rwanda Team and PNILP. The M&E Plan will focus on the following key elements:

- Baseline assessment and entomological surveillance of IRS operations: RTI will work with PNILP’s entomologist to lead and provide technical and operational support for entomological surveillance within the targeted districts during and after spraying. Given the limited human resource capacity in Rwanda, RTI will provide additional support and training in field entomology surveillance.
- Spray operations: RTI will maintain records of program performance reports which demonstrate adherence to WHO technical standards in quality of training and supervision, procurement activities and environmental compliance.
- Environmental compliance monitoring: RTI Rwanda’s Environmental Officer will conduct an internal inspection to determine compliance with the environmental assessment.

Spray forms for the collection of household level data by spray operators will be assessed and validated by key stakeholders and the data collection process monitored and reported on a daily basis during spray operations.

RTI will establish routine reporting procedures and an expected format and deadlines for report submission with the CTO and PNILP. Due to the complexities of managing IRS programs, RTI will ensure that these reports document operational, technical and financial management of IRS activities. RTI will also submit end of spray round performance reports documenting the planning and implementation process, key achievements, challenges faced, best practices utilized, and lessons learned.

**Table 2: Monitoring and Evaluation Indicators**

Indicator	Disaggregate	Frequency	Baseline (BL); Y2 Target
<b><i>Project Objective 1: Protection from malaria in target areas increased</i></b>			
<b>1.A:</b> Anopheline resting density	indoor, outdoor	semi-annual	TBD
<b>1.B:</b> Measured resistance of mosquitoes to insecticide on treated surfaces	n/a	semi-annual	TBD
<b>1.C:</b> Percentage of focus group participants who correctly understand safe household use of	Male, female	annual	TBD

Indicator	Disaggregate	Frequency	Baseline (BL); Y2 Target
anti-malaria insecticides			
<b>Intermediate Result 1.1: National collaboration on malaria prevention and control efforts improved</b>			
1.1.A: Number of national and local health officials who participated in leadership roles for IRS planning or implementation during the last reporting period	Male, female	semi-annual	
1.1.B: Percentage of targeted malaria stakeholder organizations that participated in each of the three most recent coordination meetings during the last reporting period	n/a	semi-annual	
<b>Intermediate Result 1.2: IRS programs safely implemented in targeted areas</b>			
1.2.A: Number of houses treated with anti-malarial insecticide (indoor residual spraying) with USG support	target districts	semi-annual	0; TBD
1.2.B: Percentage of targeted structures treated with anti-malarial insecticide (indoor residual spraying) with USG support		annual	0; TBD
1.2.C: Value (USD) of anti-malarial commodities (insecticide and related commodities) purchased by USG for use in PMI or USAID supported efforts	insecticide, spray equipment and personal protective equipment	semi-annual	TBD
1.2.D: Number of sector assessments related to anti-malarial efforts conducted by projects supported by the USG during the last reporting period	Environmental/PERSUAP Logistics Rwanda Environmental Assessment	semi-annual	0; 1 0; 1
1.2.E: Average number of insecticide sachets used per household sprayed	n/a	semi-annual	0; TBD
1.2.F: Average percentage of IRS oversight checklist items that met requirements for compliance	target districts	monthly	0; TBD
1.2.G: Percentage of trained spray operators tested using the Spray Operator Test who met or exceeded minimum acceptable scores	Male, female	monthly	0; TBD
1.2.H: Ratio of insecticide used (actual) to (estimated) insecticide needed	n/a	monthly	0; TBD
1.2.I: Ratio of dosage applied to application rate recommended	n/a	monthly	0; TBD
1.2.J: Percentage of targeted and visited households that do not participate in an IRS cycle	refusals, absentees	monthly	0; TBD
<b>Intermediate Result 1.3: Capacity in malaria prevention and control improved</b>			

Indicator	Disaggregate	Frequency	Baseline (BL); Y2 Target
1.3.A: Number of districts with all planned IRS staff hired and trained	target districts	semi-annual	0; TBD
1.3.B: Percentage of households sprayed and observed that had all persons, food, and goods outside of the house and furniture correctly covered	target districts	annual	0; TBD
1.3.C: Percentage of people surveyed in targeted communities who report accurate knowledge provided in IRS IEC messages	target districts	annual	0; TBD
<b>Sub IR 1.1.1: Skills of organizations and individuals supporting national anti-malaria efforts improved</b>			
1.3.1.A: Number of people who received training in malaria prevention with Presidential Malaria Initiative (PMI) or USAID malaria support in the last reporting period	male, female; spray operators; other training	semi-annual	0; TBD

RTI anticipates preparing the following deliverables and will consult with USAID/Rwanda, the PNILP, and USAID's CTO for the IRS IQC to confirm the formats and schedule for the following reports.

- Pre-Operational Period
  - Environmental assessment
  - Scope of work including an annex that documents environmental compliance requirements; to be agreed among USAID, RTI and cognizant Rwandan ministries (e.g., MOH/TRACplus/PNILP and REMA)
  - Logistics assessment
  - IRS work plan, including
- Operations schedule
- IEC program
- Performance M&E
- Operational Period
  - Weekly progress reports
- Post-operational Period
  - End of round spraying performance report

The COP and Finance Officer will review all financial data monthly and inform the home office technical manager of budget constraints and variances based on monthly financial analyses.

### Branding and Marking

RTI will develop and submit a branding and marking plan to the IRS Program CTO at USAID/Rwanda for approval. The branding plan will outline a proposal in which the IRS

program adopts the PMI logo as the official project brand. In Rwanda, RTI will ensure the branding carries the translated tagline “From the American People” and “President’s Malaria Initiative” in French for use in branding country-specific project materials and products (“Du Peuple Américain” and “L’Initiative du Président Américain Contre Le Paludisme,” respectively). The project title “Indoor Residual Spraying for Malaria Control” will also be translated into the local language equivalent (“Aspersions Intra Domiciliaire pour la Lutte Contre Le Paludisme”). The branding and marking plan will focus on program communication and publicity including the marking plan for materials to be produced, promotional activities and increasing awareness of the President’s Malaria Initiative.

Since the IRS Program includes direct involvement of government agencies and counterparts, RTI will tailor its branding plan to include the host government agencies’ logos or branding as deemed necessary and per CTO approval.

### **Other Activities**

- Capacity building of PNILP : In collaboration with PNILP and the PMI team, RTI will plan for the development of an inventory including procurement of the required equipment and supplies.
- Epidemic Surveillance Response (ESR) Needs Assessment: RTI identified a consultant to conduct the ESR in January 2008. Due to time constraints, RTI will schedule a follow up visit in collaboration with the PNILP once the scope of work and timing of the visit have been agreed by RTI and the PNILP. To that end, RTI will initiate discussions with PNILP to understand and discuss the program needs for an ESR as the basis for mapping out and planning technical assessments to support an ESR system.
- Entomological surveillance at sentinel sites: In reference to the MOP, RTI will support PNILP’s entomological surveillance strategy in up to nineteen sentinel sites to implement standard morbidity and mortality data collection systems. RTI will provide technical assistance to PNILP as it develops and revises its sentinel site surveillance strategies in anticipation of changing epidemiology of malaria.
- Development of integrated vector control policy: RTI will provide technical support to the PNILP to review and strengthen its vector control strategy.
- Field entomology training: In July 2007, RTI conducted an assessment and developed a field entomology training program through discussions with Tulane University and the PNILP. The trip report and draft field entomology training course was submitted to the PMI Rwanda Team and PNILP. In FY 2008, RTI plans to discuss selection of candidates, timing and the implementation of the field entomology training program with the PNILP.

### **Progress to Date**

Outlined below is a summary of activities completed with FY 2007 funds:

- Implementation of spray operations in the 3 Kigali districts (Kicukiro, Nyarugene and Gasabo) with 99% coverage rate treating 161,996 households.

- Environmental Assessment for 3 Kigali districts, Nyanza and Kirehe completed
- Logistics Assessment for 3 Kigali districts, Nyanza and Kirehe completed
- Training of trainers and spray operators completed
- Implementation of IEC activities for IRS operations
- Entomological surveillance:
  - Conducted baseline entomological surveillance for Kicukiro, Nyarugenge, Gasabo, Kirehe and Nyanza districts
  - Conducted post IRS surveillance for Kicukiro, Nyarugenge and Gasabo districts
- Initial assessment and development of field entomology training course
- ESR: RTI fielded a consultant to conduct an initial assessment in January 2008. A follow up visit is required by RTI once the SOW has been discussed and agreed upon with the PNILP.





Component	Activity	Person/ partner Responsible	Project Month												Key Milestones					
			N	D	J	F	M	A	M	J	J	A	S	O		N	D	J	F	M
	Discuss implementation timeline and RTI's scope of work and schedule needs assessments with the PNILP and Mission.	RTI												X						approved. Logistics & baseline entomology assessments completed. <sup>4</sup>
	Conduct logistics needs assessment and environmental assessment <sup>5</sup>	RTI, PNILP												X						
	Discuss upcoming spray operations with District Authorities	RTI, PMI, PNILP													X					
	Recruit, train and deploy District Operations Managers	RTI													X	X				
	Establish satellite office in Districts	RTI														X				
<b>Other Activities: Epidemic Surveillance Response</b>	Conduct epidemic surveillance needs assessment	RTI									X	X							Epidemic Surveillance Needs Assessment & work plan submitted	
<b>Other Activities: Support to Sentinel Sites</b>	Assess capacity, gaps and technical needs	RTI/PNILP										X	X						Entomology surveillance strategy at sentinel sites and work plan submitted.	
	Provide technical assistance to support entomology surveillance strategy at sentinel sites	RTI										X		X						
<b>Other Activities: Development of insectary</b>	Provide technical assistance in planning the development of an insectary	RTI/PNILP									X	X							Plans for insectary submitted, equipment and supplied delivered	
	Identification of equipment and supplies required	RTI/PNILP									X	X								
	Procurement of commodities for insectary	RTI/PNILP											X	X						
<b>Other Activities: Field entomology training</b>	Selection of trainees for field entomology	RTI/PNILP									X	X							Field entomology course conducted and report submitted	
	Finalization of course content and conduct a field entomology training program to build in-country capacity	RTI/Tulane/PNILP										X								

<sup>4</sup> The environmental and logistics assessments for the 3 Kigali districts, Kirehe and Nyanza were submitted in January 2007

<sup>5</sup> The Rwanda PERSUAP would be expanded to cover additional IRS targeted areas proposed by the PNILP.

## Attachment 2: Rwanda Countdown Calendar

From period November 2007 to March 2009

Component	Key Milestone	Date to be Completed	Status (e.g., date achieved)	Antecedent to:
<b>Project Start-up/ Mobilization</b>	Country work plan approved by USAID.	Completed	February 2007	Producing MOU and/or aid memoires
	MOU/aide memoires signed with government and/or key partner.	Completed	July 2007	Initiating planning activities with government and/or key partners
	MOU revised and signed with government <sup>6</sup>	06/08		Initiating planning activities with government and/or key partners
<b>Planning and Assessment</b>	Logistics assessment completed. <sup>7</sup>	06/08	-	Planning scope and scale of operations and procurement to be required
	Baseline entomology assessment completed	06/07	-	Pesticide selection
	Agreement reached with USAID and government on pesticide selection	2/07	Completed	Permission for spray operations
	Environmental Assessment completed	2/07	Submitted	Finalization of EA and approval
	EA approved by USAID	3/07	-	Permission for spray operations
	EA approved by national environmental agency (REMA)	EA submitted	Approved	Procurement
<b>Procurement &amp; Logistics</b>	Technical specifications for tenders approved and released.	12/07	Completed	Ordering supplies for spraying
	Vendor selection and procurement process completed.	1/08	completed	Delivery of supplies for spraying
	Compression sprayers delivered	1/08; 6/08	1-2/08	Spray operator training
	Insecticide and PPE delivered	1/08	1-2/08	Initiation of spray operations
<b>IEC Development &amp; Implementation</b>	IEC needs assessment completed.	Completed	January 2008	IEC material design
	Revised IEC strategy completed with HCC	6/08		Revised IEC strategy
	IEC material designs and implementation plan approved.		Ongoing	Production of materials
	IEC materials produced and delivered to project.	Completed	January 2008	Training of IEC implementers
	Training of IEC implementers completed.	6/08		Implementation of IEC campaign
	IEC campaign launched.	06/08		Spraying operations
<b>Spraying</b>	Geographic reconnaissance completed	06/08; 12/08		Team assignments and logistics

<sup>6</sup> PNILP has requested review of the IRS MOU.

<sup>7</sup> The initial logistics assessment for the 5 targeted districts has been completed. RTI to revise logistics needs pending final decision on targeted areas by the National Malaria Program.

<b>Component</b>	<b>Key Milestone</b>	<b>Date to be Completed</b>	<b>Status (e.g., date achieved)</b>	<b>Antecedent to:</b>
<b>Operations</b>				arrangements
	District staff mobilized	06/08	-	Completion of operational logistics and EM set up
	Operational logistics and environmental mitigation set up at operational sites.	06-07/08		Spraying operations
	Medical check-ups (including pregnancy tests) for sprayers, supervisors, warehouse staff, cleaners, etc. completed.	07/08		Permission to spray
	Training of spray operators completed.	07/08		Spraying operations
	Spray operations launched.	TBD	TBD by PNILP	
	Spraying operations completed.	6-8 weeks	Dependent on start date	Recapture and proper management of equipment and supplies
	Equipment and supplies recaptured and securely disposed or stored.	10/08		Environmental compliance
	Post-spraying evaluation conducted.	10-11/08		Final report production
	Final report produced and submitted to USAID.	11/08		
<b>Round III Planning and Assessment</b>	Logistics assessment completed. <sup>8</sup>	10/08	-	Planning scope and scale of operations and procurement to be required
	Agreement reached with USAID and government on pesticide selection	2/07	Completed	Permission for spray operations
	Environmental Assessment completed	2/07	Submitted	Finalization of EA and approval
	EA approved by USAID	3/07	-	Permission for spray operations
	EA approved by national environmental agency (REMA)	EA submitted	Approved	Procurement
<b>Round III- Procurement &amp; Logistics</b>	Technical specifications for tenders approved and released.	10/08		Ordering supplies for spraying
	Vendor selection and procurement process completed.	11/08		Delivery of supplies for spraying
	Compression sprayers delivered	12/08		Spray operator training
	Insecticide and PPE delivered	12/08		Initiation of spray operations
<b>Round III- IEC</b>	IEC needs assessment completed.	10/08		IEC material design

<sup>8</sup> The initial logistics assessment for the 5 targeted districts has been completed. RTI to revise logistics needs pending final decision on targeted areas by the National Malaria Program.

<b>Component</b>	<b>Key Milestone</b>	<b>Date to be Completed</b>	<b>Status (e.g., date achieved)</b>	<b>Antecedent to:</b>
<b>Development &amp; Implementation</b>	IEC material designs and implementation plan approved.	10/08		Production of materials
	IEC materials produced and delivered to project.	11/08		Training of IEC implementers
	Training of IEC implementers completed.	11/08		Implementation of IEC campaign
	IEC campaign launched.	11/08		Spraying operations
<b>Round III Spraying Operations</b>	Geographic reconnaissance completed	10/08		Team assignments and logistics arrangements
	District staff mobilized	11-12/08	-	Completion of operational logistics and EM set up
	Operational logistics and environmental mitigation set up at operational sites.	12/08		Spraying operations
	Medical check-ups (including pregnancy tests) for sprayers, supervisors, warehouse staff, cleaners, etc. completed.	1/08		Permission to spray
	Training of spray operators completed.	1/08		Spraying operations
	Spray operations launched.	TBD	TBD by PNILP	
	Spraying operations completed.	6-8 weeks	Dependent on start date	Recapture and proper management of equipment and supplies
	Equipment and supplies recaptured and securely disposed or stored.	3-4/09		Environmental compliance
	Post-spraying evaluation conducted.	4-5/09		Final report production
Final report produced and submitted to USAID.	5-6/09			