



PRESIDENT'S MALARIA INITIATIVE

INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL



Mali FY08 Work Plan

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

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RTI International is dedicated to conducting research and development that improves the human condition by turning knowledge into practice. With a staff of more than 2,500, RTI offers innovative research and technical solutions to governments and businesses worldwide in the areas of health and pharmaceuticals, education and training, surveys and statistics, democratic governance, economic and social development, advanced technology, energy, and the environment. The second largest independent nonprofit research organization in the United States, RTI maintains nine offices in the U.S., five international offices, and one international subsidiary, as well as project offices around the world.

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I. Introduction, Background and Summary of Country MOP

The President's Malaria Initiative (PMI) and Malian health authorities developed a plan targeting indoor residual spraying (IRS) operations with funding beginning in FY08. The sole holder of the IRS Indefinite Quantity Contract (IQC), RTI International (RTI), is supported by a consortium of four organizations: the Medical Research Council of South Africa, Liverpool Associates in Tropical Health, Crown Agents and Howard Delafield International. This work plan describes project activities taking place between October 2007 and December 2008.

Although current National Malaria Control Program (PNLP) policy encourages IRS in epidemic-prone areas, PMI does not support the wide use of IRS in epidemic-prone areas. Rather, PMI encourages the use of IRS in areas of seasonal malaria transmission, where it can dramatically reduce malaria transmission and mortality. PMI will support IRS to cover a population of approximately 431,000 people. The specific areas to be covered include Bla Circle (a Circle is a geographic unit similar to a district) with a population of approximately 259,000 and Koulikoro Circle with approximately 172,000 people.

Using funds allocated to RTI, a baseline entomological assessment was conducted during the rainy season of 2007 by the Malaria Research and Training Center (MRTC) with technical support from CDC. RTI submitted the assessment report to USAID/Mali in March 2008.

RTI will be responsible for procurement and training while working in close collaboration with PNLP, PMI, the Regional Direction for Health (DRS), and the CSREF.

II. Overview of Strategy for IRS Country Support

The MOH in Mali has very limited human resource and technical capacity to implement IRS. Therefore, in 2008 RTI will take the lead in all IRS activities. RTI's approach is to build capacity by implementing all activities including training, ground operations, IEC, supervision, monitoring, and data collection alongside local counterparts. We will work in close collaboration with the PNLP and the DRS of Koulikoro and Segou, the head doctors of Bla and Koulikoro in the "Centre de Reference" CSREF, and the technicians of the "Centre Communautaire" CSCOM.

RTI will also work in close collaboration with the Ministry of Environment in Bamako and their counterparts in the two circles. RTI will procure materials including insecticide, spraying equipment, and personal protective clothing and equipment for spray operators and supervisors. RTI will also cover expenses for trainers and spray teams and rental of insecticide storage facilities. Training and supervision at the regional, district and community level will be implemented by RTI in close coordination with the PNLP, PMI, and DRS.

RTI will work in close collaboration with PMI, PNLP, DRS, and CNIECS "Centre National d'Information, Education, Communication du Ministère de la Santé" on IEC to inform

beneficiaries, raise public awareness, and promote behavior change (including environmental management and sanitation).

RTI has recommended that an IRS Task Force be put in place and chaired by the Secretary General (SEGAL) of Health. RTI would report to the task force weekly or biweekly on the operations on the ground. At the circle level, RTI will convene informal meetings, chaired by the Prefect, where IRS operations reported at the Task force level will also be reported at the circle level.

III. IRS Activities

Start-up

RTI's Home Office Technical Manager for Mali, Bijou Muhura, will travel to Bamako for office start up activities, including recruiting and hiring staff, meeting with key partners, and setting up standard operating procedures. Per the mission's request and mostly due to the proximity to the U.S. Embassy building, RTI's offices in Bamako are located in ACI 2000.

Our Bamako office will have the following full time staff: Chief of Party (COP), Logistician, Finance Manager, Administrative Assistant, Technical Coordinator, and M&E Officer. All other staff, including an IEC Coordinator, a Project Assistant and an Environmental Specialist, will be hired only on a short term basis. We will also establish and support regional offices in Koulikoro and Segou. These offices will serve the circles of Koulikoro and Bla. The circle of Koulikoro has 17 CSCOM and 251 villages and the circle of Bla has 25 CSCOM and 236 villages. Each CSCOM will be a semi-autonomous operation with varying numbers of IEC mobilizers and spray operators, depending on the number of communities and the size of population served. These sites will be supervised by a local health officer. There will be 17 IRS activities in Koulikoro circle and 25 IRS activities in Bla circle. Seasonal staff in the circles will include: circle coordinator, circle logistician, finance assistant, data clerk, warehouse manager, and warehouse clerks.

As part of the start-up process, RTI will open a corporate bank account in Bamako. We will choose the bank based on location of bank branches close to the IRS target sites so that transaction of funds between villages can be facilitated in a safe manner.

Planning and Assessment

- Logistics assessment: RTI's Operations Director, Kim Canelas (based in RTI's Nairobi Regional Office), will conduct a logistics assessment. During the assessment, he will gather key data to develop the budget and the operational strategic plan. The Home Office Technical Manager will accompany Mr. Canelas to the Koulikoro and Bla Circles to meet with regional and circle authorities and to visit a number of villages in each circle. The visit will provide our team with an understanding of the types and number of structures in the circles, the number of people per household, and the estimated size of rooms. This information is needed to plan spray operations. The findings will be used to assess the accuracy of the population targets set forth in the MOP and to determine the

number of IEC mobilizers and sprayers needed. (Note: The logistics assessment was completed between January 21-29, 2008.)

- Environmental Assessment and Compliance: The environmental compliance visit will be undertaken by Environmental Specialists Tito Kodiaga and Jeanne Chabrier accompanied by the Home Office Technical Manager. Information for the assessment will be gathered from the MOH, the DNS, the PNLP, the Ministry of the Environment and Protection of Nature (MEPN), the Ministry of Agriculture, the National Institute of Geography (IGN), the Ministry of Health for the Region of Koulikoro (DRS Koulikoro), the National Direction for Decontamination and Pollution and Nuisance Control, the MRTC, the Regional Directions for the Protection of Vegetables of Koulikoro and Bla, World Vision in Bla, and the Permanent Inter-State Committee for Drought Control in the Sahel (CILS).

The information gathered will be used to draft the Supplemental Environmental Assessment (SEA). This information will include:

- Pesticide use in the country and regulatory guidelines pertaining to its use, misuse, storage and disposal.
- Background documentation and statistics related to the geography, hydrology, agriculture, environment, demography and health of Mali, and particularly of the *circles* in question.
- Visits to localities where IRS will be conducted to determine the field conditions and to identify possible environmental risks and concerns. During this visit storage facilities will be identified.
- Agricultural use and production of the circles of Koulikoro and Bla, including fishing activities and aquaculture; hydrology mapping; rainfall data; soil type; health statistics; the locations of CSCOMs in Koulikoro and Bla; agricultural export products; socioeconomic demographic statistics by commune; and types of vegetation and ecological zones (such as wetlands and elevation). This information will be analyzed to identify sensitive areas where special attention will be given in the preparation for IRS.

This information will be used to design the Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP) and IEC methods and fine tune them to Koulikoro and Bla.

Meetings will be held with:

- Key representatives of the Regional Directions of the circles of Koulikoro and Bla.
- MRTC and its panel of entomology and parasitology experts to obtain more information the process of pesticide selection.
- PNLP and Dr. Sitan Traore, the main entomologist at the PNLP.
- Ministry of Environment and Mr. Demba Sidibe, part of the Committee of Pesticide Management in Mali, to talk about roles and responsibilities in the safe usage, storage, and disposal of pesticides.

- Permanent secretary to CILS, Dr. Amadou Diarra, to determine the process by which pesticides must be registered in country and the regulatory measures to be followed regarding pesticide use.
- Ministry of Agriculture.
- Other relevant stakeholders and partners.

Health concerns will be addressed by the implementation of WHO and FAO protocols and the training of IRS operators and sprayers in these protocols. This information will also be disseminated to target populations through IEC.

The team will comply with Mali's national environmental regulations and will submit an Environmental Impact Study (Etude d'Impact sur l'Environnement), if necessary.

(Note: RTI completed the environmental assessment between February 4th - 15th, 2008. The Supplemental Evaluation Assessment (SEA) was submitted on April 22, 2008 to USAID and the Environmental Impact Assessment (EIA) was submitted to the Ministry of Environment on May 2, 2008 after it was modified based on comments of the RTI focal point person at the Ministry of Environment. Once comments and feedbacks are received from USAID environmental officer the report will be modified and resubmitted.)

- Pesticide selection: Pesticide selection will be completed by PNLP in collaboration with MRTC. MRTC will be required to conduct an entomological baseline survey.

Spray catch methods:

- Houses will be sprayed in test villages. Where possible, ten to twenty houses will be sprayed per village.
- Mosquitoes will be sorted out by species. The presence of species other than the *Anopheles gambiae* will be noted but only specimens of *An. gambiae* will be counted and recorded according to the abdomen stage (blood fed, unfed, half gravid and gravid).
- The number of people having spent the previous night in the house will be recorded.

The information collected will allow MRTC to estimate the infection rate, the relative vector densities, the man biting rate, and the entomological inoculation rate.

Once enough mosquitoes have been caught, two insecticides will be tested: Lambda-cyhalothrin and Bendiocarb. Blood fed females will be used to conduct insecticide testing by bottle bio-assay (Brogdon,) and insecticide resistance. Based on the results obtained, the PNLP will choose which pesticide will be used for IRS.

(Note: The baseline survey was completed by MRTC between October 2007 and January 2008. In a February 29th 2008 meeting held by PNLP including MRTC, WHO, USAID, and DHPS representatives, it was decided that lambda-cyhalothrin will be the pesticide used for IRS in the circles of Bla and Koulikoro.)

Procurement and Logistics

- Procuring pesticides and related supplies: Below are the quantified items that will be procured for this round. These were determined on the basis of the logistics assessment (see above).

Table 1: Pesticides and Related Supplies to be Procured

#	Name	Total Quantity to be procured								
1	Spray pumps	500								
2	Spray pump-repair kits	50								
3	Spare nozzles	500								
4	Spare filters	500								
5	Gloves - Latex Nitrile without inside lining. Gloves should be all medium size.	3,000								
6	Masks	20,000								
7	Overalls (total 1000)	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 10px;">XL</td> <td>50</td> </tr> <tr> <td style="padding-right: 10px;">L</td> <td>100</td> </tr> <tr> <td style="padding-right: 10px;">M</td> <td>700</td> </tr> <tr> <td style="padding-right: 10px;">S</td> <td>150</td> </tr> </table>	XL	50	L	100	M	700	S	150
XL	50									
L	100									
M	700									
S	150									
8	Gum Boots (total 550)	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 10px;">L</td> <td>82</td> </tr> <tr> <td style="padding-right: 10px;">M</td> <td>385</td> </tr> <tr> <td style="padding-right: 10px;">S</td> <td>83</td> </tr> </table>	L	82	M	385	S	83		
L	82									
M	385									
S	83									
9	Helmets/face shields	550								
10	Pregnancy test kits	180								
11	Reflective jackets - Green (lime)	65								
12	Reflective jackets - Red or Orange	30								

- Managing pesticides and related supplies: All pesticides and related supplies will be stored in warehouses located close to the spray sites. A schedule will be developed for dispatching supplies by truck according to the proximity of the warehouses to spraying sites. Warehouse staff will maintain entry and exit records. Other facilities will also keep entry records verified by the RTI project Logistician or the District Logistician.

IEC development and Implementation

- IEC material design and production: A TOT manual and trainee manual will be developed by adapting existing IRS IEC materials to the Malian realities. The manual will be developed by the RTI IEC consultant who will work in close collaboration with the PNLP and CНИЕCS.

Once completed, the manuals will be validated by CНИЕCS, other stakeholders including PNLP, WHO, USAID, and representatives from the health regions of Segou (representing circle of Bla) and Koulikoro.

RTI will pay for development and production of all IEC materials.

(Note: The TOT manual was validated by all partners on April 15th, 2008 and suggested changes were made. The final document was produced on April 25th, 2008.)

- **Training of trainers and IEC implementers:** The IEC TOT training will be held in the circles of Koulikoro and Bla for two days during the weeks of April 27th and May 1st, 2008. Two representatives from each of the 17 CSCOM in Koulikoro and two from the 25 CSCOM in Bla will be trained. In turn, the trainers will train the “relais” (IEC mobilizers) for 2 days in each circle the week of May 4th, 2008.

There are approximately 727 “relais” IEC mobilizers in the circle of Koulikoro and 1221 in circle of Bla. For the purpose of building the capacity of the “relais” system, the regional and circle Health Officers have requested that we train all 1948 relais and engage their services. Funding permitting, RTI proposes to implement a system of cascade training (training of trainers) that will allow all relais to be involved. If funding limitations do not allow the training of all relais, the trained relais will be organized in teams and will circulate throughout the villages served by of the CSCOM.

The training of “relais” will be conducted by the RTI IEC consultant and done in close collaboration with the PNLP and CНИЕCS. RTI will utilize existing communication channels and will work with the CSCOM and CSREF to identify IEC mobilizers.

The training of IEC mobilizers will be supervised by the RTI IEC consultant, the IEC coordinator from the PNLP, and representatives from the social mobilization staff of the health regional office.

- **IEC campaign implementation:** The IEC program will inform the population about the benefits and precautions associated with this malaria control intervention. In Mali, and more specifically in Koulikoro and Bla, RTI will utilize the government system of “relais” to implement the IEC campaign.

The implementation plan for the IEC campaign will be based on the information gathered by the RTI team during operations, logistic assessments and administrative assessments and discussions held with various stakeholders in Bamako, the Circles of Bla and Koulikoro, and the municipalities to be sprayed.

IEC supervisors and “relais” will establish initial contact and brief village leaders, religious leaders, and other organizations and associations operating in the area. Then they will organize village gatherings and conduct door-to-door visits. They will explain to the population the purposes, benefits and precautions associated with the intervention; answer questions; and deliver simple pamphlets to the households.

- Illustrative media for disseminating IEC messages
 - Community Radio – Highest reach based on listenership survey
 - Micro programs will be carried out to support quality of the IRS
 - Print Collaterals – Essential for one on one communication
 - Public information campaigns at strategic places
 - Participation cultural media
 - TV (limited use) or video projection – High impact but lower reach in some areas
 - Team Branding – Immediate recognition/acceptance by local authorities, religious associations, market place and youth and women’s associations
 - Feedback from watch “groups”, focus group discussions and meetings

Table 2: IEC Illustrative Media

Formal	Non formal	Mass med	Group med	Interpreter media	Traditional & popular media
Gov structures at national and village level. Health and agriculture extension networks. Educational system. Development projects.	NGOs. Traditional authorities. Religious groups. Women’s and, youth clubs.	Radio TV Folders Posters Banners	Video Meetings	Home visits	Theatre Comedians sketches

- Coordination with spraying operations: A geographical reconnaissance map will be created by the RTI Logistics Officer and regional district officers. This map will enable the mobilizers to know exactly where spray operations will be taking place and thus to notify homeowners of spray operations one or two days prior to the actual spraying.

Indoor Residual Spraying Operations

- Geographic planning, recruitment and orientation for district leadership/administration: Geographic planning will be done in close collaboration with the regional health officers. Recruitment of supervisors, however, will not take place, as RTI will utilize the system already in place in Mali. The “Service d’Hygiene” staff at the CSREF who have already been trained in outdoor spraying will supervise IRS spray operations. The recruitment of spray operators will be done by the head doctor at the “CSREF.”
- Environmental mitigation set-up: RTI will work closely with the Regional and Circle offices of the Ministry of Environment and the Ministry of Agriculture to provide qualified staff to monitor environmental safety and compliance with respect to the environmental guidelines maintained by their respective agencies as well as those required by RTI. Monitors will be tasked with monitoring the safe handling of insecticide, the proper use of protective gear, and the proper construction and marking of

areas designated for washing equipment, disposal of rinse water, etc. This important function is also incorporated into the duties of our RTI Quality Control (QC) Monitors.

To mitigate adverse impacts, RTI will

- Anticipate adverse impacts on human health and live stock to better avoid, minimize, mitigate, compensate and correct before cumulative effects are experienced;
- Provide WHO-standard Personal Protective Equipment (PPE) to all spray teams for IRS activities;
- Train all spray teams and drivers on good spraying techniques and how to respond in cases of emergency;
- Create awareness and sensitize targeted populations to the “do’s and don’ts” before and after spraying to reduce exposure incidents;
- Procure pregnancy tests for all female spray candidates. These will be given to the “chef de poste” at the CSCOM level who will perform the testing and do general physical testing for all spray teams.

RTI will conduct training for all surrounding health care facility personnel on emergency response to acute pesticide poisoning and all surrounding health facilities will be equipped with the recommended antidotes for pesticide poisoning. RTI will also locate storage facilities in environmentally sound sites and ensure that they are secured to avoid incidences of pilferage. The team will ensure the sound disposal of after-spray pesticide residue and that all empty pesticide sachets and un-used pesticides are locked securely until an appropriate disposal mechanism has been identified, such as shipping the sachets back to the manufacturer.

Note: Significant adverse impact could occur in the fishing village of N’Togosso, located in the circle of Bla, where houses are located very close to the river and the river has a dam erected across it. Accidental spills when crossing the bridge or unintentional or deliberate exposure to spraying could contaminate the water and harm fish, aquatic invertebrates, and the livelihoods of the village fishermen. For this reason, the SEA recommends that N’Togosso be excluded from the IRS program and instead host an alternative intervention including but not limited to the use of ITNs. The potential risk for contamination is too high to mitigate effectively.

Compliance with the measures described in the PERSUAP will be monitored on a regular basis by P NLP and DNACPN Mali. RTI International will also conduct an internal compliance inspection and submit a compliance report to major program stakeholders. Finally, USAID health and environment staff will be invited to visit the program site periodically to determine the progress of the IRS campaign and to assess compliance with the SEA. Compliance with measures described in the EIA “Environmental Impact Assessment” will also be monitored on a regular basis by the Malian Environmental Ministry and relevant Koulikoro and Bla officials.

- Recruitment and training for spray teams: RTI will recruit spray operators or use the system of “relais” already in place. Spray operators will be selected at the CSCOM level and organized in teams. The number of operators and teams will vary based on the number of villages, population, and households to be sprayed within the time frame of the operation – in this case, 40 actual work days. Training of spray operators will be conducted in a similar fashion to the IEC mobilizers. As with the IEC TOT program, personnel from the Region, CSREF and all CSCOMs will be trained at the CSREF for three days. Training of operators at CSCOM level will also be conducted in three days.
- Logistics support for spray operations: A major effort will be required to spray 72,000 homes, protect 450,000 people, and provide logistics support to 1,850 mobilizers and 413 spray personnel over a 40 day spraying period while working in a challenging environment. To facilitate this operation, RTI will locate office and warehouse space in the circles of Koulikoro and Bla and work with CSCOMs to identify facilities to store insecticide and spray equipment. If facilities are not provided by local authority, RTI will rent space and an adequate base of operations for spray teams in the CSCOM areas for the period of the spray round.

RTI will identify a source of adequate numbers of vehicles to transport spray teams. Team vehicles will be based at the CSCOM level for the purpose of transporting spray teams to the various villages within the radius of the CSCOM. We will also make provisions to transport supervisors and CSREF personnel involved in the duties of program monitoring.

Initial commodities will be delivered by Crown Agents to Bamako and released to RTI national staff. RTI’s COP and Logistics Officer will make arrangements for an inventory and the delivery of the items to each circle. Circle/regional personnel will inventory and distribute the equipment and supplies to the various CSCOMs for use in the field.

All materials and equipment will be subject to strict control procedures with particular emphasis on the chain-of-custody of insecticide. RTI’s process for insecticide control will be implemented in Mali. A standard operating procedure (SOP) on Security and Chain-of Custody for IRS Insecticide will be included in the operations plan.

- Post-spraying operations: Post spray operations will be conducted in collaboration with the PNLP and the Ministry of Environment. The data collected during spray operations will be presented to the IRS Task team and all relevant partners. RTI will then submit a report to USAID.

All equipment stored in the CSCOMs will be collected and stored in the warehouses of Koulikoro and Bla circle. All PPE will be cleaned, fixed and stored for use in the following round. Remaining pesticide will be stored based on the instructions from the USAID team in Mali, PNLP and the Ministry of Environment. Immediately after the end of each spray round, RTI staff will begin to work in collaboration with PNLP and MRTC to prepare for the next spray round. Preparations for a spray round and IRS planning activities should start at least 6 months before the next round.

Other Activities

- Environmental compliance: Environmental compliance will be monitored by the RTI environmental inspector from the Nairobi regional office and the RTI Environmental consultant based in Mali, working in close collaboration with the Ministry of Environment.
- Entomological monitoring: Entomological monitoring will be carried out by PNLP and MRTC. RTI will not play an active role in the monitoring but will work with MRTC and PNLP in developing the data collection form.
- Capacity building in M&E: Each district will have a combination of monitoring personnel including Field Monitors from the CSREF and PNLP and as necessary, additional QC monitors provided by RTI to augment this vital component. This activity will be managed by the RTI's M&E officer. These individuals will be tasked with monitoring the quality of the IEC campaign, the quality of the spraying performed by the operators, and the proper use protective gear. They will provide on-the-spot corrections and/or dismiss personnel when necessary. In addition, they will perform unannounced roll calls to ensure everyone is present and audit spray cards against homes recorded. They will also interact with the population served and determine the level of service satisfaction in areas of IEC and spraying.
- Sustainability Plan: RTI Mali will work with the PMI in-country team, the PNLP and other key stakeholders to develop a capacity building and IRS sustainability plan that outlines how responsibilities for IRS activities will be transferred from RTI to the NMCP (and other partners) over the next 2-3 years.

IV. Management Plan

Staffing & In-country Structure, Roles and Responsibilities

The following chart depicts the staffing structure in Bamako office and the seasonal staff in the circles. RTI staff will work in close collaboration with the MOH at the national and circle levels. Arrows in the chart represent the close coordination between RTI and the MOH and MOE (Ministry Of Environment) at the national and circle levels.

Table 3: Organizational Chart

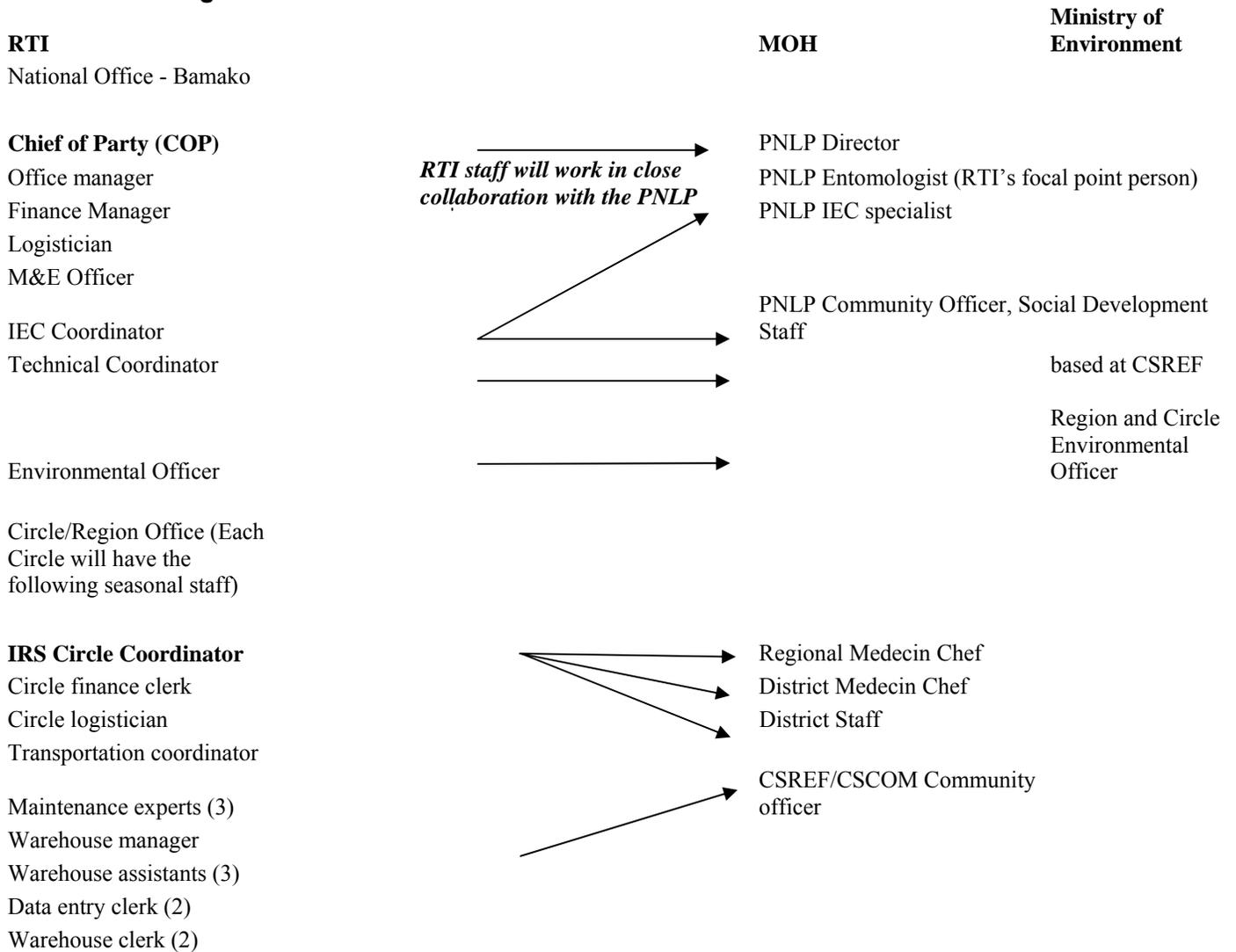


Table 4: Total Spray Personnel

Location - District	Distance from District HQ	Number of locations	Estimated population	Estimated House-holds	Estimated rooms	No of IRS Operators (36 days)	No. of Team leaders	No. of Supervisors	Monitors	Total Spray personnel
KOULIKORO	NA	17	182,407	28,953	86,860	134	24	8	2	168
BLA	NA	25	269,121	42,718	128,153	198	33	11	3	245
Total		42	451,528	71,671	215,013	332	57	19	6	413

Strategic Technical Assistance and TDY plan

- Home Office Technical Manager Bijou Muhura undertook 4 trips to include office set up, facilitation of the logistics and environmental assessments, orientation for new staff, relationship building with stakeholders and partners, facilitation for during spray operations, management activities, and participation in the end of spray round.
- Operations Manager Kim Canelas undertook one trip from RTI's Nairobi regional office to work on the logistics assessment.
- Operations Director Suzanne Hoza will undertake one trip from RTI's Nairobi regional office to work to participate in the planning for the next spray round.
- Environmental Specialists Jeanne Chabrier and Tito Kodiaga undertook one trip to work on the environmental assessment.
- Crown Agents Specialist Ronald Hooper undertook one trip to research customs rules and facilitates the transportation of the pesticide to a final warehouse when it arrives in country.
- Nairobi Controller Sam Mesfin undertook one trip to train the first hired Finance manager. He will undertake one extra trip to train the new Mali Finance Manager on rules and regulations.
- Technical Director John Chimumbwa undertook one trip from Nairobi to do the TOT. He will undertake an additional trip to participate in the end of spray round activities.
- Environmental Inspector Gaspard Bikwemu undertook two trips from RTI's Nairobi regional office to conduct the pre environmental inspection; he will undertake one additional trip to do the post environmental inspection.

The following table represents RTI's plan for providing technical assistance:

Table 5: Strategic Technical Assistance and TDY Plan**STTA trips already completed**

Name, title and source of traveler	Origin	Tasks undertaken/activities supported	No. of trips
Bijou Muhura, Home Office Technical Manager, RTI employee	USA	Office set up, facilitated the logistics and environmental assessments, orientated new staff, consultation and relationship building with stakeholders and partners, facilitated spray operations start up activities, management activities	4
Kim Canelas, Operations Director, RTI employee	Nairobi	Logistics assessment	1
Jeanne Chabrier and Tito Kodiaga, Environmental Specialists, RTI employees	USA	Environmental assessment (Note: Chabrier and Kodiaga traveled concurrently)	1 each
Ronald Hooper, procurement Specialist, Crown Agents (RTI IRS subcontractor)	UK	Researched customs rules and facilitated the transportation of pesticide to final warehouses (Note: This trip is embedded in the subcontract line item under crown agents)	1
Sam Mesfin, IRS Controller, RTI employee	Nairobi	Trained the IRS/Mali Finance Manager on rules and regulations	1
John Chimumbwa, Technical Director, RTI employee	Nairobi	Conducted the Training of Trainers (TOT)	1
Gaspard Bikwemu, Environmental Inspector, RTI employee	Nairobi	Conducted the pre- environmental inspection activities	2

STTA trips to be conducted

Name, title and source of traveler	Origin	Tasks to be undertaken/activities to be supported	No. of trips
Sam Mesfin, IRS Controller, RTI employee	Nairobi	Train the newly hired IRS/Mali Finance Manager who started in September 2008 on rules and regulations	1
Suzanne Hoza, Operations Director, RTI employee	Nairobi	Participate in planning for the next spray round	1
John Chimumbwa, Technical Director, RTI employee	Nairobi	Participate in the end of spray round activities; provide technical guidance on forward program operations	1
Gaspard Bikwemu, Environmental Inspector, RTI employee	Nairobi	Conduct the post-spray round environmental inspection.	1

V. Monitoring and Evaluation

Indicators

PMI indicators:

A. Core indicators

- Percentage of sprayable structures found in the target area that were sprayed.
- Number of residents of sprayed structures
- Number of people trained to deliver IRS

B. Additional indicators

- Supervisory Ratio describing the number of team leaders and spray operators reporting to each supervisor
- Number of insecticide sachets in stock
- Percentage of empty sachets returned
- Percentage of empty sachets disposed
- Proportion of health facilities at which health workers who have been trained to treat cases of pesticide poisoning and exposure
- Percentage of female spray operators tested for pregnancy during spray operations

Additional IRS/Mali indicators:

- Number of pregnant women sleeping under LLN the previous night
- Number of children under 5 years old sleeping under LLN the previous night
- Number of people who receiving training in malaria prevention (by gender)
- Number of national and local health officials who participated in leadership roles for IRS planning or implementation during the last reporting period

Information Collection Plan

Records and forms created by RTI as tools to gather information on the IRS project will be used for data collection. These forms are already used in all PMI countries by IRS and will be adopted in collaboration with the PNLP to the realities of the Malian health system. Gathered information will be compiled by the data clerks and sent to the M&E officer.

Reporting Plan

During the spraying season only, reports will be sent every two days to the Mission, the IRS Task force team and other relevant partners, showing the number of houses that were sprayed and the villages sprayed.

During the spray season the COP and/or Technical Coordinator will have frequent meetings with the Mission and the PNLP director to keep them informed of operations on the ground.

Attachment % Mali Implementation Plan and Timeline

For period from January 2008 to December 2008

Component	Activity	Person/ partner Responsible	Project Month												Key Milestones		
			J	F	M	A	M	J	J	A	S	O	N	D			
Project Start-up/ Mobilization	Meet with key partners.	Bijou Muhura (Home Office Technical Manager), John Chimumbwa (Tech Director), USAID	■														Country work plan approved by USAID. MOU/aide memoire signed.
	Deploy key personnel - COP, Logistician, Finance Manager, Administrative Assistant, Technical Coordinator, and M&E Officer.	Bijou						■									
	Establish main office in Bamako.	Bijou			■												
	Establish satellite offices in Koulikoro and Segou.	Bijou, Moussa Traore (logistician)						■									
	Open corporate bank account.	Bijou	■														
Planning and Assessment	Visit authorities in Koulikoro and Bla Circles.	Bijou, PNL		■												Logistics & baseline entomology assessments completed. SEA approved. Pesticide selected.	
	Conduct logistics assessment.	Kim Canelas, Bijou, PNL		■													
	Conduct environmental assessment.	Jeanne Chabrier, Tito Kodiaga, Bijou, PNL		■													
	Visit IRS localities to gather information on the field conditions.	Bijou, Moussa, Mamadou Djire (M&E), Sekou Traore (Tech Coordinator), PNL					■										
	Meet with stakeholders, including MRTC, PNL, MOE, CINIECS, DNS, CILS, and other stakeholders	Bijou													■		
	Submit Supplemental Environmental Assessment.	Jeanne				■											
	Submit Environmental Impact Study.	Bijou				■											
	Conduct baseline survey and test pesticides.	MRTC	■														
	Select pesticide.	MRTC, PNL, WHO, DNS			■												
Procurement and Logistics	Develop technical specifications.	Crown Agents, RTI			■											Technical specifications released. Vendors selected. Insecticide, PPE and equipment delivered	
	Release tender notice for procurements.	Crown Agents			■												
	Review and select vendors.	Crown Agents					■										
	Receive and inventory insecticide, PPE, and equipment.	Crown Agents						■									
	Transport equipment and materials to storage facilities and conduct inventory.	Crown Agents						■									

Component	Activity	Person/ partner Responsible	Project Month												Key Milestones		
			J	F	M	A	M	J	J	A	S	O	N	D			
	Maintain records of entry and exit in storage facilities.	RTI															
IEC Development & Implementation	Submit training of trainers' manual to CНИЕCS for approval.	RTI															Needs assessment completed. IEC materials produced. Training completed. Campaign launched.
	Recruit IEC implementers.																
	Conduct training of IEC implementers.	RTI IEC consultant, PNLП IEC coordinator, CНИЕCS															
	Establish contact and brief village leaders.	Bijou, PNLП															
	Conduct village gatherings and door-to-door visits.	IEC implementers															
	Disseminate IEC messages through media.	RTI IEC consultant															
	Develop geographical reconnaissance map to inform IEC activities during spraying.	Moussa (logistician), Regional health office, CSCOM, CSREF															
Spraying Operations	Conduct geographic planning.	RTI and Regional health office															District staff recruited and trained. Medical check-ups completed. Training completed. Spraying launched. Spraying completed. Equipment and supplies recaptured.
	Mobilize Service d'Hygiene staff from the CSREF to train spray operators.	RTI, PNLП, CSREF, Regional district															
	Train health personnel and equip health centers to respond to pesticide poisoning.	RTI, CSREF															
	Locate and secure storage facilities in each CSCOM and in Region of Segou and Koulikoro	Moussa															
	Rent vehicles for transportation of spray teams.	Moussa															
	Recruit spray operations	CSREF, CSCOM, Regional health office															
	Train spray operators.	RTI, PNLП, Regional health office, CSREF, Trained Service d'hygiene, MOE															
	Conduct spraying & Supervise spraying	Trained sprayers, RTI, MOE, PNLП, Supervisors															
	Visit program site periodically to determine the progress of the IRS campaign.	USAID															
	Collect, clean, and store equipment and remaining pesticide for next round of spraying.	RTI, MOE, PNLП, Regional health Office															
Monitoring & Evaluation	Conduct monitoring at each level of IEC campaign and spray operations.	RTI IEC consultant, PNLП, Trained supervisors, CSCOM, CSREF, MOE, Trained														M&E reports submitted to USAID. Post-round evaluation completed.	

Component	Activity	Person/ partner Responsible	Project Month												Key Milestones		
			J	F	M	A	M	J	J	A	S	O	N	D			
		Service d'hygiene															
	Conduct an internal compliance inspection and submit report to stakeholders.	Gaspard Bikwemu (RTI inspector)															
	Conduct monitoring of number of people trained on the IRS project	Mamadou Djire (M&E), PNLP															
	Conduct monitoring of number of insecticide sachets used per household sprayed	Mamadou, RTI spray supervisors, RTI warehouse manager															
	Prepare end of spray report, submit to USAID and present it to IRS Task force	Bijou & COP															
Other Activities: Reporting	Send weekly report of activities	Bijou, COP															Monthly technical reports submitted. Quarterly financial reports submitted. End-of-round report(s) submitted.
	Weekly meeting with the mission to report on IRS operations	COP, Sekou Traore (technical coordinator)															
	Regular reporting during spray operations	Bijou, COP															
Other Activities:	Collaborate with MRTC on the larviciding and IRS project in Koulikoro and Bankumana	RTI, MRTC, PNLP															
	End of spray activities – store all equipment and have everything accounted for, do end of spray evaluations	RTI															
	Start preparing at least 6 months in advance for next spray round	RTI, PNLP															

Attachment 2: Mali Countdown Calendar

For period from October 2007 to December 2008

Component	Key Milestone	Date to be Completed	Status (e.g., date achieved)	Antecedent to:
Project Start-up/ Mobilization	Country work plan approved by USAID.	May 2008		Producing MOU and/or aid memoires
	MOU/aide memoire signed with government and/or key partner.	June 2008		Initiating planning activities with government and/or key partners
Planning and Assessment	Logistics assessment completed.		Completed on January 29 th , 2008	Planning scope and scale of operations and procurement to be required
	Baseline entomology assessment completed.		Completed December 2007	Pesticide selection
	Agreement reached with USAID and government on pesticide selection.		Letter sent to RTI to inform about the selected pesticide on April 8 th , 2008	Permission for spray operations
	Supplemental Environmental Assessment completed.		Completed April 22, 2008	Finalization of EA and approval
	SEA approved by USAID		Waiting for Approval	Permission for spray operations
	EIA approved by national environmental agency, if required	Waiting	for Approval	Procurement
Procurement & Logistics	Technical specifications for tenders approved and released.		March 2008	Ordering supplies for spraying
	Vendor selection and procurement process completed.		April 2008	Delivery of supplies for spraying
	Compression sprayers delivered		June 2008	Spray operator training
	Insecticide and PPE delivered	Tax exemption process to be done by mission in order to bring PPE and Waiver needed from MOA to bring pesticide in	June 2008	Initiation of spray operations

		country		
IEC Development & Implementation	IEC needs assessment completed.		Completed on March 3rd, 2008	IEC material design
	IEC material designs and implementation plan approved.	Co	Completed on March 17 th , 2008	Production of materials
	IEC materials produced and delivered to project.	Printing of Materials to be completed in May 2008	IEC TOT manual validated and approved by all partners on April 15 th , 2008.	Training of IEC implementers
	Training of IEC implementers completed.		Scheduled for week of May 4 th , 2008	Implementation of IEC campaign
	IEC campaign launched.	May 2008	IEC launched in Bamako on April 26 th , 2008	Spraying operations
Spraying Operations	Geographic reconnaissance completed	June 2008		Team assignments and logistics arrangements
	District staff recruited, oriented and trained.	June 2008		Completion of operational logistics and EM set up
	Operational logistics and environmental mitigation set up at operational sites.	June 2008		Spraying operations
	Medical check-ups (including pregnancy tests) for sprayers, supervisors, warehouse staff, cleaners, etc. completed.	June 2008		Permission to spray
	Training of spray operators completed.	July 2008		Spraying operations
	Spray operations launched.	July 2008		
	Spraying operations completed.	July-Sept 2008		Recapture and proper management of equipment and supplies
	Equipment and supplies recaptured and securely disposed or stored.	July-Sept 2008	Env	Environmental compliance
	Post-spraying evaluation conducted.	June – Sept 2008	Fi	Final report production
End of spray report produced and submitted to USAID.	Oct 2008			
Other Operations	Initiate activities for next spray round (this needs to be initiated at least 6 months prior)	Nov - Dec 2008		