



PRESIDENT'S MALARIA INITIATIVE



INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL

PMI IRS Project in Angola

Work Plan

October 1, 2007 – December 31, 2008

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Prepared for:
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I. Introduction, Background and Summary of Country MOP

The United States Agency for International Development (USAID) under the President's Malaria Initiative (PMI) awarded RTI International (RTI) a contract to work with The Republic of Angola's (Angola's) Ministry of Health (MOH) and its National Malaria Control Program (NMCP) to implement indoor residual spraying (IRS) and other malaria control and prevention activities in Angola. RTI previously assisted the Angolan NMCP with its IRS program, overseeing spraying in four provinces in 2006 and 2007 and achieving high coverage rates which contributed to a sizeable drop in the number of reported infections. Based on this result, the NMCP is asking for assistance in conducting two rounds of IRS and other select activities between October 1, 2007 and December 31, 2008. This work plan describes the activities, milestones, implementation plan, and budget associated with the PMI IRS Project in Angola during that time period.

Angola became one of the first three countries to receive support from the President's Malaria Initiative (PMI) in May 2006. At the time, Angola was recovering from three decades of civil war, which decimated approximately 80 percent of the country's public health facilities; only about 30 percent of the population had access to public health services. Before PMI began work in Angola, no large-scale IRS had been conducted by the NMCP for more than 10 years. Activities supported by PMI and managed by RTI in Angola in 2006 and 2007 include spraying of 110,000 houses, protecting a total population of more than 613,000 in three southern provinces, Huila, Cunene, and Namibe. More than 85% of the houses targeted for spraying during this time were sprayed.

During fiscal year 2008, IRS will be continued in Angola's southern province of Huila, which reports the most cases of malaria among the southern provinces, and discontinued in Cunene and Namibe provinces. IRS will be initiated in Huambo province, the second most malarious province in the country. Between October 1, 2007 and December 31, 2008, RTI will conduct two rounds of spraying within these areas. One round of IRS occurred between December 2007 and April 2008 and protected a total of 140,000 households, benefiting an estimated 600,000–700,000 residents. The second round of IRS will occur between October 2008 and December 2008 and will also protect 140,000 households.

II. Strategy for IRS Country Support

The overall objective of the PMI IRS Project in Angola is to help the MOH and the NMCP provide IRS and other malaria control interventions to 85% of the targeted population, thereby achieving a 50% reduction in malaria-related mortality by the end of the program in 2010. RTI will work under the direction of and in full collaboration with the NMCP to implement IRS campaigns as an integral part of the government's malaria control program.

The projects main activities between October 1, 2007 and December 31, 2008 will be:

- *Provide direct operational support to implement two rounds of IRS in Huambo and Huila provinces.*
- *Provide support to the NMCP to strengthen their malaria case detection and epidemic response capabilities.*

Specifically, in each round of IRS, RTI will spray approximately 80,000 households in Huila Province in southern Angola and 60,000 households in Huambo Province in central Angola. This effort will involve the procurement of insecticide, sprayers, protective equipment and supplies, establishment of storage facilities, mapping of areas to be sprayed, hiring and training of local staff in IRS operations, and the management of spray operations, in addition to pre- and post-campaign surveys to assess the effectiveness of information, education, and communication (IEC) activities and the satisfaction of the population.

Additionally, and in the provinces of Cunene and Namibe where IRS campaigns are being discontinued, RTI will work with the NMCP to help them transition from an IRS-based prevention approach (to high insecticide-treated nets [ITN] coverage) and strengthen their malaria case detection and epidemic response capabilities. As such, RTI will: 1) train NMCP staff on entomological monitoring, 2) deliver a training program on malaria diagnosis and microscopy, 3) develop a temporary insectary until a permanent insectary is built with funding from the Integrated Vector Management 2 project, 4) support the development of a malaria early warning system, including training and equipment preparation, and 5) translate the national strategy to control malaria.

RTI is committed to delivering and maintaining the highest quality services and technical standards for the PMI IRS Project in Angola. All IRS activities are conducted strictly within the limits of relevant environmental law and treaties (22 CFR 216, Angolan laws and regulations, and regional and international treaties such as the Basel Convention and Stockholm Convention), using open and transparent procedures for pesticide selection, mitigating risks, ensuring safe storage and inventory control of pesticides, safe disposal of waste, and thorough monitoring of all spray activities to protect the health of IRS program staff and community members.

RTI is committed to working with all partners in malaria control as a team. USAID has set a high standard for cooperation with local, national, and international partners in malaria. This project team is committed to transferring skills and knowledge to our partner institutions and building capacity and local ownership of the program. This project will meet with partners regularly and coordinate activities with them under the guidance of the NMCP.

III. IRS Activities

Planning and Assessment

Logistics Assessment

The RTI IRS team conducted logistical reconnaissance visits to Huila and Huambo provinces to prepare for the IRS campaign which began in December 2007. In particular, logistical efforts were focused in Huambo where spraying was to occur for the first time. Logistical efforts in Huila consisted of fine tuning previous operational approaches and information. During these visits, RTI assessed local conditions in order to determine the compounds to be sprayed, amount of insecticide, number of compression sprayers, spare parts, and personal protective equipment required to support IRS operations. The team also sought to assess the availability of suitable warehouses and their rental prices; the availability of clean water and facilities to obtain the necessary amount needed to support operations; road accessibility to the compounds to be sprayed; road accessibility from Luanda to Huambo; the availability of adequate quantities of vehicles to hire and price competitiveness.

The logistics assessment also: 1) describes the NMCP's current IRS monitoring and evaluation (M&E) activities and opportunities to enhance these capabilities; 2) identifies potential partners for implementing IRS in target areas; 3) describes the roles and responsibilities of ministries, RTI, USAID, and partner organizations; and 4) describes the managerial structure of the program and human resource needs for IRS activities. The assessment also provides an initial timeline and budget. The budget and implementation plan submitted in this proposal are based on the logistics assessment that was conducted by the RTI team.

RTI is currently conducting post-spray operations and is planning logistics assessment trips to Huila and Huambo to update all logistical assumptions in order to support the next IRS campaign that is scheduled to begin in Huila and Huambo in October 2008.

Environmental Assessment and Compliance

To support the launch of PMI activities in Angola in 2006, RTI developed a pesticide evaluation report and safer use action plan (PERSUAP) for IRS activities in Angola. This PERSUAP was approved by USAID in October 2005 and contains information on the public health pesticide management activities in Angola; pesticide requirements and the current regulatory status of proposed insecticides; proposed mitigation and M&E activities in Angolan malaria control programs; and explored other topics as required by US Code of Federal Regulation Title 22 Section 216 (22 CFR 216) concerning pesticide use. Although RTI is now producing supplemental environmental assessments (SEA), which contain both PERSUAPs and environmental management plans, for newer PMI countries today, RTI still operates under the terms of this original PERSUAP agreement in Angola. However, a PERSUAP addendum was completed in 2007 to cover IRS operations in Huambo province.

RTI also conducted an environmental compliance visit to Angola during Year 2 activities in March 2007. This compliance report noted areas of excellence, as well as areas needing improvement and the measures that are being taken in response for the IRS operations. RTI will be visiting Angola in October 2008 to conduct an environmental compliance inspection of the country's spray operations. The results of this inspection and recommended mitigation steps will be communicated to RTI and USAID. During this time, information will also be collected in order to support the development of an updated supplemental environmental assessment.

Pesticide Selection

Angola is currently using pyrethroids for IRS, specifically lambda cyhalothrin. In Huila, RTI has been using a formulation of the pesticide referred to by its trade name ICON-WP. In Huambo, RTI began using a new encapsulated formulation of lambda cyhalothrin, referred to by its trade name ICON-CS. This formulation produces a longer-lasting residual effect than would be possible using alternative pyrethroid formulations, and should be particularly effective given Angola's long transmission season. RTI is planning to use its remaining stock of ICON-WP in both provinces during round four of spraying beginning in October 2008.

Procurement and Logistics

Procurement of Pesticide and Related Supplies

Until August 2008, RTI has led the IRS commodities procurement effort, which includes supplier performance monitoring and management; monitoring and anticipation of production capacity issues and potential delays; advising clients if this may adversely impact deliveries; risk management; responding to advice from U.S. regulatory bodies (e.g., EPA); and complaint management and correction. Starting with procurement support provided for round four of spraying in October 2008, RTI's designated procurement partner Crown Agents will oversee all procurement activities in Angola. RTI has undertaken or Crown will undertake the below tasks for the PMI IRS Project in Angola:

Model Tender Documents and Procurement Specifications. RTI developed model documents and clear specifications for use in its tenders for insecticide, compression sprayers, protective equipment, and other required commodities as part of its previous work under Task Order 1 of the IRS IQC. RTI adapted these to the specific needs of the PMI IRS Project in Angola. Procurement for the 2008 spray program was initiated by Crown in the summer of 2008. All purchases were based on the logistics assessments completed for each province.

Supply Chain Methodology. The project requires commodities specific to IRS (e.g., pesticide, protective clothing, and spraying equipment), as well as office furniture, communications equipment, and vehicles. Insecticides are considered a restricted commodity by USAID (ADS 312.5.3e) and must be individually, explicitly approved unless a waiver is granted to cover the full project period. RTI received a waiver to cover insecticide procurement.

Local Procurement. Vehicles and office equipment are likely to be obtained at a better price locally. The project also may obtain better after-sales service from a local distributor. Crown assures that products that are made locally to an acceptable standard and at a competitive price are always bought in-country (unless there are compelling reasons to the contrary). Where appropriate, RTI uses the discretion allowed under USAID rules to buy locally, thereby shortening supply chains and delivering an additional benefit from USAID funds supporting the local economy. In other cases (e.g., vehicles), appropriate waivers are sought. In September 2008, RTI received approval for a 935 geographic code to support local procurement of equipment.

Inventory Planning and Management. To reduce order procurement cycle times, Crown Agents is creating long-term IQC contracts for key IRS insecticides and other required supplies. Some commodities will require storage and transport. Handling requirements and specifications stipulated in our contract have been adhered to throughout the shipping and delivery process.

Managing Pesticides and Related Supplies

In accordance with the SEA, RTI has implemented a strict chain-of-custody system of pesticide management in Angola to ensure that all insecticide is accounted for at every step of the program implementation process. The PMI IRS Project in Angola management team oversees the stock of pesticides and related supplies in Angola. Storekeepers and provincial supervisors received training on insecticide tracking and record keeping.

During spray programs in Angola, team leaders are responsible for opening sachets and pouring them into pumps to make the soluble spraying mixture. The team leaders then handed any remaining full or empty sachets to the supervisors, who are accountable to the Logistics Manager in each province. In effect, although the local community (spray operators and team leaders) under the leadership of local government officers (supervisors and provincial health management) uses the pesticide and equipment in the field, RTI both establishes storage warehouses and hires appropriate security and storekeepers. RTI is responsible for storing, allocating, recording, maintaining, repairing, and recapturing all pesticide and equipment.

IEC Development and Implementation

IEC Material Design and Production

The PMI IRS Project in Angola is currently leveraging IEC materials that were developed in 2006 to support the first PMI-supported spraying in Angola. The original materials were developed by RTI in partnership with the NMCP for the first PMI-supported spraying in Angola. This material was proven effective in the two previous IRS rounds. The quantity of materials was increased this year in order to reach a broader target population and to help increase the level of community acceptance, cooperation and compliance with IRS spraying teams and procedures.

Training of IEC Implementers

The IEC campaign in Angola is led by RTI. RTI developed the job specifications for IEC mobilizers, the IEC mobilizers training program, and a plan to locally recruit and select highly qualified candidates. The training of the IEC mobilizers was conducted by RTI's Chief of Party, Provincial Coordinators (also called Site Managers), and M&E Officer. The training to support the December 2007 IRS campaign lasted one week and involved both classroom, role-playing, and field-based training approaches. [Note: The initial plan was to involve the provincial health department (PHD) in IEC operations. However, the NMCP does not have any IEC specialist and the PHD was at the time involved with other pressing activities, such as a cholera and polio outbreak]. Training to support the October 2008 IRS campaign will follow a similar model.

IEC Implementation and Spraying Coordination

The IEC campaign to support the December 2007 IRS campaign was implemented in two phases. The first phase took place one week before the start-up of spraying and involved IEC mobilizers visiting each house within the two target provinces and informing all adults about the upcoming spraying and how homeowners can cooperate with the IRS teams. The second phase took place one day before spraying and involved IEC mobilizers visiting each village one day before spray operators were to reach that village. During this visit, the IEC mobilizers communicated again with household members about the importance of allowing spray operators access to their homes. During both contacts, the IEC mobilizers distributed pamphlets about IRS and how to comply with IRS operations.

Further support for the IEC mobilizers and the spray operators was offered by local radio campaigns that were initiated by the MOH and reinforced all public messages on IRS. Beneficiary committees were also established in each village to educate household members who refused spray operators access to their houses.

In order to best support the IRS effort, IEC mobilizers attended the daily IRS operational meetings hosted by the IRS team leaders and supervisors. The planned and consistent forum throughout spray operations helped to ensure the IEC teams were able to best support IRS teams and operations.

IEC implementation to support the October 2008 IRS campaign will follow a similar model.

IRS Operations

RTI's Chief of Party (COP), Mr. Antonio Muhungo, and country program staff direct the IRS program implementation, with support from RTI's regional advisors in Nairobi, Kenya, and RTI's Home Office Technical Manager (HOTM) and other back-stop personnel in the U.S. We have used proven approaches and protocols to accomplish each of the following tasks in Angola.

Field site set-up. The PMI IRS Project in Angola's national office in Luanda oversees IRS operations in Angola. Prior to commencing spray operations, RTI located and secured field offices and warehouse space in each province and set up field communications and local banking arrangements. Additional logistical preparations that were completed include arranging water and fuel supply; setting up locations for equipment repair and storage, insecticide storage, team assembly, changing/wash rooms, rinse stations for spray equipment, and laundry; transporting equipment and insecticide to sites; obtaining maps and materials for geographic reconnaissance; and identifying training location and practice walls.

Recruit and train staff. RTI worked with the PHD and the NMCP to identify and recruit seasonal/part-time workers from communities in which IRS occurred. Workers included spray operators, team leaders, monitors and supervisors, equipment technicians, and community mobilizers. Based on the logistics assessment, we estimated the following requirements to support the December 2007 operations: 590 spray operators; 75 team leaders; 25 IRS supervisors; 34 field monitors; 85 IEC mobilizers; 9 IEC supervisors; 2 IEC managers; 2 data clerks; 10 cleaners/supply coordinators; 4 logistic assistants; 6 M&E assistants; and 2 equipment technicians. As the target districts and number of households to be sprayed will remain consistent for the October 2008 IRS campaign, we anticipate needing the same level of support for this spray round. Further, it is anticipated that many seasonal staff from the December 2007 operations will be available for the October 2008 operations.

RTI conducted two sets of training: training of trainers (TOT) and spray operator training to support the December 2007 operations. During the TOT, supervisors were taught all of the basics associated with IRS. The training also addressed team management skills, technical reconnaissance, mapping and team deployment, environmental compliance and safety issues, and spray-data collection. The trainers then went on to train the spray operators in similar topics. The eligible candidates attended a "refresher" training in Huila (sprayed last year) and a full IRS training in Huambo. The training lasted one to two weeks and was conducted in October and November 2007 by the RTI technical director and technical advisors. A refresher training session was conducted in February and March immediately before spraying in each province. RTI is planning to conduct one training session lasting one-week to support the October 2008 operations.

Geographic reconnaissance and detailed operational planning. In October and November 2007, RTI prepared and checked reconnaissance maps of the villages to be sprayed; confirmed the number of houses to be sprayed and program timetable; prepared team rosters and schedules; assigned teams to vehicles; and prepared full versions of spray schedule to

cover all targeted areas in the time available. The team-leaders and supervisors, led by the site managers, conducted the reconnaissance with collaborative guidance from the local administrations.

Train clinical staff to manage pesticide exposure cases. RTI worked with the PHD to ensure that physicians and supervising nurses at area health centers are familiar with the symptoms and treatment protocols for pesticide exposure and pesticide poisoning. The PHD recommended and helped identify locally available creams at different pharmacies. Training was also provided to IRS program truck drivers on environmental safety measures.

Launch and implement the IRS program. Launch activities focused on community mobilization and providing key messages regarding IRS; community mobilizers do their advance work in communities to be sprayed; spray teams deploy and do their work; spray operators follow protocols and document their work. Technical advisors including World Health Organization (WHO) national program officers for malaria and the NMCP focal persons in each province provided close supervision and note any issues necessary to be corrected. Supervisors reviewed daily spray sheets and provided feedback to operators. RTI compiled weekly spray records and reported weekly on the program's progress.

Logistics Support for Spray Operations.

The RTI IRS management team rented well-located and functional warehouses and field offices with proximity to project sites to allow for the efficient storage and distribution of equipment and material. Adequate vehicles were locally hired for the safe and secure transportation of the IRS teams, insecticide, and IRS equipment. RTI worked with the local governments in each area to obtain the necessary quantity of water to support IRS operations. Water tanks and drums were locally purchased to store water for IRS, washing of the equipment, and use during water shortage periods. All minor equipment, expendable material and services for the operations and office supplies were locally purchased or obtained. Qualified logistics assistants were hired to professionally perform the necessary logistic functions. Whenever necessary, seasonal labourers were engaged to assist the logistics assistants. The necessary tools and mechanisms were in place to guarantee the timely and efficient logistics support for the teams deployed in the field and office work.

Environmental Mitigation Set-up

RTI established a clear environmental mitigation plan as part of this IRS program. First, environmental scientists produced an addendum to the PERSUAP which was agreed to by USAID. In addition, the IRS team included in the TOT and spray operator training programs specific procedures and norms specific to Angola that were identified in the previous compliance visit by the RTI environmental compliance team. These procedures and norms were presented as compulsory for all personnel involved in the IRS campaign. Furthermore, strong disciplinary measures and actions were taken against those who failed to comply with them.

As described above, a strict internal routine was adopted to guarantee that pesticide were only carried and distributed to the operators by authorized personnel. The soluble spraying mixture was always made by the operators in the presence of the team leaders or supervisors. Any remaining soluble mixture of insecticide was always stored in drums or kept in the pumps for use the following day. Any unsuitable mixture for use was kept in sealed drums until appropriate measures for disposal were available.

Empty sachets were immediately collected by the team leaders and safely kept for transportation and delivery to the warehouse manager. The delivery and storage of the empty sachets was conducted by warehouse staff that was suitably protected by PPE. The sachets have been stored in drums for future disposal. The disposal will take place under strict direction from the RTI environmental team, with concurrence by the USAID Inspector General in the region and with inputs from the pesticide manufacturer.

The IRS field monitors have also played a significant role in the IRS operations environmental monitoring and compliance. They are responsible for monitoring and reporting to the IRS COP any indication of mishandling of insecticide or break of norms. In the event of evidence of possible environmental damage or damage to health, the monitors are empowered to take immediate action to prevent damage and request further corrective measures, which may involve severe disciplinary actions, such as immediate dismissals.

Post-spraying Operations

Once spraying is completed in a compound, RTI conducts mop-up exercises to spray those houses that were either not found in the first phase of operations or at which no one was home at the time of visit. In addition, RTI will undertake a post-spray operations survey of target communities to assess the effectiveness of IEC activities and the satisfaction of the population. All materials and equipment will be collected, cleaned, enumerated and stored until next usage. RTI is in the process of conducting post-spray operations in Angola.

Following spraying, RTI will also work with program partners to determine the effectiveness of spray operations, both from the perspective of the satisfaction of beneficiaries and with regards to the effectiveness of the insecticide applied on household walls. RTI will work in collaboration with the PHD and other partners such as the CDC to gather information about malaria transmission in the target areas after spraying. The data will be compared with existing data from previous period in the areas to measure the impact.

Other Capacity Building Activities

Insectarium

RTI will be responsible for setting up a temporary insectary in the fall of 2008 to support the entomological monitoring that will be conducted during round four of spraying in Angola. RTI has also been involved in developing with the CDC specifications to build a permanent insectarium at the National Institute for Public Health in Angola. The direction RTI has provided to date includes the advertisement and collection of quotations for the building, setting-up of the quotation evaluation committee, and the advertisement for construction firms to supervise and certify the construction. The funding to build the permanent insectary will come from USAID's Integrated Vector Management (IVM) 2 project.

Malaria Early Warning System

RTI has been requested to provide training to the NMCP and PHD on malaria warning systems. RTI has identified an international entomologist and malaria expert who will visit Angola in October 2008 to train NMCP technicians in Huila, Namibe and Cunene in the establishment and running of malaria early warning systems. The goal is for the system to be operational as soon as possible during the rainy season (i.e., starting around October 2008). With this system, the NMCP will be able to quickly understand any trend in the increase of malaria cases for adequate preparedness and response in the endemic-prone provinces where IRS has been discontinued.

Luanda Malaria Survey

In March 2008, a CDC team of enumerators came to Angola to gather data on malaria case stories at selected health facilities in Luanda. RTI provided administrative, logistics and financial support for the training of the enumerators and the data collection activity. The analysis and the interpretation of the data collected was intended to enable the NMCP to determine the level of malaria infection and transmission in Luanda in order to determine the best intervention to reduce malaria cases. This research was also intended to determine if the majority of malaria cases in Luanda are imported from other affected areas by travellers or are caught locally in Luanda.

Microscopy Training

RTI worked with the CDC to deliver one microscopy training of trainers (TOT) session on malaria diagnosis . The aim of the training was to build the capacity of laboratory technicians on new methods, techniques, and tools to identify malaria diagnosis with microscopy and train other technicians in the provinces. RTI provided logistical and financial support for the TOT. USAID has recently determined that this activity will be managed by Chemonics. As such, RTI will not provide future support for this activity.

IV. Management Plan

Staffing and Organization

Mr. Antonio Muhungo is the PMI IRS Project in Angola's Chief of Party (COP). He is based in Luanda and retains overall responsibility for managing RTI and partner activities under this project. He serves as the first point of contact for USAID on project management and performance. He provides guidance and on-site supervision for all activities in Angola. He makes trips as needed to province locations to coordinate with USAID and the NMCP on project performance and implementation issues and provides quality control and technical guidance to the provincial team's malaria control activities.

Mr. Muhungo directs the work of a national office staff in Luanda, including a Finance Manager, Logistics Officer, IEC Specialist, Data Manager and Program Assistant. He also directs an operational staff in each of the two provinces, including a Site Manager, Logistician, and Accountant. All these staff have been hired full-time and are based in two provincial offices, one in Huambo in Huambo province and the other in Lubango in Huila province respectively. Other positions such as warehouse managers, logistics assistants, etc. are seasonal workers hired only for the duration of the IRS operations.

The IRS IQC is a large and complex project being implemented in 15 countries across Africa. RTI has established an efficient structure for providing management oversight, technical support, and administrative services to all 15 countries from office locations in Washington DC, Research Triangle Park (North Carolina), and Luanda. The regional project support office in Nairobi, Kenya includes many technical and operational experts who provide on-going support to IRS operations in all countries receiving services under the IQC. The staff includes our Technical Director and Operations Director, Head of Administration, Human Resources Specialist, and Project Controller. The staff also includes operations specialists, environmental inspectors, and accounting and procurement support staff. This structure provides an efficient means of providing country programs with the full range of technical and administrative support they require.

Starting October 2008, Ms. Patricia Preware (Washington) will serve as the Home Office Technical Manager; Mr. Abrar Sattar (North Carolina) serves as Project Administration Specialist; Ms. Alice Otiato serves as the designated Operations Manager; and Mr. Autman Tembo will be assigned as the cognizant Environmental Inspector for Angola.

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
Patricia Preware	RTI employee	USA	Trip to provide management support to the COP. Responsibilities include assisting the COP in managing project budgets, recruiting and hiring project staff, liaising with partner organizations, preparing scopes of work and budgets for consultants and subcontractors, monitoring consultant and subcontractor performance, preparing routine technical reports and other documentation, and preparing for project reviews	1
John Chimumbwa	RTI employee	Nairobi	Technical Director trip to provide senior management guidance to the COP and client relationship support for USAID/Angola. Responsibilities include providing management direction for country strategies and associated project scopes of work, technical approaches, and project budgets.	1
Alice Otiato	RTI employee	Nairobi	Operations director will provide support for logistics assessment and all logistical decisions for the project.	1
Autman Tembo	RTI employee	Nairobi	Environmental Inspector will provide environmental compliance and monitoring support for the project.	2
Sr. Entomologist (Dr. Josephat Shililu)	International consultant	Nairobi	Training of IRS entomological and NMCP staff.	2

V. Monitoring and Evaluation

M&E systems are crucial to good project management and maximizing project impact. The RTI team will collect, analyze, and report M&E data internally and externally to inform the MOH, NMCP, USAID, and other implementers and partners of the progress and results of project activities.

Indicators

RTI relies on two sources of data that we generate routinely as part of IRS programs:

- Household spray cards, completed by individual spray operators to record the number of houses they spray each day; their consumption of insecticide sachets; and data on the number and gender of household residents, the number of rooms sprayed, and the total number of rooms in the house; and the presence of an insecticide-treated net.
- Cone bioassays, conducted by the entomology staff at a sample of sprayed houses to determine the length of period over which the sprayed insecticide is effective in killing sensitive, lab-reared mosquitoes. This is an important quality control measure and provides an overall check on the quality of spraying.

From these data sources, we report the following outcome indicators:

- Total number of houses sprayed
- Total number of people protected, with subtotals for women and children under five
- Percentage of households treated

We also report output benchmarks corresponding to each of the reports and plans listed as project deliverables. In Angola, RTI will train local government officials, PHD staff, and local community leaders on M&E activities and provide technical assistance so that they can track specific indicators to measure the progress and quality of IRS operations.

This project is part of the PMI, the overall M&E of which is under the direction of the CDC. This project is also part of USAID/Angola's health program. As such, RTI has reviewed the proposed indicators, methods, and data sources with USAID, CDC, and the NMCP, and will modify monitoring and reporting requirements as appropriate to meet the needs of these clients and partners going forward.

Reporting

RTI views reporting deliverables as critical tools to evaluate program performance and maintain communication channels with program's stakeholders. Currently, Mr. Muhungo is submitting weekly updates to USAID and the NMCP, participating in regular IRS taskforce meetings, and initiating weekly verbal communications with USAID and the NMCP. Upon approval of this workplan, Mr. Muhungo will consult with the CTO and NMCP managers to confirm routine procedures for satisfying the following reporting requirements:

- Quarterly financial reporting in accordance with 22 CFR 226 and including pipeline status and funds usage ("burn rate")
- Performance monitoring and reporting, including
 - Annual work plan (including implementation plan, management plan, and budget)
 - Quarterly performance reports
 - End of spray round reports

RTI is in the process of standardizing its reporting procedures, expected formats, and deadline for all IRS IQC reports. RTI is also in the process of getting "caught up" on all outstanding reports under this Task Order. Due to the complexities of managing IRS programs, RTI will ensure that reports document operational, technical, and financial management of IRS activities, including achievements to date, programmatic impacts, and lessons learned.

Attachment 1: Angola Implementation Plan and Timeline

For the period of October 1, 2007 to December 31, 2008

Component	Person/ partner Responsible	Date	Project Month (FY08)												Key Milestones					
			O	N	D	J	F	M	A	M	J	J	A	S		O	N	D		
Project Start-up/ Mobilization	Planning meetings with USAID, NMCP, and other local stakeholders	USAID, RTI	7/07	X																Country work plan approved by USAID. MOU/aide memoire signed.
	Negotiate activities and implementation plan with USAID and NMCP	RTI	7/07																	
	Sign MOU with NMCP and USAID	USAID, RTI, NMCP	8/07																	
	Establish satellite office (Huambo)	RTI	9/07																	
	Hire provincial management staff	RTI		X																
Planning and Assessment	Carry out logistics assessment in Huambo	RTI	8/07																	Logistics & baseline entomology assessments completed. SEA approved. Pesticide selected.
	Update logistics assessment in Huila	RTI	8/07																	
	Select the insecticide to be used in Huambo	NMCP, USAID/CDC	7/07																	
	Identify and secure warehouse (Huambo)	RTI	9/07																	
	Coordinate activities with provincial health departments	RTI	9/07									X	X	X						
Procurement and Logistics	Provide list of equipment and material needed for the operations	RTI	9/07								X									Technical specifications released. Vendors selected. Insecticide, PPE and equipment delivered
	Develop technical specifications and tenders for commodities	RTI		X																
	Compression sprayers delivered	RTI, Hudson				X									X					
	PPE delivered	RTI				X														
	Insecticide delivered	RTI, Syngenta				X			X											
	Coordinate commodities transportation to provinces.	RTI			X	X	X	X	X						X					
IEC Development & Implementation	Conduct IEC needs assessment (Huambo)	RTI, NMCP	8/07																	Needs assessment completed. IEC materials produced. Training completed. Campaign launched.
	Approve IEC implementation plan	USAID, RTI, NMCP	9/07										X							
	IEC materials produced and delivered to project	RTI		X										X						

Attachment 2: Angola Countdown Calendar

For the period of October 1, 2007 to December 31, 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.		Sept 2007	Producing MOU and/or aid memoires
	MOU/aide memoire signed with government and/or key partner.		Aug 2007	Initiating planning activities with government and/or key partners
Planning and Assessment	Logistics assessment completed to support Dec 2007 spray campaign.		Aug 2007	Planning scope and scale of operations and procurement to be required
	Logistics assessment updated to support Oct 2008 spray campaign.		Jul 2008	
	Baseline entomology assessment completed.		N/A	Pesticide selection
	Agreement reached with USAID and government on pesticide selection.		Jul 2007	Permission for spray operations
	PERSUAP completed.		Oct 2005	Finalization of EA and approval
	PERSUAP approved by USAID		Oct 2005	Permission for spray operations
	EIA approved by national environmental agency, if required		N/A	Procurement
Procurement & Logistics	Technical specifications for tenders approved and released.		Oct 2007	Ordering supplies for spraying
	Vendor selection and procurement process completed.		Nov 2007	Delivery of supplies for spraying
	Compression sprayers delivered		Dec 2007	Spray operator training
	Insecticide and PPE delivered		Mar 2008	Initiation of spray operations
	PPE necessary to support Oct 2008 campaign ordered		July 2008	
	PPE delivered.		Sept 2008	Initiation of spray operations
IEC Development & Implementation	IEC needs assessment completed.		Aug 2007	IEC material design
	IEC material designs and implementation plan approved.		Sept 2007	Production of materials
	IEC materials produced and delivered to project to support Dec 2007 IRS campaign.		Oct 2007	Training of IEC implementers
	IEC materials produced and delivered to project to support Oct 2008 IRS campaign.		Sept 2008	Training of IEC implementers
	Training of IEC implementers completed for Dec 2007.		Oct 2007	Implementation of IEC campaign
	Training of IEC implementers completed for Oct 2008.	Sept 2008		Implementation of IEC campaign
	IEC campaign launched for Dec 2007 campaign.		Nov 2008	Spraying operations
	IEC campaign launched for Oct 2008 campaign.	Sept 2008		Spraying operations

Component	Key Milestone	Date to be Completed	Status (e.g., date achieved)	Antecedent to:
Spraying Operations	Geographic reconnaissance completed		Nov 2007	Team assignments and logistics arrangements
	District staff recruited, oriented and trained.		Nov 2007	Completion of operational logistics and EM set up
	Operational logistics and environmental mitigation set up at operational sites.		Nov 2007	Spraying operations
	Medical check-ups (including pregnancy tests) for sprayers, supervisors, warehouse staff, cleaners, etc. completed for Dec 2007 campaign.		Nov 2007	Permission to spray
	Medical check-ups (including pregnancy tests) for sprayers, supervisors, warehouse staff, cleaners, etc. completed for Oct 2008 campaign.		Sept 2008	Permission to spray
	Training of spray operators completed for Dec 2007.		Nov 2007	Spraying operations
	Training of spray operators completed for Oct 2008.	Sept 2008		Spraying operations
	Spray operations launched for Dec 2007 campaign.		Dec 2008	
	Spray operations launched for Oct 2008 campaign.	Oct 2008		
	Spraying operations completed for Dec 2007 campaign.		Apr 2008	Recapture and proper management of equipment and supplies
	Spraying operations completed for Oct 2008 campaign.	Dec 2008		Recapture and proper management of equipment and supplies
	Equipment and supplies recaptured and securely disposed or stored for Dec 2007 campaign.	May 2008	May 2008	Environmental compliance
	Equipment and supplies recaptured and securely disposed or stored for Aug 2008 campaign.	Dec 2008		Environmental compliance
	Post-spraying evaluation conducted for Aug 2008 campaign.	Nov 2008		Final report production
	Final report produced and submitted to USAID for Dec 2007 campaign.	Oct 2008		Final report production
	Final report produced and submitted to USAID for Aug 2008 campaign.	Mar 2009		