



PRESIDENT'S MALARIA INITIATIVE



INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL

Uganda FY08 Work Plan

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

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Prepared for:
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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

Funded by the U.S. President's Malaria Initiative through the U.S. Agency for International Development (USAID), Research Triangle Institute International (RTI) is providing strategic, technical, management, operations, and financial support to the Uganda National Malaria Control Program (NMCP) to expand the use of indoor residual spraying (IRS) as an intervention for malaria prevention and control. This support is provided under the Indoor Residual Spraying (IRS) IQC Task Order. This draft work plan covers activities for the period September 2008 to March 2009 in 5 districts of Uganda (Apac, Kitgum, Oyam, Pader, Masindi).

One type of insecticide will be used: ICON CS.

Based on communication from USAID/Uganda, some revisions have been made to the initial activities requested in the FY 2008 MOP such that proposed activities for this work plan period (Sept-Mar'09) are as follows:

- Support a third round of spraying in two districts of Kitgum and Pader using ICON CS. At least 85% of houses in geographic areas targeted for spraying in the 2 districts will be sprayed during this work plan period.
- Support the MOH in information, education, and communication (IEC), behavior change communications (BCC), and community mobilization activities specific to IRS in Kitgum and Pader.
- Support entomologic monitoring in Apac, Pader and Masindi districts.
- Support environmental monitoring and compliance of IRS activities using DDT in Apac and Oyam districts and using ICON CS in Kitgum and Pader.

II. Progress to Date (April'08-Aug'08)

During the April'08-August'08 period, RTI, in collaboration with NMCP and other partners, has completed the following IRS activities:

- Supported second round of IRS for households in Kitgum and Pader districts in northern Uganda: Under this PMI activity, a total of 246,181 houses (see figure 1 for details by district) were sprayed in Kitgum and Pader districts, in each case surpassing the target of 85% coverage and protecting an estimated 1.04 million persons against malaria.

Table 1: Round Two IRS Coverage in Kitgum and Pader Districts

District	Number of houses sprayed	% coverage houses found	Estimated population protected
Kitgum 83,900		88.9%	386,094
Pader	162,281	95%	661,327
Total	246,181	92.8%	1,047,421

Other Activities Done in this Period

- Supporting IRS using DDT in Apac and Oyam districts: Following the approval of the SEA for the use of DDT in January 2008, RTI embarked on planning for and implementation of IRS activities in Apac and Oyam districts using DDT. IRS activities in Oyam district were completed in April 2008 covering 94,876 structures – 94% of the target and protecting an estimated 315,765 people against malaria. IRS activities in Apac district were completed in May 2008 covering 103,025 structures—92.4% of the target and protecting an estimated 322,697 persons against malaria.

III. Role of RTI and Partners

Under the IRS IQC Task Order, RTI the prime contractor will work with various partners under the IQC and within Uganda with the following responsibilities:

- The Uganda’s MOH/NMCP will be the key government partner in implementing this program. RTI will work with NMCP, district health teams, Malaria Control Committee and other stakeholder institutions to maintain a national IRS coordinating committee.
- Liverpool Associates for Tropical Health (LATH), an IRS IQC partner with RTI, will work alongside RTI to perform entomologic monitoring and assessment of vector susceptibility in Apac, Oyam and Masindi districts.
- Crown Agents Uganda, an IRS IQC partner with RTI, will assist RTI with procurement of IRS materials and equipment and provide logistics support as needed.
- District Health Offices (DHOs) will organize and participate in planning and district sensitization meetings, as well as provide personnel for supervisory positions on spray teams. They also will be involved in the selection of spray operators that will be used in each district.
- MOH entomologists will partner with LATH to conduct entomological monitoring tests to ascertain the effectiveness of spray operations in the various districts.
- RTI will also work in collaboration with the MOH/NMCP, USAID, CDC, Ministry of Agriculture, National Environmental Management Agency (NEMA), multi-sectoral / multi-disciplinary monitoring committee on DDT, WHO and other implementing partners as directed by USAID/PMI.

IV. Project Activities

Planning and Assessment

- Logistics Planning: Through a collaborative process with MOH/NMCP and district officials, RTI will determine the materials, logistical, and financial support required for the IRS program and associated environmental compliance activities. RTI will engage district officials in the planning process to establish their capabilities to plan future IRS operations. These actions will comply with USAID requirements and WHO guidelines and specifications.
- Environmental Monitoring and Compliance: RTI was requested to provide an environmental monitoring and compliance plan for DDT-based IRS activities in pilot districts. The purpose of the plan is to assist IRS operations in the safe use of insecticides, specifically DDT, to minimize potential risks to human health and the environment. The intent of the environmental monitoring program is to establish best practices for sampling and analyzing exposure concentrations from insecticides used for IRS. RTI's environmental monitoring plan was submitted to USAID for review. In this period, one round of routine environmental monitoring for DDT will be conducted. The monitoring effort will focus on agricultural products for export and environmental exposure pathways and will include a sampling plan and a quality assurance plan. In addition, the plan addresses the mapping of sensitive areas and determination of households within these areas to be sprayed using ICON CS instead of DDT. RTI will also complete analysis of additional baseline samples to complete this effort. RTI will also carry out environmental compliance activities for ICON CS use in Kitgum and Pader.
- Pesticide Selection: For this planning period, USAID/Uganda, in collaboration with the NMCP and MOH, agreed on the use of ICON CS in Kitgum and Pader during round three. ICON CS was deemed the appropriate insecticide to use based on its ability to last throughout longer rainy seasons.

Procurement and Logistics

- Procurement: Crown Agents in partnership with RTI will arrange all procurement, shipping, delivery, and storage of essential materials and equipment, including compression sprayers, chosen insecticides, personal protective equipment, drugs for treating pesticide poisoning, and supplies for entomological surveillance.
- Pesticide management: In accordance with the SEA, RTI will implement a strict chain-of-custody system of pesticide management to ensure that all insecticide is accounted for at every step of the program implementation process. Storekeepers and district supervisors will receive sufficient training on insecticide tracking and record keeping. For DDT-based operations, a DDT control officer will be identified in the district to monitor insecticide movement and distribution throughout the district. In addition, each sachet of insecticide will be given a unique number and logged according to the spray operator to whom it is distributed. All empty sachets will be collected at the end of each day and double checked against earlier distribution records.

IEC and Community Mobilization

- Building on the backdrop of the two completed IRS rounds in Kitgum and Pader, RTI will support the MOH and DHO in IEC/BCC/community mobilization by carrying out well coordinated and effective community mobilization campaigns to increase the promotion of information, education and communication for spraying activities. Emphasis will be on activities aimed at educating community members on the benefits and risks of IRS, proper procedures for safety and community participation. Sensitization messages will be disseminated throughout the target communities beginning a month prior to spray activities, and will continue throughout spray operations.

Indoor Residual Spraying Operations

- Implementation of spraying programs: Prior to spray operations, RTI will use data from the previous IRS rounds to determine what quantities of IRS materials are needed, as well as where trainings can be held, IRS staging areas constructed and IRS equipment and insecticide stored. RTI will enlist the help of the district in identifying all of these areas.
- Recruitment: The district has a pool of trained spray personnel. However, our experience shows that in each round, there is an attrition rate of about 30% of the trained spray personnel. Therefore, new spray personnel will be recruited and hired by the MOH through its district health offices (DHOs). Notably, the rates to be paid to spray operators and other field operations seasonal contractors will be determined by the government and not RTI. RTI will support the DHOs by paying the per diem of government employees working on IRS activities in the target districts and daily rates for spray operators. RTI will also identify its own staff to manage and oversee spray operations in both districts.
- Training: RTI will conduct two sets of training: training of trainers (TOT) and spray operator training (SOP training). Both TOT and SOP trainings will emphasize all of the basics associated with IRS and also address team management skills, environmental compliance and safety issues, and spray-data collection. Training will also be provided to physicians on insecticide poisoning management, and truck drivers on environmental safety measures. New spray personnel will undergo a full training session of five days while returning spray person with undergo a workshop of shorter duration (2 days) to enable them carry out quality SOPs training.
- Environmental compliance: For all target districts, RTI will perform a pre-, during and post-operational inspection to ensure that all necessary safety measures are in place and functional in accordance with the requirements of the USAID/Uganda mission and the national environmental authority (NEMA).
- Logistics support: IRS operations are logistically complicated and require significant planning and coordination. In order to support IRS activities, RTI will hire a large number of vehicles for the transportation of spray personnel, equipment, and insecticide from one site to another.

Other key logistic issues include identification and securing of stores at regional hubs and at the sub-county level; movement of the logistics in support of the operations on the ground, and putting into place mechanisms for both safety and logistics custody chains. Others include facilitating compliance with safety measures for the environment, for the population, and for the spray operators. We also will work with the MOH to ensure capacity to respond to emergencies and training all ancillary staff in minimizing the negative impacts of dealing with insecticides. Community mobilization will be conducted as part of IEC.

- Spray operations: RTI will provide management and technical oversight of spray operations. RTI will hire district coordinators for each target district. The district coordinators will oversee spray operations, supervise employees hired by the DHOs for IRS operations, and manage post-spraying equipment collection, cleaning, and storage.
- Post-spray operations: Once spraying is completed in each district, RTI will undertake post-spray operations. All materials and equipment will be collected, cleaned, enumerated, and stored until next usage. The environmental compliance team partnering with the district vector control officers will also carry out a post-IRS inspection to ensure that all conditions were complied with during the main campaign.
- Entomological monitoring: RTI partner LATH will lead the conducting of entomological monitoring in accordance to the scope of work provided by the Uganda PMI team. Under this activity, LATH in partnership with MOH will focus on assessing insecticide resistance and IRS insecticidal decay rate.
- Capacity building: RTI will develop increased operational capacity of NMCP and DHO staff to enable them conduct effective, safe, and well-managed future IRS operations. It is RTI's intention that with each successive round, the NMCP and DHO assume increasing roles and responsibilities in the implementation of IRS activities. RTI will conduct refresher training for experienced spray operators and supervisors. RTI will also assist the NMCP and DHOs in the development of IRS planning templates, insecticides and other logistics chain of custody control systems and reporting databases for future IRS operations in the country. RTI will work with the NMCP to develop a sustainability plan detailing when RTI will shift key responsibilities over to the NMCP over the course of the project. RTI will focus on transfer of knowledge and skills necessary to implement IRS in Uganda and build local capacity at the central and district levels for this effort.

Spraying Schedule and Timeline

IRS round three activities in Kitgum and Pader will be conducted in the period, November'08–February'09. Rainfall data suggest that this is the most appropriate time to conduct the activity in this area.

Deliverables

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

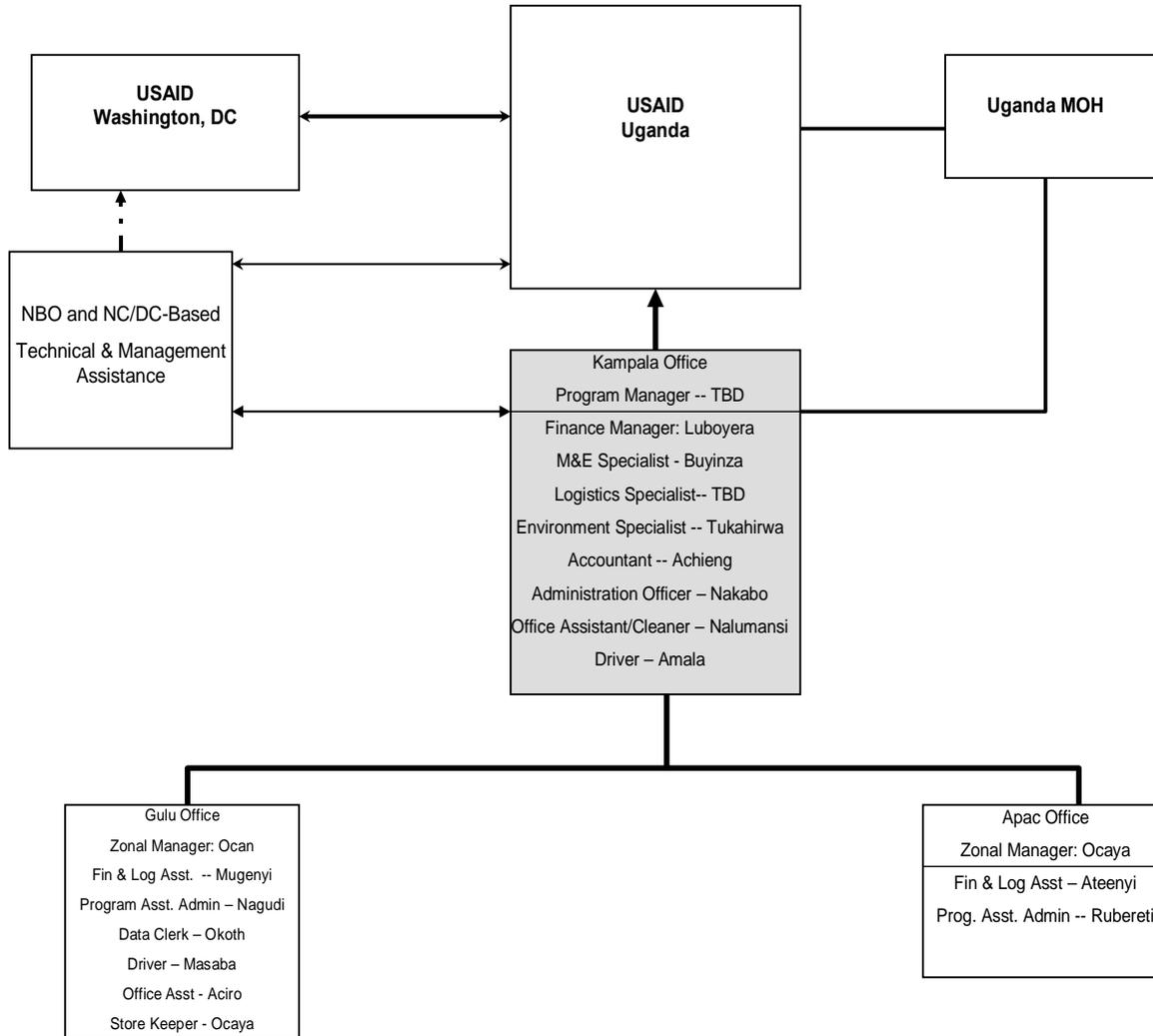
- Pre-Operational Period
 - Logistics Assessment for relevant districts
 - IRS Work Plan, including
 - Operations Schedule
 - IEC Program
- Operational Period
 - Progress reports. Bi-weekly updates will be provided to the mission and to Washington by email.
 - Quarterly Report
- Post-operational Period
 - End of Round Spraying Performance Report
 - A final bioassay report from entomologic activities for Apac, Oyam and Masindi.
 - Final report for the routine environmental monitoring for DDT activities in Apac and Oyam
- Quarterly Financial Report
- Quarterly Key Indicator Reports to MEMS
- Reporting inputs to USAID reporting systems (e.g., MORA, PMI, and FY OPs)

V. Management Plan

RTI has restructured this program and established an effective and lean management and staffing plan in Uganda to efficiently implement the IRS program with quality control measures, in conformity with international standards as described in WHO guidelines on IRS.

To implement this work plan, RTI will maintain 2 field offices to act as regional centers to support operations (IRS, environmental monitoring, entomologic monitoring) in the five districts (Apac, Oyam, Masindi, Kitgum, Pader). These offices will be based in Gulu and Apac. The field offices will be supported by technical staff from the Kampala office coupled with short term technical and management assistance from Nairobi and the US. In order to properly manage all spray activities, RTI intends has identified qualified candidates as outlined in the diagram below. Due to the short timeline for activities to be completed under this work plan period, RTI will not recruit a chief of party. However, RTI will identify a program manager, who will lead and assist the zonal managers in the overall management and implementation of the project. S/he will be the key liaison for the project in the Kampala office. The in-country team will receive technical and administrative support from RTI staff in Nairobi and the US.

Figure 1: Uganda IRS Project Country Organization Chart



IV. Monitoring and Evaluation

RTI in partnership with NMCP, CDC, USAID, MEMS and other stakeholders will plan, implement and document a monitoring and evaluation component for IRS operations in each of the focus districts. RTI will review indicators, methods, and data sources for monitoring and evaluation of IRS operations with MOH/NMCP, DDHS, USAID, CDC, MEMS and will develop a Performance Monitoring Plan. In addition, 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.

Operational Indicators will include the following:

- Total number of houses sprayed
- Total number of people protected
 - Including number of children under 5 years of age protected; number of pregnant women protected; disaggregation by sex
- Number of people trained
- Percentage of targeted households sprayed
- Percentage of targeted population protected
- Number of community members reached through IRS/IEC activities