



PRESIDENT'S MALARIA INITIATIVE



INDOOR RESIDUAL SPRAYING FOR MALARIA CONTROL

Zambia FY09 Work Plan

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

Contract GHN-I-01-06-00002-00

Prepared for:
United States Agency for International Development

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I. Acronyms

CFR	Code of federal regulations
DDT	Dichloro-diphenyl-trichloroethane
ECZ	Environmental Council of Zambia
FY	Fiscal year
GFATM	Global Fund for HIV/AIDS, TB, and Malaria
HOTM	Home office technical manager
IRS	Indoor residual spraying
IVM	Integrated Vector Management
IQC	Indefinite quantity contract
MACEPA	Malaria Control and Evaluation Partnership in Africa
MOP	Malaria operating plan
NMCC	National Malaria Control Centre
PMI	President's Malaria Initiative
SEA	Supplemental environmental assessment
STTA	Short term technical assistance
TDY	Temporary duty
USAID	United States Agency for International Development
WHO	World Health Organization

II. Introduction

Zambia is implementing indoor residual spraying (IRS) for malaria control as part of an integrated vector control management (IVM) strategy. Spraying began in 2003 following the success of IRS by the private sector Konkola Copper Mines. The spraying program is under a five-year (2006 to 2010) National Malaria Strategic Plan, which has an overall objective of reducing malaria incidence by 75 percent by 2010. IRS is implemented by the National Malaria Control Centre (NMCC) of the Ministry of Health. Additional resources and technical support are mobilized through a number of external partners, including the United States' Agency for International Development (USAID), Roll Back Malaria partnership, Malaria Control and Evaluation Partnership in Africa (MACEPA), World Health Organization (WHO), Global Fund for HIV/AIDS TB and Malaria (GFATM), and the World Bank.

USAID/Zambia elected to provide field support under the President's Malaria Initiative (PMI) to RTI International (RTI) to work with Zambia's Ministry of Health (MOH) and the NMCC to provide technical assistance and support to IRS in Zambia. In 2008, the MOH expanded IRS to 21 districts in addition to the 15 districts supported by USAID. The PMI-supported 2008 spray round targeting 700,000 structures ended in December. The final coverage figures were not yet complete at the time of this writing.

PMI will continue to support IRS through the IRS indefinite quantity contract (IQC) in fiscal year (FY) 2009 in the same 15 districts by assisting in procurement of pesticides and continuing support to ensure that environmental safeguards are in place and the program adheres to environmental regulations in all 36 districts. This work plan and budget describe those activities, their associated milestones, implementation plan, and costs covering the period from January 1 to December 31, 2009.

Summary of the FY09 Malaria Operational Plan (MOP) for IRS

The MOP for FY09 calls for continuing support to IRS in the current 15 districts, targeting 900,000 structures. USAID will support procurement through the IRS IQC, budgeted at \$3,400,000 for IRS related commodities, primarily pesticides. Additional environmental assessments and environmental monitoring for DDT will be covered in FY09 with funds left over from FY08.

III. Strategy for IRS Country Support

The overall objective of the PMI IRS Project in Zambia is to help the MOH and the NMCC provide IRS to 85 percent or more of the targeted population. RTI will work in support of and in full collaboration with the NMCC to support IRS campaign as an integral part of the government's malaria control program.

The project's proposed activities for fiscal year 2009 will be:

- Procure pesticides and other IRS related commodities for use in 15 districts.
- Update the supplemental environmental assessment (SEA) as required.

- Conduct an SEA in the 21 districts the MOH has targeted for IRS.
- Conduct environmental compliance inspections as required by the SEA.
- Support the Environmental Council of Zambia (ECZ), and the Chemistry Department of the University of Zambia in efforts to monitor for DDT in the environment.

IV. Activities

Procurement

RTI will support the pesticide procurement component of the PMI IRS Project in Zambia as it has for the past two years. Upon receiving quantification from NMCC for the 2009 spray round, RTI will issue tenders for the appropriate classes of insecticides. The tenders will be evaluated for technical soundness and overall value. RTI will make a recommendation to the NMCC for concurrence. The necessary pesticides and other equipment will be procured, delivered, and in place in the districts in time for the annual spray campaign that starts in early September 2009. The MOP has allocated \$3,400,000 for procurement of IRS related commodities in FY09.

Environmental Assessment and Compliance

Zambia was one of the first of the 15 PMI countries in Africa to make extensive use of dichloro-diphenyl-trichloroethane (DDT) to fight malaria. This pesticide, as a persistent organic pollutant, requires numerous and complex measures to mitigate the risk of environmental or human contamination and assure the health of sprayer operators and household residents. RTI was therefore tasked to develop an annual SEA for Zambia, including a safer use action plan in accordance with US environmental compliance requirements (22 CFR Part 216) and Zambian regulations.

Because the NMCC plans on using DDT in 2009, RTI will conduct the annual SEA update required for DDT use and submit it to the Mission by June. RTI will also conduct an SEA in the 21 new districts targeted for IRS. RTI's environmental inspectors will undertake pre-spray environmental compliance inspections as well as compliance inspections during the spray operations to ensure adherence to the mitigation measures required in the SEA. RTI will also assist in the gathering and storage of DDT packaging from the 2008 spray round. This waste will be repatriated by the vendor that provided it to its country of origin, South Africa, for safe disposal.

Environmental Monitoring for DDT

In order to minimize risk to human health and livelihood and to assure that DDT is not entering into the environment above recommended levels, it is necessary to conduct systematic monitoring of soil and other media where DDT residue might be found. RTI will develop the capacity of ECZ, NMCC and the University of Zambia to carry out environmental monitoring without outside technical assistance. RTI in collaboration with these partners will monitor DDT levels in the environment by undertaking regular monitoring studies and tests on environmental components including soil, water, invertebrates, crops and other environmentally sensitive ecosystems. This support will include:

- Adapting RTI’s environmental monitoring Quality Assurance Project Plan (QAPP) to the IRS situation in Zambia.
- Assessing the University of Zambia lab and determining any additional capacity needs for quality sample analysis.
- Determining the appropriate sampling media and locations on an as-needed basis. This activity will support quality decision-making in malaria vector control interventions in Zambia and fulfill USAID’s requirement for environmental monitoring under 22 CFR 216.

V. Management Plan

RTI has hired a program manager for Zambia, Adrian Kamuhuza. Mr. Kamuhuza will assume duties in January as this work plan period commences. Mr. Kamuhuza will ensure that all of USAID and RTI’s corporate systems and procedures are mobilized appropriately to support management of this project. He will be the principal point of contact with USAID and NMCC and will bear ultimate responsibility for all project management tasks, including quality and cost control, monitoring, reporting, and client relations. Mr. Kamuhuza will be based in Lusaka.

The RTI Zambia program will require on the ground support from RTI Nairobi and US-based staff in the following areas: programmatic support, financial and logistics management, environmental support, and technical management. To that end, STTA visits from the following individuals are proposed:

- Dr. John Chimumbwa, IRS Deputy Program Director
- Jake O’Sullivan, IRS Home Office Technical Manager (HOTM)
- Tito Kodiaga, IRS Environmental Compliance Manager
- Jacob Williams, Integrated Vector Management Director
- Judith Tukahirwa, RTI Uganda Environmental Specialist
- Samson Mesfin, IRS Regional Controller.

Most of these visits will be spray round inspections or technical assistance visits to facilitate DDT monitoring in the environment. In addition, several visits are proposed for administrative and overall programmatic purposes.

The following table represents RTI’s plan for providing technical assistance.

Table 1. Strategic Technical Assistance and TDY Plan

Name	Type of TA	Coming from	Tasks to be undertaken or activities to be supported	Number of visits
Jake O’Sullivan, HOTM	RTI employee	USA	Technical and administrative support to include work plan and budget development, overall project management, and operations assistance.	1 (two weeks)
Tito Kodiaga, Environmental Manager	RTI employee	Nairobi	SEA Amendment.	1 (four weeks)
Environmental Compliance Specialist	RTI employee	Nairobi	Environmental monitoring and compliance support, environmental monitoring plan development, and trainings and assessments.	2 (two weeks each)
Judith Tukahirwa	Consultant	Nairobi	Environmental monitoring oversight and technical assistance.	1 (one week)
Sam Mesfin, Regional	RTI	Nairobi	Financial and administrative oversight.	1 (one)

Name	Type of TA	Coming from	Tasks to be undertaken or activities to be supported	Number of visits
Controller	employee			week)
Jacob Williams, Director IVM/Entomologist	RTI employee	USA	Entomological review.	1 (two weeks)
Environmental Scientist (DDT Monitoring Specialist), most likely Robert Truesdale	RTI employee	USA	Set up environmental monitoring program, work with University of Zambia to define and implement DDT monitoring.	3 (two weeks each)
John Chimumbwa, IRS Deputy Program Manager	RTI employee	Nairobi	Overall program and technical management.	1 (one week)

Attachment 1: Zambia Implementation Plan and Timeline

For period from January 1 to December 31, 2009

Component	Activity	Person/ partner Responsible	Project Month												Key Milestones		
			J	F	M	A	M	J	J	A	S	O	N	D			
Planning and Assessment	Discussions with USAID and government on pesticide selection	RTI (Jake O'Sullivan), USAID, NMCC			X		X										SEA approved. Pesticide selected.
	Conduct Supplemental Environmental Assessment	Tito Kodiaga			X		X										
	SEA approved by USAID	USAID			X		X										
Procurement and Logistics	Develop Quantification and Specification	NMCC															Technical specifications released. Vendors selected. Insecticide, PPE and equipment delivered
	Develop and release technical specifications for tenders	CROWN AGENTS USA			X		X										
	Review and complete vendor selection and procurement	CROWN AGENTS USA					X										
	Accept delivery of commodities	NMCC								X							
	Insecticide and PPE delivered	CROWN AGENTS USA								X							
IRS Operations	Spray season										X	X	X	X			
Environmental monitoring	Work with University of Zambia staff, the NMCC and ECZ to refine and adopt monitoring plans and protocols	RTI (Robert Truesdale)		X	X	X											Local environmental consultant identified and in place MOU with U of Zambia signed Quality Assurance Plan revised Monitoring/sampling and analysis ongoing Environmental Compliance inspections complete and reports submitted
	Evaluate U of Zambia lab to assess testing infrastructure, including trained personnel, facilities, support systems, and quality assurance processes and procedures	RTI (Robert Truesdale)	X		X												
	Revise Quality Assurance Project Plan.	RTI (Robert Truesdale), University of Zambia			X	X											
	As needed, provide technical assistance on sample sites, sample media, collection frequency, and sample size	RTI (Robert Truesdale)					X	X	X	X	X	X	X	X	X	X	
	Revise and finalize the Zambia plan for Quality Assurance	RTI (Robert Truesdale) University of Zambia			X												
	Conduct inspections prior to and during spray operations to verify compliance with the mitigation measures proposed in the SEA	University of Zambia								X				X			

Attachment 2: Zambia Countdown Calendar

For period from January 1 to December 31, 2008

Component	Key Milestone	Date to be Completed	Status	Antecedent to
Planning and Assessment	Agreement reached with USAID and government on pesticide selection	April 2009		Procurement
	Supplemental Environmental Assessment completed	May, 2009		Finalization of SEA and approval
	SEA approved by USAID	June, 2009		Permission for spray operations
Procurement & Logistics	Quantification and Specification completed	April, 2009		Ordering pesticides and equipment
	Technical specifications for tenders approved and released	May, 2009		Ordering pesticides and equipment
	Vendor selection and procurement process completed	July 1, 2009		Delivery of supplies for spraying
	Compression sprayers delivered	August 1		Spray operations
	Insecticide and PPE delivered	August 1		Initiation of spray operations
Environmental Monitoring	Work with University of Zambia staff, the NMCC and ECZ refine and adopt monitoring plans and protocols	Feb/Mar 2009		U of Zambia having capacity to conduct environmental sampling and testing
	Evaluate U of Zambia lab to assess testing infrastructure, including trained personnel, facilities, support systems, and quality assurance processes and procedures	Feb/Mar 2009		
	Revise Quality Assurance Project Plan	Apr/May 2009		
	Provide any technical assistance on sample sites, sample media, collection frequency, and sample size, etc. as needed	May—Dec 2009		U of Zambia implementing Environmental monitoring
	Revise and finalize the Zambia plan for Quality Assurance	May/June 2009		