



PMI | Africa IRS (AIRS) Project

Indoor Residual Spraying (IRS 2) Task Order Four

AIRS GHANA

REVIEW OF GENDER ISSUES IN THE AIRS GHANA IRS PROGRAM

May 2014

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Recommended Citation: Review of Gender Issues in the AIRS Ghana IRS Program. Africa Indoor Residual Spraying Project. March 2014. Bethesda, MD. AIRS Project, Abt Associates Inc.

Contract: GHN-I-00-09-00013-00

Task Order: AID-OAA-TO-11-00039

Submitted to: United States Agency for International Development/PMI

Prepared by: Deborah Rubin, Consultant, Cultural Practice, LLC, for Abt Associates, Inc. as part of Africa Indoor Residual Spraying Project



Abt Associates Inc. | 4550 Montgomery Avenue | Suite 800 North

| Bethesda, Maryland 20814 | T. 301.347.5000 | F. 301.913.9061

| www.abtassociates.com

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ACKNOWLEDGEMENTS

I was very fortunate to work with a project that is willing to rethink the way it addresses gender issues in its implementation. During the course of my visit to Ghana, the Ghana AIRS team showed great enthusiasm and answered my many questions thoughtfully. I would like particularly to thank Peter Mumba, Chief of Party, and Sam Wehbe, Finance and Contracts Director, of the Ghana AIRS Project, as well as all the members of the team based in Tamale. I am indebted to Tahiru Ahmed, Operations Manager and Bertha Moisob, Information, Education, and Communications Officer for their assistance in visiting the field sites and in arranging interviews with such a wide cross-section of staff and beneficiaries. Bertha accompanied me on all field visits to the four districts in the Northern Region. She engaged actively in the interviews and provided translations where needed. She is a strong advocate for gender equality and shared with me many ideas for increasing the participation of women in the project, which I hope I have reflected accurately in this report.

Thanks are also offered to the project staff at Abt Associates, Inc. in Bethesda, MD who facilitated the assignment, including Angela Sanchez, Nicole de Gier, Lena Kolyada, and Bradford Lucas.

The content of this report has benefited from the involvement of these AIRS staff, while any errors remain the responsibility of the author. I hope the report provides useful guidance for the development of the project's next season of spraying.

Deborah Rubin
Cultural Practice, LLC

ACRONYMS

AIRS	Africa Indoor Residual Spraying
CDCS	Country Development Cooperation Strategy
CBS	Community Based Surveillance
CP	Cultural Practice, LLC
EC	Environmental Compliance
ECO	Environmental Compliance Officer
FTF	Feed the Future
GHI	Global Health Initiative
GHS	Ghana Health Service
HEW	Health Extension Worker
IEC	Information, Education, and Communication
IRS	Indoor Residual Spraying
ITN	Insecticide Treated Net
MOH	Ministry of Health
M&E	Monitoring and Evaluation
NMCP	National Malaria Control Program
RHB	Regional Health Bureau
PMI	President's Malaria Initiative
SOC	Spray Operations Coordinator
SOW	Scope of Work
PPE	Personal Protective Equipment
TOT	Training of Trainers
USAID	United States Agency for International Development

I. Executive Summary

This report presents the findings and recommendations of a gender assessment of the Africa Indoor Residual Spraying (AIRS) project implemented by Abt Associates in Ghana. The focus is to identify gender issues and to provide recommendations to help ensure that the AIRS project contributes to equitable employment opportunities for both men and women, avoiding either discrimination or favoritism. The report is not a full national (e.g., Caro et al. 2011; Rubin 2010) or a sectoral gender (Caro and Ibrahim-Hubner 2010) assessment such as those conducted by other Bureaus of USAID, but a more targeted analysis of issues related to project management and operations within the AIRS project in Ghana.

The report is organized into four sections. The introduction provides a brief overview of the Ghana AIRS project objectives, key gender issues in Ghana, and a description of the gender analysis methodology. The second section describes spray operations during the 2013 season. It is followed by a discussion about the information gathered from interviews and project reports about the participation of men and women in the project. Recommendations for interventions and specific measurable targets for reducing gender differences and disparities in employment remuneration, planning, and decision making, as well as suggestions for gender-sensitive indicators to measure these changes conclude the report.

The field review was conducted by Deborah Rubin from Cultural Practice, LLC from July 15-26, 2013. The trip began with meetings with Ghana AIRS project staff and a representative of the National Malaria Control Programme in Accra, followed by travel to the Northern Region. Interviews were held with a diverse set of people involved in spray operations during the 2013 season in the four districts of the Northern Region in which the project is currently active. In addition, interviews were held with a few households, as well as district health and environmental officers (see Annex 2). A total of 115 people were interviewed, as individuals and in groups.

Overall, the project has already taken many steps to promote the entry of women into spray operations. Relationships between men and women on staff and on the spray teams were friendly and easy going. There were many discussions about shared responsibility and flexible work roles. There were no serious reports of verbal or physical harassment. Nonetheless women continue to be underrepresented in most employment categories except among the washers and water carriers and do face gender-based constraints in their work. Some constraints are structural, such as the double or triple burden and time constraints that are faced by many of the women, especially those who are married women and have children, when they add paid employment to their already heavy domestic and livelihood responsibilities, such as farming and trading. Other constraints are social or ideological, such as perceptions about the appropriateness of women to interacting with men, traveling long distances to work, or suitability for the spraying tasks.

Recommendations for the project to consider include:

1. **Expanding recruiting efforts for women** by revising advertisements to more clearly depict women in each of the key job categories, using photos or drawings, and to increase informational meetings in the communities to spread the word about job opportunities. Radio messages can broadcast not only the messages about mobilization as currently done, but also for

information about job openings. Text messages to former employees' cell phones are another possible avenue for recruitment, as group interviews revealed that some women heard about the jobs from friends who had worked in previous seasons.

2. **Revise aspects of the training** to reduce militaristic language and attitudes that some women found off-putting and discourages some from applying for positions on spray teams. Women trainees would also benefit from shifting the sequence or length of some sessions to allow for more gradual strength building and more repetition on critical skills, such as data recording. Adding targeted short training sessions on gender issues, e.g., introducing a “code of conduct” about harassment and other behaviors is also advised.
3. **Improve sizing and type of uniforms** used by spray operators and washers.
4. **Replace spray tanks that hang off one shoulder with lighter, double-shouldered models.**
5. **Clarify and repeat information about the payment schedule for casual workers at hiring.** Although confusion about the payment schedule was reported by both men and women, women expressed additional concerns that their ability to work relied upon support from their husbands. Some reported that they were questioned by their spouses about the length of time between the inception of their work and the receipt of their wages.
6. **Explore the possibility of using a mobile phone payment system.** Using digital financial services could reduce both the amount of time spent traveling to rural banks and queuing for payments and the need to travel with large amounts of cash and the security risks associated with that process. It would also allow women a greater degree of privacy and security over the money they earn.
7. **Develop or expand opportunities to engage women and women-owned businesses** to provide supplementary or support services to spray operations, e.g., food services, tailoring, photocopying/printing, etc.

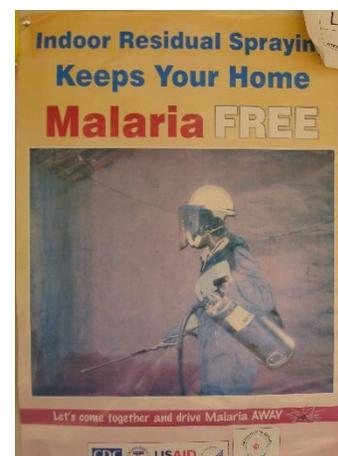
Overall, the project can set a target for women's employment of 18-20% across the project up from the current 13%. The 18% target would mean an increase of about 50-70 more women to be hired in the 2014 season, assuming that the total number of staff and seasonal workers is maintained. It is anticipated that this increase would most easily be added on the spray teams, as spray operators and team leaders, in part by promoting operators into team leaders and recruiting more operators. The category of data entry is another opportunity, recruiting in Tamale among recent secondary and technical school graduates.

2. Introduction

2.1. AIRS Program Objectives in Ghana

Malaria causes death and disease in Ghana, particularly among children under the age of five and pregnant women. The USAID-funded Best Practices at Scale in the Home, Community, and Facilities Action Plan reports that an estimated 22% of deaths of children under the age of 5 are caused by malaria. The disease also takes up the resources of the GHS, with about three million health facility visits annually.

In August 2011, Abt Associates was awarded a three-year Africa Indoor Residual Spraying (AIRS) project, funded by USAID under PMI. The purpose of the program is to perform indoor residual spraying in key target districts in the country,



in order to reduce the burden of malaria on the population, particularly among pregnant women and children under five years of age.

The AIRS project targeted four districts in the northern region of Ghana for IRS in 2013. These districts were Bunkpurugu-Yunyoo, West Mamprusi, East Mamprusi, and Savelugu Nanton.

In addition to hiring its own staff to manage the spray operations, the Indoor Residual Spraying (IRS) field operations team in Ghana relies on the Ghana Health Service (GHS) for support. The project uses space provided by the GHS and calls on some of its staff to participate in training and supervision. Community members who have an association with the GHS also work with the IRS project to prepare communities for spraying.

The Ghana AIRS project supports the objectives of the National Malaria Control Programme (NMCP) which seeks to reduce the malaria disease burden by 75% by 2015. IRS is one of several approaches being used in Ghana, along with the use of insecticide treated nets (ITNs), intermittent preventive treatment for malaria in pregnancy and case management at both health facility and community levels (Ghana Health Service 2012: 28).

2.2. Gender Issues in Ghana

Ghana has received increased attention by the United States Government (USG) in recent years. It is the beneficiary of several new initiatives, including Feed the Future (FTF) and the



Global Health Initiative (GHI). It is also one of four countries to participate in the “Partnership for Growth,” an initiative to support and accelerate economic growth. FTF brings to Ghana new investments in agriculture, including a focus on increasing women’s participation as smallholders as well as on improving women and children’s nutrition. The Northern Region is the targeted geographic area for these USAID programs.

In Ghana, despite overall economic growth, gender inequalities are still evident and quite significant, as revealed by figures from a range of development sources. The Human Development Index for 2013 gives a rank of 135 for Ghana out of 187 countries listed.¹ This ranking places Ghana in the lower end of the category of “medium human development,” between Guatemala and Timor-Leste above Ghana (133 and 134) and Equatorial Guinea and India below (136 and 137).²

A family in northern Ghana being interviewed on AIRS spraying procedures

¹ <http://hdrstats.undp.org/en/countries/profiles/GHA.html>

² http://hdr.undp.org/en/media/HDR2013_EN_Summary.pdf

As calculated in the Global Gender Gap (Hausmann et al. 2013, Tables 3a and 3b), women remain disadvantaged relative to men across a range of measures related to employment, health, education, and political participation. The Global Gender Gap index ranks Ghana 76 out of 136 countries overall, placing it at the top of the bottom half. While it ranks 24 in economic opportunity for women, its position with respect to women's health is much lower, coming in in the bottom quarter of all surveyed countries at 104.

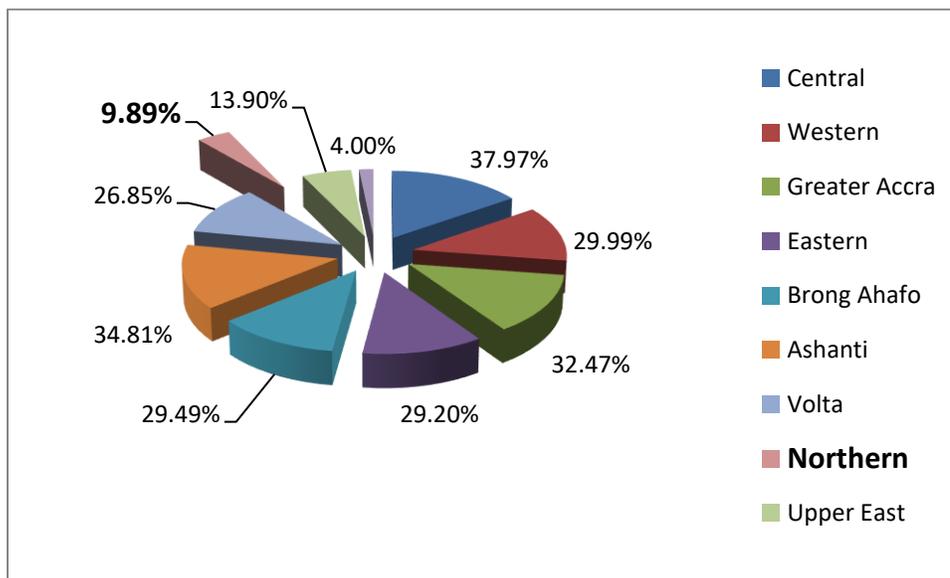
In the UNDP's Gender Inequality Index, which uses a different set of indicators to reflect inequality in achievements between women and men in reproductive health, empowerment, and the labor market, Ghana ranks 121 out of a narrower pool of nations. Both indices reflect that although women are economically active and contribute significantly to the economy, they also experience serious shortcomings in education, health, and political voice.

These national level averages, already low, still hide regional level variation. In Ghana, the Northern Region has historically been and continues to be a place of underdevelopment relative to the rest of the country, particularly the south with its oil and gas industry growth. According to a World Bank study, the north has not seen the same reduction in poverty as the south, with the number of the poor in the rural north growing between 1996 and 2006. A nationally representative sample survey on asset ownership confirmed this, finding that across the regions "[T]he contribution to total gross wealth of the three northern regions—the regions with the highest poverty—and the Volta region is less than the share of the Ashanti region" with Northern Region alone providing only 2.9% to gross national wealth (Oduro, Baah-Boateng, and Boakye-Yiadom 2011:20).

The gender gaps are also greater in the Northern Region, where women are on average poorer, less educated, and own fewer assets than women in Ghana's southern regions. For example, in the district of Savelugu Nanton, men in 72.3% of households owned land compared to women in less than half (47.7%) of households (Doss, Grown, and Deere 2008). These differences link to the agricultural economy of the northern region, since agricultural employment is among the lowest earning occupations in Ghana (World Bank 2011).

Women are constrained by unequal access to, control over, and ownership of land and other productive assets, contributing to low agricultural productivity. Policies and practices surrounding land limit women's ownership and access across Ghana, but it is particularly unequal in the patrilineal north, where women's access to land depends even more strictly than in the south on their relations with men, whether by birth or by marriage, and land access does not necessarily afford them control over the use of the land. Figure 1 shows that women's share of wealth is the second lowest of all regions in Northern Region.

Figure I: Women’s Share of Total Gross Physical Wealth by Region



Source: Oduro, Baah-Boateng, and Boakye-Yiadom (2011: 29)

Disparities in health are also greater in the Northern Region compared to regions in the south. Furthermore, research suggests that catastrophic health events are an important contributor towards households’ downward mobility and poverty status. Improving the health conditions of people who live in northern Ghana is one way to improve the population’s economic growth more broadly (World Bank 2011: 46). Generally women in the north bear heavy responsibilities for their families, working longer hours, but with the support of a very small asset base (World Bank 2011: 48).

According to Round 6 of the Ghana Living Standards Survey (GLSS) conducted in 2012/2013, the economically active portion of the population in Ghana is 75 percent among those 15 years and older. Their definition of “economically active” encompasses those who are employed or seeking work, but interestingly, those who “perform household duties (homemakers)” are considered to be NOT economically active, and as a result does not capture a significant component of women’s economic contributions.

As women in the household are typically the ones responsible for managing the care of the children and their health needs, including taking them to clinics for treatment at locations often distant from their homes and requiring long waits for treatment, they will benefit proportionately more than men from improvement in health care and reduction in malaria cases (USAID 2012: 37).

2.3. Objectives and Methodology of the Gender Review

USAID’s Country Development Cooperation Strategy (CDCS) states that “supporting activities to remove gender-based constraints is a significant pathway towards improved health outcomes, higher levels of educational attainment, economic opportunities, and political participation” (USAID 2012: 11). This project-level gender review is one effort by the Ghana

AIRS project to ensure that its activities are gender equitable and helping to reduced gender-based constraints.

The field review was conducted by Deborah Rubin from Cultural Practice, LLC from July 15-26, 2013. The trip began with meetings with Ghana AIRS project staff and a representative of the National Malaria Control Programme in Accra, followed by travel to the Northern Region. In the region, interviews were held with a diverse set of people involved in spray operations during the 2013 season in the four districts of the Northern Region in which the project is currently active. In addition, interviews were held with a few households, as well as district health and environmental officers (see Annex 2). A total of 115 people were interviewed, some as individuals, most in groups of between 4-6 people.

The Scope of Work (SOW) for this assignment was to:

1. Identify key gender-based constraints and opportunities with regard to spray operations;
2. Provide recommendations for developing appropriate interventions to offset existing gender-based differences and/or disparities;
3. Set overall and intermediary annual benchmarks for women's employment in labor categories in which they are underrepresented.

To achieve these objectives, the following tasks were carried out:

- Background documents on the project and on gender issues in Ghana were reviewed, including information about PMI's Malaria Operational Plan; PMI Ghana 2012 End of Spray Report, and other related materials.
- Meetings were held with AIRS staff on arrival in Ghana, including the Chief of Party and Finance Director to review the project's structure and operations.
- Interviews were conducted in Accra and in four districts in Ghana's Northern Region to gather information from all the types of participants in the spray operations, including the AIRS Ghana Office staff and district field staff, local government officials, community representatives, and all levels of project team and field staff (see Annex 2). Interview guides were developed for the different types of key informants (see Annex 3).

Information from the desktop review, interviews, and operations were reviewed and contribute to the findings and recommendations presented in this report.

3. 2013 Spray Operations

3.1 Description of Spray Operations

To conduct IRS, the AIRS team hires a large number of seasonal staff, such as data clerks and spray operators, who conduct spraying or spray-related activities. A few months before spraying begins, the AIRS team starts to plan and prepare for implementation. Starting in February, the recruitment process for spray operations begins (described below in greater detail). Flyers are prepared and posted at district health centers and government offices (such as at the District Assembly office) in each of the districts where spraying will take place. The

project staff stated that it had not used radio to communicate about the project hiring processes, but only to mobilize communities in preparation for spraying. The success of these messages in mobilization suggests that radio might be another communication channel to reach women who may not respond to printed flyers given their lower literacy and restricted mobility.

Each potential worker submits an application letter and supporting documentation to demonstrate their qualifications. Formal qualifications for consideration for employment include: being over the age of 18, being able to read and write, holding a Ghana Certificate of Education (formerly) or Senior Secondary School Certificate of Education (SSSCE) (currently).³ Participants must also have the physical strength needed to perform the work. Women may not be pregnant or nursing. Previous spraying experience is preferred, but not required. A few women currently working as spray operators first worked as washers in a previous season.

The applications are reviewed by a panel, typically including a staff member of the Ghana Health Service, a member of the District Assembly, and a Spray Operations Coordinator (SOC). The panel usually includes both men and women. Applicants are ranked with scores from 1 to 10. Nearly all or all of the qualified women applicants are hired as are most of the men, although this varies from one subdistrict to another. The panel seeks geographic and ethnic diversity among the workers since in some subdistricts staff from outside communities may not be well accepted.

After the interviews, prospective employees are given a medical exam. Women are also given a pregnancy test at this time. Pregnant women cannot work directly in the spray operations. However, of the relatively small number of women who apply and are interviewed in each district (usually between 30 or 40), it was stated that perhaps 5 or 6 would have a positive result on the pregnancy test.

When hiring is complete, all applicants for the spray team members undergo the same training process for spray operators. While most applicants end up filling the job for which they applied, it is during and after the course of training that the final decision is made that places each applicant into a specific position. For example, some women state in their applications that they would like to be a spray operator, but may not be able to manage the physical skills or recording skills and are instead offered a different job. Similarly, a woman might apply for a job as a washer, thinking that is all that is available for women, but does well in the training and is given a position as a spray operator. The training is a residential program, and workers are provided with food. In 2013, the training lasted for six days, from Sunday to Saturday. Men and women are given different accommodation and different washrooms.

The training itself is a combination of classroom-based learning and experiential learning. For any given position, men and women are expected to complete the same training covering topics appropriate to their work.

³ In the interviews, some district staff reported that the certificate was not formally required.

All members of the spray team learn about the mechanics of spraying and the proper handling of the insecticides as well as the method for recording information about the number of houses sprayed (see Tables 1 and 2). The spray operator training is described as being conducted in a



“military like manner” that is said to be more physically arduous than the actual work of spraying. Trainees are expected to learn and practice spray techniques by hanging the partially filled tanks on their backs and holding their arms up at a specific angle as if they were spraying, 45 cm from the wall, for 45 minutes to over one hour at a time. This process is called “facing the wall of pain.” One person

described the process as causing the arm to shake from exertion. Both men and women reported that the most difficult part of the training was learning to carry the tanks and to spray correctly, and both women and men have dropped out of the training program after being exposed to the process (although the rate of dropouts were not obtained).

In 2012, a total of 1,265 men (86.3%) and 200 women (13.7%) were trained across all the staff and seasonal positions (Table 1). In 2013, 1,448 men (86.1%) and 233 (13.9%) women were trained for all the staff and seasonal positions, maintaining a similar percentage of women from year to year (Table 2). People receiving more than one training are counted only once in the overall totals in the tables below.

Name of household / Location	IRS Serial No. (IRS Card)	TOTAL HOUSES	INDOOR				OUTDOOR				TOTAL		TOTAL HOUSES	TOTAL HOUSES	TOTAL HOUSES		
			Progress	Chlorine	ADOP	Aligned	Progress	Chlorine	ADOP	Aligned							
Shia Damban	01-902494	3	2	11	0	0	1	4	3	0	0	3	2	5	0	2	7
Chig Gmasem	01-902492	3	3	16	2	4	0	0	0	0	0	3	3	3	2	1	4
Loak Bimlaban	01-902493	2	2	13	0	2	0	0	0	0	0	2	2	2	0	1	3
Loak Kambora	01-902496	3	3	12	0	2	0	0	0	0	0	3	3	6	0	2	8
TOTAL		11	10	53	2	12	1	3	0	0	0	11	10	16	2	6	22

Ghana AIRS House number posted on an exterior compound wall (left) and copy of spray record (right)

Table 1: Men and Women Trained in IRS Delivery, 2012

Categories of Persons Trained	Training of Trainers		Spray Operations		Data Capture		Logistics Training		Totals					
	M	F	M	F	M	F	M	F	M	%	F	%	M&F	%
Spray Ops Coordinators	9	0			9	0			9	100%	0	0%	9	100%
Disease Control Officers	9	0							9	100%	0	0%	9	100%
District Env. Health Officers	9	0							9	50%	9	50%	18	100%
Spray Operators			659	141					659	82%	141	18%	800	100%
Data Assistants					8	1			8	89%	1	11%	9	100%
District M&E Coordinators	9	1			9	1			9	90%	1	10%	10	100%
Logistics/Store Assistants							7	2	9	82%	2	18%	11	100%
Field Supervisors (Spray Ops)	29	2							29	100%		0%	29	100%
Site Managers	30	1							30	97%	1	3%	31	100%
Total M/F	95	4	659	141	26	2	7	2	771		155		926	
%	96%	4%	82%	18%	93%	7%	78%	22%	83%		17%		100%	

Source: End of Spray Report, 2012.

Table 2: Men and Women Trained in IRS Delivery, 2013

Categories of Persons Trained	Training of Trainers		Spray Operations		Data Capture		Logistics Training		Totals					
	M	F	M	F	M	F	M	F	M	%	F	%	M&F	%
Spray Ops Coordinators	7	0							9	100%	0	0%	9	100%
Disease Control Officers	5	0							9	100%	0	0%	9	100%
District Env. Health Officers	5	0							9	50%	9	50%	18	100%
Spray Operators			371	119					659	82%	141	18%	800	100%
Data Assistants					8	1			8	89%	1	11%	9	100%
District M&E Coordinators	9	1			9	1			9	90%	1	10%	10	100%
Logistics/Store Assistants							7	2	9	82%	2	18%	11	100%
Team Leaders	48	5							48	91%	5	9%	53	100%
Field Supervisors (Spray Ops)	29	2							29	100%		0%	29	100%
Site Managers	30	1							30	97%	1	3%	31	100%
Total M/F	95	4	371	119	26	2	7	2	771		155		926	
%	96%	4%	76%	24%	93%	7%	78%	22%	83%		17%		100%	

Source: End of Spray Report, 2013.

Table 3: Men and Women Receiving Other Trainings, 2012

Categories of Persons Trained	Structure Enum/IEC TOT		Structure Enum/IEC		Medical Treatment Intoxication Cases		Fire Security		Applied Entomology		Total trained				
	M	F	M	F	M	F	M	F	M	F	M	%	F	%	M&F
Disease Control Off.									6	0	6	100%	0	0%	6
Dist. Env. Health Officers									2	0	2	100%	0	0%	2
Dist. Info Service Assts									2	0	2	100%	0	0%	2
District M&E Coord.	9	1							3	0	9	90%	1	10%	10
District Supervisors (Ent)									7	0	7	100%	0	0%	7
Logistics/Store Assts									6	1	6	86%	1	14%	7
Med. Assts./Prescribers					62	31			2	2	62	67%	31	33%	93
IEC Assts	7	3							4	1	7	70%	3	30%	10
IEC Implementers			356	16							356	96%	16	4%	372
Guards							60	0			60	100%	0	0%	60
Totals	16	4	356	16	62	31	60	0	32	4	517		52		569
%	80%	20%	96%	4%	94%	33%	100%	0%	100%	11%	91%		9%		100%

Source: End of Spray Report, 2012. Totals are adjusted to avoid overcounting with Table 1.

Table 4: Men and Women Receiving Other Trainings, 2012

Categories of Persons Trained	Structure Enum/IEC TOT		Structure Enum/IEC		Medical Treatment Intoxication Cases		Fire Security		Applied Entomology		Total trained				
	M	F	M	F	M	F	M	F	M	F	M	%	F	%	M&F
District M&E Coords.	4	1									4	80%	1	20%	5
District Supervisors (Ent)									76	1	1	50%	1	50%	2
Logistics/Store Assts	4	1									4	80%	1	20%	5
Med. Assts./Prescribers					32	14					32	70%	14	30%	46
IEC Assts	4	1									4	80%	1	20%	5
IEC Implementers			793	80							793	91%	80	9%	873
Guards							32	0			32	100%	0	0%	32
Totals	12	3	793	80	32	14	32	0	76	1	870		98		968
%	80%	20%	91%	9%	70%	30%	100%	0%	99%	0%	90%		10%		100%

Source: End of Spray Report 2013. Totals are adjusted to avoid overcounting with Table 2.

The IEC implementers are identified by the Ghana Health Service, and have to meet some education and literacy requirements since they work for the GHS to report disease prevalence levels. These literacy requirements are harder for women to meet.

Implementation of spray operations is a complicated logistical effort with many checks and balances to ensure accountability and accuracy. Each team gathers at its subdistrict/district headquarters and is given breakfast before dressing in their Personal Protective Equipment (PPE), collecting their equipment, and transported by bus to the day's spray site. Chemicals are released by the storekeepers to the team leaders for use in spraying.

Spraying in the field (also described below) involves walking through a community, identifying houses to be sprayed, and properly recording the information about the work completed. On return to the headquarters, the PPE and equipment is removed and rinsed and stored. Spray operators and others on the team receive another meal before being released for the day.

3.2 Roles of Key Actors

Achieving the goals of the spray operations requires a diverse and well-organized team of many different actors in order to reach the over 216,876 structures targeted across four districts. One group are those employed by the project, including the members of the spray operations teams which go out into the field as well as the district, regional, and national support and supervisory staff. The Ghana AIRS team includes both men and women at all levels. Project staff members based in the regional office include the Operations Manager, the Information, Education, and Communications (ICE) Officer, the Entomological Coordinator, and the Monitoring and Evaluation Specialist. Of these four positions, one – the ICE officer – is a woman. These staff members require both higher educational qualifications and project operations or management experience. The regional office also employs additional administrative and financial support staff, most of which are relatively young men and women.

In addition, the staff members of the Ghana Health Service and affiliated community members work as mobilizers to communicate the key messages of the spraying effort to the communities and enlist their cooperation. As noted above, the number of women who are associated with the GHS are relatively fewer because of the requirement for being able to read and write as part of their disease surveillance duties.

Spray teams: Each field spray team consists of a spray operator and his or her team leader. The team is supported in the field by a field supervisor. Supervising the entire group of teams at the district level is the spray operations coordinator (SOC).

- **Spray operators:** The sprayers are the most numerous staff members. They are responsible for identifying the houses to be sprayed, in some cases helping community members to remove their belongings from their homes, conducting the spraying itself, and recording their work on cards. Each sprayer has to suit up in protective gear, fill and carry his or her spray tank, and visit the targeted houses for spraying. Each sprayer fills out key details about the houses they spray over the course of the workday. The sequence of work in the community involves mixing the insecticide, ensuring that the household members' movable personal goods are taken outside the home, and spraying the interior walls of the structures.

The sprayers give the household members instructions to remain outside for at least two hours after which the householders are to sweep the rooms and mop the floors. The spray operators typically work about 6 hours a day, but their schedule can be affected by how consolidated or dispersed the houses are in a community. As noted in Table 4, 24% of the spray operators in the 2013 season were women.

- **Spray team leaders:** Each team is led by a team leader. Although the team leader may also be called on to spray, his or her main responsibility is ensuring that the sprayers are in the right places, at the right times, with the right equipment and materials, and that the sprayers conduct spraying in a high quality manner. They are the ones to collect the chemical and also check the quality of the spraying and assist if there are ever difficulties either among members of the field teams or between them and community members. The team leaders also provide the first check on the completion of the spray cards. After the day's work, the team leaders are also responsible for checking that the correct quantity of chemicals is accounted for. In 2013, there were several women team leaders, although the majority are men. The women who are team leaders had previous experience as spray operators in previous seasons.
- **Field supervisors:** The role of the supervisor is to follow the spray operators into the field and to do quality control. They also support the team leaders as appropriate. At this time, only one field supervisors is a woman. They are required to travel around their respective districts on their own, something that is much harder for women's families to accept for their wives and daughters.
- **Spray operations coordinators:** The SOCs are responsible for overseeing all of the spray operations at the district level, from the recruitment and review of staff, organization of the training, to the supervision of work with the communities and all oversight of the members of the spray teams and support staff. They oversee all the logistics, the M&E, reporting, and financial processes.

Spray team support staff: At the operational sites, spray teams are supported by storekeepers, data entry clerks/managers, finance assistants, Information, Education, and Communication (ICE) assistants, pump mechanics, washers, water fetchers, and security guards.



Data entry clerks and other staff and community mobilizers in Bunkpurugu-Yunyoo District office

- **Storekeepers:** The work of the storekeeper is primarily to maintain accountability for the quantities of chemicals, equipment, and other supplies that are critical to perform spray operations. Both women and men have held this position.

- **Data entry clerks/managers:** The task of the data entry staff is to review the cards on which the numbers of houses sprayed by the spray teams are recorded. These cards have been previously reviewed by their supervisors and are again verified in the process of

entering the data from the cards into the computer laptops. More men than women have been working in these jobs.

- **Pump mechanics:** These technicians keep the equipment working and conduct repairs on broken equipment so that spraying can continue on schedule. These positions are all held by men.
- **Washers and water fetchers:** The washers arrive early in the morning and start their work of washing the PPE. When the uniforms are clean and dry the washers pack them into the storeroom. There is only one man among the group of more than 30 washers and water fetchers, as the work of washing is perceived as an extension of domestic work. It does not require literacy skills, and is therefore open to women who apply but do not qualify for spray operator positions.
- **Security guards:** The guards watch the office and stores throughout the day and night to protect materials from theft. The position is currently staffed only by men, as the job is seen as unsuitable for women. It was stated that not only would women be unable to defend themselves and the office property in the event that thieves or fire appeared, but also their families would find their staying along overnight to unacceptable.
- **Community level workers (associated with the Ghana Health Service):** The community mobilizers are community members who are selected by the local government in their communities, typically one man and one woman per community. They help to collect data and pass out health information for the Ghana Health Service. They are paid by activity. For the IRS campaigns, the mobilizers inform the communities on the dates that spraying will take place, visiting each household in turn. They are responsible for giving each household an IRS card and sticker and collect household data for each compound.

4. Gender Analysis of Spray Operations

4.1 Recruitment and Hiring of Seasonal Staff

In Bunkpurugu-Yunyoo, district staff reported that some subdistricts were able to recruit more women than others, at least in part the result of active personal recruitment by an AIRS staff member familiar with the area. For the 2013 season, they ultimately hired 110 spray operators: 76 men (69%) and 34 women (31%) for positions on the spray teams. It was stated that a target of 40% participation by women would be possible for the 2014 season.

The relatively small number of women who end up being hired in the spray operations reflects the small pool of women who apply, suggesting that a more intensive recruitment process might yield more applicants. Nearly all or all of the qualified women are hired. Discussions focused on possible efforts to increase this pool with the goal of increasing both the quantity and the qualifications of the women applicants who are eventually hired. Staff and community members agreed that more qualified women were available in the districts than had applied to spray.

One area in which the project has successfully hired and retained more women staff members has been as storekeepers. The women in these posts were generally pleased with their jobs and the supervisors were pleased with their performance, noting that they have been reliable and trustworthy. Among the challenges noted was that the job is temporary and a few were bothered by the smell of the chemicals in the store. An additional challenge for women in their role as storekeepers that emerged in the interviews is having a variable work schedule, since they have to remain at the store until all the equipment and materials have been returned for

the day. When the spray operators and supervisors are delayed in returning from their site visits, it delays the storekeepers even longer.

Currently the primary methods for recruitment of spray team members are to post flyers at local district government offices and local health clinics. It was suggested that revising the flyers to show photos of women who have successfully managed the spraying work would help to clarify the type of work that is involved and the requirements needed and make clear that women are capable of doing the work. Announcements have also been made at some community meetings. Local women's groups, particularly savings and credit groups, could be another way to reach women. Another possible partner might be the Savannah Women's Empowerment Group Ghana, which operates in several regions.

Interviews with community members revealed that more face to face meetings in the community between women who have successfully held jobs as spray team members or in support capacities would help villages better understand the work and might encourage more applicants. They liked the idea of talking directly to former employees. Several people noted that seeing people wearing the AIRS Polo Shirt helped them recognize the project and was a good communications tool, especially when women wore the shirts. Additional communications channels could also be tried (e.g., radio announcements or broadcast text messages) that specifically mentioned new job opportunities. Radio has been found to be "the most widely accessible and the most widely used source of news and information for Ghanaians." Over 80% of women have radios in their homes, and other listen to radio on their mobile.⁴ Data from late 2012 finds over 26 million cell phone subscribers in Ghana.⁵ Another national survey from 2009 found that 68% of women and 72% of men have mobile phones at home.⁶

There are also challenges in recruiting women to work in the District and Subdistrict offices. Women are not yet well-represented among those holding these more technical posts which typically required higher levels of education or more specialized training. Finding qualified women for these short-term posts may be difficult, particularly if local government jobs with greater security are also available. As a result, recruitment for these jobs may need to start earlier than for the members of the spray team.

4.2 Training Process

Gender issues related to the training process were numerous. First, the harsh, military boot camp style of the training deterred many women from applying for work. Current workers and members in the community both reported having heard that the training itself was "too hard." Among the group (both men and the women), it was estimated that about 10% of those who

⁴ <http://www.audiencescapes.org/country-profiles-ghana-media-and-communication-overview-radio-development-news-most-important-source>

⁵⁵ <http://www.worldaffairsjournal.org/blog/kristin-deasy/ghanas-wireless-revolution>

⁶ <http://www.audiencescapes.org/country-profiles-ghana-demographic-profiles-communication-and-gender-communication-and-gender->

begin training drop out during the training because they find the physical aspects of the work too difficult.

One of the trainers described the rationale for the brute force training approach as important for building team solidarity. Another said that by creating a very difficult training process, people would then feel the work itself was easier and be able to complete it easily. If the training were too easy, it was argued, people would not be able to perform the work and would quit, leaving the project without adequate staff and losing their investment in the training.

A compromise might be possible. Both women and men who successfully completed the training universally agreed it was much harder and more strenuous than any work they had to do in the actual implementation of the spraying. This suggests that the training does not need to be made as difficult as it currently is simply to perform the work. In addition, in the few weeks between hiring and training, the potential workers could be given information about exercises to strengthen their arms and to build upper body strength.

This past year (2013), some new efforts were taken to align the training more closely with the needs of the work itself and to allow for a gradual uptake of skills, but more can be done. The new techniques were not adopted by all the trainers or applied uniformly.

4.3 Spray Operations

Overall, the project has already taken many steps to promote the entry of women into the spray operations. Relationships between men and women on staff and on the spray teams were friendly and easy going. There were many discussions about shared responsibility and flexible work roles. There were no serious reports of verbal or physical harassment. Nonetheless women continue to be underrepresented in most employment categories except among the washers and water carriers and do face gender-based constraints in their work. Some constraints are structural, such as the double or triple burden and time constraints that are faced by many of the women, especially those who are married women and have children, when they add paid employment to their already heavy domestic and livelihood responsibilities, such as farming and trading. Other constraints are social or ideological, such as perceptions about the appropriateness of women to interacting with men, traveling long distances to work, or suitability for the spraying tasks.

Time allocation: For a woman, the spray-related work is generally an addition rather than a substitution to an already busy work day. To participate, women have to either arrange to carry out the work of cooking and cleaning for their households before or after the spray-related work or find someone else to help out during the spraying period. There were many accounts of women returning late from spraying and thus being late to meal preparation and evening household routines. It was clear that for women to participate in the work, they need to have a supportive household environment to be able to do the job on top of their other many domestic responsibilities, narrowing the pool of qualified candidates even further.

To enlist greater household support, the project could enlist former employees, both men and women, to make a face to face recruiting visit to key communities, giving households an opportunity to ask questions and demystify the work.

Work conditions: Some women (and some men) raised the following issues about working conditions:

1. General dissatisfaction with fit of the coveralls. Women more than men were unhappy with the size of the coveralls, complaining that they were too large. In the past, it was said that few small and medium size uniforms were ordered. This has made it harder for women, who are more likely to need a smaller size uniform, to find one that fits well. A too-large uniform adds uncomfortable weight and heat. In addition, stepping on the oversize trousers grinds in mud and dirt and makes it harder for the washers, more of whom are women, to be able to clean the uniforms. A decision was taken this year to allow hemming (but not cutting) of the uniforms, but interviews revealed that this information was not fully communicated to or implemented by all the districts, and spray team members and others did not seem aware of it.

There was discussion about shifting from a one-piece coverall to a two-piece jacket and trousers style of uniform as is apparently used elsewhere in Ghana for spraying by workers with Anglo Gold. The mining company works with a local garment factory to produce overalls and other uniforms for the mine, including uniforms for the spray operators.⁷ Women on the project were very interested in the idea of a two-piece uniform, which they thought could offer a better fit and might not be as hot to work in as the current overall style.

2. Women reported a similar problem in the fit of their boots. Walking around in boots that don't fit is more tiring and can be painful if it results in blisters. Although workers are given an opportunity to choose their boot size, they may find that a size that seems to fit in the dressing room does not work well after a long day of walking. One option would be to allow workers to wear the boots during the training week to be able to check the sizes and find the most appropriate ones.

Currently, coveralls and boots are ordered through the headquarters offices in Bethesda before the number and size of the spray team members are known, so estimates must be made. The project could consider i) purchasing some additional smaller size uniforms (overalls and boots); ii) finding a local supplier for boots; and iii) contracting with a local tailor to make adjustments to the uniforms to allow for a better fit.

3. Length of work day. It was noted that because of the variation in the location of the households in communities, the distance required to walk in the course of a day to complete work was not consistent. As a result, even though there is a regular work day time period, it was not always possible to complete the work in the allocated five to six hours and workers would return late. A late return home makes it difficult for women to meeting their domestic responsibilities (see above).

⁷ <http://www.anglogold.com/NR/rdonlyres/3B098072-7711-421B-B938-F31F1FF778E8/0/obuasi.pdf>

4. **Equipment:** Women reported that the filled tank worn slung over one shoulder was heavy to carry. They said that the positioning on one shoulder was more difficult than the weight itself, since many rural women are accustomed to carrying weights in their daily work (water, children, and food crops). This year a new, lighter tank that is carried like a backpack was piloted in two districts. Although there were some issues with the nozzles and the spray strength, these pumps were far preferred to the older, metal, single side sling types that have been used. The lighter pump is advantageous to all, but certainly more to women who are less familiar with this type of equipment or with carrying this type of weight on their backs.

5. **Payment schedule:** There were two related issues about payments. First, there were initially some delays in the payments to the spray operations personnel; this was mentioned by both men and women. The project aims to get the wages to the temporary workers out within one week after the payroll period has ended, but this goal can only be achieved if each part of the process is completed without error or delay – and that has not been possible very often. While prompt payment was a desire for all staff, it is particularly important for married women whose husbands can become less supportive of their work schedule when there is a long delay before the income becomes available. Finding a way to streamline the payment schedule so that workers receive their wages more quickly would thus have a great benefit to women workers.

Second, there were some misunderstandings on the part of the temporary staff about the payment schedule. They did not all understand the twice-monthly payment schedule

and some expressed a desire for weekly pay. Ensuring that women understand the schedule and can explain it to their families will help them retain support for their continued employment.

BOX 1: ARE WOMEN BETTER AT SPRAYING THAN MEN?

Quotes from the field overwhelmingly presented the view that women spray operators did a better job than the men or were better employees. Management and field staff alike made comments such as:
 “If you want honest spray operators take the women.”
 “Women don’t make errors because they don’t want to be disgraced.”
 “Women are more careful of other peoples’ things.”

At the same time, people also noted the many challenges that women face in taking positions as spray operators:
 “Women do not have the strength to carry the pump.”
 “Women’s husbands may not agree that she should work. She will have to leave early to prepare meals at home.”
 “Women do not have the education needed to work.”

Yet, as Table 3 shows, men and women appear to perform equally well at their work.

Social perceptions:

From the first day of the field visit in Ghana, the message that women made much better spray operators than men was emphasized by nearly everyone on the Ghana AIRS project team. The reasons offered were many, but the validity of the claims was difficult to evaluate. For example, it was said that women were more careful about the spraying when they were in people’s houses, were more careful about handling their equipment, and took more care with their belongings. Some believed that women were more likely to help the community members’ belongings out of the house when needed. Others stated that women were more successful at talking with community

members and in convincing those hesitant or resistant to participating in the spraying process

to change their minds. None of these interpersonal or job performance criteria, however, are monitored or measured (Box 1).

Furthermore, it seemed that these statements present some contradictions. If women were so much better at spraying, why was the project not taking a more assertive approach to recruiting and hiring them, or to make their work more comfortable by accommodating them with smaller sized uniforms or more regular schedules? If women were so much better than men, it would behoove the project to invest more in finding them and taking greater steps to keep them.

As seen in Table 3 below, an analysis of the spray coverage data does not reveal a big difference in the performance of women compared to men. Coverage is defined as the proportion of structures sprayed compared to the number of structures found. For example, a spray operator arrives at a compound with 8 structures and sprays all of them. That would be 100% coverage. Alternatively, she finds that 4 of the houses are locked and the owners are in Tamale for the day. In that case, she can only spray 4, or 50% of the structures.

Despite the large difference both in the number of women employed as spray operators and the number of days they worked compared to men, their performance figures appear to be extremely similar.

Table 5: Coverage rates of women and men during spray operations, 2013 season

Level of coverage	Women		Men	
	# days of spraying	% of total	# days of spraying	% of total
Less than 50% coverage	35	2%	191	2%
50-59%	47	3%	377	4%
60-69%	70	5%	640	6%
70-79%	137	10%	1122	11%
89-89%	242	17%	1693	16%
90-99%	207	15%	1544	15%
100%	665	47%	4700	46%
Total	1403	100%	10267	100%

Source: Raw data provided by the Ghana AIRS M&E coordinator.

5. Recommendations

Several of the recommendations below focus on such constraints that have a particularly strong effect for women, even if they are experienced more generally by both men and women.

- I. Expand recruiting efforts for women
 - Arrange for women who were employed in the 2013 spraying season to visit communities with eligible, qualified women and hold meetings with community members (women and men) to describe what the work is really like and to encourage potential applicants. It was repeatedly suggested that such face-to-face recruitment would be

more effective in reaching larger numbers of women than the current passive system of posting flyers in health clinics and district/subdistrict offices. Community leaders and mobilizers can also be used to pass on the word about recruiting and the desire to find more women applicants. Using a wider range of other communication channels (e.g., radio, broadcast text messages) is also encouraged where available.

- Revise advertisement flyers to include photos of actual local women who were employed in previous spraying operation seasons as supervisors, team leaders, and spray operators. If women are not willing to give permission for their photos to be used, then stock photos or drawings of women doing this work can be substituted.
 - Expand recruitment for qualified women for field office staff.
2. Revise aspects of the training
 - Revise the militaristic and masochistic language used in the training (e.g., “wall of pain”) which is off-putting and discourages many women from even applying.
 - Change the sequencing and/or length of some training sessions to allow for more gradual strength building and more repetition on critical skills, such as data recording. It may help to have supplementary rather than required sessions for new hires that could benefit from extra help.
 - Include targeted short training session on gender issues, e.g., introducing a “code of conduct” about harassment and other behaviors.
 3. Improve sizing and type of the uniform
 - Purchase more small and medium-size uniforms and boots.
 - Shift to two-piece uniforms.
 4. Increase the number of lighter-weight, double-shouldered tanks available for use in spraying.
 5. Adjust payment schedule so that workers receive their wages more quickly after the end of each two-week work period so that payment arrives within 10 days of end of payroll.
 - This was an expressed desire of all workers, but is particularly important for married women whose husbands can become less supportive of their work schedule when there is a long delay before the income becomes available.
 - Explore the possibility of using a mobile phone payment system.
 6. Supplementary/support opportunities: The project draws on a number of support services to complete its work and there are opportunities to be proactive in recruiting women entrepreneurs and women’s business to meet these needs. The project already uses some women-owned businesses, e.g., to supply workers with their morning and afternoon meals. Continue to identify and promote other avenues for women to participate in the work of the project in other roles, e.g., using more community women to supply water on a rotational basis; to provide food for workers; to provide tailoring services to hem uniforms.
 7. Target for women’s employment: A target of 18-20% across the project seems a not unreasonable target for the level of women’s employment across the project, up from the current 13%. This is far lower than the 40% level proposed by several of the management staff interviewed. The 18% target would mean an increase of about 50-70 more women to be hired in the 2014 season, assuming that the total number of staff and seasonal workers is maintained. It is anticipated that this increase would most easily be added on the spray teams, as spray operators and team leaders, in part by promoting operators into team leaders and recruiting

more operators. The category of data entry is another opportunity, recruiting in Tamale among recent secondary and technical school graduates.

ANNEX 1: SCOPE OF WORK

Background

The Abt-led IRS Project carries out spraying to reduce the incidence and prevalence of malaria in 13 African countries. Cultural Practice will provide the analysis and operational strategies for carrying out Abt Associates' commitment to providing equal opportunities for women to participate on IRS programs at all levels. The role and responsibility of Cultural Practice is to ensure the project supports equitable opportunities for both women and men in conducting IRS activities, as well as protecting the safety, privacy, and dignity of all participants during the IRS campaigns. Cultural Practice will provide technical assistance to assess women's and men's participation in the country programs, identifying gender specific barriers toward their participation within the different country contexts, and providing recommendations to increase the role of women at all levels, where they are under-represented. These recommendations will then be developed into action steps incorporated into annual country work plans. Annual work plans and M&E indicators will measure the relative participation, remuneration, and decision making of women and men in planning, spray operations, community mobilization, and IRS management. Cultural Practice consultants will assist in identifying and developing partnerships with local women's and other community groups, in addition to representatives of local and regional government to remove barriers to equitable participation, remuneration, and decision making. Each country visit will be conducted by one consultant, and will be 15 days long, including travel. The primary contact in each country will be the Country Operations Manager.

Purpose

The purpose of the Gender Assessment is to assist AIRS Project in Ghana to:

1. Identify key gender-based constraints and opportunities with regard to the spray operations.
2. Provide recommendations for developing appropriate interventions to offset existing gender-based differences and/or disparities
3. Set overall and intermediary annual benchmarks for women's employment in labor categories in which they are underrepresented.

The present scope of work calls for recommendations on interventions and specific measurable targets for reducing gender differences and disparities in employment remuneration, planning, and decision making. The assessment will also recommend gender-sensitive indicators to monitor performance and inform activities.

Specific Tasks in Ghana

Cultural Practice will visit Ghana in July 2013 directly after the 2013 campaign. Before traveling to Ghana, Cultural Practice will develop interview guides for different stakeholders, a data analysis framework, and a standard outline for gender assessment reports. CP will review the data from this year and last year's campaign to identify differences in the number of women

and men in different occupational categories and differences in remuneration for similar and comparable work. Questions will focus on issues such as hiring practices; perceptions and beliefs about men’s and women’s roles and division of labor; relative accessibility of training and recruitment to men and women; and structural and policy barriers.

Based on the results of the 2012 and 2013 campaign, a CP gender expert will conduct a post-spraying gender assessment in Ghana that will include:

1. A desk review of key gender-based constraints and opportunities in Ghana, and of gender issues related to AIRS employment policies, procedures, employment data from 2012 and 2013, and any additional background documentation on the country program (the review will be begun in the U.S. and finished in Ghana).
2. Interviews with AIRS and counterpart MOH staff in Accra
3. Key stakeholder interviews with field staff including, district supervisors, team leaders, and former spray operators, washers, store managers, and district government and health officials in two districts.
4. Group and individual interviews with women and men in communities from which the project draws its spray operators, team leaders, store managers, and washers in two districts.
5. Meet with gender experts and groups in country to identify policy or other national constraints and opportunities, and comparative employment data for comparable sectors.
6. Analysis and write up of findings and recommendations

The assessment will cover three districts for purposes of comparison. The consultant will travel to Savelugu-Nanton and West Mamprusi.

Level of Effort	Task Number of Days
Tool development	2
Background reading and analysis of available data	2
In-country assessment (desk review based on national and regional data collection, field visits, and local travel) and international travel	15
Data analysis and report writing	6
TOTAL	25

2. DELIVERABLES

1. Trip Report, due fourteen (14) days after end of visit.
2. Country Gender Assessment Report due thirty (30) days after the end of the visit.

3. PERIOD OF PERFORMANCE

June 1, 2013 through September 30, 2013

ANNEX 2: SCHEDULE OF INTERVIEWS

July 15, 2013 – Accra

Peter Mumba, Chief of Party, Ghana AIRS Project
Sam Wehbe, Finance and Contracts Director, Ghana AIRS Project
Aba Wilmont, National Malaria Control Programme

July 16, 2013 – Accra

Kwame Ankobea, USAID

July 17, 2013 – Tamale

Diana Tandoh, Office Manager
Ernest Fletcher, Regional Monitoring and Evaluation Officer

July 18, 2013 – Bunkpurugu District

Tahiru Ahmed, Regional Operations Manager
Bertha Moisob, Regional Information, Education, and Communications Officer
Saibu Abukari Wumpini, Spray Operations Coordinator, Bunkpurugu District
Delali Selorm Daroh, Finance Assistant
Sualihu Faisal, IEC Assistant
Philip Annakra, Data Manger I
Janet Janglaar, Team Leader (W)
Fara Justice Palanyeunu, Team Leader (M)
Moses M. Agubinge, Team Leader (M)
Matthew Kombat Spray Operator (M)
Nathaniel Lambon, Spray Operator (M)
Kamba Nyakpaab, Spray Operator (M)
Agnes Azumah Tuatii, Spray Operator (W)
Dubik Gingong, Community Implementer (M)
Grace Isaiah, Community mobilizer (W)

July 19, 2013 – Bunkpurugu District

Augustin Asuma, District Disease Control Officer, Ghana Health Service

July 19, 2013 – East Mamprusi District

Konlan Joseph Lambon, District Environmental Officer
Adam Abu, Spray Operations Coordinator (M)
Sulemana Rakim, Monitoring and Evaluation Officer (M)
Mary Tia, Supervisor (W)
Adam Mumuni, Supervisor (M)
Abdulai Abdul Rahaman, Supervisor (M)
Adam Muzalmil, Supervisor (M)

Gladys Abaya, Team Leader (W)
Ibrahim Oyeleye, Team Leader (M)
Beatrice Manlokiya, Team Leader (W)
Atia Akurugu, Team Leader (M)
Azumah Buyri, Spray Operator (M)
Tani Abudu, Spray Operator (M)
Fuseini Abdul-Wahab, Spray Operator (M)
Issahaka Mustapha, Spray Operator (M)
Ameishetu Imoro, Community Mobilizer and Washer (W)
Balchisu Issifu, Washer (W)
Meriga Awuni, Washer (W)
Miriam Yamba, Water Fetcher (W)
Abu Haruna, Security Guard (M)
Museh Yahaya, Security Guard, (M)
James Atia, Community Implementer (M)
Judith Atinga, Community Mobilizer (W)

July 20, 2013 – West Mamprusi (accompanied by Tahiru Ahmed, Bertha Moisob, and Salifu Wahab

1. Kparigu Village

Safia Shahadu, Community Implementer (W)
Abdul-Rahaman Megidea, Household Head, and five other family members (total: 2 men, 3 women)
Iddrisu Kofi, Household Head, and seven other family adult members (total: 4 men; 4 women)

2. Wulugu Village

Community Implementer Daniel Tia Dokurugu
Seven adult women in the household of Peter Tia

July 22, 2013 – West Mamprusi

Steven Dadia, District Disease Control Officer, Ghana Health Service
Salifu Wahabu, Spray Operations Coordinator (M)
Musah Mumuni, Supervisor (M)
Alihassan Ibn Musa, Supervisor (M)
Francis Kojo, Supervisor (M)
Salfu Issifu, Supervisor (M)
Libabatu Musa, Store Assistant (W)
Samata Yahaya, Store Assistant (W)
Humu Lawlsume Bachi Abdallah, Store Assistant (W)
Yahaya Absdul-Aziz, Spray Team Leader (M)
Sumaila Bawa, Spray Team Leader (M)
Vitus Ehiberugiri, Spray Team Leader (M)
Issifu Mumuni, Spray Team Leader (M)
Raphael Kaba, Spray Team Leader (M)
Stephen Bayensi, Spray Operator (M)
Abdulai Gazali, Spray Operator (M)

Sulley Imoro, Spray Operator (M)
Aaron Imoro, Spray Operator (M)
Rahinatu Abdulai, Spray Operator (W)
Sadia Ibrahim, Spray Operator (W)
Alimatu Somo, Spray Operator (W)
Jamila Fuseini, Washer (W)
Afishetu Bayansi, Washer (W)
Rahinatu Imoro, Washer (W)
Humifa Iddirisu, Water Fetcher (W)

July 22, 2013 – Savelugu District, Mogla Subdistrict

Abukari Issifu, Store Assistant (M)
Tolihatu Issahaka, Store Assistant (W)
Sulemana Kuburu, Store Assistant (W)
Adam Ayuba Job, Site Manager (M)
Adam Abubakari, Spray Operator (M)
Adam Abukari, Spray Operator (M)
Noah Adam, Spray Operator (M)
Asana Issahaku, Spray Operator (W)
Esther Neindow, Spray Operator (W)
Wumbei Tufaru, Washer (W)
Adam Abdul-Razak, Washer (M)
Rafiatu Musah, Washer (W)
Asana Tahiru, Washer (W)
Abibata Abukari, Water Fetcher (W)
Subayatu Mohammed, Water Fetcher (W)

July 23, 2013 – Savelugu

Cristiana Aduku, Community Health Nurse, Ghana Health Service (W)
Osman Alhassan, Spray Operations Coordinator (M)
Grace Ayinjunu, Monitoring and Evaluation Officer (W)
Alaji Nambagla, Household head, with seven other adult household members (total: 4 men, 4 women)

July 23, 2013 – Tamale

Sylvester Coleman, Entomological Coordinator

July 24, 2013 – Tamale

Sammy Oppong Regional M&E Officer, National Malaria Control Programme
Tahiru Ahmed, Operations Manger
Bertha Moisob, IEC Officer
Williams Abilla, Environmental Compliance Officer

July 25, 2013 – Accra

Sam Wehbe, Finance and Contracts Director, Ghana AIRS project (Debrief)
Francis Opoku, Senior Accountant

ANNEX 3: DATA COLLECTION INSTRUMENTS

At the start of each key informant or group interview, the interviewer provided a brief introduction to the review with a statement similar to the following:

I am working with the AIRS Project to better understand the roles of women and men on project. I will be talking with you about a range of activities on the project to people in many of the different positions, including the office staff in the national, regional, and district offices as well as all the people working in the field to conduct the spray operations. We want to understand the different roles and responsibilities of men and women in the project including how you heard about the job, which parts of the work are hard and easy, and information about working conditions. This information will be reviewed by the project, and may be used to make changes in the recruitment, training, and operations of project staff. Are you willing to speak to me about your role and the role of others in the last spray operation?

The questions below were used to guide the interviews but not all questions were asked of each category or individual, and additional questions were asked in some interviews to clarify or probe specific responses.

Questions for the National, Regional, and District Office Staff:

1. Describe the structure of the project in the (country, region, or district, as appropriate).
2. Explain your specific role in the spray operations.
3. How are people in the communities notified about the spray activities?
4. How was the hiring process carried out?
5. Have you found differences in men's and women's involvement in the project (e.g., in the hiring process or in their performance on the job)?
6. Are there particular challenges facing women on the job compared to men?
7. Are there particular challenges that men face on the job compared to women?

Questions for Spray Operators, Washers, Water carriers, Storekeepers, and Guards

1. How did you hear about the spray operation activities?
2. How did you become a spray operator? A washer? A water carrier? A porter? A storekeeper? A guard?
3. What were you told about the work expected by the project?
4. Are there jobs that are only appropriate for a man? Can a woman do the job of a spray operator? Water carrier? Porter? Washer? Guard?
5. Are there jobs that are only appropriate for a woman? Can a man do the job of washer?
6. What was the hardest part of your job? Why?

7. What was the easiest part of your job? Why?
8. How well does the training prepare you to deal with the challenges of the work?
9. Were there aspects of the training that were hard for you as a man? As a woman?
10. Are there changes that could be made in the spray operations to allow women to participate more in the project, e.g., as spray operators or in other positions?

Questions for members of the community

1. Describe what happens when the spraying program starts in your community?
2. Do you prefer to have a man or a woman to spray your house?
3. What reasons do you think cause women to participate less than men on the spray squads?
4. Do you think the project could find more qualified women to work on the project from your community?

Questions for Ghana Government officers, including Health Extension Workers

1. Explain how the District or Regional Health Office and its staff are involved in the spray operations process, from hiring and training through to the spray operations?
2. What was your specific role in the spray operations last year?
3. Discuss any changes you have noticed in the number of malaria patients in the district/region?
4. How do you select community mobilizers?
5. What proportion are men and what proportion are women?
6. If given the opportunity, do you think more women would want to participate? Why or why not?
7. What are some ways to encourage women to participate more as spray operators and porters?
8. How are interested are women in participating on the spray squads?
9. Aside from the spray teams, what other temporary employment opportunities exist for women to earn money in your community? And for men?
10. Can you describe any problems or challenges that women or men spray operators, washers, and porters have had with clothing, equipment, or instructions?
11. How do household members hear about the spray operations?
12. What are the most important messages that people have to hear about prior to the spraying?
13. Which messages are hardest to understand?
14. Which messages are hardest to put into practice?
15. Do women or men have greater difficulty understanding and putting the messages into practices? Why?
16. Do you have suggestions about how to improve knowledge, understanding, and compliance with key messages by women, and by men?

ANNEX 4: REFERENCES

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