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REPORT

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END-LINE ENUMERATION REPORT

Transforming Vaccine Delivery System for Chickens and Goats (Women Rear) Project in Bawku West and Pusiga Districts of Ghana

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1. Background

The transforming vaccine delivery system for chickens and goats project is a three-year IDRC-funded intervention which began in March 2019 and is expected to end in June 2023. The project sought to achieve the following objectives;

- To identify, test, and monitor two approaches- Gender Accommodative Approach (GAA) and Gender Transformative Approach (GTA)-which will assist to develop the vaccine delivery system for Newcastle disease in chicken and Peste des Petits Ruminants (PPR) for goats.

- To create knowledge on institutional requirements for vaccine delivery system that is responsive to the needs of both women animal service providers and women farmers.

- To identify women capabilities needing support and gender norms that need addressing for all animal health services providers and women farmers to benefit from an improved vaccine delivery system.

- To determine how the combination of a social (gender transformative) and technological (strengthened vaccine delivery infrastructure) approach affect women farmers' access to vaccines at scale.

The main goal of the project has been to increase the use of vaccines by women smallholder livestock farmers and enhance their ability to benefit from healthier livestock, improved livelihoods, and increased empowerment. It is hoped that this goal has been achieved through the following outcomes.

i. Improved livelihoods and gender equality among poor rural households in remote communities through increased household income, food security and greater influence of women arising from improved access to animal health services for higher livestock productivity.

ii. Existing animal health service delivery system have been made aware of the potential for increased success through a focused attention to gender specific issues regarding both service providers and livestock keepers.

iii. Local administration and civil society can base policy decisions on additional evidence showing that strengthening gender orientation in development interventions increases the efficiency of achieving overall development objectives.

iv. Increased empowerment and improved access to chicken and goats' health services for women livestock keepers and their households.

v. Animal Health Service Providers have benefited from greater capacity to respond to the requirements of women livestock keepers and from increased demand for their services by these women.

The project has been implemented in two districts in northern Ghana, specifically Bawku West and Pusiga districts in the Upper East Region. In each of these districts, FIVE communities were selected randomly for GAA intervention only and another five communities for a GTA intervention in addition to the GAA intervention. In each community, the project worked with a minimum of 50 households. Also, GTAs were scaled in 10 villages and a total of 15 villages for GTAs.

Cowtribe Technology Limited is the lead organization responsible for delivering vaccines to women smallholder livestock farmers in hard-to-reach areas through mobile technology. Through Cowtribe's delivery model, the project is working with two female private veterinary officers in the two districts who were supported by a network of 170 female lead farmers who support in farmer mobilization and delivery of i2 vaccine.

2. Purpose of this Assignment

Having already conducted a quantitative baseline survey in 2019 prior to the start of the project, the project needed to conduct an end-line study to examine the connection between gender norms transformation, women's empowerment, and access to livestock vaccines.

3. Scope of Work

The scope of work for this assignment covers three main areas namely recruitment of the enumeration team, conduct of the survey and data reviews.

3.1 Recruitment, training and pre-test

Thirty enumerators and four supervisors were contracted to implement the survey. As part of the contract, all the enumerators and supervisors participated in a physical training on the WELI, RHoMIS and WELBI tools for nine consecutive days in Bolgatanga, the regional capital of the Upper East Region of Ghana.

Day 1 (15th May 2023)

The opening session of the training program focused on self-introduction of participants, a review of the enumeration and supervision contracts, and a general presentation on the WOMEN REAR project covering areas such as funding, project locations, and beneficiaries (see the Appendix for both the training gallery and field enumeration pictures).

The training program itself commenced after the opening session starting with a discussion of the paper-based version of the WELI tool which was facilitated online via Microsoft Teams.

The first part of the tool deals with informed consent. Enumerators, before starting an interview, were asked to first introduce themselves to the respondents and obtain their consent to participate in the survey. Respondents need to understand that their participation in the survey is voluntary and given an idea about the duration of the interview, the kind of questions that would be asked as well as an assurance of the confidentiality of their answers. Enumerators were asked to leave a signed copy of the consent form with the respondent.

In reviewing the questions captured in the tool (modules G1-G6), a number of terminologies were defined such as household and index respondents. Household was defined as a group of people who live together and take food from the "same pot". Index/primary respondents were identified and interviewed during the baseline as the primary members of households targeted by the project. Participants were allowed to ask questions and contribute to the discussion. The training for the first day started at 8:30am and closed at 4:30pm.

Day 2

The second day of the training began with a recap of the first day after which the training continued online with the rest of the modules in the paper-based WELI questionnaire. After completing the discussion on the paper-based questionnaire, the enumerators and supervisors were provided with handheld tablets and then exposed to how the WELI tool will be administered practically during the survey. Having already been trained on the paper-based version of the tool, the participants were asked to read the questions on their tablets and then translate them into the local language

for other participants to respond. This session afforded the enumerators and supervisors the opportunity to gain hands-on experience on the WELI tool and to navigate the devices as well as get a common understanding of some of the technical terms or questions in the local language. Some participants required more attention as this was their first time in using smart devices for data collection. In using the tablets, it was observed that some of the devices were slow in responding, so those were replaced.

Day 3

The training session began with a recap of Day 2 after which the session continued with the practice on the handheld tablets. The practice resulted in a common understanding of some key words and phrases such as;

Participate – Persic

Decision – Saa wala

How much – Dizem wola

To what extend – Di paa wola

The following concerns were raised for all enumerators to take note of:

-Always remember to use the right Unique ID

-Remember to save the form as you proceed

-Call for support from supervisors and others when you need help

-Record key and other relevant information in your notebook

-Create a very good rapport with the respondent

-In entering the data, be very careful and vigilant so that wrong data is not entered inadvertently.

-Try as much as possible to probe further when you are not clear with some responses

Day 4

On the fourth day, the enumerators were paired to undertake a role play as a farmer and an enumerator after which the pair switched roles. The supervisors went around to monitor the progress of the role and helped address some challenges faced during the interviews. The whole day was dedicated for the role play and discussion of issues arising from the role play. Some of the challenges were contradiction in responses where the ODK program provided an alert of the inconsistency; hence enumerators

with such errors could not move to the following sections. After the role play, it was agreed that year of birth should be changed to age and the accuracy of the GPS reading should be less than 8 meters.

Day 5

The day started with an online introduction to the Rural Household Multiple Indicator Survey (RHoMIS). RHoMIS is a standardized household survey approach designed to rapidly characterize a series of key indicators across the spectrum of agricultural production and farm activities, market integration, nutrition, food security, poverty, and greenhouse gas (GHG) emissions (see Figure 1).

RHoMIS was designed to improve the process of gathering information from farming households in the rural developing world. Household surveys are very widely carried out but the data is rarely comparable and so the opportunities for learning between individual projects are limited. For this reason, the tool balances standardization with flexibility.
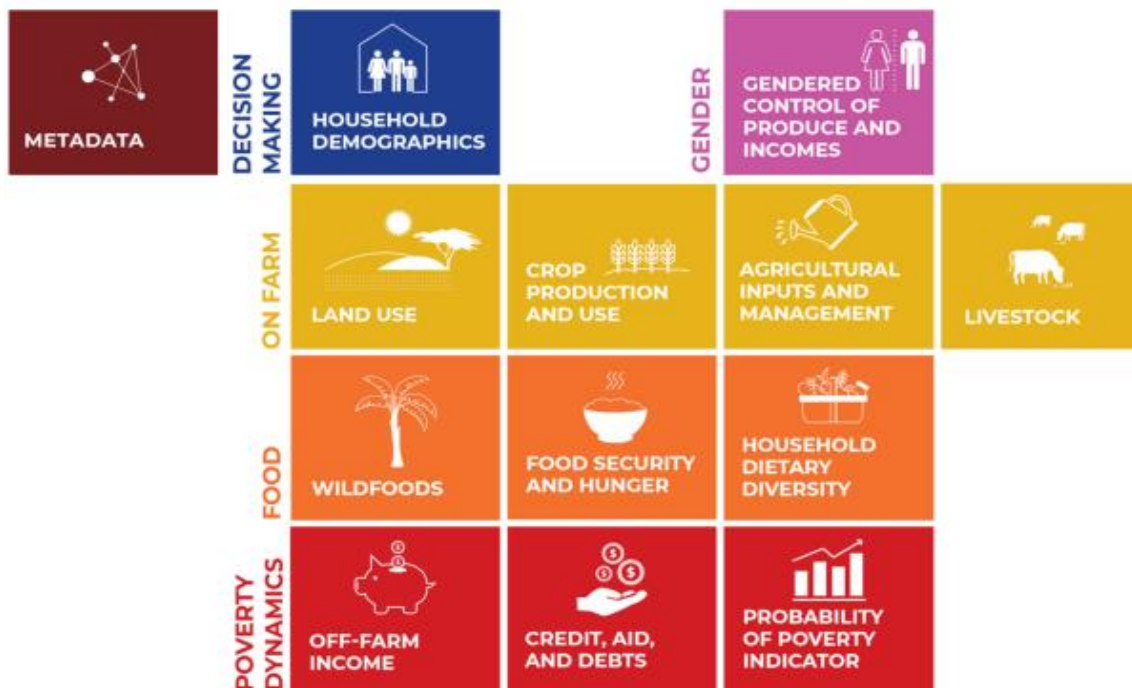

Figure 1: Key indicator groups (modules) generated by the RHoMIS application

Following the online presentation, the training session continued with ODK practice of the RHoMIS tool. Each question in the RHoMIS tool was examined and translated

into the local language for ensure that the enumerators and supervisors gain a better understanding of the tool.

Day 6

Day six of the training session was dedicated to role play on the RHoMIS tool where enumerators were paired just as in the case of the WELI role play. The supervisors went round to monitor the role play and supported those facing challenges. There were minimal challenges on the use of ODK and fewer errors or inconsistent responses given their recent experience.

Participants made the following observations after the role play;

-most enumerators had challenges calculating the proportion of land used for various crop production.

- a need arose to clarify how to capture dowry (either as gift or bought)

The enumerators were told that when a respondent gives a response that is not within the options provided, they need to select the *Others (specify)* option and enter that response.

Day 7

Day 7 was used to finalize preparation and the logistics required for a pre-test of the WELI and RHoMIS surveys. Participants were trained on the use of household IDs and how they will be assigned to various communities for the survey through balloting. It was emphasized that, this time around, there will not be replacement for households under RHoMIS or index respondents under WELI.

Day 8

The penultimate day of the training schedule was used to pretest the WELI and RHoMIS tools at the Kobori community in the Bawku West District. The pre-test respondents had already gathered and welcomed the team with a dance after which each enumerator was assigned two respondents, one each for the WELI and RHoMIS survey. The day ended with each enumerator finalizing and uploading their pre-test data.

Day 9 (23ʳᵈ May 2023)

The last day of the training began with a debrief and sharing of the pre-test field experiences. There were a few concerns. Some of the issues raised include:

Consent form

-The space to write enumerators name is too small to contain the full name, hence that space needs to be increased.

- The two bars of soap indicated on the form should be corrected to one bar of soap as a token to thank the respondent.

-The space for the respondent to sign or thump print is too small and should be increased.

General issues

-It was difficult to get accurate GPS reading since it was raining.

- There is the need to keep saving the work as the interview progresses to avoid losing the data collected.

- When an error occurs and a pop up message appears, it is important to read and try to understand the message before going ahead to locate and correct the mistake.

- Enumerators need to be careful when entering information onto the device to avoid mistakenly entering the wrong information.

The debrief session was followed by a presentation of the errors and inconsistencies spotted in the reviewed data. For the WELI, there were a lot of inconsistencies in the time allocation module. A typical example was commuting to a place without returning or cooking without eating. For the RHoMIS, there were inconsistencies in areas such as household ID and household head, age of respondent children (cannot be zero), farm size, proportional allocation for the various crops especially intercrops and price and cost information.

Prior to the close of the training program, participants were introduced to the WELBI tool which is similar to the WELI questionnaire, except that the targeted respondents are livestock traders and officers in charge of animal care. The WELBI combines both qualitative and quantitative approaches to measure the empowerment of women involved in livestock raising, integrating business and household spheres of livelihood into one tool.

The training program came to an end with discussion on the logistics for the field work. The enumerators were also given the households and communities that they

were to visit for the WELI and RHoMIS survey and were assigned to supervisors (Table 1).

Table 1: Enumeration team and corresponding data

District	Name of supervisor	Name of enumerator	Number of WELI	Number of RHoMIS	Number of WELBI
Bawku West	Mustapha Suraj Mohammed	Bolnaba Dauda Arafat	19	18	-
		Agbango Abdul Rahman	19	16	
		Ndeogo Pious	19	16	1
		Patricia Booremah Danzi	20	17	1
		Abugri Jonah Issah	20	17	-
		Akumbun Emmanuel Awinbe	20	17	1
		Emmanuel Awinbe Azambasi	19	15	-
		Adamu Haruna	19	17	-
	Titigah, Johan Akibe	Alaafia Daniel Ayawini	20	15	-
		Abongo Janet	18	16	-
		Asimiga Mercy	20	17	1
		Haruna Mohammed	20	15	1
		Atiah Richard Awindago	19	15	1
		Putomba Seibik	19	16	-
		Yeet Gladys Tampogmah	20	16	-
Pusiga	Ebenezer Gumeyi Etwire	Sampanbire Daniel Bugbire	20	16	1
		Iddrisu Zelkia	19	17	-
		Duut Mathew	20	16	1
		Asumah Mohammed Kamil	20	16	1
		Awini Dominic Adakudugu	20	19	-
		Abugbilla Wahabu	20	16	1
		Abdul-Karim Latif	21	16	0
		Aburi Sofo Abdul-Majeed	20	16	1
	Vida Akpendya Azuure	Abanga Mbawin Issaka	20	17	1
		Atule Elizabeth	20	17	-
		Haruna Hasia	18	17	1
		Karim Zuwera	20	17	1
		Akaasum Ayamba Salifu	20	17	1
		Ayobi Osman	20	15	1
		Azuuga Abraham Lamusah	20	14	0
Total			589	489	16

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3.2 Conduct of the survey

The actual field survey or data collection began on 25th May 2023 and ended on 8th June 2023. Each enumerator and supervisor was provided a tablet, folder, notebook and pen. The enumerators were further provided with inked stamp pads and the required consent forms and bar soaps (as a token) for each interview. As shown in Table 1, each enumerator conducted between 18 to 21 WELI interviews and between 14 to 19 RHoMIS interviews. Out of all the interviews presented in Table 1, the enumeration team were unable to collect complete information for 34 WELI and 22 RHoMIS surveys due to migration or death of the respondents. Sixteen enumerators further conducted a single WELBI interview each. Additionally, one WELBI respondent had passed on while another was unwilling to participate.

Each of the four supervisors that were engaged was tasked to check each interview for completion and consistency prior to approving for finalizing and submission to the ILRI server. Regular field visits were also conducted to ensure that the data collection went on as planned. The timeline (Table 2) for the survey was as follows:

Table 2: Survey timelines

Date (2023)	Day	Interview /Activity	Comments
May-24	Day 10	Travel day	
May-25	Day 11	3 interviews per enumerator	(one RHoMIS and two WELI)
May 26	Day 12	3 interviews per enumerator	(one WELI and two RHoMIS)
May-27	Day 13	Data review – All collected data	
May-28	Day 14		
May-29	Day 15	3 interviews per enumerator	(one RHoMIS and two WELI)
May-30	Day 16	3 interviews per enumerator	(one WELI and two RHoMIS)
May-31	Day 17	3 interviews per enumerator	(one RHoMIS and two WELI)
Jun-01	Day 18	Data review – All collected data	
Jun-02	Day 19	3 interviews per enumerator	(one WELI and two RHoMIS)
Jun-03	Day 20	3 interviews per enumerator	(one RHoMIS and two WELI)

Date (2023)	Day	Interview /Activity	Comments
Jun-04	Day 21		
Jun-05	Day 22	3 interviews per enumerator	(one WELI and two RHoMIS)
Jun-06	Day 23	3 interviews per enumerator	(one RHoMIS and two WELI)
Jun-07	Day 24	3 interviews per enumerator	(one WELI and two RHoMIS)
Jun-08	Day 25	1 interview per enumerator	One WELBI survey
Jun-09	Day 26	Data review – All collected data	WELI data review
Jun-10	Day 27	Final data review – All collected data	RHoMIS/WELBI data review and completion

3.3 Data reviews

The enumeration met three times over the course of the survey to periodically review the data to identify and correct anomalies. All the review meetings were held at Zebilla in the Bawku West District (Johannes Guesthouse) with the Team from Pusiga District travelling to join the meetings. The first review meeting was held on 27th May 2023. Enumerators and supervisors used the opportunity to share their field experiences and some of the challenges that they encountered. Some of the issues raised included the addition of a new module E which was not covered during the training; the longer distances some enumerators had to travel to meet their respondents, some of the respondents complained that they did not benefit directly from the project, a respondent who was of the opinion that giving accurate responses may affect her chances of benefitting from a future intervention was initially reluctant to provide exact information, and a respondent had passed on so was unavailable for the interview.

Some enumerators had good experiences during the first two days of enumeration. These enumerators were received harmoniously with some respondents grateful that the enumeration team had returned to conduct an end-line survey after the baseline. Some of the respondents provided their enumerators with food and guinea fowl eggs. As part of the data review, the enumeration team were reminded to use the consent form to clearly state the objective and benefits of the survey to get the cooperation of

respondents. The team was then trained on the new module E after which the rest of the day was used to review the few errors that were spotted in the submitted data. There were less errors in the WELI when compared to the RHoMIS. The errors in the WELI survey included inconsistency in respondent's name, type of household being interviewed and time allocation (repetition of activities, commuting and not returning, child care misinterpreted, and domestic activities). The errors in the RHoMIS survey centered around proportional distribution of the area under cultivation, age of adult female goats in years (instead of months) and reproduction data. The final activity for the day was the assignment of the WELBI respondents to selected enumerators in both Bawku West and Pusiga districts.

The second data review session was held at the same venue on 1st June 2023. The review session began with a recap of field experiences after the first review. A few enumerators indicated that they had to pause and continue their interview so as not to inconvenience their respondents so the total hours spent on those interviews per the time stamp will be longer than usual. Some enumerators also noted that it was becoming more difficult to secure interviews with the onset of the rains and start of the farming season. However, the ease and quality of data improved as more respondents were interviewed.

The main session to review the data then began after the recap of field experiences session. Errors associated with the WELI dataset was the first to be projected for discussion and correction. Errors were observed around the type of household, duplication of household ID, females with spouses as heads of their households, and intra household relationships.

For the RHoMIS dataset, errors were associated with household type, duplication of household ID, type of household interviewed, proportion of land allocated to various crops, crop harvested, reproduction period of animals, and the cost of deworming livestock. The enumerators that had issues were tasked to liaise with their supervisors to resolve them.

The final data review sessions were held on the 9th and 10th of June 2023. The first day was used to review the WELI data while the second day was used to review the RHoMIS and WELBI data. The two days were used to resolve outstanding

discrepancies such as undone interviews which was often attributed to death, migration and travel. There were a few respondents on the printed enumeration list whose information were not captured on the ODK form. The other data-related WELI and RHoMIS errors were similar to the inconsistencies identified during the first two review days. For the WELBI, the errors that were identified and discussed included lack of clarity around string or open-ended responses, the need to provide clarity on the time respondents devote specifically to their business, the right size of their business and access to reliable sanitation facilities.

4. Enumeration Issues Spotted and Resolved

The following are some of the issues that the enumerators requested for help for clarification or resolution during the survey:

- Clarifications on animal reared and time allocation
- Inconsistency in food security responses
- Inconsistency in the proportion of land under cultivation for various crops
- Clarification on reproduction questions
- Clarification on household distribution
- Duplication of household ID
- Repeat interview
- Index woman found in a different household
- Only the name of index woman found on the ODK but not the spouse
- Women wrongly indicated as heads of household
- Skipped or unanswered questions