PROJECT ON ENHANCING GENDER RESPONSIVE EXTENSION SERVICES (PEGRES) IN KENYA

GENDER STUDY ON RICE-BASED MARKET ORIENTED AGRICULTURE PROMOTION PROJECT RICE ENTERPRISE INTERVENTIONS IN MWEA EAST AND MWEA WEST SUB-COUNTIES, KIRINYAGA COUNTY

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ACRONYMS

ADS	Anglican Development Services			
ALVF	Agriculture, Livestock, Veterinary and Fisheries			
CBO	Community Based Organisation			
CEC	County Executive Committee Member			
CFs	Core Farmers			
FFs	Follower Farmers			
FGDs	Focus Group Discussions			
FY	Female Youth			
GMP	Gender Mainstreaming Package			
GoK	Government of Kenya			
IWUA	Irrigation Water Users Association			
JICA	Japan International Cooperation Agency			
KAPAP	Kenya Agricultural Productivity and Agri-business Project			
MIAD	Mwea Irrigation Agricultural Development Centre			
MIS	Mwea Irrigation Scheme			
MoALF	Ministry of Agriculture, Livestock and Fisheries			
MRGM	Mwea Rice Growers Multi-Purpose Cooperative Society Limited			
MRM	Mwea Rice Mills Limited			
MY	Male Youth			
NIB	National Irrigation Board			
NGO	Non-Governmental Organisation			
PDM	Project Design Matrix			
PEGRES	Project on Enhancing Gender Responsive Extension Services in			
	Кепуа			
PIU	Project Implementation Unit			
RICEMAPP	Rice-based Market-oriented Agriculture Promotion Project			
SCAO	Sub-county Agriculture Officer			
SHEP	Smallholder Horticulture Empowerment Project			
SHEP UP	Smallholder Horticulture Empowerment and Promotion Unit			
	Project Self Liele Crown			
	Sell Help Group			
SKI				
	Mard Agriculture Extension Officers			
WAEUS	Water Souther Dies Culture			
WSRC	water Saving Kice Culture			

FOREWORD

Integration of gender issues in development has been established worldwide as an approach for enhanced sustainability. This involves interventions that consider and address inequalities and needs among women and men of different social, cultural and economic status in development programmes.

To fulfil its mandate in the Constitution on involvement of diverse categories of its clients in agricultural development, the Ministry of Agriculture, Livestock and Fisheries continuously addresses gender inequality through promotion of gender sensitive practices and culture among its staff and the wider agriculture sector stakeholders. Together with its development partners and other stakeholders, the Ministry continues to develop and implement gender responsive programmes and projects.

The Project on Enhancing Gender Responsive Extension Services in Kenya (PEGRES) is one such project, whose purpose is to *Enhance Institutional Capacity of the Ministry of Agriculture, Livestock and Fisheries (MoALF) in Promoting Gender Responsive Agriculture Extension Services.* PEGRES aims to develop a comprehensive Gender Mainstreaming Package (GMP) by partnering with other smallholder agricultural projects. One of the key processes in the development of the GMP is the identification of gender gaps among beneficiaries and putting in place strategies to address these gaps.

Consequently, PEGRES, together with Rice-based and Market-oriented Rice Promotion Project (RiceMAPP), conducted a Gender Study on rice value chain in Mwea East and Mwea West, Kirinyaga County, to identify and to come up with recommendations to address gender gaps.

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The outcomes outlined in this Gender Study report will initialize the process of developing a comprehensive GMP which should in turn lead to effective gender mainstreaming in the agriculture sector at National and County levels.

Anos

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Beatrice Mwaura, Project Coordinator

EXECUTIVE SUMMARY

Studies have shown the existence of wide spread gender inequalities across all sectors of development including agriculture. The Ministry of Agriculture, Livestock and Fisheries (MoALF) has adopted gender mainstreaming as a strategy to promote gender equity in its institutions, programmes/projects and target communities. As an example, the Government of Kenya (GoK) in partnership with Japan International Cooperation Agency (JICA) has been mainstreaming gender in the Small Holder Horticulture Empowerment and Promotion Unit Project (SHEP UP) through Gender awareness creation and family budgeting approach.

Following the success of SHEP UP, MoALF and JICA came up with the initiative: Project on Enhancing Gender Responsive Extension Services in Kenya (PEGRES). PEGRES will develop and disseminate a Gender Mainstreaming Package (GMP) for adoption by smallholder agricultural projects. In this regard, PEGRES has partnered with RiceMAPP and carried out a Gender study in Mwea East and Mwea West, Kirinyaga County, to identify gender issues affecting the lives of women, men, male youth, female youth, boys and girls in rice enterprise in the two Sub-counties. The study methodology involved interviews with leaders of various institutions, and, Focus Group Discussions (FGDs) using Gender Analysis tools.

RiceMAPP directly works with Core Farmers to disseminate Water Saving Rice Culture (WSRC) technology in Mwea Irrigation Scheme (MIS). Core Farmers are members of the Irrigation Water Users Association (IWUA), nominated by IWUA management, due to their active engagement in rice production, and trained on WSRC. After their training, Core farmers then select Follower Farmers whom they train on-farm on WSRC in close association with Sub-county Agriculture Officer (SCAO) staff and RiceMAPP.

WSRC technologies were well accepted by both men and women Core Farmers, who agreed with their effectiveness in improving rice production and productivity. However, during the study, a few stated that some household members were initially

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hesitant to implementing new technologies. Women were very positive about being selected as core farmers since, as key players in rice production, they are able to adopt the technologies. Currently, the number of women Core Farmers is very small in spite of their substantial involvement in rice production as well as their high interest in RiceMAPP training.

All household members participate in rice production, and household livelihood in MIS is heavily dependent on rice enterprise. In rice production, levelling, flooding, spraying, fertilizer application and bird scaring are mostly responsibilities of men and male youth. Weeding, winnowing, transplanting and Reproductive works are mostly carried out by women and female youth and, in general, women and female youth are overburdened with their extensive involvement in both reproductive and productive activities. However, WSRC has partly changed roles and responsibilities of household members in rice production. For example, introduction of push-weeder has increased engagement of men in weeding, which is culturally the responsibility of women.

All household members have access to most resources necessary for rice production and benefits accrued from rice but men have more control over them than women and female youth. Income is controlled by both men and women but men have more voice. As regards dependent youth, they have minimum control over both resources and benefits. Men have more access to credit than women because they are land owners. When farmers are in need of quick cash, they approach private money lenders (shylocks) who do not require any collateral. The interest rate from these lenders is usually much higher in comparison to conventional lenders. Discussions indicated a common trend of heavy borrowing by farmers, with paddy being the key collateral. This drastically reduces the farmers' profit. At times, discussions among household members on levels of borrowing are not held. Men's dominant control over income as well as their easier access to credit sometimes causes family disputes over how men spend money on hand. Thus, it discourages other household members from actively participating in farming activities. Involvement of married youth (under 35 years old) in rice production seems high in the community because of its high

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profitability. A number of youth are given land by their parents for rice production although ownership remains under the parents while others also hire land. However, due to the limited land, especially in the main scheme, members of some households have had to cope with other survival mechanisms.

Women's and youth's participation in leadership is low in various organizations such as IWUA and MRGM because of the nature of land ownership which is vested more in men. Some activities such as water distribution require IWUA line leaders to work in the night and this deters participation of women. In addition, men tend to volunteer more in public/community institutions. As a result, voices of women and youth may not be fairly represented in these organizations.

RiceMAPP interventions have been well accepted by both men and women farmers. However, it will enhance their effectiveness if more gender considerations are put in place in selection of Core Farmers. Further, organization of gender awareness training and family budgeting training will be of great help for farmers to understand how gender inequality negatively affects rice productivity and income. It is of great importance for smallholder agricultural projects to be designed and implemented with deep understanding over socio-cultural aspects of the target community so that they will benefit all groups of the community.

CHAPTER 1: INTRODUCTION

1.1 Background Information

Gender equality was officially recognized as a global goal for economic growth and poverty reduction by the world community in 1995 in Beijing. Gender issues are prominently addressed by various global protocols and conventions. Gender parity in development is now regarded as a pre-requisite for wealth creation, food security and sustainable development. The Government of Kenya is committed to addressing gender inequalities through ratifying several international and regional conventions and treaties as well as enactment of various policies.

In 2010, Kenya adopted a Constitution that promotes gender equality and women empowerment. The Constitution guarantees the right to equality for men, women and the youth. Article 27 (2), provides for full and equal enjoyment of all rights and fundamental freedoms for all Kenyans and outlaws discrimination, preserves the dignity of individuals and communities and promotes social justice and the realization of the potential of all human beings. Special attention is given to women, youth and other marginalized and vulnerable groups. Under Article 43(1c) of the Constitution on the Economic and Social Rights, every person has the right to be free from hunger and to have adequate food of acceptable quality.

Vision 2030 is Kenya's development blueprint covering the period 2008 to 2030. It aims to transform Kenya into a newly industrializing, "middle–income country providing a high quality life to all citizens by the year 2030". The vision is based on three pillars: the economic, the social and the political. Gender is a cross-cutting factor in all the three pillars. The 2030 vision for gender, youth and vulnerable groups is equity in power and resource distribution between sexes, improved livelihoods for all vulnerable groups, and responsible, globally competitive and prosperous youth.

In the agriculture sector, gender inequalities exist in all areas of value chains, from production to processing and marketing. Gendered patterns of behaviour condition men's and women's roles, the distribution of resources and benefits derived from

income generating activities in agricultural value chains, and the efficiency and competitiveness in the global market. These gender inequalities impact negatively on families and the larger economy.

The Food and Agriculture Organization (FAO, 2010) identifies gender inequality as one of the major factors holding back agricultural productivity and perpetuating poverty and hunger in many regions, particularly in Sub-Saharan Africa. Evidence shows that lower access to productive inputs such as land and capital by women is one of the root causes of the productivity gap between men and women, both in the farm and non-farm sectors. This "gender gap" not only hinders their productivity and reduces their contribution to the agriculture sector but also narrows their contribution to the agriculture sector but also narrows their contribution to the achievement of broader economic and social development goals. If women farmers used the same level of resources as men on the land they farm, they would achieve the same yield levels, which explain the current yield gap of 20-30% between men and women. Bringing yields on the land farmed by women up to the level achieved by men would increase agricultural output in developing countries by between 2.5% and 4%. This in turn could reduce the level of malnourished people by 12-17%. This is therefore a proven strategy for reduction of food insecurity.

The Kenya Integrated Household Budget Survey (KIHBS, 2005), indicated that women in Kenya are poorer than their male gender counterparts. Kenya poverty rate was 53% where, 54% of rural and 63% of urban women and girls live below poverty line. The poverty chain is partly attributed to low agricultural productivity as women face various challenges in their production efforts. These include poor access to land and other productive resources, extension services, credit facilities, lucrative marketing and trading opportunities among others. They are also affected by higher illiteracy levels and farming decisions are mostly made by men. They receive 10% of the credit awarded to small holder farmers and only 1% of the total amount of credit directed to agriculture (FAO, 1998). More than 40% of all small scale farms are operationally managed by women and youth yet women hold only 10% of the registered land titles in Kenya (5-6% of registered titles being jointly held).

Transport of produce is usually done manually due to limited access to appropriate technology such as animals, bikes or automobile (Curry, Kooijman and Recke 1999). Additionally, women's issues may not be fully understood or addressed by the male dominated agriculture extension services.

1.2 Project on Enhancing Gender Responsive Extension Services in Kenya

The agriculture sector has made deliberate efforts to address gender inequalities using the gender mainstreaming approach, and gender issues have been considered in agriculture programmes and projects. MoALF has gender equity as a core value and endeavors to promote gender sensitive practices and culture within its staff and the wider agricultural stakeholders.

Since 2006 the Ministry, in technical cooperation with JICA has been implementing the Smallholder Horticulture Empowerment Project (SHEP) and the SHEP UP in order to increase income of smallholder horticulture male and female farmers. SHEP introduced the gender mainstreaming approach in the course of its project implementation, and has shown that the empowerment of both women and men in agriculture has a significant influence on effective equal-gender-farm management, agricultural profitability and livelihood improvement.

In acknowledging the achievements of SHEP and SHEP-UP gender mainstreaming approach, the Governments of Japan and Kenya through JICA and MoALF, signed the *Record of Discussions* in November 2013 for the "*Project on Enhancing Gender Responsive Extension Services (PEGRES)*" in Kenya. The project purpose is to enhance institutional capacity of MoALF to promote gender responsive extension services in agriculture. This will be achieved by developing and disseminating a Gender Mainstreaming Package (GMP) in partnership with other smallholder agricultural projects, Rice-based Market-oriented Agriculture Promotion Project (RiceMAPP) being one of such projects.

1.3 Rice-based Market-oriented Agriculture Promotion Project

The overall objective of Rice-based Market-oriented Agriculture Promotion Project (RiceMAPP) is to increase agricultural profits of MIS farmers through market-oriented approaches. This will be achieved through improvement of irrigation water management system, dissemination of new production technologies called Water Saving Rice Culture (WSRC) and adoption of farmer-to-farmer extension system for technology dissemination.

1.4 Cooperation between PEGRES and RiceMAPP

PEGRES and RiceMAPP have established a partnership for mutual benefit. PEGRES will work together with RiceMAPP and rice farmers to develop a GMP while RiceMAPP will allow mainstreaming gender in its activities. As a first step of their cooperation, PEGRES and RiceMAPP organized a joint Gender Study in Mwea East and Mwea West.

This report presents the findings and analysis of the study as well as recommendations and way forward for gender mainstreaming of the RiceMAPP activities in Mwea Irrigation Scheme (MIS).

CHAPTER 2: RICEMAPP INTERVENTIONS IN MWEA IRRIGATION SCHEME, WEST AND MWEA EAST SUB-COUNTIES

RiceMAPP interventions in Mwea Irrigation Scheme (MIS) started in January 2012 for expected project period of five years. It aims at improvement of productivity and farm incomes of rice farmers. Major activities are establishment and verification of Water Saving Rice Culture (WSRC) among rice farmers in MIS through trainings, demonstration and farmer field days.

2.1 RICEMAPP INTERVENTIONS IN MWEA IRRIGATION SCHEME

2.1.1 Overview of Mwea Irrigation Scheme

MIS is famous for high-quality paddy production throughout Kenya. It is situated in Mwea East and Mwea West Sub-counties, Kirinyaga County, which is about 100 km North East of Nairobi. The development of the scheme started in the 1950s and the predominant crop grown there is rice. At present, MIS has a gazetted area of 30,350 acres. Including the outgrower (*jua kali*) areas, a total of 20,000 acres are under paddy production¹.

The first generations who settled in the scheme in the 1950s and 60s were given at least four acres of land as tenants. This acreage was decided based on the minimum economic acreage sufficient for the full time upkeep of farmers. However, due to the increase in population, most of the holdings have been subdivided among family members. Currently, average size of holdings is approximately 2.85 acres². But many farmers seem to own much less than this acreage although, especially in *jua kali*, where no government regulation on land holding size has been applied, a few have significantly larger size of holdings even up to 15 acres³.

MIS is comprised of five (5) sections in the inside MIS, namely Tebere, Mwea, Thiba, Wamumu, and Karaba and two (2) sections in the outside of the Scheme (Ndekia

¹ <u>http://www.nib.or.ke/schemes-stations/2015-03-20-12-15-39/mwea-irrigation-scheme.html</u> accessed on 18th October 2015

² "*Result of the Baseline Survey: Mwea Irrigation Scheme, Kiriyaga, Kenya"*, RiceMAPP, May 2012 ³ ditto

and Curukia). Ndekia and Curukia are *jua kali* sections, which were not considered as part of MIS in the past but later integrated and became part of MIS water management system.

Each section is further divided into small units and currently MIS has a total of 77 units. Approximately 6,000 households reside in the area (see Figure 1 below).



Figure 1: Map of Mwea Irrigation Scheme

Irrigation facilities in MIS is managed and operated by National Irrigation Board (NIB) in cooperation with IWUA. While NIB is a government agency with a mandate of construction, maintenance and operation of irrigation facilities throughout Kenya, IWUA is organized and managed by MIS farmers and works for equitable distribution of irrigation water among MIS farmers. IWUA is managed by six executive members and eleven canal representatives, both of who consist of the IWUA board members. Under them there are 67 unit leaders and 347 line leaders of whom one unit leader and 20 line leaders are women.

2.1.2 RiceMAPP Interventions

RiceMAPP launched its interventions in MIS in January 2012. The purpose of RiceMAPP is to increase agricultural profits of MIS farmers through market-oriented approaches. In order to achieve this purpose, the Project focuses on improvement of irrigation water management system, dissemination of new production technologies called Water Saving Rice Culture (WSRC) and adoption of farmer-to-farmer extension system for technology dissemination. Gender aspects are incorporated into some of the project activities as cross-cutting issues. Brief descriptions of interventions are presented below.

(a) Improvement of Irrigation Management System

RiceMAPP organizes trainings for unit leaders and line leaders on efficient management and utilization of irrigation water.

(b) **Promotion of Water Saving Rice Culture**

MIS has been encountering serious water shortage for years due to rapid and continuous expansion of *jua kali* area. In cognizant of this, RiceMAPP has introduced Water Saving Rice Culture (WSRC) with an aim to reduce water usage in paddy production.

(c) Adoption of Farmer-to-Farmer Extension

RiceMAPP has adopted the Farmer-to-Farmer Extension approach. First, the Project selects Core Farmers (CFs) and train them on WSRC. After training, CFs are expected to establish demonstration farms in their own plots and appoint and train Follower Farmers (FFs) on WSRC technologies.

(d) Cross-cutting Issue: Gender

In recognition of women's contribution in paddy production, RiceMAPP has incorporated gender-related activities into its Project Design Matrix (PDM) / Logical Framework. Gender baseline study, gender awareness trainings and stakeholder workshops are main gender-related activities listed in PDM.

RiceMAPP targets all seven (7) sections of MIS, however, the project extension activities are mainly targeting three sections (Mwea, Tebere and Ndekia), which are located on the upper section of MIS.

2.1.3 Collaborating Partners of RiceMAPP

To implement activities mentioned above, RiceMAPP has partnered with various stakeholders. Mwea Irrigation Agricultural Development Centre (MIAD), Mwea East and Mwea West Sub-county Agriculture Offices, Mwea Rice Growers Multi-Purpose Cooperative Society Limited (MRGM) and IWUA are its main collaborators. Their roles played along rice value chain as well as their expected roles in RiceMAPP activities are briefly discussed below.

(a) Mwea Irrigation Agricultural Development Centre (MIAD)

MIAD centre is located in MIS. It was established in 1991 through a technical cooperation programme between the Government of Kenya and the Government of Japan as a centre for irrigation technology development and transfer. The main activities carried out by MIAD are⁴;

- Production and sales of rice seeds to MIS farmers
- Maintenance of rice germplasm
- Soil, water and plant tissue analysis
- In-house training related to irrigation management including farmer training

During the 2012 RiceMAPP Baseline Survey, 68% of respondents identified MIAD as their main extension service provider.

The office of RiceMAPP is situated in the MIAD compound. The collaborative activities, particularly on research and extension of rice technologies, have been on-going.

⁴ <u>http://www.nib.or.ke/research-centre/9-uncategorised/131-mwea-irrigation-agricultural-development-centre-miad.html</u> accessed on 18th October 2015

(b) Mwea East and Mwea West Sub-county Agriculture Offices (SCAOs)

SCAOs in Mwea East and Mwea West and their staff are engaged in agriculture extension services to farmers in their jurisdiction. RiceMAPP has provided several training for extension staff to improve their skills and knowledge on paddy production and water management, and facilitated them with motorcycles to enable them reach the core farmers. Extension staff in collaboration with RiceMAPP are closely working with CFs for dissemination of WSRC in MIS.

(c) Mwea Rice Growers Multi-Purpose Cooperative Society Limited (MRGM)

MRGM is a cooperative society, being established with an aim to support rice farmers in MIS. Main activities of MRGM are as follows⁵;

- Provision of production credit to members on land tillage, quality seeds and farm inputs in a form of kind. Borrowers make a repayment with rice produced at next harvest season.
- Provision of credit to members on education and medical expenses. MRGM makes a payment directly to relevant institutes such as schools and clinics.
 Borrowers make a repayment with produced rice at next harvest season.
- Handling, processing and marketing of members produce. Members are required to sell part of their produce to MRGM to retain their membership.
- Provision of agricultural extension services to rice farmers.
- Provision of various support services including transport, garage, storage, petrol station and drying facilities.

Approximately 40% of MIS farmers are MRGM members⁶.

(d) Irrigation and Water Users Association (IWUA)

As briefly discussed above, IWUA is a farmer organization which was established for water management of tertiary canals and feeder lines. IWUA management, including

⁵ <u>http://www.mrgm.co.ke</u> accessed on 21st October 2015

⁶ "*Result of the Baseline Survey: Mwea Irrigation Scheme, Kiriyaga, Kenya"*, RiceMAPP, May 2012

board members and unit and line leaders, is elected through popular vote of MIS farmers. IWUA board, composed of 17 volunteer member, oversees IWUA activities and regularly holds consultation with NIB for maintenance and operation of irrigation facilities. Unit and line leaders, on the other hand, are responsible for control of water flow to individual plots in their respective units and feeder lines. RiceMAPP regard these leaders as change agents for adoption and promotion of water saving technologies in the scheme.

(e) Mwea Rice Mills Limited (MRM)

Mwea Rice Mills Ltd, a subsidiary of the National Irrigation Board (NIB), is a limited liability company owned by NIB (55%) and MRGM (45%). It operates a rice mill at MIS with its core business being the storage, milling and marketing of rice. The milling capacity of MRM is five (5) tons per hour and it also possesses storage facilities of approximately 80,000 tons' capacity in Wanguru and Nguka areas of Mwea. Currently, RiceMAPP and MRM are in consultation to explore possibilities to establish Warehouse Receipt System so as to increase the number of users of storage service, with which farmers can safely keep their produce after harvest.

CHAPTER 3: STUDY OBJECTIVES AND METHODOLOGY

PEGRES in partnership with RiceMAPP conducted Gender Study in Mwea East and Mwea West Sub-Counties on 14th and 15th October 2015. The Study was designed to complement the *RiceMAPP Gender Baseline Study*⁷, which was carried out in February 2013, so as to obtain further information on existing gender gaps in rice enterprise. The Gender Study involved PEGRES, RiceMAPP, Sub-county Agriculture staff, Core Farmers, Follower Farmers and other stakeholders in rice value chain activities in MIS.

3.1 Objectives of Gender Study

The objectives of the Study were:

- 1. To complement the *RiceMAPP Gender Baseline Study* to further identify gender differences in RiceMAPP target groups and gender specific problems, constraints and opportunities in rice enterprise;
- 2. To establish effects of RiceMAPP interventions on women, men and youth groups in Mwea East and Mwea West Sub-counties and;
- 3. To develop strategies that will enhance women, men and youth groups' participation and sharing of benefits in RiceMAPP activities.

Study Team

The study team was composed of PEGRES Implementation Unit members (Annex 1).

Gender Study Schedule

The study took a total of two days; Focus Group Discussions (FGDs) and interviews with Sub-county staff, CFs and other stakeholders involved in rice value chain in the area, a gender analysis exercise with FFs and a wrap up meeting with Sub-county agriculture officers and RiceMAPP staff. On the third day a courtesy call to Kirinyaga County Chief Officer in charge of Agriculture was organized to brief him on the exercise (Annex 2 for detailed programme).

⁷ Rice-based Market-Oriented Agriculture Promotion Project Gender Baseline Study Report, March 2013

3.2 Data Collection Methods

Data collection was carried out using various methods to obtain primary and secondary data and information. Primary data was obtained through FGDs conducted with Sub-county staff, CFs and interviews with other stakeholders, using semi-structured questionnaires and checklists. Further, the half-day rapid appraisal exercise was organized with FFs using gender analysis tools. Secondary information was gathered through desk reviews of RiceMAPP documents and reports including the *RiceMAPP Gender Baseline Study Report*.

During the group exercise with FFs, Gender Analysis Tools were used to collect information on daily activity calendar, access to and control over rice farming resources and benefits, as well as gender participation in marketing activities⁸. Because there was no female youth under 35 years old, participants were divided into three gender groups; men, women and male youth to get information from each group.

A total of 75 (52 males, 23 females) persons were involved in the study as indicated in table 1 below.

Organization	Partic	ipants
	М	F
Mwea East and Mwea West Extension staff	8	2
RiceMAPP Core Farmers	9	4
RiceMAPP Follower Farmers	22	15
Key Informant: Irrigation and Water Users Association	4	1
Key Informant: Mwea Rice Growers Multipurpose (MRGM)	6	0
Key Informant: Anglican Development Services ⁹	0	1
Key Informant: Equity Bank	1	0

Table 1 Participants in Gender study inMwea East and Mwea West Sub-Counties

⁸ Since relevant information had been collected during the *RiceMAPP Gender Baseline Survey*, the most frequently utilized gender tool "Roles and Responsibility in Productive and Reproductive Activities" was not applied during this study.

⁹ Anglican Development Services (ADS) is a local NGO working for social development and community empowerment in Mt. Kenya East region. They have more than 30 years of experiences in the area.

Key Informant: Nice Millers ¹⁰	2	0
Total	52	23

Gender Analysis Tools Used

The study applied three (3) tools to collect data and information on gender roles and responsibilities and decision making process in Rice enterprise. The tools were:-

1. Daily Activity Calendar (24 – hour Schedule)

This tool is used to describe how women, men, male youth and female youth spend their time during a typical 24- hour day. It helps to highlight gender disparities in workload and appreciate roles of different gender groups so that it can be taken into consideration when planning and implementing projects.

2. Access to and Control over Resources and Benefits Profiles

The tool consists of two profiles; access to and control over resources and benefits profiles. It is used to determine which resources/assets are required in Rice enterprise, and who can make use of them (has access to) and who has decision making power over them (control). It is also used in relation to benefits from the use of the resources, who has access to them and who has decision making power over them (control). It highlights who controls the resources and benefits therefore has economic power, distribution of benefits among gender groups in the household and whether proportional to their contribution to the work. The tool helps in establishing power relations and decision making in a household set up and in determining who gains and who loses in project interventions.

3. Marketing Analysis Tool

It gives insights into participation of gender groups in marketing activities of produce/products, and how incomes earned are distributed among household members. This tool as well highlights gender power relations in a household when household members are engaged in marketing activities.

¹⁰ Nice Miller is a private company operating in Wanguru town, Mwea East Sub-county. It is a biggest miller in the area.

In addition, the study referred to the *RiceMAPP Gender Baseline Report* to obtain relevant information generated through the following tools.

Reproductive Roles Profile

The objective of the profile is to highlight how men, women, male youth and female youth participate in the care and maintenance of the household and its members. This work is necessary yet it is rarely considered of the same value as work that generates income.

Rice Enterprise Activity Profile

This tool indicates who participates in activities pertaining to rice enterprise and how, when and where each gender group performs the tasks.

CHAPTER 4: STUDY FINDINGS

This section presents the findings identified during the study. It discusses gender relations of the target communities; how men, women, male youth and female youth interact with each other in their lives in general and in their engagement in rice enterprises in particular. Further, RiceMAPP achievements are also touched upon.

4.1 Gender Characteristics in the Community

FGDs and gender analysis exercises highlighted existence of gender issues in roles and responsibilities and decision making power among gender groups. MIS is famous for high-quality paddy and white rice throughout Kenya. Most people in the Subcounties are involved in rice value chain. The study confirmed that all gender groups participate in rice farming activities. However, there were disparities in levels of labour contribution and decision making power between men, women, male youth and female youth. On the other hand, household chores for family care and maintenance are mostly carried out by women and female youth.

(a) Division of Labour

Daily Activity Calendar

Results of Daily Activity Calendar highlighted gender inequalities in the division of labour at household level.

Women are extremely busy throughout the day, spending about 16 hours on both reproductive and productive roles out of which 7.5 hours is on care and maintenance of family. They manage their hours through multitasking. In contrast, contribution of men to reproductive works is very low. As regards male youth, they spend some time in sourcing of firewood, fetching water, family shopping as well as being with children at night.

Every gender group works in the farm both in the morning and afternoon. Men and male youth spend 8.5 to 9.5 hours a day on leisure activities including meeting their

friends and watching TV. They are able to take a rest from hard work in the farm. However, women hardly have any time for such activities (Graph 1).



Graph 1: Time Use Analysis of 24 Hour Schedule by Gender Group

As indicated above, unfortunately, the exercise had no female youth participation. Thus, it was not possible to establish how female youth spend the time every day. However, the *RiceMAPP Gender Baseline Survey Report* reveals that women and female youth are engaged in similar activities. Further, all male youth participants in the gender analysis exercise were all married and stated minimum involvement in household reproductive activities. Therefore, it could be safely concluded that female youth have congested daily calendar just like their older counterparts.

Reproductive Roles

Reproductive roles are those pertaining to family care and maintenance such as cooking, washing and cleaning, fetching water and firewood, child care and security patrols. These activities are almost exclusively carried out by women and female youth, except for security patrol, but male youth occasionally give some help in fetching of firewood and water and, child care.

Productive Roles in Rice Value Chain

In MIS, rice has been grown as a dominant source of income and livelihood in the area for more than 50 years. For most MIS farmers, rice production is a household business with substantive involvement of all household members including children before and during school age. Because some rice production activities such as transplanting and harvesting demand substantial labour inputs to complete the work on time, it is common for MIS farmers to hire labour on such occasions. Many MIS farmers regard high labour expenses as one of the biggest challenges in rice production¹¹

The Study participants highlighted levelling, transplanting, fertilizer and chemical application, weeding, bird scaring, harvesting, winnowing, transportation and marketing as important activities in rice enterprise. These activities are mostly manually done rendering rice production a labour intensive venture.

Perceptions of all gender groups were in agreement that all gender groups participate in rice production. However, degree of participation in different activities varies from one group to another and gender specific participation is observed depending on method of performing the task.





(Above) Tiller in MRGM compound: hired out to rice farmers

(Right) Push-weeder promoted by RiceMAPP

¹¹ Rice-based Market-Oriented Agriculture Promotion Project Gender Baseline Study Report, March 2013

The activities mainly carried out by men and male youth are levelling, fertilizer and chemical application and transportation of paddy bags from plots to main road, which are regarded as activities requiring physical strength. According to the interviewees, levelling of hard black cotton soil requires a lot of physical strength. As regards fertilizer and chemical application, those performing the task need to carry a 20kg fertilizer container or knapsack sprayer on their backs while undertaking the activity, thus, CFs claimed, it would be only managed by either men or male youth. Further, they believed this activity would be harmful to women's health although agriculture staff indicated everybody, either men or women, should be aware of effects of chemicals and take protective measures.

Men and male youth are more involved in using push-weeder, while manual weeding is done by women and female youth. Transplanting is mainly done by women, youth and children. School age children also participate in the activity. Flooding, bird scaring and spraying are mainly done by men and male youth. Manual reaping is done by women, male and female youth while mechanized reaping is by men since machines are heavy. Threshing is by all genders while winnowing is by women and female youth.

Because transplanting, weeding and harvesting are labour intensive activities, rice farm household generally hire labour to complete the work on time. It is common practice in the community for school children as well as dependent youth to work not only on family plots but also for other farmers' plots to earn some allowances. Marketing is done by either men or women.

Paddy production is a household business requiring involvement of all household members. Although rigid gender division of labour is practiced, as discussed above, when men are away, women are vested with all the responsibilities to manage the farm.

Community Roles

As regards community roles, both men and women are involved in social activities

such as funerals and weddings. However, the level of participation in community meetings and public/community institutions highly varies across different gender groups. It is high among men while it is very limited among other gender groups. For example, women's representation in the management of the IWUA which controls irrigation water supply in MIS, is very low. Among 68 Unit leaders and 347 Line leaders, the number of women was one and 20 respectively. The woman Unit leader was also one of the seven members of IWUA Management Committee. IWUA management explained that lower participation of women in leadership was attributed to women's lower land ownership in MIS as well as to their unwillingness to be engaged in night distribution of irrigation water. The women reported that the assumption by the community is that when men attend, they represent the whole family. Even those women who attend the meetings and trainings register their participation using husbands name since land is mainly registered in men's names.

One of the most important roles assigned to IWUA unit and line leaders is to supervise and control flow of irrigation water at night, thus, due to a security concern, few women are willing to take part in such activity. Also, very few women are board members of MRGM, which is constituted with member farmers. Instead, women participate more in social groups such as merry-go-round.

(b) Access to and Control over Resources and Benefits

MIS farming community regards rice as a staple food, source of income and employment. During the exercise, resources identified as necessary for rice production were land, water, rice seeds, labour, money/capital, fertilizer, herbicides and oxen (draught power). Benefits from rice that were listed were food, income, employment, livestock feeds and manure. In addition, although it was not identified as an important resource by the exercise participants, the Study team explored how credit affected lives of farmers in MIS where rice enterprise has been highly commercialized and monetized.

Access to Resources and Benefits

Land is the most critical resource for farmers. Unlike the past, when a settler was given at least four acres of irrigated land, population has increased and new generations obtain land mostly from parents. Parents allocate land to their children once they feel they are mature enough or the parents feel they have become too old to properly maintain their plots. However, as parents allocate potions of land to their children for paddy production, they still retain the ownership. The interviewees indicated parents decide how to allocate land based not on sex of their children, but their judgement over willingness and capability of children to be engaged in paddy production. Such decision by parents sometimes induces resentment among the children, especially male children, who believe they have more rights over household assets and properties than their sisters.

Over generations, most land in MIS has been subdivided among family members and landholding per household has reduced. In situations where inherited land cannot be further subdivided, some farmers hire additional land and/or have adopted "shift" or rotational cultivation among households of heirs.

Capital is another essential resource for the enterprise. The RiceMAPP Baseline Survey revealed about 40% of MIS farmers use credit services for rice production. MIS farmers seem to have relatively easy access to credit as long as they have a land certificate under one's name.

There are various sources of credit facilities operating in the area. One of the most prominent credit providers in the community is MRGM. It has a credit scheme for members, which is restricted only in kind. It rents tractors, provides rice seeds and fertilizer and extends educational and medical loans through direct transfer of money to concerned institutions. Borrowers make repayment with paddy after harvest. Formal banking institutions including Equity Bank also extend credit to MIS farmers. Credit scheme of Equity Bank is mostly in kind. One of the schemes is called "Kilimo Super". Through this scheme, they finance farm inputs, school tuitions and house construction by making a direct payment to suppliers of inputs and materials as well as schools. To be eligible to "Kilimo Super", a borrower must be a farmer owning

plots under paddy production. Loan security can be land allotment card, car log book or household items such as furniture. In loan provision, Equity Bank obliges a married person to obtain consent from their spouses. In parallel to formal institutions, there are a number of informal private money lenders, referred to as "shylocks". Although the interest rate from shylocks is usually much higher in comparison to conventional lenders, many approach shylocks because of their readiness to provide credits for applicants without lengthy procedures or screening process. Shylocks do not require any collateral as long as borrowers have a land certificate under his/her name and make next harvest loan security.

Because most money lenders, either formal or informal require a borrower either to have collateral/security or at least to have an evidence of land ownership, it is men who mostly benefit from credit. For example, men accounts for approximately 75% of those who take loan through "Kilimo Super", while women and youth account for 10% and 15% respectively and, among these women, many are widows with inherited land. Women, on the other hand, usually turn to social groups, such as merry-go-round and table banking to fulfil their financial needs.

Within households, all gender groups seem to have relatively equal access to resources and benefits listed by the exercise participants. All are engaged in farming utilizing available resources in the household.

Control over Resources and Benefits

Results of the study indicated that resources and benefits derived from rice enterprise in MIS are mostly under the control of men, who are considered as heads of household. Women also practice some control over resources and benefits listed by the exercise participants. However, the exercise results revealed that men have a final say in household decision-making. One stakeholder reported that misuse of rice income by men is prevalent in the scheme, even to the extent that their wives and children encounter difficulties to meet their food requirement. Independent male youth, who are under 35 years old but are married and have established own household, seem to practice more power over the use of resources and benefits in their households, compared with their mature counterparts. Exercise results indicated young wives have little control over both resources and benefits. Some participants pointed out that because of their lack of control over resources and benefits, young wives prefer to go to near-by town to earn some income, which can be at their disposal. For instance, many women are engaged in rice marketing as traders.

Most married male youth, who participated in the exercise, said they cultivate land allocated by their parents while the land title is still with parents. Parents seem not to interfere with lives of young family as long as land is properly managed. However, the young family has no authority to sell or, sometimes, even lease land without approval of their parents.

Dependent male and female youth, on the other hand, have little voice over resources necessary for, and benefits from, rice value chain activities although men group suggested dependent male youth have some control over resources and benefits except for land, capital and income, unlike female youth whom men group perceived has no voice at all over either resources or benefits.

Graph 2 below illustrates perceptions of men, women and married male youth who participated in the exercise over who in the household participates in decision-making on critical resources in rice production. Men believed decisions were made jointly although women believed men exercise more control on the resources except for rice seed and labour. As regards the households of male youth, as discussed above, husbands have dominant control over all the resources.

Graph 2: Perceptions over How Household Members Share Control over Respective Household Resources



Perception of Men Group



Perception of Women Group



Highly commercialised rice enterprise in MIS provides various employment opportunities for people in the community. During the peak time of transplanting, weeding and harvesting, many provide daily labour; for adult to supplement incomes and for dependent youth and children to earn allowances. Commonly, parents give the youth allowances for their labour contribution in family plots.

(c) Rice Marketing Activities

In MIS farmers are dependent on rice production and marketing for their livelihoods. High profitability derived from rice marketing attracts various types of traders to Wanguru town, which is the biggest town in Mwea East and Mwea West Subcounties.

From discussions and exercises, all gender groups were in agreement that both men and women farmers are involved in marketing activities while dependent male and female youth are assigned minimum role to play in rice marketing.

Men and women groups indicated that both husband and wife are engaged in the marketing activities, from storage, transportation, sales up to income control. They hire transport and take produce to the town for sale. If they are members of MRGM, they are required to sell at least some portion of produce to them.

Rice price significantly fluctuates throughout the year because of changes in supply and demand but at any one period is uniform throughout the town. To meet their immediate cash needs, many farmers sell their produce immediately after harvest at a time when the market price is at its lowest point. According to the 2012 RiceMAPP Baseline Survey Report, the number of such farmers exceeded 80% of the survey respondents.

As regards income control, during FGDs, participants stated regardless of their gender, the person who takes and sell produce to traders sometimes misuses money. However, in general, men have more control over rice income compared to women as discussed in the previous section.

4.2 Findings on RiceMAPP Interventions

RiceMAPP was in operation for almost four years at the time when the study was conducted in October, 2015. As mentioned in Chapter 2, the purpose of RiceMAPP is to increase the agricultural profit of MIS farmers through market-oriented approach. To achieve the project purpose, the Project focuses on improvement of irrigation water management system, verification and promotion of new production technologies referred to as WSRC and use of farmer-to-farmer extension system for technology dissemination. The main activities of RiceMAPP under each expected output are outlined in Table 2 below.

Outputs	Main Activities
 Improvement of Water Management System 	 Analysis of current situation on water management Development of countermeasures for rational water management Formulation of guidelines on water management
2. Verification of WSRC	 Verification and demonstration of WSRC Demonstration and proposing of appropriate mechanization system, Development of prototype and testing Postharvest analysis Market surveys, profitability analysis and farmer linkage to affordable credit institutions
3. Promotion of technologies	 Design extension plan Technology dissemination Conduct workshops/trainings on the following topics Water management Rice cultivation Mechanization Post-harvest techniques Marketing Strengthening of farmers' organization Gender mainstreaming

Table 2: Rice-MAPP Outputs and Activities

4.2.1 RiceMAPP Interventions

(a) RiceMAPP Extension Approach

As indicated above, the main extension approach adopted by RiceMAPP is farmer-tofarmer extension approach; technology dissemination through selected number of Core Farmers (CFs) and their Follower Farmers (FFs). In addition to this approach, RiceMAPP trains IWUA unit leaders on irrigation water management and produces WSRC pamphlets and posters to reach wider audiences.

Farmer to Farmer Extensions

The first batch of CFs was selected in 2014. After they received the training and implemented new technologies in their farm, each CF recruited at least five FFs for on-farm training. The current number of CFs and FFs are indicated in Table 3 below.

Year selected	Core Farmers		Follower Farmers	
for CF/FF	Male	Female	Male	Female
2014	20	1	45	5
2015	44	4	153	42
Total	64	5	198	47

Table 3: Number of CFs and FFs: as of October 2015

Source: RiceMAPP

Selection of CFs was carried out by IWUA management in consultation with their member farmers. CFs are required to allocate at least 1/2 acre of land for demonstration of the trained technologies as well as to appoint their FFs whom they will train on technologies (Figure 2). Most FFs are friends, relatives or neighbours of CFs.



Figure 2: Concept of RiceMAPP Farmer-to Farmer Extension

Topics of the training are Healthy seedling, Levelling, Line Planting, Weeding using push weeder, Intermittent irrigation, Land reparation, Pests & diseases, Soil and plant nutrition, Harvesting/ postharvest, Marketing, Gender, Core farmer approach,
and Sensitization by unit leaders. Training methodologies are both lecture and practical in RiceMAPP demo farm.

RiceMAPP also organizes trainings for Sub-county extension staff to enhance their skills and knowledge on rice production in general and WSRC technologies in particular, so that they can effectively carry out on-farm training for FFs along with CFs.

Unit Leaders Training

In cognizant of critical roles played by unit leaders of IWUA in water management, RiceMAPP organizes training particularly targeting these leaders. The Unit Leader training covers not only irrigation water management but also WSRC technologies with an aspiration to disseminate WSRC through unit leaders in his/her unit. There are 68 Unit Leaders, out of whom only one is a woman.

Production of Educational Materials

RiceMAPP has produced several posters and pamphlets aiming at further dissemination of WSRC in MIS.

No.	Date	Course Title	Target	At	tenda	nce
			participants	Μ	F	Total
		2	2012			
1	14 Dec.	Double Crop Farmer	Farmers from five			20
		Training	units			
		2	2013			
2	13 June &	Mechanization	Youth Groups			102
	4 July					
		2	2014			
3	9 – 12	Stakeholder's	MIS Stakeholders	18	12	30
	June	Training				
4	18 & 19	Core Farmers'	CFs	27	1	28
	June	Training				
5	15 Aug.	Rice Cultivation	Staff and CFs	9	3	12
		Farmers' Training				
6	27 & 28	Up-scaling of seven	CFs, SCAOs and	7	4	11
	Aug.	technologies in CF	WAEOs.			

Table 4 RiceMAPP Trainings and No. of Participants by Gender

		program for SCAOs officers				
7	16 & 17 Dec.	Ratoon Crop Farmers Training	CFs			28
			2015			
8	16 Jan.	Training on WSRC	SCAOs, WAEOs, Extension staff & Unit leaders	11	3	14
9	20 – 22 May	Integrated / WSRC Training for CF 1	CFs selected in 2015 in Mwea & Ndikia Sections	18	3	21
10	20 – 22 May	Integrated / WSRC Training for Extension Officers	WAEOs, Extension staff in Mwea West Sub-county	9	3	12
11	3 – 5 June	Integrated/WSRC Training for CF 2	CFs selected in 2015 in Tebere and Ndikia Sections	23	1	24
12	18 June	WSRC Training for Unit Leaders	Unit leaders	43	1	44
13	24 June	WSRC Supplementary Training for CFs	CFs selected in 2015 in Tebere, Mwea and Ndikia sections	24	2	26
		Total				372

(Note) Gender disaggregated attendance is not available for No. 1, 2 and 7 trainings.

(b) Promotion of Water Saving Rice Culture

Main WSRC technologies introduced by RiceMAPP are as follows:

- Manual Levelling after rotavation
- Healthy seedlings: 100g/m² and 3 week seedlings
- Line planting: Spacing 30 x 15 and 3 seedlings/hill
- Intermittent irrigation: Alternate wetting and drying
- Improved Weeding: Use of Push-weeder

WSRC originates from System of Rice Intensification (SRI), which has been promoted in various countries as well as in MIS. Both WSRC and SRI aim at minimization of water usage and increasing productivity.

As part of WSRC, RiceMAPP has been promoting push-weeder. Unlike random transplanting, in line planting method, seedlings are planted in straight row, between which there are uniform spaces. Push-weeder is used along spaces without damaging

plants on both sides. The other major equipment which have been tested by RiceMAPP are prototype chisel plough, ridger and harvester.

(c) Gender related Activities

In recognition of women's contribution in paddy production, RiceMAPP has incorporated gender-related activities into its Project Design Matrix (PDM) / Logical Framework. In February 2013, the Gender Baseline Survey was conducted to identify and establish gender issues in the MIS community. In 2015, a one-hour gender awareness session was incorporated in the CF training as mentioned above.

4.2.2 RiceMAPP Achievements from Gender Perspective

The Gender Study confirmed WSRC was well accepted by CFs and FFs. All CFs and FFs who participated in the Study agreed with effectiveness of WSRC in increase of production and productivity. Demo plots established by CFs attract not only FFs but also other farmers who cultivate surrounding plots. One CF asserted that almost 75% of farmers along his feeder line adopted some of WSRC technologies. Although detailed information on yield of CFs and FFs were not available for the Study, discussion participants, both men and women, expressed their high expectations for significant increase in yield for next harvest.

Not only does WSRC contribute to increase of paddy production but also to change in division of labour in CFs' and FFs' households. In MIS, weeding is mostly done by hand and traditionally carried out by women with an assistance of male and female youth and little involvement of men. However, after introduction of push-weeder, men started participating in the activity. Men operate push-weeder and women follow men to remove weeds which are within the rows.

Introduction of push-weeder has helped farm households to reduce their labour requirements, resulting in significant reduction of the weeding cost by about 36%¹². On the other hand, some introduced practices require more labour force than

¹² Information from RiceMAPP

conventional methods. For example, line planting demands slightly more labour in comparison with random planting, resulting in increase in the number of hired labour for this activity by about 15%¹³.

Interviewees asserted there is no perceived difference between men and women CFs in terms of level of technology adoption as well as provision of training for FFs. Some men and women CFs admitted difficulties to convince their spouses initially in application of some of RiceMAPP technologies in family plots. For example, 15 x 30 line planting creates much wider spaces between seedlings unlike conventional methods, which many spouses had perceived could lead to lower yields and, thus, refused to practice it. One man CF reported when his wife expressed her disapproval in implementation of RiceMAPP technologies, he decided to divide a plot into two; one for him to practice RiceMAPP technologies and the other for his wife to follow conventional methods. He continued;

"After some time, my wife was convinced of the effectiveness of new technologies because differences in growth of plants between two plots became clear."

Women CFs also mentioned similar incidents, which took place in their households.

On the other hand, fewer FFs encountered disagreement from their spouses in application of technologies. This is because they became FFs after observing positive changes taking place in plots of CFs. CFs asserted that both men and women of their FFs practice RiceMAPP technologies but, they continued, women seemed to be more cautious about adoption compared with men FFs.

As regards technology dissemination, both CFs and FFs, who participated in the Study, agreed that they freely interact with their FFs or CFs of opposite sex and such interaction is acceptable culturally.

¹³ Information from RiceMAPP

CHAPTER 5: GENDER ANALYSIS

The findings of the Gender Study discussed in the previous chapter highlighted gender disparities in all aspects of rural lives. In this chapter, the key gender issues are analysed as they affect different gender groups in engagement of rice enterprise in the project area.

5.1 Gender Characteristics in the Community

Gender findings in the community indicated women and female youth are overburdened with both reproductive and productive roles. In particular, the fact that they spend extremely long hours on reproductive activities should not be overlooked. Heavy workload of women and female youth drains their energy levels and reduces their efficiency in productive activities and, consequently, quality of their works is compromised. Further, time constraints they face obviously discourage them to attend community meetings or to get involved in community leadership.

Along with time constraints, there is little consideration in place for most public /community institutions to ensure fair representation of all gender groups. This makes it difficult for women to take part in public fora whose management is mostly dominated by men, especially older men, who are culturally regarded as leaders of the community. As a result, needs and interests of different gender groups may not be properly taken into account when community issues are discussed and decided during these meetings or among community leaders.

Rice industry in MIS is highly commercialized. Young male participants of the Study explained high profitability of rice enterprise as below;

"Why do I need to give up rice farming? I know very well rice brings about high profit, much better than I could get in the town. In addition, during off-season, I can do the other business as well." Such perceived lucrativeness attracts young people and leads to their decision to stay in farming like their parents. In contrast to some successful farmers, many farmers are constantly in debt. Rice farmers have rather easy access to cash not only through sale of their produce but also through making next harvest a collateral / loan security. In some cases, farmers are required to use most of their newly harvested produce for repayment. Few farmers have culture of savings and budgeting, and often use up their income long before the next harvest season comes, resulting in another borrowing. Obtained credit, especially from shylocks is not always utilized to improve their production but to meet their immediate needs for basic commodities. Further, resulting from acute land shortage in the scheme, many farm household finds it difficult to sustain their livelihoods only with rice farming. While average size of land owned by each household is 2.85 acres, many have only one acre or even less, thus, it is difficult for these households to produce sufficient volume of paddy which sustains the household throughout the coming year unless their resources are cautiously budgeted and expended.

While both men and women face financial constraints, especially towards harvest season, situation of women as well as dependent youth seems to be more severe because of their little control over household income. Their limited control over household income mostly discourage them to be actively involved in rice farming. They often look for alternative livelihoods in the town, some of which may not be sustainable.

As regards school going youth and children, especially boys, because of allowances they earn as casual labour, many prefer to loiter around to get such opportunities rather than staying in school. This has led to increased number of school dropouts.

5.2 Gender Analysis of RICEMAPP Interventions

RiceMAPP interventions were mainly in provision of farmers' trainings on WSRC agronomic practices. RiceMAPP has adopted farmer-to-farmer extension approach to quickly and effectively disseminate new rice technologies in MIS.

In RiceMAPP farmer-to-farmer extension, CFs play significant roles in adoption and dissemination of WSRC technologies at farm level. They establish demo plots within their farm and train FFs and other farmers who become interested in the WSRC technologies. As discussed above, women are substantially involved in rice farming in MIS. Thus, it is of great important for women to fully understand what new technologies are all about so as to effectively practice them in plots. Further, technology dissemination could be more effective and efficient if both men and women are involved along with CF-to-FF channels.

Introduction and promotion of push-weeder has made remarkable impact on division of labour in MIS. Now men and male youth are involved in weeding and, as a consequence, women's workload in this activity has substantially reduced. However, because it requires physical forces to operate, only men and male youth are currently using the provided equipment. Thus, in case men are away, there are possibilities that weeding may not be conducted at right timing, which is likely to have negative impact on production. Introduction of push-weeder has contributed to reduction of workload as well as shift in gender division of labour in paddy production. But at the same time, there is a risk for new technologies to benefit certain gender group at the expense of the others unless proper consideration is given in their development and introduction.

Further, it is important to pay cautious attention on changes in labour requirement resulting in adoption of WSRC; especially when a new practice demands more workforce than conventional practices. For example, planting in lines needs more labour input than conventional random planting, therefore, it would be good if line planting was introduced together with some labour saving technology/tool so as to prevent certain gender group, who is in charge of this particular activity from increasing their workload and responsibilities. RiceMAPP could also encourage those gender groups who usually do not participate in transplanting to take part in the activity so that increased workload will be equally shared among all gender groups.

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According to the Study findings, WSRC technologies has increased rice production among beneficiaries. RiceMAPP is currently under consideration to have collaboration with MRM storage services so that users of the service will be able to keep their increased produce in a proper facility until rice prices become attractive. However, unless farmers are made properly aware of the importance of ploughing back increased incomes for rice farm improvement as well as household welfare, such interventions may not produce intended positive impact on lives of MIS farmers.



Gender Analysis Exercise organized during the Gender Study

Table 6 below discusses RiceMAPP promoted interventions and some proposed recommendations for more effective and efficient implementation of its activities.

Table 5 Identified Gender Gaps and Possible Interventions on RiceMAPP Activities

Key: M – Men, W-Women, MY- Male Youth, FY – Female Youth, HH – Household, CF – Core Farmer, FF – Follower Farmer

RiceMAPP interventio ns & activities	Findings from Study	Analysis from Study	Identified gender gaps	Proposed interventions
1.0 Promotio	n of Farmer to Farmer Extens	ion		
1.1 Participation in training as CFs and FFs	Number of M CFs is 64 and no. of W CFs is 5. CF was selected in consultation with IWUA No. of M FF is 163 and W FF is 44. They are mainly friends, relatives & neighbours of CFs. CFs & FFs can freely interact with each other regardless of their sex. W's representation in community institutions is low. Some M & W initially faced difficulties in technology adoption due to spouses were not convinced. In such	 M: interested in training because of expected better yield W: interested in training but few opportunities to be selected as CF & heavy workload likely to limit their participation in training Dependent MY: participate if there is a perceived benefit. FY: participate if there is a perceived benefit but their workload is likely to limit their participation. 	Insufficient representation of Women and youth may compromise effectiveness of extension approach	Introduction of affirmative action in selection of CFs and other community institutions so as to have fair representations of all gender groups. Thus more seats could be reserved for women and youth. Organization of gender trainings and family budgeting to raise awareness of all HH members on importance of sharing of workload and benefits.
	community institutions is low. Some M & W initially faced difficulties in technology adoption due to spouses were not convinced. In such occasion, they divided plots	perceived benefit but their workload is likely to limit their participation.		members on importance of sharing of workload and benefits. Promotion of labour-saving technologies such as energy saving stoves and other rice

RiceMAPP interventio ns & activities	Findings from Study	Analysis from Study	Identified gender gaps	Proposed interventions
	into two. M & W adopt technologies. W & FY: busy throughout the day because of heavy involvement in both productive & reproductive roles			production technologies to reduce the workload of W & FY.
2.0 Promotio	n of Water Saving Rice Cultur	<u>e</u>	-	
2.1 New agronomic practices in rice production	 All members of HH participate in rice production while gender division of labour is practiced in the community. Farmers generally hire labour at peak farming season to supplement family labour. High labour cost is one of main challenges of rice farm household on profitability, W: more often present at the farm compound. MY, FY & children: allowances 	M & W: likely to adopt recommended agronomic practices because of perceived effectiveness of new practice in production increase but may have reservation of implementation of some practices or quality of work may be affected if it is considerably increase labour requirement. W: likely to adopt recommended agronomic practices but rate of	If trained participants have little decision- making power in HH, they may not fully implement acquired technologies & skills unless a decision-maker approves and provides financial support. High labour cost may discourage	Organization of training on importance of involvement of all HH members in decision- making process. Since rice production is a labour intensive venture, introduction of labour saving (energy and time saving) technologies and awareness raising on the importance of workload sharing among HH members
	W: more often present at the farm compound. MY, FY & children: allowances are paid by parents according	W: likely to adopt recommended agronomic practices but rate of adoption may be affected by	support. High labour cost may discourage farmers to fully	members

RiceMAPP interventio ns & activities	Findings from Study	Analysis from Study	Identified gender gaps	Proposed interventions
	 to their labour contribution to family plots. W & FY: busy throughout the day because of heavy involvement in both productive & reproductive roles As regards control of resources & benefits, men have more control than women and dependent MY & FY have minimal control. 	time availability, cost implication involved & their position in HH decision- making process. MY & FY: unlikely to adopt because of minimum control on resources & minimum perceived benefits FY: unlikely to adopt because of time constraints	adopt knowledge and skills promoted by RiceMAPP.	
3.0 Mechaniz	ation	1	1	1
3.1 Introduction and promotion of push weeder	 M: be interested in weeder and now engaged in weeding using push-weeder W: since introduction of weeder, which is operated by men, their workload has been reduced. But unable to use weeder by themselves because of physical strength required for its operation. 	Shift in gender division of labour took place. W: Timing of weeding may become dependent on availability of men who operates weeder.	Inadequate consideration on gender differences may negatively affect proper and timely implementation of the activity.	Improvisation of tools and equipment, which can be adopted and utilized by all gender groups. Introduction of gender friendly and labour saving equipment to reduce workload in paddy production such as that for transplanting.

RiceMAPP interventio ns & activities	Findings from Study	Analysis from Study	Identified gender gaps	Proposed interventions
4.0 Rice Mar	keting			
4.1 Promotion of cereal banking	Most farmers sell their produce immediately after harvest to meet immediate cash needs. Members of MRGM are mostly men.	 M: may be interested if they have any excess after sale of produce to meet their immediate needs. W: may not benefit from the intervention because most are not MRGM members. Dependent MY & FY: little interest because of minimum control over produce 	Without awareness on importance of benefit sharing, the intervention is unlikely to lead to livelihood improvement of HH.	Gender trainings and family budgeting should be organized to raise awareness of all HH members on importance of sharing of workload and benefits. Some measures should be in place for interventions to benefit all HH members.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

Gender Study in Mwea Irrigation Scheme gave a deeper understanding of gender dynamics and cooperation at household, and community level. It highlighted participation of men, women, male youth and female youth in both reproductive and productive activities; and how they have been engaged in RiceMAPP activities. It created visibility of gender groups in RiceMAPP interventions on rice value chain; how each gender group benefits from its activities. From FGDs and interviews it was evident that gender inequalities and concerns existed in relation to RiceMAPP implementation in MIS. Inequalities in division of labour, control over resources and benefits and marketing are likely to have negative impacts on rice value chain.

In this context, this chapter highlights proposed recommendations from gender point of view for enhanced rice productivity and accrued incomes in MIS.

The study revealed gender differences in division of labour. Levelling, flooding, bird scaring, chemical and fertilizer application and transportation of paddy bags are mainly carried out by men and male youth; on the other hand, major players of transplanting, weeding and winnowing are women and female youth. However, the study also disclosed such division of labour could be easily modified through introduction of new technologies.

Control over resources and income is more vested in the hands of men and, to some extent, of women while dependent youth have minimal say over the income. Instead, dependent youth and children are given allowances for their labour contributions. Some male youth (dependent or independent) also hire land on their own thus, in this case, they have control of their own income.

Rice is a highly commercialized commodity. Market is readily available and it is not difficult to source for credit using future harvest as collateral. Many farmers are constantly in debt and hardly meet their basic requirements. Financial constraints in households cause tension among household members and at times result in family disintegration. Especially, limited control over benefits accrued from rice production undermine their motivation to actively work for household enterprise, which would directly affect household production.

RiceMAPP interventions have contributed to increase of paddy production of beneficial farmers because of their adoption of recommended technologies. However, as discussed throughout this report, effectiveness of RiceMAPP interventions would be further enhanced and its resultant impact would be maximized if some more attention is given to power relations across different gender groups working in rice value chain; how interventions affect each groups and how each has responded to such interventions.

Recommendation 1: Gender Balance among Beneficiary Farmers

RiceMAPP has exerted an effort to engage more women farmers in RiceMAPP activities as CFs and FFs. Owning to such efforts, their number, especially that of women FFs, has been gradually increasing over the project period. Although traditional practices in the community may be persistent against such efforts and initiatives, it would be recommended that RiceMAPP continuously encourage stakeholders to work on attainment of gender balance since men, women and youth are engaged in paddy production. RiceMAAP technologies would be more properly adopted and widely disseminated throughout the scheme if all gender groups are given an opportunity to learn new technologies. Further, it would be also necessary to create enabling environment for women and female youth to actively participate in the training along with their male counterparts. Promotion of labour-saving technologies to reduce their workload in reproductive tasks as well as organization of training programme in gender sensitive manner in relation to content, duration, venue and level of understanding will be of great help to enhance their participation. Both staff and stakeholders also recommended that community institutions consider enhancing participation of women in leadership and community roles.

Recommendation 2: Promotion of Equal Representation

Public institutions in MIS are mostly dominated by men such as IWUA and MRGM which are main collaborators of RiceMAPP. It would be recommended that RiceMAPP continuously support concerned organization to promote fair representation of all gender groups, men, women, male youth and female youth. In this regard, RiceMAPP could explain positive impacts of gender balance in management by citing its experiences with women and youth CFs and FFs.

Recommendation 3: Holistic Approach for Increased Production and Income

In MIS rice enterprise is largely a family business because most farmers are smallscale producers. Most farmers hire labour to supplement inadequate family labour and labour costs represents bulk of production costs in farm household in MIS. Thus, reduction of labour cost could directly improve their farm income. In view of this, it would be of interest of RiceMAPP to carefully examine how introduced technologies are adopted by each member of farm household. If new technologies are properly adopted by all of household members and overall workload is reduced and equitably shared among them, it would be likely to result in reduction of number of hired labour. Efficiency and effectiveness of RiceMAPP interventions would be further enhanced if power relations in the households and in the community are fully taken into account in their designing.

Recommendation 4: Assessment of Introduced Technologies

RiceMAPP has experimented several tools and machines, taking into account local conditions. Push-weeder is provided for CFs and FFs for free. Currently, the Project is planning to carry out the study so as to assess its impact on different gender groups. Such study on introduced technologies would provide the Project with valuable information on possible gender differences over adoption of concerned technologies. Such information would greatly assist the Project in their improvement and, subsequently make effects of the Project interventions more sustainable and long-lasting.

Recommendation 5: Monitoring Framework with Gender Aspects

In relation to Recommendation 3 and 4 above, it will be of great assistance for the Project to introduce a monitoring framework with gender aspects so that impacts of interventions will be regularly monitored and, if necessary, appropriate measures will be put into place immediately. Besides, introduction of engendered indicators in PDM may greatly assist in promotion of gender mainstreaming in RiceMAPP activities.

Recommendations 6: Gender Awareness Creation among Stakeholders

Gender awareness creation should be initiated for farmers and other community institutions to understand the negative impact of gender issues on productivity and farm income. They are likely to appreciate the contribution of different gender groups to household and community economy, and learn how to share responsibilities and incomes so that all family members are motivated to work together for increased productivity and incomes. Staff recommended that sub-county offices should work in collaboration to engage and create gender awareness in the boy child from early ages in order to minimize idleness. To avoid high school dropout and early marriages, child labour should be discouraged.

Recommendation 7: Assessment of Participation of Vulnerable and Resource Poor Groups in Rice Production and Marketing

Level of participation of vulnerable and resources poor should be assessed to identify their special needs and interests. Multi-disciplinary approach would be of great help in that their socio-economic gender issues will be properly recognized and, accordingly, addressed.

CHAPTER 7: WAY FORWARD

RiceMAPP Gender Study revealed existing gender disparities in the household and community. While men, women, male youth and female youth in household were involved in day-to-day rice activities, benefits accrued from the family enterprise were mostly controlled by men and, to some extent, women. Disparities in benefit sharing apparently demotivated those members of the household, who are not entitled with fair share against their labour contributions. Further, in case new activities resulting from RiceMAPP interventions further skew workload distribution among household members, such activities is unlikely to be properly adopted in the household.

In view of above, PEGRES would like to organize the following activities in collaboration with RiceMAPP and county government so as to mitigate gender gap and to contribute to the achievement of RiceMAPP objectives, improvement of rice productivity and family incomes.

1. Organization of Gender Awareness Training for Farmers

The gender awareness training will be organized to raise gender awareness of target farmers on importance of sharing of workload and benefits. This will increase understanding and transform community behaviours towards more equitable workloads and income among the gender groups. PEGRES will be responsible for development of training materials and organization of TOTs. RiceMAPP and Mwea East and West Sub-county offices will make the necessary arrangements for implementation of farmers' trainings. As part of training activities, community gender action plan will be prepared by beneficial farmers to mitigate gender gaps in the community.

2. Organization of Family Budgeting Trainings

The family budgeting training will be organized to train target farmers on importance of sharing of income among household members and importance of budgeting. PEGRES will be responsible for development of training materials and organization of TOTs. RiceMAPP and Mwea East and West Sub-county offices will make arrangements for implementation of farmers' trainings.

3. Identification and Promotion of Gender-Friendly Technologies

Gender-friendly technologies which fit into local conditions would be explored. For example, there are some examples of rice projects which have improvised pushweeder to be easily handled by women. PEGRES will source appropriate technologies which have been contributing to mitigation of gender gaps in workload.

4. Preparation of Gender Sensitive Monitoring Framework

Gender sensitive monitoring framework would be developed so that impacts of interventions on different gender groups will be monitored and assessed.

5. Promotion of Gender Balance in RiceMAPP Activities

PEGRES will explore the way to work together with RiceMAPP in promotion of gender balance in its activities. It is important to ascertain that all gender groups participate actively and effectively; not be just nominal to observe gender balance per se.

PEGRES in collaboration with RiceMAPP developed a Gender Action Plan (GAP) outlined below, indicating the above stated recommendations with detailed objectives, activities, timelines and implementation steps. The listed activities are planned to be completed by the end of the PEGRES project period, August 2017.

ACTION PLAN OF PEGRES ACTIVITIES IN Mwea Irrigation Scheme

A. Introduction

The Project on Enhancing Gender Responsive Extension Services (PEGRES) in cooperation with the Rice-based Market-oriented Agriculture Promotion Project (RiceMAPP) conducted a Gender Study in Mwea Irrigation Scheme, Mwea East and Mwea West Sub-counties from 14th to 15th October, 2015, in order to identify existing gender gaps in rice enterprise. The findings of the study were shared in two workshops held with staff and with stakeholders in Kirinyaga County. During the workshops, participants reached a consensus on the identified gaps from which PEGRES developed this Action Plan. The Action Plan includes strategic objective, objectives and activities to address the identified gaps.

B. Gaps identified during the RiceMAPP Gender Study

- Skewed workload distribution among household members
- Low representation of women and youth in public/community institutions
- High indebtedness among rice farmers and financial difficulties encountered by many households
- Few gender mainstreaming activities in the project

C. Strategic Objective: To enhance institutional capacity on gender mainstreaming for staff and projects at national and county levels

Objective 1: To enhance staff knowledge and skills on gender mainstreaming

- Activity 1.1: Organize Gender Awareness Trainings for National, Project, and County Staff
- Activity 1.2: Organize ToTs for County staff
- Activity 1.3: Support Trainers (County staff) in Implementation of Staff and Farmer Trainings

Objective 2: To enhance gender responsiveness in project cycle management at beneficiary level

- Activity 2.1: In consultation with RiceMAPP, develop strategies and interventions to address gender related gaps identified at beneficiary level during gender study
- Activity 2.2: Support RiceMAPP to implement gender responsive interventions

Implementation Plan

Objective 1: To enhance staff knowledge and skills on gender mainstreaming

Activity 1: Organize Gender Awareness Trainings to National, Project, and County Staff									
**Target groups									
A. MOALF managers	A. MOALF managers B. RiceMAPP staff, County and Sub-county managers								
Outputs	uts Sub-activities Responsible Stakeholders Resources Timeframe								
					(To be decided)				
1. Training contents	1.1 Identify training	Training	Directorates,	Human Resource	***				
and materials	beneficiaries	Officer	Gender Units and						
developed			HRDs, Projects						
			Coordination						
			Units (PCUs)						
	1.2 Develop training	Training		Human Resource	***				
	objectives	Officer							
	1.3 Develop draft	Training		Human Resource	***				
	training contents	Officer							
	1.4 Recruit facilitators	Training		Human Resource	***				

	(trainers)	Officer			
	1.5 Finalize training outline & contents	Training Officer	Consultant	Human Resource	***
		Tusinin	Carrant		***
	1.6 Design training	Officer	Consultant	Human Resource	<u>ጥጥጥ</u>
		onicei		Stationery	
	1.7 Produce training	Training	Consultant	Human Resource	***
	materials	Officer		Stationery	
2. Training	2.1 Prepare training	Training	Consultant,	Human	***
Programmes	programmes (Venues,	Officer	Gender Units,	Resource,	
Developed	timing, schedules)		RICEMAPP, PCUs	Stationery	
	2.2 Prepare budget	Training		Human	***
		Officer		Resource,	
				Funds	
				Stationery	
3. Trainings	3.1 Make arrangements	Training		Human Resource	***

conducted	for trainings (invitation,	Officer			
	booking of venues)				
	3.2 Conduct trainings	Training Officer	Consultant	Stationery, Human Resource, Funds	***
	3.3 Conduct trainings	Training	Consultant	Stationery,	***
	evaluation	Officer		Human Resource	
4. Trainings	4.1 Review trainings	Training	Consultant	Human	***
reviewed and	(procedure, contents,	Officer		Resource,	
contents &	materials, reaction of				
Materials revised	participants, etc.)				
	4.2 Revise training	Training	Consultant	Human Resource	***
	contents	Officer		Stationery	
	4.3 Revise training	Training	Consultant	Human	***
	materials	Officer		Resource,	

				Stationery			
** Two separate trainings will be conducted for MOALF managers (A) and RICEMAPP staff, County and Sub-							
county managers (B))						

Activity 2: Organize ToT for County staff								
Target group: County, Sub-county staff, Ward office staff								
Outputs	Sub-activities	Responsible	Stakeholders	Resources	Timeframe			
1. Training Needs Assessment Conducted	1.1 Develop tool for training needs assessment	Training Officer	County Staff	Human Resource Stationery	November 2015			
	1.2 Conduct Training Needs Assessment	Training Officer	County Staff	Human Resource Stationery	December 2015			
2. TOT Plan	2.1 Identify training	Training	County Staff,	Human Resource	January –			
developed	beneficiaries	Officer	RICEMAPP	Stationery	February 2016			
	2.2 Prepare and produce	Training		Human Resource	January –			
	training contents &	Officer			February 2016			

	materials				
3.Training Programme Developed	3.1 Prepare training programme (Venue, timing, schedule)	Training Officer	County staff	Human Resource	February - March 2016
	3.2 Prepare budget	Training Officer	County staff	Human Resource Stationery	February - March 2016
4. TOT conducted	4.1 Make arrangements for training (invitation, booking,	Training Officer	County staff, RICEMAPP	Human Resource Stationery Funds	March 2016
	4.2 Conduct TOT and prepare Action Plan	Training Officer	County staff, RICEMAPP	Human Resource Stationery Funds	March 2016
	4.3 Conduct training evaluation	Training Officer	TOT Participants	Human Resource Stationery	March - April 2016
5. Training	5.1 Review training	Training		Human Resource	April - May 2016

reviewed and	(procedure, contents,	Officer	Stationery	
contents &	materials, reaction of			
materials revised	participants, etc.)			
	5 2 Revise training	Training	Human Resource	April - May 2016
	J.2 Revise training		Human Resource	
	contents	Officer	Stationery	
	5.3 Revise training	Training	Human Resource	April - May 2016
	materials	Officer	Stationery	

Activity 3: Support Trainers in Implementation of Staff and Farmer Trainings						
Target group: TOT participants						
Outputs	Sub-activities	Responsible	Stakeholders	Resources	Timeframe	
1. Staff and	1.1 Consult with Trainers on	Training officer	Trained	Funds,	March 2016	
farmer Training	training implementation and		Trainers,	Human		
Plan (Action Plan)	support them in		CDA Kirinyaa	Resource,		
Implemented	preparations		SCAO Mwea			

			East & West		
	1.2 Prepare budget	Training officer	CDA Kirinyga	Human	March 2016
			SCAO Mwea	Resource	
			East & West		
	1.3 Backstop trainers during	Training officer	Trainers	Funds,	April - June
	and after staff and farmer trainings		CDA Kirinyga SCAO Mwea East & West	Human Resource,	2016
2. Training	2.1 Review trainings	Training Officer	Trainers	Human	June 2016
reviewed and	(procedure, contents,			Resource	
contents &	materials, reaction of				
materials revised	participants, etc.)				
	2.2 Revise training contents	Training Officer	Trainers	Human	June-July
	& materials			Resource	2016

Objective 2: To enhance gender responsiveness of project cycle management at beneficiary level

Activity 1: In consultation with RICEMAPP, develop strategies and interventions to address gender gaps identified at beneficiary level during the gender study								
Target group: RIG	Target group: RICEMAPP							
Outputs	Sub-activity	Responsible	Stakeholders	Resources	Timeframe			
1.Consultation held with RICEMAPP and	1.1 Identify topics/issues to be discussed with RICEMAPP and arrange for consultations	NPC		Human Resources	February - March 2016			
feasible areas of intervention identified (e.g youth activities, gender friendly technologies	1.2 Conduct consultation	NPC	RICEMAPP	Human Resources	February - March 2016			
	1.3 Compile outcomes of consultation	NPC		Human Resources Stationery	March 2016			
2. Strategies and interventions developed	2.1 Identify and develop draft strategies and interventions	NPC		Human Resource Stationery	April 2016			

	2.2 Conduct final consultation	1	NPC	RICEMAPP	Human	April 2016
	with RICEMAPP and beneficia	ries			Resource	
	2.3 Finalize strategies and		NPC	RICEMAPP	Human	April 2016
	interventions				Resource	
Activity 2: Suppo	rt RICEMAPP to implement gene	der res	ponsive stra	ategies and interv	rentions	
	Target group: RICEMAPP, Co	ounty a	and Sub-cou	inty staff in charg	e of RICEMAPP ad	tivities,
	farmers					
Outputs	Sub-activity	Res	ponsible	Stakeholders	Resource	Timeframe
1.Implementation	1.1 Consult with RICEMAPP	NPC		RICEMAPP,	Human	***
plan of strategies	and County on strategy			County staff	Resource	
and interventions	implementation plan				Funds	
developed	1 2 Finalize the				Human	***
	implementation plan	INF C		County Staff	Resource	
					Resource	
2. Interventions	2.1 Prepare necessary	NPC		RICEMAPP,	Human	***
implemented	materials			County Staff	Resource	
					Funds	

	2.2 Implement interventions	NPC	RICEMAPP,	Human	***
			County Staff	Resource	
				Funds	
3. Interventions	3.1 Review implementation	NPC	RICEMAPP,	Human	***
reviewed and	process and effectiveness of		County Staff	Resource	
recommendations	interventions				
drawn					
	3.2 Make recommendations	NPC	RICEMAPP,	Human	***
	to RICEMAPP		County	Resource	
			Government		

*** Time frame to be determined after discussions with RICEMAPP

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http://www.mrgm.co.ke accessed on 21st October 2015

ANNEXES

Annex 1: GENDER STUDY TEAM COMPOSITION (1M/5F)

Beatrice Mwaura – PEGRES - National Project Coordinator (F) Yoko Harada – JICA Chief Advisor (F) Kyoko Minami – JICA Project Coordinator (F) Paul Musyoka – PEGRES - Monitoring & Evaluation (M) Rebecca Biegon – PEGRES - Gender Training Officer (F) Fridah Oduor– Administrative Assistant (F)

Annex 2: SCHEDULE OF GENDER STUDY

Time	Agenda	Venue
Wed 14 Oct		
9:00 - 10:30	- Group Interview with Core Farmers	ADS
10.30 - 12.00	- Group Interview with Extension officers	ADS
14.00 - 14.40	- Interview with IWUA	IWUA office
15.15 – 15.45	- Interview with MRGM	MRGM office
Thur 15 Oct		
9.00 - 11.30	- Focus Group Discussion Exercise	ADS
14.00 - 14.40	- Interview with Equity Bank	Bank office
14.00 - 14.40	- Interview with Nice Miller	Nice City
15.30	 Brief Report to SCAOs (Mwea East & Mwea West) and RiceMAPP 	ME SCAO
Friday 16 Oct		
8.00 - 8.30	- Brief Report to County Office	County office

Annex 3 Checklist for Interviews

A. Extension Staff

I. Knowledge of Staff on Gender

- 1. What are your roles in Rice-MAPP activities?
- 2. Have you ever been trained on gender? If so, please tell us what you learnt and how you use the gained knowledge and skills in your daily activities?

II. General information on participation of men, women, and youth in rice value chain

- 3. How is the participation of men, women, MY and FY (both dependent and independent) in a) rice production b) value addition and processing c) marketing, d) control of income earned from rice sales in this area?
- 4. Are there any challenges/issues with the way the various gender groups participate in the above activities? If so, please elaborate.
- 5. How do the HH sizes in the main sections compare with those in the out grower sections? Why is the situation this way and what are the implications on rice productivity in the two areas?
- 6. How does the difference in HH sizes affect the way men, women, MY and FY engage in rice value chain?
- 7. How do the land sizes in the main sections compare with those in the out grower sections? Why is the situation this way and what are the implications on rice productivity in the two areas?
- 8. How does the difference in land size affect the way men, women, MY and FY engage in rice value chain? Does the land size have any other effect on gender relations?

III. Access to and control over resources

- 9. Is there a difference in access to and control over rice production resources such as land, labour, fertilizer, seeds, technologies and credit between men, women and MY and FY (both dependent and independent)? Why is the situation this way?
- 10. How is the participation of men, women and MY and FY (both dependent and independent) in decision-making regarding income use in the community and household? Are there any challenges/issues with the way the various gender groups participate? If so, please elaborate.

IV. Participation in community organizations

11. What community organizations/institutions related to rice production, processing and marketing exist in MIS, and how do farmers get recruited into these organizations? How is the participation of men, women, MY and FY in these organizations?

V. Performance of RiceMAPP farmers

12. What criteria did RiceMAPP use in selection of core farmers?

13. Why is the number of women core farmer very small compared with men? Are

there MY and FY core farmers? Are these youth dependent or independent?

- 14. What do you think of the performance of the RiceMAPP core farmers? Have you observed any differences between men core farmers, women core farmer, MY and FY core farmers in terms of performance, adoption level of technologies? If so, how and why are they different?
- 15. What criteria did RiceMAPP use in selection of follower farmers? How many male, female, MY and FY are there? Are the youth dependent or independent? What do you think of the performance of the follower farmers? Have you observed any difference between men and women follower farmers? If so, how and why are they different?
- 16. What do you think are other advantages and disadvantages of the approach of using core farmers to disseminate technology to follower farmers?
- 17. Have there been challenges when men and women train members of the same or opposite sex as follower farmers?
- 18.Do you think those trained share what they learnt with their spouses and other household members?
- 19. Are there social issues arising out of rice enterprise encountered by the community? If yes, please list. Can some of them be solved from a gender perspective and how?

VI. Information on technology

20. What new technologies at the various stages of the value chain has RiceMAPP introduced to farmers? How have they impacted on the participation of men, women and youth in the rice value chain in comparison to the time before the new technologies were introduced?

VII. Credit Provision

- 19. What credit providers exist in MIS and what credit products do they have for rice growers? What collateral do they require? Do they offer the credit to those who own the land as well as those who have rented?
- 20. What are the advantages and disadvantages of each type of credit provider?
- 21. How do farmers access information on the various types of credit available in MIS? In your opinion, do you think there is some types of credit they are not aware of and why?
- 22. Are you aware of government subsidized credit and are all gender groups able to access it? If not (to both questions) why?
- 23. Is there consultation at HH level between 1. Spouses and 2. All HH members on whether or not to take credit for rice production?
- 24. For those with difficulties in accessing the credit, why is it so?
- 25. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?

B. Key Informants:-

- 1. IWUA,
- 2. Mwea Rice Growers and Millers (MRGM),
- 3. Equity Bank
- 4. NICE Millers
- 5. Anglican Development Services (ADS)

IWUA

I. General information on Organization

- 1. What are your roles in rice value chain and in MIS in general?
- 2. Please briefly explain how men, women, MY and FY engage in rice value chain (production, processing, marketing) in MIS
- 3. Please briefly explain how men, women, MY and FY are involved in your organizations including member composition. What are criteria for membership?
- 4. Why do you think the involvement of men in your organization is more than the other gender groups? What do you think are the pros and cons of men's more involvement in your organization than the others? Have you ever tried to increase the involvement of the others? What do you think you can do to increase the involvement of the others?

II. General Information on Farmers in MIS

- 5. How do men, women, MY and FY work in the farm and household? How do they interact? Is there any gender related problem in the community? If so, what?
- 6. How do men, women, MY and FY share the household asset, especially those essential to rice production?

III. Participation of gender groups in community organizations

7. What community organizations/institutions related to rice production, processing and marketing exist in MIS, and how do farmers get recruited into these organizations? How is the participation of men, women, male and FY in these organizations?

IV. Performance of RiceMAPP farmers

- 8. What criteria do you know RiceMAPP use in selection of core farmers?
- 9. Why is the number of women core farmer so small compared with men? Are there MY and FY core farmers? Are these youth dependent or independent?
- 10. What do you think of the performance of RiceMAPP core farmers? Have you observed any differences between men core farmers, women core farmers, MY and FY core farmers in terms of performance, adoption level of technologies? If so, how and why are they different?
- 11. What criteria do you know RiceMAPP use in selection of follower farmers? How many male, female, MY and FY are there? Are the youth dependent or independent?
- 12. Have there been challenges when men and women train members of the same or opposite sex as follower farmers?

- 13. What do you think are other advantages and disadvantages of the approach of using core farmers to disseminate technology to follower farmers?
- 14.Do you think those trained share what they learnt with their spouses and other household members?
- 15. Are there social issues arising out of rice enterprise encountered by the community? If yes, please list. Can some of them be solved from a gender perspective and how?

V. Credit Provision

- 16. What credit providers exist in MIS and what credit products do they have for rice growers? What collateral do they require? Do they offer the credit to those who own the land as well as those who have rented?
- 17. What are the advantages and disadvantages of each type of credit provider?
- 18. How do farmers access information on the various types of credit available in MIS? In your opinion, do you think there is some types of credit they are not aware of and why?
- 19. Is there consultation at HH level between 1. Spouses and 2. All HH members on whether or not to take credit for rice production?
- 20. For those with difficulties in accessing the credit, why is it so?
- 21. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?

Mwea Rice Growers and Millers (MRGM)

- 1. Please tell us what services MRGM provides in MIS.
- 2. Who are your members? What are compositions of men, women, MY and FY? How do farmers apply for membership?

I. Credit Service

- 3. How do your members access to your credit services? How much is the average amount of credit you provide? Is there any difference among the gender groups in terms of purpose, amount of credit they apply for, repayment, etc.?
- 4. For those with difficulties in accessing the credit, why is it so?
- 5. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?
- 6. What do you think you could do more to improve your service provision for livelihood improvement of MIS farmers?

II. Milling Service

7. How do your members access your milling service? How much is the charge for members and non-members? Who are main beneficiaries of your service; men, women, MY or FY?
Equity Bank

- 1. Please tell us what services Equity Bank provides in MIS.
- 2. Who are the users of your service and what are the characteristics of users in terms of gender, age, asset entitlement, etc.?
- 3. How do your clients access your credit services? How much is the average amount of credit you provide? Is there any difference among the gender groups in terms of purpose, amount of credit they apply for, repayment, etc.
- 4. What is the criteria for credit provision to clients?
- 5. For those with difficulties in accessing the credit, why is it so?
- 6. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?
- 7. What do you think you could do more to improve your service provision for livelihood improvement of MIS farmers?

NICE Millers

- 1. Please tell us about your business in MIS.
- 2. Who are the users of your service and what are the characteristics of users in terms of gender, age, asset entitlement, etc.?
- 3. Do you directly work with farmers and how? What are the challenges of working with clients of different gender groups?

Anglican Development Services (ADS)

- 1. Please tell us about your activities in MIS.
- 2. Who are beneficiaries of your interventions?
- 3. Please give us your observations on gender relations in MIS. What are social issues encountered by the MIS community?

C. Male Core Farmers

I. Experiences as core farmers

- 1. You have been core farmers of RICE-MAPP. Please briefly explain what your roles are.
- 2. How were you selected/elected as core farmers? Why are there very few women core farmers in Rice MAPP? What trainings have you received from RICE-MAPP?
- 3. Do you think the training(s) you attended were helpful to you as a core farmer
- 4. Have you adopted (implemented) what you learned? Is there any technology which you did not adopt? If so, what is it and why?
- 5. Did you share what you learnt with other members of your household? Who are they? What were their reactions?
- 6. About the other core farmers, have they adopted/implemented what they learnt in the Rice-MAPP trainings? How about the women core farmers? Is there any difference between men and women in terms of adopting new technologies? If so, what are the differences?

II. General information on participation of men, women, and youth in rice value chain

7. How is the participation of men, women and MY and FY (both dependent and independent) participate in farm and marketing activities as well as decision-making regarding resource use and incomes in rice value chain at community and household levels? Are there any challenges/issues with the way the various gender groups participate? If so, please elaborate.

III. Information on technology

- 8. What new technologies at the various stages of the value chain, has Rice-MAPP introduced to farmers? How have they affected the participation of men, women and youth in the rice value chain in comparison to the time before the new technologies?
- 9. What are the challenges faced by male, female, youth (both dependent and independent) farmers involved in rice production in this community?

IV. Participation of gender groups in community organizations

10. What community organizations/institutions related to rice production, processing and marketing exist in MIS, and how do farmers get recruited into these organizations? How is the participation of men, women, male and FY in these organizations?

V. Credit Provision

- 11.Do you use any credit facility for rice production? If no, why? How about your friends, neighbors? Do most farmers use one? What are major credit provider and products in MIS? Why are they popular?
- 12. How about youth and women? Do they have any means to get credit?
- 13. How do you get information on the various types of credit available in MIS?
- 14. What is main purpose for you to get credit?
- 15. Do you consult your wife and other HH members in applying for credit? How

about your wife? Does she consult you when she applies for credit?

16. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?

VI. Training of other farmers by the core farmers

- 17. How did you select your follower farmers? How many male, female, MY and FY are there? Are the youth dependent or independent?
- 18.Do you feel challenges to train members of the same or opposite sex as follower farmers?
- 19. Do you think your follower farmers share what you learnt with their spouses and other household members?

D. Female Core Farmers

I. Experiences as core farmers

- 1. You have been core farmers of Rice-MAPP. Please briefly explain what your roles are.
- 2. How were you selected/elected as core farmers? Why are there very few women core farmers in Rice MAPP?
- 3. What did you think when you got to know that you were selected as core farmers? How about your HH members, including your husbands? If they were not happy, how did you persuade them? Do you think other women in the community could be core farmers like you or do you think you are special cases?
- 4. What trainings have you received from Rice MAPP?
- 5. Have you adopted (implemented) what you learned? Is there any technology which you did not adopt? If so, what is it and why?
- 6. Did you share what you learnt with other members of your household? Who are they? What were their reactions?
- 7. About the other core farmers, have they adopted/implemented what they learnt in the Rice-MAPP training? Do you observe any difference between men and you in terms of adopting new technologies? If so, what are the differences?

II. General information on participation of men, women, and youth in rice value chain

- 8. How is the participation of men, women and MY and FY (both dependent and independent) participate in farm and marketing activities as well as decision-making regarding resource use and incomes in the community and household? Are there any challenges/issues with the way the various gender groups participate? If so, please elaborate.
- 9. What are the challenges faced by male, female, youth (both dependent and independent) farmers involved in rice production in this community?

III. Information on technology

10. What new technologies at the various stages of the value chain, has Rice-MAPP introduced to farmers? How have they affected the participation of men, women and youth in the rice value chain in comparison to the time before the new

technologies?

11. What are the challenges faced by male, female, youth (both dependent and independent) farmers involved in rice production in this community?

IV. Participation of gender groups in community organizations

12. What community organizations/institutions related to rice production, processing and marketing exist in MIS, and how do farmers get recruited into these organizations? How is the participation of men, women, male and FY in these organizations?

V. Credit Provision

- 13. Do you use any credit facility for rice production? If no, why? How about your friends, neighbors? Do most farmers use one? What are major credit provider and products in MIS? Why are they popular?
- 14. Is it more difficult for women to access credit?
- 15. How do get information on the various types of credit available in MIS?
- 16. What is the main purpose for you to get credit?
- 17. Do you consult your husband and other HH members in applying for credit? How about your husband? Does he consult you when he applies for credit?
- 18. For those with difficulties in accessing the credit, why is it so?
- 19. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?

VI. Training of other farmers by the core farmers

- 20. How did you select your follower farmers? How many male, female, MY and FY are there? Are the youth dependent or independent?
- 21.Do you feel challenges to train members of the same or opposite sex as follower farmers?
- 22. Do you think your follower farmers share what you learnt with their spouses and other household members?

E. Focus Group Discussion with Followers Farmers

RiceMAPP staff to present a summary of Gender Baseline Report to farmers before FGDs begin

Divide the farmers into (four) different gender groups

I. Experiences as follower farmers

- 1. You have been a follower farmer of RICE-MAPP. Please briefly explain what your roles are.
- 2. What trainings have you received from RICE-MAPP and/or your core farmer?
- 3. Do you think the training(s) you attended were helpful to you as a core farmer
- 4. Have you adopted (implemented) what you learned? Is there any technology which you did not adopt? If so, what is it and why?
- 5. Did you share what you learnt with other members of your household? Who are they? What were their reactions?
- 6. Is there any difference between men and women in terms of adopting new technologies? If so, what are the differences?
- 7. What do you think receive the training from a core farmer of opposite sex? What do you think to train other farmers of opposite sex?

II. General information on participation of men, women, and youth in rice value chain

8. What determines the participation of men, women, male/FY in specific activities along the rice value chain? (Activities include; flooding, rotavation, nursery preparation & mgt, levelling of paddy fields, transplanting, watering of fields, weeding, bird scaring, harvesting and threshing, winnowing and bagging, transport from the fields to homes, storage, transport from home to market, selling of paddy rice) Is there any taboo for either men or women to engage in any of rice production activity?

III. Information on technology

- 9. What new technologies at the various stages of the value chain, has Rice-MAPP introduced to you? How have they affected the participation of men, women and youth in the rice value chain in comparison to the time before the new technologies?
- 10. What are the challenges faced by male, female, youth (both dependent and independent) farmers involved in rice production in this community?

IV. Participation of gender groups in community organizations

11. What community organizations/institutions related to rice production exist in MIS, and how do farmers get recruited into these organizations? How is the participation of men, women, MY and FY in these organizations? Is it possible for anybody other than HH head to become a member in these organizations?

V. Credit Provision

- 12. Do you use any credit facility for rice production? If no, why? How about your friends, neighbors? Do most farmers use one? What are major credit provider and products in MIS? Why are they popular?
- 13. How do you get information on the various types of credit available in MIS? In your opinion, do you think there is some types of credit they are not aware of and why?
- 14.Do you consult your spouse and other HH members in applying for credit? How about your spouse? Does s/he consult you when s/he applies for credit?
- 15. For those with difficulties in accessing the credit, why is it so?
- 16. What are the positive and negative impacts of credit provision to the various gender groups involved in rice production?

Annex 4: GENDER ANALYSIS TOOLS

Notes: The tools to be used during this section will be Daily calendar, Access and Control of Resources and Benefits and Marketing Analysis. Other tools were used by RiceMAPP during the Gender Study. This exercise will be conducted after asking the general questions above, and in the respective gender groups.

1. Daily activity Calendar (24 – hour Schedule)

Procedure

(Plenary Session)

- 1. Explain the purpose of this tool and exercise.
- 2. Decide with participants which season (e.g. dry season / rainy season) to be worked on in the group exercise.
- 3. Divide participants into M, W, MY and FY groups. As for the youth groups, consider marital status and responsibilities in the household.

(Group Exercise)

- 4. Ask each group to imagine a day in the lives of M, W, MY and FY in a particular season, which was decided in the plenary session.
- 5. Using the 24-hour day chart (see below) as a model, ask each group to indicate the time and the activities they do over 24 hour period.

(Plenary Session)

- 6. Ask each group to present the results.
- 7. Ask participants how the Rice-MAPP interventions have changed the workload of each group and how affected groups have coped.

Daily activ	ity Calendar (24 -hour Sched	ule)	
Gender G	roup		
Time	Activities	Remarks	
		1	

2. Access and Control of Resources

Procedures

(Plenary Session)

- 1. Explain the purpose of this tool and exercise.
- 2. Let the participants identify the major types of resources and assets required to carry out rice production activities.
- 3. Ask the participants what benefits are derived from rice enterprise.
- 4. Divide participants into M, W, MY and FY groups. As for the youth groups, consider marital status and responsibilities in the household.

(Group Exercise)

- 5. Ask each group who has access to and control over resources and assets.
- 6. Ask each group who has access to and control over benefits.

(Plenary Session)

7. Ask each group to present the results.

Gender Group.....

(Insert two ticks for main player and one tick for the one helping)

Resources /Assets	Acc	ess t	0		Con	trol o	ver	
	Μ	W	FY	MY	Μ	W	FY	MY

Gender Group)							
(Insert two ti	cks for	mair	n play	ver an	d one	tick f	or th	e one
Benefits	Acc	cess t	0		Con	trol o	ver	
	М	W	FY	MY	Μ	W	FY	MY

3. Marketing Analysis Procedure

(Plenary Session)

- 1. Explain the purpose of this tool and exercise and this exercise focuses on the marketing of concerned commodity.
- 2. Divide participants into M, W, MY and FY groups. As for the youth groups, consider marital status and responsibilities in the household.

(Group Exercise)

3. Ask the questions and write the answers for each gender group accordingly.

(Plenary Session)

- 4. Ask each group to present the results.
- 5. Ask participants the following questions;
 - How and where do farmers market their produce? Do male, female, male and FY market their rice produce differently? If so why?
 - What interventions concerning marketing have you received from Rice-MAPP?
 - How did Rice-MAPP interventions affect participation of M, W, MY and FY in marketing of concerned commodity? Who lost and who gained?
 - What factors influence amounts to be sold

Marketing Analysis Gender Group..... (Insert two ticks for main player and one tick for the one helping and/or explain as appropriate)

Question	Μ	W	MY	FY	Remarks/
					Reasons
Who stores produce/products					
Who decides when to sell					
Who decides how much to sell					
Market outlets – farm gate, cooperatives,					
local					
mkts,distributor/wholesaler/retailer/consumer					
etc and frequency of visits to each					
outlet/week					
Means of transport to markets					
Distance to markets					
Who controls the income					
Who decides how to spend the income					
Who spends the income					
Does the seller show the earnings to spouse,					
FY, MY					
How is the income used					

Annex 5 Gender Analysis Exercise Results

Daily Activity Calendar

Gender Group: Men

Time	Activities							
6 .00 am – 6.30 am	Wake up, pray wash fac	Wake up, pray wash face brush Teeth/Bird Scaring						
6.30 am – 6.45 am	Inspection of Compound	Inspection of Compound						
6.45 am – 7.00 am	Milking/Levelling	Milking/Levelling						
7.00 am – 7.30 am	Breakfast							
7.30 am – 8.00 am	Prepare to go Shamba							
8.00 am – 3.00 pm	1. Levelling	5. Harvesting						
	2. Weeding	6. Watering						
	3. Planting	7. Application of Fertilizer						
	4. Spraying	8. Rice farm Activities						
3.00 pm – 4.00 pm	Luncheon/Bathing							
4.00 pm – 6.30 pm	Leisure, shopping, Mino	r Duties						
6.30 pm – 9.00 pm	Social Activities, In Mar	ket Place						
9.00 pm – 10.00 pm	Supper, Sleeping/ Wate	ring during Dry Season						

Gender Group: Women

Time	Activities
5.00 am – 7.00 am	First we pray
	Cooking breakfast
	Preparing the children for school
	Waking up our husband
	We take the break fast
	Clean House, Clean clothes
7.00 am – 8.00 am	Care for Livestock
8.00 am – 3.00 pm	Farm work – Hand levelling, spraying
	Weeding (Manual/Bushweeder
	Harvesting/threshing/Winnowing, Bird scaring
3.00 pm – 4.00 pm	Walking to home from farm, Cooking lunch
4.00 pm – 6.00 pm	Bathing/ Preparing the Supper
	Livestock back home, Washing cloths for school child
	Merry go round, Shopping

6.00 pm – 7.00 pm	Bathing children
	Assisting children home work
	Feeding children
7.00 pm – 9.00 pm	Farming discussion
	Feeding husband
	Watching TV
	Boiling water
9.00 pm – 5.00 am	Sleep

Gender Group: Male Youth

Time	Activities
5.00 am	Wake up
6.00 am	Prepare, Breakfast
7.00 am	I go to the shamba
9.00 am	Prepare nursery
	Working to the shamba
10.00 am	Meeting friends
	Take care of Livestock
11.00 am	Coming back to house
12.00 noon	Taking lunch
	Watching movies
2.00 pm	Go back to the shamba. Bird scarering
6.00 pm	Go back to the house
7.00 pm	Watching News
	Taking time with children
8.00 pm	Dinner
9.00 pm	Planning for tomorrow work
	Taking time for my wife
10.00 pm	Go to bed

Access to and control over resources profile

Gender Group: Men

Resources	Access	s to			Control over					
	М	W	MY	FY	М	W	MY	FY		
Fertilizer	\checkmark	$\sqrt{}$	\checkmark	\checkmark	$\sqrt{}$	\checkmark				
Land	\checkmark	$\sqrt{}$	\checkmark	\checkmark	$\sqrt{}$	\checkmark				
Water	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark					
Rice Seed	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark				
Labour	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark				
					Depe					
					nding					
					of					
					famil					
					У					
Money (Funds)	\checkmark	\checkmark	\checkmark	\checkmark	$\sqrt{}$	\checkmark				
Herbicides	\checkmark	\checkmark	\checkmark	\checkmark	$\sqrt{}$	\checkmark				

Gender Group: Women

Resources	Acces	s to			Control over				
	Μ	W	MY	FY	М	W	MY	FY	
Fertilizer	\checkmark	$\sqrt{}$	\checkmark	\checkmark	$\sqrt{}$	\checkmark			
Land	\checkmark	$\sqrt{}$	\checkmark	\checkmark	$\sqrt{}$	\checkmark			
Water	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark				
Rice Seed	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			
Labour	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			
					Dependi				
					ng of				
					family				
Money (Funds)	\checkmark		\checkmark	\checkmark	$\sqrt{}$	\checkmark			
Herbicides	\checkmark	\checkmark	\checkmark	\checkmark	$\sqrt{}$	\checkmark			

Gender Group: Male Youth

Resources	Access	s to			Control over				
	М	W	Boy	Girl	М	W	Boy	Girl	
Oxen Cow/(drought	$\sqrt{}$		\checkmark		$\sqrt{}$				
power)									
Fertilizer	$\sqrt{}$	\checkmark			$\sqrt{}$	\checkmark			
Land	\checkmark	\checkmark			$\sqrt{}$	\checkmark			
Water	\checkmark	\checkmark	\checkmark	\checkmark					
Rice Seed	$\sqrt{}$	\checkmark			$\sqrt{}$	\checkmark			
Labour	\checkmark	$\sqrt{}$			$\sqrt{}$	\checkmark			
Money (Funds)	$\sqrt{}$	\checkmark			$\sqrt{}$				
Herbicides	$\sqrt{}$				$\sqrt{}$				

Access to and control over benefits profile

Gender Group: Men

Benefits	Acces	s to			Control over						
	М	W	MY	FY	М	W	MY	FY			
Food	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark					
Income	\checkmark	\checkmark	\checkmark	\checkmark	$\sqrt{}$	\checkmark					
Employment	\checkmark										
Livestock Feed	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark					
Manure	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark						
Male Youth – are dependent											
Female Youth – are dependent											

Gender Group: Women

Benefits	Access to				Control over			
	Μ	W	MY	FY	Μ	W	MY	FY
Food	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		
Income	\checkmark	\checkmark	\checkmark	\checkmark	$\sqrt{}$	\checkmark		
Employment	\checkmark							
Livestock Feed	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		
Manure	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark			
Male Youth – are dependent			·	•			·	·
Female Youth – are depende	ent							

Gender Group: Male Youth

Benefits	Access to			Control over				
	М	W	Boy	Girl	М	W	Boy	Girl
Food	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		
Income	$\sqrt{}$	\checkmark			$\sqrt{}$			
Employment	\checkmark	\checkmark	\checkmark	\checkmark	$\sqrt{}$			
Livestock Feed	\checkmark	\checkmark			\checkmark	$\sqrt{}$		
Manure	$\sqrt{}$				$\sqrt{}$			

Marketing Analysis (Product Rice)

Gender Group: Men

Question	Μ	W	MY	FY
Who stores produce/products	$\sqrt{}$	\checkmark		
Who decides how much to sell	$\sqrt{}$	\checkmark		
Who sells	\checkmark	$\sqrt{}$		
Who controls the income	$\sqrt{}$	\checkmark		
Who decides how to spend the	\checkmark	\checkmark		
income				
Who decides where to sell	\checkmark	\checkmark		
Marketing outlet				
Distance to market	\checkmark	\checkmark		
Means of transport	\checkmark	\checkmark		
Transport costs	\checkmark	\checkmark		
Does the seller show the earnings	\checkmark	\checkmark		
to spouse, FY, MY	Do not	show the		
	total	amount		

Gender Group: Women

Question	М	W	MY	FY
Who stores produce/products	$\sqrt{}$	\checkmark		
Who decides how much to sell	$\sqrt{}$	\checkmark		
Who sells	\checkmark	$\sqrt{}$		
Who controls the income	$\sqrt{}$	\checkmark		
Who decides how to spend the	\checkmark	\checkmark		
income				
Who decides where to sell	\checkmark	\checkmark		
Marketing outlet				
Distance to market	\checkmark	\checkmark		
Means of transport	\checkmark	\checkmark		
 Transport costs 	\checkmark	\checkmark		
Does the seller show the earnings	\checkmark	\checkmark		
to spouse, FY, MY	Do not	show the		
	total	amount		

Gender Group: Male Youth

Question	М	W	MY	FY
Who stores produce/products	$\sqrt{}$			
Who decides how much to sell	$\sqrt{}$			
Who sells/Paddy	$\sqrt{}$			
Who controls the income	$\sqrt{}$			
Who decides how to spend the	\checkmark	\checkmark		
income				
Who decide how to spends the	\checkmark	\checkmark		
income				
Who decides where to sell	\checkmark	\checkmark		
Marketing outlet				
Distance to market	2 km			
Means of transport	Lorries			
	Motorbikes			
	Cart			
	Pick up			
Transport costs	One hundred			
	and forty			

	Ksh.140 per		
	bag		
Does the seller show the	50% yes		
earnings to spouse, FY, MY	50% no		