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GENDER RESPONSIVE STRATEGIES THAT CAN BE EMPLOYED IN IMPROVED BEE KEEPING IN TRANS MARA SUB COUNTY, NAROK COUNTY, KENYA

Miriti Lydiah, Wamue Ngare, Masiga Casper and Maina Immaculate



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¹Miriti Lydiah

PhD Student: School of Humanities and Social Sciences Department of Sociology and Gender Studies Kenyatta University Kenya

*Corresponding Author's E-mail: lydiahmiriti@gmail.com

²Wamue Ngare

Associate Professor: School of Humanities and Social Sciences Kenyatta University

Email: gwamuengare@yahoo.com

³Masiga Casper

Senior Lecturer: School of Humanities and Social Sciences Kenyatta University

Email: casperochieng@gmail.com

⁴Maina Immaculate

Senior Researcher : Kenya Agricultural and Livestock Research Organisation

Email: immaculate.n.maina@gmail.com

Abstract

Purpose: This study sought to explore the gender responsive strategies that can be employed in Improved Bee Keeping in Trans Mara Sub County, Narok County, Kenya

Methodology: The study used an investigative survey design with a mixed method approach. Through stratified random sampling, 180 respondents were interviewed for household surveys, 16 key informants (KII), and four (4) focus groups discussions (FGDs), comprising of 36 participants. Structured and Semi-structured interviews with closed and open ended questions were used to collect both qualitative and quantitative data based on research objectives. An interview guide was used to collect information from participants in FGDs and interview schedules for KIIs. The data collected was analysed using SPSS and excel spreadsheet.

Findings: Findings showed that both genders suggested the fact that training centres will improve access to bee keeping skills. However, while men did not mind the locality, women needed the centres on-farm. Women's solutions are geared towards capital and gender related factors that constrain them while men's are on improvement of services offered. The study found that the Kenya Agricultural and Livestock Research Organisation (KALRO) centre in the study area has plans to assist bee keepers to advertise and market their products through associations, a scenario that triggered diverse solutions from both genders to marketing challenges.

Unique contribution to theory, practice and policy: The study suggests that projects with bee interventions should plan for gender responsive forums where all key players, including men and women farmers, can come together in order to strengthen production and marketing depending on the prevailing challenges.

Keywords: *Improved Bee Keeping, Gender, Responsive strategies, Trans Mara, Narok County, Kenya*

1.0 INTRODUCTION

Apiculture an emerging division in the livestock sector in Kenya (GOK, 2008). Beekeeping is well established and can be successfully carried out in about 80% of the country. The introduction of improved bee keeping has shown major development and is an important component in livestock production (GOK, 2009). According to Kiptarus, *et al* (2011), beekeeping is a valuable enterprise within Kenyan agricultural sector, contributing about Ksh.4.3 billion. The industry harbours a great potential for increasing incomes and supportive sustainable development. Beekeeping complements agriculture and contributes to National Policy objectives spelt out in the strategic plan and vision 2030 with emphasis on food security, increased household incomes through value added hive products, employment creation especially the youth, access to markets and conservation of the environment (Kiptarus *et al.*, 2011). Gender issues are now mentioned in most national and regional agricultural policy plans. However, they are relegated to separate chapters on women rather than treated as an integral part of policy and programming. This is despite the fact that Kenya is a signatory to most international mandates on gender mainstreaming, including the 2015 Sustainable Development Goals (SDGs) especially number five; achieving gender equality and empowering all women and girls, and ten; reduced inequalities. The government's commitment to mainstreaming gender is also spelt out in the bill of rights in the constitution, and Vision 2030 under the social pillar. It is in this context that gender need to be seriously addressed especially during technology transfers. This will ensure equity in increased household incomes, employment creation and access to markets which Kiptarus *et al.* (2011) are talking about.

Over the last decade, improvement of bee keeping has broken gender barriers in Trans Mara by incorporating women and the youth. However, women's involvement is still low as it confines them within bee-related conservative gender roles such as feeding bees, washing and handling utensils. As such, despite the gains made in making bee-keeping gender responsive, the move has eventually increased women's workload and burdened them further. Besides, the strategies employed in transferring the improved bee-keeping are gender biased. Women and youth have access but lack control over productive resources especially the initial capital required to start the enterprise. Due to their low participation levels, benefits are limited, a move that certainly continues to hinder the realization of their full potential in the enterprise. These factors are enhanced by the male-dominated culture of passing the activity to men throughout the generations, thereby leaving out women. On the other hand, the enterprise has attracted initiatives whose intention is to enhance resource poor farmers' livelihoods, a move that is gender blind. By so doing, they transfer the improved enterprise without undertaking gender inclusive needs' assessment. As a result, these initiatives ignore the prevailing gender challenges that dominate traditional communities. Likewise there is lack of market due to overproduction. Most of these factors affect women and youth as new comers in the enterprise. This study therefore sought to explore the gender responsive strategies that can be employed in improved bee keeping in Trans Mara Sub County, Narok County, Kenya. The study was responding to the following main objectives

1. To explore the gender solutions to the prevailing production challenges in improved bee in Trans Mara Sub County, Kenya
2. To identify the gender solutions to the Prevailing Marketing Challenges in improved bee keeping in Trans Mara Sub County, Kenya

2.0 LITERATURE REVIEW

Strategies and investments to improve food production among small-scale farmers are needed to ensure food security and economic growth. This is especially true in sub-Saharan Africa where women play a pivotal role being responsible for nearly all food production, 60 per cent of marketing, and at least half the tasks involved in storing food and raising animals (Mehra *and* Rojas, 2008). For example, conservative communities in Southeast Asia who found it difficult to adapt to new technologies were assisted through technology transfer by Asian Action for Food Security Project to improve their domestic gardens and small-scale fishing. As a result, women learnt self-advocacy techniques and a group of local technicians were trained to provide support to farmers in their villages. The women were encouraged to learn from each other to promote dissemination of ideas and good practice, not just technology (UN, 2014).

A study by Ndungo *et al.* (2011) in Kenya found that women are the key actors in NALEP initiatives which was attributed to many factors which are gender based. For example unlike men, women hardly venture into new initiatives without a careful scrutiny of such projects. Nevertheless upon embracing it, they are always willing to support it as long as it does not contradict their gender roles. Likewise, their participation is higher in common interest groups (CIGs) as compared to men since the groups allow them to operate within their traditionally gender perceived spheres. This shows that through gender responsive strategies, technologies can have a considerably positive impact.

Ndungo *et al.* (2011) argue that despite efforts by NALEP to initiate new opportunities in agricultural value-chains, marketing poses the most serious challenge to women farmers. This is because they are unable to travel far and wide in search of better marketing opportunities compared to men who can access long distant markets without seeking their wives' consent and are not tied by gender roles at home. Wambugu *et al.* (2002) shows that tissue culture propagation project increase production as well as small holder farmers' income thereby, improving food security. However, according to Miriti (2011), resource poor farmers (majority women) in Meru, Kenya, are no longer growing the improved bananas due to the fact that they require more inputs, are labour intensive and the plantlets are expensive. Similar results were recorded in Mount Kenya region (Muyanga, 2008).

All these strategies, together with others not reviewed, are meant to increase income and raise the living standards among small scale farmers. To exploit the full potential of men and women therefore, the transfer of improved bee keeping must be gender responsive, hence, this study sought to find out views of both genders on how participation can be enhanced. Similarly, suggestions were made to various stakeholders and the sector on how to ensure improved bee keeping is gender responsive for enhanced participation and impact not only in the community, but in the country.

3.0. METHODOLOGY

Study Design and area

The study used an investigative survey design. It was conducted in Trans Mara, Narok County, Kenya. The choice of Trans Mara was based on what emanated from a three month scoping study whose stakeholders had met in Kenya Agricultural Research Institute (KARI), Nairobi, in 2009 (Miruka, 2009). They agreed that bee keeping was one of the five commodities among (Banana, African leafy vegetables, Passion fruits, and Indigenous chickens), that are best placed

for increased incomes and food security for resource poor farmers, especially women. The aim was to understand mechanisms for development of gender responsive value chains. Trans Mara was selected as the site to transfer improved bee keeping which has been practiced traditionally for a long time in the area. The target population comprised of farmers who were members in improved bee keeping groups in the study area between 2010 and 2015. The total population was therefore 632 men and women comprising of those who were married, single, widowed and youth.

Sampling Procedure

Stratified random sampling was used for the household surveys, key informants and focus group discussions. The list of men and women in improved bee keeping groups was obtained from Oral Informant (O.I) Stanley Bett who assisted in selecting the respondents. A total of 180 respondents were selected for the household survey translating into 28% of the targeted population (632), as represented in Table 1.

Table 1: Sample Composition of Household Survey

	Female HH	Men in MHH	Women in MHH	Youths	Total	Target	% of target
Lolgorian	11	23	22	22	78	275	28
Angata	8	17	16	16	57	200	29
Kirdon	5	10	10	8	33	112	29
Kilgoris	1	3	4	4	12	45	27
Total	25	53	52	50	180	632	28

For key informant interviews, 16 men and women were selected from group leaders, bee products retailers, KARLO officers and agricultural officers. Efforts were made to categorize group leaders into clusters of chairpersons, secretaries and treasurers and through a list provided by a key informant, 10 respondents were selected. The study further randomly selected 2 county agricultural officers (Table 2).

Table 2: Sampled Composition of Key Informants

	Male	Female	Total
County agricultural officers	1	1	2
Bee keeping group leaders	5	5	10
Bee products retailers	1	1	2
KARLO officers	2	0	2
Total	9	7	16

Stratified random sampling was used to select 36 farmers (Table 3).

Table 3: Sampled Composition of Focus Group Discussions

	Male	Female	Number of participants
Bidii Torch group	8	0	8
Kaptigei widows group	0	10	10
Naratisho women group	0	9	9
Oreteti youth group	7	2	9
Total participants	15	21	36

Data Collection Methods, Processing and Analysis

For household survey, structured and semi-structured interviews were used to collect qualitative and quantitative data based on research objectives. A FGD guide with open ended questions was used to collect information from participants in group discussions. Interview schedules with open ended questions were used for KIIs. Secondary data on bee keeping was also collected from Kenya Agricultural and Livestock Research Organisation (KALRO) Trans Mara, which has a component that trains bee farmers in the area. Quantitative data was processed through manual cleaning, edited and coded. It was followed by data entry and then analysed using descriptive statistics in SPSS computer software version 20 and excel spread sheet. Qualitative data was processed by cleaning it manually through identification of main themes from in-depth interviews.

4.0 RESULTS AND DISCUSSIONS

4.1 Strategies to Make Improved Bee Keeping Gender Responsive

The fourth objective was to suggest effective strategies that can be employed to make improved bee keeping gender responsive. In the study conclusions, gender responsive strategies have been suggested for instance, programs that consider the unique needs and challenges faced by men and women, including gender perceptions which in most times, hinder participation. In bee keeping, both genders are facing varied problems which are discussed throughout the study. In order to document men's and women's solutions to the prevailing challenges, they were asked to rank them from the most important to the least.

4.2 Solutions to the prevailing production challenges

Results are presented in Figures 1 and 2.

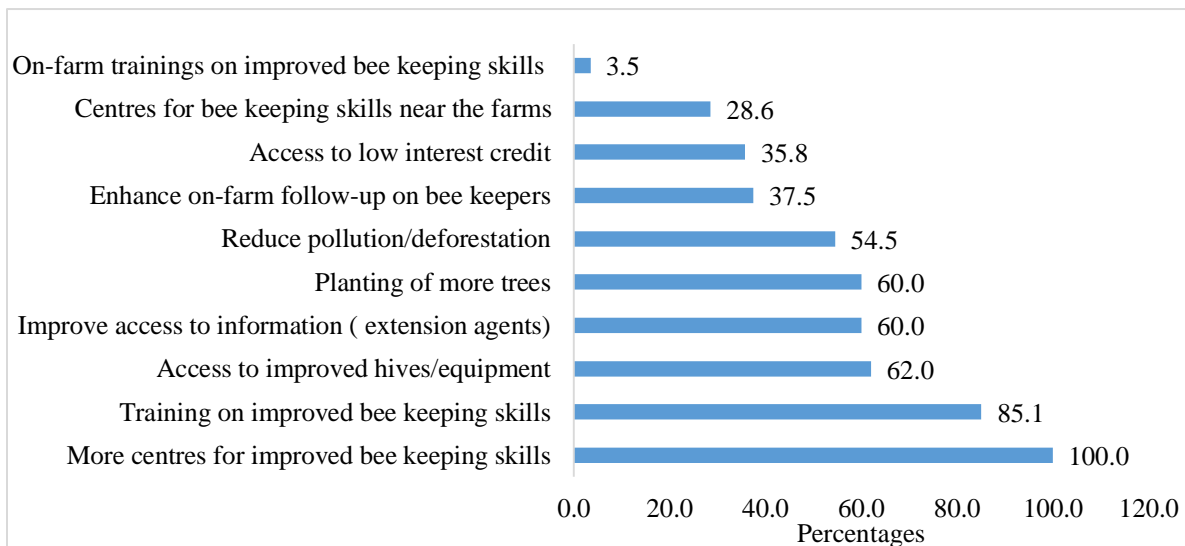


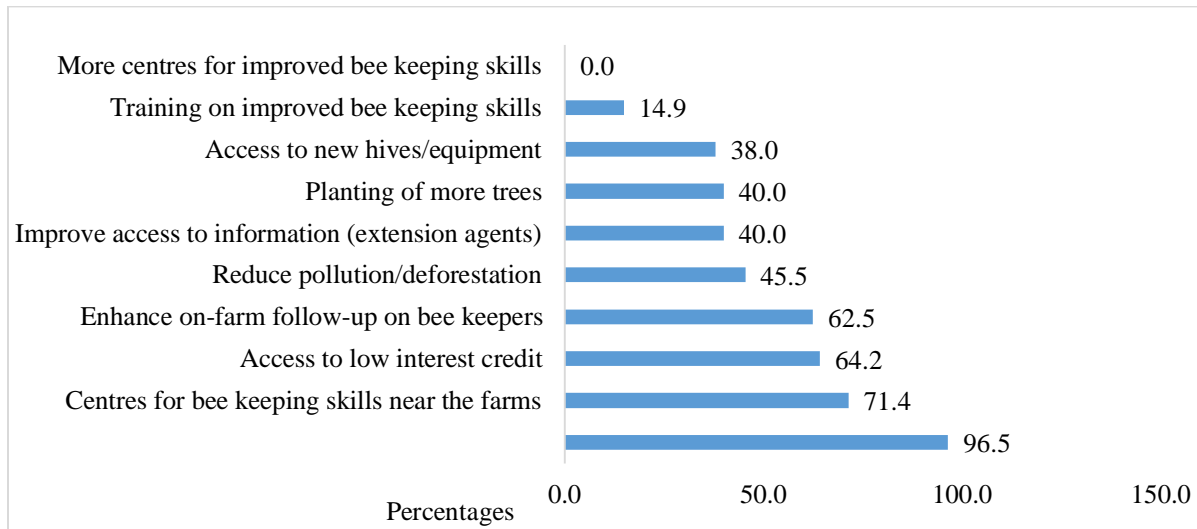
Figure 1: Solutions to Prevailing Production Challenges for Men**Figure 2: Solutions to Prevailing Production Challenges for Women**

Figure 2 reveals that men (100%), mentioned provision of training centres, and while they ranked it first, it was second for women (71.4%). However, the latter added that the centres should be within their vicinity (Figure 4.11). These results indicate that while men do not mind the centres' locality, women state that they should be located near the farms. This further suggests why women's number one solution was access to on-farm trainings (96.5%), which is actually viewed as a last option by men (3.5%). Notably, men do not mind the venue for the improved bee keeping trainings and this shows diversity in factors that constrain both genders.

Development interventions are thus expected to understand these unique factors to enable them plan successful transfers. For example, women's participation is low due to factors like mobility and time which actually do not challenge men. Further, both genders have focused their solutions on access to improved bee keeping skills which is a crucial avenue to realize their potential in the enterprise. However, while women prefer the information to be provided on-farm, men do not mind the locality. Likewise, whereas men based their views on provision of extension services, and planting trees, women's were mainly on access to low interest loans including on-farm follow-ups. It can be argued that both genders were focusing on solutions which can enhance their participation confirming the fact that the factors constraining them are diverse. The solutions suggested by men and women are therefore crucial for informing stakeholders in order to ensure gender responsive transfers.

According to UN (2014) communities in Southeast Asia who found it difficult to adapt to new technologies were assisted through transfer by an Asian based Project. As a result, women learnt self-advocacy techniques through a group of local technicians who were trained to provide support to them in their villages. They were encouraged to learn from each other so as to promote dissemination of ideas and good practice, not just technology. Adapting to such initiatives in improved bee keeping can greatly benefit the *Maasai* community.

A study by Ndungo *et al.* (2011) in Kenya found that women are key actors in NALEP initiatives and it was attributed to gender related factors. For example unlike men, women hardly venture

into new initiatives without careful scrutiny of such projects. Nevertheless upon embracing it, they are always willing to support it as long as it does not contradict gender roles. Likewise, their participation in common interest groups (CIGs) is higher than men’s, since the CIGs allow them operate within their traditionally gender perceived spheres. This shows that through gender responsive strategies, technology transfers can have positive impacts in communities.

Other solutions suggested are; reduction of pollution and planting of trees. The study noted that bees migrate due to lack of food and water which is as a result of deforestation and air pollution. Awareness initiatives are needed in mixed farming areas of Trans Mara especially the importance to plant trees that are favourable to bees. Likewise, they should be sensitised on the need to burn charcoal, if they have to, away from apiaries to avoid air pollution which is detrimental to their survival.

4.2 Solutions to the Prevailing Marketing Challenges

Results are shown in the Figures 3 and 4.

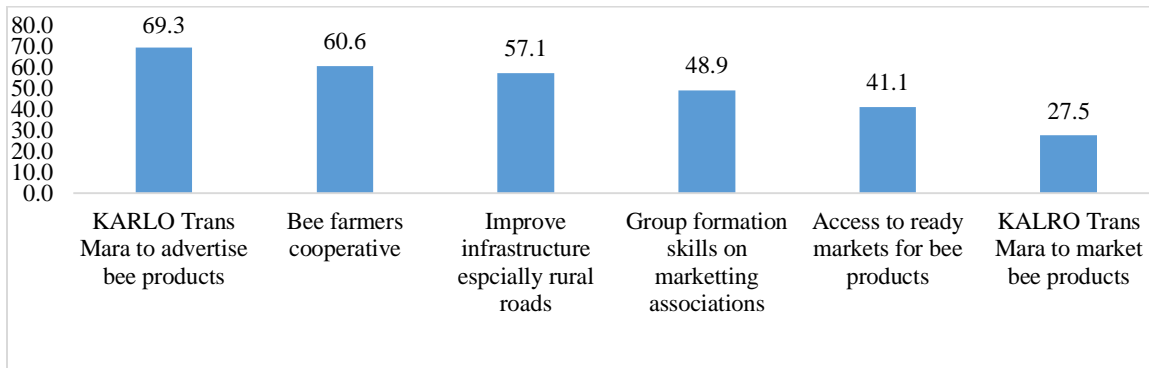


Figure 3: Solutions to Prevailing Marketing Challenges for Men (%)

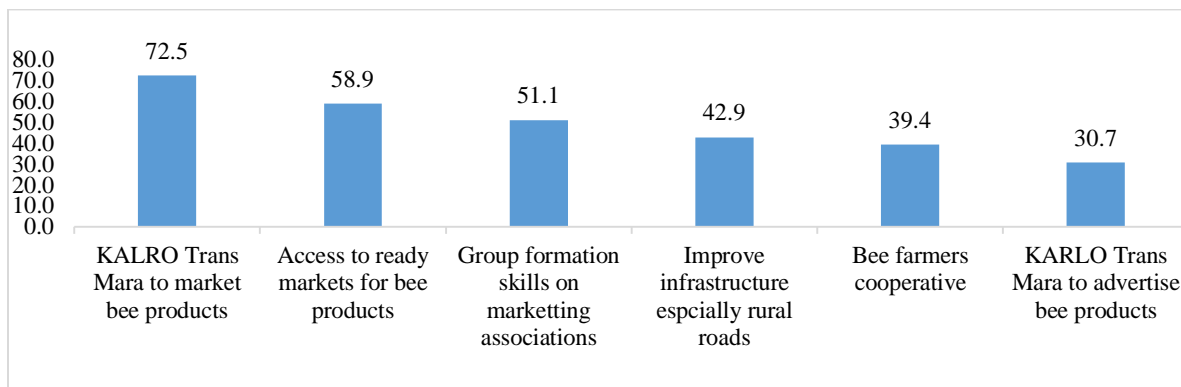


Figure 4: Solutions to Prevailing Marketing Challenges for Women (%)

More men (69.3%), compared to women (30.7%), stated that KALRO Trans Mara should advertise bee products. Observably, the former ranked it first while it was actually last for the latter. In contrast, majority of women (72.5%), compared to men (27.5%), were of the view that KALRO Trans Mara should market the bee products, reason why they ranked it first while men cited it as a last option. This can be attributed to earlier findings in the study. Men had no problem in accessing marketing channels that offer better prices. However, most women could

only access those buying on-farm despite the fact that these outlets were offering lower prices. This is why the need for better markets is crucial for them hence, assistance by KALRO Trans Mara in marketing the products. Men are able to source for buyers away from home and what they need is assistance in advertising their products. This shows the diversity of both genders' unique needs. The study noted that KALRO Trans Mara has plans to assist men and women to advertise, market their products, and form marketing associations. This idea should be encouraged in institutions partnering with improved bee keeping interventions. It will not only alleviate middle men, but solve other marketing challenges such as access to ready markets and enhance collective marketing. Nonetheless, gender should be taken as central in all programs. The other solution mentioned is improvement of infrastructure especially rural roads. Most men and women were using either hired motorbikes or personally carrying their bee products to the market as shown in Table 27 below.

Table 4: Modes of Transporting Bee Products to the Market

Transportation Modes	Male	Female
Hired motorbike	47.3	48.0
Carry by myself	37.6	47.0
Hired bicycle	5.4	1.0
Own bicycle	2.2	2.0
Own motorbike	4.3	0.0
Public vehicle	3.3	2.0
Total	100.0	100.0

The study noted that bad roads, especially during rainy seasons, are a problem when marketing bee products. This suggests that when it rains, both modes are affected. It is crucial to have all-weather roads especially now that bee keeping is commercialised. In conclusion, factors constraining men and women are varied hence, diverse solutions. Most women were constrained by capital thus, access to low interest loans is viewed as a solution to improve participation. Women's solutions are focused on capital and gender related factors such as mobility and time, while men's are mainly on improved services for instance, infrastructure, farmers associations, and extension agents. Improved bee keeping, in comparison to other farming systems such as crop and livestock, is favourable to women yet, they are still facing unique challenges that are hindering their participation. Generally, women face a lot of barriers in agricultural production which calls for urgent address, not only in bee keeping, but also in other pro-poor agro-enterprises value chains. For example, a study by Miriti (2011) in Meru, Kenya, established that despite tissue culture bananas' aim to increase income through collective marketing, women could not join organised markets because of capital constraints and gender perceptions. Instead, they were selling at roadside markets which are unreliable. Nevertheless, since bananas which were their domain had shifted to commercial, they were able to earn extra income by hiring own farms and opening bank accounts thus, changing gender roles that caused intra-household conflicts in homes.

This turn of events disempowered men who resulted to drinking local brew, which further triggered marriage breakages. As a result, the impact was negative as many women who needed to secure their homes, eventually stopped banana business, a situation that could be happening with transfer of many commodities in rural areas. The challenge is that gender studies to explore transferred interventions are few. This study is thus timely to suggest the way forward, to

government and development interventions. For example, bee keeping has been a domain for men passed through inheritance in many communities, study area included. Bearing in mind that men control most productive resources, they will continue to dominate the improved enterprises' value chain and hence, negating the intended impact which in most times, is minimal.

With this in mind, for both genders to benefit, adherence to gender should be endorsed both by the government and private interventions. For instance, empowerment programs that target joint ownership and sharing of productive resources in households and among neighbours can be employed. Similarly, prior knowledge of a community is important, for example, concerning men's or women's domains, information that is usually ignored yet it is key in realising both genders' potential to adopt the enterprise. This can alleviate dominance in participation and also household conflicts arising from change of gender roles. Research has shown that if women are empowered, their participation increases in high value stages, and the impact is usually positive. Equally, if they have extra income, they not only use it to develop their households, but also educate children thus, impacting the community's welfare.

In bee keeping, men are dominating while women's involvement remains low yet it is expected to enhance both genders' participation. For the government to realise its four main agendas, the stakeholders, not only in bee keeping but also other agricultural value chains, should start employing gender strategies in development programs. Food security (nutritious food) means good health, and a healthy nation enhances men's and women's productivity. Poverty alleviation by year 2030 will be achieved if the use of traditional methods, where agricultural information is passed to men with erroneous assumption that it will trickle down to women, will come to an end. Likewise, the belief that development projects and technologies that use gender neutral strategies can automatically increase income, raise the living standards and ensure food security among resource-poor men and women, is a fallacy. This is because for decades, numerous interventions intended to change situations in rural areas have either left most communities unchanged, or worse (Miriti, 2011; Ndegwa, 2018), and at times, middle-income men and women are the ones who benefit and not the resource-poor who are the majority.

Results in this study corroborates Ndungo *et al.*, (2011). The scholars argue that despite NALEP's efforts to initiate new opportunities in value chains, marketing is the most serious challenge. Listed among major constraints are; "poor infrastructure, distance to markets, exploitation by middlemen, packaging, lack of knowledge in marketing, and over-production of similar commodities in a region, and the worst hit by this scenario are women. They are unable to travel far and wide in search of better marketing opportunities compared to men who accesses long distant markets without seeking their wives' consent and are not tied by gender roles at home. Quisumbing and Dolfelli, (2010) state that in addition to typical market risks like theft and inadequate information concerning current prices, female farmers face many gender-specific barriers in accessing markets. Market-oriented interventions should address gender norms that place women at disadvantageous situation when seeking new market opportunities. With this in mind, poverty will be a thing of the past and stakeholders in development interventions will be happy with the results.

5.0 SUMMARY CONCLUSIONS and RECOMMENDATIONS

5.1 Summary

Concerning production challenges, both genders were of the view that training centres will improve access to bee keeping skills. However, while men did not mind their locality women indicated they should be on-farm. Further, women's solutions are geared towards capital and gender related factors that constrain them while men's are on improvement of the services offered. The stakeholders should therefore consider the unique needs of men and women so as to enhance both genders' participation in the value chain. For example, compared to women, men are less constrained by mobility and time. Likewise, men exclusively control productive resources like land, a collateral to access loans, while most women own big farms with no title deeds hence, marginalised in access to capital.

In marketing challenges, men's views were centred on advertising bee products, while women's were on marketing them, a factor attributed to middle men challenge. Notably, KALRO Trans Mara has plans to assist men and women to advertise and market their products through associations. Such strategies should be encouraged in institutions partnering with improved bee keeping interventions. It will not only alleviate middle men, but also solve other marketing challenges such as lack of access to ready markets. Improvement of bad roads was also among the solutions mentioned. It is fundamental to ensure they are accessible especially with bee keeping turning commercial. Stakeholders should consider the solutions suggested by both genders which can assist to mainstream gender in the sector. This will increase participation and at the same time, enhance equity in access to productive resources and benefits accrued from bee products. Consequently, it will not only increase both genders' potential, but also ensure a positive impact in the community.

5.2 Conclusions

Findings showed that both genders suggested the fact that training centres will improve access to bee keeping skills. However, while men did not mind the locality, women needed the centres on-farm. Women's solutions are geared towards capital and gender related factors that constrain them while men's are on improvement of services offered. The study found that the Kenya Agricultural and Livestock Research Organisation (KALRO) centre in the study area has plans to assist bee keepers to advertise and market their products through associations, a scenario that triggered diverse solutions from both genders to marketing challenges. While men's views were centred on advertising bee products by the institution, women's were geared towards marketing them, a factor attributed to middle men challenge. Improvement of bad roads was also among the solutions mentioned.

5.3 Recommendations

The study found women's solutions to production challenges were geared towards access to capital and gender related factors that constrain them, while men were concerned with improvement of the services offered.

The study suggests that projects with bee interventions should plan for gender responsive forums where all key players, including men and women farmers, can come together in order to strengthen production and marketing depending on the prevailing challenges. As a starting point, farmers' representatives can include men and women group leaders from areas where the intervention has been transferred, and they must be encouraged to discuss their challenges freely.

Such forums should, in most times, be conducted within localities to maximize involvement of women. This will enhance both genders' participation in the value chain, increase the realisation of their potential and eventually a positive impact in the community.

The study also recommends that the government should revise agricultural policies and strategic plans so that they can include gender and development, not just relegated to particular paragraphs, but spelt out as key in achieving food security, including poverty alleviation

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