

**AN ASSESSMENT OF THE IMPACT OF GREEN SCHEMES AND GENDER
ON ECONOMIC EMPOWERMENT: A CASE STUDY OF FEMALE
SMALL-SCALE FARMERS IN NDONGA-LINENA, KAVANGO EAST,
NAMIBIA.**

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

MASTER OF GENDER AND DEVELOPMENT STUDIES

AT

THE UNIVERSITY OF NAMIBIA

BY

CECILIA ENDUNDE

STUDENT NUMBER: 200808249

September 2017

MAIN SUPERVISOR: DR KLETUS LIKUWA, MRC, UNAM

CO-SUPERVISOR: DR TOM FOX, DEPARTMENT OF SOCIOLOGY, UNAM

Declarations

I, Cecilia Endunde, hereby declare that this is a true reflection of my own research, and that this work, or any part thereof has not been submitted for a degree in any other institution of higher education

No part of this thesis may be reproduced, stored in any retrieval system, or transmitted in any form, or by means (e.g. electronic, mechanical, photocopying, recording or otherwise) without the prior permission of the author, or The University of Namibia in that behalf.

I, Cecilia Endunde, grant The University of Namibia the right to reproduce this thesis in whole or in part, in any manner or format, which The University of Namibia may deem fit.

Cecilia Endunde

.....

.....

Name of student

Signature

Date

Abstract

This thesis explored the impact of green schemes and gender on economic empowerment of women. In particular, it informs on gender participation in the green schemes; decisions on access and control of resources; production and income; green scheme impact on the small-scale farmers (ssfs) and on gender disparity in agriculture. A qualitative research methodology was used where questionnaires and interviews were used for data collection on 16 small-scale farmers at Ndonga-linena green scheme. Although the study's target were women, male small-scale farmers were also interviewed to analyse the extent of empowerment. The study found that 80% of the small-scale farmers at Ndonga-linena green scheme originate from other regions than the Kavango east region, an indication that green scheme projects are national than regional in their target of beneficiaries. Green schemes, although not fully, empowers women as they make decisions over access to credits, the marketing and sale of products and control over their income and expenditures. The study further revealed that female small-scale farmers out-performed the male small-scale farmers in terms of high crop yield and profit. In addition, the female small-scale farmers displayed control over the agricultural resources as well as leisure time despite other household chores. Since fewer females than males are participating as small-scale farmers, there is a need to increase women participation, to increase production and address past injustices. The study significantly contributes to an understanding of women's economic empowerment through agriculture.

Table of Contents

Declarations.....	ii
Abstract	iii
Table of Contents	iv
List of Tables.....	viii
List of Figures	ix
List of Acronyms.....	x
Acknowledgements	xi
Dedications.....	xii
CHAPTER 1:.....	1
INTRODUCTION.....	1
1.1 Background of the study	1
1.2 Conceptual framework	3
1.3 Problem statement	9
1.4 Objectives.....	11
1.5 Significance of the study	11
1.6 Limitation of the study	11
CHAPTER 2:.....	13
LITERATURE REVIEW	13
2.1 Introduction	13
2.2 Gender and land	13
2.3 Green scheme in Namibia	17
2.4 Agricultural sector and women’s involvement in Namibia.....	19
2.5 Small-scale farmers in agriculture.....	23
2.6 Women’s empowerment in agriculture	25

CHAPTER 3:.....	28
MATERIAL AND METHODS	28
3.1 Introduction	28
3.2 Study area.....	28
3.3 Research design.....	30
3.4 Population.....	30
3.5 Sample and sampling procedure.....	31
3.6 Research Instrument	32
3.6.1 Semi-structured interviews	32
3.6.2 A schedule interview guide.....	33
3.6.3 A focus group discussion guide	33
3.7 Data collection procedure.....	34
3.8 Data analysis	34
3.9 Research ethics	35
CHAPTER 4:.....	36
RESULTS.....	36
4.1 Introduction	36
4.2 Gender participation of small-scale farmers in the green scheme.....	36
4.2.1 Application process.....	36
4.2.2 Small-scale farmers' (ssfs) participation in the green scheme.....	38
4.2.3 The small-scale farmers daily activities at Ndonga-linena	38
4.2.4 Training and farming experience of the small-scale farmers.....	39
4.2.5 Relationship and experience of service providers working with ssfs ..	40
4.2.6 Green scheme impact on the small-scale farmers	41
4.2.7 Participants' expectations from the green scheme	42

4.2.8	Achievements and setbacks	44
4.2.9	Benefits in the greens scheme: female small-scale farmers opinion ...	45
4.3	Women economic empowerment in the green scheme	49
4.3.1	Control and access to decision-making power over productive resources	49
4.3.2	The agricultural production decisions.....	52
4.3.3	Control over use of income.....	54
4.3.4	Leadership roles within the community.....	57
4.3.5	Time allocation	58
4.3.6	Gender disparity in the green scheme	59
CHAPTER 5:.....		71
DISCUSSION		71
5.1	Introduction	71
5.1.1	Gendered participation.....	71
5.1.2	Decisions about agricultural production	73
5.1.3	Access to resources	75
5.1.4	Control of use of income.....	77
5.1.5	Leadership in the community.....	79
5.1.6	Time allocation	80
CHAPTER 6.....		84
CONCLUSION AND RECOMMENDATION		84
6.1	Conclusion.....	84
6.2	Recommendations	86
7	REFERENCE LIST	88
Appendix A: Qualitative questionnaire for the small-scale farmers.....		95

Appendix B: Key informant protocol and feedback	100
Appendix C: Focus group discussion with female ssfs.....	118
Appendix D: AGRIBUSDEV Managing Director’s letter of permission to conduct research at Ndonga-linena Green scheme irrigation project in Kavango East region.....	136

List of Tables

	Page
Table 1.1: Women Economic Empowerment Index	6
Table 3.1: Demographic Information Participants	32
Table 4.2: Small-scale farmers' daily farm activities	39
Table 4.4: Small-scale farmers benefits	46
Table 4.5: Small-scale farmers' suggestions and additional comments	48
Table 4.6: Agricultural equipment utilised by small-scale farmers	50
Table 5.1: Women's triple role and activities	80

List of Figures

	Page
Figure 4.1 Small-scale farmers region of origin	37
Figure 4.3 Small-scale farmers expectations	44
Figure 4.7 Small-scale farmers income expenditures	54
Figure 4.8 Small-scale farmers leadership positions	57

List of Acronyms

5DE	: 5 Domain of Empowerment
AgriBusDev	: Agricultural Business Development Agency
AMTA	: Agro-Marketing & Trade Agency
FRGs	: Farmer Research Groups
GDP	: Gross Domestic Product
HPP	: Harambee Prosperity Plan
MAWF	: Ministry of Agriculture, Water and Forestry
MAWRD	: Ministry of Agriculture, Water and Rural Development
MGECW	: Ministry of Gender Equity and Child Welfare
NDP4	: National Development Plan 4
NGO	: Non-Governmental Organisation
NPC	: National Planning Commission
SSFs	: Small-Scale Farmers
UNAM	: University of Namibia
WEE	: Women Economic Empowerment

Acknowledgements

Firstly, I would like to thank the almighty God for giving me the strength, wisdom and audacity to complete my research. Secondly, my profound appreciation goes to my main supervisor Dr Kletus Likuwa and co-supervisor Dr Tom Fox for their mentorship, support, patient, guidance and commitment to ensure that I produce a quality document.

Furthermore, I would like to thank the Multi-disciplinary Research Centre (MRC) staff and students at the University of Namibia for all the support, and encouragement they offered during my studies. However, this study could also have not been possible without the Financial support of the Carl Schlettwein Foundation, I am forever grateful.

Lastly, I would like to thank the Managing Director of AgriBusDev, as well as the farm manger/service provider for granting me the opportunity to conduct my study at the Ndonga-linena green scheme project. Most importantly, I would also like to extend my sincere gratitude to the respondent who participated in the study your ideas formed the basis of this study, thank you for your time and co-operation.

Dedications

I would like to dedicate this thesis to my parents (Mr and Mrs. Endunde), siblings (Alex, Siprian, Mahupe and Lucas), my daughter (Merline Rudolf), and thank you all for the love, support and encouragement you have showed me throughout my studies.

CHAPTER 1:

INTRODUCTION

1.1 Background of the study

This study is focused on an assessment of green schemes and gender on economic empowerment of women at Ndonga-linena Green scheme in the Kavango East region of Namibia. The dimensions of gender and economic empowerment as espoused in the National Gender Policy of Namibia are meant to address the imbalances and injustices of the colonial past (National Planning Commission [NPC], 2012). Previously, the majority of women were economically marginalised, therefore, integrating women into the green schemes irrigation projects is considered as a means to bring them out of poverty, create employment, redress gender inequalities and empower women. Therefore, this study focused on Ndonga-linena green scheme irrigation project as a case study to assess the extent to which this irrigation project is redressing gender inequalities of the past and present, and how it is empowering women particularly those in rural areas.

Green schemes are government irrigation programmes aimed at reducing poverty by increasing food productivity, job creation and export markets as envisioned in the National Development Plan 4 (NDP4) and Vision 2030 (Ministry of Agriculture, Water and Forestry [MAWF], 2008). The Green Scheme Policy's of 2008 main objectives are: "to increase production of crops under irrigation at the national level and to promote import substitution" (Kandjeke, 2013, p.6). These projects owned by the MAWF are often operated by the various service providers on either lease or

profit-sharing agreement as stipulated in the Green Scheme Policy that was revised and adopted in December 2008 (MAWF, 2008).

The Ministry of Agriculture policy of 1995 acknowledged that women participation in agricultural development are hampered by a “lack of knowledge, limited access to land, lack of security of tenure, discriminatory laws, shortages of labour and poor access to services and finance” (Ministry of Agriculture, Water and Rural Development [MAWRD], 1995, p.13). Hence, emphasis was placed on gender sensitive research as an outmost priority to secure women’s participation in agricultural development and to be recognised as farmers in their own right (MAWRD, 1995). Therefore, the Central Bureau of Statistics (CBS) in the National Planning Commission Secretariat (NPCS), in collaboration with the Directorate of Planning (DoP) in the Ministry of Agriculture, Water and Rural Development (MAWRD) in Namibia conducts an Annual Agricultural Survey and thus far, seven (7) agricultural surveys have been conducted from 1996/97 up to 2002/2003. The main purpose of the survey has been to gather agricultural information, the data obtained were disaggregate and presented by gender. The results however, shows a big variation and disparities between men and women participation in agricultural practices in the communal agricultural sector (Republic of Namibia, 2003).

Therefore, increasing women’s involvement in agriculture is not merely for food security purposes alone but to change the existing norms and values, which discriminates women in such a way that women and men can have equal access to resources (such as land, capital and the market) and achieve economic empowerment.

Kabeer (2012) defines WEE as a process aimed at increasing women's authority over economic decisions that influence their lives in society. However, Tornqvist and Schmitz cited in Kabeer (2012) suggest that to achieve WEE, women should have equal access to and control over economic resources and opportunities, and to eliminate or amend structures that causes gender inequalities in the labour market.

Nevertheless, Kabeer (2001) further defines "Empowerment as expansion of people's ability to make strategic life choices, particularly in the contexts where this ability had been denied to them" (p.19) and perceives empowerment as the process of change. Certainly, the concept of empowerment emphasizes the ability to bring about change, and the UN Women (2012) stresses that the change could be inclusion of women in growth and social protection, employment in agriculture or sustainable development.

1.2 Conceptual framework

Empowerment Concept

The concept of empowerment as an approach in women and development discourse was developed in the mid-1980s. This is from the emergent feminist writings and grass-root level organizational experience that inequalities between men and women originates in the family structures that later reaches all levels of socio-economic, political, and cultural structures of societies (Tasli, 2007).

The concept of “empowerment is not clearly defined as it is inherently context-specific, shaped by socioeconomic, cultural, and political conditions, which can make comparison across countries problematic” (Malhotra & Schuler, as cited in Alkire et al., 2013, p.5). Also, Bertelsen, and Hollard (2006) define empowerment as a group’s or individual’s capacity to make effective choices and transfer them into desired actions and outcomes. According to Sharma (2000) the main key factor that leads to the rise of women’s empowerment is their involvement in the decision-making process, participation in the domestic and community power structure. Therefore, the process of “empowering women to become self-sufficient and have multiple benefits on the entire household and the nation as a whole” is necessary (De Klerk, 2008, p. 33).

Similar to Sharma, Tasli (2007) alludes to empowerment as a way of bringing women on board as far as decision-making is concerned in the political and economic arenas. Furthermore, Moser (1993) emphasizes “the fact that women experience oppression differently according to their race, class, colonial history and current position in the international economic order” (p.74). In other words, though women share common problems or challenges they experience oppression or cope differently within these structures. There are also instances in which women discriminates other women (Kilelo & Kurgat, 2015).

According to Tasli (2007) structures that creates inequalities not only produce inequality, but they strengthen and protect it through socio-cultural norms resulting in so-called 'false consciousness' making both man and women believe that women’s inferior position is normal and natural. Therefore, empower women in order to

participate equally in the development process and achieve control over the factors of production on an equal basis with men (March, Smyth, & Mukopadya, 1999). Empowerment is about giving power to the vulnerable so that they can make decisions that affect their livelihood, and it does not necessary mean disempowering men. Therefore, women empowerment cannot be achieved without the support of their male counterparts as well the nation (Kilelo & Kurgat, 2015).

The United Nations (UN) Women (2012, para.5) defines Women's Economic Empowerment (WEE) as increasing the ability of women to bring about change, for example their ability to function effectively in the economy, to participate in the labour and product markets on equal terms with men, to shape the gender division of labour, to accumulate assets, and to influence the institutions and processes that determine growth development.

Women Empowerment in Agriculture Index (WEAI) concept

In the context of women economic empowerment in agriculture, empowerment is measured using an index. A Women Economic Empowerment in Agriculture Index (WEAI) is a tool initially developed by the United States (US) government 'feed the future' program designed to measure the empowerment, agency, and inclusion of women in the agricultural sector, more generally to assess the state of empowerment and gender parity in agriculture. WEAI advantage helps identify key areas in which empowerment needs to be strengthened and to track progress over time (Alkire et al., 2013).

In addition, the index measures the level of empowerment by collecting data through interviews with men and women within the same household or project, either at a national or regional level, or on individual-level. In other words, scholars can adopt, construct and validate the tool within the context of their setting in order to measure women empowerment in agriculture (Alkire et al., 2013).

WEAI is an aggregate index reported at the program level and is composed of two sub-indexes. The first index assess the extent in which women are empowered using the five domains of empowerment (5DE) which include production, resources, income, leadership, and time allocation (*table 1.1*). The second index is the Gender Parity Index (GPI) that assesses gender gap for households that has not reached gender parity (Alkire et al., 2013).

Table 1.1: The five domains, indicator and definition of WEAI

Domains	Indicator	Definition
1. Production	1.1 Input in productive decisions	Sole or joint decision-making over food and cash-crop farming.
	1.2 Autonomy in production	Reflects the extent to which the respondent's motivation for decision-making reflects own values rather than a desire to please others or avoid harm

2. Resources	2.1 Ownership of assets	Sole or joint ownership of major household assets
	2.2 Purchase, sale or transfer of assets	Whether respondent participates in decision to buy, sell, or transfer assets
	2.3 Access to and decisions about credit	Access to and participation in decision making concerning credit
3. Income	3.1 Control over use of income	Sole or joint control over income and expenditures
4. Leadership	4.1 Group member	Whether respondent is an active member in at least one economic or social group
	4.2 Speaking in public	Whether the respondent is comfortable speaking in public concerning issues relevant to oneself or one's community
5. Time	5.1 Workload	Allocation of time to productive and domestic tasks
	5.2 Leisure	Satisfaction with time for leisure activities

Source: Alkire et al., (2013).

Hence, using the WEAI tool for the study not only assesses women empowerment in agriculture, but also reveals areas that required strengthening, and evaluate gendered participation in agriculture.

Gendered participation concept definition

In a planning methodology, participation is the most critical yet complex gender planning procedure and although in theory participation in planning is generally considered good, clear consensus still does not exist as to what it means in practice. The term participation is used naturally to include consultation. However, through interpretations the term changed over time distinguishing between the four questions of why, when, who and how to participate provides a useful framework for understanding some complexities of the concept (Moser, 1993).

In the context of empowerment the question of why gendered participation refers obviously, to the reasons for and causes of participation. Participation for empowerment, capacity building, increasing project effectiveness, and project cost sharing is significant for gendered participation and the active consultation of women in the development process (Moser, 1993). It refers to the gender analysis stage, and the planning process of decision-making, implementation, financing and managing. Participatory planning process includes identifying who *controls* the process of the identification of goals and objectives, and who legitimizes the process. Although acknowledging women participation is crucial for project's success, lack of awareness of women's triple role and activities (*Table 5.1*) can be a cause of project failure (Moser, 1993).

Central to the debate about participation is the issue whether participation includes an element of empowerment (Moser, 1993), although these concepts are closely related, some development organisations are more comfortable with the concept of participation, which is less overtly focused on challenging power relations. Briefly,

empowerment is demonstrated by the quality of people's participation in the decisions and processes affecting their lives. Promoting empowerment through participation requires more than a process of consultation over decisions already made elsewhere. Strategies to support women empowerment should encourage women's participation at all stages of projects, incorporating a bottom-up approach (Oxaal & Baden, 1997).

In view of the above, gendered participation has the tendency to refer to women due to the inherent discrimination they face. Similar to Oxaal and Baden (1997), Longwe views women participation as an important aspect of development projects, where participation means involvement in needs-assessment, project formulation, implementation, and evaluation. In this way, the process of participation should be empowering meaning involving women in making the decisions by which their wider community will be affected (March et al., 1999). However, participation that eventually leads to empowerment should emerge from within rather than imposed by planners, being active agents that bring about transformation. Therefore, more research is needed to bring a gender perspective into the debates on participation that arouses conflict between different groups in a community particularly on the issue of gender equality (Oxfam, 1995).

1.3 Problem statement

Studies have shown that women are often ignored from research; they are excluded from decision making resulting in limited access to resources and development agenda although they play key roles in agriculture (Oumer, Tiruneh, & Tizale, 2014).

The problem of gender inequality evident in the agricultural sector needs to be addressed in order to achieve vision 2030. The Ministry of Agriculture Water and Rural Development (MAWRD) policy of 1995 was designed to address gender inequality and household food insecurity; it also emphasizes on women's crucial role in agricultural development needs (MAWRD, 1995).

According to the data presented from Annual Agricultural survey conducted in Namibia, there is a slight trend of closing the gap disparity although the variations prevails. For instance, the survey shows that the men farmers, who planted any crop, out-numbered the women farmers by an average of 4 percent in 2000-2001. However, in 2001-2002 the number of women-headed households planting increased from 43,000 to 50,000 representing a 5.4 percentage, decreasing the men-headed households by the same percentage margin between those two years. On average, the total number of households planting varies between 37,000 and 51,000 women-headed households and 61,000 and 66,000 men-headed households. The number of men-headed households planting gradually decreased over the years as compared to the number of women-headed households increasing over the survey periods (Republic of Namibia, 2003).

The Ministry of Gender Equality and Child Welfare (MGECW) in Namibia carried out a gender assessment and strategy for MAWF, to identify gaps, and areas in which empowerment aspect can be strengthened in various sectors. Moreover, MGECW went on to propose gender strategies and actions to improve gender mainstreaming in the MAWF based on their study findings (MGECW, 2013). Although the green scheme policy shows great potential in terms of food security in Namibia, efforts to

incorporate gender in its component is minimal, hence the central problem is that remains unclear as to how the green schemes projects have translated gender responsiveness into concrete actions. Furthermore, although green schemes focuses on existing and emerging farmers in communal areas, no studies in Namibia have so far focused on assessing women empowerment aspect or the extent to which women and men participate and benefit from these projects.

1.4 Objectives

The main objective was to assess the impact of green schemes and gender on economic empowerment. The specific objectives were to:

- i. Assess gender participation of small-scale farmers in the green scheme.
- ii. Determine the extent of Women Economic Empowerment (WEE).

1.5 Significance of the study

The study contribute to academic discussions on women's economic empowerment through agriculture, particularly the green scheme component. Furthermore, scholars and government officials in policy formulations and execution on green schemes in Namibia could use findings from this study.

1.6 Limitation of the study

The following were the limiting factors:

- Some of the farmers were reluctant to participate in the study because they felt the interviews would consume a lot of time which they should be spending

working in the field, however the questions were kept short and precise for participants.

- Some identified potential key participants could not participate in the study during data collection. For instance, a government official from MAWF in Rundu said he felt under qualified to speak on green scheme matters turning down the request for an interview and suggested the AgriBusDev office a state-owned enterprise within MAWF. As such, the interview was carried out with one key informant who was the project's manager and service provider of Ndonga-linena green scheme irrigation project.
- The focus group that was planned to have all eight female small-scale farmers of Ndonga-linena green scheme irrigation project managed to have a discussion with only six female small-scale farmers as the other two female had prior arrangements outside the project. However, due to the limited number of the female small-scale farmers at the project the study expected 100% attendance. Nevertheless, the interviews went ahead with the discussion that had 80% attendance.

CHAPTER 2:

LITERATURE REVIEW

2.1 Introduction

This chapter explores gender and land issues, analysing past experience on access to land, and land ownership based on gender relations and how these had an impact on women's social and economic conditions in the past and the present. It further explores the green scheme and its components including its main objectives and strategies towards economic growth.

It also examines Namibia as an agricultural-based country specifically focussing on the impact of women involvement in farming. The study further explores definitions around the concept of a small-scale farmer, and concludes with the notion on women empowerment in agriculture through an in-depth understanding of the concept of empowerment from the perspective of empowering women in agriculture to reduce poverty and improve their economic standing.

2.2 Gender and land

Historically land has been treated as a common property resource in many African societies. However, due to the process of modernization there has been a shift towards individual ownership something that is limiting female farmers from accessing and owning land, and other productive resources regardless of their ongoing efforts on the farms (Gittinger, as cited in Kajoba, 2002). Hence, "their

contribution to national effort, household food security and national food self-sufficiency goes unnoticed” (Kajoba, 2002, p. 35-36).

In Western African societies among the Muslim Hausa for instance, when a father dies, his farms are usually divided between his sons and a daughter who receives shares often sells them to a brother. Moreover, women were prevented from inheriting valuable land planted with gum Arabic trees (Holy, as cited in Kevane, 2004). In addition, a married woman in Sahelian in West Africa is granted land rights from her husband’s lineage, however these rights are precarious and contingent. Upon divorce, widowhood, or relocation, women generally lose these rights (Kevane, 2004). Similarly, in Sub-Sahara Africa women’s access to land and other resources was obtained through a male relative (father, brother, or husband) (Kevane, 2004).

In Kenya, women have a similar case in terms of land rights and access but often undergo customary wife inheritance or cleansing rituals to continue having access to their husband’s property (Grown & Gupta, 2005). However, in Central Africa, Democratic of Congo (DRC) seems to have a large number of matrilineal societies that privileges women as owners of land. For instance, among the Lemba of Zaire in DRC, men say, “*we live at the home of the women; land here belongs to women; women have a say in everything we do; we listen to the opinion of women; and so on*” (Kevane, 2004, p. 50). However, Gawaya (2008) stated that there are similar cases in South were “a woman’s access to land in matrilineal societies is mainly through her parents so that when a man marry in this community he is expected to contribute to the family agriculture through labour” (p.149). However, women in

patrilineal societies' access to land and reproductive resources is often limited as the descent is traced through the male line. The literature suggest that South and East of Africa assume similar principles to those of West Africa when it comes to treatment of land as it shows the centrality of male dominance over land allocation and ownership.

In other words, a woman's access to land in some cases or societies is defined or determined by her lineage. In addition, between the matrilineal Tonga and Lenje of Zambia, married women who lived in their husbands' villages retained access to land in their matrikin villages. They could inherit and own property and their land could be passed on to their heirs, with their husbands having overall control over some land (Kevane, 2004). Therefore, despite the fact that women have the right to own land in the matrilineal societies, men still play a crucial role in controlling the land which women owned or inherited something that implies women's rights over land or property remains limited that could have an impact on their livelihood. According to Duncan (2004) access to land and other productive resources is central to basic livelihood in the African development context, therefore most African economies view agricultural land as a basic tool of development and a significant determinant of income earning power. Gawaya (2008) points out that women make a significant contribution to agriculture in developing countries, particularly those found in rural areas.

Namibia consequently inherited an extremely asymmetrical distribution of land after independence in 1990, whereby 52% of the agricultural farmland was in the hands of the white commercial farmer community who made up 6% of the country's

population whereas, the remaining 94% of the population owned only 48% of the agricultural land in communal farmland with few resources and poor productivity. Moreover, the majority of Namibians who stay in communal areas are subsistence farmers who do not own the land (Hunter, 2004).

In Namibia, land is communally owned in the northern part of the country. The tenure system does not allow farmers to own land legally. Given that the majority of the farmers in these areas are women, these women therefore do not own land and their progress in enhancing agricultural production is hampered. Moreover, private ownership, customary and inheritance laws continue to discourage women's access to control and own land and property (Abate, 2000). Therefore, because of the tenure system the allocation of rights to use and transfer land, mostly in African societies, give women far fewer land use rights compared to men. However, while many Namibian communities in the past gave more preferences to men to access land, there are exceptions where equal preferences is promoted (Likuwa, 2014).

Land reform in Namibia took three forms: Redistributive land reform, Affirmative Action Loan Scheme, and the development of resettlement projects in communal areas (Werner, as cited in Hunter, 2004). Redistribution programme in Namibia now gives preference treatment to women who are encouraged to have access and control over resources (land) so as to become independent and self-reliant (Werner & Odendaal, 2010). Since women in the communal farming areas have received less attention than those in the commercial farming area, the "government embarked on Green Schemes in August 2003" (Hunter, 2004, p.22) in order to create farming opportunity for communal small-scale farmers (Werner & Odendaal, 2010).

2.3 Green scheme in Namibia

The Green Scheme is an initiative conceptualized and introduced by the Government of the Republic of Namibia. Operated by the various service providers on either lease or profit-sharing agreement with the aim to encourage the development of irrigation-based agronomic production to increase food production and food security as well as job creation (Kandjeke, 2013).

According to MAWF, “The Green Scheme is designed to maximise irrigation opportunities along the maize triangle which are Grootfontein, Tsumeb & Otavi as well as in the North Central and North Eastern regions using the Kunene, Kavango and Zambezi rivers” (MAWF, 2008, p.3). The Green Scheme also aims for the following objectives:

- to increase agriculture production and sector contribution to the Gross Domestic Product (GDP);
- to promote investment in food production and agro industry; to mobilize private and public capital for investment in agriculture;
- to promote food security at national and household levels;
- to diversify agricultural production and products for the domestic and export markets;
- to promote research and adaptation of technology to increase productivity; to promote value addition and job creation; and
- to promote skills development and transfer of technology” (MAWF, 2008, p. 4).

In other words, the Green Scheme project initiative is for the benefit of both the country's GDP by attracting foreign investors as well as the community through farmers venturing in new agricultural activities, creating employment and reducing poverty.

According to the Green Scheme policy of 2008, the green scheme projects target four main groups or beneficiaries which are "Investors and irrigation expertise; Emerging commercial irrigation farmers; Rural communities; and Individuals with legal entitlement to land" (MAWF, 2008, p.6). In other words, these projects create a platform that give beneficiaries employment opportunities, allow existing farmers to venture into new agricultural activities, attract investors to assist the government in achieving its objective of food production and the transferring of skills to emerging irrigation farmers (MAWF, 2008).

The Republic of Namibia is guided by long-term developmental plans that are outlined in the National Development Plan 4 (NDP4) that aims to achieve agricultural production growth of 4% per annum over a period of 5 years. The agricultural sector in Namibia continues to be a priority focus under the NDP4 as it is the backbone of the country's economy. In addition, the agricultural sector create jobs, however the 4% growth can only be achieved by "continuing to promote Green Scheme projects; increasing the land's carrying capacity for livestock; the establishment of agricultural fresh produce markets, and other agricultural infrastructure such as silos and research stations (National Planning Commission [NPC], 2012).

The Republic of Namibia therefore embarked on achieving the NDP4 goal through the expansion and development of the Green schemes countrywide. However, according to the National planning commission, the performance of the sector has been of substandard because of many factors despite the Government efforts and the potential associated with agriculture (NPC, 2102).

Thus, Namibia still imports more than 50% of the cereals and horticultural products consumed locally. There are weak links to available markets and it is difficult to put local products on the local market due to the high competition with imported products. In addition, fertiliser imported beyond borders is not readily available at affordable prices, making access to these agents difficult and expensive for farmers (NPC, 2012). The Government pledges to however, continue supporting the agricultural sector over the NDP4 period of growth with the aims of employment-generation and improving livelihoods (NPC, 2012).

The discussion above shows the importance of green scheme towards achieving vision 2030 as the state continue to provide resources the agricultural sector need despite the inherent challenges in these green schemes which are impacting participation of different gender and women empowerment.

2.4 Agricultural sector and women's involvement in Namibia

The agricultural sectors tend to differ across different countries depending on how they rely on agriculture as a source of growth. For instance, agriculture-based countries situated in the Sub-Sahara rely on agriculture as their main source of

growth. Hence, it accounts for 32% of their GDP on average, whilst transforming and urbanized countries' agricultural sector accounts for 7% or less (World Bank, 2007). In Namibia, agriculture is the second most important economic sector besides mining contributing about 6 percent of GDP. Majority of the country's population in subsistence rural areas depends on this sector as their main source of livelihood. It is estimated that more than 70 percent of the population in the country depend upon the agricultural sector (Republic of Namibia, 2003). However, Namibia as an agriculture-based country consists of two specific types of land ownership: the commercial farming sector based on freehold titles and the communal sector based on non-title deed areas owned by the State. The later sector is characterized by low agricultural yield production and subsequently low income due to limited access to markets (MAWF, 2008). These consequences emerged prior to the independence of Namibia where most agricultural services and efforts were directed towards supporting commercial agriculture, ignoring communal farming sector, which consists of roughly 100,000 households, and 770,000 persons (Republic of Namibia, 2003).

In addition, similar to the Annual Agricultural Survey report of 2003, Jauch's study showed (as cited in Ministry of Gender, Equality and Child Welfare [MGECW], 2013) that "Namibia's agriculture sector has historically supported about 70% of the population directly and indirectly and employed about 18,6% of the country's total workforce" (p. 15), Contributing towards economic growth and poverty reduction hence are sound reasons for investments in large numbers of agricultural developmental projects and programs (Dorward, Kirsten, Were Omamo, Poulton, & Vink, 2009). An example to these developmental projects is the National Green

scheme irrigation projects in Namibia that aims to drive the country towards food security, and economy stabilization (MAWF, 2008).

Although, there is limited data on women's involvement literature in Namibia, an agriculture survey conducted in six regions in the Northern Communal areas of Namibia provided a time series on area planted/harvested, production and yield, of selected crops, presenting the data by gender. The presentations were analysed according to the recorded numbers of men and women heads of households that shows gender disparities between men and women-headed households (Republic of Namibia, 2003).

The National Agricultural policy of Namibia was designed not only to address colonial injustices and problems but also to address gender inequalities, placing emphasis on women being recognised as female farmers in their own right (MAWRD, 1995). Moreover, the government in the end identified the shortcomings that existed in the green schemes and established a green scheme policy in 2008 which highlighted the central need of green schemes to provide food security and economic growth in the country (Ministry of Gender Equality and Child Welfare [MGECW], 2013).

According to Gawaya (2014), women, in particular those found in the rural areas, produced an estimate of 70% of the food in Southern Africa and thus contributing to commercial and communal agriculture. However, despite these contributions, women's efforts in farming are not recognized; their voices barely shape public policies and deprived in terms of access and control over resources such as land,

farm inputs and equipment (Gawaya, 2014). Duncan (2004) further argues that closing the gap in agriculture would generate significant gains for the agricultural sector and society. He further adds that if women could have the same access to productive resources as men, they could increase yield on their farms. Similarly, Oumer et al., (2004) concludes that women farmers are productive and empowered through access to technology. The agricultural survey conducted in Namibia concurs with Oumer et al study, implements used and/or required for agricultural production are important input variables that facilitates and enhance the overall process of production. The major implements required found in the study were milling machines, a plough, and a draft power (Republic of Namibia, 2003).

Namibia has made efforts to address gender imbalance problems. For instance, Namibia's Ministry of Gender Equality and Child Welfare (MGECW) is mandated with the responsibility to ensure that gender equality is achieved country wide in every discipline including agriculture particularly where the majority of women are involved but not recognised (MGECW, 2013). Therefore, it is vital for a country to call for a gender analysis to address constrains faced by women farmers.

The MGECW conducted an assessment study with various actors to help identify issues and gaps in policies, projects that causes gender inequalities, to assess progress made so far in narrowing the gap and to develop a gender strategy action for implementation (MGECW, 2013). The assessment study shows that more is yet to be done in order to narrow or completely close the gender inequality gap through implementing projects, policies or programs from a gender perspective especially for communal small-scale farmers.

2.5 Small-scale farmers in agriculture

Scholars like Kirsten & Van Zyl (1998) have used the terms small-scale farmer and smallholder farmer interchangeably over the past years. However, these terms' meaning tend to vary depending on the context or discipline. In South Africa, the meaning of a 'small scale farmer' has been contested as the concept is value-laden, creates wrong impressions and is often viewed in a negative light and is only limited to African subsistence farmers in the former Bantustans (Kirsten & Van Zyl, 1998). Whereas, in Namibia, there is an indication that "a vast majority of people in the communal areas are small-scale farmers who barely are able to satisfy their subsistence needs and have to complement their agricultural outputs with non-agricultural income streams to make ends meet" (Werner & Odendaal, 2010, p.18). However, The World Bank (2007) states a small-scale farm is operated by a household with limited hired labour and remains the most common form of organization in agriculture, being it agricultural-based or in industrial countries. The green scheme policy refers to a small-scale farmer as a farmer utilizing a farming unit within the state agro project in an agreement with a commercial farmer for service or independent enterprise or an individual engaged in horticulture or crop production under irrigation (MAWF, 2008)

Furthermore, private investors in communal areas or commercial areas obtain land from the land board through lease agreements in which the investors are not obliged but could help support small-scale farmers by utilizing the land under a contract agreement. Moreover, "the small-scale farmers who excelled in farming in the state agro projects at the expiry of their contracts will be assisted and supported to acquire

their own land, assisted in accessing finance for agricultural inputs, marketing, plant, and machinery” (MAWF, 2008, p.9). Many countries however tried to promote large-scale farming, believing that smallholder farming is inefficient, backward and resistant to change but the results remain negative (World Bank, 2007). Moreover, Aliber and Hall (2012) research shows that the South African government attempts to support smallholder farmers have been costly and ineffective. According to Aliber and Hall (2012), smallholder farmers are known as family farming, or a small-scale farm operated by a household with limited hired labour, resulting to small impact.

However, despite the small impact, the smallholder farmers still hold substantial opportunities for growth and expansion. This can be achieved and sustained by improving small-scale farmers’ access to land, improving the affordability of inputs such as fertilizers, seeds, access to infrastructure, financial resources and by removing the barriers to the market in order to invest and profit from their production (Salami, Kabyemera, & Anyanwu, 2009).

Generally, agriculture in Africa faces a host of challenges such as that the land surface that continues to lose nutrients resulting in farmers paying for costly fertilizer compared to their counterparts in Brazil, India or Thailand, hence the farmers in Africa should be subsidized on fertilizer that tend to hinder their profit production (World Bank, 2007). The scholars above concludes that access to resources is vital for production. However, according to Gawayya (2008) access to credit facilities from commercial banks is a challenge for most rural women in Africa due to the conditions imposed on lenders by the banks. In Mozambique, for example, some farmers were either faced with debts due to the high interest rate and limited time to pay back the loan.

The Government of Mozambique attempted to address the issues of discrimination against women's access to credit facilities by introducing development banks in the rural areas and giving women special attention in order to narrow the gender gap. It was then found that although there have been success in terms of women accessing credit facilities from banks, women still found it difficult to pay back loans thus adding to a declining rural women's livelihood (Gawaya, 2008).

In Ethiopia, through the participatory intervention, women farmers enhanced their skills and knowledge of improved agricultural technologies as well as access to credit. As a result, membership increased as did the women's productivity, which eventually enabled them to generate income for the household and enhance food security thus overcoming poverty (Oumer et al., 2014).

Hence, overcoming challenges faced by small-scale farmers, particularly those in agricultural-based countries of the Sub-Sahara may be overwhelming but not impossible. It only requires overcoming institutional obstacles that imposes high transaction costs and the public intervention to support service provision to small-scale farmers and a collective action by small-scale farmers themselves to excel in eradicating poverty, boosting the economy and empowering the farmers.

2.6 Women's empowerment in agriculture

According to Africa Development Bank (2010), agricultural growth has a strong impact on a country's development, however, there are numerous obstacles that hinders growth but with the women's crucial role in the agricultural sector, there is

evidence that gender equality and aspect of women's empowerment is far from being achieved. Despite their significant role in agriculture, "women have limited access to land, agricultural extension services, credit, infrastructure, technology and markets that are crucial for enhancing their productivity" (Africa Development Bank, 2010, p.9) and boosting the country's GDP. Similarly, Kajoba (2002) notes the majority of subsistence farmers in the communal areas are women yet their effort towards household food security and national food self-sufficiency goes unnoticed.

In North Africa, studies have shown a slight difference between women and men participation in the agriculture sector. However, these figures are much higher in sub-Saharan Africa. For example, studies in Kenya have shown that women farmer's productivity increases by at least 20% if given an equal chance to access inputs, education and technology. Therefore, it is important for agricultural-based countries to invest in initiatives that increase the productivity of women's participation in agriculture (African Development Bank Group, 2012).

In Namibia, the Ministry of Agriculture, Water and Forestry (MAWF) placed emphasis on female farmers in order to ensure gender equality and women empowerment and to help narrow the gender gap because generally women were and are still disadvantaged compared to men, in terms of access and control over land, employment, labour and training opportunities (MAWRD, 1995). Namibia being a capitalist society requires financial capital in order to acquire private land mostly for male farmers as opposed to female farmers who have been resettled on commercial farming of late. The majority of the subsistence farmers who are women remain at the mercy of the state to provide them with opportunities to access land for

agriculture (MAWRD, 1995). There is a need to empower women in the agricultural sector where opportunities arise.

CHAPTER 3:

MATERIAL AND METHODS

3.1 Introduction

This chapter gives detail of the research process such as the study area, research design, the population, sample procedure, research instrument, data collection procedure, data analysis, and the research ethics.

3.2 Study area

The study area of Ndonga-linena green scheme project is situated 75km East of Rundu in the Kavango East Region. Ndonga-linena green scheme project covers a total land area 1000 hectares of which 506 hectares are under commercial and small-scale production. Out of the 174 hectares utilised by the twenty-six (26) small-scale farmers each farmer occupies 6 hectares. A project is managed through a contract agreement with the Ministry of Agriculture, Water and Forestry (AgriBusDev, 2015).



Source: Montle & Teweldemedhin (2014)

Ndonga-linena green scheme project together with the other 10 existing country-wide are monitored by AgriBusDev (Agricultural Business Development Agency), a state-owned enterprise mandated to monitor and create an ideal environment for the greens scheme projects in order to achieve the objective stipulated in the green scheme policy of 2008 (Agricultural Business Development Agency [AgriBusDev], 2015).

AgriBusDev company's structure consists of members from various governmental institutions. A managing director responsible for operations, and a designated senior managers responsible for various departments. However due to the nature of its mandate, AgriBusDev often requires specialised skilled persons to be a project manager for each green scheme country-wide (AgriBusDev, 2015).

The study areas' soil type is mainly sandy soils with excellent drainage with an average temperature of 22.4 degrees Celsius, and an average annual rainfall of 577 mm that mostly occurs in the month of February (Ministry of Agriculture, Water and Forestry [MAWF], 2010)

Ndonga-linena green schemes success depends on the role of various stakeholder such as MAWF, Ministry of Lands and Resettlement (MLR), Ministry of Finance (MoF), Traditional Authorities, Regional Council, Ministry of Education, and Agricultural Bank. These stakeholders provide support and services such as promotions, financing, regulations, facilitation, and training whilst implementing the green scheme programs (MAWF, 2008).

3.3 Research design

This study used a case study design, a qualitative research method that focused on providing a detailed account of one or more cases (Johnson & Christensen, 2012), to study the small-scale farmers of Ndonga-linena green scheme irrigation project through an in-depth assessment. Data collection was through interviews and focus group discussions in order to acquire information that helped the study to evaluate the contribution of Ndonga-linena green scheme irrigation project towards women's economic empowerment in the Kavango East Region.

3.4 Population

A population is "a large group to which a researcher want to generalize the sample results" (Johnson & Christensen, 2012, p. 218). The population of the study was made up of 26 small-scale farmers of Ndonga-linena green scheme irrigation project.

3.5 Sample and sampling procedure

A sample is the group of elements drawn from the population (Bless, Higson-Smith, & Kagee, 2006). Therefore, the sample of the study was drawn from the 26 small-scale farmers of Ndonga-linena green scheme irrigation projects. A qualitative sampling procedure was used to select eight (8) female small-scale farmers. According to Johnson and Christensen (2012), this procedure allows all relevant cases to be included in the study. There were 18 male small-scale farmers at the Ndonga-linena green scheme irrigation projects. Eight (8) male small-scale farmers were selected in order to have an equal number of representative of gender in the study. Convenient sampling was used to select the eight (8) male small-scale farmers who were available or had volunteered to be included in the study. As a result, the total sample size had 16 small-scale farmers.

The key informants were selected using expert sampling procedure to select persons with known or demonstrable experience and expertise in the study area were selected. Comprehensive sampling was then used to select eight female small-scale farmers for focus group discussion.

Table 3.1: Demographic information of participants (n=16)

Characteristics	Categories	Total number of ssfs
Gender	Female	8
	Male	8
Age	18-23	None
	24-29	1
	30-35	14
	36-41	1
Level of Education	No formal Education	None
	Primary Education	None
	Secondary Education	10
	Tertiary Education	6

3.6 Research Instrument

Semi-structured interviews and focus group discussion were carried out. A voice recorder recorded the interviews.

3.6.1 Semi-structured interviews

Semi-structured interview questions for both the selected male and female small-scale farmers were used. This instrument gave room for additional questions and probing. The questionnaire had six sections from section A to section F and the discussions lasted for about 40 minutes with each participant. The supervisor

validated the data collection instrument and changes were made where necessary. The interview question schedule was administered to the small-scale farmers by completing the questionnaire and probing where necessary.

3.6.2 A schedule interview guide

The interview guide constituted of the following three sections developed for the key informants to provide relevant data:

- Section A- Background information of the key informants
- Section B- Key informants relationship and experiences shared and encounter while working with the small-scale farmers at Ndonga-linena green scheme irrigation project
- Section C- Women economic empowerment in Ndonga-linena green scheme irrigation project

3.6.3 A focus group discussion guide

Focus group discussion was carried out in order to distinguish among the comments or topics that participants agree or disagree over (Lune, Pumar, & Koppel, 2010). The discussions were scheduled immediately after the small-scale farmers' one-on-one questionnaire discussion, which covered topics that needed clarity or a group's opinion.

3.7 Data collection procedure

Permission was requested from AgriBusDev in Windhoek and from the service provider at Ndonga-linena green scheme irrigation project to carry out the study. Permission was granted and data collection started a week later. Data collection started with all eight male small-scale farmers and proceeded to the female small-scale farmers. For ethical purposes, the purpose of the study was explained to the participants and assured that their names will remain anonymous and that their responses will be used only for the study purpose.

Focus group discussion was arranged with the female small-scale farmers. It was not easy to arrange a meeting during the week as it was a busy season for the farmers at the project but eventually the discussions were scheduled on a Sunday. The discussion was held at one of the farmers' back yard instead of the boardroom offices. A tape recorder was used with the permission of the participants. Some notes were taken on observation in terms of body language and other physical reactions.

A one-on-one interview was carried out with the service provider who was also the farm manager of Ndonga-linena irrigation project.

3.8 Data analysis

Data was analysed by hand instead of a computer. According to Creswell (2012), analysing data by hand means that the researcher read the data obtained from the field, marks it by hand and then divide it into parts. The recorded information in the audio was transcribed into written words. The text was analysed by coding, a process

known for organising materials into chunks before bringing meaning to those chunks (Creswell, 2012). The results were presented in tables and figures.

3.9 Research ethics

Research ethics are guidelines or set of principles for professional practices, which serve to advise and steer researchers as they conduct their work (Bloor & Wood, 2006). The following research ethics practices were instituted:

- The Ethical clearance letter for the study was obtained from University of Namibia's Postgraduate Committee through the Research and Publication Office.
- Permission for conducting the study was obtained from the office the managing director of AgriBusDev in Windhoek.
- Permission was requested from the service provider and the small-scale farmers prior to the interviews or discussions.
- Consent form was read to the small-scale farmers and the key informant prior to discussions.
- The purpose of the study was explained to the participants prior to the discussions.
- Participants' confidentiality, anonymity and their right to withdraw from the study at any time was explained to the respondents.
- The participants were assured the recorded interviews was to be kept in an encrypted site for safekeeping and only be accessible for educational purposes.
- The results were based on the actual data collected and no fabrication or falsification of any other information.

CHAPTER 4:

RESULTS

4.1 Introduction

This chapter presents the results of the data collected and analysed in relation to the study objectives.

4.2 Gender participation of small-scale farmers in the green scheme

4.2.1 Application process

According to the service provider of the Ndonga-linena green scheme project, successful candidates who attended the training for a period of 12 months at Mashare research station centre in the Kavango East region were later dispatched to regions all over the country, particularly away from their regions of origin. The variant ethnic and regional representation within the green schemes confirms the assertion that although the green schemes are based in various regions they are national projects.

(Figure 4.1)

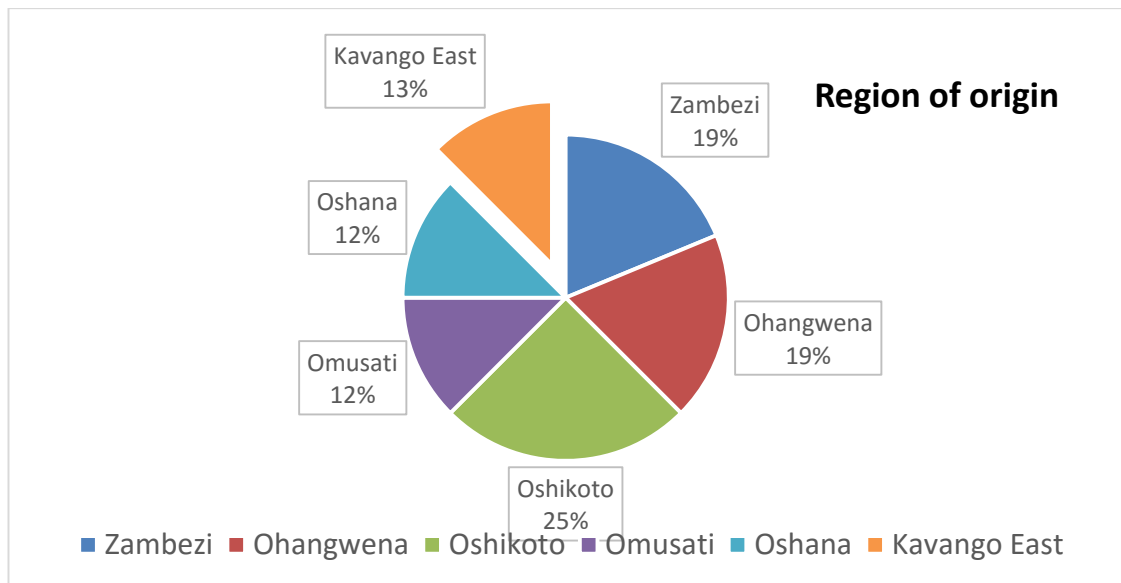


Figure 4.1: Participants’ regions of origin (n=16)

According to the service provider, selection and recruitment process was done regardless of the applicant’s gender. There seem to be a high number of male small-scale farmers than female at Ndonga-linena green scheme. However, the government has since realised the need to recruit more women as equal representative. The service provider states that: *I think the priority will be given to women because this is something that they have been talking about that we need to involve more women in the project. [Service provider]*

Overall, the majority of participants indicated they recall the process as easy as it simply required submitting their identification document and at least holding a certificate from grade 10.

As one of the participants stated; *It was nothing like difficult, like for me it was easy, you just write a letter in your own hand writing and own pen without even typing it. I just wrote a letter [of motivation] on my farming background and my interest [in*

farming] made me to apply, from there, they were just asking for grade 10 and agriculture so it was not difficult.

4.2.2 Small-scale farmers' (ssfs) participation in the green scheme

Even though the application process required interested candidate to possess a grade 10 certificate, findings from data collection shows that the majority of the participants in the study possessed secondary and tertiary level education. Prior to joining the green scheme in 2010, the study shows, that majority of the female farmers were unemployed compared to their counterparts. About 80% of the male farmers worked in retail or were self-employed. Some participants joined the project in order to secure better employment and uplift their standard of living or simply for the passion of farming and to be able to promote food security in order to feed the nation.

Whatever the reason, the overall objective was to ensure food availability, which plays a crucial role in boosting the country's economy.

4.2.3 The small-scale farmers daily activities at Ndonga-linena

Data on daily activities of female and male ssfs of Ndonga-linena green scheme project was also gathered. Apart from farming activities, only one (1) female and two (2) male ssfs participants indicated that they would be involved in other non-farming related activities. In other words, the majority of farmers ought to dedicate their time and effort towards managing their farming plots within the green schemes to ensure positive results. *(Table 4.2)*

Table 4.2: The male and female ssfs daily farm activities

Farm activities
Weeding
Pests inspection
Irrigating
Supervision of casual workers
Maintenance [fix broken pipes]
Crop evaluation
Shifting sprinkles
Fumigation
Applying chemicals
Planting

4.2.4 Training and farming experience of the small-scale farmers

The small-scale farmers attended training for a period of 12 months at Mashare research station in the Kavango East Region. Data collected shows that the training aimed to equip them with the necessary knowledge and skills needed to run a farm in order to produce food for themselves and for the market.

As participant 1 stated: *It was only about agriculture, there is nothing like gender*

Another participant 2 added: *It was about irrigation*

Participant1 responded: *Just how to apply chemical, fertiliser and all that” and “It is like you are at the college or UNAM (University of Namibia) you are not allowed to bring the kids or family*

Study shows that the aspirant small-scale farmers during the training at Mashare had to leave their children at home, and could only see them during the holidays because the training could not accommodate their families.

Participants responded collectively: *Only you alone, a single room for only you alone.*

The study found that after the training at Mashare, farmers at Ndonga-linena continued to attend in-service training through workshops, training which are agricultural related to help struggling farmers to excel. These workshops are organised by the service provider and small-scale farmers suggest such additional training workshops are critical for their development and their capability to increase farm produce.

4.2.5 Relationship and experience of service providers working with ssfs

The study also collected data to evaluate relationship between the ssfs and service provider from the service provider’s view. The service provider stated that: *I can say the relationship is excellent now although there are times were we point fingers at each other.*

The data shows that conflicts often emerge between the male ssfs and the service provider as the male ssfs often fail to comply with the instructions or suggestions regarding farming activities. The service provider explained that: *We at times can*

advise a certain small-scale farmer that the broadcaster [applications used in farming to apply fertiliser or seeds over a wide area] is not working so use another method to apply fertiliser but they will not listen to me because all they want is to use the broadcaster. So if they fail [low production] they will come back today in June and say remember in January when i needed a broadcaster but then you told the person that there was a reason why you did not get that specific machinery you wanted.

4.2.6 Green scheme impact on the small-scale farmers

According to Kabeer (as cited in Alkire et al, 2013) empowerment is the ability to make choices in the context where it was previously denied. However, these choices cannot be made without being well informed or equipped with skills and knowledge. Therefore, to measure women empowerment in agriculture the participants were asked what skills and knowledge they had acquired. The female ssfs are of the opinion that they have gained skills to farm without supervision. Here are what some of the female participants had to say:

I learned how to plant different crops in different seasons, I also know how to control plants as they grow and observe them for deficiencies – [female farmer 7]

I also learned about cropping season, I have also acquired skills on how to apply fertiliser and identify pests in the field – [female farmer 5]

I picked up some capital and finance management as well as teamwork– [female farmer8]

Therefore, the green schemes not only equip the female ssfs with farming skills and knowledge but also with financial management and interpersonal skills that are of benefit to ssfs in terms of access and control to resources.

4.2.7 Participants' expectations from the green scheme

The study evaluated some of the participants' expectations from the green scheme and whether those expectations were met. The majority of participants explained that:

To earn enough capital about N\$300 000-00 per year, so that I can move to more than 20 hectare to become a medium-scale farmers; I did not, unless we are subsidized on electricity, fertiliser and transport to the market; the input cost is high; the control over price determination is set by the buyer and not the seller – [male farmer1]

To become a successful commercial farmer one day; not yet so perhaps i need to put in more effort for the future– [male farmer 2]

I expected to become a medium-scale farmers after 5 years; there is a need for graduation as stipulated in the contract and the government need to deliver on their promise of upgrading small-scale farmers to medium-scale farmers–[male farmer 4]

To earn an income, no rental payment meaning free accommodation and free agricultural equipment; thus far no income due to high input costs, we are expected to pay for the plot in the next 5 years leasehold contract but then why pay or buy farming equipment if its broken and what are we to do with them if we decide to leave the green scheme? – [female farmer1]

To graduate to become medium-scale farmer; but now there are new requirements I have to put up money and a collateral of N\$300 000-00 needed as a medium-scale farmer – [female farmer5]

Allowed to work hard and produce more to survive on my production and to graduate medium or large-scale farmer with the government as collateral; there is no money to be large or medium-scale farmer and yes my production is sustaining me – [female farmer 6]

To graduate for those doing well, to medium-scale farmer because it is difficult for us to go there now, also marketing to go smooth but a lot of vegetables produced has no market; they expect the farmers to look for the market as long as it goes through the office – [female farmers8]

The data indicate that 60% of their expectations particularly that of them graduating from a small-scale farmer to a medium-scale farmer are not met and they thus appeal to the government to subsidize them on the inputs costs.

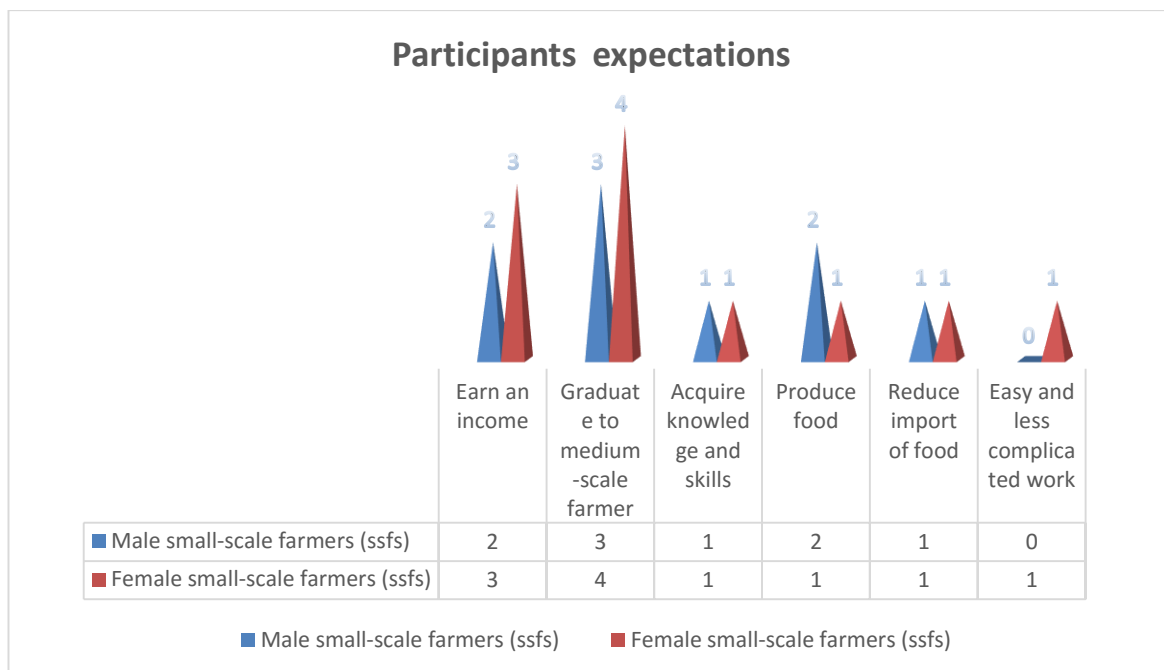


Figure 4.3: The ssfs expectations from the green scheme

4.2.8 Achievements and setbacks

Participants were asked about their greatest achievements working under the green scheme for the past 5 years, and whether it had changed their lives for the better, worse or remain the same. Data collected shows 80% of the male ssfs greatest achievements were building a house and buying a car whereas, others indicated that they have managed to buy livestock and opening up a small business at their village.

One participant claim:

I gained experience in agriculture, I can be a manager at any farm and i bought three cars – [male farmer6]

Unlike their male counterparts, the female farmers indicated that they have managed to buy houses but are mostly grateful for securing a job and gaining farming knowledge and skills. One participant says:

A lot of knowledge, I am now hardworking and independent and I can survive on my own – [female farmer8]

Another participant stated similarly: *I got experience; i can do more on my own with no problem or supervision – [female farmer6]*

The majority of female ssfs indicated that they have benefited and that the project had not only provided them with employment but also changed their lives and those of their families for the better.

Female farmer 8 remarked: *For the better, I can manage to give my children anything they want, and I can buy all things I want since I came here compared to my previous job*

Another farmer expressed her sentiments: *It has changed for the better, I did not have a job previously but now I can buy what I want – [female farmer5]*

Although the female participants expressed positive results from the projects, some were disappointed, as the service provider did not deliver the prize of helping ssfs to become medium-scale farmers. Another participant said the project took up much of her time as a result she could not afford to go back to school. Lastly, another participant stated: *A little bit, when we started everything was better but now things are not that good we are in debts, so I have not achieved anything – [female farmer3]*

4.2.9 Benefits in the greens scheme: female small-scale farmers opinion

Contrast to the achievements mentioned above, the female small-scale farmers were asked during the group discussions to indicate some of the benefits received working under the green scheme and here is what they had to say. (*Table 4.4*)

Table 4.4: Female small-scale farmers' benefits

Remarks participants (p)	Benefits
<p><i>if i can compare myself to others farmers like this, there are also some small-scale farmers in the neighbouring, here at Shankara they are also called small-scale farmers as i am also called small-scale farmers but i am under green scheme and they are not, i have [the] opportunity to get input, i can get a loan easier than them. P1</i></p>	<ul style="list-style-type: none"> *Access to input *Access to a loan
<p><i>I can survive on the knowledge that i got, i can survive on my own using my own hands, it will be difficult for somebody who is just in the office, we know some are just good in the office but not hardworking, [working] with hands. & I can survive on my own with my hands than just depending in the office. P3</i></p>	<ul style="list-style-type: none"> *Acquired farming knowledge *Hard work *Independent
<p><i>I can say we get experience... & yes because somebody can know theory but when it comes to the practical in the farm, they can fail but me I can go through. P4</i></p>	<ul style="list-style-type: none"> *Farming experience *Practical skills

<p><i>We have benefited a lot, skills and here we are very independent [as] you work with your own time than somebody in the office, you do things own your own if you decide to work during the night and during the day you sleep [or] if you decide to work day and night that is on you own and we benefited with houses like the small-scale farmers [at Shankara] they are also small-scale farmers but they don't have houses because they are not under the green scheme and if can say we know that we will pay rent in the future but for now for 5 years we have just enjoyed free accommodation. We have learned a lot we appreciate it than other out there, i know there are others who are struggling but us we are happy. P6</i></p>	<ul style="list-style-type: none"> *Independent *Flexible *Free accommodation
<p><i>Us we are benefiting, we don't have a jobs, this is our job, our own source, no one can force you to work, you are your own boss, and I can work at my own time p2</i></p>	<ul style="list-style-type: none"> *Employment *Flexible *Independent *Income

Table 4.4 above shows the female participants in the study were satisfied working under the green scheme. Participants did not benefit from employment alone but also acquired agricultural knowledge and skills needed to enhance productivity, and eventually engage in decision-making process.

The participants were asked if they feel the projects were moving towards poverty eradication, which is one of the objectives of the green projects. According to the participants, the green schemes projects countrywide are indeed moving towards its objective of feeding the nation through drought relief programme. However, participant6 believes despite the programme’s effort to feed the nation, there are those who are hungry and unable to afford the food sold in the market.

According to participant6:

If you go in the market now the cost of the maize is high because the fertiliser is [increasing] each year, they are not subsidizing us because if they subsidize us with fertilisers and chemicals, the buyers will buy it at the normal price, then the millers will also sell the produce at a cheaper price [because] everything is expensive, people out there are starving because they cannot afford to buy maize meal and that is a problem.

To conclude the discussion with the small-scale farmers (ssfs), the participants were asked to suggest changes from their experience that could help ensure positive outcome. (Table 4.5)

Table 4.5: Small-scale farmers’ suggestions and additional comments (n-16)

Female small-scale farmer	Male small-scale farmer
Pay profit on time	Purchase more equipment
Record accurate amount of input for the farmer- <i>Transparency</i>	Decisions regarding market & what to do
Government discipline the service provider	Provide inputs on time

Order inputs such as fertilizer & chemical on time- <i>avoid delay of production</i>	Remove 15% VAT on the market
Release causal workers' budget on time	Escalate to a medium-scale farmer
Purchase more equipment	Government to monitor their ideas because some of them are not being transformed into concrete actions
Fix pump station, it is not 100% effective	Retain the current service provider – <i>doing a great job with the project</i>
Improve soil fertility- <i>it affect yield</i>	Reduce service fee provided by the service provider

The results from the table 4.5 shows the ssfs great concern is the service delivery, which at times delay their production resulting in low output, which could gradually affect their profit. In addition, the farmers also complained about the high input cost such as electricity and fertilisers, which are provided to them by their service provider and therefore, appealed to the government to look into the matter. Lastly, the farmers are however satisfied with their current service provider.

4.3 Women economic empowerment in the green scheme

4.3.1 Control and access to decision-making power over productive resources

The study incorporated WEAI (Women Empowerment in Agriculture Index) concept through questions to assess the type of agricultural equipment being utilised by the ssfs, and to determine the farmers' authority in terms of control, ownership and

access to resources. In our context the term access is as an opportunity to make use of the resources while the term control is the power to decide how to use the resources, and who has access to it” (March et al., 1999).

Table 4.6: Agricultural equipment utilised by ssfs at Ndonga-linena green scheme project

Agricultural equipment			
Tractor	Discs	Centre pivot	Broadcaster
Hoes	Chisel	Combine harvester	Boom spray
Spreader	Spade	Shrilled plough	Planter

According to the female farmer1:

The government own them but now if equipment is broken we are required to buy it ourselves

However, ownership details with the new system remain unclear as it is yet to be implemented.

A male farmer also emphasized the government’s role in ownership of resources by indicating that:

The government owns the equipment; we are only leasing the plot.

In conclusion, participants indicated the government or AgriBusDev their service provider as the sole owner of the agricultural equipment.

The study examined the farmers' power over resources in terms of transferring or selling the plot to a relative or friend. Female farmer1 stated:

I have no power to decide and it has never happened before.

Similar to the above statement, female farmer2 and female farmer 8 concur:

It cannot be transferred as the land belongs to the government.

Female farmer3 empathized:

It is impossible as the person need to attend the training on how to use some of the equipment and resources because some chemicals are poisonous.

However, there are those farmers that stated that if a farmer decides to leave the plot; the government would allocate it to someone particularly to those that had gone through the training. However, male farmer1 is of the opinion that there are terms and condition as stipulated in the contract that specifies how the change of land ownership should occur. Similarly, male farmer5 pointed out:

If I decide to transfer I can but, I have to contact the government [Ministry of Agriculture]) so I cannot decide on my own, I do not have the authority to do so.

Moreover, male farmer6 uttered:

It is stipulated in the agreement that the plot cannot be transferred so I cannot make any decisions regarding transferring of the plot.

In other words, data shows the participants in the study only have access to the aforementioned resources but no control over them as they are leasing the agricultural resources for a period of 5 years with possible extension.

One of the green scheme objectives is to ensure food production and diversity, in order to curb poverty and reduce food insecurity. The farmers involved in the scheme

need to be more empowered in terms of decision-makings regarding production and marketing for the project's fresh produce.

4.3.2 The agricultural production decisions

With the above issues in mind, the participants were asked questions on their level of influence in the production and marketing decision-making.

According to the farmers, they have no say in what to plant during summer season as it is stipulated in the contract to grow and supply maize to the government. Female farmer1 stated that:

I can decide sometimes like for vegetables but with maize the programme guides us.

Another farmer concurred:

In summer, it is compulsory to plant or grow maize but in winter AMTA [agro-marketing & trade agency] will bring the lists of what to be planted and then we decide what to grow and in which hectares – [female farmer3]

In addition, male farmer4 expressed similar remarks:

I decide myself but I also depend on the market we collaborate with AMTA on what to produce

AMTA is a newly established agency under MAWF responsible for managing the fresh produce businesses and the food reserve facilities to ensure high quality standard in order to achieve food security as envisioned in vision 2030 (Agro-marketing & trade agency-Namibia, nd).

A male farmer8 pointed out that:

Decisions are made by three (3) parties (investors, farmers and government), the farmers take part in decisions regarding production through suggestions of what and when to plant but there is a need for the other two parties' approval.

In terms of making decisions over marketing, it is the male and female small-scale farmers' responsibility to inform the service provider, but the value of their produce is determined either by MAWF or by AMTA, similar to the decisions over production. The summer crops such as maize are bought by MAWF for drought relief programmes whereas; AMTA is responsible for the fresh produce particularly the winter crops that are mostly vegetables.

Male farmer² in the study stated that:

We signed a contract with the government for the maize and another contract with AMTA with the other crops depending on when you have harvested and ready to sell.

Consequently, there have been some complaints regarding their winter produce:

With the maize the government buys it all while with the other produce if the vegetables are ready we call AMTA to come and pick them but sometimes they get spoiled with us on the farm – [female farmer³]

The service provider are always ready to decide on the produce [maize] whenever it is ready but vegetable are an exception always a delay with AMTA which is not good – [female farmer⁷]

Overall, the participants' role in decision making over production and marketing is limited due to the terms and conditions of the contract. The female farmers may have access to the agricultural resources of the project but are limited in terms of control, lacking the authority to decide on the value of their own produce. Despite their efforts, this could mean disempowerment.

4.3.3 Control over use of income

The study shows that the majority of participants rely on the green scheme for their source of income, which they receive after every season [six months]. In addition, data were obtained on how the participants spent their income after a good harvest and sale.

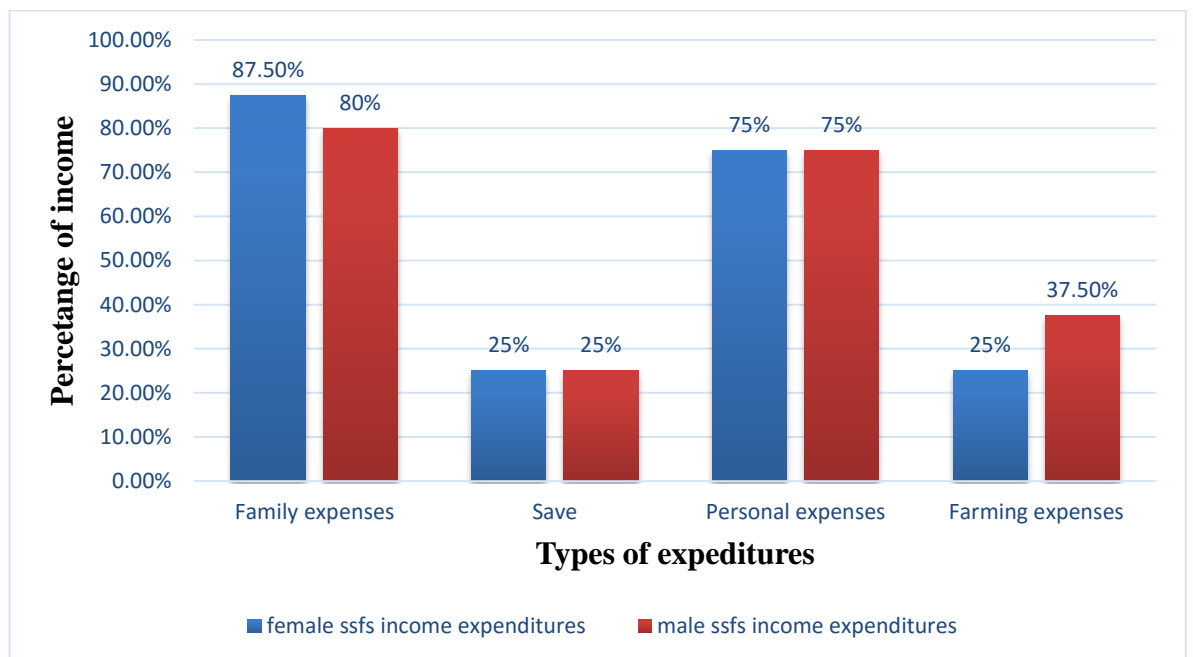


Figure 4.7: Female and male ssfs expenditures (n=16)

The female and male ssfs of Ndonga-linena green scheme spent 80% of their income on family and personal expenses whereas, less than 40% is spend on farming inputs (*figure 4.7*). The male ssfs seems to be investing a little more in their farms compared to the female ssfs. These findings can be explained by farmers' social responsibility of spending most of their income on family expenses particularly the married women.

When the participants were asked on who has the power to decide on how their income should be spend, most of the female farmers who are married responded by saying;

Me and my husband because we work together in the field – [female farmer1 and female farmer2]; Me and my husband because he left his job to come help me on the farm – [female farmer4] whereas, the single female farmer6 said *Myself, I am self-boss or sole owner and I worked for it.*

Nevertheless, the study received the same respond from the single male farmer1 saying;

I decide myself because it is my income and profit.

However, male farmer6 stated he also decides but because he lives with the girlfriend, so she also has the power to decide with him.

According to Alkire et al. (2013) “control over income is a key domain for exercising choice and it reflects whether a person is able to benefit from her or his efforts. This is especially important in agriculture because, in many cases, even where women produce crops or livestock, they are marketed by men who then keep most of the income” (p.7). In other words, the single ssfs in the study that has sole control over the use of income and expenditure are benefiting more compared to the married ssfs who have a joint control over the use of income with their husbands.

The concept empowerment also entails adequate levels of access to credit facilities (Alkire et al., 2013). Participants were asked if they have access to any form of credit facilities and here is what they had to say:

Initially we acquired our finance from AgriBank with an interest of 4% but now we get our finance from AgriBusDev with no interest – [female farmer4]

AgriBank have given us a loan but we had problems with them and our relationship with the bank ended due to delay of payments which resulted in debts, currently AgriBusDev is our financial provider as from August 2015 – [male farmer4]

However, the farmers indicated that the credit facilities available from AgriBusDev are not in the form of money but rather in agricultural equipment and materials such as seed and fertilizer.

One participant stressed that:

We only get from AgriBusDev through the inputs but not money – [female farmer6]

Another participant concurred:

AgriBusDev buys the inputs and deduct it's debts after I have harvested and sold my produce – [female farmer1]

The participants claimed to have access to credit from their new service provider AgriBusDev without any interest, although still in debts with AgriBank through the former service provider Shikunino trading enterprise. *Yes, I was granted a loan by AgriBusDev but some of us still owe AgriBank so I have to settle the amounts due – say female farmer7.*

The study explored some of the challenges the ssfs had or continue to encounter with their current creditor and service provider. Some of the participants indicated to have not experienced major challenges compared to their previous service provider

Shikunino trading enterprise, however, delays of service delivery and availability of money for the casual framers were some of the challenges mentioned.

4.3.4 Leadership roles within the community

Data was collected on leadership in the community to measure farmer’s empowerment in agriculture. Previously farmers were assumed to have been voiceless and powerless in influencing or negotiating better terms for themselves with government, Non-government (NGOs) and civil-society representatives (Alkire, 2013). In this study, leadership was measured by the farmers’ membership in economic or social groups. (Figure 4.8)

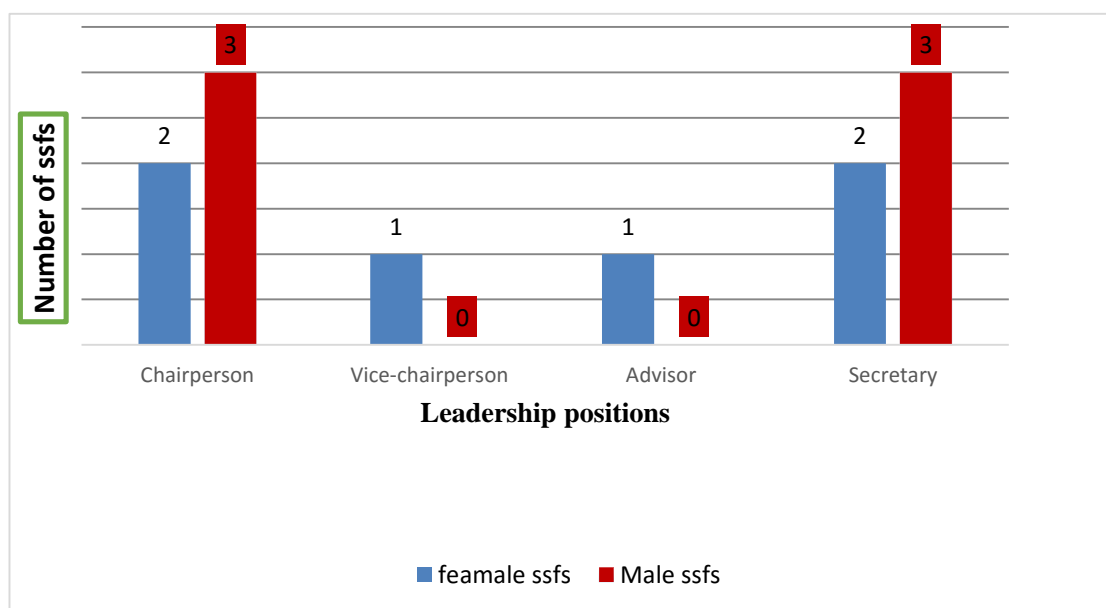


Figure 4.8: Participants leadership positions

However, data shows majority of the farmers who were involved in any leadership position at the time of the study were in a position of a chairperson, secretary or vice chairperson in the small-scale farmers committee of Ndonga-linena green scheme

project. The ssfs were able to influence emerging and existing legislation concerning both the female and male ssfs in the scheme.

4.3.5 Time allocation

The final domain to measure women empowerment in agriculture is the allocation of time to productive and domestic workload and the satisfaction with the availability of the time for leisure (Alkire et al., 2013). The participants were asked to recall some of their daily household activities and here is what they had to say:

Record keeping and book keeping of the field activities – [male farmer1- single]

CV writing and printing for the nearby community at a small fee, and administration for the field – [male farmer4- single]

Administration for the plot – [male farmer3- single]

Household activities because my girlfriend is at times busy at the mini-shop – [male farmer6- cohabitating]

Laundry and cooking – [male farmer5-single]

Household chores because I am a married women – [female farmer4-married]

Mostly household chores cooking and cleaning [female farmer1-married]

Book and record keeping and plan for farming activities [female farmer3-single]

Cooking, cleaning and all household chores—[female farmer6-single]

Household chores; cook, clean, laundry, wife duties, and care for the children – [female farmer8-married]

Despite the household activities the farmers however, indicated to have spent most of the time in the field rather than at home doing chores, doing crop inspections, casual worker inspection and many other farming activities. In addition, it is important for them to spend more time to ensure good production as their livelihood depends on it.

Female farmer8 said that:

The plot, it provides for us and takes care of our children

Another married female farmer2 stated that:

80% is spend in the field regardless of the help I get from my husband because I have to show him what to do; I have more experience, skills and knowledge compared to him because of the training I attended at Mashare for 1 year.

Lastly, the data in the study points out that the participants were satisfied with the available time of leisure. Majority of them had time for visiting neighbours and friends, watching TV, going shopping, surfing the internet, or doing sports.

4.3.6 Gender disparity in the green scheme

Literature shows women in Southern Africa produced an estimate of 70% of the food found in the rural areas contributing to food security and the country's economy. However, women's efforts in farming is not recognised and is deprived in terms socioeconomic resources. Therefore, it is vital for a country to call for a gender analysis to address challenges faced by women farmers.

4.3.6.1 Key informant views

Data shows that management treat all farmers the same regardless of their gender or roles. Management's main concern however according to the small-scale farmers is to help them excel in order to achieve the green scheme objectives.

Participant3 said:

There is nothing to complain about.

Another participant4 responded:

They will just say you can leave, who told you to apply?

A third participant1 adds:

If it is a 50 kg, you should make some means to make it half if you cannot lift a 50 kg.

According to participant3:

It is just like a job, even if you are at the office you cannot say you need someone to help you do your job.

Participant4 went on to explain about the availability of extra help and support to balance their fieldwork and household chores:

What do you mean extra help? There is no limit if you want you can recruit somebody as long as you are paying that person. Then if you do not want to pay you [will] work by [yourself] otherwise you will have [no] profit [if you do not work]. This is just like [any other work] it is up to you, you can recruit even (5) people if you want.

It was also found that the majority of participants are forced by circumstances to do the fieldwork themselves, to avoid additional expenses such as recruiting permanent workers or casual workers for an extended period. In addition, participants believe that for one to be a farmer, one has to work hard. As a result, they succumb to these difficult situations of small-scale farming in order to feed themselves and their families.

To sum up the discussion with the small-scale farmers, the participants were asked if they could turn down farming given a chance. The majority of the farmers indicated that they will still choose to be small-scale farmers and had positive remarks for what they are doing.

For instance, one participant stated that:

Farming is nice, i do not think of doing something else and we eat fresh produce.

Despite, the positive remarks, participants believe they can do a better job producing for the nation if they are given the opportunity to work on bigger plots and becoming medium-scale farmers eventually leading to empowerment.

In a different interview the aspect of gender parity was assessed on a one on one discussion with the key informant in the study. The service provider was asked if the ssfs performed different activities at Ndonga-linena, and his response was:

No they all do the same thing, if it is time to plant maize they all plant maize, if it's time to plant vegetable they all grow vegetables.

From the above quote and the remarks from the ssfs, it can be concluded that to some extent, the green scheme projects is addressing issues pertaining to gender inequality. However, various studies have also shown that focusing on equality neglecting

equity can also worsen women's situation predominantly when women's issues are ignored (March et al., 1999). Therefore, the project should also focus on equity rather than equality for the small-scale farmers at Ndonga-linena.

Furthermore, data collected shows that the female small-scale farmers at Ndonga-linena are doing much better than the male small-scale farmers did. According to Mr X [service provider], the females are more co-operative compared to their counterparts who are viewed as ignorant. Mr X state that: *Women listen to advices but men ever doubt, you can advise them to do 'abcd' but they will not put into practice what you have told them unless they see someone else doing it, so in most cases they are waiting for the ladies to practice some methods before they try it out.*

Therefore, discipline adds to the list of the reason why female are outperforming male ssfs. The findings from data collection show that the project has made some positive impact on the farmers' lives particularly the female ssfs. For instance, Mr X believes the female farmers invest their profit in something meaningful or long term unlike the young male farmers that spend most of their profit in temporary assets such as car.

Mr. X further mentioned some of the constraints the female farmers encounter under the green scheme, considering their reproductive and productive roles for instance, bearing and caring for children or handling heavy equipment.

Mr X responded that:

there are no problems, the small-scale farmers are allowed to recruit casual workers who will do the job together with them and when it comes to the casual

workers the service provider is [responsible for their payment] all they need to do is to allocate the money to their account.

As mentioned earlier in the study, the budget for the casual workers is often limited which delay farming activities as farmers are unable to recruit a lot of casual workers to assist with the farm workload. However, the budget according to Mr X can be increased but this could result in debts for the farmers. Thus far, research findings show that only three (3) small-scale farmers out of 27 farmers are in debts and that those farmers have accumulated the debts since the previous service provider (Shikunino trading enterprise) in 2014.

In relation to women empowerment, studies have shown that economically empowering women is important for realizing women's rights and achieving other developmental goals such as economic growth, poverty reduction, and increase in productivity. Hence, it is for this reason that different authors emphasized women economic empowerment if developmental programs are to be a success (Bolla, Malhotra, Nanda, & Mehra, 2011). For instance, the government developmental initiatives, irrigation projects are spread across regions. Therefore, to further evaluate and understand women economic empowerment, the service provider was asked to elaborate on the measures at Ndonga-linena that seek to address gender imbalance and injustices that end up excluding women. The data gathered for this section was aimed at establishing measures that are being used to integrate women in the socio-economic mainstream using a bottom-up strategy in order for women to empower themselves. The service provider responded:

As a farm manager to the small-scale farmer, I am only a service provider as they are managers of their own plots and all I can do is to only provide them with the services so that they can manage their plots.

Therefore, as a farm manager and a service provider, Mr X feels it is important to have an equal gender representative in the green scheme.

According to Mr X's records, women are doing much better than men are as he stated that:

Just like i said there are only three farmers that made a loss and out of those three farmers, there is only one woman, two are men so that already tell you that the ratio of losing is more on men than women.

Mr X also believes that communicating this information to the projects' managing director could increase women participation in the green scheme.

The study shows that female small-scale farmers who are overworked with household chores and are married; often receive help from their husbands unlike the single female small-scale farmers. The single farmers are forced to search for alternatives sources of support and help with the workload. Therefore, in terms of achieving gender equality, the study shows that despite the unequal representative of gender among the small-scale farmers, the green scheme recruit casual workers of which 90% are women. Expressing his observation, Mr X states that:

The project in general we usually have casual workers for now we are having 60 casual workers but out of those people, i can say 50 are women, for small-scale farmers you will find most of their casual workers are women.

I think it is just the understanding that the village people are having in terms of casual workers, they look at the temporary work [casual work] as work for women and men want [permanent] work. For example, the time of weeding, threshing or harvesting Mahangu you will find more women than men.

To sum up the discussion, the service provider [Mr X] revealed some interesting facts about the project and ssfs:

- The female small-scale farmers at Ndonga-linena are committed and dedicated to their plots, unlike their male counterparts.
- Ssfs are their own bosses [managers]; they do not need the service providers' permission to leave the farm to attend other errands outside the farm.
- Service provider dismisses the male farmers allegations on poor service delivery on their plots, as the male farmers unlike the females, seldom follow instructions but find ways to disobey and disagree with the service provider.
- Service provider gave the ssfs the opportunity to apply for medium-scale farming, but few succeeded due to lack of funds.
- Farm equipment are limited and overused because they are utilised on the small-scale farmers' plots, and on the commercial farm.
- Subsidize the small-scale farmers in terms of the input cost such as fertilisers as these are very expensive.

4.3.6.2 Small-scale farmers' views on production

Data on ssfs' view on their productivity indicated that:

Female farmers who are single are more focused and responsible in farming than the male farmers however, the married female farmers are not that focussed as they depend on their husbands who are not trained to take care of their field while they are busy with household chores which is resulting in low productivity – [male farmer1]

Another male farmer stated:

Women do better than men, men concentration is affected by outside factors – [male farmer4]

The following similar remarks were obtained from male farmer 2:

In most cases female farmers are better than men, women do not move around and are more focused on the field; male farmers have more needs than women

However, there were two male farmers who disagreed with the above propositions and emphasized that productivity depends on one's commitment and that best achievements differs every season.

According to male farmer6:

It is almost the same because some seasons the female farmers will achieve better than men but next season it will be the male farmers.

The female farmers in the study had similar remarks. Female farmer2 said:

We are doing much better than the male farmers; women are performing better than men every season

Female farmer3 stated:

Female farmers are few here, I think it is the same but if female farmers were a lot or the same as the male farmers in number, the female farmers will perform better than the male farmers.

According to female farmer4 who is originally from the Kavango East region:

Women are out-performing men because it was not common for a woman to be a farmer in the past especially in the Kavango region so they took us and still take us for granted and this encouraged us to do better.

Lastly, female farmer8 had this to say:

It is according to your own hard work. The more attention you give to the field, the more you produces but in many achievements, so far female farmers are doing better than male farmers.

The remarks above revealed that male farmers are lagging behind in terms of commitment to farming activities compared to the female farmers who spend most of their time on the farm. However, apart from the lack of commitment, data also shows that factors such as soil fertility could be the reason for male farmers' constant low production. Scholars indicated that women farmers are often deprived in terms of access and control over resources such as land, farm inputs and equipment resulting into inequality. Therefore, it is vital for a country to call for a gender analysis to address constrained faced by women farmers (MGECW, 2013).

In Namibia for instance, the Ministry of Gender Equality and Child Welfare (MGECW) is mandated to ensure that gender equality is achieved country wide in every discipline including agriculture particularly where majority of women are involved and not recognised (MGECW, 2013). The study shows majority of the participants both male and female have equal access to services and resources from

the service provider and that the services like disc, ploughing and ordering inputs are provided to all the farmers.

A male farmer⁷ stated:

The government and service provider provide us with most of the farming services.

The study shows the service provider renders services to the farmers regardless of their gender.

Female farmer⁵ said:

All the resources and services that male farmers get are accessible to me.

Another expressed similar thoughts:

I can access what a male farmer can access, equal treatment. – [female farmer⁷]

Findings from data collection also reveal that all participants perform the same roles in the green scheme regardless of their gender, according to female farmer⁶:

We are the same, no discrimination and if there is something to do we all do it”.

Male farmer⁸ weighs in by stating that:

It is the same for all farmers in the green scheme; our roles only differ in the households.

Participants were also asked if the management of Ndonga-linena green scheme consider gender roles during their planning and implementation process taking into account the women productive and reproductive roles. Majority of the female farmers indicated that their biological roles were not taken into account, and that all farmers were treated equally.

A female farmer¹ explains that:

There are no consideration regardless of the household chores or your children, it is up yourself to hire a baby sitter to help with those chores my neighbour for instance who is not from this region has no baby sitter so she would go in the field with her baby to work.

Another farmer expressed similar remarks:

No consideration, if a truck of fertiliser arrives we all need to go there to pick or carry bags from the truck and if you are pregnant or married you can ask your husband to help you carry or hire a casual worker. – [female farmer⁴]

The male farmers expressed similar remarks but some disputed and stated that female farmers would at times receive special treatment.

A male farmer¹ state:

Services differs in male and female farmers plots/field, the tractors do a better job such as ploughing and harvesting for the female farmers than for the male farmers, they also deliver quick and effective services to female farmers such as repairing and fixing broken pipes.

Another male farmer said:

Sometimes priority is given to the women farmers but not all the time, in terms of harvesting whoever is ready to harvest will go first regardless of their gender.—[male farmer²]

On the contrary, the service provider disputes the first female farmer's views or allegations and instead claims that all farmers are given equal treatment regardless of their gender.

A male farmer⁸ concurred: *Management do not take the gender roles into account, everyone is fighting for their bread.*

CHAPTER 5:

DISCUSSION

5.1 Introduction

This chapter provides discussion of results based on the research objectives. The discussions are presented using the Five Domains of Empowerment (5DE) (*Table 1.1*), linking them to the research objectives. Although the study used the indicators in Alkire study, the results were however not rigorously quantified, but descriptive. In addition, the study presents the literature that support or disputes the findings on gendered participation and on the 5Domains:

- Decisions about agricultural production
- Access to and decision-making power about productive resources
- Control of use of income
- Leadership in the community
- Time allocation.

5.1.1 Gendered participation

The study shows gendered participation was incorporated to a certain extent examining the four questions of why, when, who and how to participate. The terms gendered participation in this context refers to women participation in projects. The study shows that causes and reasons for participation in the project was a personal decision, participants felt they needed a change in their lives; engage in activities that greatly benefited them and their families. The green scheme was a platform to grow and excel into independent individuals.

Gendered participation in projects or programs can also be accomplished through the type of methods used to achieve intended goals, mechanisms that does not discriminate or exclude target groups (Moser, 1993). The study indicated the government used the newspaper to advertised vacancies for small-scale farmers at Ndonga-linena without bearing in mind the illiterate group or those in remote areas with no access to newspaper and excluded marginalised groups such as women. Therefore, creating gender-awareness program in various disciplines will enable planners to analyse gender aspects in the planning stages. The study shows, lack of gender-awareness program can contribute to an unequal representative of gender in the green scheme.

MAWRD's aim to incorporate gendered participation in agricultural projects has failed to recognise women efforts and that both gender equally have the right to participate in the execution of projects that enhances their livelihood. The study shows, out of 26 ssfs famers only (8) eight women were recruited to participate in the project thus creating an imbalance. The imbalance that causes conflict among gender due to the challenging power relation that eventually lead to disempowerment for women. However, in the study the Namibian Government recognises the imbalance and plans to increase the number of women participates in the green scheme.

The study also shows that the ssfs perform the same daily activities in their farms regardless of their gender resulting to equality, however equality tends to lead to

further discrimination for women rather implement equity, which considers women's triple role and activities, which at times, according to Moser (1993) causes projects to fail due to the work burden. The service provider in the study sees women's triple role not to be a concern. Therefore, consultation informs the policy or project planners on issues of gender in societies. The study however, indicated that women in the green scheme do not consider their triple role as a burden; the on-going trainings enable them to cope and be experts in their work. The study found that the project management involves ssfs in stakeholder meetings regarding production, marketing and financing matters. Although, farmers participate in the process of planning, top management (MAWF) makes the final decisions that shows to benefit the ssfs thus far. Scholars however encourage a bottom-up approach as a strategy that ensure women participate in all stages of planning including the final decisions rather than complying with decisions made elsewhere (Oxaal & Baden, 1997).

5.1.2 Decisions about agricultural production

“This dimension concerns decisions about agricultural production and refers to sole or joint decision-making about food and cash crop farming, livestock and fisheries, and autonomy in agricultural production, with no judgment on whether sole or joint decision-making was better or reflected greater empowerment” (Alkire et al., 2013, P.7).

According to the green scheme policy, the small-scale farmers enter in an agreement with the commercial farmers or independent enterprise for service in different farming models that includes the rules and guidelines for the irrigation project

determined by the Government (MAWF, 2008). In other words, although the study revealed the ssfs are their own managers and have power over deciding what to grow in their fields, the final decision over production rests with the Government's approval. For instance, the small-scale farmers revealed in the study that growing maize in summer was compulsory, whereas in winter, farmers have a choice to decide on what winter crop to grow, but this decision is done jointly with AMTA their marketing agency.

The female small-scale farmers at Ndonga-linena green scheme regardless of their marital status make their own informed decisions regarding production and because of the farming training, they had received, these female ssfs are capable of farming with minimal supervision. Studies shows, women in the past had little or rather no control over resources despite their efforts in agriculture, which greatly contributed to women exclusion, or oppression but this study proves otherwise. Women particularly those in the green schemes, are being integrated into the socio-economic mainstream through this developmental projects. The study revealed that the majority of the female small-scale farmers willingly embark on the project from the application process up to the resettlement. The study also found cases where the husband had to leave his home to come and resettle with his spouse. In reference to the statement above, literature shows in Southern Africa such actions or arrangements were rare as women had no access to job opportunities, land or other resources and men were viewed as head of the household (Kevane, 2004). Therefore, unlike in the past where women were voiceless, this study shows women do have a voice and are able to make informed decisions regarding farming. According to Alkire et al., (2013), being able to make decisions regarding production reflects

empowerment. On that note, women seems to exercises some form of power over their lives through changing the status quo of men being the only provider and women solely responsible for household chores. Women acquired employment to provide for their family rather than relying on the spouse. The next domain will however, elaborate more on how the amount of power these women possesses enable them to have access and control the agricultural resources.

5.1.3 Access to resources

The findings of this study shows that unlike Duncan (2004) findings where women had less access to resources and opportunities than men, both female and male ssfs in this study had equal access to all resources and equipment (*table 4.6*) needed for their daily farming activities. Hence, providing equal access to the farmers at Ndonga-linena green scheme project had a positive impact on the female ssfs, the data indicated an increase in the female ssfs yields compared to their male counterparts over the past few years. Therefore, access to resources such as farming implements and inputs are considered crucial for yield increase to avoid the low yield as was experienced by the majority of female farmers in Chenena, Central Zambia due to lack of access to farming implements and other farm inputs (Kajoba, 2002).

The study also indicated that the small-scale farmers at Ndonga-linena had access to the land for farming through leasing agreements with the government, but had no control over decisions regarding transferring the land or selling other agricultural resources on the farm. The contract binds the small-scale farmers to adhere to the agreement, so that if a small-scale farmer decides to terminate the contract he or she

would lose all of the benefits, which includes the housing and services provided by the service provider.

It should be noted that the lease agreement limits small-scale farmers' authority and control over marketing their farm produce. The government is solely responsible for marketing almost 80% of the small-scale farmers produce, unlike other farmers farming outside the green scheme in the same region that market their own produce and determine their produce price. The Ndonga-linena service provider controls the value of the farmers' produce on the market. For instance, maize grown in summer is sold to the government and no other institution as stipulated in the lease agreement. However, winter produce can be sold to either AMTA or the nearby communities. The study revealed that 70% of the small-scale farmer's profit is accumulated from the summer crop, which the government solely controls.

The limited ownership or control of assets accelerate poverty in rural areas and hinders growth in agricultural income (Mashindano, Kayunze, Da Corta, & Maro, 2011). Control and ownership of agricultural resources and assets is seen as crucial for poverty eradication. Ownership and control also contributes to the empowerment of community members, enabling them to make informed decisions and take actions where it was previously denied. Informed decision are made by acquiring the relevant information, knowledge or skills, which the small-scale farmers at Ndonga-linena acquire through on-going trainings. Although the female small-scale farmers at Ndonga-linena green scheme project are not able to fully exercise access and control over resources due to structural barriers, the on-going trainings had a positive impact on the small-scale farmers, empowering them to make informed decisions.

Access to farming technology significantly contributes to empowering farmers and high productivity.

The next section will then look into whether the farmers solely or jointly are empowered to control their income and expenditures in rural areas.

5.1.4 Control of use of income

In line with studies conducted in Mozambique and Ethiopia, findings on small-scale farmers at Ndonga-linena indicated they have access to credit facilities through their service provider and that they were provided with a loan, which they would pay back at an interest rate of 4% per annum. Similar to the female farmers in Ethiopia and Mozambique, ssfs at Ndonga-linena encountered challenges in settling their debts with the bank. According to some small-scale farmers at Ndonga-linena, the inputs over the years were costly resulting in low profits, which makes it less viable to meet their financial obligations at the banks. To address this problem, the government of Namibia through the new service provider now gives loan facilities to farmers at no interest. Furthermore, with the new management structure in place, no farmer at Ndonga-linena green scheme have incurred new debts except for the old debts that they accumulated under the previous service provider, Shikunino trading enterprise.

A study by Duncan (2004) in Ghana asserted that farmers' farming activities were mainly financed by the farmers themselves, with moneylenders contributing 7% only. Similarly to the small-scale farmers at Ndonga-linena, farmers in Ghana spend

their income obtained through farming activities on the education of children, groceries, the expansion of farming activities, and medical expenses.

According to Alkire et al., (2013), access and control over income is one of the indicators that reflects empowerment, in some cases women work tirelessly in the field but have little or no control over their income especially married women. The study shows that the majority of the single small-scale farmers solely have control over their income due to the effort and time invested in farming. They also have control over decisions regarding their income expenditures (*Figure 4.7*). Married female farmers in the study indicated that decisions regarding their income is controlled jointly with the husband, empathizing the effort and time their spouse invested working in the field.

Furthermore, the study stresses two major challenges experienced by the farmers; apart from incurring debts with the bank, the small-scale farmers complained of limited budget for casual workers and the delay in profit pay out from the service provider, which leads to a delay in production. However, in response to this on-going complaint, the Namibian government intends to address the high input cost issues through the Harambee Prosperity Plan (HPP). The HPP is an action plan that aims to accelerate development, complementing the existing National Development Plans (NDPs) in order to achieve Namibia's vision 2030. HPP aims to expand the green scheme as well as subsidize the farmers in terms of purchasing farm implements, seeds and strengthen agricultural extension service to improve agricultural output in communal areas, and support food security at household level and at national levels (Republic of Namibia, 2016). The study shows that the ssfs not only have access to

credit with zero interest, but also do control their income, and participate in decisions on household, farming and other expenditures. This breaks the circle of women being excluded from access and control over credit facilities in Southern Africa as alluded by Oumer et al., (2014).

The next domain looks into whether being a small-scale farmer in the green scheme has an influence on leadership position in the community to influence policies or change existing structures that exclude women farmers.

5.1.5 Leadership in the community

This dimension concerns leadership in the community, measured by membership in economic or social groups and comfort speaking in public (Alkire et al., 2013). “Empowerment has emerged out of the assumption that farmers particularly women have generally been voiceless and powerless, which has made them unable to influence or negotiate better terms for themselves with traders, financiers, governments, and civil-society representatives” (Mwaseba et al., 2009, p. 405). In other words, the domain discussed above, access to information is crucial for the leadership domain, women ought to have access to the relevant information to make informed decisions that could influence policies or programmes in order to change self-perceptions, particularly those of the oppressed.

According to Gawaya (2008), men dominate leadership positions. As such, the impact of women's participation in influencing decision making at community level and national level are invisible. The same applies to women's participation in formal farmers' groups. Gawaya's (2008) study reveals a lack of literacy or education as a factor contributing to women's low active participation in meetings. Even if women

participate in some cases, they are often given less attention or ignored by their male counterparts or some influential institutions. It is interesting to note that equal opportunities were given to the farmers at Ndonga-linena regardless of their gender. In addition to the knowledge and skills acquired through training, the farmers could also make informed decisions regarding farmers' issues that need to be addressed.

Although none of the small-scale farmers was involved in leadership positions outside the green scheme project, both gender in the project had equal and fair chance to become a chairperson, a vice and a secretary of the small-scale committee at Ndonga-linena green scheme. However, women's leadership in agriculture can be built or strengthened through formal farmers institutions such as farmers union or associations (Gawaya, 2008). Contrast to the above, the female ssfs were disadvantaged or not exposed to other formal farmers institutions as none of them were involved in any farmers' union or associations which could help build or strengthen leadership skills or boost their confidence to speak in public. Therefore, it is of outmost important to expose ssfs farmers of Ndonga-linena to outside groups, unions or associations.

5.1.6 Time allocation

The green scheme irrigation projects in Namibia can be an example of a contract farming project that utilises various modern agricultural implements, inputs such as fertilisers and seeds aiming to increase agricultural production to alleviate food insecurity whilst contributing to the country's economy. Unlike traditional farming, modern farming requires enormous efforts and time.

According to Gawaya (2008), women in rural areas that often have unplanned families face challenges in their attempt to participate in modern or traditional agricultural activities or other productive work as they constantly need to find alternative child care and unplanned pregnancy support. Women have multiple roles, which include bringing up children, agriculture and community projects that do not allow them to compete effectively with men (Kilelo & Kurgat, 2015). (Table 5.1)

Table 5.1: Women’s triple role and activities

<i>Roles</i>	<i>Main activities/responsibilities</i>
<i>Reproductive roles</i>	<i>Childbearing, rearing and other household tasks</i>
<i>Productive roles</i>	<i>Work done by both men and women for pay in cash or kind</i>
<i>Community managing roles</i>	<i>Voluntary unpaid work that is done at the community level to ensure the provision and maintenance of scarce resources such as water, health and education facilities amongst others</i>

Source: Moser (1993), Gender role identification

Gawaya (2008) alludes to the fact that unmet reproductive rights are therefore a fundamental constraint on rural women's productivity, which is rarely recognised by agricultural policy makers. Although, the MGECW in Namibia’s mandate is to assess gender disparity in various sectors, more is yet to be done in terms of women farmers’ triple roles (MGECW, 2013). Gawaya (2008) indicated that “women take the primary role in childcare, and any productive activities they undertake on the

farm or off the farm have to be combined with childcare or they must find alternative forms of childcare to release them to concentrate solely on production” (p.154).

Approximately 80% of the female small-scale farmers at Ndonga-linena green scheme originate from other regions, with no nearby relatives to help them with their reproductive roles forcing them to rely on alternative sources of support. This can be done through recruiting casual workers or perform both reproductive and productive roles.

Similarly, to Gawayya’s study, Ndonga-linena green scheme has no policies or mechanisms responsive enough to these challenges and does not make the links with agricultural and rural development policies. Women engaged in this study raised no concern regarding work overload thereby giving an impression that all is well. It is important to shift women’s mind-set and to change the structures to implement policies and mechanisms to empower women in agriculture. Furthermore, “empowerment in agriculture or any project is more likely to occur where there is a long-term collaboration built based on equality, and mutual respect between an organisation and its beneficiaries as well as continuous interaction that minimises project failure” (Mwaseba et al., 2009, p. 408). Small-scale farmers in the study indicated good relationship with the current service provider based on mutual respect and transparency compared to their relationship with the previous service provider.

“Another positive consequence of empowerment is enabling beneficiaries to gain autonomy in decision-making process and hence reducing their dependency on outsiders” (Mwaseba, et al., 2009, p. 411). The small-scale farmers in the study had

access to the necessary information and training needed to make informed decisions regarding production, and because of the training and farming experience, most of them are able to perform farming activities with limited supervision and supervise their casual worker in the field. However, the small-scale farmers at Ndonga-linena demanded continuous transparency as well as regular reporting on the financial status of the project from their service provider.

In view of the discussions within this thesis, it is necessary to present the study's conclusion and recommendations as a way forward to improve gendered participation and empower women within the green scheme.

CHAPTER 6

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

Empowerment is defined and measured differently in various disciplines; however, this study used the Women Empowerment in Agriculture Index (WEAI) to measure women's level of empowerment in the green scheme and to assess gendered participation in agriculture. The study revealed that 80% of the small-scale farmers at Ndonga-linena green scheme originate from other regions than the Kavango east region, an indication that green scheme projects are national than regional in their target of beneficiaries.

Few females compared to males are participating as small-scale farmers, which mean that there is a need to increase women participation in agriculture in order to increase production and address past injustices. Green schemes, although not fully, empowers women as they make decisions over access to credits, the marketing and sale of products and control over their income and expenditures. Female small-scale farmers out-performed the male small-scale farmers in terms of high crop yield and profit. The female small-scale farmers also displayed control over the agricultural resources as well as leisure time despite other household chores.

Green scheme participation has helped female small-scale farmers secure employment and income and has provided them with new farming skills through trainings leading to improved job efficiency, housing and food security.

The study found that the green scheme project boost female farmers to be their own farm manager acquiring leadership skills, independence, and financial stability. The female small-scale farmers continued to excel in terms of production as they put in more effort and time than the male small-scale farmers did. Unlike the female farmers outside the green scheme project, the female small-scale farmers within the green scheme project had easy access to seeds, fertilisers, as well as farming equipment for harvesting, irrigating, planting.

The study showed that the benefits of farm inputs previously came at a high rate of loan repayment (4% interest) resulting in debts or low profit. This indicate the need for government to subsidize the costs. The study also revealed that women have control over their income and participate in decision-making despite the bureaucracy that slows their participation and empowerment process.

Despite all the achievements, there is a need to increase the voice of female small-scale farmers in influencing farming decisions. Moreover, apart from equality, focus should also centre on equity in order to practice fairness and achieve empowerment within the green scheme project. Realizing empowerment within the green scheme requires on-going workshops and training with top management and the farmers at grassroots level to sensitize, create awareness and inform them about the significance of ensuring uniformity and gender mainstreaming during execution of agricultural policies, projects and programmes.

6.2 Recommendations

- i. Majority of the participants in the study indicated high input cost as pressing issue that needs immediate solutions as it greatly affects the farmers' profit. Therefore, there is a need for highly subsidizing of input cost in green scheme farming.
- ii. Despite the Ministry of Gender Equality and Child Welfare (MGEW) efforts to promote gender equality in all sectors is yet to materialize in the agricultural sectors particularly the green scheme. Therefore, requires intervention from the government to ensure the small-scale farmers gender disparities are considered, and integrated into the projects activities and policy formulation.
- iii. The current setup whereby the market value of farm produces by small-scale farmers is determined by the government or AMTA need to be revisited. There is need to amend the contract signed between the three parties in order to give the farmers a voice to determine the crop to be grown and the value of their produce as well.
- iv. More efforts are required to promote continuous training of the farmers, incorporating issues of gender for women to recognise their rights as well as recognising women's triple role in order to devise coping mechanisms.
- v. Build women's leadership through formal institutions such as farmers' union, associations; alternatively joint cooperatives as this could easily improve access to new technology, finance and productive resources for the female farmers.
- vi. The service provider at Ndonga-linena should improve collaboration with AgriBank in order to settle the outstanding debts of the small-scale farmers at Ndonga-linena.

- vii. There is a need to shift female small-scale farmers' mind-set to recognise oppression, sense of self-worth and social identity so that they are able to question their subordination in order to have control over their lives.

7 REFERENCE LIST

- Abate, A. (2000). Gender and environment links in development. In E. Iipinge, & M. Williams (Eds.), *Gender and development* (pp. 9-8). Windhoek, Namibia: Pollination Publisher.
- African Development Bank Group. (2012). *Agriculture sector strategy 2010-2014*. Agriculture and agro-industry department & Operational resource and policies department, Tunisia. Retrieved May 17, 2016, from www.afdb.org
- Agricultural Business Development Agency [AgriBusDev]. (2015). *AgriBusDev: Information brochure*. Windhoek: AgriBusDev.
- Agro-Marketing & Trade Agency-Namibia. (n.d.). *AMTA Corporate Brochure*. Windhoek. Retrieved May 19, 2016, from www.amta.na
- Aliber, M., & Hall, R. (2012). Support for smallholder farmer in South Africa: Challenges of scale and strategy. *Development Southern Africa*, 29(4), 548-562. doi:10.1080/0376835X.2012.715441
- Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A. R., Seymour, G., & Vaz, A. (2013). *The women empowerment in agriculture index*. Washington: International Food Policy Research Institute. Retrieved May 18, 2016, from www.ifpri.org/pubs/pubs.htm#dp
- Alson, R., Bertelsen, M., & Hollard, J. (2006). *Empowering in practice from analysis to implementation*. Washington, DC: World Bank.

- Bless, C., Higson-Smith, C., & Kagee, A. (2006). *Fundamentals of social research methods : An African perspective* (4th ed.). Lusaka: Jupa & Co. Ltd.
- Bloor, M., & Wood, F. (2006). *Key words in qualitative methods: A vocabulary of research concepts*. London: SAGE Publications.
- Bolla, A. M., Malhotra, A., Nanda, P., & Mehra, R. (2011). *Understanding and measuring women's economic empowerment: Definition, framework and indicators*. Washington, DC: International Center for Research on Women (ICRW). Retrieved June 27, 2016, from www.icrw.org
- Creswell, J. W. (2012). *Education research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston: Pearson.
- De Klerk, V. (2008). Women's action for development: 15 Years of experience with customary practice in rural Namibia. In O. C. Ruppel (Ed.), *Women and custom in Namibia: Cultural practice versus gender equality?* (pp. 33-42). Windhoek, Namibia: Macmillan Education Namibia.
- Dorward, A. R., Kirsten, J. F., Were Omamo, S., Poulton, C., & Vink, N. (2009). Institutions and the agricultural development challenge in Africa. In A. R. Dorward, J. F. Kirsten, S. Were Omamo, C. Poulton, & N. Vink (Eds.), *Institutional economics perspectives in African agricultural development* (pp. 3-34). Washington, DC: International Food Policy Research Institute.
- Duncan, A. B. (2004). *Access to and control over land from a gender perspective: A study conducted in the volt region of Ghana*. Research study, University of Ghana, Ghana.

- Gawaya, R. (2008). Investing in women farmers to eliminate food insecurity in Southern Africa: Policy-related research from Mozambique. *Gender and Development*, 16(1), 147-159. Retrieved March 23, 2015, from <http://www.jstor.org/stable/20461255>
- Grown, C., & Gupta, G. R. (2005). *Taking action: achieving gender equality and empowerment women, task force on education and gender equality*. London: Gutenberg Press.
- Hunter, J. (Ed.). (2004). *Who should own the land?: Analysis and views on land reform and the land in Namibia and Southern Africa*. Windhoek, Namibia: Konrad-Adenauer-Stiftung.
- Johnson, B., & Christensen, L. (2012). *Educational research: Quantitative, qualitative, and mixed approaches*. (4th ed.). London, United Kingdom: Sage Publication.
- Kabeer, N. (2001). Reflections on the measurement of women's empowerment. In A. Sisask (Ed.), *Discussing women's empowerment-theory and practice* (pp. 17-54). Stockholm, Sweden: SIDA. Retrieved February 27, 2015, from www.sida.se
- Kabeer, N. (2012). *Women's economic empowerment and inclusive growth: Labour markets and enterprise development*. SIG Working paper 2012/1, School of Oriental and African Studies, United Kingdom.
- Kajoba, G. (2002, January). Women in Zambia: A case study of small scale farmers in Chenena village, Chibombo district, Central Zambia. *Eastern Africa Social Science Research Review*, 18(1), 35-61. doi:10.1353/eas.2002.0002

- Kandjeke, J. E. (2013). *Report of the auditor-general on a performance audit study on the green scheme programme in the Ministry of Agriculture, water and forestry for the financial years 2009, 2010 and 2011*. Windhoek: Republic of Namibia.
- Kevane, M. (2004). *Women and development in Africa: How gender works*. Colorado: Lynne Rienner Publisher.
- Kilelo, H., & Kurgat, A. (2015, May). Gender and development: Consolidating the gains and moving beyond 2015. *International Journal of Multidisciplinary Research and Development*, 2(5), 503-506.
- Kirsten, J. F., & Van Zyl, J. (1998, December). Defining small-scale farmers in the South African context. *Agrekon*, 37(4), 560-571.
- Likuwa, K. (2014). *Voices of the youth on customary land rights and registration in Hardap, Ohangwena, Kavango East and Zambezi region in Namibia*. Windhoek: University of Namibia.
- Lune, H., Pumar, S. E., & Kopper, R. (Eds.). (2010). *Perspectives in social research methods and analysis: A reader for sociology*. London, United Kingdom: Sage Publications.
- Malapit, H. J., & Quisumbing, A. R. (2015). What dimensions of women's empowerment in agriculture matter for nutrition in Ghana? *Food Policy*, 52, 54-63. Retrieved April 27, 2015, from <http://creativecommons.org/licenses/by-nc-nd/4.0/>
- March, C., Smyth, I., & Mukopadya. (1999). *A guide to gender-analysis frameworks*. London, United Kingdom: Oxfam Publication.

- Mashindano, O., Kayunze, K., Da Corta, L., & Maro, F. (2011). *Agricultural growth and poverty reduction in Tanzania 200-2010: Where has agriculture worked for the poor and what can we learn from this?* Working Paper No .208, Chronic Poverty Research Centre. Retrieved April 19, 2016, from <http://www.chronicpoverty.org>
- Ministry of Agriculture, Water and Forestry [MAWF]. (2008). *Green scheme policy*. Windhoek: MAWF.
- Ministry of Agriculture, Water and Forestry [MAWF]. (2010). *Extension staff handbook-crop production*. Windhoek: Directorate of Crop Production.
- Ministry of Agriculture, Water and Rural Development [MAWRD]. (1995). *National agricultural policy*. Windhoek: MAWRD.
- Ministry of Gender Equality and Child Welfare [MGECW]. (2013). *Gender assessment and strategy for the ministry of agriculture, water and forestry*. Windhoek: MGECW.
- Montle, B. P., & Teweldemedhin, Y. M. (2014). Small-scale Irrigation farming system situational analysis in Namibia: Case study from Ndonga Linena. *International Journal of Agriculture Innovations and Research*, 3(1), 315-325.
- Moser, C. (1993). *Gender planning and development: theory, practice & training*. New York: Routledge.
- Mwaseba L, D., Mattee Z, A., Kaarhus, R., Lazaro A, E., Mvena K, S. Z., Wambura M, R., & Kiranga D, E. (2009). Perceptions and practices of farmer empowerment in Tanzania. *Development in Practice*, 19(3), 403-413. Retrieved April 10, 2015, from <http://www.jstor.org/stable/27752069>

- National Planning Commission (NPC). (2012). *Namibia's fourth national development plan (NDP4) 2012-13 to 2016-17*. Windhoek: National Planning Commission.
- Oumer, A. M., Tiruneh, W. G., & Tizale, C. Y. (2014). Empowering smallholder women farmers through participatory Seed. *Journal of Sustainable Development*, 7(5), 93-110. doi:10.5539/jsd.v7n5p93
- Oxaal, Z., & Baden, S. (1997). *Gender and empowerment: definitions, approaches and implications for policy*. University of Sussex. Brighton: Institute of Development Studies. Retrieved May 4, 2017, from <http://www.ids.ac.uk/bridge>
- Oxfam. (1995). *The Oxfam Handbook of Relief and Development*. Oxford: Oxfam.
- Republic of Namibia. (2003). *Report on the Annual Agricultural Surveys 1996-2003*. Windhoek: National Planning Commission.
- Republic of Namibia. (2016). *Harambee Prosperity Plan 2016/17-2-19/20: Namibian Government's Action Plan towards Prosperity for All*. Windhoek. Retrieved May 19, 2016, from <http://www.op.gov.na>
- Salami, A., Kabyemera, J. J., & Anyanwu, J. (2009). *Smallholder agriculture in Africa's changing economy: Case study*. African Development Bank, Development Research Department, Tunisia. Retrieved June 8, 2015, from <http://www.afdg.org>
- Sharma, L. S. (2000). Empowerment without antagonism: A Case for reformulation of women's empowerment approach. *Sociological Bulletin*, 49(1), 19-49. Retrieved August 2, 2016, from <http://www.jstor.org/stable/23619887>

Tasli, K. (2007). *A conceptual framework for gender and development studies: From welfare to empowerment*. OFSE Forum 32. Retrieved July 7, 2015, from www.ofse.at

UN Women. (2012). *Policy brief decent work and women's economic empowerment: Good policy and practice*. New York. Retrieved June 27, 2015, from <http://www.unwomen.org>

Werner, W., & Odendaal, W. (2010). *Livelihoods after land reform*. Windhoek: Legal Assistance Centre.

World Bank. (2007). *World development plan 2008: Agriculture for development*. Washington,DC: World Bank.

Appendix A: Qualitative questionnaire for the small-scale farmers

Introduction

My name is Cecilia Endunde a Master student at the University of Namibia. The purpose for my visit at Ndonga-linena irrigation project is to conduct a research on the impacts of the green schemes and gender on economic empowerment. The aim of the research is to provide an assessment of gendered participation by small-scale farmers in the green schemes and the extent of women's economic empowerment. The study is for academic purposes only and it will not be used for commercial gain. These questionnaires shall be kept safe to keep participants identity confidential.

Name of interviewer:	
Date/Time:	
Site/Area:	

[For record keeping purposes]

Qualitative questionnaire

Section A:

Identification information (fill and tick [] in appropriate box)

1.	Name:	
2.	Age of respondent:	
3.	Gender:	Female[] Male[]
4.	Marital status:	Single[] Married[] Cohabiting[] Divorced/separated[] Widow[]
5.	Level of Education:	No formal education[] Primary education[] Secondary education[] Tertiary[]
6.	Region of origin:	

Section B: Farmers' participation in the green schemes

7. When did you join the green scheme? _____
8. What were you doing before you joined the green scheme?
9. Why did you decide to join the green scheme?
10. What are your daily activities or task on your plot/field?
11. What other activities or tasks are you involved in apart from farming?

12. What skills and knowledge have you gained working under the green scheme?

13. What were you expecting of the green scheme?

14. Were your expectations met? If not, suggest changes that could be done differently?

Section C: Decision making and access to agricultural resources and production

15. Explain how you acquired this land/plot?

16. What agricultural equipment do you use on this plot?

17. Explain who owns the agricultural equipment or assets being used to produce on the land?

18. Who makes decisions about the transfer of the plot or land you are using? Explain.

19. What decisions do you as an individual make regarding production (what and when to produce)?

20. Who decides when to take your produce to the market and why?

Section D: Access to credit and control over income

21. What is your source of income: (tick appropriate box)

(a) Green scheme []

(b) Off farm income []

(c) Subsistence farming []

(d) Formal employment []

(e) Other [], specify _____

22. How do you spend your income?

23. Who decides on what the income should be spent and why?

24. Do you have access to acquiring credit or financial assistance to help grow your farming activities? Elaborate.

25. What challenges if any, do you encounter that hinders (prevents) you from accessing financial assistance?

Section E: Impact on the small-scale farmers

26. What have you as a female/male small-scale farmer achieved since you joined the green scheme?

27. In your own opinion, do you think the green scheme has changed your life for better or for worse? Elaborate

28. Has working under the green scheme given you an opportunity to become a member or a leader of any group in the society? Explain.

Section F: Gender disparity in Agriculture

29. Are your achievements as a female/male small-scale farmer equal or higher than that of other female/male small-scale farmers in the green schemes? Explain your answer.

30. What factors prevent you as a female/male farmer to reach the same level of production as the other female/male farmers?

31. What type of resources and services do you have access to being a female or male small-scale farmer at Ndonga-linena?

32. What different roles/tasks do female and male small-scale have in the green scheme?

33. In your opinion, does green scheme management consider your gender roles in the planning of the green scheme activities? Elaborate.

34. Apart from the plot/farm activities, what are your activities or tasks in your household?

35. Which of the two: (plot/farm and household activities) do you spend most of your time? Elaborate.
36. What are some of your leisure activities, apart from the above activities?
37. In your own opinion, what can the service provider do ensure a positive impact on you the small-scale farmers?
38. Any additional information.

Appendix B: Key informant protocol and feedback

Introduction

My name is Cecilia Endunde a Master student at the University of Namibia. The purpose for my visit at Ndonga-linena irrigation project is to conduct a research on the impacts of the green schemes and gender on economic empowerment. The aim of the research is to provide an assessment of gendered participation by small-scale farmers in the green schemes and the extent of women's economic empowerment. The study is for academic purposes only and it will not be used for commercial gain. These questionnaires shall be kept safe to keep participants identity confidential.

Section A: Background

Researcher: so first of all i would like to get some background information about you, your name and a small background the green scheme and maybe something about yourself, your work experience and how long have you been here as a manager?

Service provider: I am Titus Adreas, i formally satisfy the requirements with the national diploma in agriculture with the university of Namibia that was in 2008 [ahh] from 2010 i have been working as a manager at Etaka agricultural outlet, it is an outlet that sells agricultural inputs, seeds, fertiliser, chemicals, it is situated at Epalela closer to Etunda that is 5km before you reach Etunda that is if you are driving from Outapi. The activities at Etaka as a manager i normally use to place orders for fertilisers, seeds and chemicals and then we use to sell them to farmers surrounding Etaka dam, the Olushandja farmers as well as the Etunda small and medium scale

farmers, at times they will come to us at Etaka and they will explain their problems and we recommend chemicals or fertiliser to help them in any possible way we can.

Researcher: okay that was in 2010, when did you join Ndonga-linena? From Etaka you came here?

Service provider: no. From Etaka i joined Shadikongoro as an assistant farm manager that was in June 2014, [ehh] i was with Shadikongoro as an assistant until i was appointed as a manager for Ndonga-linena and that was in December 2015 but before i became a manager i was acting on phase 2 of the project but now it is all just one project all together.

Researcher: okay so phase 2 is now up and running now and is that for the medium-scale farmers?

Service provider: Yes, it is going to have medium-scale farmers

Researcher: is it going be like Sikindo [green scheme]?

Service provider: yes [showing the setup of the geographical area on the map]

Researcher: quickly, are you going to move some of the small-scale farmers to the medium-scale plots or are you going to get new people?

Service provider: the head office has placed an advert for the small-scale farmers to apply, if they want to be medium-scale farmers but then the only thing that is, let me say an obstacle is finance.

Researcher: okay, so the requirement for this is the same as the one at Sikindo, the amount of money that you need to pay.

Service provider: yes

Researcher: okay. What is your responsibilities here?

Service provider: my responsibility as a manager here is to plan, organise, and control the farm. Planning in terms of production, we are planning on when, what to plant and how to plant.

Researcher: okay, and do you do this planning alone or with the farmers?

Service provider: when it comes to the small-scale farmers i am their service provider, I am not their manager. I only have the resources they do their own plans, I can only advise them and give them the resources.

Researcher: so how does this manager and service provider work, because I thought you are the manager for everything here?

Service provider: yes, I am a manager for the whole farm including commercial and small-scale farmers but to the small-scale farmers i am their service provider.

Researcher: okay, so who is their manager?

Service provider: they are managers on their own and i am just their service provider, I only provide some advice to them

Researcher: Roughly, how many small-scale farmers do you have here?

Service provider: for now we are having 27 but the farm is having a space for 29, 2 of them quit.

Researcher: is it male or female that quit?

Service provider: male farmers.

Researcher: for what reason?

Service provider: there were struggling with production...

Researcher: mmmh... they can't keep up?

Service provider: yes, so they just decided to quit.

Researcher: okay, the 27 farmers that you have now, how were they selected for this site? I know that you only came in late last year but do you know the procedure used?

Service provider: okay, there was a training, the Ministry put an advertisement in the newspaper for people out there who are interested to join the green scheme to apply and go for training which was conducted at Omashare and if i am not mistaken it was in 2006, because when i was at the college i came for practical attachment there and i found them there on training'

Researcher: Oh, okay.

Service provider: okay so there was an advertisement, they attended a training and after the training, they were allocated plots at Etunda, here [Ndonga-linena], Vhungu-vhungu.

Researcher: But how did they decide on who to take?

Service provider: well they looked at the performances, when they were in the training, they were given a portion of land so if you are doing better on your plot that

you are given at the training, they will recommend so during the training they were given practical training. After the training, they were given plots so that they can produce so those who were performing better were recommended to join the green scheme.

Researcher: so it is regardless of whether you are a woman or man.

Service provider: yes regardless of whether you are a woman or man as long as you are doing better.

Researcher: okay, but i also see that you have more male farmers than female farmers here, when they did the selection, did they take into account on maybe having an equal number of both male and female farmers to be representatives or they just took or [was it that] more men applied to be small-scale farmers than women.

Service provider: yes, I can say at the training there were more men than women [who applied], and the other thing [was] the gentleman were performing better during the training, that is why when it comes to allocation they first allocated to the best the best farmers from the training.

Researcher: with the good plots? Or not necessarily?

Service provider: no, only those that performed better, they were allocated plots first.

Researcher: okay, now from the training is it the same people that are here or were there those that were excluded because they could not perform?

Service provider: Whoever is here went through the training but there are other that went through the training but could not make it but the government is still having their names, just in case there are those that had just quit so the government will go back to the list and see who is next.

Researcher: but will they look at, let say here there were 29 but male 2 quit so when they look at that list in your opinion do you think they take the male and female farmer or will they just take by performance, how performed during the training?

Service provider: I think the priority will be given to women because this is something that they have been talking about that we need to involve more women in the project.

Section B: Relationships and experiences with the female small-scale farmers (ssfs)

Researcher: okay, would you briefly tell me about your relationship with the small-scale farmers, since you are the service provider, how is the relationship?

Service provider: I can say the relationship is excellent now although there are times were we point fingers at each other.

Researcher: okay but why are we pointing fingers at each other, what is going on?

Service provider: as i said i am their service provider and not their manager, they are their own managers, sometimes you tell them to submit their plan on what they want to plant for the next season so then they will bring their plan and you will tell

them that – from this plan place an order of the inputs that you want and they place an order then they submit it to me from there i will advise that no you are ordering too much or very little in many cases they are ordering too little and we will always tell them if you order few the production will be low with low profit but then they will say no- it is me who wants it that way, I am only a service provider i cannot force them but only to advise.

So when the harvest comes and their productivity is low they will come back to us and say my harvest was low because i wanted this but i didn't get it [however] sometimes it is not the implement, it can be there but it could be broken and it might take us time to repair. We at times can advise a certain small-scale farmer that [ahh] the broadcasting is not working so use another method to apply fertiliser but they will not listen to me because all they want is to use the broadcaster. Therefore, if they fail they will come back today in June and say remember in January when i needed a broadcaster but then you tell the person that there was a reason why you did not get that specific machinery you wanted.

Researcher: maybe they are afraid of the input cost to be high, maybe that is the reason why they order only few inputs?

Service provider: Yes, they are trying to cut on the cost of the high input

Researcher: do you think the female and male small-scale farmer in this green scheme do the same activities?

Service provider: no they all do the same thing, if it is time to plant maize they all plant maize, if it's time to plant vegetable they all plant vegetables.

Researcher: okay, now in terms of the available data you have, from your past experience who among the male or female is out performing who between the male and female small-scale farmers, i know that there are more male than female farmers at this green scheme but who is doing much better in terms of production?

Service provider: I would say the women are actually doing well.

Researcher: please do elaborate on that

Service provider: let us say if you are having five women who are small-scale farmers and out of those five women only one that have failed and if you are having a group of five men and out of the five men, two men failed so we can tell that they [female] are better telling them unlike men, women listen and do what you are telling them. Women listen to advices but men are ever doubting, you can advise them to do 'abcd' but they will not put into practice what you have told them unless they see someone else doing it, so in most cases they are waiting for the ladies to practice some methods before they try it out.

Researcher: okay, but what is going on with the male farmers?

Service provider: i can say sometimes they can be ignorance; they really do not want to listen to what they are told.

Researcher: okay. In terms of production how is this green scheme helping especially for the female small-scale farmers to help overcome unemployment or the poverty rate in Namibia, given the women background of being at home without

looking for jobs as they always rely on their husband, how is the green scheme helping them now that today they involved in the green scheme at Ndonga-linena?

Service provider: okay, like most of the small-scale farmers that we are having here they are very young people, and if you look at the guys [male farmers] they hardly spend their profit on valuable items or invest them on valuable things but women do because for a male farmer he will get a profit today and buy a car tomorrow and you will see a car running up and down and after two months that car is packed out of function completely so a person spent six months to get a profit that he will throw away in a month. Later they will come to the office and ask for support financially but when it comes to women, we hardly find them doing that.

Researcher: Are you talking about the married women or single ones?

Service provider: Both, you hardly find a woman buying a second hand car; drive it for few months and it is dead so you can really tell that they are putting their money to good use.

Researcher: okay, now are there any problems that women encounter working at the green scheme, like for example because they are women who bear children and they live with them here, do you experience problems were they cannot go in the field because they have no one to stay with their children at home or the machines are too heavy for them to handle. I saw the red container for the fertiliser and I [attempted] to pick up but it was too heavy so i asked them how they manage with it?

Service provider: ahhh, there are no problems the small-scale farmers are allowed to recruit casual workers who will do the job together with them and ahh when it comes

to the casual workers the service provider is [responsible for their payment] all they need to do is allocate the money to their account.

Researcher: but is that money paid on time?

Service provider: yes, every month end they just submit that this are the people that i was having and worked for how many days and each is getting how much then we just have to prepare the money and call in the casual workers and give them the money and not to the small-scale farmers.

Researcher: so there are no problems that they are experiencing, from your experience, there have been no complains at your office?

Service provider: the only challenge that we are having is that there is a limit on how much to pay to the casual farmers, so sometimes they are very much limited maybe they want people to do more work but then we are having a limit, we are only giving let me say N\$2 000-00 per small-scale farmer per month so they might want them to work the whole month but the money to pay them [casual worker] might not be enough.

Researcher: so is that a fixed rate there is nothing that can be done, you cannot fix that problem in any [way]. Can the N\$2 000-00 not be increased?

Service provider: the N\$2 000-00 can be increased but now we are looking at this, we just paid out their profit and just an example majority are at more than N\$40 000-00 and some of them up to N\$90 000-00 and we are starting with the planting season so if a small-scale farmer starts with plating in July and they come asking for money [it will] put him or her into debts.

Researcher: yes, but if they ask for this money are you allowed to give them the money?

Service provider: yes but i just need to sit and advise them that i just paid out your profit and you are supposed to use the profit to pay your casual so you don't have much input costs.

Researcher: but when you pay for the casual workers, do you deduct it from them?

Service provider: Yes, we keep it to their accounts and they are all having accounts, if they take fertiliser, i record it to their accounts that he or she took N\$400.

Researcher: okay so then after six months you deduct it from their profit.

Service provider: yes.

Researcher: but in terms of their profits do they get negatives to their accounts with the new service provider?

Service provider: yes for now i can say there is only three [small-scale farmers] that are in minus out of 27 farmers but the negatives are not from this year we found them already with negatives that started in 2014, in 2014 AgriBusDev started with them so there is no more Shikunino which was only a service provider that was given a tender by the government to provider service to the small-scale farmers [in the long-run] they could not provide all the services and then beginning of 2015 AgriBusDev started procuring inputs for them [small-scale farmers]

Section C: Women economic empowerment in Ndonga-linena green scheme project

Researcher: Now let us focus on ways, if any, Ndonga-linena is addressing the imbalance and injustices of the colonial past that excluded women from socio-economic development. How are you as a service provider helping to increase female small-scale farmers' participation in the green schemes? What plans do you have to ensure that the female farmers are participating, having more women in the green scheme, are the plans for that in order for us to address the inequality of the past?

Service provider: as a farm manager because to the small-scale farmer i am only a service provider as they are managers of their own plots all i can do is to only provide them with the services so that they can manage their plots.

Researcher: okay, what can you as farm manager do to ensure that we have a balance of female and male farmers at Ndonga-linena project?

Service provider: I just need to communicate to the managing director particularly with the medium-scale farmers that we already have more male then female farmers so we should give privilege to the women that are going to apply.

Researcher: but do you think this is important to have an equal representative of women and men?

Service provider: yes it is.

Researcher: does it also help with the green scheme productivity, do you think if you had an equal representative will the productivity be different, will it slightly increase?

Service provider: just like i said there are only three farmers that made a loss and out of those three farmers, there is only one woman, two are men so that already tell you that the ratio of losing is more on men than women.

Researcher: okay

Service provider: in all the green schemes women are doing much better than men are so if we communicate all this information to the [managing director] it will help with [women participation]

Researcher: okay, but for now are there any measures or actions put in place to help, particularly the female farmers or are the actions and measures in place for all small-scale farmers in general?

Service provider: ahhh. Whatever is in place is for all small-scale farmers, there is no specific treated for the women

Researcher: okay so it is for all farmers and how do you as a service provider ensure that both men and women to participate and benefit equally? In terms of the time given as women you will find for example those who are married living with their husband and children but these women have to do things at home and at the same time take care of their plots, so how does the project ensure that they are not overloaded with work.

Service provider: I can say that there are women that are married and are staying with their husbands on the project and there are those that are married and their husbands are out of the project, those whose staying with their husbands at the

project i think those ones are fine because in most cases it is their husbands that are doing most of the work in the field.

Researcher: okay but are they qualified to do the job?

Service provider: yes but i would not say through the training but through their wives they are qualified as they have been working together and through experiences.

Researcher: In your own opinion, how is Ndonga-linena contributing to gender equity and in what manner?

Service provider: Yes, we are contributing to gender equality, the project in general we usually have casual workers for now we are having 60 casual workers but out of those people, i can say 50 are women, for small-scale farmers you will find most of their casual workers are women.

Researcher: why is it that way, are women doing better work in the field?

Service provider: I think it is just the understanding that the village people are having in terms of casual workers, they look at the temporary work [casual work] as work for women and men want [permanent] work. For example, the time of weeding, threshing or harvesting mahangu you will find more women than men blond

Researcher: my last question before i leave you, do you have any monitoring and evaluation systems are in place at Ndonga-linena project for small-scale farmers to be specific?

Service provider: Yes, we are having in place.

Researcher: okay so what have you learned from this system, perhaps lessons learned or any improvements, what are there complains, anything new that needs to be put in place?

Service provider: yes, what we found out is that women are dedicated, they are ever at their plots than men you can find that in the middle of the season when the maize is in its critical stage you will find that the men are absent for 3 or 4 days [from their plots]

Researcher: tell me where do they go because i also picked that up when i was interviewing the small-scale farmers?

Service provider: ahh. In most cases there are just in town i do not really know what they are doing there, they will tell you they have something urgent in town.

Researcher: okay, but there are their own boss so you cannot really control them

Service provider: Yes, so you cannot really tell them to stay in their plot but just to advise the person that if you are moving up and down and something happen to your plot while you are not there you might loss out.

Researcher: okay. What are the major findings that you have discovered, something that you think it is critical to mention apart from the women being 24hours paying attention to their plots?

[Silence]

Researcher: because there was a claim i just want to see if this is true, so when i interviewed the male farmers they said the service providers tend to give service

quickly to the female farmers than to the male farmers or is it a perceptions that you would think he is a man he can wait or is it being a gentleman, would you say that is true?

Service provider: No that one is just a reasoning in the mind of the small-scale farmers because they also came to me and complained that when we are sending the drivers in the field apparently the job that is been done in the women's field is perfect but [it is not the case] it is just in their mind;

and the other thing also is the attitude of the male farmers because if i send a driver to their field the male small-scale farmers will be arguing with the driver and if you start arguing with the [driver] [he] will not do the job in peace so there is supposed to be where a small-scale farmers and driver [listen to each other] but this is only happening with the female farmers because if you tell her not to do this in their field but [rather] do [something else] she will listen but then if [she wanted to use a another method] then they will try to reach an agreement but then with the male small-scale farmer it will be a problem.

Also because there are 27 and for example if i am distributing fertiliser [i would drop the bags of at each house perhaps in 2 days depending on the bags that the farmers had booked] so if the farmers had booked 100 bags that i start to distribute them in the afternoon and by evening i am done but if they book 200 bags i will only [deliver 100] and finish the other 100 bags the next day but if i stop at a [particular] one, this farmers will complain and say why they didn't get their bag because they are supposed to fertigate tomorrow morning but then they don't understand that the quantity that was booked could not be managed in one day and we even put a day Tuesday as a day for booking for services and have your program for fertigating on

[particular] days but then the person books on Tuesday and wants to fertigate Tuesday [same day] again so this creates [misunderstanding] but sometimes they will come and say ‘no there are a lot of tractors and trailers’ but then if i give all this [resources] to be for the small-scale farmers i will cutting on the activities that will be doing on the other side [commercial farm] and this are the same people who are working on both farms so the small-scale farmers [do not take that into account]

Researcher: okay so that is why they complain that the service is been delayed

Service provider: well with the delay of the services in the project we are only having 13 tractors that [do different activities in the field] for the whole farm so the equipment are limited.

Researcher: okay does it mean you are going to use the same equipment for phase 2, and will you manage?

Service provider: yes we are managing already but we can have 3 tractors breaking down in a day even now as we are speaking we have 3 tractors that are been repairs and only 7 tractors working [and all are been utilised] so we do not have any spare tractor so a small-scale farmer will come here and say ‘i want do disc tomorrow’ and yet they are supposed to be having a program because everything has been booked so now i have to go and look for a tractor that is available because as a service provider you need to answer to their call.

Researcher: okay that is all i had for you Mr. Titus unless there is something you would want to add.

Service provider: No, i think i said it all.

Informal discussion [subsidize the small-scale farmers in terms of the input cost such as fertilisers there are very expensive]

Appendix C: Focus group discussion with female ssfs

Introduction

My name is Cecilia Endunde a Master student at the University of Namibia. The purpose for my visit at Ndonga-linena irrigation project is to conduct a research on the impacts of the green schemes and gender on economic empowerment. The aim of the research is to provide an assessment of gendered participation by small-scale farmers in the green schemes and the extent of women's economic empowerment. The study is for academic purposes only and it will not be used for commercial gain. These questionnaires shall be kept safe to keep participants identity confidential.

Section A: Participants Introduction

1. Researcher: so I have [clear throat] of three to four, different sections that I am going to ask you regarding our previous interviews that we had individually. You have given me your names already [attendance list] and you all joined in..... which is?

Participants (all): 2010.

Section B: Application Process

2. Researcher: Okay. Can you maybe tell me about, how you heard about the green scheme?

Participant 1: It was advertised in the newspaper.

Researcher: is it the same with everyone? How did you hear about it?

Participant 3: I heard it in the newspaper.

Participant4&5: Newspaper.

Researcher: okay.

Researcher: Did you on your own decide to apply or did someone tell you to apply, maybe a family member or a friend or did you just decide on your own, I am going to apply?

Participant 1: me on my own.

Participant 5: I decided on my own.

Researcher: No one encouraged you to apply?

Participant 5: you just decide on your own.

Researcher:that you want to apply?

Participant 5: yes.

Researcher: Okay, now on your experiences, during the application when you had to apply, how was the application process, was it easy or was there a lot required from you do to or how was the process? It went smooth or you had to submit a lot of documents or was it expensive you had to make a lot of copies or you had to drive somewhere to pick up the applications? How was your experience with the application processes if you can recall?

Participant 1: it was nothing like difficult, like for me it was easy, you just write a letter in your own hand writing and own pen without even typing it. I just wrote a letter [of motivation] on my farming background and my interest [in farming] made

me to apply, from there, they were just asking for grade 10 and agriculture so it was not difficult.

Researcher: so what documents did you have to attach?

Participant 1: just your certificate, id and a certificate.

Researcher: That is all, and it was the same for everyone?

Participants (all): Yes.

3. Researcher: okay, [aahh] are there no farmers that had to submit something different maybe here or somewhere else at other green schemes, the requirements are the same for everyone?

Participant 1: there are the same.

4. Researcher: okay and there was no difficulties with the process on like maybe it was not clear on what you had to submit or how you should write the letter?

Participant 1: it was clear.

Researcher: everything was clear.

Participant 1: they stated everything in the advert.

Researcher: okay and everyone understood what was expected of you to submit or do, or was there a point where you had to go consult their offices to see what it is that you need to give in.

Participants (all): No

Participant 6: just after you write, you just put it in Nampost, [that is all].

Section C: Training Experiences

5. Researcher: On your training experiences, [ahh] during the training at Mashare, when you were being trained did they address any gender issues during the training or was the training only about agriculture?

Participants (all): it was only about agriculture, there is nothing like gender.

Researcher: they didn't maybe try to explain to you, how you would handle your farming activities with you roles at home, if you have children at home or if you are a mother, how your life can be made easier, to balance the two during the training?

Participants (all): No.

Researcher: Nothing, what was the training all about?

Participant 2: it was about irrigation...

Researcher: Just farming?

Participant 1: Just how to apply chemical, fertiliser and all that....

Researcher: So the training...the people who were training you didn't touch on, let's say if you had to go for training, is there anyone here who maybe had a baby or small kids that had to leave their kids at home to go for training, is there someone like that.. Who maybe had to leave their little ones to come to Mashare?

[Children shouting in the background]

Participant 1: My first-born was three years old I had to leave her with somebody because we were just in the hostel.

Researcher: oh, so they did not allow you bring them with or give you time to go and see them?

Participant 1: It is like you are at the college or UNAM you are not allowed to bring the kids or family.

Researcher: okay but did they give you time off to go see [your family/kids]

Participant 1: Yes, it is like a normal school [with holidays]

Researcher: But you are not allowed to bring them and there was no accommodation for family only you alone?

Participants (all): Only you alone, a single room for only you alone.

Researcher: Oh, okay so they gave you, everyone a single room, okay.

Section D: Female small-scale farmer's experiences at Ndonga-linena

6. Researcher: After you were done the training at Mashare, did you for this past 5 years that you are here, did you get any another training?

Participants (all): Yes, we use to get

Participant 1: Like in-service training... [Interrupted by a female farmer that joined the discussion] some workshops they can come here, one time we went to Mashare for a workshop.

Researcher: Regarding farming?

Participants (all): Yes.

Researcher: Okay, how often do this training being going on, the workshops, is it only once or...?

Participant 1: Not once and not that often.

Researcher: But the training that you are getting, is it the training that you really need or are they just training you on things that you already know?

Participant 2: What we need.

Researcher: What you need, who request for training, is it you or just decided you need training on fertigating, or do you decide that you need training on this and that?

Participant 3: them.

Researcher: they decide for you?

Participants (all): Yes.

Researcher: But is it what you need, that which they are deciding for you?

Participant 1: You see what they use to do is, they will be a training somewhere or a workshop somewhere... they will give us information that there will be a workshop somewhere on this days and the topics will be about this and this so if there is a need now, like for us who knows that this thing is important for us and that I need to go because it is important, but if it is not important you can ignore.

Researcher: so you can decide not to go to the training? Oh, okay.

7. Researcher: The last time there was a question on how you have benefited since you have been in the green scheme, and I feel like we did not go into detail that specific question, so my question is how did you benefit as a small scale farmer compared to the other farmers out there, like the subsistence farmers or compared to other females out there like the ones in the offices? [Silence from the participants]... maybe something that you can see or not see, a benefit [could] be a car, or you have acquired knowledge. How have you benefited compared to others, we can say I can do this compared to a person or a female who is doing this and that... from your own [experience].

Participant 1: Yes on that one if I can compare myself to others farmers like this, there are also some small scale farmers in the neighbouring, here at Shankara they are also called small scale farmers as I am also called small scale farmers but I am under green scheme and they are not, I have [the] opportunity to get input, I can get a loan easier than them.

Researcher: Okay, what about you?

Participant 2: [Silence]

Researcher: You have not benefited anything?

Laughter]

Researcher: Meme Charity?

Participant 3: I say it in what way?

Researcher: Just compared to someone out there?

Participant 3: Let me say, someone in the office and me, I can survive on the knowledge that I got, I can survive on my own using my own hands, it will be difficult for somebody who is just in the office, we know some are just good in the office but not hardworking, [working] with hands...

[Jokes and laughter]

Participant 3: I can survive on my own with my hands than just depending in the office.

Researcher: Okay.

Participant 4: with me there [ahh], I can say we get experience...

Researcher: How?

Participant 4: if I am comparing with other women and us who are in the farm, someone who knows theory and me know the practical, there it can be somehow different....

Researcher: You are much better than them?

Participant 4: Yes, because somebody can know theory but when it comes to the practical in the farm they can fail but me I can go through.

Participant 3: Like the UNAM [students], they do not know how to fertigate [laughs] someone can just know fertigating but they do not know how to apply. They will

[surprise] us by asking us how to apply fertiliser but theory they know that they have to apply fertiliser but come to practical they don't know how [laughs]

Researcher: Okay. My sister?

Participant 6: We have benefited a lot, skills and here we are very independent [as] you work with your own time than somebody in the office, you do things own your own if you decide to work during the night and during the day you sleep [or] if you decide to work day and night that is on you own and we benefited with houses like the small scale farmers [at Shankara] they are also small scale farmers but they don't have houses because they are not under the green scheme and if can say we know that we will pay rent in the future but for now for 5 years we have just enjoyed free accommodation, not even that we have to squeeze with people, you are alone in the house, freedom of sleeping, working... [Laughs] everything [free] and we have learned a lot we appreciate it than other out there, I know there are others who are struggling but us we happy.

Researcher: Okay. Yes madam?

Participant 5: We benefited a lot, let me say you [have] pesticides in your field, if you want apply that pesticide in the field you don't need to call somebody you can just read on the container, there [are] instructions [on] how many litres you can put at what stage and how much water, you don't need to call somebody like those women that have farms outside [the green scheme] we have a lot of experience here.

Researcher: Okay. Back to you [Ester]... [Laughter]

Participant 2: Us we are benefiting, we do not have a job, this is our job, our own source, no one can force you to work, you are your own boss, and I can work at my own time.

8. Researcher: Okay. One of the main objective of the green scheme is to help eradicate poverty in the country.

Participant 6: Yes, of course.

Researcher: In your opinion, you as small-scale farmers compared to other farmers or even this farmers here [at shankara] how are you helping to reduce poverty, are you moving towards that objective.

Participants (all): Yes we are. Very much

Participants (all): The whole Namibia is depending on the green scheme, on us.

Participants (all): all the maize meal that they are getting for drought relief from this projects.

Researcher: from Ndonga-linena?

Participants (all): not only here but all the green schemes.

Participant 6: in Kavango east and west, this is the only project that is having 27 small scale farmers, other they are 13 and 12, they are part of, and we are part of it.

Participant 1: we are feeding the nation, we are doing it and we are proud of it.

Researcher: But is poverty being reduced in Namibia, are there people out there who are no longer hungry?

Participant 6: No there is, you know why because if the government will subsidize with fertiliser and everything, the price for maize will be cheap and us farmers will not complain, even food in the market it will be cheap also, if you go in the market now the maize is high because the fertiliser is [increasing] each year, they are not subsidizing us because if they subsidize us with fertilisers and chemicals, the tons also will be normal, the buyers will buy it at the normal price, then the millers will also sell the produce at a cheaper price [because] everything is expensive, people out there are starving because they cannot afford to buy maize meal and that is a problem.

Researcher: so you feel that if the government subsidize you, the hunger will also reduce?

Participant 6: Yes because the final produce like maize meal will be cheap [and] I won't complain of fertiliser because the fertiliser will be maybe 25% subsidize and the buyer who will buy it from me will not buy it at an expensive price, and the miller will sell at a cheaper price were everybody can afford to buy it, not now maize meal [and] everything is going up..

Researcher: But is this maize meal not going to the [ahh] for drought relief, do they not give it for free?

Participant 6: it is for free but you know we are not the only farmers, there are farmers [elsewhere] who will decide we are not selling to the government, they sell on their own and those [farmers] you cannot tell them what to do, they decide on what to do [with their produce].

9. Researcher: okay now when you were at Omashare attending this training, at what level were you, let me say part of decision making in terms of coming to work at Ndonga-linena; when they had to give you the contract with everything that you are going to do, how you are going to enter in agreement with selling the maize, were you part of the decision making?

Participant 6: First, we signed the leasehold then we signed the tripartite agreement...

Researcher: but were you part of the decision-making on what should be written in the agreement?

Participants (all): No.

Researcher: so it was just given to you and you signed, you had no choice?

Participants (all): Yes, we just signed.

Participant 4: You just read and you sign.

[Laughter from participants]

Researcher: Okay.

Section E: Gender aspect in the green scheme

10. Researcher: now on the... My last topic is on the issue of gender, the last interviews we had... I don't know maybe it is just me because the issue of gender does not seem to [ahh] be an issue with the female farmers at Ndonga-linena, there was a question, if I can remember on whether the male or female farmers issues are

taken into account, for example if you are a female farmer and you have a baby the government [service provider] will [be] more considerate

Participants (all): [Laughs] [remarks from the participants]

Researcher: will be more consideration [based on the fact] that you are a woman, they will give you a man [worker] to help you carry? For instance, if was here [at Ndonga-linena] I will ask for help [laughs].

Participant 1: [laughs] they will chase you [as] you are not fit to be a farmer.

[Laughter]

Researcher: so you are okay with that, you don't seem to complain or have an issue with the fact that the government does not take into account that you are a woman and that maybe you will need extra help, i understand for Zimbe [small-scale female farmer] who is married and has a husband who can help her, but what about for those who are not married and have [children] at home?

Participant 1: Yes, you who are not married and are expecting for that matter [referring to participant5 who is pregnant]

[Laughter]

Participant 5: Then you will recruit somebody who can help?

Researcher: But are you okay with the service provider not taking that into account that you are a woman and you need extra help?

Participant 4: what do you mean extra help? There is no limit if you want you can recruit somebody as long as you are paying that person. But then if you do not want to pay you [will] work by [yourself] otherwise you will have [any] profit [if you do not work]. This is just like [any other work] it is up to you, you can recruit even 5 people if you want.

Participant 6: When you are not getting a salary every month, we have learned a lot on how to be stingy by working yourself it is better [as] you are saving up, you are controlling your cash-flow, it's better you work yourself because that money that you are giving to that worker it is part of your profit at least if you work yourself and you are use, we are here for 5 years now, we can work, we can weed [ourselves], we don't need permanent workers we can recruit casual workers to help with the weeding like at this stage of my maize we need workers just to weed, irrigating and [other activities] we do it ourselves [as] it is difficult to ask someone to do it who does not know [how to] fertigate [so] we do it ourselves and don't complain.

Researcher: If there was anything to complain about, the fact that you are a woman, what will it be?

Participant 3: To complain, here, that I am a woman?

Researcher: Yes.

Participant 3: There is nothing to complain about.

Participant 4: They will just say you can leave, who told you to apply?

Participant 1: If it a 50 kg, you should make some means to make it half and lift if cannot lift a 50 kg.

Participant 3: It is just like a job, even if you are at the office you cannot say you need someone to help you do your job.

Researcher: so even when you applied they told you this is your job now, take care of everything.

Participants (all): Yes!

Participant 1: Take care of everything and you must be hardworking.

Researcher: whether you are a man or a woman?

Participant 1: If you do not want to work, do not apply!

Participant 4: Yes, if you do not want, quit!

Researcher: Is that what they told you in the training?

Participant 6: they do not need to even say it but they situation will force you, if you do not want [or] cannot manage...

Participant 5: or do not want to work in the sun you can [always] quit!

Participant 1: it is obvious, it even used to be on the advert, they will tell you that the requirements are the suitable candidate should be hard working so if you go for it you need to make sure that you [are] but if you see that I cannot [do it] then you leave, you cannot force yourself. The [issue] of unemployment brought us there [to work], the issue of 50/50 so... we also need a president woman now...

[Laughter]

Participant 3: Even if you go back home, to go and bother people again, no job... so

11. Researcher: Okay. Now lastly if you have to do it again, come back in another life, will you still choose to be a female small-scale farmer?

Participant 6: Farming is better, maybe it is because we were the first people [small-scale farmers] in the green scheme we are facing some challenging but I think [soon] they will [be overcome]. To [be honest] farming itself is nice even though it's hardworking...

Researcher: But it does pay off, it is those things that pays off.

Participant 6: Yes and we eat fresh produce [such as] tomatoes.

Researcher: Okay so you will still choose to be small-scale farmers, even if you die today and come back in another life you will still choose to be small-scale farmers.

Participants (all): Yes!

Participant 5: But we also want to grow and become medium-scale farmers...

Participant 6: To be on those bigger plots.

Researcher: But then requirements for medium farmers are different, it is not like that of the small-scale it requires cash.

Participants (all): Yes, cash!

Participant 6: But for me farming is nice, do not even think of doing something else, going and working as a police officer, no! What will I do, as a police officer... be Constable Djolinda! [Laughs]. The is some work [that you will just be proud of, I am

not saying other [jobs] are bad, no! because if there could not be farmers, there could not be food in the markets; if there could be not teachers there could be no farmers [so] we just have to be proud at where we are, god knows why you are there but for me if I had to come back I will just be a farmer again.

Researcher: Okay. Is there someone here who are maybe a farmer before joining the green scheme?

Participant 1: No, we were just working in these small gardens helping our parents.

Researcher: Oh subsistence farmers?

Participant 1: Yes.

12. Researcher: Anyway, those are all of the questions that I had for you unless there any additional questions or comments that you would like to share with me, before I say thank you very much for your time, anything else?

Participant 1: I [would] like to say something about your questionnaire that you would come and ask us, we want to see the outcome of those things, the benefit, what are we benefiting? Every time you are coming here but we are not seeing the benefit, at least we would like to see those things to be implemented. We [are] happy to see you and think those [information] are taking to the top official for them to see how the farmers are doing and [what] challenges [the] farmers are facing, we are ever [information] to [researcher] not only you but there are many others but we don't see the benefits.

Researcher: Yes, I understand and I hear you... Thank you for your time and cooperation. It is greatly appreciated

Focus group discussion participants

Name	Single(S) / Married(M)	Region of Origin
Participant 1	M	Zambezi
Participant 2	M	Oshikoto
Participant 3	M	Zambezi
Participant 4	S	Oshikoto
Participant 5	S	Oshikoto
Participant 6	M	Kavango East

Appendix D: AGRIBUSDEV Managing Director's letter of permission to conduct research at Ndonga-linena Green scheme irrigation project in Kavango East region

