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**Institutional Dynamics of Innovation Platforms: A
Case Study of Conservation Agriculture in Gwanda
District, Zimbabwe.**

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Abstract

Platforms and fora to facilitate innovation and improved livelihoods at the local level are currently being implemented in Southern Africa including Zimbabwe and yet the institutional and livelihood performance of such platforms are not understood. Using Conservation Agriculture Innovation Platforms in Gwanda District as a case study, this study investigates the institutional and livelihood outcomes of these platforms. Data for this study were gathered through observation over six months in three wards of the district. Interviews were conducted with key figures including traditional leaders, local champions of development, extension and civil society staff. Multiple Focus Group Discussions were also held in all three sites. Secondary data which include project reports by participating nongovernmental organizations and minutes of platform meetings were also utilized. Challenges encountered included language difficulties especially in Sotho speaking households. This was counteracted by seeking clarity on issues from multi-lingual informants. The study observes that multiple stakeholders hold differing perceptions towards Conservation Agriculture Innovation Platforms, affecting their participation in the platform and its related activities. The study also established that existing institutions are affected and respond differently to the advent of the platform. Further, the livelihood outcomes of the platform are not yet well pronounced owing to the propensity of platform activities to compete with already established livelihoods. In conclusion, the study notes that activities in the innovation platform are underlined by self interest and profit maximization as actors seek to make the most out of the prevailing situation. The observed self-serving actions by people and organizations at various scales suggests a theoretical point, namely that people have individuality and at the heart political.

Key Words: Conservation Agriculture, Innovation Platforms, Institutions, Livelihoods.

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Dedication

To my wife Rumbie, and daughter Nomufaro Idah.

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List of Acronyms

AIS-Agriculture Innovation Systems

BDA-Buhera Development Association

CA- Conservation Agriculture

CAIP- Conservation Agriculture Innovation Platform

CIAT- The International Centre for Tropical Agriculture

CORAF/WECARD- West and Central African Council for Agricultural Research and Development

DAEO-District Agriculture Extension Officer

FAO- Food and Agricultural Organization

FARA-Forum for Agricultural Research

FGD-Focus Group Discussion

ICRISAT-International Crops Research Institute for the Semi-Arid Tropics

IP- Innovation Platform

LCD-Local Champion of Development

LDC- Local Driver of Change

MP-Member of Parliament

NGO- Non-governmental Organization

RDC-Rural District Council

SAFIRE-Southern Alliance for Indigenous Resources

ZFU- Zimbabwe Farmers' Union

ZIMASSET- Zimbabwe Agenda for Sustainable Socio-Economic Transformation

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CHAPTER 1

1.0 Introduction

Institutions and platforms for rural development have been introduced in Africa by both the modern state and civil society (Berthoud, 2001). Unlike traditional development models which adopted a largely linear technology generation-transfer-adoption model, contemporary focus is on an inclusive mutually beneficial model of development through innovation platforms (Tenywa et al, 2011; Heemskerk and Wennink, 2004; Nyikahadzoi et al, 2012). Innovation platforms (IPs) are networks of actors involved in the creation and use of new knowledge and technologies (Fatunbi, 2012). These systems are directed towards including and developing local people through an interactive and multi-stakeholder process. Conservation agriculture (CA), the practice of minimal land tillage combined with a permanent cover of organic matter and crop rotation is being promoted by governments, civic organizations and research institutes in Southern Africa's arid areas. It is envisaged as a panacea to soil degradation reportedly arising from 'primitive' farming practices (Baudron et al, 2011), climate variability which has seen increased frequency of droughts (Mabiza, 2013) and labour bottlenecks emanating from high rates of migration among vulnerable households (Andersson and Giller, 2012; Derpsch and Friedrich, 2009(b)).

Conceptually, an innovation platform is a voluntary coalition of cognate actors and organizations coming together to share and create knowledge on an area of common interest (Tenywa et al, 2011; Sanginga et al, 2008). IPs emanate from the innovation systems concept. They entail the practical implementation of the agricultural innovation systems concept, a concept which says innovations can be learnt and diffused (Spielman, 2005; Van Rooyen and Homann, 2010;

Filipe, 2010). Having been motivated by a common theme or concern, these actors and organizations of diverse professional, economic, socio-political and ideological backgrounds use such diversity to formulate and proffer solutions to the identified problem for mutual benefit (Anandajayasekeram, 2011; Agwu et al 2008).

The innovation systems approach, the latest in a series of knowledge gathering and dissemination approaches (see Tenywa et al, 2011), has revised the diffusion of innovations paradigm spearheaded by Rogers (1983; 1995). Diffusion of innovations entails the transfer of innovations through a certain channel over a period of time from the innovator to the adopter (Orr, 2003; Rogers, 1995). However, with innovation platforms emphasis is placed on participation and partnership which ensures that innovations are collective and do not necessarily flow from one source as is the case with diffusion of innovations (Van Rooyen and Homann, 2009; Waters-Bayer et al, 2005). For purposes of this study, an innovation is a new idea or method introduced with a view to improving the present situation. It involves ways of knowing that are new and novel.

In respect of CA, this is an idealized way of managing farming systems to achieve sustained productivity for the benefit of improved food security while preserving and enhancing the environment (Derpsch, 2008; FAO REOSA, 2011). There are variations in the definition of CA but its defining principles are limited or low soil disturbance, permanent organic soil cover or mulch and diversified crop rotation (Giller et al, 2009). Partly on account of huge funding from donors in Europe and USA, CA is gaining prominence all over the world as evidenced by adoption levels (from an 45 million hectares in 1999, it is now being practiced on approximately 105 million hectares worldwide) (Derpsch, 2008; Dubreil, 2011). CA platforms are therefore allied arenas where the multitude of civil society organizations, extension staff, farmers,

researchers and other actors converge to share approved knowledge and innovations on the practice of conservation agriculture within a particular locality. The platforms are, presumably, non-linear with actors dynamically interacting. This convergence of different actors in the platforms is at variance with the traditional 'linear' or 'transfer of technology' model of agricultural knowledge generation and dissemination which is essentially top-down (Filipe, 2010) and which is now concluded as a failed system generating poverty and degradation at a micro scale.

Even if some are discovering them now, innovation platforms are, arguably, not new in Africa in general and Zimbabwe in particular. In fact what has only changed over the years is their designation and who espouses them. Notwithstanding observations by Scoones and others against immutable colonial agriculture policy, agricultural knowledge dissemination in Zimbabwe and indeed the African region has been changing ever since the onset of colonialism (Ranger, 1999, Baudron et al 2011). Colonial administrators set up institutions through which European ways of farming were ideologically diffused (voluntarily the compulsively) to the 'native' communities (Baudron et al, 2011).

These agricultural institutions started long back in colonial period and farmers clubs; demonstration groups, cooperatives etc survive as undying relics (Ibid). In these farmer clubs and demonstration groups championed by colonial state, white farmers and missionaries, farmers were grouped together and underwent transformation in modern farming practices under the auspices of Emery Alvord's demonstration and Master Farmer programmes (Baudron et al, 2011; Sadomba, 1999) to become elite or master farmers. The state recognized successful farmers, awarding them with certificates, symbolic regalia including badges, crowns and hats upon which were colorfully inscribed the virtues of 'modern farming' (Mtisi, 2002). Such

successful farmers were designed to assist extension officers and workers in the diffusion of innovative practices to farmers considered backward. Typically modernization of agriculture, as emphasized in these institutions, included commercial transformation of subsistence agriculture both at the level of agricultural method (such as contouring and crop rotation), crop specialization and management.

Today and as a result of neoliberal thinking emphasizing the reduced role of the state in development processes, NGOs now (implicitly) take the role of government in agriculture (Berthoud, 2001; Andersson and Giller, 2012). Building on PRA, these are now broadly propagating what they consider to be innovation platforms. In theory the NGOs, target vulnerable households in the innovation platforms they initiate (Manji and O’Coill, 2002; FAO REOSA, 2011). IPs are varied, but of interest to this study are Conservation Agriculture Innovation Platforms (CAIPs).

CA is currently being tried in many semi arid parts of Zimbabwe (Baudron et al, 2011) including the general study area of Matabeleland South where rainfall is little (ranging from 400-450mm), and is less able to sustain rain fed or conventional crop production (Love et al, 2005, Mupangwa et al, 2008). It is also being practiced among households without labour for a variety of reasons including, migration of productive labour, incapacitation through ill health, old age among others (Mazvimavi and Twomlow, 2008; Nyagumbo, 2008; FAO, 2010). There may be variations but often it is a particular NGO funding the setting and the running of a CA innovation platform, usually for a specific duration coinciding with a funding cycle. As in the case of state driven agricultural knowledge generation and dissemination institutions, the tenuous assumption is that CA platforms will enable vulnerable farmers to improve their agriculture and livelihoods.

There are general assumptions underlying the introduction of CA innovation platforms in rural areas. The first is that rural farmers hold good perceptions of and believe in these CA platforms (presumably by virtue of them being NGO initiated) (Filipe, 2010). In other words it is assumed that farmers value CA ahead of other practices and that they hold it in high esteem against other multitudes of platforms. The second assumption is that these conservation agriculture platforms are being well received by farmers as reflected by the increasing land under CA (Derpsch and Friedrich, 2009a; 2009b). It is thought farmers are abandoning old practices in favour of CA. Thirdly it is assumed that these CA innovation platforms will result in new institutional arrangements and reorganization of mutual benefits to its farmers (Van Rooyen & Homman Kee-Tui, 2010). The fourth assumption, one favoured by most NGOs, is that the rural livelihoods will improve as a result of introduction of these CA innovation platforms (Filipe, 2010). However, is it always the case that the introduction of conservation agriculture innovation platforms will lead to those above stated assumptions?

1.2 Statement of the Problem

Rural farmers today are struggling to irk out sustainable livelihoods owing to poor production methods coupled with insufficient inputs, poor soils and harsh climatic conditions among other diverse constraints. States, with the support of non state actors, are increasingly supporting innovative processes of doing and learning agriculture among the rural 'poor'. One such innovation is Conservation Agriculture Innovation Platforms, a process organizing once independent farmers, marketers, extensionists, NGOs, input suppliers, researchers and other agriculture stakeholders into collectives for purposes of shared learning and mutual assistance. The institutional and livelihood outcomes and performance of such platforms as well as how

these are perceived and appropriated by individuals at local scales are matters not fully understood by scholars, hence this study which uses Gwanda's three wards as case study.

1.3 Aim of the study

The aim of the study is to investigate the institutional and livelihood outcomes of innovation platforms. Conservation agriculture-based innovation platforms were used in this particular study. The study attempts to assess the benefits that accrue to different stakeholders following their participation in the platforms.

1.3.1 Research Objectives

This study is on institutional and livelihood dynamics of Conservation Agriculture Innovation Platforms. More specifically the objectives of the study are:

1. Establish smallholders perception and adoption of conservation agriculture based innovation platforms;
2. Assess the influence of conservation agriculture innovation platforms on rural institutions and institutional processes;
3. Investigate the contribution of innovation platforms to rural livelihoods and
4. Explore available ways of managing and coordinating platform activities.

1.4 Key Research Questions

In order to respond adequately to the foregoing objectives the study considered the following critical research questions:

1. What power dynamics obtain in the formation and operation of Innovation Platforms? How do these power dynamics play out in day to day interactions of actors?
2. What institutional changes result from the processes of innovation platform operations?
3. How are livelihoods of rural communities changed and how do IP-based livelihoods compete or conflict with traditional or existent livelihoods?
4. What strategies are adopted in trying to better manage IPs and the way they operate?

1.5 Research Hypothesis

In this study it is hypothesized that while people take part in Conservation Agriculture Innovation Platforms and while they show interest in associated activities, frequently reasons for doing so deviate from what is formally agreed in the projects and related activities. Reasons for continued participation are essentially individualistic and pragmatic. This is the hypothesis that will guide this research.

1.6 Justification of the study

This study is timely and can be justified from two angles. First, to researchers it is not clear whether CA innovation platforms have an impact on rural livelihoods (Twomlow et al, 2008). It is not known, in particular, whether conservation agriculture platforms result in increased range of livelihoods outcomes, income, and opportunities for the vulnerable groupings in semi arid contexts (FAO REOSA, 2010). This study seeks to contribute towards a clarification of this matter providing alternative explanations of how innovation platforms influence rural livelihoods and institutions.

Secondly, and from a knowledge and theoretical point of view, it is not clear what the institutional implications have been for propagating conservation agriculture platforms. The study attempts to outline how and why institutional arrangements (such as traditional leadership and tenure regimes) have changed owing to the propagation as well as acceptance of conservation agriculture platforms within the local communities.

1.7 Theoretical Framework

The study is guided by the assumption that actors individually making up society, are always self- interested and enterprising. This assumption is informed by Transactional Theory, traceable to Malinowski and his legion of students including Barth (1970) and Bailey (1973) and other adherents of transactionalism like Blau (1964), and Cheater (1989). Barth (1970, 1990) argued that the individual's interests were central to institutional operations and accordingly they will direct their activities towards those points which seem most profitable to them.

For Bailey (1973), the individual's interests lead him to contest for his ideas to influence proceedings in a social group context. He further argues that actors from different backgrounds engage in constant negotiation as they try to have their ideas accepted by their counterparts. Blau (1964) argues that social exchange is underlined by power differentials and actors with access to highly valued resources exert their power on others to have their ideas accepted. For Blau, the process of status differences between and among transacting parties results in some having more power and influence over others. Such power and influence (usually deriving from superior access and control of material and non material resources) culminates in relations of patronage among transacting parties.

From this theoretical tradition it is hypothesized that actors who include the state, NGOs and smallholders have situated but often conflicting interests which they try to satisfy. In particular, it is hypothesized that when various actors, including smallholders are brought together for development, especially in rural settings, they tend to direct the development process towards their individual and institutional aspirations. This study utilized these innovative transactionalist ideas to analyze relations among the state, NGOs and smallholders in CA platforms, how they manipulate resources and relations to best suit their varied aspirations and its implications for rural livelihoods and institutions.

1.8 Chapter Synopsis

The thesis is divided into six distinct but interconnected which are broken down as below. Chapter 1 introduces the study giving a background to the issues to be investigated. It also presents a statement of the problem to be investigated as well as the objectives research questions and justification of the study. An attempt to locate the study within a transactional theory is also made

Chapter 2 is concerned with a systematic review of relevant literature. This chapter looks at global, regional and local literature on IPs and CA. The review also explores transactionalism that is inherent in the development arena. This review is done with a view to exposing the gaps left out by existing literature as well as to direct the research in terms of plugging the identified gaps.

Chapter 3 explores methodological issues in the research. Research design, research methods employed as well as ethical considerations are discussed in this section. Being anthropological, the research adopts a qualitative outlook where by purposive sampling was used in the selection

of the study sites as well as the research participants. The research utilizes participant observation, key informant interviews, focus group discussions and unstructured interviews to gather data. Research ethics which form an important thread in all research are also discussed with particular emphasis being put on seeking authority to conduct study as well as undertaking to protect the identities of research subjects through maintaining high levels of confidentiality as well as deploying pseudonyms to protect the integrity of research respondents.

Chapter 4 presents results for the study. It discusses the perceptions of and decisions to either join CA and IPs among farmers in Ntalale, Mtshabezi and Manama wards. It outlines that farmers' preference in whether to be part and parcel of IPs or to abandon after having joined them is mediated by a multiplicity of considerations they make. The perceptions of other stakeholders such as representatives of government departments, NGOs and private sector enterprises are also explored in this section.

Continuing data presentation, Chapter 5 explores the institutional outcomes of Innovation Platforms. The chapter notes that there are diverse institutional outcomes arising from the introduction of CAIPs. It is noted that IPs culminate in institutional change and fortification simultaneously. Some institutions were found to be conservative and resistant to IPs while others embraced IPs and there gained mileage through associating with IPs. Some institutions like land tenure changed in view of the introduction of CAIPs.

Chapter 6 which concludes the data presentation looks at the contribution of IPs to rural livelihoods in Gwanda. Considering that Innovation Platforms are often touted as holding potential to improve livelihoods where they are successfully set up, this section assesses whether livelihoods improved following the introduction CAIPs in the study area. Other livelihood

sources (and how they compete or complement livelihoods around IPs) are also considered in this section. Chapter 7 summarizes, concludes and gives recommendations from the study. All this is organized around the objectives of the research.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on innovation platforms, especially those relating to Conservation Agriculture. It starts by considering the scholarly views on Conservation Agriculture and its significance for improved production especially for small holders. Second to be reviewed is literature pertaining to the views of scholars on platforms in general and more specifically about innovation platforms. Thirdly is a discussion on what literature says about stakeholder perceptions towards CA and innovation platforms. This is followed by a review of what scholars note about adoption of CA and formulation of innovation platforms. The contribution of platforms to rural livelihoods and the institutional outcomes of innovation platforms are also considered in the review. Key issues emerging from innovation platform discourse is discussed. In the final analysis, the purpose of this work is discussed in view of the preceding review.

The introduction of new technologies brings to the fore a wide variety of actions and reactions which may affect the proper functioning of the technology. These various actions exhibited by outsiders and locals alike are influenced in large part by a plethora of considerations the various actors make. Players in the development arena have transactional considerations to make in view of the new interventions made. The said transactional considerations influence the way in which actors will eventually relate with each other and to the given technology or intervention. By and large, different actors are bent on achieving maximum mileage from a given technology through strategically positioning themselves and manipulating a given intervention to benefit more than other concerned parties in the transactions.

2.2 Conservation Agriculture and its significance for improved production

Conservation agriculture started in the 1930s in the United States of America and spread to South America, Canada, Australia and other developing countries while a paltry 3.9 percent of the technology is practiced in the rest of the world (Deprsch, 2008). Currently, an estimated 105 million hectares of arable land are under Conservation Agriculture (Derpsch and Friedrich 2009). Small scale adoption of Conservation Agriculture is limited, possibly owing to a plethora of factors including the technical nature of most CA interventions (Giller et al 2009) as well as competing demands for available crop residues which are used as supplementary stock feed (Vanlauwe et al, 2014).

Lately, Conservation Agriculture components have been introduced to small scale farmers in Sub Saharan Africa through an alliance of governments, Non Governmental Organizations (NGOs), donors and research organizations (Andersson and Giller, 2012; Mazvimavi and Towmlow, 2008; Nyagumbo, 2008; Haggblade and Tembo, 2003). The technology (especially hand hoe basin digging which is popular among resource-poor rural farmers) has also been received with mixed feelings among small scale farmers who feel that it is laborious (Andersson et al, Undated; Haggblade and Tembo, 2003). However CA seems to be gaining credence especially among large scale farmers, arguably, for its high yields (Vanlauwe et al, 2014) and also due to its ability to conserve water and soils unlike conventional farming practices like plowing which have become notorious for causing environmental degradation (Dubreil, 2011).

It is further stated that CA is becoming popular in Sub Saharan Africa because it is believed to increase soil and water use efficiency (Baudron et al, 2011(a); Twomlow et al, 2008). Comparisons of CA and conventional farming showed that average yields from the former increased by between 15 and 75 percent among small scale farming households in Zimbabwe

(Mazvimavi and Twomlow, 2008). However, the adoption of CA is not only influenced by the biophysical conditions mentioned earlier on, as there are other underlying political, social and economic factors to be considered. Furthermore, farmers have multiple objectives such as catering to the feeding of livestock which also have a bearing on their decision to adopt Conservation Agriculture (Mazvimavi and Twomlow, op cit; Vanlauwe et al, 2014).

2.3 CAIPs and adoption

Technology adoption is mediated by a variety of considerations that farmers make before eventually deciding on adopting or not. Leeuwis (2004) notes that adoption of a given technology in a locality is often influenced by opinion leader(s) who are usually well educated, financially stable, command local respect, possess wider network connections with individuals beyond his locality as well as leading an active social life locally. Owing to the fact that they command respect in their localities opinion leaders play a critical role in the adoption of given technologies. Leeuwis (2004: 286) further states that opinion leaders may,

...act as (agricultural) information brokers with the outside world and... they (selectively) bring in and interpret information from elsewhere and communicate this (again selectively) with other members of their community.

They may also,

...serve as experiential experts ...influential in shaping people's norms and values or play a role in legitimizing or disapproving particular changes.

While farmer decision to adopt or not adopt CA and other technologies arises from a consideration of prevailing ecological and socio economic conditions in their locality (Andersson

et al, 2011; Nkala et al, 2011) the same farmers also make transactional considerations of the benefits likely to accrue to them as well. Many times, technologies that enhance one's socio political and economic standing are adopted. In most instances among Sub Saharan small holders, adoption is not so much a result of its technical efficiency but the social mileage one gets riding on it (Doss, 2003).

Moreover, the fact that CA is regarded as an indivisible technology requiring wholesale adoption makes adoption difficult for small scale farmers because their socio economic condition or ecological circumstances may affect their ability to adopt the technology (Nkala et al, 2011). Hobbs (2007) further notes that farmer decisions to adopt CA are mostly taken following evaluation of duration of the period of waiting for meaningful returns from the technology which is normally in the range of 3 to 7 years. Farmers usually opt to disadopt because the waiting period is rather too long. Similarly, Mazvimavi and Twomlow (2008) note that the requirement for pesticides and herbicides meant for controlling weeds during the first to the third year of adoption force farmers, especially small holders, to discard the technology.

Farmer decisions to participate usually derive from the opportunities and benefits they are likely to realize which come with membership in CAIPS. Adekunle et al (2012) note that improved market opportunities arising along the value chain spurred farmers to join platforms. The same can be said for cotton, groundnuts, banana, pineapple and coffee platforms in Malawi, Cameroon and Eastern Africa respectively (ibid)

2.4 Innovation Platforms and rural livelihoods

The contribution of agriculture to improved rural livelihoods in Sub Saharan Africa is insignificant and insufficiently exploited today with most small scale farmers locked in a

‘poverty abyss’ (Tenywa et al, 2011). Efforts are being instituted to upgrade agriculture from being a mere subsistence endeavor for small scale farmers. Owing to persistent dry spells, erratic rains and other biophysical challenges affecting rural areas especially in Sub Saharan Africa, farmers are being encouraged to innovate if they are to withstand these natural and human-instigated challenges (CIAT, 2009). To that end, technologies such as Conservation Agriculture along with high breed seed and livestock varieties continue to be disseminated to small scale farmers with a view to improving their livelihoods (Towmlow et al, 2008; Van Rooyen and Homann, 2008; Filipe, 2010).

Lately, Innovation Platforms have been presented as possible avenues through which farmers can improve their food security and livelihoods (FARA, 2009). The impact of innovation platforms on rural livelihoods can be immediate, intermediate or long term. Gildemacher et al (2011), state that the impacts of IPs vary basing on the conditions in and for which the platform was formulated. Outcomes of Innovation Platforms for rural farmers in Sub Saharan Africa include, but are not limited to: improved stakeholder organization, conflict resolution, more and improved business opportunities, problem solving, resource and material synergies, identification of new opportunities as well as policy advocacy (Gildemacher et al, 2011).

As noted above, some scholars say the benefits of IPs are immediate. This is the point made by Gildemacher et al (2011) who state that these immediate benefits include more market opportunities and business deals for farmers as they get connected to other players in the value chain who include input dealers, traders, marketers, processors among others. Using cases of livestock platforms van Rooyen and Homann (2009, 2010) show that livestock innovation platforms have improved the livelihoods of local farmers in Mozambique, Zimbabwe and Namibia through improved markets.

Similarly, in Tanzania poultry farmers' livelihoods have received an immediate boost due to improved markets. Mugittu and Jube (2011) show how farmers' livelihoods improved immediately as a result of the poultry innovation platform in rural Tanzania. One farmer sold an average of 200 chickens a year making a profit of about US\$ 600.00 annually which goes a long way in improving their livelihoods. Fatunbi (2012) notes that about 5000 farmers in Uganda realized an 80% income boon through innovation platform instigated product innovations while in Democratic Republic of Congo (DRC) the income of about 2500 farmers improved by 200% through the same initiative.

The benefits can be long term basing on the commodity under consideration. For instance, farmers participating in horticulture or poultry are more likely to experience improvement in their livelihoods earlier than those specializing in delayed return platforms. Other scholars say the benefits are intermediate as they foster improved institutional and organizational performance. This leads to improved coordination and enhances the capacity of platform members (see Nederlof and Pyburn, 2012).

Because diverse organizations are brought together in the platform, more cooperation and coordination is realized amongst the various stakeholders. For example, the Conservation Agriculture platform in Monze district, Zambia brought together local farmers, government departments, input suppliers, NGOs, media houses and other stakeholders who had been operating in isolation from others. Van der Lee et al (2011) note that such coalescing of stakeholders results in improved performance for all stakeholders which generally improves development. The same can be said for the vegetable IP studied by Nyikahadzo et al (2012) in Thyolo, Malawi where farmer's earnings improved significantly following the establishment of the platform to facilitate proper marketing of produce from small scale farmers.

However while the above may be used as pointers to the success or not of innovation platforms, it has proven difficult to attach an economic value to the impact of innovation platforms. Gildemacher et al, (2011) state that it is difficult to measure ‘economic growth’ or assess ‘livelihoods improvements’ because of the multiplicity of (diverse) actors involved in the platform.

2.5 Institutional outcomes of Innovation Platforms

Institutional processes are critical in influencing how farmers could use new technologies to improve their livelihoods (Fatunbi, 2012; Nyikahadzoi et al 2012). Traditional and modern institutions constitute the starting point for any change (including innovation-instigated change) occurring in the society (Broekhuysse, 1991). Back (1991) argues that farmers as members of associative institutions based on gender, generation, kinship among others are constrained by such institutions to act as they do. For Dore (2001) rural traditional institutions responsible for the management of common property resources have influence on how small scale farmers relate to new innovations.

In outlining the importance of institutions in economic development North (1990) underscored the importance of transactional considerations in institutional processes, emphasizing that actors are more likely to partake in development initiatives following consideration of the benefits against the costs. Fatunbi (2012) notes that institutional bottlenecks existing in a given setting may hinder the realization of full benefits from a newly introduced technology. Nyikahadzoi et al, further decry the failure to upscale local innovations in sub Saharan Africa owing to a myriad of institutional barriers which may be at play in a given setting. They state that: “*Many local innovations could not be scaled up largely because of institutional related constraints.*” (2012:92). Institutions therefore play a critical role in the design and successful up scaling of any

technology, foreign or local (Ibid). Just like with other innovations, the proper functioning of Innovation Platforms may be jeopardized if due consideration is not granted to the institutional environment in which they have been set up.

Most recently the Agricultural Innovation Systems (AIS) approach has become a more fashionable approach in agricultural research and development (Spielman, 2005; Rajalahti et al, 2008). AIS entails the convergence of diverse players who share ideas in order to formulate new ideas. It fosters linkages among different stakeholders (farmers, researchers, extension staff, marketers etc) as well as cooperation as they try to come up with new and mutually rewarding ideas.

While existing literature on linear, holistic and innovation system approaches to agriculture development has tried to outline the transformation of agriculture research and development, little has been written about the transactional relations taking place among various actors who have been implored to combine forces in agriculture research and development. This study, instead, attempts to analyse the institutional processes influencing new agricultural innovations with particular reference to Conservation Agriculture Innovation Platforms.

2.6 Transactionalism in development and Innovation platforms

Innovation Platforms as we know them today are a product of the Innovation Systems framework (Van Rooyen and Homann, 2009). The innovation systems framework is still relatively new in the study of developing country agriculture systems and has been variably defined (See for example, Agwu et al, 2008; Rajalahti et al, 2008; Spielman, 2005). In general terms, an innovation system can be understood as an interactive learning and knowledge sharing process whereby organizations, enterprises and individuals alike share experiences and compare ideas in

order to come up with new dynamic, and innovative ideas which are put into use for development.

More specifically, an Agricultural Innovation System (AIS) is defined as: *a collaborative arrangement bringing together several organizations working toward technological, managerial, organizational, and institutional change in agriculture* (Anandajayasekeram, 2011:7). The innovation system approach facilitates innovation design, dissemination and adoption which are interactive and not unilinear or unidirectional while also recognizing the role of social and economic institutions which determine multiple stakeholder interactions (Ibid).

As earlier noted and in line with Bailey's (1960) transactional perspective, actors in the rural development arena engage in development with a view to enhancing their position ahead of the overall goal of the development as well as the goal and position of other actors they are engaged with. Simply put, society is typified by many actors harbouring dissimilar motivations (Mararike, 1995; Dzingirai, 1993). Politicians, locals, NGOs, donors and many others hold and champion divergent motivations and aspirations. Peasant farmers have for long been presented as being at the receiving end of the whims of development practitioners and the state at large, however Barker's (1989) study of peasant farmer-state interactions has proven otherwise. The peasant farmers in Barker's case have come up with ways of registering their displeasure with certain actions of the state in their interactions. They even go to the extent of invoking different strategies that enhance their position where they feel shortchanged by the state. Farmers were noted to maintain good relations with the state in a bid to access 'free' inputs but they subsequently went on to create and sustain alternative marketing channels that fetched them more lucrative prices compared to those offered by state boards.

In a similar vein, Dzingirai's (1993) study of peasant-state relations in Chivi, Masvingo notes that while appearing vulnerable to and at the mercy of the state, peasants acted more out of their self interest than ignorance as widely believed. The decisions by peasants were noted to be rational and well calculated to ensure they benefited from each encounter with the state. On account of the above, farmers should not be treated or viewed as entirely helpless and suffering deprivation for they are calculative and manipulative and almost always realize their ambitions from their supposed deprived position.

Mararike's (1995) study of pre-cooperative groups in Manicaland province revealed that people maintained their membership of the group and participated actively therein after receiving or in anticipation of receiving personal material benefits. They also maintained membership in the group if they felt that the group could and would satisfy their personal desires which therefore goes to show that actors are driven by their personal aspirations more than anything else. However they are quick to: *...pull out of a group unless they believe that the group meets their expectations, or will do so at some point in future...* (Ibid: 79).

In counteracting the domineering disposition of the state in state-peasant relations in development interventions, peasants have devised varying strategies that enhance their position while still appearing under the control of the state and other overbearing development institutions. Barnett's (1987) study of tenant water use strategies on the Gezira irrigation scheme shows how tenant farmers devised informal strategies of using officially allocated water to irrigate the official cotton crop while also serving their food crops. The tenants even went to the extent of meticulously reciting the official *grid* or *open plan* irrigation methods but in practice they never used such to irrigate their plots.

Natural resource management is also characterized by a multiplicity of stakeholders. These stakeholders are not necessarily homogenous and they usually hold diverse interests and perceptions concerning the use of the said resources. Mutimukuru-Maravanyika's (2010) study of forest resource use in the Mafungautsi state forest reveals that locals held differing interests in a given resource which in turn influenced the way they related to each other. For instance, some locals were more interested in bee keeping than broom or thatching grass. At the end of the day individual forest preservation initiatives reflected the different aspirations of the diverse stakeholders in the area.

Transactional considerations are not made by peasants alone as representatives of the state and other development actors strategically position themselves to enhance their standing through exploiting the prevailing situation to their benefit. Dzingirai (1993) aptly captures this scenario when he notes that some official decisions and actions are carried out with a view to broadening an individual's personal profile and not necessarily enhance the overall outcome of the development interventions. He notes that extension officials for instance make decisions aimed at furthering their personal mileage more than helping the development cause itself. Similarly, Jiggins (1988) states that in receiving donor funding recipient governments do not look to the development interventions the donations serve but they view the resources as a means to buy political influence. On the other hand members of cooperatives that are aid recipients receive individual benefits from the donor at the expense of the cooperative. Mararike (1995) identifies a group which he calls the '*strategic elites*' who through their privileged socio-economic and political standing use organizations and institutions meant for development as launch pads to kick start their political career. Under the guise of rural development they champion their political ambitions. These individuals are said to have been personalizing institutions which

generate resources. One illustrative case he uses is that of a local member of parliament (MP) who was a member of the provincial development engine, Manicaland Development Association (MDA) but mobilized some villagers to form a rival pre-cooperative group as well as a rival development engine, the Buhera Development Association (BDA). All this was done with an implicit aim of wresting control of resources away from legitimate development institutions and use the same for their own personal political endeavors (Ibid). The development literature reviewed above points to a scenario where the multiple stakeholders involved in development strive to make the most for themselves out of each particular development intervention. I now turn to an analysis of Innovation Platforms and their overall contribution to development.

Comprehension of the innovation systems is relatively widespread but little is known pertaining to the way Innovation Platforms work practically and in theory (Nederlof et al, 2011). The way Innovation Platforms are designed is such that different players interface and interact as they engage in dialogue over the product for which the platform was designed. These include livestock (Van Rooyen and Homann, 2009; 2010) and a variety of cash crops (groundnuts, coffee, cotton, garlick, pineapples, soybean as well as other marketable vegetables and fruits) (Nederlof et al, 2011; Adekunle et al 2012).

Innovation platforms are handy to small scale farmers in that they afford them easy access to other actors in a product value chain. IPs help do away with bottlenecks in communication as well as improving marketing of agricultural produce by improving productivity through infrastructure rehabilitation (Van Rooyen and Homann, 2008). Homann's (2008) study of goat production in southwestern Zimbabwe underscores the centrality of IPs in improving goat productivity and marketing. Similarly Filipe's (2010) study of two livestock Innovation platforms in Chicualacuala and Changara, Mozambique reveals the importance of stakeholder

interaction in the production and sale of livestock. This is because farmers, traders and other actors in the livestock value chains are allowed to share their concerns and identify common solutions to the problems affecting them. The livestock IPs also encourage small scale farmers to commercialize and realize more profits from the sale of their products.

While innovation platforms ideally provide a win-win situation and build trust among actors along the value chain (FARA, 2009; Nokoe et al, 2013), it is undeniable that some actors stand to benefit more than others in the IP. Fatunbi (2012) aptly notes that parties to the IP maintain interest in the platform because they, “...*have a contribution and benefits which sustain their interest and continued participation.*” (Fatunbi 2012: 10). However, little has been written about the differential benefits likely to accrue to the different members of the platform. Also considering the calculative and transactional nature of human kind it is most likely that different members of the platform engage in activities or manipulate the platform to best suit their individual aspirations.

2.7 Key issues arising

From the foregoing review, two interesting issues arise. These are institutional constraint on innovations as well as transactional considerations made by stakeholders as they commit to development in general and operating in innovation platforms respectively. Institutional constraints have a bearing on how on adoption, up scaling and simultaneously out scaling of new innovations which limits potential for development. Due cognizance of these institutional constraints is required if innovation platforms are to be productive. Stakeholders are driven by transactional considerations to partake in development. If their ambitions and aspirations appear to be neglected they are bound to participate lesser in the platform.

2.8 Chapter Summary

This chapter has considered literature related to Conservation Agriculture and Innovation Platforms locally regionally and globally. It has also looked at transactionalism underlying technology adoption as well as the livelihood outcomes of farmer participation in innovation platforms. Lastly transactionalism in development and Innovation Platforms and issues arising were discussed. The ensuing chapter describes the methodology employed in the study.

CHAPTER 3

3.0 RESEARCH METHODOLOGY

The preceding sections, Chapter 1 and 2 formed the research problem, together with the justification for it. The research stands out as an attempt to understand the sociological dimensions of innovation platforms through continued framework for knowledge sharing to improve farmers' situation. Such an attempt is important, not least because it does contribute to a better understanding of a process that can lead to a change in farmers' situation. In this chapter the thesis focuses on the very critical process on how data collection was both conceived and operationalised. By presenting the procedures in this study it is hoped that a better judgment on how the study contributes to knowledge is realized, for a thesis must minimally do this (Babbie 2001). This section therefore considers the methodological approach, research methods, selection of target population and research sites. It starts by looking at the research methodology chosen followed by the research instruments selected, description of study area and reason for selection of the particular areas.

3.1 Gwanda-brief description

Gwanda district falls within Matebeleland South province to the south-west of Zimbabwe. It was established in August 1897 and was then known as Mawabeni and the administrative center was known as Manzinyama before being renamed Gwanda in 1902 (Fleming, 1984). Initially the district was regarded as an extension of Matobo district later becoming a standalone district called Tuli-Manzinyama, Tuli-Gwanda and eventually Gwanda (National Archives of Rhodesia, 1969) The importance of the district and its administrative center became more pronounced following discoveries of gold in surrounding areas such as West Nicholson, Fort Rickson as well

as in Insiza nearby (Fleming 1984) Gold deposits of varying sizes still remain today and they are exploited both at commercial and small scale levels (Mabiza, 2013). Most small scale mines in the district are run on patronage lines with 'big man' delegating responsibility to 'runners' to preside over the day to day running of the mines. The big men are either present or domiciled in places far from the district. The district borders Botswana to the south and is close to South Africa with Beit Bridge district in between to the south west. There is a combined 24 administrative wards in Gwanda district each presided over and represented in council by an elected councillor.

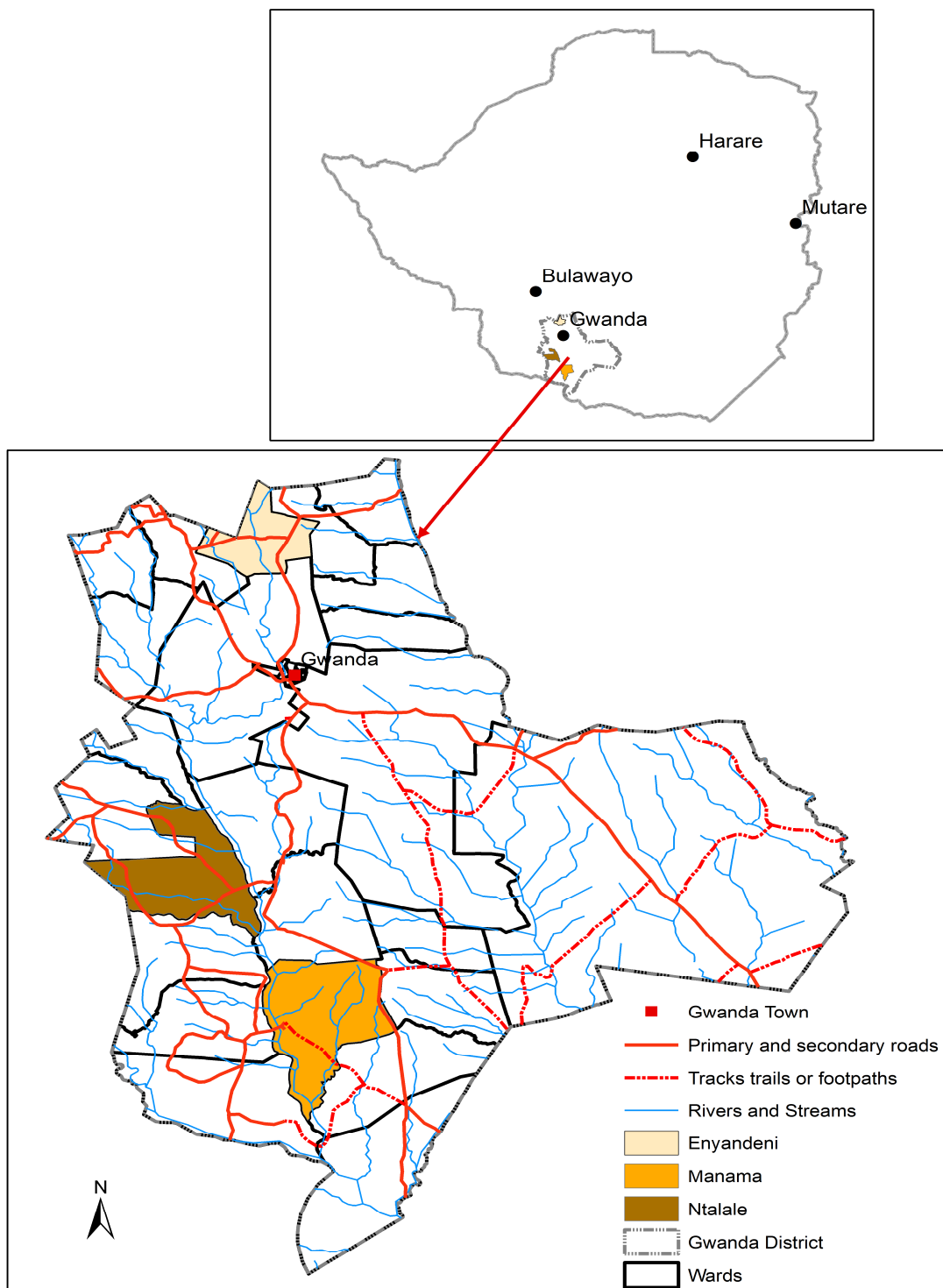
The district falls within the Mzingwane catchment north of the expansive and ecologically variable Limpopo river basin. The Mzingwane catchment is divided into four sub catchments namely Shashe, Mwenezi, Upper Mzigwane and Lower Muzingwane (Munamati and Nyagumbo, 2010). Gwanda district and the southern part of the district which constitutes the bigger part of the research area, falls within the Upper Mzingwane sub catchment. The district straddles agro ecological regions IV and V respectively and is therefore prone to incessant droughts owing to the low and erratic rains it receives. Scholarship is divided on the average amount of rainfall received annually with some pegging it below 300mm per annum (see Ncube et al, 2012; Mate, 2009), while others put it around 400 to 650mm (see Ncube et al, 2012; Munamati and Nyagumbo, 2010; Munamati, 2005; Love et al, 2005). Since colonial times the district's boundaries are constantly mutating with administrative boundaries overlapping with hydrological boundaries for instance. Traditional leaders in the area are also always debating over the extent of their areas of jurisdiction as they allege encroachment by others into their areas.

One thing scholars are generally agreed on however, is that the district is susceptible to incessant droughts occurring generally once in three years or even more frequently. This has turned out to be a long standing and difficult to counter problem. The district has experienced insufficient water supplies for human, livestock and crop consumption. Fleming (1984) notes that challenges of water scarcity in the district were existent even in the early days of colonial occupation of the area. She states that due to acute water scarcity in the district in the 1900s one mining concern made use of the newly built railway line to transport water from Umzingwane river to West Nicholson. The water was used for crushing and treatment of ore at the mine. This distressed scenario is further graphically captured in a 1952 correspondence between the then Native Commissioner for Gwanda, a Mr JCW Cramer, and the Provincial Native Commissioner at Bulawayo. On 11 February 1952 he wrote thus:

I have to report severe drought conditions in the southern portion of the Tuli Special Native Area (Modern day Gwanda South). No rain has fallen in this area since early November with the result that grazing has been completely depleted and most of the wells and boreholes have become exhausted. The situation in this area is becoming desperate... [Emphasis Mine] (Native Commissioner's File S2833/4 National Archives).

Having provided a general background to the district, I now turn to a description of the specific study sites indicated on the map below.

Figure 3.4.1 Map of the study area, Gwanda District



This study is organized around three study sites, namely Ntalale Ward 11, Manama Ward 17 and Mtshabezi/Enyandeni Ward 5.

3.1.1 Ntalale Ward 11

In 2002 this ward had 947 households and a population of about 4577 people, 2078 being men and 2499 women (Zimstat, 2004). Currently the ward has 1079 households, a total population of 4593 with 2115 being men and 2478 being women (Zimstat, 2012). The ward forms part of chief Mathe's area of jurisdiction. The area also has headmen and village heads responsible for its day to day administration.

This ward was serviced by the Gwanda-based Lutheran Development Services (LDS), a humanitarian wing of the Lutheran church with funding from the church and the international donor community. The organization supports a variety of livelihoods projects including Mavula Green Project, a community garden project, community banking services as well as Conservation Agriculture. There are between 20 and 30 households still active in the ward though the majority has withdrawn. The NGO concluded its CA activities in the district in 2008. Ntalale therefore represents a good case for analysis of livelihoods, political structure and institutional arrangements in CA platforms even after the NGO's withdrawal.

3.1.2 Manama Ward 17

A long term missionary work area, Manama is particularly attractive to NGOs as evidenced by the multiplicity of NGOs operating there at a particular point in time. At the time of conducting the researches there were six NGOs active in the ward. These were implementing projects ranging from para-veterinary training, cattle fattening and goat pass-on project-ORAP, Hlekweni Trust, Care International and World Vision; water harvesting-ICRISAT, communal gardens;

natural resources management- SAFIRE, water governance and of course conservation agriculture-Practical Action; Moriti Oa Schaba. These projects brought together multiple stakeholders, for example the livestock projects brought in ICRISAT, Veterinary department, agro-chemical suppliers, abattoir operators as well as the farmers themselves. The area falls under the jurisdiction of chief Marupi and his subordinate headmen and village heads as well as an elected councillor who represents the ward in council.

During the 2002 national census, the ward had 230 households comprising 2823 males and 3505 females (Zimstat, 2004). The total population for the ward in 2012 was 5971 with 2741 males and 3230 females respectively. Households increased to 1283 and the average household size is 4.7 (Zimstat, 2012). Considering the respect they command in the villages, CA farmers are, arguably, now powerful and it was interesting to investigate whether this power derived from involvement with the CA platforms alone or has been bolstered by such.

3.1.3 Enyandeni/Mtshabezi Ward 5

The ward falls under the jurisdiction of chief Masuku and there are several headmen and village heads that help the chief in traditionally governing the area. Since the ward is a resettlement ward (following the villagised resettlement model of the first decade of Zimbabwean independence, [see also Moore, 2005]) there is another layer of authority in the form of Village Chairmen. These often compete for authority with the village heads and headmen. Elected councillors who are representatives of the local authority also lead and represent the ward often in competition with traditional leadership institutions.

The least populated of the three wards in 2002, Ward 5 had 257 households and a population of 1444 people 662 males and 782 females (Zimstat, 2004). Currently the total population for the

ward has declined slightly to 1295, with 628 men and 667 women respectively (Zimstat, 2012). The population is attributable to an upsurge in rural-urban as well as foreign destination migration. The households currently stand at 285 with an average household size of 4.5. Enyandeni is also a recipient of multiple donor initiatives including Operation Joseph a River of Life Conservation Agriculture and food security initiative. World Vision has also been active in the ward, similarly promoting CA. The NGOs work independent of each other. Some dynamic socio-economic issues are therefore brought into clearer relief and the likely outcome of such a scenario for rural livelihoods and institutional arrangements was therefore investigated.

3.2 Methodological approach

Being anthropological, the research uses a qualitative research methodology, a preferred approach that captures the attitudes, feelings and values of the research participants from their own frames of reference or in their social setting, with minor distortion to the data (Burgess, 1982; Leedy, 1997). Scholars that have utilized the method locally include, Robins's (1994) study of land management in Matabeleland Cleaver's (2000) study of water use in Nkayi; Dzingirai, (1993) in his study of peasant state relations in Masvingo; Mate, (2009) in her study of youth sexualities and consumerism in rural Gwanda; Mararike, (1995) in his study of pre cooperatives in Manicaland in the early 1990s among others.

It is phenomenological because it approaches reality from the view point of those who construct it. Such an actor oriented approach allows the researcher to capture first hand, the respondents' views on CA innovation platforms and how they influence livelihoods. While the formative influence of positivism in the social sciences is undeniable (Hughes and Sharrock, 1997), it

should also be borne in mind that its obsession with ‘scientism’ and ‘value freedom’ limit the propensity of the researcher to elicit rich qualitative data. Cognate data gathering techniques used are, observation, key informant and in depth interviews; focus group discussions (FGDs) and secondary data sources and they are discussed in detail below (section 3.4).

3.3 Selection of target population

The three cases around which the research is organized are picked purposively or judgmentally basing on the unique characteristics they possess which are discussed below. The same purposive sampling is also used in the selection of the respondents. This choice is informed by the realization that purposive sampling allows the researcher to use prior knowledge to select his/her sample (Cochran, 1977). So, prior knowledge on participants and non-participants in CA innovation platforms was used to select respondents in the three research sites discussed below. About 5 non CAIP member households, 5 former CA households and 5 CAIP member households were selected per ward. Local opinion leaders, NGO and government officials were also selected basing on their importance in adding value to the study.

3.4 Data gathering techniques

3.4.1 Participant observation

The researcher employed this method especially for Objective 1. This involves the researcher residing in the area of study for relatively long periods of time taking part in the day to day activities of the community while observing in detail the social organization of the society and matters of interest to his research. The technique itself started in Anthropology and was popularized by Malinowski and his students including Barth, Bailey, Kenyatta among others (Lewis, 1976; Agar 1986). Much change has taken place in fieldwork and there are many who

shrug from seeing it as a rite of passage. Unlike questionnaires, valorized for their standardized and objective style of gathering data (Carter and Williamson, 1996) as well as ‘reliability and validity’ (Adams and Cox, 2008) and interviews, observation gives the researcher first hand information of activities and behavior in their natural settings (Berg 2007). I resided with the communities practicing CA during summer season that is when the CA activities are in motion.

The researcher observed conservation platforms working and relations obtaining in households and in community in the areas of Ntalale, Enyandeni and Manama for varying periods of time ranging from a fortnight to a whole month between August 2011 and July 2013. In Ntalale I stayed at the home of Mthatheho, the chairperson of Mavula Green Project. In Enyandeni the Mlilo family, a family enthusiastic in CA, accommodated me on my visits. Mlilo was an elderly man but he had great enthusiasm for CA to such an extent that he would spend the whole day at the CA plot toiling away. He would even have his breakfast and lunch at the plot. In Manama I found multiple researchers staying with the matriarch and gatekeeper, Mama Magaya who was very accommodative and supportive. Her passion for CA had seen her being invited to places as far away as Manicaland and Mashonaland East to impart knowledge to other farmers.

My involvement with these communities saw me participating in day to day activities such as borehole repairs in Manama, livestock dipping and water fetching in Enyandeni. As well as attending funerals in Ntalale. Through observing the livelihood strategies being employed by innovators and non innovators alike, I gained an insight into whether and how innovation platforms foster improved livelihoods in rural communities. Through engaging with farmers at their homesteads, in the fields (*amasimini*) and at irrigation sites and community gardens, I also managed to observe institutional transformations, rearrangements and power dynamics possibly necessitated by propagation of CA platforms. I particularly endeavored to observe new relations

emanating from tenure arrangements following introduction of CA innovation platforms both at the household and community levels. This is consistent with the first and third objectives of the research.

Even as I speak highly of the method as it generated different and critical data, I remain sensitive to its flaws as it related to me. Residents of Manama and Ntalale are predominantly Sotho-speaking with Ndebele being used especially in commerce and public situations (see for example Mate 2009: 82). I should say while I had elementary command of the latter I was not very competent with the former. I relied in large part on the interpretations of my field assistants Brighton and Tsebiso and I believe I lost critical information in the process of translation from Sotho or Ndebele by the assistants. Thus I am sure the observation I made, especially in situations where Sotho was the medium of communication, in turn distorted data as critical Anthropologists say. To counteract this short coming, I consulted key informants and technocrats who were conversant with English and Shona to verify the accounts and explanations given by my research assistants

3.4.2 Interviews

The researcher employed this method especially for Objective 2. This research also used interviews to gather information on CA innovation platforms. In particular, the researcher used key informant interviews and in depth interviews.

(i) Key informant interviews

These are interviews that are conducted with individuals who possess substantial knowledge on the topic at hand. The method itself can be traced from Malinowski's masterpiece *Argonauts of the Western Pacific* and Mead's seminal *Coming of Age in Samoa* who used it with impressive

effects (DiCicco-Bloom and Crabtree, 2006). Regarded as ‘opinion leaders’(Kvale, 2004), ‘elites’ (Derman, 1990), ‘stars’ (Berg 1989) or ‘gatekeepers’ (Adams and Cox, 2008), key informants are individuals who are deemed to know more than other members of the community by virtue of their technical expertise, age, position in society etc (Berg 1989). The key informants for this research included but were not limited to the, two local chiefs, headmen, councillors, village heads and champion farmers or local focal person. In addition, bureaucrats were engaged. Agricultural extension and NGO field officers were interviewed on the technical aspects of CA platforms while traditional authorities were interviewed on the influence of CA platforms on local level institutions. Further, the champion farmers were interviewed on the livelihood implications of CA platforms (See Appendix I for a checklist of interview questions posed to Key Informants).

(ii) In depth interviews

These are partially guided but detailed discussions held between the researcher and respondent (Cohen and Crabtree, 2006: DiCicco-Bloom and Crabtree, 2006). Prior to conducting the interviews, I noted down the questions I wanted to ask which I then used as a guide in enquiring about phenomena under study. That they are in depth means that they allow for discussion to be broad while at the same time allowing the researcher to direct his enquiries to topics of interest to him (Horton, Macve and Struyven, 2004). They were also useful in that they allowed the researcher to probe and follow up on answers given which enriched the outputs. In one of the interviews the man of the house professed his non participation in CA activities ‘due to ‘deteriorating health’. On further probing, the man and his wife revealed that men in the area were not interested in crop production but they invested their energies in animal husbandry

which they believed was more profitable than CA. This scenario above points to the importance of probing in in-depth interviews as it helps to bring hidden issues to the fore.

The researcher held semi structured interviews with CA platform members and non members so as to get varied and diverse explanations of how they perceive it. Through these interviews innovating and non innovating communal farmers' perceptions of CA platforms were investigated. Respondents were strategically guided to present their perceptions on and reception of civil society led innovation platforms. This is consistent with the second objective

The researcher is aware of the difficulties of this method at least in closed society where this might constrain response. In Gwanda, women do not want to be seen in public with single men, especially strangers, so it is possible some cut answers to allay suspicions and ridicule from other members of the community. In some cases women hid from me or avoided enduring discussions, a problem highlighted by Derman (1990). In order to obtain buy-in from the female respondents, I was accompanied by my assistants who were known to the locals. I also tried to engage in conversations with the women in the company of their male relatives.

3.4.3 Focus Group Discussions (FGDs)

The researcher employed this method especially for Objective 3. Popularized by the 'Farmer First' group, FGDs are group meetings where people of similar or different backgrounds converge and discuss a topic at hand. The researcher or moderator is essential for 'providing direction' to the discussion through directing debate especially when it tends to drift from the core of the topic at hand. He or she also promotes dialogue among discussants through probing and facilitating responses during the discussion (Gibbs, 1997; Sagoe, 2012). They are handy in

that they allow for participants to proffer their views especially where people of different genders, age, social status etc discuss. Derman (1990) notes that some people especially women in rural conservative settings in developing countries, as a result of custom, are not always comfortable discussing or opening up to strangers in the absence of other people. Hence the FGDs were convenient in that they made them feel safer and contribute unhindered.

The researcher held three FGDs with combined groups of innovating and non innovating farmers, men and women to determine their perceptions and responses to CA innovation platforms. The first FGD was held in Enyandeni at Mlilo's homestead with a group of four men and seven women of varying ages who were members of CA groups to discuss the perceived contribution of CA to rural livelihoods. In Ntalale five men and five women converged under a tree at Mhene Bulamba nutrition garden and discussed the implications of CAIPs on institutions in the area. For Manama, the discussion was held at Humbane dip tank with a group of thirteen participants, eight of whom were female and five male.

The challenge with FGDs in all three sites was that the so-called lead farmers appeared to be taking the lead even in the discussions in the process denying others chance to contribute to the discussion. Ordinary group members would always wait for the lead farmer to respond before they could 'chip in' with their contributions. In a way, this muffled the views of other participants. However the researcher tried as much as possible to provide opportunities to everyone to participate in the discussions. All the same, the discussions were eye opening for the researcher for hidden gender dynamics of innovation platforms came out clearly during the course of the discussions.

3.3.4 Secondary sources

The reservations of how they may hide a political element aside, secondary sources are used extensively in research (Law, 2005). They are referred to as secondary because they were prepared for purposes different from those of the study but they still speak to the requirements of the study at hand. This study made use of a wide variety of secondary sources. I made use of archival data from the National Archives of Zimbabwe to trace the history of Gwanda district from its establishment to date. Of particular interest to me was the ecological as well the socio-political conditions prevailing in the area at different times. In Manama I used NGO end-of-project reports, In Ntalale I utilized coordinators' or focal persons' reports, In Enyandeni I made use of minutes of platform meetings, farmer records and farm diaries etc. Emphasis was on those sources directly linked to the CA platforms and farmer initiative. Secondary sources helped the researcher to track the contribution of CA platforms to improved livelihoods. This entailed assessing pre CA platform data and current data to try and analyze livelihoods before during and after the introduction of civil society brokered CA platforms in line with the third objective.

However this particular data gathering strategy was not without a myriad of frustrating shortcomings and glitches prominent being bureaucratic bottlenecks particularly in NGOs and government departments, like many anthropologists working in rural development. To mind comes Moore's account of the difficulties he encountered at the hands of state bureaucrats when he sought permission and clearance to carry out his ethnography in Kaerezi area of Nyanga district. So cumbersome was the process that he had to rely on colleagues 'with connections' to facilitate his clearance (Moore, 2005). In the case of one of the NGOs, I was instructed to make a formal request for access to project reports (through letters of request to the regional offices) after which I was made to shuttle between offices in Harare and Bulawayo explaining the

purpose of the research as well as undertaking not to cast them *'in bad light'* as one official emphasized to me. As aptly put forward by Moore (2005), these bureaucrats shuffled me from office to office as a way of reaffirming their 'sovereignties and territories' to me (Ibid: 26). Accordingly, I settled for secondary information that the NGOs themselves felt would not be incriminating, because that was the practical thing to do. Such information did not always capture the essence of the institutional processes obtaining in the platforms. End of project reports for instance did not capture the underlying politics playing out in the CA and IP groupings (for the obvious reason of charming donors) yet observation pointed to the occurrence of such.

3.5 Ethical considerations

Ethics in research (especially in rural settings) are often glossed over leading to a myriad of challenges for both the researcher and the research subjects themselves (Derman 1990). In order to conform to the ethics of research, the researcher sought prior consent from all intended respondents. A formal request to conduct research was circulated to all office bearers in Gwanda and clearance was sought from the local leaders before engaging their subjects. This was done through district-wide introductory visits carried out in August and September 2011. During the introductory visits I introduced myself to the AGRITEX provincial and district leadership, District Administrator's office, several heads of government departments, Gwanda RDC leadership, chiefs; headmen and village heads as well as other local opinion leaders. The purpose and broad aims of the research were spelt out to all concerned authorities in order to gain their trust and cooperation.

Having undergone a period of state-instigated violence, the people of Matabeleland are still particular about the motives of strangers in their area and they will go to any lengths to try to 'protect' themselves from strangers. One particular incident comes to mind, on one of our earliest visits to Ntalale we lost our way in the maze of dirt roads in the area until we met some old man who after trying to explain ourselves and our purpose in the area gave us what turned out to be very wrong directions. The directions led us out of his village into the adjoining ward! On reflection, I am convinced the man was not particularly comfortable entertaining strangers hence his misdirecting us. Against such a background of suspicion and apprehension exhibited by locals it became imperative to protect the residents of Matabeleland who have suffered ethnic based violence from the state (Alexander, 2000). I therefore concealed all information and sources that may be used against the local people. As recommended by van der Geest (2003) and for the purposes of confidentiality pseudonyms are used throughout the research to protect the identity of the respondents.

3.6 Chapter summary

This chapter discussed research design, sampling, data gathering techniques as well as the actual process of gathering data. Challenges encountered during the data gathering process along with research ethics were also considered. The following chapter presents findings of the study related to the first objective of the study.

CHAPTER 4

4.0 STAKEHOLDER PERCEPTIONS OF CONSERVATION AGRICULTURE INNOVATION PLATFORMS

4.1 Introduction

There are several stakeholders involved in Conservation Agriculture and Innovation Platforms and these include: farmers, traditional and local leaders, extension officers, Non Governmental Organizations, research organizations and researchers, media organizations, product marketers among several other interested parties (Van der Lee et al 2011, Nederlof and Pyburn, 2012). Each actor involved in a given technology or innovation, from its promoters to its recipients and even non-recipients, best views it in their own frames of reference in order to suit their own aspirations or ideas. Andersson and Giller (2012) in discussing processes of Conservation Agriculture (CA) for example, note that promotion of CA has been championed by “...a conglomerate of faith-based, science-based and policy organizations.” (2012:1). These all hold different expectations. In a similar way, innovation platforms also bring together a cross section of players from diverse backgrounds and representing different interests. In fact, the more actors there are in an IP, the more divergent will be their views of it (Van der lee et al 2011). Furthermore, technology adoption decisions are not simplistic but dynamic as they involve an evaluation of a multiplicity of real and/or imagined spinoffs likely to arise when one decides on adoption, disadoption or non adoption (Doss, 2003). Stakeholder decisions on whether to adopt, not adopt or disadopt a given technology is therefore influenced by such things as, age gender, socio-economic status of targeted households as well as biophysical conditions of the targeted area.

This chapter looks at the stakeholder perceptions and adoption of CAIPs in Gwanda District. It argues that these perceptions and adoption are in large part influenced by the individual interests of the actors involved. The chapter is arranged as follows: the second section characterizes adopters, disadopters and non adopters, it also explores factors that influence their perceptions and decisions on whether to adopt or disadopt. The third section looks at other stakeholder perceptions while the fourth and final section discusses and concludes.

4.2 Who are the adopters?

Adoption literature defines adopters as farmers who adopt a technology relating to agriculture (Rogers 1983). Adopters invest so much time and resources in it (Diederer et al 2003). In this chapter, CA adopters are those farmers who have adopted and continue using the CA technology ever since its inception by government departments in partnership with local and international NGOs. Such farmers, who are always few, see the potential of such a technology in improving the quality and quantity of their crop hence their constant and consistent use of the technology. Demographic profiles gleaned from platform and CA group registers in Gwanda reveal that adopters are mostly the elderly (55 years and above). The majority of these adopters were the well to do and influential members of the community. One prominent adopter from Humbane village, Manama Ward with a modern brick house is a former teacher who had taught in urban areas before moving to rural Gwanda. She has all her four children staying and working in neighboring South Africa. She is also the local village head, facilitator for several NGO projects in the area according to the head of the NGO operating in the area. Most villagers relied on her in times of need and worked in her fields in return for food. One of her neighbors testified that:

‘Umama (Mother) assists us with food almost every year. In return we help her with the basin preparation and other farm activities.’

In Ntalale B village, Ward 11, the prominent adopter is a seasoned traveller and ‘multi-linguist’ who speaks six local languages including those spoken in the high veldt the exposure of which may have influenced his high regard for crop production and new externally-driven agricultural innovations . He was also a former extension officer having worked in the colonial government and meat inspector with 26 years experience. He had a herd of 80 cattle, about 60 goats and close to 40 sheep. He was also the chairperson for the local gardening project, as well as local church leader. His three children are also based in South Africa and remitted regularly to the family. All these characteristics, presumably, place (in the farmer and other individuals like him) some prestige as well as authority which serve as currency in interaction with other stakeholders in the platform. Farmers in this area are generally not at liberty to disclose their exact numbers of livestock. Such reluctance may be attributable to their strategy of fitting NGO set criteria of beneficiary selection.

For Mtshabezi, Enyandeni (Village 5), the local prominent adopter was a reverend who had travelled through West Africa and Spain and stayed in the USA for several years before and had trained as a teacher while the wife was a retired registered nurse. The farmer still enjoys lots of financial and material support from local and foreign based associates some of which he channels to his farming activities. Their children were very educated and also constantly sent them remittances. This is consistent with observations made by Giller et al (2009) as well as Nkala et al (2011) who note that the relatively wealthy communal farmers are more likely to adopt new technologies compared to the less endowed farmers. These farmers are more willing to adopt new technologies as their stock of wealth, social influence and external support from friends, relatives and children in formal employment act as a hedge against uncertainties that

may arise due to unsuccessful technology adoption. In short these farmers are less risk averse compared to the poorer farmers.

These adopters eventually act as role models or beacons to other farmers and their plots were used by extension and NGO staff for extension purposes as demonstration plots where other 'late adopters' learn the technology, for instance in Manama Ward 17 Goholi village, Mrs Mafu's plot was used as a demonstration plot for maize and other CA crops by SAFIRE. The fact that the plots of mostly successful farmers are purposively picked by extension staff for use as demonstration plots implies that these farmers are afforded more prestige and first preference in accessing inputs which makes them loyal to the new technology and its proponents.

Previous researches on gender and adoption of agricultural technologies show that men are better adopters than females with female headed households not adopting at all or partially adopting in comparison to male headed households (Doss, 2003; Ndiritu et al, 2011). Limited adoption among women and female headed households in Sub Saharan Africa is also attributable to the marginal position they occupy in society as well as few decision making chances. However, demographic profiles gleaned from CA group registers revealed that there are more female than male adopters of CA technology across the three research sites in Gwanda. Such over representation of female farmers as adopters may be attributable to the general belief that women are responsible for subsistence farming while males are expected to be concentrated in off and nonfarm activities. Moreover southern Zimbabwe (including Gwanda district) is characterized by extensive migration of middle aged male household members to neighboring South Africa and Botswana in search of employment (Mabiza, 2013; Tevera and Zinyama, 2002). It is also

imperative that Innovation Platforms be gender sensitive in order to allow women who are mostly marginalized to partake fully and benefit from participating in the platform (Makini et al, 2013).

4.3 What they said about CAIP

That adopters value CAIPs highly is undeniable, this is seen in what they say. A lead farmer from Manama ward Goholi village, Mr Mhlongwa, said:

‘CAIPs are very beneficial to farmers. I now have better access to inputs, expert advice as well as encouragement from other platform members.’

Mrs Nkomo of Village 3 Enyandeni Ward noted that,

‘Conservation agriculture is good we get to harvest lots through it.’

While NaSthabile of Ntalale A village, Ntalale remarked:

‘CA groups are helpful as we learn and teach each other new ideas which improves our yields and understanding of farming.’

It would appear that they value CAIPs because of the benefits they bring into their lives. One farmer, Mr Ncube, of Humbane village Manama, stated that:

‘Even in the driest of seasons I can still afford to harvest something as opposed to those who have not adopted the technology. Moreover, my concerns pertaining to the crop always have an answer from members of the platform who may possess better knowledge about the crop production and tending.’

When one examines the issue of benefits accruing to farmers from CA it is clear the farmers are not entirely inventing. Mr Ncube reported that in the 2006/2007 season he harvested about fifteen 50 kilogram bags of maize while Johnson his neighbor who had used conventional means of farming got about five bags. Such positive perceptions motivated adopters to continue with the technology even after NGOs had pulled out in all the three sites.

4.4 Disadopters

In literature disadopters are farmers that are disenchanted with a given technology after having tried it out (Rogers 1983, 2003). In the context of CA in Gwanda, these are farmers who initially adopted the technology but abandoned it later. The disadopting farmers regard CA as useless:

Mzoli a middle aged farmer from Manama sarcastically remarked:

'This technology they are introducing is useless. In fact, it is hopeless and it is like a cloud bearing no rain, impressive at first but disappointing at the end.'

In Village 5 Enyandeni, Phineas chose to do piggery and gardening ahead of CA and he had no kind words for CA. He stated that:

'CA is of no use; I wasted my time all those years trying worthless things.'

Landa from Ntalali A. village also regarded it as valueless, saying:

'My friend, I was dreaming when I thought CA would improve my yields. I have seen that it cannot help us.'

4.5 Reasons for disenchantment

Some of the farmers viewed the technology as labour intensive compared to the exaggerated benefits promised with its introduction. In describing the burdensome nature of CA Mzoli compared adopting the technology with indirectly serving a jail term. He said:

'CA is like serving a jail term (where you don't have freedom and perform hard labour under strenuous conditions) because of too much work involved in it.'

Others saw it as stressful: Phineas from Mtshabezi said:

'Attending regular group meetings, the requirement to monitor CA plots daily and having extension and NGO staff on your doorstep everyday (supervision) is stressful.'

Others saw CA technology as unsuitable arguing that their region was not conducive to practice it. Landa from Ntalale said:

'I quit after realizing that there was insufficient mulch in the area. I ended up literally fighting my neighbours and chasing after donkeys and cattle for mulch. The soils are sandy with little capacity to hold water for long. Small grains are actually more profitable than maize in this area.'

Other farmers saw it as a threat to social order. They saw it as causing strife and tension in the community. They cited internal power struggles in the CA group as the reason for their disadoption. Phineas further said:

'I don't have anything to do with CA because our village and the group in which I was had people who were power hungry and always wanted to be leaders of the group even when they had failed. I could not continue to be part of that confusion hence my resignation.'

It was revealed in a discussion with the incumbent CA group chairperson that the farmer in question was now using his influence as a village chairman to sabotage the activities of the CA group by, for instance instructing other villagers to attend the servicing of the borehole on a day when the CA chairperson had called for a meeting.

The disadopters also had problems with the way in which extension and NGO staff treated them in terms of adhering to CA principles and their functions in the CAIPs. Landa, Phineas and Mzoli all complained of being denied the chance to be creative and inventive in the implementation of CAIP processes. Landa said:

I left CA because each time I interacted with the NGO guys they treated me like a kid who does not know anything about farming yet I have been doing it all my life. I think I even know better than some of these young NGO guys who come to teach and supervise us!

The arguments raised by the various disadopters are compelling considering that in other contexts CAIPs have been abandoned for their stressful itineraries (see for example Andersson et al, 2011), as well as unsuitability of the biophysical conditions in which CA is being promoted.

4.6 Non-adopters

In literature non adopters are usually people who are not attracted to a new technology (Rogers 1983). They are also known as laggards (Deideren et al, 2003). With regards to CA, these are farmers who have not adopted the CA technology and do not participate in IP activities. In Gwanda most of these farmers seem to be very poor or socially marginalized to participate in CAIP activities or they have other more lucrative interests to pursue. Other non adopters were terminally ill and incapacitated to partake in CA activities. A further category of non adopters is

that of people who saw no value in practicing farming and chose to engage in activities like gold panning and cattle husbandry.

Disregarding those scorning and not adopting it for its limited viability, non adopters are generally farmers on the margins where conditions make it difficult for them to adopt. This category constitutes a greater number of non adopting farmers in all the three study wards while those who are well off or pursuing other livelihoods sources outside farming and CA are also generally present across all the three wards.

4.7 What non-adopters said about CAIPs

The poor non-adopters viewed the CAIPs as good but decried the selection criteria as discriminatory and unfair to them. They alleged nepotism in the selection of participants. One of the respondents Philani of Village 3 Enyandeni said:

'The NGO and AGRITEX staff look at who you are in selecting. They pick people on the basis of who they like.'

NaFiso from Manama also felt that the selection criteria was unfair to ordinary farmers like her. She said:

'I think we have been sidelined from these projects because my family is poor and my husband is not an influential person in the community. I would have wanted to take part in the project but it seems it is for the rich and well connected'

These claims may be true considering that poor people in most instances are not connected politically and therefore experience great social marginalization at the hands of society.

Furthermore these non adopting farmers complained of being sidelined by NGO and extension staff owing to their perceived incapacity and backwardness. In this regard, Philani said:

'I have never been visited by NGO or extension staff in my fields despite the fact that I need their teachings just like anyone else in this village. These guys view us as doomed to failure and do not make any effort to teach us new farming techniques such as CA. They actually have their favourites in this village that they invite to training and visit regularly. I think that is not fair.'

Those who were terminally ill applauded the CAIPs but attributed their non adoption to their illnesses. Dalubuhle, an arthritis patient from Mtshabezi said:

'I would have loved to participate in CAIPs but have not adopted because of this permanent illness (arthritis)'

The illness is severe and contradicts the busy and strenuous schedule of CAIPs where one spends a lot of time at the demo plot, platform meetings, their fields or colleagues' fields learning or helping out.

In Ntalali B village Judith a tuberculosis patient never adopted the technology and opted for illicit beer brewing ahead of CAIPs because of her ill health. She said:

'The demands of these CAIPs are very high and I felt I could not cope with them given my ill health, but even the sick like me still want to eat hence my choice of beer brewing which is less demanding.'

Some of the well off people who were non adopters argued they had enough resources and needed no extra resources (seed, fertilizers and other implements) from the NGO. One of the rich

non adopters from Goholi village Manama Ward owned a filling station, a grocery shop, a huge herd of cattle, goats and sheep. Another rich farmer, Thembelihle of Goholi village, Manama said:

'I did not join CAIPs because it is for those that have problems in accessing resources like seed and draft power.'

In Ntalale, Moyo, a local farmer who owned a grinding mill, store and about 100 herd of cattle said:

'Much as this CAIP thing of yours sounds good I do not have time to pursue it as I have more pressing issues to attend at the shop hence my decision not to join it.' Such claims are sensible considering that some of the well-off farmers rely on nonfarm and off farm activities for survival. The claims are also valid given that these farmers have other channels to pursue interests contrary to other categories of farmers who arguably want to gain influence and prestige through the innovation platform.

4.8 Private and public sector stakeholders

Besides farmers who are targets of a given technology, private and public institutions are represented on innovation platforms (Van der lee 2011, CORAF/WECARD, 2012). These other stakeholders have perceptions towards a given technology which are driven by a number of professional and strategic considerations. These perceptions are often played out in the way the organizations participate in the platforms and they are considered below. Majority of NGO and research officers try as much as possible to present their technologies of interest as ideal and necessary even in situations where they have been seen to be irrelevant. For NGOs, the need to

post good results to their funders makes them give glowing reviews of otherwise inappropriate technologies.

4.9 Views of AGRITEX extension staff

As a state agency this organization is mandated with coordinating agricultural activities in the district. The DAEO with assistance from supervisors and ward extension workers go around training farmers. The extension staff said CAIPs could be helpful but considering that the initiatives to set them up were short-lived meant that not much benefit is derived from such innovations. The DAEO blamed NGOs for sidelining them and said:

'The CAIP initiatives are not going to be of much benefit to the farmer because the initiative is often short-lived, besides the NGOs shun us yet we know the farmers better.'

Another extension officer stationed at Gwanda office, Charles, noted that:

'New technologies often require three to four years for them to start paying off to the farmers but the paradox is that most NGO projects are wound up in the third year of inception leaving the farmers without guidance and assistance. What this means is that farmers are exposed to new interventions every four years without being allowed to establish how viable the previous intervention may be.'

A ward extension worker from Mtshabezi, Juliana, lamented the fragmented approach to CA dissemination and IP setting up which was adopted by the NGOs. She noted that:

'Initiators Of CAIPs are competing for clientele among the farmers in the process delivering a half-baked cake to the beneficiaries. For me, it is a waste of resources and time'

It is possible these claims and allegations signify tension possibly arising from jealousy between government extensionists and NGOs. The tension arises as stakeholders encroach into each other's mandate. Moreover, the tension comes from exclusionist approaches adopted by each stakeholder in the IP which ironically is not in line with the dictates of prototype IPs which require cooperation and mutual understanding among partners. NGOs often sidelined extension staff in all CAIPs which hurts the farmers ultimately because once the NGOs withdraw government extension staff that remain behind are reluctant to work with the farmers for having been initially sidelined. In general NGOs presented a narrative of success perhaps because they gained from such initiative.

4.10 NGO representatives

Non Governmental Organizations have taken a lead in the promotion of rural-based agricultural initiatives. They often collaborate with other locally based partners in the dissemination of these innovations. There are six international and four local NGOs promoting CA in Gwanda district. These are: SAFIRE, Practical Action, Lutheran Development Services, Care International, World Vision, ZIMPRO, Dabane Trust, ORAP, Hlekweni, and Moriti Oa Sechaba. These NGOs have come and promoted the technology in wards of their choice. NGO representatives were generally optimistic about the usefulness of CAIPs for the communities. One representative noted that the farmers practicing CA and participating in CAIPs harvested more than those still practicing conventional farming. These NGOs however adopted slightly different strategies in the promotion of CA activities. A case in hand is that of World Vision and Practical Action whereby the former distributed food items like mealie-meal, cooking oil and beans as well as farming implements and inputs while the latter provided farming implements, seed, fertilizers and fencing material. These different incentive strategies were influential on farmer perceptions and

adoptions of CA. Overall, NGOs seem to be happy because CA (and IPs) give them a semblance of control over farmers. This is seen in the way they relate with farmers and line ministry staff. Their power also presumably derives from the vast resources they command and distribute amongst participating farmers.

4.11 Local leaders

Traditional and other local leaders in the study area include chiefs, headmen; village heads, councilors and local elders or opinion leaders. They serve as an entry port for change agents intending to operate in their areas of jurisdiction. These traditional leaders are also used to mobilize communities to participate in new activities and constitute an indispensable resource for NGOs intending to introduce new innovations in an area. For Gwanda, local leaders like councilors played a coordinative role in helping NGOs reach out to farmers. Perceptions of these traditional and other local leaders are as varied as those of other stakeholders discussed above. Such perceptions are, arguably, influenced by the anticipated and/or real influence of the innovation on the leaders' hold on power in the society as well as the benefits likely to accrue from participating in CAIPs.

Local leaders' perceptions were divided. Some leaders felt that the introduction of CA brought with it a lot of problems as land use patterns shifted. One village head in Mnyabetsi Village, Manama Ward, Mr Nare, argued that the innovation heightened tensions among farmers as they tried to protect their CA plots from encroachment by livestock in search of stover which served as mulch (see Chapter 5 for a discussion of institutional changes instigated by CAIPs). The emerging land use patterns were ironical in that while the CA adopters proclaimed exclusive tenure over their individual plots as a way of safe guarding their plots, they drove their livestock to others' plots hence raising tensions with community members not practicing CA.

Other traditional leaders felt threatened by new authority structures emerging as a result of these CAIPs. The CAIPs bestowed power upon previously powerless individuals and they posed a real and/or imagined threat to hitherto established power bases. Out of uncertainty and jealous established leaders even went to the extent of discouraging their constituents from partaking in CA activities as a way of keeping in check the new authority structures. At Mtshabezi one CA platform chairman Mdala Dube reported that his leadership in CA activities was being ‘sabotaged’ by the local village chairman because he was not part of the platform. Mdala Dube narrated how on several occasions the village chair would call for an urgent meeting just to scuttle the platform’s planned activities. On the other hand the village chair argued that the CA groups had given “*too much power*” to some locals resulting in them challenging the authority of ‘official’ leaders.

However, other leaders perceived the CAIPs to be a noble initiative that brought farmers and other stakeholders together while also promoting mutual understanding among new and old leaders. One ‘deputy councilor’ for ward 17 Manama, Mr Maligazana argued that CAIPs encouraged unity among the farmers and stakeholders. It also turned out that these leaders were supportive of and cooperative with those NGOs that gave them substantial allowances while not cooperating with those regarded as poorly financed.

NGO facilitation allowances ranged from as low as US\$10 to US\$35 per day and traditional leaders are said to have cooperated with the ‘better paying’ NGOs in mobilizing communities. Extension staff were also found to be willing to work with those NGOs which gave them

‘reasonable’ Travel and Subsistence (T&S) allowances. The leaders would go to the extent of encouraging their people to join initiatives of certain NGOs ahead of others. To that end it may be reasonable to argue that the perceptions of leaders towards new innovations may not necessarily be premised on the significance of the said innovation in the lives of the people but on their perceived usefulness in enhancing their individual aspirations.

Other traditional leaders felt hard done by the way CAIP interventions were introduced in their areas of jurisdiction as NGOs by-passed them in the process of beneficiary selection and actual implementation of the project. They argued that these CAIP interventions were presented by the NGOs as epitomies of liberation and freedom from hunger for rural communities experiencing perennial droughts but in actual fact these interventions were enslaving these farmers in a way. Chief Masuku remarked that:

‘These CAIPs are not in any way liberating. They are a new form of slavery for the farmers. The only difference with the slavery of long back is that the current slavery is voluntary. Conservation Agriculture for me is synonymous with slavery in its worst form. If I had my way I would discourage my people from adopting it!’

Chief Marupi who is still in his late teens also felt that the people in his area are not benefitting much besides the inputs that came with CAIPs in the initial stages of the interventions. He felt that they were not being adequately allowed the chance to present what people in their constituencies really required to uplift their livelihoods. This assertion from the two chiefs is somehow valid considering that traditional leaders featured in CAIP activities as ex-officio and not full participants thereby limiting their contribution to the platforms’ outputs

4.12 Chapter Summary

This chapter has presented the varied perceptions held by stakeholders towards the Conservation Agriculture based Innovation Platforms. It has established that peoples' perceptions are molded by the experiences they have in the platform. People's or stakeholder experiences also influence the decision to continue in the platform or disadopt and discard the technology all together. The chapter has revealed that the underlying currency for adoption or not are the transactional considerations people make prior to making the decision to adopt or not. In the final analysis we can note that the development arena is populated by stakeholders driven by self interest and may discard a given technology or not participate in related fora if they consider their interests to be negated. The next chapter is a presentation of findings relating to the second objective of the study.

CHAPTER 5

5.0 THE INFLUENCE OF CONSERVATION AGRICULTURE INNOVATION PLATFORMS ON INSTITUTIONS IN GWANDA

5.1 Introduction

In the rural areas the introduction of new innovations or technologies particularly in the field of agriculture brings with it new institutions. In some cases existing ones take new forms, what Cleaver (2001) terms institutional bricolage. However, it can also be the case that old institutions disappear altogether (CORAF/WECARD, 2012; Chereni, 2007). The institutional transformation that arises emanates from two distinct sources; firstly, institutional change is externally driven with outside forces transforming them (institutions) to suit dominant or prevalent interests. Secondly, institutions change endogenously adapting and remaining relevant to the current situation. Kingston and Caballero (2009) also note that institutional change may occur as a result of political and evolutionary processes internally or externally derived. In line with the above propositions, it can be argued that the introduction of Conservation Agriculture Innovation Platforms culminates in changed institutional arrangements often with far reaching consequences in the affected areas.

As discussed in the preceding chapters, the process of IP formation is characterized by the congregation of players of diverse backgrounds, and on that account, who are bound to hold variant ideologies. Because Innovation Platforms serve as "...grounds and pillars for multi-level, multi-stakeholder interactions..." their "...formation is a dynamic, highly context specific process... *that may necessitate institutional reformulation*" (Tenywa et al 2011:118 [emphasis mine]). The diversity of backgrounds therefore necessitates a reformulation of associational

relationships obtaining amongst these institutions and other interested actors (CORAF/WECARD, 2012).

This chapter sets out to discuss the second objective of the research which sought to assess the influence of Conservation Agriculture IPs on rural institutions and institutional processes. It further sought to analyze the institutional changes that arise as a result of the establishment of IPs in rural settings. It looks at whether and how CAIPs influence institutional formation and change. The chapter attempts to answer the question of whether the institutional metamorphosis and resultant proliferation as observed and discussed in preceding chapters is attributable entirely to the advent of IPs or there are other extenuating factors with a bearing on the institutional changes noted.

This chapter is arranged following a four-point schema of what is likely to happen when new innovations are introduced, these are outlined below. Firstly, the introduction of new technologies nullifies or cancels out existing institutions, secondly new technologies strengthen existing institutions, thirdly introduction of new technologies brings with it new institutions, lastly when new technologies are introduced no institutional change occurs and the status quo remains. After an exploration of the above schema, the next section explores the institutional changes arising in the three research sites following the introduction of CA and formation of IPs. The chapter also looks at the implications of the changes on social organization in the area and lastly it concludes and attempts to theoretically situate the chapter

(i) Institutional change and nullification

In order to populate the framework above I now turn to the issue of institutional change and nullification since it is the more perverse of the changes wrought by CA. It is clear from available data that CA nullifies existing institutions. By this I mean that it erases established practices of using and relating to land. Now we give three cases to support the above assertion.

An established practice in Gwanda is the opening up of commons to allow supplementary grazing for livestock during the winter season following harvesting of crops. Ideally livestock is allowed access to stover or crop residues strewn across the fields (*amasimini*) in the aftermath of harvests starting around April to the onset of the rains in October or November. However, CA reverses this, coming up with a new range of practices organized around individualizing the commons.

Firstly, CA encouraged farmers to tightly fence off their properties. In some instances farmers used brush or thickets as did Mr Banda who used thickets slashed from the commons. The fence itself was so thick and thorny trees were mostly used in fencing off the fields, presumably to make it impossible for livestock to breach it.



Figure 5.1:Thicket fenced CA plot. **Source:** Fieldwork (2012).

In the same village Mr Mlilo double fenced his plot with barbed wire on the outside and thickets on the inside. The barbed wire was double strand and reinforced with wood and metal droppers. Not only did he fence the plot but he also regularly inspected the fence to identify where animals had the potential of encroaching into the plot.



Figure 5.2: Farmer inspecting his double fenced CA plot. **Source:** Fieldwork (2012).

Clearly these two cases suggest the new tenurial practice brought about by CA to prevent the use of commons especially by CA farmers protecting their plots from communal access. Sometimes the new practice of individualization may take the form of hiding commons from the public eye and public use. The first example is found in Goholi village, Manama where Mr Phiri hid stover in a huge tree behind his homestead. Even neighbours who could see it could not access it as they had done over the years.

The same pattern of concealing commons which was a break with the past was also evident in Fumukwe village, Manama where a CA farmer Mrs Nare hid stover in a structure next to her bedroom. Not only did she conceal the stover but she barricaded the structure so that no one could have access to it and no other livestock could chance on it.



Figure 5.3: Stover stowed away from livestock's reach. **Source:** Fieldwork (2012)

Farmers practicing CA never run short of excuses to justify their new practices. Some say it is the only way of ensuring that they have the requisite crop residues to serve as mulch necessary for continued fertility and maximum moisture retention on their CA plots. Later on in the chapter, I shall describe some of the implications particularly conflicts arising from this practice. These two examples demonstrate a new practice with a bearing on common property which ten years ago did not exist. The next section looks at the influence of new technologies on the emergence of new institutions.

(ii) New technologies and the emergence of new institutions

Change and nullification as discussed above do not necessarily leave a vacuum in the institutional set up but culminates in the establishment of new institutions. This section looks at the new institutions formed following the adoption of new technologies. These new institutions

arise as a result of the introduction of new technologies in an area. The same can be said for Gwanda following the introduction of CA and IPs. The new institutions were established with the explicit purpose of overseeing the CAIP activities including soil and water management, input distribution and training of farmers.

The first example of newly formed institutions is the Platform Committee (PC) whose mandate is the coordination of IP activities which include soil and water conservation, seed and fertilizer distribution, training of new CA farmers, management of demonstration plots. Previously AGRITEX extension officers were responsible for related issues like crop cultivation, livestock production crop inspection. The Department of Natural Resources was responsible for soil and water preservation while Master Farmer training was the responsibility of Zimbabwe Farmers' Union (ZFU). For example the platform in Mtshabezi village 3 was led by Mr Bhebhe since the inception of CA in the area. In Ntalale the implementing NGO (Lutheran Development Services) bestowed the responsibility of the coordination of platform activities on the committee led by Mr Zondi. The CA committee in Manama had women as chairperson and committee members respectively. The committee was led by Mrs Ranthanang.

Another newly established institution are what might be referred to as institutions of agricultural excellence. These institutions are responsible for providing farmers with excellence. Examples of these include the Local Champions of Development (LCD) as exemplified in Manama by Skhanyisiwe, a middle aged widow who received much recognition from fellow CA farmers and other villagers for her new found role. A variant of this was the Local Drivers of Change (LDC) as exemplified by Mthatheho a former extension worker and local church leader. LDCs or LCDs

are therefore farmers deemed by the NGO and other implementing partners to be innovative, successful and with potential to impart their CA experiences to other farmers.

The following are some of the traits that qualify a farmer to be designated an LCD/LDC: accessibility to other farmers, willingness to collaborate with development initiators and other farmers, willingness to train other farmers, appreciation of cultural and social context of local farmers, upholding active farmer participation and learning by doing etc (Practical Action Annual Project Report, 2010). These functions were traditionally found among so-called farmers and disseminated by AGRITEX extension workers and farmer representative organizations (Zimbabwe Farmers Union ZFU). These institutions became influential in society through the recognition they got from implementing partners and local ordinary farmers alike. The incumbent enjoys the responsibilities and privileges which come with this as well as an active role in the distribution of resources like hoes, fertilizers, seed, t-shirts and hats as well as selection of beneficiaries.

The implications of these new institutions of new incumbents and traditional office bearers are note worthy. Firstly the new institutions bestow power on the new incumbents through improved access to resources and prestige. They use such resources to wield power even over traditionally dominant institutions like village leaders. This is evident in the case of Skhanyisiwe who could easily mobilize the whole village for a meeting, a feat which traditional leaders were failing to equal. It is also evident that these new institutions were able to use their positions to draw further authority to themselves. In Manama the leader maneuvered the location of a demonstration plot in her field. In Ntalale Mthatheho became influential to such an extent that he was even approached by fellow villagers to mediate in domestic disputes. This was formerly the responsibility of the village head and headmen.

(iii) Institutional reinforcement through new technologies

While it has generally been proven that the introduction of new technologies leads to change, nullification and even formation of new institutions, it should also be appreciated that the process of technology introduction also in some way strengthens or buoys up existing institutions. In the case of CA and IPs in Gwanda it was established that while the majority of institutions changed or lost currency others thrived. For that reason, it can be noted that similar institutions across the district experienced change, albeit contextually. In some instances, local traditional leaders lost their influence in the day to day running of local affairs while similar institutions elsewhere became more powerful.

Traditional leadership institutions (village heads) are an example of institutions that have been reinvigorated by the introduction of CA and IPs. Village heads that have opted to partake in CA and IP activities as active and not as ex-officio members have bolstered their social and economic standing. Village heads, headmen and councillors have traditionally been mandated with responsibility for land administration and disposal, resolving land and boundaries, beneficiaries selection, distribution of resources as well as mediating in domestic disputes. However, owing to lesser material resources being made available to them, their authority in their areas of jurisdiction waned. The village head for Mamsisi village Ntalale, Mr Maligwa remarked that in the last decade or so locals especially youths in his area had lost respect for the office of the village head preferring to seek guidance from nontraditional institutions. The same can be noted for traditional leaders in Manama and Mtshabezi.

With the advent of CAIPs traditional leaders' authority has been reinvigorated. They are now able to mobilize their constituencies for meetings owing to their renewed power. In Manama CA and other general village meetings were well attended following invites sent out by the village head. Similarly, in Mtshabezi and Ntalale implementing NGOs and AGRITEX extension workers acknowledged that they enlisted the services of the village leaders to gather people for weekly and other meetings. Clearly, the village heads can now strategically deploy their reinforced authority to mobilize villagers theoretically for CA and even more practically for political purposes. This point is demonstrated through three examples discussed below.

The first example is in Manama ward where the village head for Fumukwe village Mrs Magamba has been an influential and active member of the platform in the village in spite of her advanced age. The village head has ridden on both her platform membership and traditional office to maneuver between fellow platform members and other villagers under her jurisdiction. Secondly, in Mamsisi village, Ntalale the village head Mr Maligwana relies on platform resources to execute his traditional duties which include settling of disputes in the village. Lastly in Mtshabezi the village chairman Mr Nyathi also mobilized the community for other non CA activities like borehole repairs through the CA grouping. The next section looks at how new technologies have not necessarily led to a change in the status quo.

(iv) New technologies and the maintenance of the status quo

Some institutions do not necessarily change as a result of the introduction of new technologies. In this section I intend to discuss how and why the introduction of new technologies may not necessarily culminate in any institutional change. Across the three research sites the introduction

of CA and IPs has not brought about significant changes in some of the prevailing institutional arrangements.

In some cases the introduction of CA and IPs has not significantly changed conventional crop production systems in the three wards. This is evidenced by the huge number of households continuing to do crop production despite having joined CA groups. Caleb the extension officer for Ntalale noted that in Mavula area the number of farmers practicing CA declined from about 40 at inception to about 8 in 2012. It is paradoxical that although farmers could recite what CA was, how it was supposed to be carried out and even its defining principles they were not practicing it anymore. A visit to the main fields in Ntalale Manama and Mtshabezi showed that farmers were doing more conventional than CA farming. Mulamuli a middle aged farmer from Magaya village, Manama was skeptical about CA despite showing great understanding of the principles of C A. His fields did not have any evidence of CA activity taking place in spite of his vast knowledge of the technique. To that end, institutions behind conventional crop production have not changed with the introduction of CA and IPs. Evidence from the three sites show that farmers have bigger plots devoted to conventional cropping compared to CA plots (*gantshopo*).

It is possible that the farmers were driven by a desire to tap into the 'careless' resources being splashed around by CA-promoting NGOs without necessarily abandoning their conventional farming institutions. This can be further evidenced by the high rates of disadoption of CA across the district after NGO withdrawal of incentives. For instance, in Enyandeni farmers practiced CA concurrently with conventional farming as they sought access to food hand outs from World Vision. In Ntalale the number of households practicing CA plummeted from about 40 to between

5 and 8 households following the withdrawal seed packs fertilizers and other inputs by LDS. Huge numbers of households also reported reverting to conventional farming in Manama at the end Practical Action and SAFIRE projects in 2010 and 2012 respectively. Having discussed the four pointers in technology and institutional change, the following section turns to a broader discussion of the implications of the technology change on institutions. First to be discussed is the conflict that arises due to the change and nullification of institutions owing to the introduction of CAIPs.

5.2 Institutional nullification and conflict among farmers

The change in tenurial arrangements resulting from the introduction of CA leads to both overt and covert conflict especially among adopters and non adopters. Most often this conflict arises from the partial privatization of commons by farmers practicing CA. Below are three cases of conflict associated with the practice of CA. Firstly, in Manama farmers excluded other people's livestock from accessing their own plots which provoked the hostility of non adopters who believed in stover as common property. This culminated in a harsh exchange of words and conflict between the two groups. Melusi a non CA farmer from Manama protested thus:

These CA people are selfish, you see them placing their stover in a tree for use as mulch but their livestock compete for stover with ours on our plots. It is unfair because they benefit from us (through driving their livestock into non CA plots which are open for livestock in winter) yet they do not share their crops with us [emphasis mine]. They know full well that livestock supplement their grazing through stover yet they choose to reserve their stover for igantshopo which does not bring meaningful yields at the end of the day.

Mulamuli the CA farmer, in counteraction to the accusation by non CA farmers, argued that their counterparts were lazy and are not able to join CA groups hence their jealousy. On being further probed about where he thought his own livestock consumed stover as supplement if he drove his and those of neighbours off the plots he was evasive and argued that the livestock could do without stover as supplementary feed, a point generally refuted by most non CA farmers.

During field work I was informed that non adopters once drove CA adopters' livestock from their plots. In Ntalale these tensions were exemplified by incidents of fence destruction and attacks on livestock deemed to be straying into cordoned plots during winter. Tshinga the headman for the area mediated regularly in cases of attacks on livestock. He also heard seasonal cases of burnt down fences. The headman noted that tensions went high in the area during winter, with people accusing each other of destruction of fences, opening of gates to let livestock destroy crops or consume stover. However, in Manama I did not come across cases where farmers threatened to attack or drive away livestock belonging to adopters if ever they strayed into their plots. The CA farmers accuse non CA farmers for all these problems. For their part, non adopters accused adopters of anti-social practices especially cordoning commons.

The third case involves the village chairman for Village 3 Enyandeni who noted that CA groups in his area were folding up. According to him the closure was due to the problem of destruction of fences, and heightened competition for stover. The village leadership in Enyandeni confirmed receiving reports of sabotage against CA activities by non CA farmers. His monthly register of cases showed the high frequency of stover-based conflict. In September 2012 such cases topped up to 8 with an average of 2 cases per month being recorded. Because stover is scarce, CA farmers and livestock have been observed to compete for the little that is available. Livestock

which forms a key livelihood source in this semi-arid district unnecessarily starve in the dry season simply because stover is now being stowed away for use in CA plots.

5.4 Conflict and competition emanating from emergence of new institutions around CAIPs

Owing to the advent of new institutions brought about by the introduction of CA in the study area there is a heightened incidence of institutional conflict and competition in all the three wards. This is especially because the new institutions take over the duty and mandate of existing traditional institutions. The institution of excellence, the LCD/LDC (discussed in the second part of the schema), became the centre of hostility between traditional leaders and LCD/LDCs. As earlier stated, the responsibilities and other privileges that come with this office were formerly a preserve of traditional leaders (village heads, headmen and councillors). These traditional leaders were not comfortable and did not take lightly to the idea of newly emerging institutions 'competing for clientele' with them. In Manama traditional leaders did everything within their power to scuttle the activities of these new institutions as discussed in Box 5.1 below.

Box 5.1: Seed distribution stand-off in Manama

NGO X (not real name) which has been implementing CA in Manama ward since 2010 encountered problems when they distributed seed at the homestead of a lead farmer. The problem arose when one local leader in conjunction with the village head disrupted the seed distribution, apparently because the local leadership wanted it distributed at their preferred distribution point. The local leadership accused the NGOs field officers of causing divisions in the area through their CA projects. They further accused the NGO of unilaterally picking up beneficiaries without their (local leaders') knowledge. The leaders also felt that the newly elected platform chairperson (a woman) was also subverting their authority by not consulting them regularly. The platform leader in turn argued that by virtue of the traditional leaders not being active members of the CAIP she was not accountable to them but to the platform members and the NGO. Tempers only subsided when the village head and his associates received seed packs and fertilizers from the NGO.

In Enyandeni friction was noted to abound between the Village Chairman and the platform. The latter complained that the former was foiling planned CA activities, running parallel village activities in a bid to dissuade farmers from fully participating in CA activities. He remarked:

Some of us in this village are not happy to see others developing and they can do anything to make sure their neighbour fails.

He recalled one incident where the Village Chairman instructed villagers to attend a 'compulsory' borehole maintenance meeting when the platform chairperson had called for a meeting earlier. In the third instance, in Ntalale Mthatheho intimated that traditional leaders were

not enthusiastic about CA and he suspected they could be inciting people to abandon CA. It is possible that people had their own reasons for abandoning CA. Indeed, the decision to drop CA was often a private matter not a function of instigation. That Mthatheho chose to blame the local leadership represents a tension of struggle.

5.5 Chapter Summary

The chapter presented the institutional outcomes of innovation platforms. A four tier trajectory of institutional outcomes was outlined. In the first scenario existing institutions were nullified following the introduction of CA and IPs. Tenure processes were changed in the study area. In the second trajectory new institutions were established as a result of the advent of new innovations and related platforms. Thirdly, existing institutions that were receptive of changes were galvanized as they rode on the resources available in the platform and associated with the technology. In the fourth and final trajectory the status quo remained. The institutional implications of all this has been noted to be conflict and competition among farmers and other related stakeholders. The next chapter considers the livelihood outcomes CAIPs.

CHAPTER 6

6.0 THE INFLUENCE OF CONSERVATION AGRICULTURE INNOVATION PLATFORMS ON RURAL LIVELIHOODS

6.1 Introduction

Previous chapters have looked at stakeholder perceptions and adoption of CAIPs (Chapter 4) and influence of CAIPs on rural institutions (Chapter 5). In this chapter, I examine the last of my objectives which sought to assess the role of CAIPs in attaining or maintaining sustainable rural livelihoods in Gwanda. Central to the assessment is the assumption that innovations and IPs in particular are introduced with the express view of improving the agro-based livelihoods of rural farmers in the developing world. Evidence from other IPs across Africa has shown a marked improvement in the livelihoods of implementing communities (Nederlof et al 2011, Van Rooyen and Homann 2009). Livelihoods are defined as the possession of material and social assets which are deployed to attain a means of living. Livelihoods can be sustainable or otherwise. In keeping with the Sustainable Livelihoods Approach (SLA) of Chambers and Chambers (1992), sustainable livelihoods carry potential to afford the individual comfortable and long term sustenance which does not do harm to the environment. On the other hand, the opposite of sustainable livelihoods is undesirable owing to its propensity to deny the individual meaningful existence. However SLA is only an ideal which may be difficult to realize in real life.

With a diverse basket of livelihood sources from which to tap for survival, smallholders often consider the long term sustainability of a given livelihood source before they decide to pursue the same or not. It is against this background that people in Gwanda have varied views on the importance of CAIPs as a viable livelihood source. Prevalent livelihood strategies in south

western Zimbabwe include but are not limited to small scale gold prospecting, livestock production, poultry production, irrigation, petty commodity trading among others (See Mabiza, 2013). The conclusion from the chapter seems to be that CA has contradictory implications on livelihoods, supporting them in one situation and undermining them in another.

The structure of this chapter follows this sequence. Section 2 enumerates the dominant livelihood sources as well as assessing the contribution of CA to these livelihoods. Section 3 considers the stakeholder rating of livelihood sources including CA and IPs as alternatives for rural livelihoods. Section 4 concludes.

6.2 Livelihood sources in Gwanda

Livestock production is a widespread livelihood source across the three research sites. Most farmers in Ntalale, Manama and Mtshabezi owned cattle, goats, sheep and other small livestock which they occasionally sold to buyers from within and outside the district. An average size goat could fetch about \$US50 on a good market day while a beast could fetch about \$US200 or more depending on size. Farmers therefore relied significantly on livestock sales as a livelihood source.

However, owing to the dry conditions prevailing in the area farmers lost a lot of their livestock which succumbed to starvation. Magwaliba from Goholi village, Manama noted that over the past three years he lost about 15 herd of cattle due to lack of water and grazing. To avert this problem he has been buying supplementary feeds for the cattle. Each 50kg bag of feeds costs \$11. Sunduza from Nyambi village, Ntalale explained that he lost about 18 cattle due to the drought conditions in the past years. He saved the remaining herd through the practice of *lagisa* whereby he drives his cattle to far off places with better pastures usually at other people's farms.

Melusi from Village 5 Mtshabezi stated that his whole cattle herd succumbed to drought and he currently remains with one donkey and a few goats. He lamented that he is finding it difficult to send his children to school following the loss of his key livelihood source- cattle. A few farmers were also involved in poultry projects, rearing pigs and chickens for sale to locals and institutions like Manama and Mtshabezi missions. This however turned out to be a preserve of well off farmers who could afford to buy feeds for the chickens and the pigs.

CA and related IPs do not contribute much to livestock based livelihoods in Gwanda owing to a range of factors chief among them being the conflict arising between CA and livestock. The requirement for preservation of stover in CA results in farmers driving livestock away from CA plots. As discussed in the preceding chapter, CA has led to tensions especially among CA and non CA farmers over the movement of livestock into CA plots. Even at the household level, men (with greater interest in livestock) were at loggerheads with their female counterparts (with a keen interest in CA). To support this, three cases are described below.

In the first case in Enyandeni at the Shaba homestead, the husband claimed to be too old to go into the fields but was very active when it came to dosing livestock. So his disregard for CA and related institutions made him feign infirmity so as to be excused from partaking in it. Elsewhere in Ntalale, MaKhumalo of Mamsisi village claimed that her husband was ill and could not help in the CA plots but it latter turned the husband preferred livestock production and was an active member of a local cattle pen fattening scheme while also devoting much time to conventional crop production.

Secondly and as earlier noted in Chapter 5, tensions are high between CA and non CA farmers in all the three wards. CA farmers accused non CA farmers of not properly looking after their livestock leading to them encroaching into ‘protected’ CA plots. In a similar vein, the latter accuse the former of being selfish and driving away and even attacking livestock that stray into CA plots. The tensions have also led to thicket fences erected by CA farmers being burnt down, allegedly, by the non CA farmers (See Chapter 5 for more detail on CA-non CA farmer tensions in Gwanda).

In the third and final case, a middle aged farmer Mr Mafu from Manama dismissed CA and its promoters as time consuming and too taxing on his busy schedule, He was particularly not amused by what he viewed as the nagging enquiries of CA promoters whom he accused of always being at farmers’ door steps. The second dominant livelihood source in the study area is irrigation and small gardens, they are discussed below.

Irrigation and gardening are also viable livelihood options being pursued by villagers in the three research sites. Irrigation was mostly done on a cooperative basis while individual households set up small gardens adjacent to streams. Two irrigation schemes are in operation in Ntalale, namely Mhene-Bulamba irrigation scheme and Pelele irrigation scheme. Both schemes were initiated and are sponsored by Pro Africa, a local NGO. The NGO assists local farmers with the setting up of schemes and provision of inputs. They also employ agricultural extension workers dedicated to advising farmers on crop choices and other crop production issues in the schemes. These are complimented by AGRITEX extension staff who also devote part of their time to the schemes.

Mhene-Bulamba scheme draws water from Bulamba dam and farmers currently working the scheme claim that they are under-capacitated to fully utilize water from the dam since it can irrigate a bigger piece of land than is currently in use. There are about 50 households holding plots in the scheme. The households grow a variety of crops including sugar beans, wheat, maize and vegetables both for consumption and for sale. Pelele irrigation scheme was set up following the amalgamation of small household gardens into one big plot to enable the laying of irrigation canals. They created irrigable blocks which were then subdivided equally amongst contributing households (households whose gardens were amalgamated). The scheme draws water from Pelele weir. However water from the weir is not sufficient to irrigate crops throughout the year and the NGO drilled boreholes around the scheme from which supplementary water is drawn. The irrigation committee decides on crop choice and rotation of responsibility for canal opening and other matters affecting the scheme. Crops grown are for consumption and commercial purposes.

Small bucket irrigated gardens are also the order of the day in Ntalale, Manama and Mtshabezi. All households in the study area own vegetable gardens of varying sizes. These gardens supply relish for household consumption while in some cases those tending bigger gardens and having better access to sufficient water for irrigation actually earn a bit of income from the sale of their produce. In Mavula village, Ntalale a group of about ten households have come together and set up the Mavula Green Project a vegetable production venture. They produce vegetable for consumption and for sale. However the project is being hampered by lack of a consistent water supply.

NGOs have also drilled boreholes and supplied fencing material and inputs for the establishment of community nutrition gardens wherein the members of the community work in the garden and give the produce to orphans, the elderly and the terminally ill. An example of such nutrition gardens is the Ntalale Bulamba nutrition garden funded by the embassy of France in collaboration with UNDP and a local NGO Moriti oa Sechaba. Owing to scarcity of water, irrigation and gardening are not very reliable livelihood sources. For those relying on boreholes and pumps for irrigation the challenge lies in constant breaking down of boreholes and pumps and lack of funds to purchase consumables for boreholes and pumps.

The contribution of CA to irrigation and gardening is implicit. Farmers are taking the knowledge they gained from CA and applying to their irrigation plots and gardens. Concepts like moisture preservation which are key in CA are being implemented in gardens and plots. Ncube from acknowledged that the benefit he derived from CA was the potential of the technique to limit moisture stress through applying mulch. Below is a picture of his winter maize crop mulched using stover and grass just like in CA.



Figure 6.1: Winter maize crop mulched Conservation Agriculture-style, Village 5 Enyandeni.
Source: Fieldwork (2012).

Other farmers chose to adopt plant basins characteristic of CA in their gardens. In Ntalale, Mrs Nare who vehemently denied being labeled a CA farmer acknowledged borrowing the idea of plant basins for its potential to “...hold water for the plants.” It can therefore be noted that farmers have selectively adopted CA techniques that work for them and discarded others which may not be beneficial to their garden projects.

However beyond this, CA cannot be said to be of much positive significance to gardening and irrigation especially in view of its busy itinerary. Farmers engaged in irrigation schemes in the study area noted that their irrigation plots demanded maximum and undivided devotion such that they could not commit to the equally busy itinerary of CA. Brighton a plot holder at Pelele irrigation scheme compared his irrigation output and that realized by CA farmers and argued that he was better off concentrating on irrigation because it was more profitable than CA. In Manama, Mqhumeni a middle aged small garden owner argued that he did not see much benefit from participating in CA considering that a farmer’s independence and innovativeness is ignored

in line with sticking to CA principles. He argued that CA farmers were under constant surveillance from the promoting NGO staff and other platform members checking on their progress or lack of it.

Petty commodity production, a combination of gold panning, petty commodity trading and other less established livelihood sources also contributed to the upkeep of people in Gwanda, Though not very reliable owing to the limited reserves of the mineral in the area, gold panning was especially practiced by youths in Ntalale and Manama. Most youth especially herd boys do gold panning while they are herding livestock along rivers in the area. Youths also preferred gold panning for its quick and high returns compared to other livelihood sources which took long to give meaningful returns. Due to its illegality locals were less interested in discussing about gold panning, especially with 'stranger'. For that reason it was difficult to establish the actual extent to which gold panning provided a livelihood source in the three wards.

Petty commodity trading which is mostly a preserve of women is another livelihood source in the study area. Women from Ntalale engaged in petty trade at the local shopping centres and even in Gwanda town. They traded in garden produce, and hand crafts produced by household members. Not all households are engaged in petty commodity trading though. Siphon a married woman from Village 3 Enyandeni stated that she engages in petty commodity trading to supplement her husband's salary since it is mostly insufficient to cater for all the household needs. She sales mostly vegetables from the household garden as well as second hand clothes.

6.3 Stakeholder livelihood ranking

Farmers were asked to proffer their views on the significance of the multiple livelihood sources they had identified ranking the contribution of the same to household food security and income.

Each identified livelihood source was rated out of a possible score of 20 points. Below are matrix scores for two three farmers in Ntalale Manama and Mtshabezi.

Table 6.1 Household livelihoods scoring: Enyandeni

Livelihood Source	Contribution to food Security out of 20	Contribution to Household income out of 20	Total out of 40
Livestock sales	15	18	33
Vegetable Gardening	12	15	27
Remittances	9	10	19
Piggery	12	5	17
Poultry	6	0	6
Conservation Agriculture	4	0	4

Table 6.2 Household livelihoods scoring: Manama

Livelihood Source	Contribution to food Security out of 20	Contribution to Household income out of 20	Total out of 40
Livestock sales	17	15	32
Formal Employment	16	15	31
Conservation Agriculture	15	12	27
Vegetable gardening	13	10	23
Vending/trading	10	10	20
Remittances	7	6	13

Table 6.3 Household livelihoods scoring: Ntalale

Livelihood Activity	Contribution to food Security out of 20	Contribution to Household income out of 20	Total out of 40
Livestock sales	4	0	4
Irrigation/Vegetable Gardening	12	15	27
Remittances	10	10	20
Piggery	12	5	17
Poultry	6	0	6
Conservation Agriculture	4	0	4

In all three rankings livestock production was identified to be the most viable contributor to household food security as well as household income. Irrigation and vegetable gardening were also noted to contribute significantly to livelihoods and food security in all the three sites. The contribution of Conservation Agriculture to livelihoods and food security was minimal considering that it was ranked lowly by all three households. Remittances constituted a regular livelihood source as most households reported having a migrant or tow sending remittances back home.

6.4 Conservation Agriculture and dynamization of livelihoods

Conservation Agriculture can be seen to be contributing to the dynamization of rural livelihoods in Gwanda. This is evidenced by its contribution to different facets of sustainable. Firstly, CA has contributed to the acquisition of household assets and livestock. In Mtshabezi, Banda stated that he had been able to buy a scotch cart, wheel barrow and ox drawn plough following the sale of his harvest. In Manama Maligwana reported having bought two donkeys for draught purposes and goats after realizing some profits from his CA crop. In the third case, Maluwa of Ntalale

managed to buy a bicycle, solar panel and television set during the season he harvested and sold 10 by 90kg bags of maize.

CA has also contributed to sustainable livelihoods in instances where households have sent children to school and accessed other essential social services like hospitals using money realized from the sale of crops harvested. Skhanyisiwe, a builder's wife from Manama stated that in the 2009 to 2010 season she managed to pay her primary school children's fees using proceeds from CA. In another case Ma Ncube from Mtshabezi said she used the proceeds from CA to finance part of her husband's medical bill. In Bulamba village, Ntalale, Ngwenya harvested 7 by 50kg bags of maize which he sold and assisted his nephew to obtain travel documents.

Conversely, in other households in Gwanda the attainment of sustainable livelihoods through CA in Gwanda is doubtful especially in view of the low ranking it received from some of the farmers across the three sites. The fact that more households are abandoning it is testimony that CA is contributing little to the livelihoods of rural communities in Gwanda. Ncube from Mtshabezi noted that CA is failing to improve the livelihoods of farmers because it is being practiced on a small scale and is also affected by the dry spell characteristic of south western Zimbabwe in general. For Ntalale, Mthatheho argued that the 'early' withdrawal of input and technical support by NGOs resulted in farmers failing to realize much from it. Most NGOs withdrew their support in the third or fourth year of project inception when farmers are not yet self sufficient

More over the contribution of CA to sustainable livelihoods in Gwanda was made difficult by the fact that it competed for resources and time with more established livelihood sources. Most male household members preferred committing their time and energy to livestock compared to CA. In one case in Mtshabezi at the Shaba homestead, the husband claimed to be too old to go into the

fields but was very active when it came to dosing livestock. MaKhumalo from Ntalale claimed that her husband was ill and could not help in the CA plots but it latter turned the husband preferred livestock production and was an active member of a local cattle pen fattening scheme. The contribution of CA to livelihoods in some households was less tangible as family members shunned it in preference of other livelihood sources.

6.5 Chapter summary

This chapter has looked at the livelihood outcomes of Conservation Agriculture based innovation platforms. The chapter began by outlining the livelihood sources prevalent in the study and these included livestock production, gold panning, gardening and irrigation, regional migration as well as petty commodity trading. Livelihoods were also ranked according to importance in the study area. The contribution of CA to the sustainability of existing livelihoods was also established across the three study sites. The chapter that follows provides a summary, conclusion and recommendations for the entire study.

CHAPTER 7

7.0 SUMMARY, CONCLUSION AND IMPLICATIONS

7.1 Introduction

The foremost aim of this research has been to observe and analyze the institutional and livelihood processes arising from the operation of innovation platforms and in particular those premised on Conservation Agriculture. This chapter is presenting a summary of the findings, conclusions and recommendations. A summary of the findings of the research shall be presented in view of the key objectives of the research. This shall be followed by a consideration of the conclusions drawn from the findings followed by recommendations for further research.

7.2 Summary

The first objective of the research sought to ascertain smallholders and other stakeholders' perceptions and adoption of Conservation Agriculture based innovation platforms. In line with the objective, the research established that there are multiple categories of farmers and their status in terms of adoption. For analytical purposes three categories were identified, and these are: adopters, disadopters and non adopters. The first category is seized with the CAIP activities, talking and practicing CA. The second category is made up of quitters, abandoning the platform and technology for a variety of reasons. The third category are largely sceptics, composed of people who have not made effort to embrace the technology, again as a result of a variety of reasons.

Farmer perceptions were influenced in large part by adoption status as well as the strategic considerations of the various stakeholders involved. Farmers active in the platforms argued that CAIPs are the way to go probably because of the benefits accruing to them. Non-adopting and by

implication non-platform stakeholders had contrary perceptions to those held by adopters or platform members. At the organizational level, organizations with less material and financial resources (mostly government departments) are less active and influential in day to day platform activities compared to the resource rich stakeholders (mostly NGOs and private enterprises) (see Nyamwanza et al, forthcoming for detailed discussion). This is consistent with Doss's (2003) contention that technology adoption is not as simple as it appears. Rather, before one commits to adopting a new technology they carry out a 'cost-benefit' analysis of the likely outcome of their adoption. The findings also confirm Rogers's (1995) assertion that innovations diffuse in a dynamic and complex not linear and simplistic way. To that end, stakeholders are motivated by Barth's transactional considerations of 'self interest' and 'profit maximization' (Patel, 2007).

Farmers' decisions to adopt CA and partake in IP activities in Gwanda are also influenced by factors such as socio-economic standing, age and gender. Generally, well to do members with a history of formal education and employment took up CA and joined IPs. The elderly prevailed in CAIP activities compared to youths. In terms of gender as a determinant of adoption, females dominated in CA groups as well as activity in the platform which is contrary to the views of some scholars on gender and technology adoption, who argue for men's stronger propensity to adopt than women in Africa (Doss, 2003; Ndiritu et al, 2011).

While some studies on IPs in Sub Saharan Africa present a picture of general equality of standing in the functioning of the platforms (see for example Nederloff and Pyburn, 2012; Tenywa et al, 2011), Gwanda material reflects difference in influence among stakeholders. Civil society organizations play the roles of broker cum coordinator of the IP with government and

other institutions of authority being less vocal. As such, perceptions of less influential stakeholders towards the technology and the platforms may not always be supportive.

In terms of Objective Two which sought to consider the influence of conservation agriculture innovation platforms on rural institutions and institutional processes, the research fairly established that local institutions change following the introduction of the CAIPs. The research established four probable institutional trajectories emanating largely from the introduction of new technologies. The likely trajectories are nullification of existing institutions, strengthening of existing institutions, emergence of new institutions as well as no institutional change or maintenance of status quo. I will take these institutional outcomes in sequence.

In view of the first trajectory, the research established that institutions governing resource use change due to the new technological innovation introduced. In the case study, communal tenure was in some instances revised following the adoption CA by some farmers and simultaneous disadoption by others. CA requires prolonged exclusive use of CA plots as farmers try to adhere to the key principles of the technology such as mulch retention and basin preservation. CAIP members in Gwanda often drove away livestock from their fields while insisting that their own roaming livestock move around freely. This invariably culminated in conflict or tension in the village. Such conflicts and tension took the form of attacks on 'straying' livestock as well as burning down of brush fences surrounding CA plots by aggrieved non participants. More so, social networks especially the family also underwent some changes as a result of CA and IPs. This is especially more pronounced in situations where household interests were 'split' between adoption and disadoption. As a result of these splits cooperation waned.

In view of the third route, new institutions were formed as a result of the introduction of new technologies. These included platform committees mandated with the running of IP activities. Institutions of 'agricultural excellence' emerged in a similar way and served the purpose of imparting good practices of farming on farmers. Basing on the recognition they received from other stakeholders in the platform and community at large, these institutions assumed popularity. Not surprisingly, such new institutions attracted suspicion and competition from hitherto existing institutions, often culminating in broader institutional instability in the area.

With respect to the third likely scenario, the research established that traditional institutions fared differently following the introduction of CAIPs in the study area. Village heads and other traditional office bearers who have embraced CA and partake in CAIPs have seen a rise in stock in their influence in their areas of jurisdiction. On the other hand, those that have shunned the technology feel threatened and therefore resist or try to stifle activities related to the CAIP.

Basing on the prestige and resources they accrue from NGO sponsored CA activities, some village heads are more influential than they were prior to participating in CA innovation platforms. Village heads such as in Manama act as lead farmers for the CA group hence serving as motivators for other farmers to participate in CAIP activities. In a similar vein, the responsibility for the distribution of CA inputs and food handouts also retain an element of influence over village activities for the traditional leaders.

On the contrary, conservative traditional leaders who have resisted the technology continue to feel threatened (authority wise) by the introduction of CAIPs. Ordinary farmers active in CA

platforms in Gwanda have become *de facto* local leaders by virtue of the authority gained in the platform. The so called lead or champion farmers are viewed by traditional authorities as threats to their authority. Some female platform members and lead farmers mandated with the daily running of the said platform now wield some influence they do not possess outside the platform and have taken over in distribution of inputs for instance which is formerly a preserve of traditional leaders. Such gender empowerment through women's increased participation in innovation platform activity is consistent with Makini et al (2013) who argue that a sustainable innovation platform is one that is sensitive and responsive to gender disparities obtaining especially in rural Sub Saharan Africa.

For the fourth institutional scenario, the study established that conventional farming institutions are still in operation despite the adoption CA and establishment of IPs in the study area. Livestock management institutions have also not changed due to CA technology introduction or establishment of new innovation platform-based institutions. Clearly, the outcomes of the institutional processes arising from CAIPs are diverse, ranging from conflict and competition to duplication of roles and institutional functions (See Nyamwanza et al, 2011, for a detailed discussion).

With regards to the third and final objective, which sought to investigate the contributions of innovation platforms to rural livelihoods, the research unearthed the dominant livelihood sources, even though illegal in some cases. The livelihood sources include, but are not limited to, livestock production, gold panning, petty commodity trading, gardening and regional migration. The research found that the contribution of CAIPs is in some instances lower than the other

livelihoods strategies stated above. The contribution of CAIPs to improve livestock production is limited owing to the perceived competition for resources between CA and livestock. The incongruencies were also evident in crop-livestock competition for stover which further divided household members along gender lines with men mostly preferring livestock activities ahead of CA.

In the case of gardening and irrigation, CAIPs are not making much contribution other than helping farmers with new skills. Some farmers have selectively adopted specific components of CA technology in a bid to improve their gardening ventures. Practices like mulching and crop basins are in wide use among farmers practicing gardening. Livelihood ranking exercises carried out with households in the three study sites showed that on average CA scored less than other livelihood sources. Livestock production was noted to be the most preferred livelihood source in all the study sites. CA on the other hand was ranked lowly and such low ranking is attributable to conditions which are not very conducive for Conservation Agriculture. I now turn to the conclusion, below.

7.3 Conclusion

In conclusion, if livestock production is the preferred option, how then are we to interpret two things- (i) Why NGOs are pushing CA and IPs? (ii) Why some people are participating still, in spite of this? These are the two questions I want to address linking them to theoretical concerns underlining this study.

In response to the first question, it would appear that NGO and state stakeholders are pushing this as an attempt to tap 'careless resources' being distributed by donors. While these sources of

funding were generous in times past and there was money which followed people. Nowadays it is the reverse, there are very few donors. It is therefore likely that the NGOs stick to these discredited CAIPs hoping to tap these resources.

These stakeholders in turn use the so-called careless resources to control local peasants who are reliant on them for goods and services. In other words a patron-client relationship is established and maintained through resource manipulation. This conclusion is consistent with observations by Barth (1990), Bailey (1973) and Cheater (1989) that individuals use resources to control others. In his recent paper, Barth (1990) showed how individuals in society attempt to control each other through resource use.

The above proposition is consistent with Bailey (1960) who notes that organizations and/or individuals holding political office strive to control the flow of resources to their constituency as a way of trying to control people's behaviour and contact. Like politicians who deploy both normative and pragmatic strategies to manipulate and maintain control over their followers, NGOs in the study area have been shown to use resources at their disposal to maintain control over other stakeholders in CA and IPs. Mararike (1995) also recounts that politicians in Manicaland participated in MDA activities for the enhancement of their individual political career rather than the common development goal.

That stakeholders participate in development initiatives for transactional/strategic purposes is undeniable. Bailey's (1960) study of *Kond* and *Oriya* caste group interactions in Orissa would indicate that such control allows for possibilities of further resource control and ultimately

enhance control over other less endowed stakeholders. He notes that to gain control over each other the *Konds* and *Oriyas* would manipulate resources such as land and labour. Similarly, Cheater, (1989) alludes to the manipulation and use of cultural symbols as a way of maintaining individual interests and influence. Even local people have local interests and the study of CA in Gwanda seems to amplify this to a practical extent and these individual interests are competitive and positive.

In response to the second enquiry, it would appear stakeholders maintain interest and remain attached to CA and IP based institutions because the said institutions still speak to their extra-routine needs and aspirations. These aspirations may be social, economic or even political. Theoretically this is consistent with Blau (1964) who notes that institutions continue to survive only if they are still serving a real and practical purpose. CA and IP based institutions are in terms of their intended purpose hopeless, but useful in terms of the extra curricula opportunities they provide.

It is also consistent with Bailey's recent conclusion that people only stay in institutions when they provide for their basic needs. Dzingirai (1993) has also reached at the same conclusion, showing how peasants in south western Zimbabwe stick to state instigated agrarian institutions only because they are allowed to gain access to state resources. For him, peasants are calculative and strategic in their interactions with the state, development agents and other outsiders.

Thus to conclude, CA and IPs do provide opportunities to control people at the local level. They allow for government and NGOs to have a reach on the people in the countryside and to use the

same for own narrow interests. But it also emerges that these same institutions do provide some platform for local people to exploit outsiders and the resources they represent. Thus from seeing small holders or peasants in the development context as marginalised and weak, I have come to regard them as strategic manipulators of a kind taking advantage of new agrarian institutions and resources that are introduced in their local contexts. I now turn to the recommendations.

7.4 Recommendations

Away from abstract and theoretical concerns, it is imperative that I make some recommendations for practical purposes. The recommendations are premised on the objectives of the research.

7.4.1 Fostering common understanding among stakeholders

The first objective of the research sought to outline the perspectives of stakeholders towards conservation agriculture innovation platforms. The research revealed that the many stakeholders that populate the platform hold divergent views on the efficacy of the platform. The result of such divergence of views is conflict and competition among farmers and other stakeholders alike. In light of this, the study recommends that a common understanding needs to be fostered among platform brokers and other stakeholders in order for unity of purpose to be achieved. Due consideration also needs to be given to the coordination of the activities of NGOs and government in CA and platform activities.

7.4.2 Awareness of existing institutions

The second objective of the research sought to explore the institutional outcomes of CAIPs in Gwanda. The institutional outcomes of innovation platforms bordered both on the negative and the positive. The research established that in some instances existing institutions got nullified as the platform took shape. In light of this, it is recommended that during the process of setting up

innovation platforms actors should be aware of existing institutions and how their performance is likely to be affected by the platform. Effort needs to be made also to ensure that newly established institutions do not upset or appear to be competing with existing ones. This can be ensured through acknowledging the existence of these institutions prior to setting up the platforms.

7.4.3 Livelihood complementarity

The third objective of the study sought to evaluate the contribution of CAIPs to rural livelihoods. There are several livelihoods strategies in the study area which include livestock production gardening among others. This research found out that instead of complementing existing livelihood sources CA and IP activities often seemed to be competing or even disrupting existing livelihood sources. The obvious recommendation is that livelihoods CA and IPs should be promoted in such a way that they do not appear like they are competing for resources with existing livelihood strategies. In short there is need for new livelihood sources to complement existing livelihood sources. Realisation of this goal will go a long way in promoting the vision and spirit of ZIMASSET (Zimbabwe Agenda for Sustainable Socio Economic Transformation), especially the Food Security and Nutrition Cluster which aims to achieve a self-sufficient and food-surplus economy.

The study further recommends more research on the processes that keep institutions operational even after exhausting their intended function. More needs to be established on what influences stakeholders to abandon the said institutions as well as what would have kept them attached following the dissolution of material benefits that enticed them in the first place.

Multi-commodity and multipurpose platforms should be established in order to avert tensions that may arise through the promotion of one commodity as in the case of CA based platforms. Farmer aspirations also need to be established prior to the setting up of a platform so that they feel a sense of ownership of the initiative. This can be achieved through broad based stakeholder consultation prior to the setting up of the said platform in order to capture the needs and requirements of the targeted farmers.

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Appendix 1: Letter of request for access to project information-SAFIRE

29th August 2012

Ms A Mutengwa

SAFIRE

Box BE398

Belvedere, Harare

Dear Madam

**RE: REQUEST FOR PERMISSION TO ACCESS PROJECT DOCUMENTATION ON
CONSERVATION AGRICULTURE IN GWANDA DISTRICT**

I am a Master of Philosophy, Applied Social Science student at the University of Zimbabwe and I am currently carrying out research on institutional processes in Conservation Agriculture in Gwanda District under the Challenge Programme on Water and Food, Water Governance in the Limpopo Basin Project. I am working in three wards which are Wards 5, 11 and 17 and your organization has been working in ward 17.

I am therefore kindly requesting for permission to access and use the documentation generated by your organization. Documents of interest to me include project inception reports, monthly or mid-term reports, end of project reports, minutes of meetings with farmers, reports written by the farmers as well as any other documentation related to Conservation Agriculture in Gwanda district.

I wish to assure you that this information that I seek will be used solely for academic purposes and I will undertake to keep it as confidential as may be required by your organization.

Please feel free to liaise with my supervisors should you want to clarify some issues. They are Professor V Dzingirai and Doctor BB Mukamuri who can be contacted on the following numbers 04 307134 during hours.

Here is hoping to get a favorable response from you

Yours Sincerely

Owen Nyamwanza



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Appendix 2: Guiding questions on Conservation Agriculture, Institutions and Innovation Platforms

- How do locals perceive Conservation Agriculture?
- What factors may be likely to influence such differences in perception?
- Does the Innovation Platform impart knowledge on stakeholders?
- Does the Innovation Platform culminate changing relations among stakeholders?
- Is there a shift in relations between producers and other players?
- Are there any noticeable tensions and conflicts among or between platform members?