

**THE ROLE OF COMMUNITY AND SOCIAL DEVELOPMENT PROJECT IN
IMPROVING RURAL LIVELIHOODS, KEBBI STATE, NIGERIA**

By

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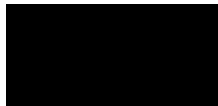
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As the candidate's supervisor I, Caister, K F agree to the submission of this report

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ABSTRACT

Between the years 2010 and 2013, the Nigerian Government established a transforming structure called the Community and Social Development Project (CSDP). This research explores the influences of that project on livelihoods through the perceptions of participants located in Local Government Area (LGA), Danko/Wasagu of Kebbi State, Nigeria. Four (4) of the twenty-four (24) communities in Danko/Wasagu involved in the CSDP partnership between communities and Government were targeted as an accessible case to investigate. One objective of the study was to identify perceived influences of the CSDP using the programme data. Permission for the researcher to extract (200) individual records from the CSDP data base was approved. Two hundred records (50 for each of the four communities) were identified as a random sample from the project survey data. These records provided livelihood information and perceptions from beneficiaries of the CSDP through data collected before and after the project. Descriptive statistics and Paired Sample t-test were tools used to look for perceived influences between project delivery and post project availability of livelihood resources. To provide a snap shot of perceptions three years after the Programme Project ended, a second objective used a Focus Group approach in 2016 to explore current livelihood options within these communities. Field visits included a purposeful selection of (12) respondents from each of the four target communities. For each community, group discussions were carried out in two (3-4 hour) sessions. Session 1, carried out in the morning, used participatory activities to reflect on the past, present and future. Session 2 in the evening, revolved around discussion and consensus on current livelihoods against an adapted livelihoods framework. In general, communities depended on multiple strategies and combined community effort to achieve livelihood goals. The CSDP sample data inferred improved access to resources particularly in health and transport across all communities. Improved access to water however, was only significant in two communities. Three years later, the focus group discussion revealed that development efforts continued by the LG were not perceived as providing sufficient economic opportunity. To encourage entrepreneurship, mobilisation of the community for collective decision making needs to be reactivated and Local Government needs to continue facilitating the delivery of infrastructure as originally tasked. Further research of actual and potential asset based micro-enterprise would benefit an understanding of innovative livelihood options alongside economic policy agendas.

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Abbreviations and Acronyms

| | |
|--------|---|
| ADP | Agricultural Development Project |
| BLP | Better Life Programme |
| CARE | Cooperative for Assistance and Relief Everywhere |
| CB | Community Bank |
| CBARDP | Community Based Agriculture and Rural Development Project |
| CBOs | Community Based Organisations |
| CDA | Community Development Association |
| CDD | Community Driven Development |
| CDP | Community Development Plan |
| CPMC | Community Project Management Committee |
| CSDP | Community and Social Development Project |
| DFID | Department for International Development |
| DFRRI | Directorate for Food Roads and Rural Infrastructure |
| FCT | Federal Capital Territory |
| FCAs | Fadama Community Association |
| FEAP | Family Economic Advancement Programme |
| FGN | Federal Government of Nigeria |
| FOA | Food Agricultural Organisation |
| FUGs | Fadama User Groups |
| GR | Green Revolution |
| IDA | International Development Association |
| IFAD | International Fund for Agricultural Development |
| LGAs | Local Government Authorities |
| NAPEP | National Poverty Eradication Programme |
| NEEDS | National Economic Empowerment and Development Strategy |
| NBS | National Bureau of Statistics |
| NPC | National Population Commission |
| OFN | Operation Feed the Nation |
| PAP | Poverty Alleviation Programme |
| PB | People's Bank |
| RBDA | River Basin Development Authority |
| RD | Rural Development |
| SLA | Sustainable Livelihood Approach |
| SLF | Sustainable Livelihood Framework |
| SPSS | Statistical Package for Social Sciences |
| TCN | Transmission Company of Nigeria |
| UN | United Nations |

| | |
|--------|---|
| UNDP | United Nation Development Programme |
| UNESCO | United Nation Education, Social and Cultural Organisation |
| USAID | United Nation Agency for International Development |
| WHO | World Health Organisation |

CHAPTER ONE: INTRODUCTION

Rural Development (RD) is an approach to poverty alleviation that has become international policy (Anyebe, 2015). Issues addressed through RD are mainly geared towards improving human and natural resources and to ameliorate the continuous problem of poverty and deprivation of the rural dwellers and raising their livelihood (Anyebe, 2015). As a multidimensional process concerning the rural man and his environment, development solutions rely totally on the person and their situation (Ugwuanyi, 2013). Emma (2009), noted that rural development is concerned with the mobilisation of the rural masses to develop and cope with changes in their lives and environment. It is in this direction Okoye et al., (2012) posits that, rural people shall not only be provided with social amenities, but they should be responsible for developing themselves and their environment. Therefore, development can only be useful if the people become agents of their affairs.

According to Olayiwole and Adeleye (2005), infrastructural development requirements of rural areas can be classified as: (1) Infrastructure such as good roads, clean water and rural electricity. (2) Social infrastructure concerned primarily with healthcare, provision of education, community centres, and security services and (3) Institutional infrastructure involving credit and micro-finance houses and agricultural research institutions to promote agricultural related and economic activities in the rural area. These structures serve as a springboard for integrated rural development that supports agricultural activities and human resource development.

Millions of rural people in Nigeria have escaped poverty as a result of rural development Programmes, but a majority of them continue to suffer from poverty (Akpan, 2012). This is because development of rural areas in Nigeria has historically not been given priority. Most policies were focused on developing and empowering the urban dwellers (Nilsson et al., 2014). Rural areas in Nigeria lack basic facilities such as access roads, electricity and health care (Ugwuanyi, 2013). Although, Nigeria indulged in some community self-help before the period of colonial rule (Ering, 2012 and Ebong et al (2013). In the 1920s, the strategy of community development started in rural areas occupied as colonial territories (Kamar et al., 2014). International organisations have also contributed significantly towards Nigeria rural development (Kamar et al., 2014). They have promoted agricultural development, training of extension workers, provided primary health care, control of soil erosion and developed the river basins (Akpan, 2012),

which rural areas depend on for livelihoods (Ogunlela & Mukhtar, 2009 and Matthew & Olatunji, 2016).

The Nigerian government has embarked on a series of rural development Programmes (Table 1.1) to address the problem of poverty (Akpan, 2012, Raheem & Oyinlola, 2015). The main objectives of the Programmes were to increase food production, improve the water resources of the River Basin in the country, income and well-being of the rural people (Emmanuel, 2015). Also, the Programmes intent was to boost the financial base of the rural farming community and encourage productivity at the local level (Raheem & Iyanda, 2014). In addition, the Programmes were empowered by the government to disburse loans to members of the rural communities and provide rural access roads to connect rural communities, rural to urban centers and farmers to the markets (Ekpo & Olaniyi, 1995). Furthermore, Programmes have helped in the formation of a Community Bank to provide loan facilities to the rural dwellers (Akpan, 2012). Some benefits were recorded at the beginning of these rural development Programmes (Ogwumike, 1997). However, Akpan (2012) argues that such benefits did not translate into development of the rural communities. This is evident in the continuation of the problems they were meant to solve such as rural poverty, rural-urban migration, low productivity and illiteracy among others (Raheem & Oyinlola, 2015).

Community and Social Development Projects (CSDP) have been one of the latest means of approach aimed at reducing poverty in the rural areas of Nigeria (Hussain, 2002). The perception was that community-based development helps poor rural communities to improve their livelihoods (Matthew & Olatunji, 2016). The intention was that providing rural infrastructure would enhance rural economic activities and employment opportunities, thereby reducing rural poverty (Reardon, 2001; Ayogu, 2007).

Table 1.1 Summary of Rural Development Initiatives in Nigeria from 1974 – 2020 (Deneji, 2011; Okhankhuele et al., 2017 & Uwaoma et al., 2000)

| Year | Rural Development Programmes | Achievements | Challenges |
|------|---|---|---|
| 1974 | National Accelerated Food Production Programme | Access to subsidised farm inputs, loans to cooperatives and technical assistance to farmers | Lack of community participation, mismanagement, and corruption |
| 1976 | Operation Feed the Nation | Subsidised farm inputs. Technical assistance and extension service. | Lack of community participation, mismanagement, and corruption |
| 1979 | Green Revolution | Mechanised farm implements, subsidized fertilizer, and improved seeds | Poor control of the affairs of the Programme, imported ideas/managers who don't know the problems of the community and corruption |
| 1980 | Integrated Rural Development Projects | Provision of improved livestock and poultry breeds, insecticides, and herbicides for insect and weed control | low technical know-how on the part of officials and corruption |
| 1985 | Agricultural Development Programme | Access to Extension services and farm inputs | Lack of community participation, mismanagement and corruption and lack of enough budget |
| 1987 | Nigerian Agricultural Insurance Company (NAIC) | Provision of Insurance Cover to farmers | Lack of Participation of farmers in the scheme |
| 1988 | National Directorate of foods, Roads and Rural Infrastructure | Rehabilitation of rural roads, rural electrification, provision of water through boreholes and open wells | Large-scale corruption and indiscipline |
| 1996 | First National Fadama Development Project (Fadama I) | Fadama I mainly focused on crop production and reduced crop prices and storage losses | Increased conflict among the users of Fadama resources |
| 2002 | Presidential Initiatives on Livestock Production, Processes, and Export | Subsidised loan to small and medium scale people for livestock production, feeds, and medicines | Farmers were not trained, lack of extension officer and poor housing |
| 2003 | Presidential Cassava Transformation Initiative (PCTI) | Cultivation of cassava to fight poverty and expand the use of cassava locally, in form of starch, <i>gari</i> , <i>lafun</i> , tapioca and livestock feed, household flour, starch, ethanol, and raw materials for industries | Increased conflict among the users of Fadama resources Lack of knowledge on how to process cassava and poor participation |
| 2010 | Second National Fadama Development Project (Fadama II) | Support post-production activities such as storage processing and marketing. Rural infrastructure development and livestock, fisher folk and pastoralist | Increased conflict among the users of Fadama resources |
| 2012 | Growth Enhancement Support Scheme (GESS) | Increase access and usage of fertilizer among the rural farmers and contact with extension agents | Poor participation of rural farmers in the growth enhancement support scheme reduced fertilizer use in Nigeria |
| 2013 | Agricultural Transformation Agenda Support Program (ATASP) | To attract private sector investment in agriculture, reduce post-harvest losses, add value to local agricultural produce, | Integration of smallholder farmers, particularly women and youths, into markets was not sufficiently prioritized |
| 2017 | Third National Fadama Development Project (Fadama III) | Increase the income for uses of rural lands and water resources in a sustainable manner and to contribute to restoration of livelihood of conflict affected households | Increased conflict among the users of Fadama resources |
| 2019 | National Fadama Development Project III Addition Financing (AF) | Increase production and productivity of cassava, rice, sorghum and horticultural and link them to better organised market | Narrow geographical focus/ instead of national coverage/ in selected states |
| 2020 | Rural Access and Agricultural Marketing Project (RAAMP) | Inclusion of agricultural marketing and unlocking the agro value chain potentials of rural and household farmers | Hijack or problem of the middle men in the production, processing and storage activities |

In CSDP, a demand driven approach and participatory mode of service delivery was used to try and include communities. Communities therefore were not only involved in the planning and decision about poverty reduction programme but in funding such projects. As a World Bank assisted project, it was a collaboration between the International Development Association (IDA), the Federal Government of Nigeria (FGN), 26 states and the Federal Capital Territory (FCT) in Nigeria: Abia, Adamawa, Akwa Ibom, Bauchi, Bayelsa, Benue, Cross River, Edo, Ebonyi, Ekiti, Enugu, Gombe, Imo, Katsina, Kebbi, Kogi, Kwara, Nasarawa, Niger, Ondo, Osun, Oyo, Plateau, Taraba, Yobe, Zamfara and FCT. The project was planned to be implemented from 2009 to 2013. It was an intervention aimed at targeting social and environmental infrastructure at the community level and improve local government authority (LGA) and responsibility for service delivery. The project development objectives were to improve access of poor people to services offered by social, natural and infrastructure resources. Therefore, the project supported empowerment of communities and local government authorities (LGAs). Once the project ended, the Local Government structures were tasked with ongoing development and services. The CSDP focused mainly on community development plans (CDPs). These were projects introduced by communities, and were supposed to make at least a 10% resource contribution. The CDPs that were eligible for assistance were projects that could improve social welfare in the communities, boost environmental management and allow access to social and natural resources infrastructure by the poor. The continuation of the problems in Nigeria such as rural poverty, rural-urban migration, low productivity and illiteracy among others (Raheem & Oyinlola, 2015), suggests a need to investigate the lived experience of normal rural Nigerians.

1.1 Statement of the research problem

Poverty seems not to ease its grip on the lives of rural people of Danko/Wasagu LGA. This unfortunate situation appeared to threaten their ability to secure sustainable livelihood and guarantee continuous flow of income. Majority of the rural areas of Nigeria remain largely under-developed because of poor access roads, poor health facilities, high unemployment and inadequacy of other social facilities (Emmanuel, 2015). During the past two to three decades Nigeria had experienced increasing number of rural people living in poverty, this is because of economic and socio-political instability experienced in the country (Gabriel & Hillary, 2014). The country imports large amount of grains, livestock products and fish. In addition, 50% of the population live

below poverty line, only about 40% have access to safe drinking water and 48% have no access to primary healthcare (Gabriel & Hillary, 2014). The problems are exacerbated because of irregular income, low rate of capital accumulation, declining agricultural output and rapidly changing climatic conditions. Agriculture alone is unable to provide all the livelihood opportunities for the poor, therefore diversification into non-farm activities is an alternative (Oluwatayo, 2009). To overcome these problems, government at various levels have initiated rural development Programmes and projects intended at transforming the life of the rural people. The Programmes are introduced to reduce poverty and improve the general well-being of the rural dwellers through the provision of social amenities such as rural feeder roads, potable water and health care center.

Despite benefiting from rural development projects and Programmes through provision of social amenities, the country failed to contribute meaningfully to rural development transformation (Raheem & Oyinlola, 2015). Rural communities in Nigeria continue to be in a state of under-development. They lack health facilities, basic nutrition, inadequate housing and are socially discriminated against and have no channels through which to voice their opinions. The level of poverty in the Northern state of Nigeria is increasing particularly in Kebbi State which accounts for about 77% of people living in poverty (Dodo, 2016). This is caused by low level of education, disease and malnutrition, corruption from the government officials and poor distribution of the country oils wealth (Olayiwola & Adeleye, 2005). The current insecurity problem in the Northern Nigeria (Boko haram) has worsened the situation and is a serious threat to stability in the region (Carson, 2012).

Successive Rural development Programmes in Nigeria employed a top-bottom approach to development. Failure in development objectives has been partially attributed to community participation (Raheem & Oyinlola, 2015). Local communities are not empowered or involved in decision that affect their lives. The effect of such action is imposition of projects/Programmes on the populace with imported methodology and idea. Rural communities were not given opportunity to prioritize their needs on the identification and execution of project and community leaders were not involved in the decision making about the project. Therefore, this study is of the view that, for projects to serve the need of a local community, it must embrace a Community Based Development approach. The approach is the best strategy to achieve development and addressing failures of the top-bottom approach (Lykee et al., 2011). Decisions and resources of community-based

development projects must be managed at a local level. Local communities stakeholders and institutions should be at the centre of activity in all aspects of community development. Projects and project management need also to address the felt needs and interest of the community members (Mansuri & Rao, 2013). It is in this light that this research sought to examine the participants' perspectives on the effect of rural livelihood intervention with the help of sustainable livelihood approach and how does it play a role in influencing livelihood choices. Sustainable livelihood approach emphasizing the need to find solutions to poverty that are people-centered as well as economically and environmentally sustainable (DFID, 2001). Therefore, sustainable livelihood is fundamentally rooted in creating conditions in which primarily poor people's day to day realities assume center stage and are served by projects and programmes. The research is based on the relationship between the influences of the CSDP on resources available and the livelihood choices that beneficiaries are making.

1.2 Research Question

This study asks the question, has the Community and Social Development Project (CSDP) been successful in influencing livelihood vulnerability in Danko/Wasagu LGA, Kebbi State, Nigeria?

Sub question One: asks how has the CSDP intervention influenced livelihood resources for respondents?

and

Sub question Two: asks what are the perceptions of beneficiaries of the effect of the CSDP intervention?

To answer these questions, two objectives were identified as analytical processes for this study:

Objective One: To extract and analyse a sample of the original CSDP survey data to ascertain a 2013 baseline for influences on resource availability.

Objective Two: To explore in 2016, the livelihood strategies of respondents

1.3 Significance of the study

This research work provides an insight and contributed to knowledge about the role of rural development intervention on livelihood outcomes of rural people in Danko/Wasagu LGA of Kebbi

state and identify the role of policy measures on rural development Programmes such as poverty reduction strategies and diversification activities in mitigating poverty. Assessing and understanding the role of rural development intervention on livelihood of rural people is important and necessary in order to enhance and implement holistic poverty reduction policies in the best interest of all. It is also significant since it bridges the gap that exists in the previous literatures, by assessing the relationships between rural development Programmes, Department for International Development (DFID) sustainable livelihood approach, poverty reduction and the rural people livelihood.

This study contributes to the literature that attempts to communicate voices of the poor and their experiences with the processes of the development agenda. It contributes then, as a case to inform local, state, national government and non-governmental organisations in designing policies and action plans in Kebbi state. In addition, the outcome would provide an avenue for researchers to build on the limitations of this study and as relevant material for students and the general public.

1.4 Limitations and assumptions of the study

There are several rural development Programmes embarked by the Nigerian government to solve the perennial poverty problem and development in the rural areas (Raheem & Oyinlola, 2015). However, lack of clear demarcation of objectives for each of the development programme had resulted to unsustainable development in the rural areas. In this study, Community and Social Development Project would also have been used as a vehicle to deliver sustainable development in Danko/Wasau LGA. Comparing the livelihood strategies currently used by participants to the dreams desired as livelihood outcomes provided a measure of evidence for development in the study area. Descriptions of livelihood concepts expressed by participants provided an indication of livelihood vulnerability experienced by households residing in the study area. The exploration of meanings for the sustainable livelihood concepts, and the relationships between them, established a common understanding between participants and stakeholders on how to strategize for future community development after the closure of the CSDP.

In this study, poverty levels and the strength and influence of Government policies were not analysed in the Danko/Wasagu LGA. Also, existing investment opportunities and important technological contributions to sustainable livelihood were not identified in the study. They were

omitted because they did not contribute to the evaluation of CSDP role in social empowerment or evaluation of the impact of infrastructure development.

There are two methods that could have been used in an attempt to infer findings to a larger population. The two methods were: to obtain information about relevant aspects of the population of cases and compare our case to them, to use survey research on a random sample of cases (this was not possible due to limited access and time constraints). For this study, the issue of whether Danko/Wasagu or the groups studied represent the population was not the important issue. What was important was whether the experiences of people in this population were representative of the broad class of phenomena (livelihood vulnerability) to which the sustainable livelihoods theory refers. Through describing the phenomenon of livelihood vulnerability in the study area, the case was generalised to theoretical preposition rather to a population. DFID Sustainable Livelihoods Framework providing a theoretical construct within which perceptions about livelihood concepts of vulnerability, processes and structures, outcomes and vulnerabilities experienced by participants were organised. The research was based on DFID sustainable livelihood framework which show the relationship between internal and external influences and elaborate how participants make sense of their world.

There was a combined effort by the participants and researchers/facilitators to discover and understand what was happening with respect to livelihood strategies practiced by communities and to reveal the variety and diversity of livelihoods in Danko/Wasagu. The livelihoods analysis framework was expected to show relationships between internal and external influences and describe how participants express their experience. The revelation of the participants involves personal, socio-political and professional belief in giving meaning to events and possible ways of action. Members of the communities in the study participating in the project shared ideas, outcomes, and means of determining criteria for mediating issues related to livelihood. Further gendered studies may reveal an understanding of power relationships and gendered norms within institutions and processes, whether formal or informal. This was not however the focus of this study.

Rather than rely on survey-research style interviews, it was assumed that the level of trust and combined history of the facilitators with the communities would produce reliable data expressing

underlying external/internal realities or displays of perspectives and moral/social realities. By using the sustainable livelihoods framework, the communities' perceptions were placed within the categories defined by the framework and provided examples for the relationship between the development process described and the realities of livelihoods in Danko/Wasagu LGA. **Ethical clearance for the design was granted under HSS/0704/016D**

1.5 Operational definition of terms

This section provides operational definitions of the terms used for the study.

1.5.1 Livelihood

A livelihood means the ability to possess assets (whether in material or social form) and utilisation of these assets to achieve a living. A livelihood is considered sustainable when it can tolerate and be resilience against stresses and shocks and promote its capabilities and assets both presently and in the future without affecting the environment (Carney, 1998).

1.5.2 Sustainable livelihood framework

The Sustainable Livelihood framework was a product of Department for International Development (DFID). It is an approach to development that prioritised the needs of the poor (DFID, 2007). The framework considers people at the core of development. It utilises asset and vulnerability elements to understand the livelihoods of poor people. The framework considers different types of assets and activities on which poor people depend for their livelihoods. In this study an adaption of the livelihoods framework was specifically used as a guide for focus group discussion.

1.5.3 Vulnerability

Vulnerability in this study refers to exposure of people to negative effect of internal and external environment in which people pursue their livelihoods. This exposure could be associated with risk, shocks and trends of seasonality (DFID, 2001).

1.5.4 Development

In this study, a broad definition of development was used. According to the UNDP (2001), development is the process whereby an enabling environment would be created to give an

opportunity for people to lead a productive life that suits their needs and interests. Therefore, development is about allowing people to make their own decision on matters affecting their lives and what they value (UNDP, 2001).

1.5.5 Rural development

Rural development is a process in which the general condition of the rural people is improved through increasing their productivity and income as well as enhancing their welfare in the form of healthcare, education, transportation and employment (Raheem & Iyanda, 2014).

1.5.6 Sustainable development

Elliott (2012) defined sustainable development as a development that considers people and their welfare to take a centre stage. It also concerns with not only how to generate economic resources but how it is distributed equally. Brundtland (1987) argues sustainable development takes into consideration of human needs, through increasing productivity potential and ensuring equitable distribution of resources to all.

1.5.7 Poverty

Poverty explained a situation of lack of wide range of essential needs, and resources. Poverty is a deprivation from basic necessities such as living a long and productive life, lack of access to knowledge and education as well as being deprived of resources for good quality of life which enable people to have a decent standard of living (Sen, 1998).

1.5.8 CSDP

CSDP is a community development project mainly concerned with the development of community development plans (CDPs). These are projects started by communities and they are expected to make at least 10% of resource contribution.

1.5.9 Uhola/Dbiti

Annual festival practiced by the members of the communities in the study area to mark the end of the harvesting season.

1.6 Structure of the research thesis

Chapter one provides introductory information as road map and boundary for the study. The intro highlights issues relating to rural development and poverty in Nigeria. Problem statement, significance of the study, assumptions of the research and limitation and delimitation of the study were also presented. Chapter two describes the context within which the CSDP was effected. It describes the specific area for this investigation and defends the targeting of these areas. Chapter three presents a review of literature on the theoretical relationships embedded in sustainable livelihoods. It explores issues relating to sustainable livelihood theories and framework, diversification, rural development and poverty. Chapter four details the way in which knowledge was produced in this study through an ethical and systematic process of data collection and analysis. The mix of methods persuing analysis of secondary data and primary Focus group discussion information are brought together in preparation for a discussion of vulnerability in chapter six. Chapter five presents the results and patterns found in CSDP data and discussions of livelihoods with respondents. Chapter six responds to the research question through a discussion of the perceived impact of CSDP on livelihood vulnerability in the study area. Chapter seven presents conclusions and recommendations for the guidance of rural development in Kebbi State. These recommendations are followed by areas for further research.

CHAPTER TWO: STUDY AREA AND FRAMEWORK FOR CSDP OPERATION IN NIGERIA

Poverty in Nigeria is an endemic problem particularly in rural communities. Insufficient infrastructure and social services in rural areas to serve the population contribute to this condition (IFAD, 2011). In Nigeria, a society or community can be categorized as rural because of low population density, less social activities, less social and spatial mobility and a slow rate of social change (Raheem & Oyinlola, 2015). The absence of public and social infrastructure such as electricity, education, healthcare, regular transport, technical personnel and a low level of economic activity suggest a need for development (Raheem & Oyinlola, 2015). Therefore, in this description, rural communities refer to remote or disadvantaged communities not the size of the town.

According to 2019/2020 Nigerian living standards survey released by National Bureau of Statistic (NBS) 82.9 million (40.1%) Nigerians are poor. The majority of these live in rural areas and account for about 52.1% of the population (Oludayo, 2021). Despite the level of poverty in the rural communities, these spaces are needed to support livelihoods (Onyeiwu & Liu, 2011). More than half of the people living in Nigeria depend mainly on traditional small-scale agriculture as a livelihood in rural areas (IFAD, 2011). In the year 2006, agriculture together with other rural livelihood activities was responsible for the engagement of 30,682,234 people (62%) of the total working population.

Similar to the rest of Africa (Hussein & Nelson, 1998), a significant contribution to the Nigerian rural economy arises from agriculture combined with informal rural activities. Several livelihood studies indicate that households depend on a mixture of activities to make a living (Fabusoro et al., 2010; Canagarajah & Thomas, 2001). Haggblade et al., (2002) identified that the combination of strategies increases where there is a shortage of land. In one study in Ogun, Nigeria the non-farm sector provided opportunity for 63% of the household income (Fabusoro et al., 2010). Therefore, income from rural nonfarm activities have become an important part of livelihood strategies of the rural people. These augment income from seasonal agriculture, provide additional steady income from a variety of enterprises, and include vulnerable groups such as women, youth and people with disabilities (Pablo, 2017).

2.1 Geography of the Study Region: Kebbi State

Kebbi State is one of the thirty-six (36) states of the Nigerian federation, created from former Sokoto State on 17 August 1991. Kebbi is situated within Sudan Savannah zone (Gabriel and Hilary, 2014) in the Northwestern part of Nigeria (NPC, 2015) between latitudes $11^{\circ}30'N$ $4^{\circ}00'E$ and Longitude $11.500^{\circ}N$ $4.000^{\circ}E$ (Figure 2.1).

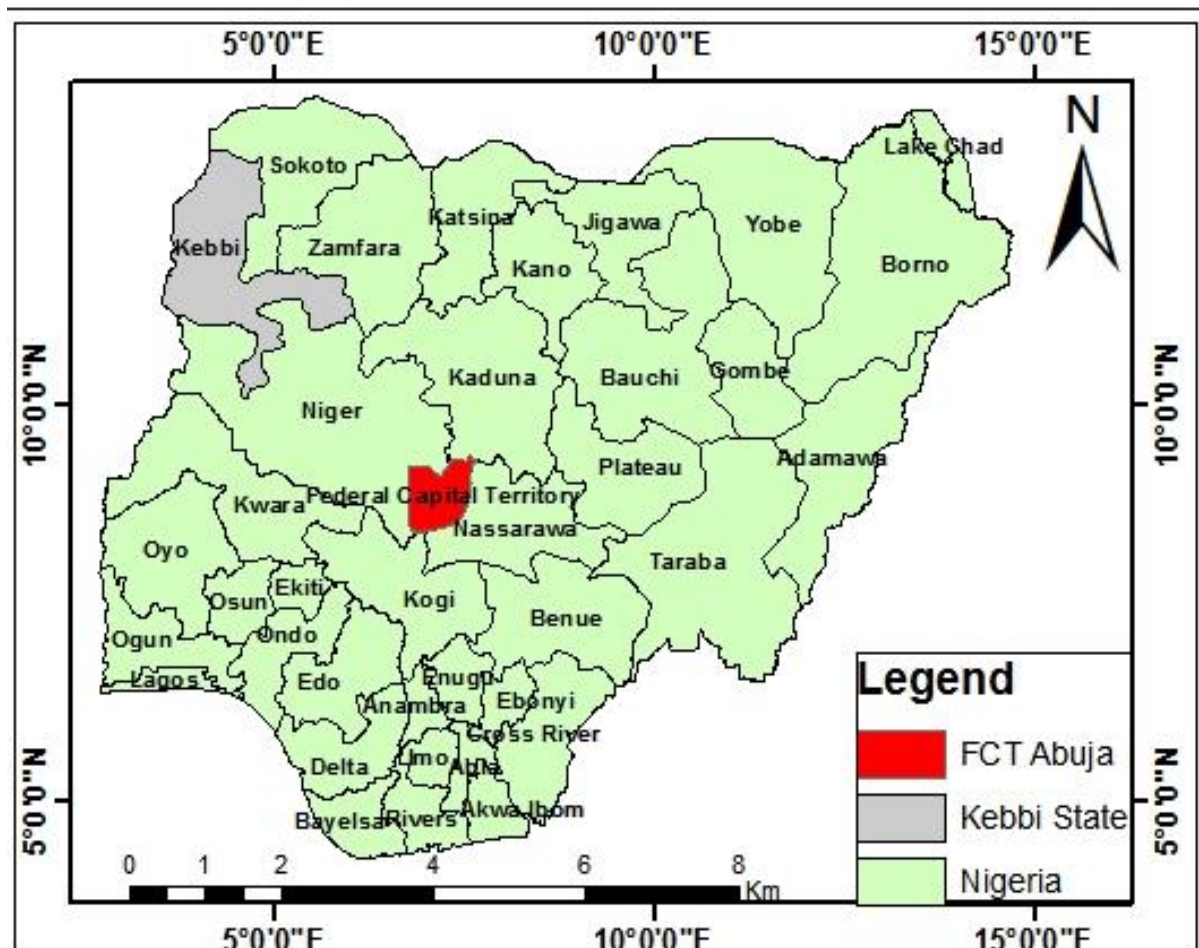


Figure 2.1 Map of Nigeria Showing Kebbi State and Federal capital Abuja (NPC, 2015).

There are a total of 21 Local Government Areas (LGAs) in Kebbi State (Figure 2.2). These are Alieri, Arewa, Argungu, Augie, Bagudo, Birnin Kebbi, Bunza, Dandi, Danko/Wasagu, Fakai, Gwandu, Jega, Kalgo, Koko Besse, Maiyama, Ngaski, Sakaba, Shanga, Suru, Yauri, and Zuru (NPC, 2015). These areas are further classified as 225 wards, 3000 settlements and 1036 remote areas (Figure 2.3).

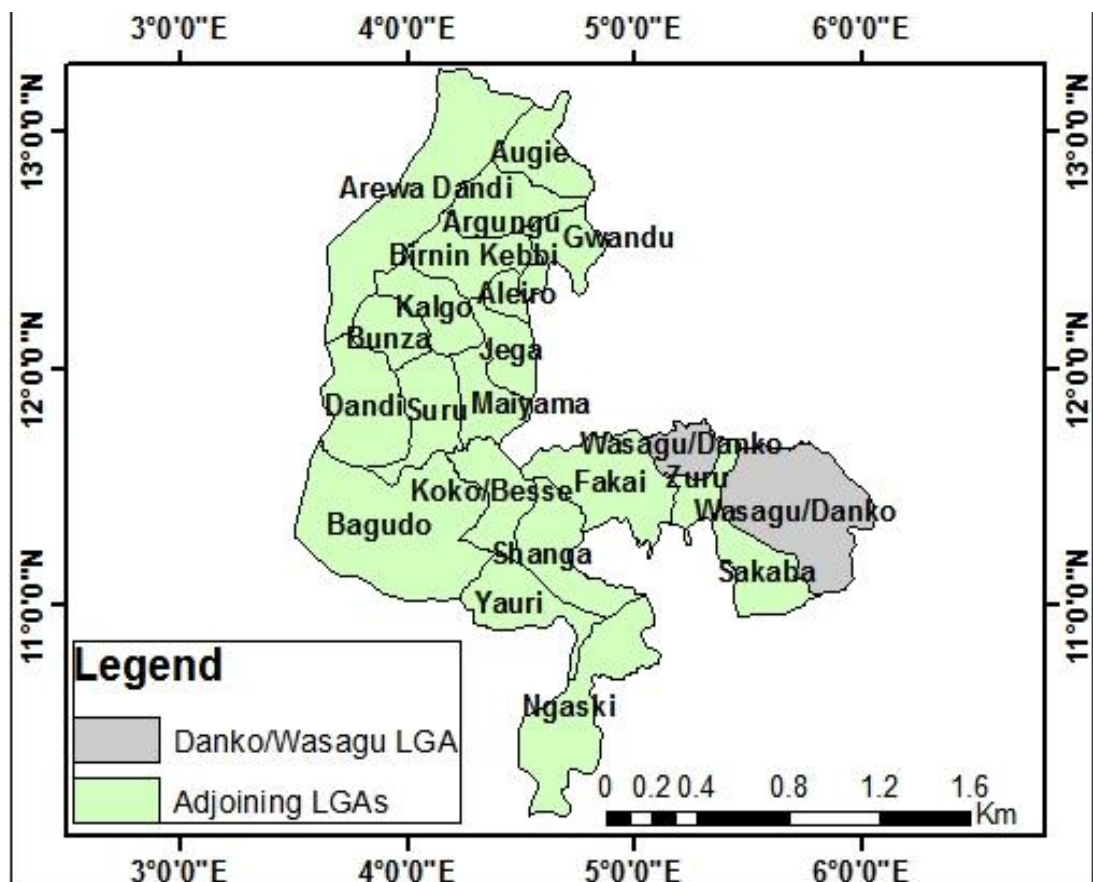


Figure 2.2 Map of Kebbi showing 21 local government area (NPC, 2015).

According to projections of the 2015 national population census, Kebbi State has an estimated population of 4,296,400 million people (NPC, 2015). The population density is sparsely distributed; an average of 28 persons per square kilometres (UNDP, 2005). However, they lack basic human and materials needs such as education, healthcare, clean water, shelter and clothing. The Northern States of Nigeria accommodate the largest population of people living in poverty, recording 77.7% of the population (Gabriel & Hilary, 2014). Most of people in Kebbi State are uneducated. This figure is higher for females than the male population (Sallawu et al., 2016). Skills to secure well-paying jobs, difficulty in adoption of modern techniques of production and inability to access agricultural loans are challenges (IFAD, 2011). Unemployment is another factor responsible for poverty in Kebbi State (World Bank, 2010). The rate of formal employment in 2010 was 4.9%, suggesting that, people are unemployed and their source of livelihood is mainly from the informal sector. Also, the severity of poverty in Kebbi State is worrisome when indicators

of services and development such as electricity, drinking water, health services and sanitation are considered. Only about 40% have access to safe drinking water and 52% access to primary healthcare (Alimeka, 2001). People cannot afford money to purchase food, medication or basic public healthcare. These conditions of limited opportunities and resources for improved income and well-being describe a context that can take decades and generations to turn around.

2.1.1 Danko/Wasagu Local Government Area (LGA): The Study Area

Danko-Wasagu LGA comprises one of the twenty-one (21) Local Governments of Kebbi State. It has a land mass of Four Thousand Two Hundred and Eight (4,208) square kilometres. It is bordered in the South by Sakaba LGA, in the West by Zuru LGA and in the North – East by Bukkuyyum LGA of Zamfara State (NPC, 2015). The area can be found between latitude $11^{\circ} 22'$ N and longitude $5^{\circ} 47'$ E of the equator. The total population of the LGA is about Two Hundred and Sixty-Five Thousand, Two Hundred and Seventy-One (265,271) people (NPC, 2015). The Local Government is made up of Eight settlements/districts namely Donko, Kandu, Kuba, Ribah, Kanya, Wasagu, Bena and Morai (Figure 2.3), and Twenty Four (24) communities: Maga community is located in Donko settlement; Roman community is found in Kandu settlement; Korgiya and 'Yar Maitaba communities are located in Kuba settlement; G/Makofa, Bankami, Seva and Shengel communities are located in Ribah settlement; Kanya and Rambo Diche communities are in Kanya settlement; Sauzama community is located in Wasagu settlement; Bena settlement consist of Unguwar Magaba, Unguwar Kolo, Unguwar Dansanda and D'tan communities and Dseme, Kandamao, Kanya, K'Daban Galadima, Samaru and Dutsin Kwana communities are located in Morai settlement.

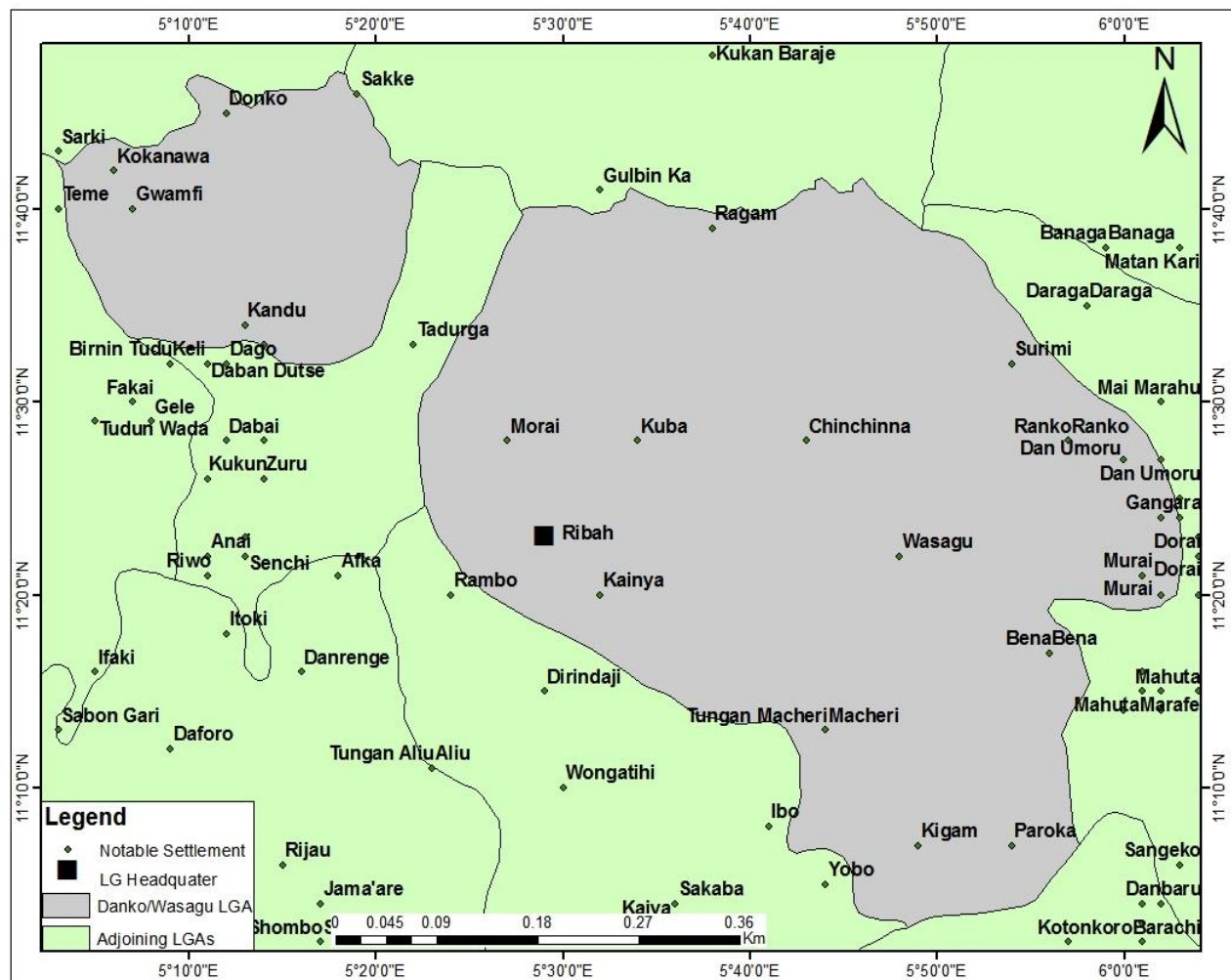


Figure 2.3 Map of Danko/Wasagu Local Government Area Showing the Study Area (NPC, 2015).

Danko/Wasagu has a flat topography characterized by fertile soil which is suitable for agriculture with an average rainfall of 720mm and, temperature range of 15⁰C to 38⁰C. Mostly it is just hot. The weather is characterised by a six month rainy season (May through October) and prolonged dry season more especially around the months of November to February (NPC, 2015). The main occupation of the people is agriculture. They depend mainly on crop production, animal rearing and fishing (NPC, 2015). Although agricultural production is the main driver of the economy in Danko/Wasagu, its potential has not been fully exploited. It faces important challenges, mainly lack of access roads, essential inputs, technical assistance and lack of access to finance. These affect the basic human and materials needs such as education, health care, clean water, shelter and clothing.

2.1.2 Dseme, Kanya, Maga, Shengel: the communities under focus

This investigation targeted four communities identified as beneficiaries of the Community and Social Development Project (CSDP). They are identified as Dseme, Kanya, Maga and Shengel communities. The characteristics of under-development and remoteness are common to all selected communities. Although not all are considered rural, they comply with the description of rural and remote areas defined on page 12. All four communities depend primarily on farming for their livelihood and lack a minimum of two basic types of infrastructure. For example, Dseme needs health facilities and access roads, Kanya require access roads, water, school and health facilities, Maga needs clean water, access roads and schools while Shengel requires roads, culverts, and drainage as well as schools. These areas were within a viable reach for the researcher. While a survey during the CSDP intervention had been collected during and post intervention, the data had not been analysed for these particular communities. With accessibility for the researcher and the meeting of the rural and project involvement criteria; the opportunity arose to investigate the lived experience at a particular point in time of these communities. It was an opportunity to carry out a follow up investigation for communities specifically targeted and surveyed during a development project.

2.2 Framework for the community and social development project

Between the years 2010 to 2013 the Nigerian Government established a transforming structure entitled the Community and Social Development Project (CSDP). Community level projects referred to as Community Development Plans (CDPs) were established as partnerships between government and the civil society. Communities involved in this study were those that fully implemented their Community Development Plan (CDP) and established a legally recognized Community Development Association by way of registering it with the LGA or the relevant Department/Ministry of the State Government. In addition, they were required to make a resource contribution of 10% and remain active in community activities for at least period of three years. The intention here was to ensure local participation and responsibility in decision making. Local officials on the other hand were accountable to the poor for their actions and communities were theoretically empowered to effect changes on a more sustainable basis. Five principles formed the core values of CSDP:

1. The project has a demand-driven development approach
2. Must have community participation

3. Decision making must be decentralized
4. Operated by the communities and
5. Empowered local communities through skills enhancement

The objective was to increase sustainable access to social and environmental infrastructure. Through establishment of infrastructure and strengthening human capital, the poor could partner with government in improving their own welfare. Four operational objectives in line with the strategic priority of rural development in Nigeria were identified (Figure 2.4).

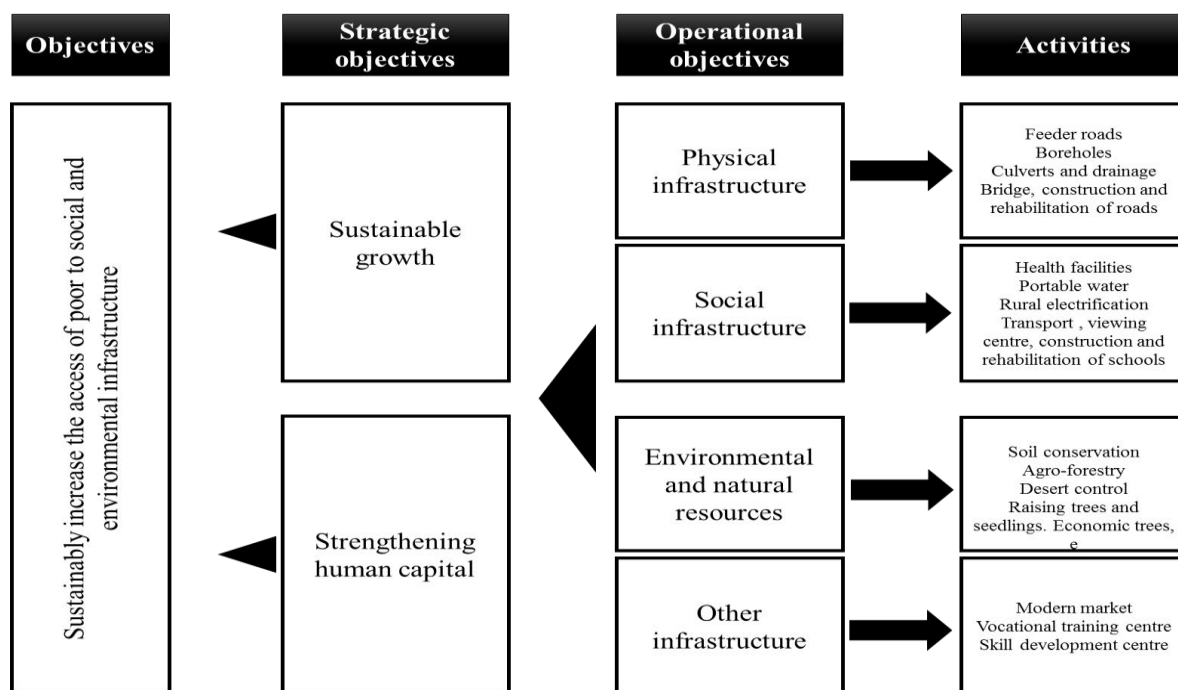


Figure 2.4 Framework for CSDP strategic operation in Nigeria (Adapted from CSDP, 2013)

Physical infrastructure: this involves repair of rural feeder roads, bridges, culverts and drainages. Also, drilling of motorised boreholes, hand pump and improved open dug-well are part of the intervention.

Social infrastructure: involves accessibility to social and economic services such as dispensary, Primary Health Centre and clinics. Also, provision of education facilities, rural electricity and clean water as well as rural viewing and skill acquisition centres.

Environmental and natural resources management: this include improvement of natural resource management services such as soil conservation, erosion and flood control measures, nurseries and orchards establishment, afforestation, waste management, water catchment and desertification control and,

Other infrastructure: modern market, vocational training centre, skill acquisition centre, multipurpose community infrastructure and assistance to vulnerable community members to access to social and natural resources. These are micro-projects usually assisted under CSDP to improve the social condition of the community's members and access to social and natural resources

CHAPTER THREE: LITERATURE REVIEW

The level of poverty in the rural areas of Nigeria continues to be a major problem despite, the resources (both human and material) devoted to poverty reduction (Olayiwola & Adeleye, 2005, Akpan, 2012). Essential services and support such as transport, schools, health services and water are limited or unavailable in the rural communities. Outcomes of development activities in rural areas of Nigeria are explored in the literature. This chapter also discusses theory and background information on a sustainable livelihood approach. These include the nature and objectives of government policy on rural development, the characteristics and poverty and poverty as themes. The use of a sustainable livelihood approach as an appropriate lens for discussing the role of the CSDP on livelihood vulnerability on the rural communities of Danko/Wasagu LGA has been presented.

3.1 Concept of rural livelihood

According to Stephen & Lenihan (2010), the concept of a sustainable livelihood is an important part of rural development and poverty reduction. Life in the rural areas often describe a series of activities for household survival and long-time wellbeing. Livelihood strategies often involve the collection, gathering and cultivation of environmental products as well as livestock keeping (natural resource-based activities) and trading, services and remittances (non-natural resources-based activities) (Stephen & Lenihan, 2010).

Rural development has mainly focused on promotion of modern agriculture for poor households in order to enhance food security (Ashley & Maxwell, 2001; Carney, 2002). Today, the emphasis has shifted to sustainable livelihoods (Carney, 1998 & 1999; Ellis & Biggs, 2001), diversification to promote non-farm activities (Ellis, 1998), access to natural resource-based activities and opportunities (Freeman et al., 2004) and provision of social support services to help vulnerable groups and landless households (Devereux, 2002; Kabeer, 2002). Many African rural households experience reduced farm income and poor market opportunities for their produce. Non-farm activities are often opted for as a supplementary source of income to reduce the fluctuations in household income (Fabusoro et al., 2010). Households adopt different coping mechanisms and survival strategies in response to the effect of socio-economic and environmental factors they encounter in their pursuit of household income and food. The coping mechanism includes the selection of available investment, production system and employment opportunities.

3.1.1 Sustainable livelihoods approach (SLA)

Poverty is a condition of insecurity rather than a lack of wealth, when looked at through the lens of a sustainable livelihood (Chambers et al., 1995). The Sustainable Livelihood Approach (SLA) considers the means of living and takes account of the full portfolio of economic activities undertaken by the poor. When sustainable, a livelihood is resilient to shocks and stresses and does not adversely affect the environment (Carpenter & McGillivray, 2012). Resilience that not only creates change but replaces adversity with opportunities (Reardon & Berdegue, 2002). The SLA recognises that poor people employ assets, various strategies and resources that are available and accessible to sustain themselves in spite of precarious conditions (Carney, 1999; Ashley and Carney, 1999). These strategies for poverty alleviation may be employed either at the individual, household or community level through agricultural practices, non-farm activities, infrastructural development, education, skill training, effective technology to mention but a few. A key relationship lies in how institutions and processes influence resource availability and access. The approach provides a framework for the influences and relationships found in livelihoods of the poor (DFID, 1999). Therefore, it provides a useful lens for taking stock of resources available and for looking at the way in which rural people utilise their resources and opportunities moving towards their full potential.

The DIFID model for sustainable livelihoods embeds the complexity of poverty (IFAD, 2009). In the connections between people and their livelihoods with political, social, and economic influences (Toner, 2003). As perceived through the DIFID model, livelihood thinking as focused on the problem of the poor as priority, providing assistance through projects and programmes (Hussein, 2002). The use of projects and programmes to intervene has been widely used by government, non-governmental and international development interventions such as International Fund for Agricultural Development (IFAD), United Nation Development Programme (UNDP), United Kingdom Department for International Development (DFID), and Co-operative for Assistance and Relief Everywhere (CARE) as an instrument to accelerate rural development.

Conceptually, livelihood vulnerability is a dynamic process following the transformations that take place as people move in and out of poverty. The trends are influenced by an array of external and internal livelihood factors such as hazards, shocks, pressure and resilience against negative forces. These factors are responsible for influencing and constraining livelihood strategies available to the

poor thereby exposes households to trends and uncertainty such as unemployment, price fluctuation, health problem, conflict and economic imbalance (Carney, 1998; DFID, 1999; Adato & Meinzen-Dick, 2002). Most of the poor rural people battle with the problem of livelihood security caused by stress and shocks (Devereux, 2001; Kabeer, 2002). For example, reduction in the wealth of the household members or sudden cut-off of family support from relatives can have an impact on the asset and livelihood strategies of households or community (Devereux, 2001). Livelihood vulnerability also influences the outcomes related to livelihood such as income increase and use of natural resource base which have direct bearing on the livelihood assets (Carpenter & McGillivray, 2012).

3.1.2 Understanding sustainability through the livelihood framework

The sustainable livelihood framework (Figure 3.1) presented by DFID is a useful approach for understanding livelihoods of the rural population because it places them at the centre of development. Livelihood outcomes reflect the ability of the rural poor people to use their knowledge, skills and adaptive strategies to achieve their goals. These strategies range from permanent to seasonal employment such as depending on natural resources, garden and crop production, livestock production and labour exchange. The sustainable livelihood framework shown in Figure 3.1 addresses multiple dimensions of rural poverty and the complexity of rural livelihoods (Carpenter & McGillivray, 2012), as it links the issues of poverty reduction sustainability and empowerment processes (DFID, 2001).

The framework is a useful tool in addressing different situations of insecurity of poor rural people and have the capacity to be used in participatory discussion for communication of ideas and strategies between different stakeholders advocating good governance (Hussein, 2002). In SLF, poor people are perceived to be operating in an environment characterized by shocks and stresses and limits in access or resources known as vulnerability context. This is because people exist in a dynamic balance between their assets base, transforming institutions and outcomes of their livelihood decisions (Carpenter & McGillivray, 2012). What this balance means to the individual depends on the social, institutional and organisational environment and determines how he or she will utilise the assets that are available when pursuing livelihood outcomes for achieving personal livelihood goals (DFID, 2001). The framework identifies a chain of interaction taking place in the

rural economy such as livelihoods assets, the environment upon which rural people pursue their livelihoods (Hussein, 2002).

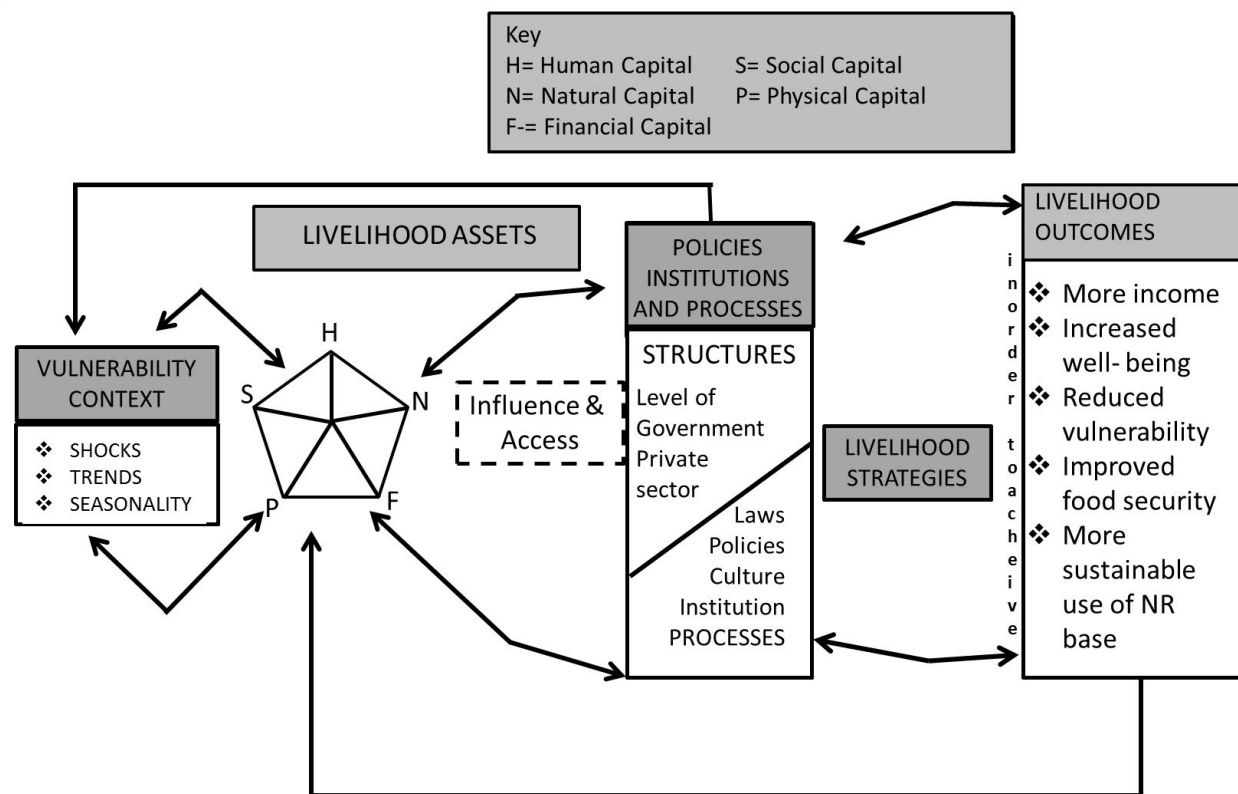


Figure 3.1 Sustainable rural livelihood framework (Adapted from DFID, 2001)

It is important to understand that the framework does not have a linear relationship starting with vulnerability and ending in suitable livelihood outcomes. There are multiple of multiple interactions and feedbacks between different forces and factors that are relating with each other (Hussein, 2002). The framework provides a structure or an avenue where various stakeholders or participants can engage in productive discussion on the factors influencing livelihood even though each one of them may have different views or outlooks.

The livelihood activities of the rural people depends largely on the assets and resources available. The assets and the choice of strategies are central to overcoming vulnerability. Assets that are commonly used by the rural poor for livelihood are sale of their produce, sale of their labour especially during the off-farm season, trading of goods within the community for cash, sales of households' goods like poultry, vegetables and fruits, environmental resources, network of support and exchange existing within and between households and their communities (Muhammad et al.,

2016). These assets are the resources households command for production and exchange within a community. In the rural area, use of resources at community level depend on available infrastructures, environmental conditions and economic well-being of individuals in the community. Therefore, access to assets is fundamental for the household or community to generate livelihood (Mickle et al., 2001).

Households and communities need to be resilient and explore opportunities that would guard against and resist negative outcomes. Therefore, access to assets provide opportunity for resilience between negative effects and livelihood security. Poor people living in rural areas are prone to external shocks and stresses mainly caused by seasonality and trends. For example, effect of malnutrition especially on children due to lack of balance diet, effect of pests and diseases on crops and livestock and poor harvest due to inadequate rainfall. Other vulnerabilities that may affect rural people are poor access to education and health facilities, clean water, powerlessness, and exposure to diseases like HIV/AIDS (IFAD, 2009).

People's choice of livelihood strategies as well as influences on policy, institutions and processes depend on the nature and types of capital at their disposal. These capitals include human, natural, financial, physical and social capitals which poor used for livelihoods.

Human capital – this include skills, knowledge rural people acquire to pursue different livelihood options (Sen, 1997; Carney, 1998; Scoones, 1998). At the household level human capital depend on the amount and quality of labour available which is also been influenced by the educational level and health statues of the households (IFAD, 2009). For example, educated people are likely to have good income compared to less educated individuals (Becker, 2008).

Natural Capital – refers to all the resources (both natural and ecological) and services which are accessible to the people that can influenced various livelihood opportunities (Carney, 1998; DFID, 1999 & 2007). Rural poor people make used of land and trees for income and improve well-being. They also rely on trees as a protection against erosion and storms.

Social Capital – refers to the networks of social resources or relationship (both formal and informal) from which various opportunities and benefits can be derive by the poor people in achieving their livelihood (Carney, 1998; DFID, 1999 & 2007). In a rural setting interaction

between individuals or groups enables shared interests that may increase their ability to work together to pursue a different livelihood. The co-operation relationships can reduce production costs and help in the development of informal safety-net among the poor (Carpenter and McGillivray, 2012). Social capital also promotes social learning, encouraging innovation, exchange of ideas and developing partnership within and outside the community (Pretty, 2002).

Financial Capital – These are resources used by people for investment and to pursue various livelihood goals (Carney, 1998 & DFID, 2007). For example, savings, grants, payment and transfer. Financial resources mostly available to the poor people are livestock, poultry, grains, pension, money lenders and transfer from relatives (Dowling & Chin-Fang, 2009). Financial resource can also be obtained through credit-providing institution such as micro-finance bank in which case the rural people must provide collateral.

Physical Capital – these are physical infrastructures that are required to meet the livelihoods outcomes of the poor (DFID, 2001). Physical infrastructures consist of changes to environment that support the poor to achieve their basic needs and enhance productivity (Carney, 1998; DFID, 2007). Lack of access to infrastructures (water, transport, shelter) may have a significant impact on the poor people. For instance, a poor transportation system may jeopardise their access to education and health services and reduce opportunities for income. Also, poor access to water and energy may cause a severe impact on human health of the people (Carpenter et al., 2002). Examples of other productive physical capital that provide opportunity for income of the poor include sewing machines, ploughs, motorcycles and vehicles with the infrastructure and knowledge of how to use them productively..

3.1.3 Strength of the sustainable livelihood approach

The SLA considers different types of processes and activities that people carry out for livelihoods. The poor depend on different types of economic activities and they rely on a number of resources or combination of resources such as physical, natural, social and human resources for their livelihoods (Holland & Blackburn, 1998; Hussein & Nelson, 1998). While doing so, they are influenced by the factors that causes poverty and constraints that prevent them to access resources. These constraints may be due to formal, informal, or social institutions or they may be the outcome of prevailing policies, economic and legislative processes (Frankenberger, 1996).

Considering how the poor people make a living by employing adaptive and coping mechanisms in spite of their exposure to vulnerability context, the SL approach encourages the poor to be active not passive receivers in decision making about their livelihoods. This is important in building the strengths of the poor (Wong, 2015). The SLA takes advantages of the strength of other development approaches in helping the poor. It uses varieties of methods and tools such as, Participatory Poverty Assessment (PPA), Participatory Rural Appraisal (PRA) and Good Governance Assessment methods (Kollmair et al., 2002). Therefore, SLA offers a suitable tool for assessing the impact of projects or Programmes on poor people for poverty reduction, because it provides an opportunity for understanding the living conditions of peoples (Wong, 2015). Due to the flexibility of SLA, it can adapt to different local circumstances and development research or project. It can also be useful in identification of priorities of a social institution and partners before the commencement of any development activities (Ellis, 2000).

3.1.4 Limitations of sustainable livelihood approach

The SL approach is primarily concerned with poverty alleviation and poverty differs within a geographical community. Therefore, poverty is not homogeneous to social units as understood by a majority of development projects and programmes (Agrawal & Gibson, 1999). The approach gives emphasis to transforming structures and processes which can influence the livelihoods of the poor (Hussein, 2002). Formal and informal social structures and institutions within communities also influences people's access to resources and livelihood opportunities (Mosse, 1994).

While the framework is genderless, the inclusion of gendered issues relies on the methodical procedures when using the approach. Therefore, it can be very important to address the issue of gender and give women the opportunity to express their views and interests (Ashley, 2000). There is also problem of programme planning and sectoral prejudices. The initiation of development projects usually depends on earlier support from a sector, it does not start afresh. The project is influenced by the guidelines and principles set by the counterpart ministry of the recipient country, which might likely interfere with the issues or areas of activity that the donor might support (Ashley, 2000). In addition, the SL approach is highly demanding considering the methodical capacity and information requirements. Counterpart institutions and organisations are unlikely to allocate enough manpower to work with the beneficiaries' particularly if the counterpart institutions are from government. They might also not be able to take advantage of the approach

due to poor knowledge and understanding of poverty and livelihood issues (Wong, 2014). People are not visible in all the processes of SLA. There are capitals, influences, institutions and policies. And it is usually where people delivering policy agendas or institutional priorities that require capacity where sustainability and participatory approaches fail. While these limitations are acknowledged as relevant to a particular researcher, decision maker or enabler the use of the livelihoods approach has informed and continues to conceptualise reliably, the relationship between resource availability and livelihood options.

3.2. Rural livelihood diversification

Rural livelihood refers to household coping and survival mechanism that rural people employed to adapt to changing social, economic and environmental factors for household income and food (Stephen & Lenihan, 2010). This survival strategies involve deciding on the present and future activity, style of production and employment opportunities. Rural livelihood diversification is a process whereby a rural household engages in different portfolios of activities in order to survive and promote their well - being (Ellis, 2000). Rural people in Africa, not only rely on agricultural practices such as cultivation of crops, livestock, and fishing as the primary source of livelihoods, they also engage in other activities to augment their main source of income (Adepoju & Obayelu, 2013). Farming as a livelihood activity is associated with immense risks (climatic, pest and diseases, price and policy). This phenomenon is more severe in sub-Saharan African countries where appropriate mitigation solutions have yielded average results. Farm households (households who engage in the production of crops and livestock) in Africa have increasingly sought means of escaping from the detrimental consequences of poverty by inclining to diversification of their activities; within and outside the farm sector. This is to primarily address their income and food security shortfalls (Bernard et al., 2014). About 30% to 50% of rural household's income are from non-farm sources in sub-Saharan Africa. The figure is between 80% and 90% in southern Africa (Fabusoro et al., 2010). Diversification of livelihood is important in controlling seasonal shocks in agricultural practices, accumulation of income and assets as well as alleviate risk and manage vulnerability and setting the poor people towards better livelihood success (Davies, 1996). Apart from the problem of subsistence failure, livelihood diversification can also cushion the effect of seasonal labour demand and consumption, reduce the effect of natural disaster, and provide an opportunity to accumulate resources and assets (Dimova & Sen, 2010).

Studies show that livelihood diversification in African depends on economic status, educational level, culture and life cycle of the family (Agyeman et al., 2014). As the head of the households advance in age they lack the strength and resources to contribute to more income, since activities are labour intensive. Educational levels of the head of the households also favoured the attainment of high paying jobs and enhance families understanding of farming-related activities (Agyeman et al., 2014). In addition, families that are educated tend to have access to credit facilities and infrastructural facilities which may increase their level of diversification. The magnitude of extension agent visits has a positive impact on household earnings. The support of an extension agent in the farming community assist families to venture into new income generating activities such as adopting new techniques of crop production, livestock rearing and agricultural services (primary and secondary tillage practice) for income (Dimova & Sen, 2010).

There are two types of livelihood diversification identified in the rural areas. Firstly, diversification as a result of survival strategy. This type of diversification occur because of increasing rural population growth, cost of input, unfavourable environmental condition, land fragmentation, reduced access to market, decreasing farm income and poor access to public services (Ellis, 2001). Secondly, diversification either as a response to failing agricultural output (distress-pull) or as an opportunity to take advantage of growing economy and market demand (demand-pull) (Davis & Bezemer, 2003). Nowadays, rural non-farm activities have pose opportunity and threats related to diversification (Haggblade et al., 2002). Distress and demand-pull approach diversification are influenced by non-farm activities (Kusters, 2010). Distress pulls influenced people to work on non-farm activities in order to diversify their income and reduce vulnerability and escape poverty. Whereas demand pull approach pulled people into non-farm activities to accumulate capital and increase household income. Distress-pulls happened due to environmental failure characterized by agricultural unemployment and market imperfection which are facilitated by economic diversity responsible for reduced income in the household (Davis & Bezemer, 2003). Whereas, demand-pull diversification is because of changes in the opportunity associated with market and technology. Therefore, poor households engaged in non-farm activities as an opportunity to survive the unfavourable economic condition (Davis & Bezemer, 2003).

3.2.1 Livelihoods diversification in Nigeria

A diversified livelihoods approach is a significant component of rural people survival in Nigeria (Adepoju & Obayelu, 2013; Faburoso et al., 2010). Rural household (those who are in crop and livestock production) are increasingly seeking diversification strategies to escape from poverty within and outside the farm sectors (Agyeman et al., 2014). Agriculture is the primary source of livelihoods for rural communities in Nigeria. Crop production, rearing of livestock and fishing mainly cater for food security and immediate household needs. (Oyinbo & Olaleye, 2016). However, these are influenced by a series of problems such as pest and diseases, price and government policy (Oyinbo & Olaleye, 2016). Therefore, diversification is necessary to acquire more income, engaging in trading and businesses to solve the pressing needs of food, shelter, healthcare, and payment of school fees (Dimova & Sen, 2010). While about 50% of rural income comes from farming, alternative sources are from off-farm wages from agriculture, non-farm self-employment such as trading and remittances from relatives working in the urban centres (Babatunde, 2013).

In addition, for rural populations in Nigeria large family sizes, marginal soil, weak agricultural output, and seasonal nature of farm produce among others drive a diversification of activities (Adepoju & Obayelu, 2013). Seasonality of farming results in idleness during the dry season which frees up rural people to take part in another activity (particularly non-farm activities) and exploit their labour potential. Another reason for livelihood diversification is the push and the pull factors (Barrett et al., 2001). Push factors are the favourable condition which draws rural households into diversification and pull elements are the severe or harsh condition which forces farm families into diversification.

3.3 The concept of poverty

Poverty is characterized by different consequences and dimensions and can be perceived differently across disciplines and ideologies. The most widely used definition of poverty by Grusky & Kanbur (2006) uses levels of income or consumption to measure poverty. Also, Lipton & Ravallion describe the poor by a headcount of those who fall below a given income/consumption level. However, new approaches have defined poverty in a multidimensional way (Subramanian, 1997). Therefore, poverty may be associated with hunger, unemployment, and lack of access to clean water, education and health facilities, exposure to disease, economic instability as well as

exclusion from decision-making processes in the society (Amundsen, 2010). In this study, poverty is defined as lack of opportunities, resourcefulness and over dependence on government by the poor (Narayan et al., 2000).

3.3.1 Poverty in Nigeria

The poverty situation in Nigeria is perplexing. Firstly, the level of poverty in Nigeria presents a contradiction considering the country's immense wealth. Secondly, the poverty situation has worsened despite the huge human and material resources devoted to poverty reduction by successive governments (Olayiwola & Adeleye, 2005). These problems of poverty in Nigeria has been primarily associated with widespread corruption, poor governance, low level of education, low production in agriculture and inadequate access to opportunities to social and economic infrastructure (Akpan, 2012). Also, non-diversification of the economy is another factor contributing to poverty in the country. Oil generates the main export revenue. About 87 percent of the export revenues comes from oil and gas sector which constitute 74 percent of government revenues and about 7.4 percent of GDP (Simona, 2021). In 1999, Nigerian per capita income of \$240 lay well below the average of \$500 for sub-Saharan African (Ellis and Biggs, 2001). This figure was lower than Botswana (\$3,210), Cote d'Ivoire (\$6,600), Egypt (\$1,080) and South Africa (\$3,500). Levels of poverty are reflected as a disturbing consequence from the level of decay in services and development. These include the average life expectancy, infant mortality population per doctor and hospital bed. This demonstrates the level of poverty in the country and the condition is more obvious in the rural areas and slums where people die daily because they cannot afford \$1.00 per day to take care of basic necessities of life such as medication or basic public health services (Anaeto, 2003). Poor electricity, unsafe drinking water and insufficient housing exacerbate poverty (World Bank, 1996; UNDP, 2003; Ogwumike, 1997).

Nigeria experienced many ethnic conflicts during the civilian administration of 1999. This unrest was caused by the militants from religious and ethnic groups. Conflict which further aggravates poverty, created economic competition and untold human damages in the country (NBS, 2010). Population increases especially in the Northern part of the country has put pressure on scarce resources and environment which further threaten food security. Land degradation caused by agricultural practices, deforestation, overgrazing and erosion in the North as well as floods and oil pollution in the South are other factors contributing to poverty in the country (Akpan, 2012). Other

factors included; poor leadership, lack of a comprehensive National poverty alleviation policy, lack of sound agricultural policy and high levels of illiteracy in the North (Akpan, 2012).

The National Bureau of Statistics (2010 & 2021), identified the percentage of people living below the poverty line in Nigeria (Table 3.1). Poverty levels increased between the 1980s and 1990s, decreased slightly in 2004, but after that, continued to rise.

Table 3.1 Trend of poverty in Nigeria

| Year | Percentage (%) of poverty | Total Population in (Millions) | Population experiencing Poverty in (Millions) |
|-------------|----------------------------------|---------------------------------------|--|
| 1980 | 28.1 | 65 | 18.26 |
| 1985 | 46.3 | 75 | 34.73 |
| 1992 | 42.7 | 91.5 | 39.07 |
| 1996 | 65.6 | 102.3 | 67.11 |
| 2004 | 54.7 | 126.3 | 69.09 |
| 2010 | 69.0 | 163.0 | 112.47 |
| 2014 | 10.5 | 178.7 | 18.76 |
| 2018 | 11.8 | 195.6 | 23.08 |
| 2019 | 10.5 | 200.9 | 21.09 |
| 2020 | 11.4 | 206.1 | 23.48 |
| 2021 | 45.0 | 211.4 | 95.13 |

Source: National Bureau of Statistics, 2021

In the year 1980 about 28% of the Nigerian people were living in poverty, the percentage change to 47% by 1985 reflecting almost half of the population living below the poverty line by the year 2000. This shows that the population of Nigerian living in poverty between the years 1980 to 2010 was progressively increasing, except for the year 1992. In the year 2014, the poverty rate had fallen 4.3% points, from 14.8% to 10.5%. The official poverty rate in 2019 was 10.5%, down 1.3% points from 11.8% in 2018. This is the fifth consecutive annual decline in poverty. However, in the year

2020 the poverty rate was 11.4%, up 1% point from 2019. This is the first increase in poverty after a five consecutive annual decline. In 2020, there were 37.2 million people in poverty, approximately 3.3 million more than in 2019. The number of people living in poverty in 2021 are up to 90 million or 45% of the population. In 2022, the poverty rate is anticipated at 71%. The implication of this is that, the issue of poverty reduction did not receive sufficient attention by the Nigerian governments during this period. Therefore, several factors could have been responsible which may include political instability and misrule by the military regimes. At the time of this study, the levels of poverty also varied across the Nigerian geopolitical zones (Table 3.2). Poverty was lower in southern Nigeria compared to northern regions, particularly in rural areas (Olayiwola & Adeleye, 2005).

Table 3.2 Poverty by geo-political zones (%)

| | Year | 1980 | 1985 | 1992 | 1996 | 2004 | 2010 |
|--------------------|------|------|------|------|------|------|------|
| Geo-political zone | | | | | | | |
| South-South | | 12.2 | 45.7 | 51.1 | 58.2 | 54.3 | 37.6 |
| South-East | | 12.9 | 30.4 | 41.0 | 52.5 | 34.1 | 34.3 |
| South West | | 12.4 | 38.6 | 42.1 | 60.9 | 43.2 | 42.0 |
| North-Central | | 32.2 | 50.8 | 46.0 | 64.7 | 63.4 | 62.3 |
| North-East | | 35.6 | 54.9 | 54.0 | 70.1 | 67.6 | 63.0 |
| North-West | | 37.7 | 52.1 | 36.5 | 77.2 | 63.9 | 62.9 |

Source: National Bureau of Statistics (2012).

Poverty is perceived as the result of inability or failure of previous government officials to make judicious use of resources (Olugboyega & Kolawole, 2005). Results of the studies based on the Nigerian geographical zones, indicated that 77.7% of North Western population are living in poverty compared to 76.3% of the North East and 67.5% of the North Central States (Dodo, 2016). Therefore, the gap in the level of poverty between Northern and Southern States of Nigeria is wide and is mainly caused by the low level of education from people of Northern region, corruption on the part of government officials and poor distribution of the country's oil wealth. The current insecurity problem in the Northern Nigeria (Boko haram) worsen the situation and is a serious

threat to stability in the region (Carson, 2012). In the South, poverty is higher in Akwa Ibom, Delta and Edo States and in the North in Bauchi, Jigawa and Kebbi States.

3.3.2 Factors contributing to poverty in rural Nigeria

There are several factors contributing to poverty in rural Nigeria among which are: the inequality between the rural and urban inhabitants. People living in the rural areas depend heavily on agriculture for their sustenance. Poor rural people lack basic knowledge on the acquisition of skills and are deprived of opportunities to acquire resources compared to their urban counterparts (Oluwatayo, 2008). Furthermore, rural infrastructure in Nigeria has been focused mainly in the cities. Health, education and good drinking water facilities in the rural areas are remain inadequate. As a result, the rural communities become neglected and very poor.

3.3.3 Determinants of rural poverty reduction

Rural non-farm activities in the form of casual or regular wage employment is an important source of rural household income and, therefore, very significant to rural economy in the developing countries (Sanusi, 2011). Even though agriculture remains the main source of income and employment in most rural areas in developing countries, the rural non-farm sector has gained increasing importance over the past decades (Sanusi, 2011). For this reason, non-farm activity serves as an alternative to agriculture in providing employment. This study argues that the rural people's way of life depends on the variety of livelihoods activities they pursue to make a living. Therefore, rural poor communities must employ other strategies or factors that would improve their income. Factors considered important to providing opportunity lie in infrastructure facilities, land, financial capital, education and age of head of household.

3.3.3.1 Access to infrastructure

Economic uncertainties and poor infrastructure in the rural sector exacerbate vulnerability. Rural areas require basic infrastructure such as roads, schools, hospitals, electricity and water for development (Reardon, 2001). Lack of access roads is responsible for poor distribution and marketing of agricultural commodities as well as preventing small-scale farmers from accessing inputs, and new technology (Ayogu, 2007). Therefore, infrastructure availability would stimulate economic growth and alleviate poverty. This is possible through agricultural diversification,

generating employment opportunities and providing access to markets including export (NEPAD, 2002).

Accessibility to markets and nearby cities encourage income activities in rural villages. Therefore, poverty reduction in the rural area is not only a factor of asset ownership, but on infrastructure available, as well as proximity to the city (Dorosh et al., 2010; Khander & Koolwall, 2010; Krishna & Shariff, 2011). According to Onyeiwu and Liu (2011), rural households that are close to an urban centre have the opportunity of accessing electricity, good roads and transport, which potentially increase their income. For example, rural communities located 5km away from the city were found to be moving out of poverty (Onyeiwu & Liu, 2011). Therefore, providing rural infrastructure would enhance rural economic activities and employment opportunities, thereby reducing rural poverty (Reardon, 2001; Ayogu, 2007). Creating an enabling environment and promoting sustainable economic activity is another effective means of alleviating poverty (DFID, 2011). This would promote jobs in the private sector and raise household income. Therefore, infrastructural development can reduce poverty in the rural areas by enhancing their livelihood through raising the value of the asset and easy access to market.

3.3.3.2 Land as a factor of production

Land is the most important capital asset for the rural poor in many developing contexts, because it provides a basic foundation for economic activities (Deininger, 2003; Nnadi et al., 2010). A majority of the rural farming communities in Africa obtain what they need to live from land. For example, 50 – 60% of the assets of the poor people in Uganda come from land (Deininger, 2003). Land is a major productive asset of the poor (Onyeiwu & Liu, 2011). Also , land ownership contributes to a source of revenue in rural communities of developing countries (Onyeiwu & Liu, 2011). These authors also found that a concentration of landholdings in the hands of few individuals was responsible for rural poverty in parts of East and Southern Africa. Therefore, land availability is important for people to be self-reliant thereby reducing people's vulnerability to shocks and stress (Deininger, 2003).

3.3.3.3 Education

Education is an important capital asset for rural people that enables them to explore opportunities in both agriculture and skilled jobs as well as engaging in small-scale business and migration

(World Bank, 2008). Education helps subsistence farmers in their production activity, particularly when the inputs are available. Investment in education promotes skills and productivity potentials of the poor households. The incomes of the self-employed rural people engaged in informal activities, are better for the educated than the less educated ones (Oxaal, 1997). Education is also an important factor in poverty reduction (Canagarajah & Thomas, 2001). A 1985 study found that 48% of Nigerian households where the head of the household had no education were poor and only 28% were poor when the household head had a secondary education (Canagarajah & Thomas, 2001). Education is an important determinant of poverty and rural-urban migration influencing an individuals ability to migrate from rural to urban areas (Todaro & Smith, 2003).

3.3.3.4 Financial capital

Financial capital is an important asset for rural households to engage with various economic activities either in the farm or non-farm sector (Mishra, 2002; Muhammad & Humayun, 2010). Financial capital is necessary for rural household enterprises such as small-scale farming, trading, forestry transportation and mining (IFAD, 2012). Access to financial capital has been discovered as the most important factor that determine the growth and survival of small-scale enterprises in either developed or developing economy. Microfinance provides rural people access to soft loans, investments, assurance and other basic financial services in order to increased household income and reduced poverty (Muhammad & Humayun, 2010). In remote locations and developing contexts access to microfinance services is aggravated by a lack of collateral. This gap can lead to a proliferation of informal financial services in the rural areas providing soft loans and credit. Rural households can benefit from the informal financial institutions because of their flexibility and accessibility in offering services. However, the loans are short term due to the nature and scale of operation of the individual lender (Attah, 2008; Muhammad & Humayun, 2010).

3.3.3.5 Size of the households, labour and age

The average number of people in a household can have a very important impact on household income (Bryceson, (2000), Lanjouw, (1999), Rahman (1999) & Fabusoro et al., 2010). In Bangladesh, the number of people working in a household are the major determinant of income (Rahman, 1999). Therefore, when the majority are working in a household, it is expected they can contribute to household income which will have an influence on their production and investment. The level of household income increases with an increase in labour force (Aikaeli, 2010).

Therefore, households with larger numbers of adult working members influence choices for farm and non-farm productivity. Similarly, age distribution of household members also determines the type of activities with which people participate. Age in some instances serves as an important entry point for some employment and livelihood activities (Gordon and Craig, 2001; Fabusoro et al., 2010). Young people are more likely to migrate for opportunities in the cities than older people.

3.4 Concept of rural development

Rural development is a concept geared towards changing the social and economic life of the rural people (Chinweoke, 2015). It is a process of development that aimed to benefits poor people that live in the rural area. Therefore, it is responsible for improving the quality of life promoting self-sufficiency and sustenance while promote changes in the components of rural lives in the desired direction (Ogidefa, 2010). These group includes small-scale farmers, vulnerable groups (youth, women and the children), tenants and the landless. Availability of infrastructural facilities and support such as better housing, health facilities, education, electricity and industries are central to effective development and empowerment of rural people living in the rural area (Myrdal, 1972; Copp, 1972; Fan & Chen-Kang, 2001).

3.4.1 Sustainable rural development

Sustainable rural development is an approach of empowering those living in poverty to develop skills, knowledge, competencies, structure, and strength so as to participate fully in the affairs of their community. (Giovannucci et al., 2012). It is a development approach that can survive the effect of threat and shocks (Omotola, 2008), and it is multidimensional in approach and was built on the relationship between the different aspects of political, social and economic parts of the rural economy and various aspects of the competing forces that influence rural livelihood. Sustainable rural development promotes values, such as equality, better life opportunities freedom and requires the participation of the non-elite members of the society (Nilsson et al., 2014). A balance is sought between different and often competing demands, awareness of the environment and sustainable utilisation, and the economic and social limitations we face as a society. The hope is for people to have sustainable lives in strong, just and egalitarian communities. This means meeting the demands of the present and future generation, enhancing personal well-being, enabling social cohesion and inclusion and allowing equal opportunity

According to Montaldo (2013), there are three elements of the sustainable approach to development:

Economic: sustainable economic development is responsible for the production of goods and services. It includes the management of resources for production of agricultural and industrial goods.

Environmental: sustainable environmental process is expected to have stable resource-based. It relies heavily on the good use and management of renewable resource system. This includes preservation of the stability of the atmosphere, biodiversity and other components of the ecosystem.

Social: sustainable social system is responsible for equal and adequate distribution of basic services such as basic education, health care, gender equality and participation.

3.4.2 History of rural development in Nigeria

Most of the policies in Nigeria were geared towards developing and empowering the urban dwellers while neglecting the rural areas (Nilsson et al., 2014). Rural communities in Nigeria are involved in some community efforts such as the construction of trenches, shrines, village assembly and markets before the coming of the colonial rule (Ering 2012; Ebong et al, 2013).

Between 1973 and 2012, the Nigerian government implemented a series of programmes and measures geared towards rural development. The programmes and approaches focussed on sustainable development of the rural dwellers (Raheem & Iyanda, 2014). While some programmes have been successful, many others had failed to achieve results. Also, efforts were made in Nigeria by non-governmental and individuals towards reducing poverty. For example, International organisations such as food and agriculture organisation (FAO), United Nation Education, Social and Cultural organization (UNESCO), United Nations (UN) World health Organisation (WHO) and World Bank has also played a significant role in rural development in Nigeria (Kamar et al., 2014). These organisations have assisted in the field of education, extension services and training through their technical and environmental activities in the country. Specifically, these organisations sponsored and promoted Agricultural development (Akpan, 2012), through which rural people derived their income, employment opportunities and livelihoods (Ogunlela & Mukhtar, 2009). They also enhanced the development of river basin, disseminated information on

soil erosion, training of extension workers and basic education as well as providing primary health care (Matthew & Olatunji, 2016).

The rural development programmes that were implemented in Nigeria between the years 1973 – 1985 include Operation Feed the Nation, Agricultural Development Program, River Basin Development Authorities, Agricultural Credit Guarantee Scheme, Green Revolution, and Rural Electrification Scheme. The Programmes were geared towards increasing food production in particular areas of the farming community, improving the water resources of the river basin in the country, improved farm productivity, income and well-being of the rural people and to make the country self-sufficient in food production (Emmanuel, 2015). Some benefits were recorded at the beginning of these rural development Programmes (Ogwumike, 2001). However, Akpan (2012) indicated that these benefits had not remarkably improved the rural development activities in the countries because of corruption, poor institutional arrangement and weak coordination practice between agencies.

In the period between 1986 and 1992, the Directorate of Food, Roads and Rural Infrastructures (DFRRI), the National Directorate of Employment (NDE), the Better Life Programme (BLP), the Peoples Bank (PB), the Community Bank (CB), the Family Support Programme (FSP) and the Family Economic Advancement Programme (FEAP) were implemented. These Programmes according to Raheem & Bako (2014), are mainly concerned with economic growth and development. In these periods some financial institutions were created and empowered by the government to disburse loan services to the rural residents with affordable interest and without collateral securities. The main reason for this was to boost the financial base of the rural farming community and encourage productivity at the local level (Ekpo & Olaniyi, 1995).

The Programmes also, provided rural access roads to connect rural-rural communities, rural-urban centers and farmers to the markets. This is because, before the commencement of the Programmes, one of the main problems facing farmers and farming activities was poor access roads (Raheem & Bako, 2014). In addition, the Programmes helped in the formation of Community Development Associations (CDAs), Community-Based Organizations (CBOs) and Community Bank to provide loan to the rural dwellers which ordinarily cannot have access to commercial banks (Akpan, 2012). The CDAs and the CBOs have contributed much to the development of rural areas.

However, despite the progress recorded by the projects, like the other rural development approaches before them, change of government policies as well as mismanagement and priority misplacement weakened their scope and thus could not take the rural development to “the promised land.”

The democratic (1993 - 2003) period witnessed the introduction of a poverty alleviation programme (PAP). This was aimed to employ and make people self-reliant in the country. It was also meant to promote and teach a better maintenance culture among the people particularly those in the rural areas (Ogwumike, 2001). In 2001, PAP was merged with National Poverty Eradication Programme (NAPEP) which was part of the National Economic Empowerment and Development Strategy (NEEDS). This approach by government geared addressed the problems of the rural poor. The NAPEP development approach is not the same as general development because it stresses more importance on the development and enrolment of human resources potential (Ogwumike, 2001). It also plays a role towards equal distribution of income and access to resources. NAPEP also includes agendas meant to achieve social improvements of the rural masses apart from agriculture. In the 2003, the Nigerian government established the Presidential Cassava Transformation Initiative (PCTI) to support cassava industrialization. The project focused on cassava because a majority of farmers in Nigeria cultivate cassava as their staple food. Cassava has the ability to transform rural economies in Nigeria because it can survive on marginal soils, has diverse uses and requires low inputs when compared to other crops such as maize and rice (Okhankhuele, et al., 2017). The project mandated the inclusion of 10% cassava flour to wheat flour, for the production of bread, 10% bioethanol in gasoline and the use of paraffin with ethanol gel fuel as the cooking fuel (Okhankhuele, et al., 2017). Also, to expand the use of cassava locally, in form of starch, *gari*, *lafun*¹, tapioca to livestock feed, household flour, starch, ethanol, and raw materials for industries.

Also, between 1993 – 2012, there was an introduction of a Community-driven development (CDD) approach (Mansuri & Rao, 2004). This is a strategy used by both government and development practitioners to develop programmes and projects that are responsive to local needs and priorities and also empowered local communities to be responsible of their own development (Gillespie,

¹ *Gari* and *lafun* are local names for fermented cassava used for human consumption.

2004). The CDD approach targets the poor and vulnerable groups such as the youth, women, elderly and people with disability, and relies on the use of local knowledge to identify and define the targeted groups (Nkonya et al., 2012). Also, the Federal Government of Nigeria (FGN) launched the Growth Enhancement Support Scheme (GESS) in 2012, to transform the delivery of input subsidy as part of its Agricultural Transformation Agenda (ATA). Under the GESS, the Government's role was facilitation of procurement, regulation of fertilizer quality, and promotion of the private-sector fertilizer value chain (Joseph & Ajagono, 2020). The FGN and state governments each contribute 25 percent of the fertilizer cost resulting in a 50 percent subsidy offered directly to smallholder farmers in the country. The states and local governments were responsible for registering the farmers, with 3.91 million farmers in 2012; 9.5 million farmers in 2013 and 10.47 million farmers in 2014 (Joseph & Ajagono, 2020). Agricultural Transformation Agenda Support Program (ATASP) aimed to reduce post-harvest losses, add value to local agricultural produce, develop rural infrastructure and enhance access of farmers and other value chain actors to financial services and markets with the help of private sector investment in agriculture was introduced in the year 2013. The program created jobs along value chains for priority agricultural commodities of rice, sorghum, cassava, horticulture, cotton, cocoa, oil palm, livestock and fisheries. These particularly targeted Nigerian youth and women. The project provides additional income to producers and entrepreneurs through creation of jobs along the value chain of priority commodities (Okhankhuele, et al., 2017).

The National Fadama Development Programme (I, II and III) used a CDD approach in its programme implementation. The programme was the largest agricultural project in Nigeria covering 12 out of the 37 states of the federation (Nkonya et al., 2012). Fadama I used a top-down supply-driven development approach, mainly concerned with agricultural production. Fadama II and III sought to address the shortcomings identified in Fadama I, and therefore, supported activities and services apart from crop production (Nkonya et al., 2012). Fadama II and III supported communities to access infrastructure and productive assets and empowered communities to manage economic activities and reduced conflicts among the users of resources. The activities of Fadama II and III centered on farmers groups: Fadama User Groups (FUGs) and Fadama Community Associations (FCAs). FUGs are group of farmers with a common economic interest and FCAs comprises of multiple FUGs. The FCAs the responsibility for the implementation of a local development plan. Community and social development projects (CSDP)

have been one of the latest approaches aimed at reducing poverty in the rural areas of Nigeria (Hussain, 2002). These have been promoted on the perception that community-based development helps poor rural communities in their striving towards incorporation in the national economy (Olugboyega & Kolawole, 2005). They aimed at improving rural livelihoods in the country (Matthew & Olatunji, 2016). Currently, the Rural Access and Agricultural Marketing Project (RAAMP) was initiated by the Federal Government of Nigeria in 2020. This project is being financed by the World Bank and French Development Agency. Federal Department of Rural Development (FDRD) of the Federal Ministry of Agriculture and Rural Development (FMARD) was responsible for driving this project. The project presents an agricultural marketing package designed to unlock agro-value chain potentials of rural and household farmers through agro-logistics hub development (Uwaoma, et al., 2020). Agro-food value chains are designed to increase competitive advantage through collaboration in a venture that links producers, processors, marketers, food service components, retailers and supporting groups.

3.5 Theoretical framework

According to Ocholla and Roux (2011), the theoretical framework of a study aims at answering the question that the research set out to investigate. The findings then are inherently based on the concepts and approaches related to the suggested theories/concepts for the study. The Livelihoods approach guided the framework of this research study. This involved formulation and understanding relationships and concepts that are relevant to the research work so as to explain, predict and understand the phenomena. An adapted version of the DFID Livelihoods Framework was also utilised for group discussion with respondents as a data collection tool this is described in Chapter Four.

3.5.1 Sustainable livelihood approach

The Sustainable Livelihood Approach was developed by United Kingdom, Department for International Development. The Sustainable livelihood approach (SLA) is a framework within that approach, used to address poverty reduction in rural development intervention (DFID, 1997). It was first described by Chambers & Conway (1991). It has been used as a tool for thinking about the priorities and influences of development activities. As such, the framework imbeds the impact of institutional process and access, associated with livelihood activities with the on the resilience of a household or community (DFID, 1999). The framework is used as a guide to select and unpack

various dimensions of people's livelihoods, their strategies, related opportunities and challenges. Considering the impact of vulnerability context on the livelihood strategies and access to resource within rural development interventions presents a model for unpacking and the impact of poverty and vulnerability on livelihood outcomes. Entry points for further intervention can be identified.

The SLA evolved within the context of rural development approach, where development practitioners used it to plan and evaluate the effectiveness of interventions (Morse & McNamara, 2013). The approach outlines the elements that influence how a household can cope with and recover from shock (e.g. disaster) and stresses to enhance and achieve their livelihood outcomes/goals (improved food security, income, wellbeing and reduction in vulnerability). The approach, when combined with a development model such as explained by Dorward & Andrew (2009) further explains how people use their resources to cope and adapt to uncertain and unpredictable natural events, in addition to the support they receive from governments and non-governmental institutions as indicated earlier in Figure 3.1.

3.5.2 Rural development model

Achieving the goal of rural development requires the assets, which are classify into: human, natural, social, physical and financial capitals (Scoones, 2009). According to Dorward & Andrew (2009), the livelihood activities of the poor rural people can be classified into three broad categories: Hanging in, stepping up and stepping out as indicated in Figure 3.2.

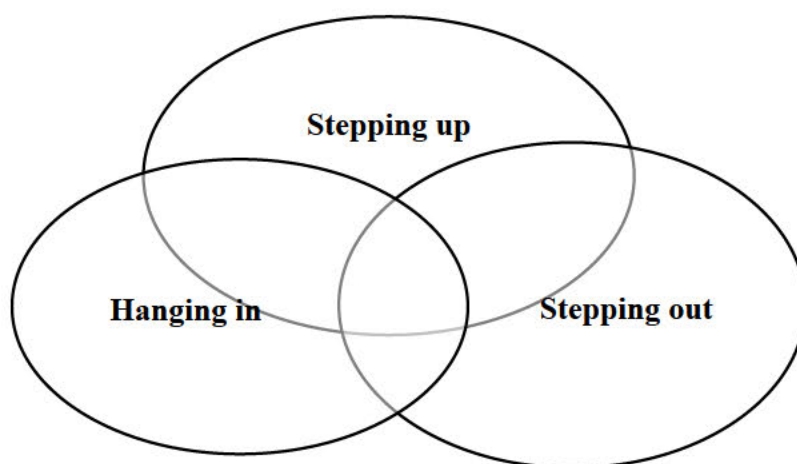


Figure 3.2 livelihood strategies of the rural poor (Adapted from Dorward & Andrew, 2009)

Hanging in: refers to when the activities of people are towards protecting the assets they possess. They are afraid not to lose assets as a result of unfavourable condition of trends and shocks. For example, a household trying to maintain the fertility of their land.

Stepping up: this is possible when people improve the productivity of their existing assets into new investment such as new technology, more land and better equipment. For example, a smallholder farmer investing into improved seed variety and weeds management techniques to enhance the productivity of their land.

Stepping out: this process takes place when people desire to accumulate new assets. Their livelihood activities tend to focussed on new productive activities. For example, smallholder farmer investing into education of children or off-farm enterprise. Each of these processes are potential outcomes of livelihood strategies and they can be pursued individually or in combination depending on the circumstances of the people involved.

3.6 Operationalisation of the conceptual framework into the rural livelihood analysis

The background of this study was to explore the perceived role of the Community and Social Development Project (CSDP) on the livelihood activities of residents of Danko/Wasagu LGA and draw conclusions about the state of vulnerability. The CSDP aimed to reduce poverty through a strategic improvement of resources available for livelihoods. The livelihoods framework (Figure 3.3) emphasizes the role of institutions and processes as key to the available resource and influence on livelihood vulnerability (DFID, 2000). While, previous studies of rural livelihood strategies have examined household income derived from different activities (Alemu, 2012) and on the basis of assets and labour distribution (Brown et al., 2006). This study focused on diversity of household assets (tangible resources such as physical, natural and financial capital and intangible ones social and human capital) as well as the social institutions that influences how or whether ones have access to assets (Scoones, 1998; Leo & Annelies, 2005). Therefore, livelihoods studies cannot be equated with monetary resources alone, but are multidimensional and are related to socio-economic activities in which people depend (DFID, 2001).

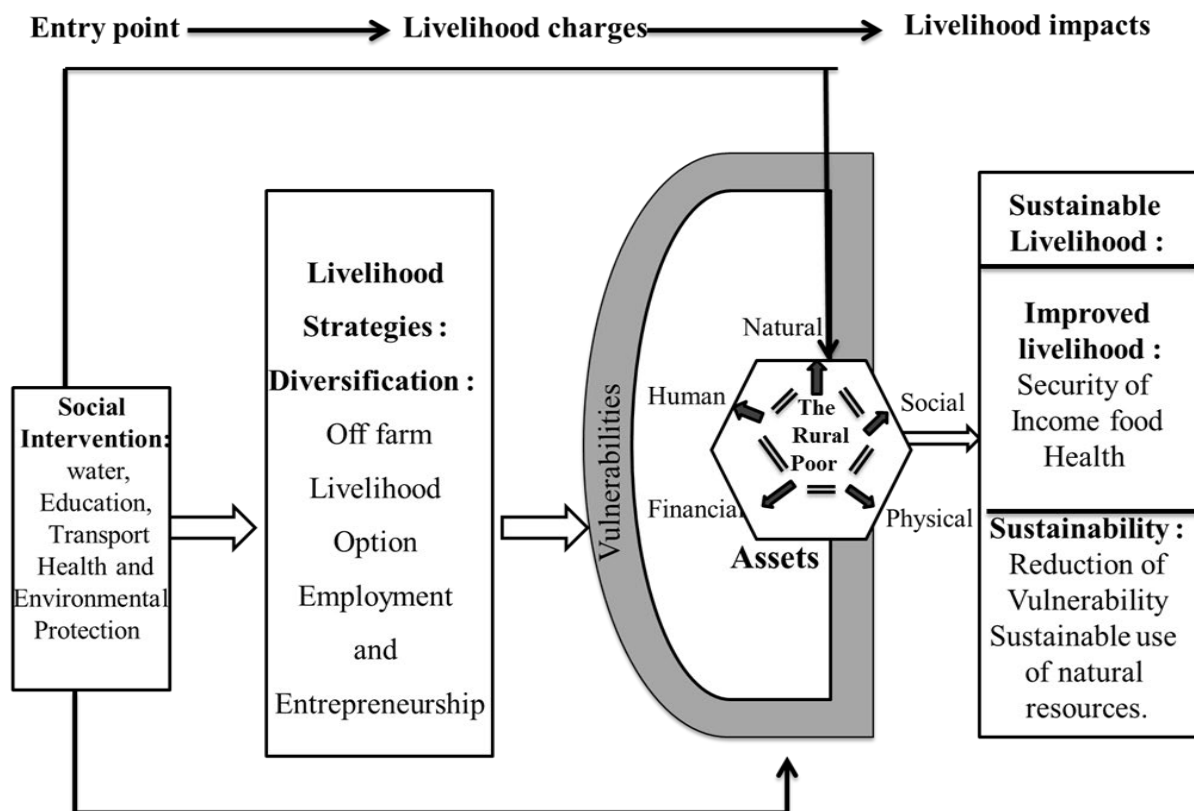


Figure 3.3 Conceptual Framework of Sustainable livelihood of rural people (Modified from DFID, 2001)

3.6.1 Rural development intervention

Community and Social Development Project was devoted to sustaining people's lives. The project aimed to improve the general welfare of the rural dwellers by facilitating their access to social, economic and natural resources infrastructure and services such as education, potable water, health care and environment rehabilitation (see explanation in, Figure 2.4). Rural poor people could take the advantage of rural development interventions for poverty reduction (Allison & Horemans, 2006) if the intervention facilitated the efforts of low-income households to build their livelihood assets (DFID, 1999). The CSDP intervention intended support and services in the form of education, health, water, transport, environmental protection training, economic awareness, and savings Programmes and support for small business development. They also included addressing the vulnerability context such as social and economic change at the community level through community building, alliance and organising. Therefore, if the poor were able to access the livelihood assets they require and are adequately supported by service providers such as rural

development intervention and if they are able to make markets, politics, rules and norms work to their advantage, then they are likely to cope with those elements of vulnerability context which they can do little to change.

3.6.2 Livelihood strategy of households

Livelihood strategies are activities practised by rural people to achieved livelihood outcomes (DFID, 2001). Natural and socio-economic factors such as resource endowment, educational level and market fluctuations influences households to engage into a range of livelihood activities such as subsistence production, production for market, engaging in labour market and self-employment (Wang et al., 2012). Although the preference of a livelihood strategies depends on the household, also institutions and policy provide more options in terms of proximity, affordability, availability and eligibility for people to grab these options. These options provide opportunities like employment, entrepreneurship and supply of good and services (Ellis, 1998).

3.6.3 Building livelihood resources

Generally, livelihood assets have some relationship with livelihood diversification strategies of the people. Assets owned by the people can support and contribute to overall production and income, allowing exchange to take place in period when there is no income as well as facilitate the creation of livelihood capitals for sustainability in lives (Ellis, 2000). While, no single asset is enough to achieve livelihood goals, it is equally important to understand that a single asset can generate multiple benefits or outcomes. For example, land (a natural asset) can be used as a financial capital to secure loan apart from productive purposes.

3.6.4 Livelihood outcomes

The indicators for a sustainable livelihood outcome are increased income, food security, improved well-being, reduction in vulnerability and sustainable use of natural resources (Alinovi et al., 2010). Assessing vulnerability relies on investigating the livelihood outcomes which can be explained as follows:

Improved income security

CSDP creates opportunity for income generating activities through the training on skill acquisition activities. For instance, knowledge on tailoring, computer operation and carpentry are helping to

boost business activities. Also, support on rural electricity may extend business hours, improved business activities and provide opportunity for employment (Komatsu et al., 2011).

Improved food security

The term food security refers to access and availability food, food value and nutritional adequacy. Food security can be achieved when people are educated. One of the objectives of CSDP was to provide support and services to education. Education brings about awareness in farming methods such as seed selection, method of applying fertilizer and soil testing techniques.

Increased well-being

Support and services in education, health and environment can have improved the living statuses of the people. For example, health centres provided by the CSDP in the study communities are helping awareness building and care of health-related problems. Also, provision of clean drinking water to rural population through the CSDP helps to keep away people from water borne diseases.

Sustainability

A livelihood is sustainable when it is able to reduce or overcome vulnerability and can ensure the sustainable use of natural resources.

Reduction of vulnerabilities

Vulnerabilities are livelihoods constraints experienced by people as a result of natural, economic and religious perspectives. People assets along with institutions and diversified livelihood strategy could be an important interventionist for compensating people from vulnerabilities (Cannon et al. 2004).

Sustainable use of natural resources

These are nature dependent resources that requires management for the upcoming generations. CSDP through Programmes on shelter-belt establishment, planting of trees and environmental protection would definitely instigate the sustainable use of natural resources and sustainable development at large.

CHAPTER FOUR: RESEARCH METHODOLOGY

The intention of the CSDP was to invest in poverty reduction through a strategic improvement of resources available for livelihoods. Providing rural infrastructure would enhance rural economic activities and employment opportunities, thereby reducing rural poverty (Reardon, 2001; Ayogu, 2007). Thereafter Local Government Authorities were expected to maintain the existing infrastructures and continue development following closure of CSDP.

Although a survey had been conducted (initially in 2013 and then post project between February and April, 2015) by CSDP facilitators – this data had not yet been analysed at the start of this investigation. The livelihoods framework emphasises the role of institutions and processes as key to the available resource and influence on livelihood vulnerability. The intention of this investigation then, was to explore the perceived role of the Community and Social Development Project (CSDP) on the livelihood activities of residents of Danko/Wasagu LGA and draw conclusions about the state of vulnerability. To achieve this, two sources of information provided data for analysis. A field visit included focus group discussions with a purposeful selection of beneficiaries of the CSDP. The CSDP data bank approved the extraction of a purposeful selection of survey data, providing a secondary source of respondent and livelihood information from the CSDP intervention itself (Figure 4.1).

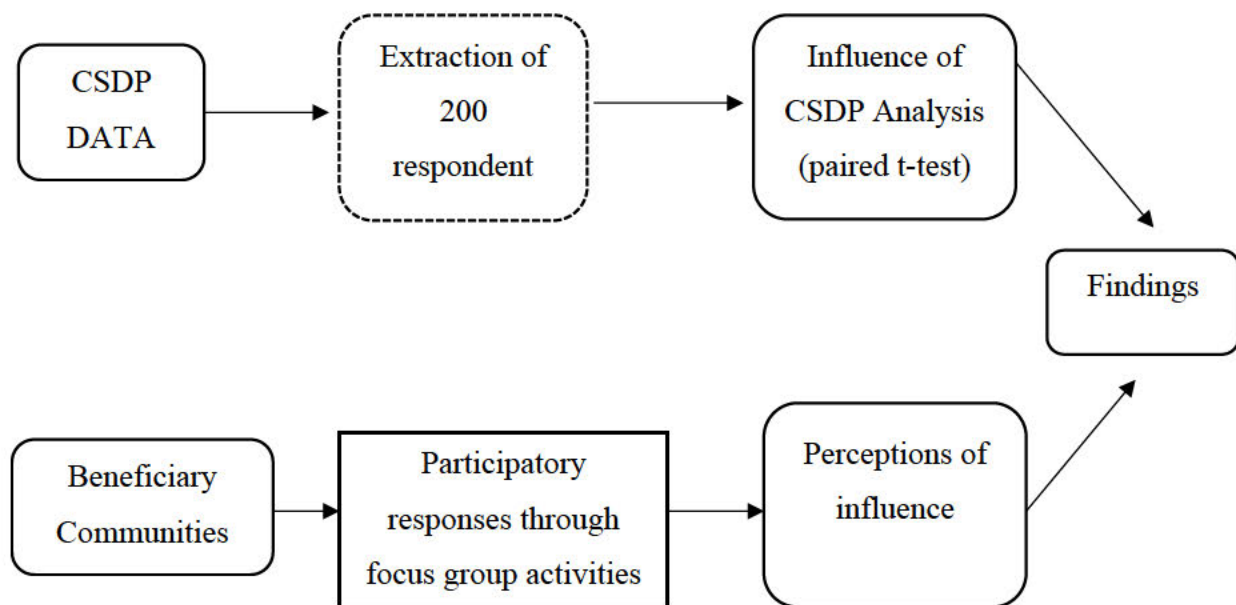


Figure 4.1 Schematic procedure used to obtain data

The researcher was assisted by the CSDP facilitators who had experience in participatory rural appraisal method. They helped considerably on how to pursue a sustainable livelihood analysis. The researcher and team explored the practice, benefits and tools used in sustainable livelihood analysis before the commencement of field work. An outline of this original plan is shown in Appendix 2. This use of participatory interaction with the help of focus group discussion had two primary objectives for a post intervention perspective:

1. To develop understanding of the livelihood strategies of participants from an emic perspective which will be fundamental for any strategic planning in the communities and,
2. To identify CSDP influences on livelihood vulnerability in the area under study

4.1 Selection of Communities

There were 24 communities in Danko/Wasagu local government area that take part in the CSDP, (Appendix 1). Between January and February 2016, detailed desktop study of all the communities were carried out. A telephone conversation was established between desk officer of the CSDP in the study area and the researcher to clarify some of the information provided in their publications. Communities to be included in the research were selected after studying the information in the criteria provided (Table 4.1). Based on the information gathered from the 24 communities, only four (Dseme, Kanya, Maga and Shengel) met all the criteria for selection and would make a suitable sample for the study. Other communities were not included because they failed to meet up with rules set for selection.

Table 4.1 Criteria followed for selection of communities

| Criteria followed | Consideration applied |
|-------------------------------------|--|
| Area | Communities selected for this study were those located in rural areas. |
| Project implementation | Communities involved in this study were those that fully implemented their community development plan (CDP), and established a legally recognized Community Development Association by way of registering it with the LGA or the relevant Ministry/Department of the State Government. |
| Maturity | The communities involved are those that fully completed their micro-project (for at least three years), to qualify for evaluation. |
| Ability to participate/Contribution | The communities involved are those that contributed at least 10% in cash and in-kind to the financing of the community development plan (CDP). |
| Economic activity | The communities involved are those that are primarily engaged in occupation such as farming, livestock rearing, fishing and small-scale enterprise. |

Source: A similar approach was used by Maepa and Mphahlele (2004) and Yin (2013)

From the list of individuals that are active in community development associations (including their names and contacts) from the CSDP in the four communities selected for this study available with the desk officer, twelve (12) respondents were purposely selected to participate in the Focus Group based on the criteria mentioned in (Table 4.2). Informed consent was obtained from each participant prior to Focus Group Discussion (Appendix 6). The individuals targeted were selected from individuals who had originally been beneficiaries of the CSDP project, were currently active in community development association (CDA) and also involved in various economic activities such as farming, fishing, and livestock keeping and small-scale businesses.

Table 4.2 Criteria for selection of participants

| Criteria | Definition |
|---|---|
| Participant are member of the Community Development Association (CDA) | CDA is the main organisation of the community. It takes care of the development needs of the whole community. It is usually consisting of the members of the community and it guides all community development activities |
| Participant engaged in economic activity | These are primary occupation undertaken by members to earn a living. For example, farming, livestock and fishing |

4.2 Focus Group Activities

A semi-structured process of Focused Group activities was used for the respondents to share their collective experience around institutions, structure and processes. The activities were held between 4th July to 8th September 2016. At Dseme and Maga, sessions were held at the community primary centre, while the assembly of Kanya and Shengel were held at the community primary school. Four focus groups were conducted, one for each community. The procedure was accomplished with the researcher and the team members responsible for explaining each part of the process to participants, guiding group participation and discussion and recording information (some part of the discussion were explained to respondents in Hausa to suit the English proficiency of individual respondents).

For each focus group, a 1st session was carried out in the morning, and a 2nd part was done in the evening. Each session lasted 3 – 4 hours. Figure 4.2 demonstrates the logic of this process.

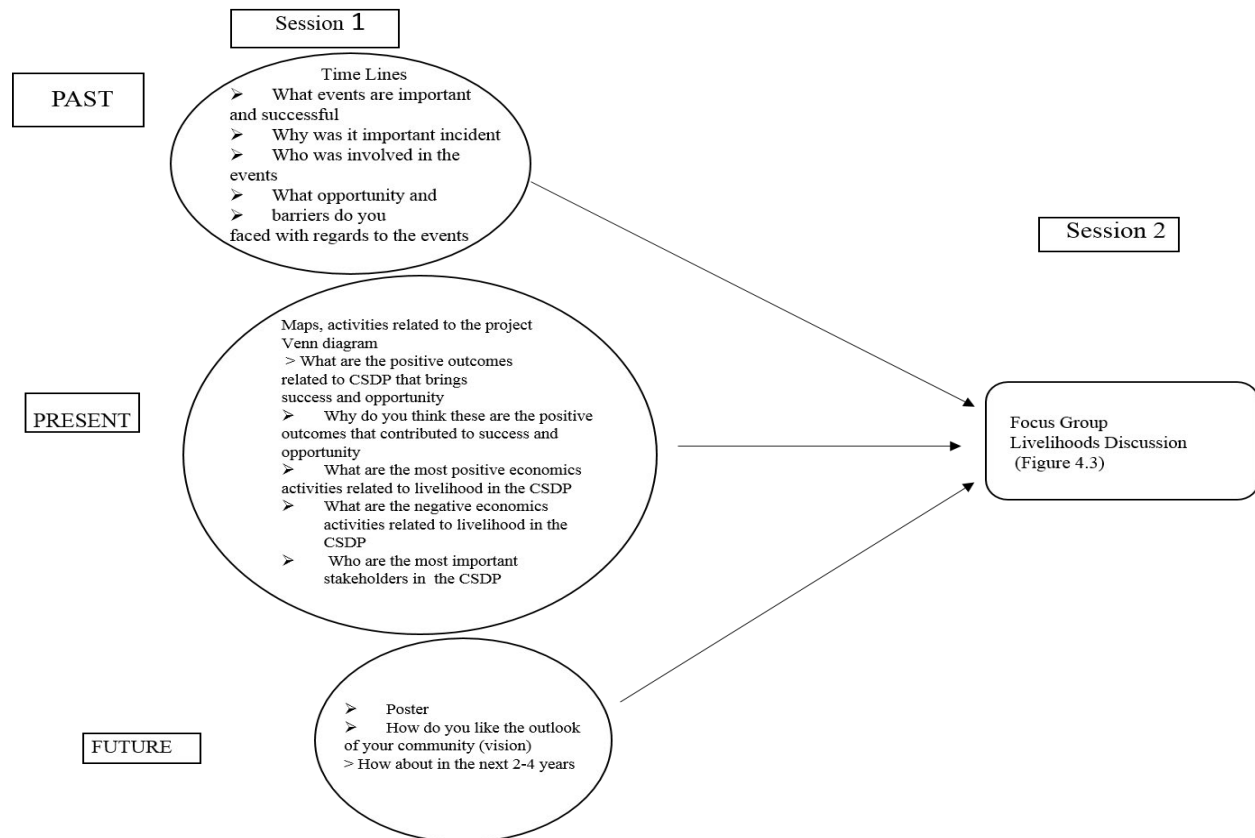


Figure 4.2 The Focus Group Logic

4.2.1 Participatory learning and discussion

The main objective of Session 1 (Figure 4.2) was engaging the participants to reflect on their livelihood both within the household and the community level and to expose them to the understanding of sustainable livelihood terminology and concepts. The process is described in detail in Appendix 10. The process was carried out with the researcher and his team explaining each part of the process to the participants to ensure focus on the themes and recording the information. The group analysis record followed the sequence described in Appendix 10. The first learning process or exercise was a timeline, identification of positive and negative activities related to the project, economic activities related to livelihood in the project, followed by the drawing of a map and poster and finally, Venn diagrams. At the beginning of each of these discussions,

previously completed tasks were displayed on the ground as reminders of previous information. At the end of Session 1, facilitators collected all of the records of the participatory learning exercises to be use for Session 2, the discussion for a livelihood analysis summary. During focus group activity learning occurred almost constantly as members in each community interacted with their appointed tasks and discussed with each other and the facilitating team. The members shared ideas and identified institutions and structures that had an influence on their livelihood strategies. The learning process also exposes members to visualizing their future.

4.2.2 Focus group discussion for livelihood analysis summary

For the Session 2 summative activity, the researcher and the facilitators again guided a group discussion. A single data collection tool, the group livelihood analysis record was adapted from DFID Sustainable Livelihood Framework (Figure 4.3). A big sheet of paper was made available for each focus group in the four communities studied. Each meeting of the focus group began with the recollection of previous learning activities conducted. Timelines, positive and negative as well as economic activities related to livelihood in the project, maps, posters and Venn diagrams were all presented in the meeting venue of each community as a reminder to earlier findings.

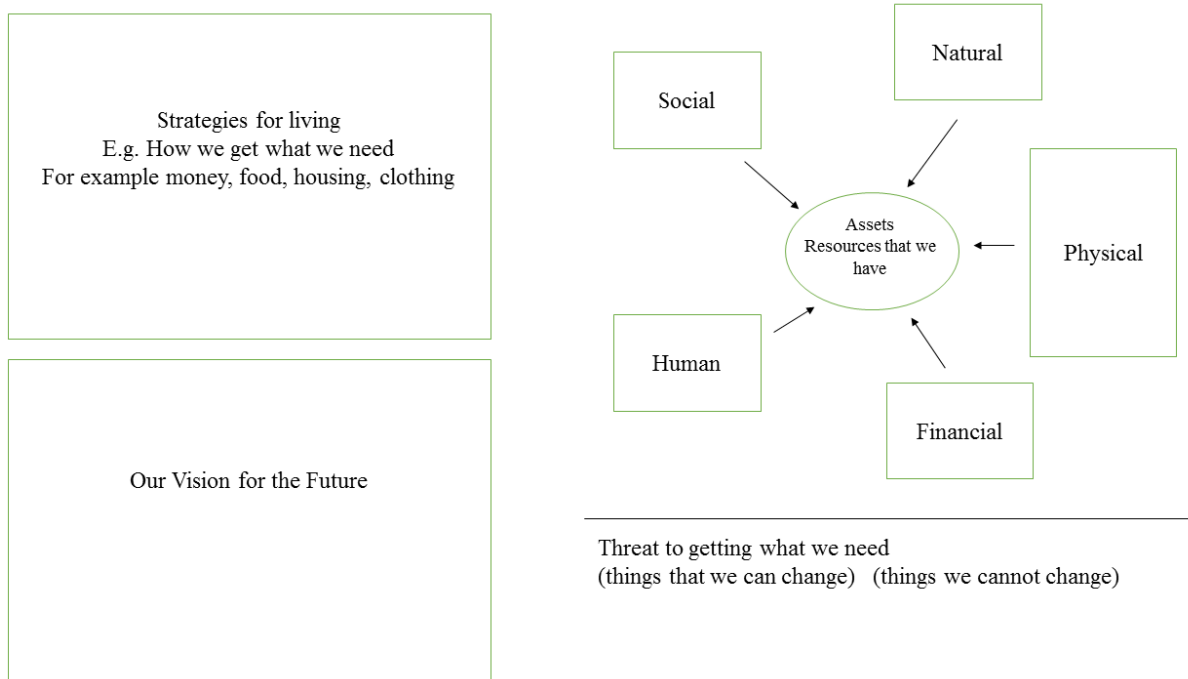


Figure 4.3 Sustainable livelihood record framework for the communities in Danko/Wasagu, adapted from (Caister, 2005)

The group summary record was placed in front of the circles by the facilitator for the members to focus their attention and record decisions on the relationship between previous learning exercises and the group summary sheet. Discussion was encouraged by progressively responding and clarifying issues and responded to queries and debates on issues and ideas raised from the Timelines, discussions, maps, posters and diagrams already conducted. Gradually a consensus occurred and was recorded on the group summary sheet. The raw data from these analysis records are presented in Appendix 10. The focus group discussion process allowed the participants to share their experience and understand their livelihood as a system and further understand external and internal factors influencing their livelihood activities. The knowledge gained would help in the future planning of these communities (beyond the scope of this study) which would serve as a visioning. The summary was recorded by the researcher and the team members.

4.2.3 Data treatment and analysis for the focus group

Information from four (4) group livelihood analysis was recorded in Excel spreadsheet by the researcher. The Excel entries and the original group livelihood sheets were compared by the researcher for any error. The completion of full textual and coded versions of the responses for each category of the sustainable livelihood framework followed. The results of all the four focus group are presented in the appendix for ease of comparison as thus: Appendix: 13, Summary of livelihood strategies; Appendix: 14, Summary of perceived transforming structures and processes; Appendix: 15, Summary of livelihood resources and Appendix: 16, Summary of vision. Summarised data of these raw data are available in chapter 5. The data analysis for focus group in this study involved qualitative approach that examine meaningful and symbolic content of qualitative data. The approach helps in understanding the relationships between emerging themes/patterns through qualitative inferences which were identified, and also in discussing the similarities and differences that corroborate or contradict the findings used in this study. Also, the contents of the discussion and field notes were reviewed to identify the emerging concepts, constructs and themes. They were subsequently analysed according to their themes and recurring patterns of meanings and relationships (Cohen et al., 2007).

After the field visit which include focus group discussion with the beneficiaries of the CSDP, the next source of information that provided data for analysis was the extraction of CSDP survey data bank. Focus group data through the participatory interaction with respondents focuses on rural livelihoods strategies where the participants make use of assets and activities to construct a living. However, these efforts are constraint because of poor infrastructure, functioning markets, lack of credit facilities, modern technology and social welfare services (Onyeiwu & Liu, 2011). The Focus group also identifies the influence CSDP had on livelihood vulnerability of the participants. The CSDP survey data bank informed on the demographic characteristic of the individuals used in this study. Also, it provided information on income characteristics, focuses on identifying how access to assets influences outcome and vulnerability.

4.3 Secondary data collection and methods: the CSDP survey data bank

Facilitators of the Danko/Wasagu, Community and Social Development Project (CSDP) conducted the survey in the communities of Danko/Wasagu LGA between February and April, 2015. After the survey, the data collected by the facilitators was digitised but not analysed. Appendix 4, the questionnaire on the CSDP survey was used to cover all aspects of livelihood at the household level. It considered factors that are essential in determining rural household incomes and poverty reduction in the Nigerian context – education, age, financial capital, infrastructure, household labour and farm land). The data is an official statistical data of the CSDP monitoring and evaluation unit of the local government. The researcher had obtained approval from the head of department of the monitoring and evaluation of the Danko/Wasagu CSDP before accessing the data bank (Appendix 8).

4.3.1 Extraction and handling of CSDP survey data sample

The extraction of the sample from CSDP data bank followed focus group discussion. It was deemed important to identify livelihood vulnerability and CSDP for households whose skills base or area of interest was shared by participant contributors to the FGD. In each of the four (4) communities of Danko/Wasagu local government area that participated in the FGD, namely Dseme, Kanya, Maga and Shengel information of fifty (50) individuals were purposely extracted on the basis that:

- Individuals are members of the community development association and takes part in community development activities,
- The primary activity for the individuals to earn a living are generally farming, livestock husbandry and fishing.

The CSDP data base consisted of list of members of the four (4) selected communities in Danko/Wasagu LGA. To extract data of the individuals from the CSDP data bank, in each of the four (4) communities, one facilitator helps the researcher in the extraction process. The process of extraction of data was carried out in the boardroom of the local government CSDP. The data was extracted from the record data base available with the CSDP. For example, the list of the digitised data of individuals that participated from the CSDP data survey in Dseme community were displayed on the table, and the facilitator assisted the researcher in extracting fifty (50) individuals that shared similar interest with participants that contributed in the FGD. The data of the individuals were extracted according to their serial number. The first, fifty individuals whose skills base or area of interest was shared by participant that contributors to the FGD were extracted for the study. Criteria used for exclusion of individuals during the extraction for this study include disinterest in farming and lack of formal membership with the community development association. The same process was carried out for Kanya, Maga and Shengel communities respectively.

.4 Data analysis techniques for CSDP extracted data

The data analysis for CSDP extracted data for this study focuses on rural livelihoods. It analyses factors that are responsible in identifying rural household incomes and poverty reduction. It also, describes how these factors play important role in the process of income generation. It is through these activities that rural households are able to make their livelihood over time. The analytical techniques employed in analysing the data for this study include Descriptive Statistics and Paired Sample t-test. Descriptive statistics was used to describe and explain the results of the study in terms of age, level of education, occupation, and sources of income, types of assets, household labour and farm land. Descriptive analysis in this study select frequency, percentage and the use of tables and graphical presentations. Paired sample t-tests were used to determine the influence of CSDP support and services before and after the intervention. Paired sample t-tests analysis compare and determine whether there is statistical evidence that the mean difference between the paired observations (before and after) is different from the zero.

4.5 Trustworthiness

For this study qualitative method of investigation was employed with the help of two methods of data collection (triangulation a validity process where researchers used different sources of information to arrive at a conclusion (Creswell & Miller, 2000), which provides the opportunities to explore and describe the process of the investigation (Yin, 2013). The data informs on the activities of households and communities within the context of a local social development project (Lederer et al., 2017). The data explained events and meanings the way people describe them and attached importance to processes and purposes (Hancock and Algozzine, 2015). Therefore, it facilitated self-understanding and give more insight into the human knowledge and behaviour (Hussein, 2015), and provide an opportunity for the researcher to relate and interact with the people under study (Van der Merwe, 2003).

The two sources of data collection used led to more accurate, reliable information that single process cannot achieve (Yin, 1994 & 2009). Firstly, with the help of focus group, participatory exercises with the members of the communities gave a richer understanding of people's lives and their socio-cultural practices (Ritchie et al., 2013). The discussion reflected on livelihood strategies both within the household and the community, influence of CSDP on livelihood vulnerability and expose members to the understanding of sustainable livelihood terminology and concepts. The exercise encouraged participants to identified resources which affect their livelihood choices and also exploring challenges or limitations against them to invest in poverty reduction. Group analysis records stimulated discussion and provided opportunity for the participants to share their collective experience within their relationship and outcomes which had influence at both household and communities levels. During the livelihood analysis, a single data collection tool, the group livelihood analysis record was adapted from DFID Sustainable Livelihood Framework. The livelihoods framework emphasizes the role of institutions and processes as key to the available resource and influence on livelihood vulnerability. The CSDP was obviously an intervention designed to influence both institutions and processes for poverty reduction. The, extracted data from CSDP survey data bank, provided a baseline within the timeframes of the intervention, for details on individual respondents, household assets with respect to human capital, income characteristics, and access to housing, and relationships of household members with respect to decision-making process and the influence the CSDP through micro – projects.

CHAPTER FIVE: PRESENTATION AND DESCRIPTIVE ANALYSIS OF RESULTS

This study set out to investigate whether a national agenda for improvement of resources had influenced the livelihood vulnerability of community members in Danko/Wasagu LGA. This Chapter presented findings obtained through two analytical processes allowing the researcher to reflect on the vulnerability of livelihoods three years post intervention.

1. A sample set of original respondent responses extracted from the survey data of CSDP provide demographic information and details about household assets in respect of income characteristics, relation of household's members in decision making process and access to resources and services. Before and After responses were extracted for the key areas of projected resource improvement by the CSDP. The sample was random with no attempt to stratify the sample by age or gender.
2. A sustainable livelihood analysis explored a post evaluation of the concept of livelihoods with participants currently residing in communities impacted by the CSDP. Focussed discussion created a space for them to define in their own words, what they perceived as their livelihood strategies, assets, transforming structures and processes, vulnerabilities and livelihood outcomes.

The CSDP sample data analysis compared before and after survey responses on the contribution to livelihoods and the influence of the CSDP in promoting access to resources and services. The livelihood analysis provided a 'down the line' perspective as it described the various strategies' participants currently engaged in to sustain their living, how they overcame vulnerabilities and achieved outcomes not only for themselves but including their communities. Focussing the discussion guided the participants to identify issues perceived as problems and possible solutions of perceived obstacles of getting what we desire from a different viewpoint.

5.1 Background information of individuals extracted from the CSDP database

This section describes age, gender, education, occupation, household size, and remittances, sources of income, household tenure, and asset ownership of selected items of individuals extracted from the CSDP database.

Table 5.1 below indicated that most of the individuals extracted from the data base in all the communities were young except those in Maga community which recorded only 20% of the

youth. The second group who are neither young nor old (41-59) recorded the highest percentage of the individuals in Maga, while the last group who were termed to be old were between 2 – 6 percent of the individuals. While the sample was a random extraction from a data base, the age distribution of household members is a factor that can have an influence on their livelihood activities. The relationship between age distribution and livelihood activities is clear that the higher the number of youths available to a household in a particular community, the higher the level of their contribution to livelihood activities, since they would likely be able to afford changes to their livelihoods in case of hazard exposure. Therefore, in this sample most of the individuals extracted from the CSDP data base are at their productive age (21 – 40) except in Maga, and they are expected to contribute positively to livelihood strategies in the study area (Gordon and Craig, 2001, Fabusoro et al. 2010).

Table 5.1: Age of the individuals from CSDP database
N = 200

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|-------------------------------|--------------------|--------------|------------|--------------|------------|-------------|------------|----------------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Age of the individuals | 21 – 40 years. | 47 | 94 | 41 | 82 | 10 | 20 | 42 | 84 |
| | 41 – 59 years. | 3 | 6 | 7 | 14 | 37 | 74 | 6 | 12 |
| | 60 years and above | - | - | 2 | 4 | 3 | 6 | 2 | 4 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

As shown in the Table 5.2, the gender of the individuals extracted from the data base revealed that majority were males. Women in rural areas of Northern Nigeria often suffer segregation compared to men especially when making decision in a household (Shahbaz, 2008). Therefore, most of the livelihood activities are dominated by males (Salawu et al., 2016; Okere & Shittu, 2012), and the segregation may be because of the cultural barrier in some part of Northern Nigeria which does not allow women to freely participate in Programmes (Galadima, 2014).

Table 5.2: Gender of the individuals from CSDP database N = 200

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|--------------------|--------------|--------------|------------|--------------|------------|-------------|------------|----------------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Gender | Male | 28 | 56 | 31 | 62 | 30 | 60 | 32 | 64 |
| | Female | 22 | 44 | 19 | 38 | 20 | 40 | 18 | 36 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

The educational level of the individuals extracted from the CSDP data base indicated that in all the communities almost half of the individuals only attended primary school (Table 5.3). Low levels of education have a depressing repercussion for economic growth (Chambers and Conway, 1992). The table also indicates that, some of the individuals had experienced of education at the junior secondary school (first half of secondary education) and only in Maga and Shengel communities hardly any individual attend senior secondary school (last half of secondary education). And less than 15 (30%) had no western education across the communities. In this sample majority of the individuals are constrained to seeking higher education. Education is one of the important assets for rural people to seek opportunities in agriculture, skilled jobs and small scale business activities as well as enhances one's ability to appreciate and prepare for future situations such as drought and climate change. Households with skills are more likely to gain employment and earn their wage by employing their skills than unskilled households (Madhuri et al., 2014).

Table 5.3 Educational level of the individuals from CSDP database N= 200

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|---------------------------|---------------------------|--------------|------------|--------------|------------|-------------|------------|----------------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Level of education | Primary school | 25 | 50 | 24 | 48 | 24 | 48 | 25 | 50 |
| | Junior secondary school | 15 | 30 | 12 | 24 | 14 | 28 | 13 | 26 |
| | Senior secondary school | - | - | - | - | 5 | 10 | 3 | 6 |
| | Post-secondary school | - | - | - | - | - | - | - | - |
| | Have never gone to school | 10 | 20 | 14 | 28 | 7 | 14 | 9 | 18 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

Results of the occupation of individuals (extracted from CSDP data base) were distributed into various groups as shown in table 5.4:

Table 5.4 Occupation of the individuals from CSDP database N = 200

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|-------------------|---------------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Occupation | Farming | 29 | 58 | 24 | 48 | 26 | 52 | 28 | 56 |
| | Fishing | 8 | 16 | 6 | 12 | 6 | 12 | 8 | 16 |
| | Trading | 4 | 8 | 5 | 10 | 5 | 10 | 5 | 10 |
| | Artisans | 3 | 6 | 7 | 14 | 6 | 12 | 5 | 10 |
| | Performing artisans | 2 | 4 | 3 | 6 | 4 | 8 | 2 | 4 |
| | Others | 4 | 8 | 5 | 10 | 3 | 6 | 2 | 4 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

Farmers and livestock keepers – these involve small-scale farmers and those rearing livestock for sustenance.

Traders – these include firewood sellers, retail shop owners, traditional medicine vendors and motorcycle transport.

Fishers – those practicing fishing mainly for sustenance with the help of simple fishing net.

Performing artists – local traditional dancers, musicians, local drama performances, and acrobats.

Artisans – includes blacksmiths, local dying of cloths, tailoring, bicycle repairs, knitting, weaving, knapsack (sprayer) repairs and water pump repairs.

Others – these include community employee, teachers and health workers.

Farming was the most common occupation practiced by all the communities. In addition to cultivating their own farm, fishing was the second most common activity practiced (Table 5.4). However, farming is a seasonal activity in Danko/Wasagu. Therefore, the dry season offers a window of opportunity to engage in off-farm income source activities. Many young men particularly from low income and food insecure households engaged into wage-labour (tailoring, blacksmiths, local dying of cloth and bicycles repair) in the city. They return before the beginning of the next farming season with small amount of cash and consumer goods.

Trading is also an important occupation practiced in Danko/Wasagu. The sample reflected that 9.5% of the individuals are involved in trade. Apart from trading, members also earn money through weaving, knitting, local traditional performance and acrobats. Handcraft and tools making (blacksmiths) are also an important source of income for some households. All agricultural tools in Danko/Wasagu are locally produced, so tools made particularly related to producing hoe, spade, sickle and other agricultural tools. However, Danko/Wasagu has witnessed a number of salaried jobs amounting to 7.0% of the individuals.

A household's size can influence labour availability and diversity as well as consumption and need for cash. Households with large family size are more likely to be more supportive than household with smaller family sizes (Thathsarania & Gunaratne, 2017). Household sizes of 6-10 and 1-5 family members were the most frequent in the total sample (Table 5.5). According to (Thathsarania & Gunaratne, 2017) larger households that are supportive of each other are more likely to exhibit adaptive capacity.

Table 5.5 Household size of the individuals from the CSDP database N = 200

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|------------------------|----------------------|--------------|------------|--------------|------------|-------------|------------|----------------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Households size | 1 – 5 persons. | 9 | 18 | 12 | 24 | 13 | 26 | 10 | 20 |
| | 6 – 10 persons. | 39 | 78 | 35 | 70 | 37 | 74 | 37 | 74 |
| | 10 persons and above | 2 | 4 | 3 | 6 | 0 | 0 | 3 | 6 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

More than half of the families' in the CSDP data sample were moderately relying on help from relatives living elsewhere for their livelihood (Table 5.6). This dependency may be due to poor source of income, lower educational level reflected by the individuals in almost all the communities. The results further show that, Maga community are the least dependent in terms of support from family members.

**Table 5.6 Household dependence on relatives living elsewhere from the CSDP database
N = 200**

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|---|--------------|--------------|------------|--------------|------------|-------------|------------|----------------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Family support from other members living elsewhere | Not at all | 10 | 20 | 5 | 10 | 22 | 44 | 14 | 28 |
| | Moderately | 28 | 56 | 29 | 58 | 21 | 42 | 26 | 52 |
| | Highly | 12 | 24 | 16 | 32 | 7 | 14 | 10 | 20 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

Financial resources are necessary for building infrastructure and investing in other activities (Buckle, 2006). As shown in Figure 5.1, individuals extracted from the CSDP data in all the communities rely on multiple activities for income. Sales of farm produce, vegetables and fruits and specialized skills are the major source of income. In the absence of investment and institutional support facilities for members to get assistance, members of the communities rely on money lenders, who usually charge a very high interest rate resulting to further indebtedness and vulnerability. A salary was the second most frequent means of accessing income followed by remittances and charity.

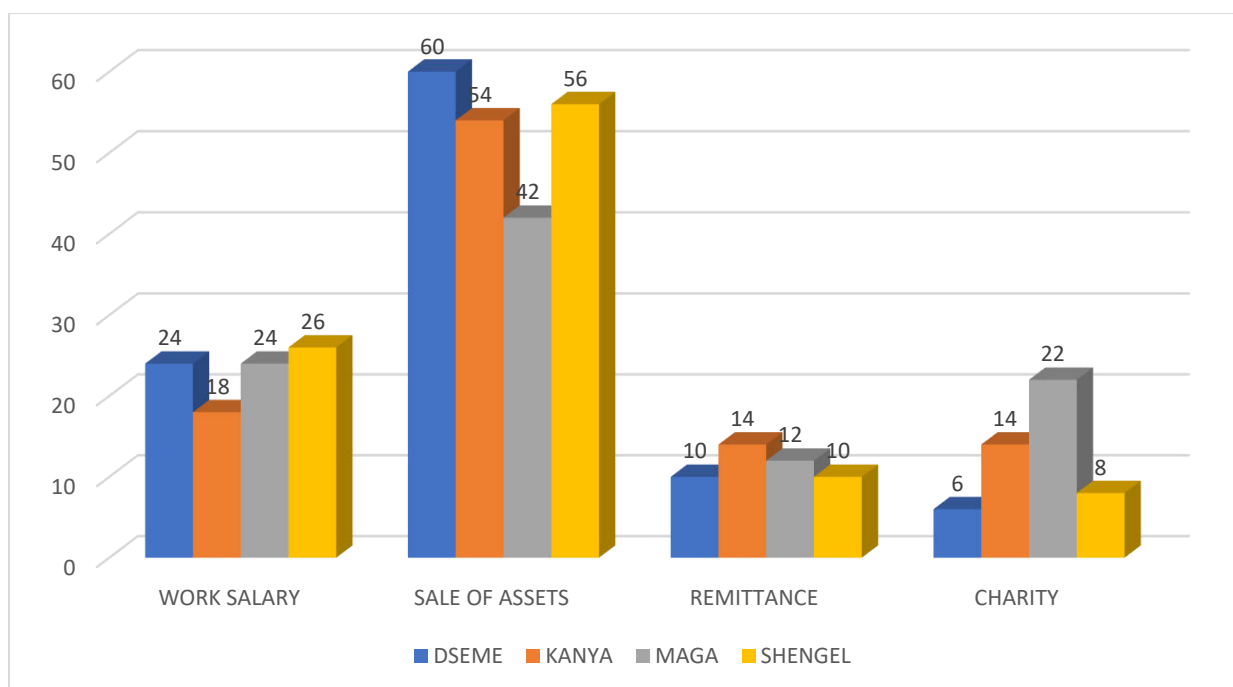


Figure 5.1 Source of income

Physical capital allows people to develop livelihood strategies that improve their resilience (Aikaeli, 2010). People that possess physical assets are better prepared than those that have none. Most of the individuals extracted from the CSDP data in Danko/Wasagu owned their houses either through purchase or inheritance Table 5.7. Other individuals lived on hosted and rented accommodation and the rest were on shared shelter. This indicated that, housing delivery in the sample was informally acquired which mainly depends on mutual help from members of the communities.

Table 5.7: Housing tenure by individuals extracted from CSDP database

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|--------------------------------------|--------------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Housing tenure by individuals | Owned | 28 | 56 | 31 | 62 | 24 | 48 | 33 | 66 |
| | Rent | 7 | 14 | 4 | 8 | 6 | 12 | 5 | 10 |
| | Hosted | 3 | 6 | 3 | 6 | 11 | 22 | 4 | 8 |
| | Collective shelter | 12 | 24 | 12 | 24 | 9 | 18 | 8 | 16 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

From Table 5.8, it can be seen that land is the most important asset Danko/Wasagu depend on for livelihood. Land (natural capital) play an important role in the life of rural people and access or lack of access to it affects vulnerability and resilience (Thathsarania & Gunaratne, 2017).

Table 5.8 Ownership of household assets

| Household Assets | Dseme | Kanya | Maga | Shengel |
|--------------------------|--------------|--------------|-------------|----------------|
| Motorcycle/Bike | 15 (30%) | 7 (14%) | 4 (8%) | 6 (12%) |
| Bicycle | 27 (54%) | 32 (64%) | 29 (58%) | 23 (46%) |
| Radio | 49 (98%) | 48 (96%) | 45 (90%) | 41 (82%) |
| Livestock/Poultry | 28 (56%) | 25 (50%) | 32 (64%) | 29 (58%) |
| Truck/Pick-up van | - | 2 (4%) | - | 1 (2%) |
| Land | 37 (74%) | 32 (64%) | 39 (78%) | 41 (82%) |

Note: This was a multiple response question

The importance of land is followed by livestock/poultry production, radio, bicycle, motorcycle and truck. Ownership of radio would increase the chances of accessing weather related information. Kanya and Shengel community members owned a vehicle (truck) indicating that they can command access and travelling costs of their farm produce to the city.

5.2 Results of the perceived CSDP in promoting and increased access to services

In sub-sections which follow, data extracted from the CSDP survey process show the perceived influence of the CSDP in promoting access to education, water, transport, health, and environment.

5.2.1 Influence of the CSDP in promoting and increasing access to education

Education is an important factor in determining vulnerability (Chambers and Conway, 1992) and an important asset for people seeking opportunity for skilled jobs and small-scale business activities (IFAD, 2012). Perception amongst all communities is that enrollment in schools over the period of the CSDP resulted in an increased enrollment of pupils in schools (Table 5.9). The enrollment and accessibility may be due to reduced cost of school fees and availability of books

provided by the CSDP. In relation to each other, Shengel community enjoyed the highest enrolment. This was followed by Kanya, Dseme and Maga communities.

Table 5.9 Influences of the project on school enrolment. N = 200

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|---|--------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| CSDP influence on the enrolment of pupils in schools | Yes | 33 | 66 | 35 | 70 | 34 | 68 | 37 | 74 |
| | No | 17 | 34 | 15 | 30 | 16 | 32 | 13 | 26 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

5.2.2 Influence of CSDP in promoting access to resources and services on water

Paired t-test analysis from the extracted CSDP data (Table 5.10) was used to identify whether the sources of water provided by the project had significant effect on communities. This was achieved by comparing the value of water availability in the study area, before and after CSDP. The result shows that, the average value of water sources in Maga ($p = 0.054$) and Shengel ($p = 0.090$) were significant at 10% indicating that, these communities witnessed an increased availability of water post CSDP. This study also shows that Dseme and Kanya did not report a significant improvement in access to water services. This might be attributed to the location, time and distance the individuals were from the water sources at the time of the intervention. Therefore, the intervention of CSDP has brought a remarkable increase in access to improved water sources like hand pumps/boreholes particularly in Maga and Shengel in the period after CSDP. This provisioning of water would improve the living condition of the rural dwellers whereas the lack of enough water often leads to the problem of health and hygiene and sometimes exacerbate conflicts in the community (Tandukar, 2012). The implication of non-availability of water makes households arrange for water on their own, adding further burden to domestic expenditure and effort.

Table 5.10 Paired sample t-test results for the sources of water before and after CSDP

| Communities | Time Frame | Mean | std | df | t-crit | t-stat | P-value two-tail |
|--------------------|------------------------------|-------------|------------|-----------|---------------|---------------|-----------------------------|
| Dseme | Water sources Before CSDP | 2.88 | 1.891 | 49 | 1.677 | 0.5966 | 0.554 |
| | Water sources After CSDP | 3.06 | 1.609 | | | | |
| Kanya | Water sources Before CSDP | 3.00 | 1.629 | 49 | 1.677 | 0.5466 | 0.588 |
| | Water sources After CSDP | 3.16 | 1.621 | | | | |
| Maga | Water sources Before CSDP | 3.08 | 1.576 | 49 | 1.677 | 1.978 | 0.054*** |
| | Water sources After CSDP | 3.64 | 1.467 | | | | |
| Shengel | Water sources Before CSDP | 2.88 | 1.662 | 49 | 1.677 | 1.73 | 0.090*** |
| | Water sources After CSDP | 3.46 | 1.358 | | | | |

*** Significant at 10%, std = standard deviation, df= degree of freedom, t-crit= critical value

5.2.3 Influence of CSDP in promoting access to resources and services on transport

Paired t-test analysis from the CSDP extracted data (Table 5.11) was used to identify whether the transport system available post CSDP intervention had improved. This was achieved by comparing the sources of transport before and after CSDP. The result shows that, the average sources of transport in all the communities were significant at 5%, indicating that, these communities recorded an improvement in transport system during the period of CSDP. The reason might be due to provision of transport infrastructure such as feeder roads, culverts and drainages which allowed for the efficient transport in the communities.

Table 5.11 Paired sample t-test results for the sources of transport before and after CSDP

| Communities | Time Frame | Mean | std | df | t-crit | t stat | P-value two-tail |
|--------------------|----------------------------------|-------------|------------|-----------|---------------|---------------|-------------------------|
| Dseme | Sources of Transport Before CSDP | 3.26 | 1.724 | 49 | 1.677 | 4.54 | 0.000** |
| | Sources of Transport After CSDP | 4.88 | 1.460 | | | | |
| Kanya | Sources of Transport Before CSDP | 2.68 | 1.708 | 49 | 1.677 | 2.46 | 0.017** |
| | Sources of Transport After CSDP | 3.48 | 1.474 | | | | |
| Maga | Sources of Transport Before CSDP | 2.46 | 1.606 | 49 | 1.677 | 3.03 | 0.004** |
| | Sources of Transport After CSDP | 3.40 | 1.525 | | | | |
| Shengel | Sources of Transport Before CSDP | 3.14 | 1.750 | 49 | 1.677 | 4.88 | 0.000** |
| | Sources of Transport After CSDP | 4.46 | 1.129 | | | | |

**** Significant at 5%, std = standard deviation, df= degree of freedom, t-crit= critical value**

5.2.4 Influence of CSDP in promoting access to resources and services on health

Paired t-test analysis (Table 5.12) of the extracted data was used to identify whether the health facilities provided post CSDP had a significant effect on members of the communities. The comparison of perceived access to health facilities before and after CSDP, and the average value of health services in all the communities were significant at 5%. The provision of health facilities such as dispensary and health care centers were identified.

Table 5.12 Paired sample t-test for health support before and after CSDP intervention

| Communities | Time Frame | Mean | std | df | t-crit | t stat | P-value two-tail |
|--------------------|-------------------------------|-------------|------------|-----------|---------------|---------------|-------------------------|
| Dseme | Sources of Health Before CSDP | 2.58 | 1.527 | 49 | 1.677 | 2.74 | 0.008** |
| | Sources of Health After CSDP | 3.24 | 1.673 | | | | |
| Kanya | Sources of Health Before CSDP | 2.70 | 1.199 | 49 | 1.677 | 2.62 | 0.012** |
| | Sources of Health After CSDP | 3.30 | 1.474 | | | | |
| Maga | Sources of Health Before CSDP | 2.30 | 1.111 | 49 | 1.677 | 2.72 | 0.009** |
| | Sources of Health After CSDP | 3.08 | 1.469 | | | | |
| Shengel | Sources of Health Before CSDP | 2.29 | 1.203 | 49 | 1.677 | 2.72 | 0.009** |
| | Sources of Health After CSDP | 2.98 | 1.491 | | | | |

**** Significant at 5%, std = standard deviation, df= degree of freedom, t-crit= critical value**

5.2.5 Knowledge on environmental protection measures

Planting of trees and grasses were the most mentioned environment and natural resources established in the communities (Table 5.13). Dealing with waste was the second most important and included construction and management of pits for waste disposal and burning of waste. Training on waste disposal was needed because of the provision of incinerators.

Table 5.13 Distribution of individuals on knowledge of environmental protection measures

| Communities | | Dseme | | Kanya | | Maga | | Shengel | |
|---|----------------------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|
| | | Freq | % | Freq | % | Freq | % | Freq | % |
| Knowledge of environmental protection measures | Planting trees and grasses | 14 | 28 | 14 | 28 | 15 | 30 | 16 | 32 |
| | Pit for waste disposal | 8 | 16 | 9 | 18 | 7 | 14 | 14 | 28 |
| | Pit latrines | 7 | 14 | 8 | 16 | 7 | 14 | 6 | 12 |
| | Incinerators | 5 | 10 | 5 | 10 | 7 | 14 | 3 | 6 |
| | Burning of waste | 4 | 8 | 4 | 8 | 3 | 6 | 3 | 6 |
| | Afforestation | 12 | 24 | 10 | 20 | 11 | 22 | 8 | 16 |
| | Total | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 |

5.3 Results of livelihood analyses

This section presents the results of the livelihood analyses from focus group discussion (group livelihood analysis records) designed for this purpose. An adapted livelihoods framework already presented in Figure 4.3, was used to guide and summarise discussion. The full text of each of these summaries are provided in Appendix 11. In the following sub-sections, responses from discussion are presented according to five categories defined by the DFID Sustainable Livelihood Framework: livelihood strategies, livelihood assets, transforming structures and processes, livelihood outcomes and visions and vulnerability context. These categories are helpful in understanding the CSDP investment of resources to reduce poverty and livelihood vulnerability.

5.3.1 Livelihood strategies

Focus Group discussion on livelihood strategies focused on the possession of the land, food, housing, clothing and services (Figure 4.3, strategies for living). The responses to using different types of assets in pursuit of beneficial livelihood outcomes are many as observed in the communities. In Table 5.14, a summary of the ‘mechanisms of obtaining what we want’ has been created from Appendix 13. Each mechanism in Table 5.14, has been identified as being used at household and community levels. The respondents, showed a heavy reliance on the informal sector

for obtaining income, food and clothing. Indicating the levels of use demonstrate how members of the community can utilise these mechanisms at multiple levels to maximise their resources. These descriptions provide a picture of communities that are resourceful and who utilise opportunities perceived as available to them.

Most of the livelihood strategies imply that these communities are concentrating on obtaining income and food. This was not surprising in a rural area of Nigeria that is faced with the problem of poverty. The communities obtained their income from different sources, drawing from, informal activities, trading and assistance from government/ non-governmental organisations (Table. 5.14). These characteristics are indicative of poverty, reliance on informal market and vulnerability to livelihood. Another important livelihood strategy in the communities is the acquisition of land. Land is mostly obtained through purchase and inheritance. Four Focus Groups mentioned acquiring land through purchase, but two Focus Groups stated inheritance as a means for acquiring land (Table 5.14).

Mechanisms mentioned as livelihood strategies have been summarised in Table. 5.15. Trading of goods and services (selling firewood, vegetables, and fruits) was another strategy used by all the participants in the communities for generating income. Most of these activities take place in the neighbourhood and from household premises, indicating heavy dependence on the informal market. The proceeds generated from these strategies are only for consumption. Strategies for building houses in all the communities was through communal efforts, they made use of local and modern building materials by the group members. Social capital is an asset that was widely used by all the members of the communities. Strategies employing social capital were cooperation and gifts from family and friends to facilitate communal building as well as social grants (both financial and in kind) from philanthropists and non-governmental organisations. Therefore, it can be observed that the strategies employed by the participants did not indicate much independence in terms of personal goals and choices because access to assets such as micro-finance and business skills were not available. Income from farming and informal trading activities is mostly opportunistic in Danko/Wasagu demonstrating a resourcefulness, but not steady improvement in the quality of life of the people.

Table 5.14 Livelihood mechanisms reported in focus group discussion

| The level at which mechanisms were used H = Household C = Community | | | Sector of the economy used to obtain asset | Livelihood mechanism increasing household or community resources (from Figure 4.3, what we need for living. Livelihood strategies identified specifically by the community | Dseme | Kanya | Maga | Shengel | Total | |
|---|---|----------------|--|---|---------------------------------|-------|------|---------|-------|---|
| H | C | Asset obtained | | | | | | | | |
| ✓ | | Land | | Inheritance | ✓ | | | ✓ | 2 | |
| ✓ | ✓ | | | Buying | ✓ | | ✓ | ✓ | 4 | |
| ✓ | ✓ | | | Negotiating with community leaders | ✓ | | ✓ | ✓ | 4 | |
| ✓ | | Money | | Formal employment | | | ✓ | | 1 | |
| ✓ | ✓ | | | Self-employment from special skills | ✓ | | ✓ | ✓ | 4 | |
| ✓ | ✓ | | Informal sector | Selling farm produce/livestock | ✓ | | ✓ | ✓ | 4 | |
| ✓ | ✓ | | | Vegetables and fruits | ✓ | | ✓ | | ✓ | 3 |
| | ✓ | | | Trading, selling firewood, livestock, and poultry, carpentry and brick making | ✓ | | ✓ | | ✓ | 3 |
| | ✓ | | Social sector | gift from philanthropist | | | | | ✓ | 1 |
| | ✓ | | | Donation from NGOs | | | | ✓ | ✓ | 2 |
| ✓ | ✓ | | | Gift from family and friends | | | | ✓ | ✓ | 2 |
| ✓ | ✓ | | | Social grant | | | | | | 1 |
| ✓ | ✓ | | Food | | We produce our food e.g. grains | ✓ | ✓ | ✓ | ✓ | 4 |
| ✓ | ✓ | | | We produce vegetables and fruits | ✓ | ✓ | ✓ | ✓ | 4 | |
| ✓ | | | | Buy food from the market | ✓ | ✓ | ✓ | | 3 | |
| ✓ | ✓ | | | Gift of food from friends and relatives | ✓ | ✓ | | ✓ | 3 | |
| ✓ | | Clothing | | We buy new and second-hand cloth | ✓ | ✓ | ✓ | ✓ | 4 | |
| ✓ | | | | Gift from family and friends | ✓ | ✓ | | ✓ | 3 | |
| ✓ | | | | We sew our cloth | | | ✓ | | 1 | |
| ✓ | | | | Tailor sewn our cloth | ✓ | ✓ | | ✓ | 3 | |
| ✓ | ✓ | Housing | Self-build houses/ inheritance | We build our houses in the group using both local and modern materials | ✓ | ✓ | ✓ | ✓ | 4 | |
| ✓ | | | | We inherited our houses | ✓ | ✓ | ✓ | ✓ | 4 | |
| ✓ | ✓ | Services | Public sector (CSDP) | Water, drainages, culverts by CSDP | ✓ | ✓ | ✓ | ✓ | 4 | |
| ✓ | ✓ | | | Pit latrines, dispensary by CSDP | ✓ | | ✓ | ✓ | 3 | |
| ✓ | ✓ | | | Environmental management, school facilities by and roads rehabilitation by CSDP | ✓ | ✓ | | ✓ | 3 | |
| ✓ | ✓ | | | No electricity | ✓ | ✓ | ✓ | ✓ | 4 | |
| | ✓ | Education | Local Government | Primary and secondary school | ✓ | ✓ | ✓ | ✓ | 4 | |
| | ✓ | | | Adult and nomadic education | ✓ | ✓ | ✓ | ✓ | 4 | |

Table 5.15 Common livelihood strategies practice from group analysis records

| Livelihood requirements | Livelihood strategy | Number of communities indicated using this strategy |
|--------------------------------|---|--|
| Income | Trading, selling firewood, brick making and vegetables | 3 |
| | Informal business/self-employment | 4 |
| | Formal employment | 1 |
| | Selling excess agricultural produce and livestock | 4 |
| | Selling specialized skills | 3 |
| Housing/Land | Obtaining land through purchase | 4 |
| | Obtaining land through inheritance | 2 |
| | Building house in group from local and modern raw materials | 4 |
| Food and vegetables | Preparing our food and vegetables | 4 |
| | Buying food in bulk on weekly market days | 3 |
| | Gift of food from friends and relatives | 3 |
| Clothing | We sew our cloth | 1 |
| | Tailors sew our cloth and from donations | 3 |
| | We buy second hand cloth | 4 |

5.3.2 Assets acquisition

Mechanisms from the informal sector were described as the primary source of income (Table 5.14). The CSDP was relied on for the delivery of physical and social infrastructures such as education and health services. Provision of housing was mainly acquired informally. There was no formal provision of accommodation by the public sector. The participants relied on communal efforts using available local materials for their housing. It was clear from the summaries that land acquisition by the participants was meant for farming activities (planting and livestock rearing), building homes, or for small-scale businesses. The most common form of acquiring land had been through negotiation with community leaders. They are the custodian of the communities and are mandated with the right from the Government to lease and allocate land to members of the communities. Also, some members legally inherited land from their parents or purchased land from a community member who legally inherited it for livelihood purposes.

Multiple strategies were a means of generating cash. All the communities mentioned that dry season farming (cultivation of fruits and vegetable), selling of firewood for cooking and sales of

products at the end of the harvest period were the most common form of generating cash, in the study area (Appendix 13). Other means of making income was through selling of excess or deliberate produce by women from their homes. Examples of these products were: vegetables and fruits produced in the backyard garden eggs, and poultry. Government employment (salaries and pension) was another means of making income as identified by Maga community (Table 5.14). Two focus groups said that members engaged in specialized skills such as auto-mechanic, carpentry, block making, building, weaving, knitting, blacksmith, and tailoring for generating income. One focus group (Maga community) had access to philanthropist which had contributed capital for their business enterprise (computer centre) (Table 5.14). The most common ways of obtaining clothing for the participants was through buying new and second-hand cloth and gifts from family and friends. It was only one focus group that mentioned sewing as a means of obtaining clothing (Table 5.14). CSDP had invested in the provision of public services and provided borehole water, school, health centre and roads to Danko/Wasagu. The LGA only provided security in the form of the police. While community policing (vigilante) were also mentioned by the participants. Electricity was not available in all the communities during this study (Table 5.14).

5.3.3 Summary of livelihood assets

By means of DFID's sustainable livelihood theory framework, the five main resource categories for a livelihood asset base were identified as: social, natural, financial, human and physical. Resources in the physical resource category were identified as having the most significant increase in the communities from the CSDP intervention. This was due to the increased delivery of services and infrastructure. A summary of resources identified by focus group discussion was presented in Table 5.16. The full-text can be found in Appendix 15. In the group discussions, participants made the decisions around what resources were available to them. Some resources were identified under more than one category (e.g., schools were identified as social as well as physical resources). The reason for repetition was to show that these resources might be viewed from a different viewpoint. Social resources were identified by all the Focus Group suggesting that they are essential. Members of the communities depend on social capital such as support from family and friends and mobilisation of labour and credit for livelihood. Social resources identified were: schools, market, mosque/churches and access to community halls, adult and nomadic education, village squares

and local history bureau hall, arts and the chronological tree of community leaders. Also indicated was the importance of dance, music, and traditional festivals such as *Uhola* and *Ribiti*. The participants appear to be well informed about the importance of environment and natural resources infrastructures in their communities. This is not surprising in a rural area, as they contribute to their livelihood. Tree planting and windbreaks that reduce the incidence of desert encroachment were some of the environmental practices (Table 5.16). However, the communities complained of severe illegal felling of trees, because firewood serves as source of energy for cooking and heating, as there is no rural electricity. All the focus groups indicated that natural features, such as rain, rivers, mountain, and vegetation were important resources. These resources seem to have been noted as a value and reliance on the environment. The traditional healing, which cannot occur without herbs and other products from the natural environment, were important from both a social and health perspective (Appendix 15). Traditional healers and their medicines were perceived as social and human resources. This indicated that maintenance and the preservation of the herbal plants, use of herbal medicine, and the service they provide in the communities were interconnected and essential to the livelihood of the participants.

Business activities are the most important financial resource as mentioned by the participants. There are two primary markets Ribah and Bena markets (found in the Dseme and Kanya communities) which are major livestock and grains markets in Kebbi State. The financial resources identified includes produce from farming and livestock, income derived from small-scale business such as specialised skills and selling fire-wood. Petty trading engaged by women such as selling firewood, vegetables and eggs were also indicated as financial resources. Only one focus group did indicate proceeds from the Motor Park as financial resource (Table 5.16). Salaries and pensions from employed spouses were indicated as important financial resource, although the pensions appear to be inconsistent. There was no mention of informal finance agents or money lenders as financial resources by the respondents.

Dseme and Maga communities seemed to be most aware of human capital (Table 5.16). Assets identified by them were: knowledge generation in farming practices, skills acquisition, and sanitation practices. Other communities suggested that people, traditional dancers, and healers were important human resources in Danko/Wasagu LGA.

Table 5.16 Summary of resources identified by the participants

| Asset type | Sub-classification of assets type | Identification of assets by focus group | Dseme | Kanya | Maga | Shengel | Total |
|------------|-----------------------------------|---|-------|-------|------|---------|-------|
| Social | | School | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Market | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Community Hall | | ✓ | | | 1 |
| | | Skill acquisition centre | | | ✓ | | 1 |
| | | Mosque/churches | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Computer centre | | | ✓ | | 1 |
| Natural | | Trees | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Mountain | ✓ | | | ✓ | 2 |
| | | Forest | ✓ | | | | 1 |
| | | Forage | | ✓ | ✓ | | 2 |
| | | Vegetation | | ✓ | ✓ | ✓ | 3 |
| | | Rain | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Moon | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Stars | ✓ | ✓ | ✓ | ✓ | 4 |
| Financial | | A business owned by members | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Money generated from motor park | | | ✓ | | 1 |
| Human | | Traditional dancers/hailers | ✓ | | ✓ | | 2 |
| | | People | ✓ | ✓ | ✓ | ✓ | 4 |
| Physical | Infrastructure | Feeder roads | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Mud and cement houses | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Public toilet | ✓ | ✓ | ✓ | | 3 |
| | | Refuse Dump | ✓ | | | | 1 |
| | Institutions | Police station | | | ✓ | | 1 |
| | | Market | ✓ | ✓ | ✓ | ✓ | 4 |
| | | Mosque/churches | ✓ | ✓ | ✓ | ✓ | 4 |
| | Facilities | Motor park | | ✓ | ✓ | | 2 |
| | | Dispensary | ✓ | | | ✓ | 2 |
| | | Health centre | | ✓ | ✓ | | 2 |
| | | Community Hall | | ✓ | | | 1 |
| | | Skill acquisition centre | | | ✓ | | 1 |

The market for business, mosque/churches, houses (informal), schools and roads were identified as essential physical resources (Table 5.16). Respondents identified many assets such as simple

farm equipment, ox-drawn ploughs, livestock and raw materials such as (compost manure) for small enterprises as physical resources. All the respondents from the four communities complained of inadequate schools for education of their children. There were not enough schools, and access to adult and nomadic education programmes designed to teach literacy, skills development, and improved farming practices was not available. Respondents from Maga community complained about seasonal flooding that ravages their farmland and houses. Many infrastructure resources were identified, indicating the delivery of physical structures like culverts, drainage, dispensary and health centres. Respondents complained of the lack of rural electricity and enough drinking water, however, accessibility to land for livelihood opportunities was identified.

5.3.4 Summary of perceived transforming institutions and processes

When the participants were assisted by the facilitators to create Venn, diagrams (Appendix 12), illustrating the institutions influencing their communities, it became clear that there was a wide variety of organisations perceived to be important to the study area. A summary of these in Table 5.17 shows a number of civil organisations and the participants in Danko/Wasagu had interacted and are conscious of them. There were many religious organisations, community associations and NGOs mainly concerned with general welfare.

Many institutional activities are concentrated at the community level. Studying the Venn diagrams (Table 5.17) for each of the community revealed that local government council, Ministry of Agriculture and Agricultural Development Project (ADP) responsible for delivering development as the most influential on the communities. The LGA, followed by community leaders, the All People Congress (APC), Ministry of Agriculture and Rural Development, Universal Basic Education (UBE) and Danko/Wasagu Social Welfare Department, prominently influenced how respondents and communities select livelihood strategies. Next influence on communities were a variety of religious organisations, NGOs and public facilities reflecting their various social activities. An array of institutions like level two but with reduced influence surrounded these. The level understood as having the least influence on respondents and communities consisted of perceived forces working from outside the communities or without direct impact on the everyday functioning of livelihood strategies. Example of institutions at this level includes National Union of Road Transport Workers and Vigilante Co-operative Group.

The CSDP was noted as influencing livelihood outcomes through its investment of resources to reduced poverty. Usually, infrastructures like a health centres, schools were attributed to the activity of the CSDP supported by the state government and the participating local government authority. The vigilante group (community policing) was identified as a private community outfit that was supported by local government to provide security. Also, The Nigerian Security and Civil Defence Corps had a significant presence in the communities and was perceived to have a positive influence in reducing crime in Danko/Wasagu LGA.

Transforming institutions that had little or even negative influences on the communities were also identified. The perception amongst the respondents was that the National Union of Road Transport Workers (NURTW) that should have had a positive result on availability and access to transportation in the study area. However, their contribution was considered undesirable. Four complaints by two different Focus Groups indicated that management personnel for NURTW was unable to control the exorbitant prices of transportation. Also, Uholo festival (an annual festival) which is made to showcase the cultural heritage found in the study area, instead use to destabilising the economic activities on the festive days. Important institutions that warranted mention by the communities as part of positive development were the United State Agency for International Development (USAID) and Community Based Agriculture and Rural Development Project (CBARDP) responsible for distribution of improved maize and sorghum seeds and farming skill to the farmers and Community. Respondents were aware that Ministry of Agriculture and Natural Resources, the body responsible for providing access to extension service and subsidized fertilizer. Some respondents admitted to not being able to have access to extension services or subsidized fertilizer for farming practices. This situation was blamed on corrupt government officials. The members of the communities felt that these conditions could be changed, but not by them. In one focus group respondents mentioned the positive contribution of Sami HIV/AIDs in prevention and control of HIV/AIDS disease through the provision of counselling and antiretroviral drugs.

Table 5.17 Institutions mentioned by the respondents that influenced livelihoods in Danko/Wasagu

| Individuals | Public Sector | | | Private Sector | | |
|---|--|---|--|--|--|--|
| | Executive Agencies | Political Bodies | Parastatals and Agencies | Civil Society | Commercial organizations | NGOs |
| <p>Community leader, Village head.</p> <p>Community development association leaders</p> | <p>Danko/Wasagu LGA, Nigerian Civil Defence Corps, Universal Basic Education Board, Primary Health Care, Ministry of Agriculture and Rural Development, Ministry of Social Welfare and Community Development</p> | <p>All Nigerian Congress, Peoples Democratic Party, Green Party</p> | <p>Community and Social Development Project, Agricultural Development Project, Community-Based Agriculture and Rural Development Project, United State Agency for International Development,</p> | <p>Uhola Festival, Ribiti Harvest Festival, Traditional Religion Jama,atul Nasral Islam, Islamic Council of Nigeria Christian Association of Nigeria, United Missionary Church of Africa, Roman Catholic Church Community Policing (Vigilante Group), Zumunta Social Club, Zuru Emirate Development Society,</p> | <p>Saving club (Adashe), Shops, Market stalls, Motor park Stands</p> | <p>Zuru Emirate Development Association, Sami HIV/AIDS Prevention and Control, Zuru Emirate Foundation, National Union of Road Transport Workers</p> |

5.3.5 Perceived needs of the communities which caused livelihood vulnerabilities

This section describes the perceived needs of the communities responsible for livelihood vulnerability. The absence of access roads was the most pressing need identified by the communities which caused livelihood vulnerabilities (Table 5.18). Poor road network limited bulk transport of farm produce within and outside the study area. Dseme and Kanya communities felt they needed good roads for transportation of farm produce to the city. Lack of enough water for livestock and domestic use was another problem identified by the communities. Inadequate or clean water for domestic use caused members become vulnerable to water-borne diseases. Also, livestock trek long distances for water. Although water facility provided by CSDP was perceived as an alternative, members of the communities lacks technical expertise to maintain them. Lack of education leads to poor access to social services, increased poverty and low quality of life. Some level of education would facilitate the formation of cooperatives which would enable members, accessing extension services, government subsidies, social grants and welfare. There was no massive campaign to enlighten the members of the communities on the benefits that can be derived from the education.

All the focus groups discussed the issue of HIV/AIDS and health. Participants are at high-risk of becoming infected and contracting HIV/AIDS, malaria, cholera and diarrhoea. The highest rate of those that can contract these diseases are mostly youth and women. In the sample, youth are essential players in most of the livelihood strategies and they contribute meaningfully in the livelihood activities. Therefore, loss of young family members would add the problem to already limited resources these communities had and may increase vulnerability to food insecurity (as most of the communities depend on manual labour for their activities).

Another perceived vulnerability identified by the participating communities is lack of available cash. The possible causes of these problems were rising unemployment and decreasing sources of income. Unemployment was associated with lack of available job to argument the primary source of income (mostly farming), particularly during the dry season. Although small scale-businesses and selling specialized skills were perceived as a coping mechanism, respondents complained that business was not profitable. Lack of profitable business means buying power of the community member's remains low. Making products that people would not buy and not having profitable markets, indicated vulnerability in the area of networking, poor access to market, skill development and possibly institutional support. Participants in four communities complained of

poor rainfall to support their farming activities. This has limited their ability to get enough food to sustain their livelihoods. The micro-enterprise businesses such as buying and selling of fruits and vegetables which serves as a coping mechanism against draught are characterised with lack of available capital. However, they are important coping mechanism during the crop failure and was perceived to contribute meaningfully to people livelihood.

Table 5.18 Summary of livelihood vulnerability in the study area

| Perceived Livelihood Vulnerability | Potential threats and Shocks |
|---|--|
| Clean water | Exposure to water-borne diseases Lack of enough water for domestic use Unsafe water for livestock consumption |
| Access roads | Lead to decrease source of income Takes a long time to travel because of the dangerous path A frequent accident because of hazardous road Untold hardship especially during the rainy season Transportation of goods (grains) for business usually delayed Exposure to flood and limited access to infrastructure |
| Inadequate access to education | Leads to illiteracy Increase poverty Poor quality of life Inability to form cooperatives Scepticism to participate in the project Poor awareness of benefits of the government |
| Inadequate access to health facilities and HIV/AIDS | Loss of person-hour because of communicable diseases Decrease average lifespan Poor quality of life HIV/AIDS expose victims to stigmatization Poor education because of the problem of HIV/AIDS |
| Lack of available cash and inflation | Rising unemployment Decrease sources of income Social exclusion |
| Informal employment | Lack of permanent jobs No regular income Sudden loss of job Vulnerability during the off-season period Poor working condition Bad wages to workers |
| Poor rainfall | Drought condition Famine Lack of enough forage for livestock Low harvest of crops and vegetables |

5.3.6 Livelihood outcomes desired by the participants

Livelihood outcomes are about ‘what we desired’. During the analysis session, participants were asked, what their 'vision' for the future was, and where they want to be in few years (i.e., 2 – 4 years). This step would be an important strategy planning session with each of the community to identify indicators of progress towards identified outcomes that they could achieved through collective cooperation. Participants identified various outcomes desired by the communities that would be responsible for their development goals. The outcomes described in Table 5.19, were a mixture of desires for both the communities and for the households represented by the respondents (full texts are available in Appendix 16).

Table 5.19 Livelihood outcomes shared by the participating communities in Danko/wasagu during the livelihood analyses

| Outcome | Number of communities | Issue identified by the respondents |
|--------------------------------------|-----------------------|--|
| Quality of life | 4 | More economic activities |
| | 4 | Need for infrastructural facilities |
| | 4 | Primary health care |
| | 4 | Access roads |
| | 1 | Drainage system |
| | 1 | Establishment of secondary school |
| | 4 | Environmental protection |
| Increase well-being | 1 | Modern market |
| | 4 | Public utilities, i.e., water, school, and roads |
| | 2 | Cultural festival i.e. Uhola and Rbiti |
| Reduced vulnerability | 1 | More school for children |
| | 4 | More infrastructural utilities |
| | 4 | Improve housing |
| Sustainable use of natural resources | 4 | Improved farming techniques |
| | 4 | Shelterbelt |
| | 2 | Mixed farming/cropping |

In Table 5.20, the dreams are given by the communities to show the individuality of the focus groups concerning outcomes. The most important dreams were about the sustenance of infrastructural facilities and vision of a formal business activities. For growth and advancement of economic activities accessible roads are perceived to be significant in the communities. The communities are major producers of grains which required access roads for transport into the city. Kanya community needs a health centre to stem the menace of malaria and other communicable

diseases. Maga community apart from the health centre, required a proper drainage system to reduce the negative effect of annual flooding. Also, Shengel community called for the establishment of a secondary school for their children to avoid them trekking a long distance to local government headquarters where the school is located.

Table 5.20 Dreams specifically to respondents in the communities of Danko/Wasagu

| Focus Group Communities | Individual ideas | Dreams specific to communities |
|--------------------------------|---|--|
| Dseme | Improved seeds, fertilizer, herbicides/insecticides | Access roads and modern market |
| Kanya | Employment opportunities, good health, and transport | Access roads and rehabilitation of existing clinic |
| Maga | Clean and habitable environment, employment opportunities | Drainage system |
| Shengel | Education for our children | Upgrade of secondary school |

Even though these dreams are influenced by the respondents (members of the community), it was surprising that only Maga community mentioned the desire or benefits associated with a secure formal job for improved life style. They relied partly for assistance from government and international donors for livelihood. The desire of all the Focus groups was to continue with their business activities rather than seeking employment in the formal sector. This indicates that livelihood activities and efforts are geared towards the present, while future vulnerability is ignored. The communities are blessed with natural resources, but there was no clear idea about their strategic usefulness in their dreams. There was an expressed need for the communities to practice their cultural expressions (annual farming festival), market and display crafts and artefacts, which express and preserve culture.

Some of the livelihood outcomes were specific to a community or need within the community. Dseme appeared to be most desirous of the modern market and the need for improved infrastructure delivery more especially access roads. Maga community wanted a drainage system, and Shengel had a school but wanted it upgraded to be a senior secondary school. Kanya wanted access roads and rehabilitation of the existing health centre.

The households represented by respondents in these communities had different dreams because they are all struggling with poverty. The communities expressed different scales of needs. The basic needs of the individual's respondents are those that can support rural livelihood. These requirements include employment opportunities, assistance with inputs for farming activities education, primary health care, clean water, and transportation.

CHAPTER SIX: HAS THE CSDP BEEN SUCCESSFUL IN INFLUENCING LIVELIHOOD VULNERABILITY?

The objective of the CSDP was to invest in poverty reduction through a strategic improvement of resources available for livelihoods. The livelihoods improvement framework emphasises the role of institutions and processes as key to the available resource and influence on livelihood vulnerability. Therefore, this study anticipated that through engaging communities in defining the characteristics of their own vulnerability, a better understanding of livelihood options would develop, data to inform government would be provided, and the knowledge obtained would be used as a priority in strategic planning of development Programme in Danko/Wasagu after the closure of CSDP in 2013. The chapter discusses the role that community and social development project (CSDP) had on livelihood strategies in Danko/Wasagu LGA, and whether current livelihood strategies described by the participants in Danko/Wasagu reflected reduced livelihood vulnerability.

6.1 The influence of the CSDP on resources for livelihoods as at 2013.

The objectives of CSDP were to invest in the provision of resources to allow livelihood opportunities and reduce poverty. The strategy employed by the CSDP was to provide opportunity for the poor to access social services, provide infrastructure and human capacity building as well as supports access to natural resources. The CSDP finance community development plans (CDPs), these are projects started and implemented by the communities, and they provide at least 10% resource contributions in form of cash, kind or materials.

6.1.1 Education and water

The outcomes of the influences of CSDP in Danko/Wasagu LGA on education demonstrated that, all the communities benefited from education support. An increase in school enrolment (Table 5.9) was identified. The participants pointed out that schools had been built. For instance, before the CSDP intervention, the pupils received lessons under trees even during the cold and windy season. These unfavourable conditions discourage pupils from attending school. The opportunity to attend an educational institution enhances one's chances for increasing knowledge and therefore one's ability to appreciate and prepare for future situations such as impacts of climate change (Thathsarania & Gunaratne, 2017). Investment in education promotes skills and productivity potentials of the poor households. Increase in literacy level, knowledge and awareness would offer opportunities for

small to medium micro-enterprises development (Madhuri et al., 2014; IFAD, 2012; Giovannucci et al., 2012). Also, good education can promote resilience in the face of environmental risk in the rural community. Therefore, education is an important factor in poverty reduction (Canagarajah & Thomas, 2001). In Danko/Wasagu knowledge on reclamation of land through erosion management and flood control are the some of the key outcomes of CDP influence on education. Others include knowledge in farming practices, skills acquisition, sanitation practices and afforestation.

Water availability is essential to rural livelihoods and is expected to reduce livelihood vulnerability (Alinovi et al., 2010; Cannon et al. 2004). The effective management and use of underground water reduces the cases of waterborne diseases like cholera and bilharzia as well as conflict associated with water scarcity. Unavailability of water results in households to trek long distance for water (Dseme and Kanya communities) and spending more time for productive activities.

The intervention of CSDP has brought some increase in access to water sources like hand pumps/boreholes to Danko/Wasagu particularly in Maga and Shengel communities. Before the intervention the communities depend on natural source of water (wells, rivers and ponds) for water which are contaminated water sources. In Danko/Wasagu, Maga and Shengel communities had more access to water sources compared to Dseme and Kanya communities. Access to water sources like hand pumps and boreholes would facilitate development in the rural areas (Reardon, 2011).

6.1.2 Transport and health

The CSDP survey data for resources and services on transport indicated that, Danko/Wasagu communities recorded an improvement in the transport system during the period of CSDP. This was due to provision of feeder roads, culverts and drainages in the communities. This agrees with Ayugo (2007) conclusion that the lack of access roads is responsible for poor distribution and marketing of agricultural commodities as well as preventing small-scale farmers from accessing inputs, and new technology. However, the feeder roads restricted movement of vehicles especially around August – September Period (rainy season) because of the muddy condition of the roads. This condition limited the participants' access to opportunities to pursue personal socio-economic goals, generate employment and improved the transportation of goods and services in their communities. Rural households that have the opportunity of accessing good roads and transport tend to increase their income. For example, rural communities located 5km away from the city

have the opportunity of moving out of poverty (Onyeiwu & Liu, 2011). Therefore, providing rural infrastructure would enhance rural economic activities and employment opportunities, thereby reducing rural poverty (Reardon, 2001; Ayogu, 2007). Lack of access roads is responsible for poor distribution and marketing of agricultural commodities as well as preventing small-scale farmers from accessing inputs, and new technology (Ayogu, 2007). CSDP has brought an improvement in health facilities (Table 5.13). Danko/Wasagu communities experienced a considerable difference in the number of people being able to attend health centre for treatment and counseling because of the project intervention. The findings demonstrated that, health status of the members of the communities was generally impressive because of the project intervention. The success recorded may be as a result of establishment of new health centres and the renovation of the abandoned ones.

6.1.3 Environmental and natural resources management

Planting of trees and grasses are the predominant environment and natural resources infrastructure outcomes influenced by CSDP (Table 5.14) in the study communities. Other natural resources outcomes benefited by the participants include land reclamation or protection, flood and erosion control, windbreak, establishment of agro-farm/orchards and waste management (Appendix 13). This would led to establishment and growth of rural based enterprises and asset base in the study area (Montaldo, 2013). And would also led to reduction in vulnerability and sustainable use of natural resources (Alinovi et al., 2010). Planting of trees and grasses might have possibly arisen because of the desert encroachment experienced in the study area. This practice is necessary because of severe illegal deforestation, as firewood is used for cooking and heating. Natural and socio-economic factors such as resource endowment influences households to engage into a range of livelihood activities such as subsistence production, production for market, engaging in labour market and self-employment (Wang et al., 2012).

The findings are consistent with (Devereux, 2002; Kabeer, 2002; Freeman et al., 2004) that highlight, rural development mainly focused on promotion and provision of social support services to help vulnerable groups and landless households. These services include roads, schools, hospitals, electricity and water for development (Reardon, 2001). The support services provide access to natural resource-based activities and opportunities (Stephen & Lenihan, 2010). Accessibility to markets and nearby cities are some of the factors that lead to income activities in

rural villages. Therefore, poverty reduction in the rural area was not only due to assets people own, but on the infrastructure available, as well as proximity to the city (Dorosh et al., 2010; Khander & Koolwall, 2010; Krishna & Shariff, 2011). Therefore, providing rural infrastructure would enhance rural economic activities and employment opportunities, thereby reducing rural poverty (Reardon, 2001; Ayogu, 2007).

6.2 Do the livelihood strategies in these communities reflect reduced vulnerability in 2016?

The following section discusses whether livelihood processes described by participants in the study area revealed reduced livelihood vulnerability. The livelihood choices participants made relied on the availability of assets and the nature of the study area. How reliable these choices were and how useful they were in the acquisition and management of assets was central to overcoming vulnerability. These observations provide a lens for viewing how the CSDP beneficiaries utilised available resources and opportunities to realise livelihood outcomes.

6.2.1 Identification of economic sustainability

One of the important capital resources required in rural areas for desired livelihood is housing. The CSDP data indicated that housing was acquired in the study area through inheritance, purchase and collective effort (Table 5.7) with the help of community organisation. Research in Edo state made similar observation; that collective organisation for self-building was a predominant livelihood strategy for acquiring housing (Stephen & Lenihan, 2010). The houses were essentially made from mud and waste materials from farm produce. Although housing options and choice available in the communities has offered some comfort and generated by mutual helps, these options have been totally unsuitable for many households in this sample. Houses in the form of mud blocks and waste materials from farm produce proved to be unsustainable, as individuals complain that, heavy rainfall used to threaten mud blocks houses and affected the roofing made from waste materials. The mode of ownership of housing described in this study suggest however, that as in an Australian study, depending on mutual help strengthens social and cultural ties of families within the context of increasing poverty (Carpenter and McGillivray, 2012). The diversity of strategies these communities use resonate with Fabusoro et al., (2010) who highlight that to build resiliency: rural people adopt different coping mechanisms and survival strategies in response to the effect of socio-economic and environmental factors they encounter in their pursuit of household needs. Coping mechanisms include the selection of available investment, production

systems and employment opportunities. These strategies for poverty alleviation may be employed either at the individual, household or community level. The temporary nature of building materials for homes, limits community members to one of the important capital resources for collateral for building wealth represented in a home ownership. There was no electricity in the informal housing in the project communities. Access to electricity would expand opportunities for livelihood strategies because electricity allowed increased lighting and the use of refrigeration and use of other household appliances. Occupancy rates of these households (many of which are extended family members) imply overcrowding and poverty (Table 5.5).

The communities' interest in natural resources conservation suggested that these are valued assets that may be utilised for increased well-being and possibly economic opportunities (Carney, 1998 & DFID, 2007). Training on soil conservation offered the opportunity to use these skills to boost farming enterprise. Furthermore, waste and drainage system management are another conservation support. These would generate more income and increasing employment. However, access to micro finance limited the opportunity to use these skills for enterprise development. Reliance on farming, donations from NGOs, remittances from families and cultivation of vegetables at backyard garden reflect the hand-to-mouth existence of a culture that has relied on mutual help to meet basic needs. Informal mutual help strategies adopted by participants' increase access to assets and guard against livelihood failure in crises situations. This strategy indicated inconsistency flow of resources and does not lead to more acquisition of assets that could be used against shocks and negative trends. Therefore, for business to be sustainable, it needs to be productive, compete in productive markets, and generate money and jobs.

In Danko/Wasagu trade is a key activity instrumental for well-being. A majority of the businesses in the communities were informal trading enterprises. Communities use these strategies to diversify income generation in their livelihoods (Stephen & Lenihan, 2010). Small businesses such as trading of fruits and vegetables do not attract markets or consumers outside the study area. The barriers for access to markets defeats the goal of entrepreneurial development. Another economic strategy that the communities relied on was salaried jobs and help from relatives living elsewhere for their livelihood (Table 5.6). Most of the jobs are related to working in the local government council as labourers and clerical officers and field work for the development project. In addition, the increased number of public schools because of the project has also increased the

number of teaching jobs in the communities. This demonstrates the power of education, good social and political networks and financial investment capacities as drivers of stability and movement away from poverty (Adepoju & Obayelu, 2013). The overall livelihood dynamics necessitate a more in-depth analysis of local socio-economic dimensions of the study area.

The inefficiency of local production to sustain the communities is a stimulus for livelihood diversification in Danko/Wasagu. Households with agricultural success and a higher level of food security are evidently less likely to invest in new technologies or ideas aimed at economic diversification (Dimova & Sen, 2010). The local production such as cultivation of fruits and vegetable, selling of firewood for cooking and sales of products at the end of the harvest period were unable to provide sufficient income. Arguably, this condition of local production as insufficient can explain why Danko/Wasagu communities are more likely to be involved in trade. Moreover, polygamous family structures and the associated household demographics, with more working age members, not only offered motivation but also some necessity for the Danko/Wasagu to become involved in different activities. The desire for agricultural modern market was important because Dseme and Kanya communities are major producers of farm produce in Danko/Wasagu. Markets as reported by participants were not available. This vision may arise from the need for more improved channels for selling their grains and other agricultural produce because of the increasing production. Freedom in trade networks is strongly associated with trade performance from which arguably Danko/Wasagu has not benefited. The grain potential in Dseme and Kanya communities is promising as it is not limited to Danko/Wasagu. Giving the right opportunity the market potential could attract business from outside the local government area.

Although, a large proportion of the sample could be considered productive due to age (Aikaeli, 2010; Agyeman et al., 2014). There were no opportunities in the communities for the youth to explore their full potential. They are unable to be involved in lucrative diversification activities and are forced to adopt activities that do not require high investment capacities and special skills. One of them is wage labour which contributes no more than a little relief for the labourer's families in situations of food crisis. The second choice, seasonal labour migration, also ends up with low paying labour wages Danko/Wasagu. This has not contributed much for the youths to move out of poverty. Other activities include a vocational centre and internet café training. The lack of investment opportunity for the youth in Danko/Wasagu can supposedly be explained in light of

poor social network to get information, low education and other skills and also the lack of financial capital to meet the start-up expenses for investment (Carney, 1998; DFID, 1999 & 2007). Poverty alleviation in the form of grants subsidies and pensions from government, non-governmental organisation and philanthropists helps to promote livelihood strategies, but were indicative of continued crisis rather than a move towards sustainability. Factors influencing economic sustainability such as empowerment strategies, access to micro-finance, access to market and skill development are absent in the sample. Some households that had access to extension service felt they were forced to pay for what should have been freely provided by the local government.

6.2.2 Sustainability of roles and responsibilities

At the time of this study the sample relied on the CSDP for delivery of infrastructures and Danko/Wasagu for management and maintenance of these community resources. Decentralisation of power between the federal, state and local government in Nigeria had placed Danko/Wasagu in key position for maintenance of these community resources for poverty reduction. There is no confidence shown by the sample in the ability of the Danko/Wasagu local government authority to represent the communities' interest for further development after the closure of CSDP. The uncertainty about future development with respect to continued delivery of resources is interpreted as a threat to opportunities for livelihood choices.

Also, there was several political structures, NGOs and rural development projects working with these communities. Hopefully, experience obtained by talking with these organisations would assist the communities to build stronger civic responsibility and nurture skills required for democratic citizenship. The capacity for civil responsibility and the networking and accountability between the respondents and the local government authority is at present not encouraging. Lack of rural electricity and social housing support, the reliance on government for roads to access markets, education and knowledge for entrepreneurship skills showed a heavy reliance of the communities on government for intervention. Limited options for sustainable livelihoods in the study area because of inadequate facilities, minimal resources for pursuing livelihood choices and transport constraints for business activities. The dependence on micro-enterprise activity and lack of evidence of formal economic activity in partnership between the communities and NGOs and local government for small to medium business indicated that there was much vulnerability for households and the sustainability of the study area.

CHAPTER SEVEN: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Danko/Wasagu LGA was one of the Twenty-One (21) local of Kebbi State that benefited from CSDP intervention Programme. This study attempted to explore whether CSDP investment of resources in Danko/Wasagu communities has led to reducing livelihood vulnerability. Two sources of information were used for this study. A field visit included focus group discussions with a purposeful selection of beneficiaries of the CSDP and the CSDP data bank approved the extraction of a purposeful selection of survey data, providing secondary source of respondent and livelihood information from the CSDP intervention itself.

Four focus groups were conducted, one for each community. The procedure was accomplished with the researcher and the team members responsible for explaining each part of the process to participants, guiding group participation and discussion and recording information. The focus groups engaged the participants to reflect on their livelihood both within the household and the community level and to expose them to the understanding of sustainable livelihood terminology and concepts. The first learning process or exercise was a timeline, identification of positive and negative activities related to the project, economic activities related to livelihood in the project, followed by drawing of map and poster and finally, Venn diagrams. The group analysis record followed the sequence described in learning exercise for the discussion of livelihood analysis summary.

The next activity used a discussion tool adapted from the DFID Sustainable Livelihoods Framework to guide learning by placing detail of these summaries into the categories below:

1. Livelihood assets or the resources that are available,
2. Livelihood strategies for living,
3. Threats to getting what we desire and,
4. Dreams for the future.

The perceived asset base, transforming structures and processes, livelihood strategies, and vulnerabilities were recorded. Survey data extracted from CSDP provided background information and access to social services by the individuals on the activities of the projects.

7.1 Summary of patterns in context

The Community and social development project (CSDP) has played an important role in Danko/Wasagu local government area through the provision of rural infrastructure. This is evidenced by the availability of social, physical and natural infrastructures. This study showed that CSDP also contributed to human capital through the provision of knowledge and skills among the communities. The influence of education, environment and natural resources infrastructure benefits the communities in a variety of ways including agricultural production, marketing and natural resource management. Also, the CSDP assisted the rural communities in the study area by assisting them to form “bonds” among themselves (e.g. farmers’ associations) and “bridges” linking them to markets. These are important to reduce production costs and improve their profit margin. Also, alliances between the communities bring about more articulation of their needs from other agricultural institutions.

The study also showed that livelihood strategies of farming and informal trading enterprises are the main economic activities for income generation practiced by the communities. This reflects the only options perceived for the communities as livelihood options. Although the communities depend on a wide variety of livelihood strategies. These multiple strategies suggested that, communities remained vulnerable to external threat and shocks. The business activities do not attract market outside the study area which defeated the goal of entrepreneurial development, lack of access by the poor communities’ members to micro finance limited the opportunity to use their skills to generate income and reliance on government on virtually all services and goods.

The findings of this study highlighted how community and social development project (CSDP) can help address poverty in the study communities. The CSDP demonstrates that, by focusing on enhancing rural infrastructures, all the other options available to rural households can also be enhanced. However, the perception of communities indicates poverty and unsustainable livelihoods continue in Danko/Wasagu LGA.

7.2 Discussion

The CSDP invested in poverty reduction through a strategic improvement of resources in communities of Danko/Wasagu LGA. The findings of this study showed that, there was improved access to resources provided by the education, water, transport, health, and environmental resource management. Access to clean water had reduced livelihood vulnerability, because it was found to reduce the problems associated with waterborne diseases in Danko/Wasagu. The number of people

using boreholes has increased during the CSDP intervention. A very clearly expressed perception is that the road system provided by the project has failed to meet the transport needs of the communities for micro-enterprise activities. The feeder roads constructed were of poor quality, as the commuters' encountered difficulty with transportation of goods, especially during the rainy season. Access to health facilities and education recorded remarkable achievement. The number of people attending health centres for counselling and treatment had increased during the CSDP intervention. Similarly, in the education sector, during the project there was a positive response to pupil/student enrolment and retention in the study area. Participants benefited from the CSDP training on environmental protection and afforestation and shelterbelt practices were perceived as effective in the threat of climatic threats to livelihoods. This is essential because of desert encroachment experienced in the study area.

This study found that the communities chosen for this study engaged in entrepreneurship in order to defy threats to livelihoods. They are people who were able to exploit social, economic and political opportunities available to them to achieve livelihood goals. The participating communities depend on multiple uses of resources to achieve livelihoods ends. The reliance on the different strategies to make a living, suggests that households and the study communities are vulnerable to external threats and shocks. The communities relied on micro-enterprises such as farming, informal trading enterprises as the main economic activities for income generation. The small businesses do not attract market outside the study area. These restrictions on access to markets defeated the goal of entrepreneurial development. Training on soil conservation and rural enterprise skills offered the opportunity to use these skills to boost farming enterprise. However, access to micro finance limited the opportunity to use these skills for enterprise development. Factors influencing economic sustainability such as empowerment strategies, access to micro-finance, access to market and skill development are absent in the sample. The livelihood strategies of small-scale business, informal activities and trust on combined community efforts made by the members in this study showed options perceived as available choices for survival in the study area. Donations from NGOs, remittances from families, informal mutual helps were some of the strategies adopted by participants to guard against livelihood failure in crises situations. Also, Poverty alleviation in the form of grants subsidies and pensions from government, non-governmental organisation and philanthropists helps to promote livelihood strategies, but were indicative of continued crisis rather than a move towards sustainability.

7.3 Conclusions

There is no indication from this study that vulnerability is essentially decreasing. As the population increases, the provision of infrastructure and services is not sufficient. The analysis of the CSDP data, while indicating the delivery of some services and infrastructure, does not show an increasing trend when discussed within the focus group discussions three years later. The overall trend is that the Local Governments responsible for facilitating further development is perceived to have failed.

Looking at the resources invested by the CSDP in Danko/Wasagu. The infrastructure delivery had been perceived as improving the quality of life through delivery of education, health, transport, water and environmental management. Investment in these resources demonstrated the responsiveness of the CSDP to support the future development of the Danko/Wasagu LGA. This development plan had introduced a cordial relationship between the study communities, local government authority and the CSDP.

The livelihood strategies described by the participants showed increasing reliance on the informal sector for income which revealed high levels of vulnerability with no possible option to produce livelihood resilience because of unemployment and lack of skills acquisition. The livelihood approaches also depend on poverty intervention measures, government grants and informal economic practices for income. Livelihood outcomes for participants remained primarily based on basic livelihood needs such as increased physical, social and financial support for small-scale enterprise development and suitable road networks for business. It can be concluded that, delivery of infrastructural facilities to Danko/Wasagu has provided reasonable physical and social resources. However, inadequate institutional response despite inclusion of the poor in decision making have not resulted in livelihood opportunities that will provide resilience to livelihood shocks and negative trends faced in the area under study.

7.4 Recommendations for government

It was recommended following the closure of the CSDP in September 2013, that continued development and maintenance of infrastructures provided by the project was transferred to Danko/Wasagu local government authority. Therefore, the development challenge relies on the integrity, efficiency and role played by the LGA.

1. Knowledge and understanding of households and community vulnerability may provide government and other relevant agencies with critical information that would help greatly in alleviating poverty in the rural communities.
2. LGA should empower Community Project Management Committees (CPMCs) to form an umbrella cooperative body to further mobilise resources for more community projects and the sustenance of existing ones.
3. The Government should expedite the release of its contributions in arrears to the rural development project. Doing this would empower the project to meet more of the ever-increasing requests for its much-needed support by the communities.

7.5 Recommendations for reducing livelihood vulnerability

LGA needs to develop opportunities and create a market to boost entrepreneurship activities in order to improve livelihood of the participants in Danko/Wasagu. Also, effective partnership between the farmers and the marketers would go a long way in facilitating a social network of relation to provide opportunities. In addition, informal activities for livelihood need to be promoted and utilise labour intensive methods to employ labour from within the study communities.

Individuals that rely on assistance from NGOs and philanthropists need to be offered alternative source of income to carry out their businesses. This would be important in reducing livelihood vulnerability. At the same time, housing delivery needs to be included in the objectives of CSDP that would probably resolve issues of inheritance and rent. The project should also have encouraged the formation of housing co-operatives where homes are self-built in the communities. This would facilitate ownership of subsidised homes by the participants.

7.6 Areas that needs further research

The present research explores how the CSDP invested in poverty reduction through strategic improvement of resources for livelihoods in Danko/Wasagu LGA of Kebbi State. The livelihoods framework emphasises the role of institutions and processes as key to the available resource and influence on livelihood vulnerability.

This study was done in the selected communities of Danko/Wasagu LGA which may not be representative of all the rural communities in the state. Therefore, extending the study in other parts of the state or northern Nigeria is highly recommended in future study.

The study covers sub-dimension of livelihood such as income, well-being and vulnerability which are normally linked and as consequence of poverty on rural livelihood. Gendered issues, food security and extension services were recommended by the researcher to be included in future research.

Finally, further research is needed to explore the actual realities of micro-enterprises located within the communities. The poor infrastructures and lack of policy support to these small-scale businesses would suggest that more creative application of local economic policy is required. Also, micro-finance should be an investment opportunity to the poor communities. This may result to the solution of problem of finance to the communities.

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Appendices

Appendix 1. List of communities in Danko/Wasagu local government area that participated in CSDP

| S/No | Names of communities | Settlements |
|------|----------------------|---------------|
| 1 | G/ Makofa | Ribah/Machika |
| 2 | Kanya | Kanya |
| 3 | Maga | Danko/Maga |
| 4 | Roman | Kyabu |
| 5 | Unguwar Dansanda | Bena |
| 6 | Korgiya | Kubu |
| 7 | Bankami | Ribah/Machika |
| 8 | D'tan | Bena |
| 9 | Dseme | Morai |
| 10 | Kandamao | Morai |
| 11 | Dakarkari/Hausawa | Wasagu |
| 12 | Kanya | Morai |
| 13 | Unguwar kolo | Bena |
| 14 | K'Daban Galadima | Morai |
| 15 | Rambo Diche | Kanya |
| 16 | Unguwar Magaba | Bena |

| | | |
|----|----------------|---------------|
| 17 | Yar Maitaba | Kubu |
| 18 | Tungan Gishiri | Wasagu |
| 19 | Madami | Morai |
| 20 | Sauzama | Wasagu |
| 21 | Samaru | Morai |
| 22 | Dutsin Kwana | Morai |
| 23 | Seva | Ribah/Machika |
| 24 | Shengel | Ribah/Machika |

Source: Danko/Wasagu Community and Social Development Project, 2016.

Appendix: 2 Schedules of research group formation

| Schedule | Activity |
|---|--|
| On 27 th and 28 th July, 2016 | <p>A combined research team (researcher and the facilitators) had meetings to identify study population, understand the process of SLA and select data collection tools to complement SLA.</p> <ul style="list-style-type: none"> - 4 communities were finally selected based on the criteria followed in Table 4.2. - The researcher and the team would meet with each of the community. Researcher helps in the discussion and the facilitators records information - Timelines, posters, maps and Venn diagrams helps as tools for exciting discussion and serves in sustainable livelihood summary - Two session were identified, for each of the community. |

| | |
|--|--|
| On 1 st and 2 nd August, 2016 | <p>The researcher and the facilitators meet with participants from each community to discuss what was proposed and request participation for SLA. And telling them about the time frame for group discussion which would take 3 – 4 hours</p> <p>A plan for SLA procedure was agreed to:</p> <p>Meet at normal meeting place for a period of 3 – 4 hours</p> |
| On 4 th July to 8 th September, 2016 | <p>The group participants are assisted to draw a timeline of important events 2 years before the project to the present time. To start remembering where they come from and what have been accomplished</p> <p>The activity was to filled a Venn diagram showing formal and informal institutions influencing their communities</p> <p>The final activity was identification of institutions and structures in the form of posters. The way their community looks like today, and how they would like it to look in the future</p> |

Appendix 3: Guide for focus group interview process

Name Community

Discussion date

Members -----

1. The participants arrive at the interview location

Informal conversation and registration until everyone arrives:

(If it has not been done previously) information on the approximately ten (12) participants is required (name, age, occupation, relationship to the project)

2. The introduction made by the researcher:

I. The introduction of the participants to each other. Explain to them what they have in common is the participation in the CSDP project.

ii. Presentation of the research objective to the participating members. The importance of the research data was emphasized to the participating members and the type of knowledge expected from them was highlighted.

iii. Brief the participants about the Program of the focus group discussion

II. The introduction of individual consent form for each participant

First Learning Activity

Draw a Timeline:

The participants are given a large piece of paper.

1. I ask them to draw a timeline – starting two (2) years before the project was initiated and two (2) years after project completion. (Also the participants mark the date/time of the initiation of the project and the present time.
2. They are required to mark events of importance on the timeline (the events should be of importance to the project, community and themselves)
3. While they draw, the researcher asks further questions, and they were encouraged to explain which events they mark and why to mark them.

Further Questions

- Explain why you marked the events? What happened and why was it an important incident?
- Who was involved in the activities related to the remarkable events (where you all or just some of you part of the activities)?
- Are you all or just some of you are interested in the mark events?
- Are the needs of this community having a relationship with the mark events?

Second Action Learning Activity (part 1)

On a new paper: point out the most important activities related to CSDP (first the positive and afterward the negative):

1. The participants should write down what they think are the most positive outcomes related to the CSDP, which has created successes or opportunities.
2. The participants should write down what they see as the key obstacles related to the CSDP (obstacles and barriers that hinders the success of the project and other challenges).

Further Questions

Why did you think these are the most positive outcomes of the CSDP which contributed to the successes or opportunities?

Are the successes or opportunities due to the project or are related to other factors?

Why did you say these are the obstacles and barriers that bring challenges to the successes of the project?

Are these obstacles and barriers caused by some group who may have interest in the project activities?

Who has different perspectives on the successes or opportunities and obstacles or challenges related to the project?

Second Action Learning Activity part 2

Identification of the Economic Activities Related to Livelihood Strategies.

1. The participants should write down what they think are the most positive economic activities related to their livelihood in the CSDP project which brings development opportunities.
2. The participants should write down what they see as the negative economic activities related to their livelihoods in the CSDP project which hinders development.
3. Why do you think these are the most positive economic activities in the project that brings development?
4. Why do you say these are the most negative economic activities in the project?
5. Who has a different perspective on the positive and negative economic activities mentioned above?
6. Are you all involved or who is involved in the control and maintenance economic resources related to your livelihood strategies?
7. Explain why, if all of you are participating in the control of economic resources.
8. What types of livelihood activities do you engage that contribute to your income?

Further Questions

- What are the economic activities related to your livelihood strategies as influenced by the project?
- What are the priorities or importance do you attached to the CSDP?
- Do you have an interest in the general activities of the CSDP?
- What role are you playing in the overall activities of the project
- What type or quantity of economic resources do you possess in your community?
- Do these resources influence the way CSDP underwent its activities?
- Can you tell me how the economic resources influence CSDP activities

Stakeholders Analysis

Identification of Project Stakeholders:

1. The participants are interviewed to identify the list of stakeholders.
2. The name, position, project role and contact information of the stakeholders were also identified.

Questions

- What level of interest or support to the stakeholders have on the CSDP?
- What level of influence or power do stakeholders have on the activities of CSDP?
- What position do stakeholders occupy in the decision making of the project?

A Venn diagram session will be carried out using the circle to understand where attributes of the stakeholders intersect or overlap. These will lead to a useful discussion to identify groups that play a role, the influence they have on the decision making of the project.

Visioning

1. Looking to the future (in the next year or so), what do you see as the outlook of those in needs in your community?
2. How about in the next 2 – 4 years
3. What is your perception of the CSDP?
4. Are its efforts (funding, project, and initiatives) targeted on the right priorities
5. How well does the CSDP respond to community needs identified?
6. What recommendation do you have for the CSDP for improving services to the community members?

Thank you for your time

Appendix 4. Headings/themes of CSDP survey questionnaire in Danko/Wasagu LGA

Data collection

Village Name

No-----

SECTION 1: Respondent's data

This section sort information on the demographic characteristics of the individual's members, level of education and occupation.

SECTION 2: Household data

This section informed data on the head of the household, relationship of members with the household head, number of people living in the household and support from family members living elsewhere.

SECTION 3: Asset acquisition

This section gives data on the source of income, assets available and type of housing owned by the individuals.

SECTION 4: Assessment of CSDP micro-projects

This section was on the type of support CSDP offered to communities on education, transport, health, water and environmental protection.

Appendix: 5 Digitised CSDP survey data

Table A: Coded data of background information of individuals from CSDP survey

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 1 | 1 | 1 | 42 | 1 | 1 | 8 | 2 | 1 | 2 | 1 | 6 | 2 |
| 2 | 1 | 2 | 22 | 2 | 1 | 7 | 1 | 1 | 2 | 1 | 6 | 3 |
| 3 | 1 | 1 | 32 | 3 | 1 | 6 | 2 | 1 | 1 | 1 | 6 | 2 |
| 4 | 1 | 2 | 31 | 1 | 1 | 9 | 2 | 1 | 2 | 4 | 1 | 1 |
| 5 | 1 | 2 | 21 | 1 | 2 | 9 | 1 | 1 | 1 | 1 | 4 | 2 |
| 6 | 1 | 2 | 55 | 2 | 1 | 5 | 3 | 1 | 3 | 1 | 6 | 1 |
| 7 | 1 | 1 | 33 | 1 | 2 | 6 | 2 | 1 | 3 | 1 | 2 | 2 |
| 8 | 1 | 1 | 22 | 1 | 2 | 6 | 2 | 1 | 4 | 1 | 6 | 2 |
| 9 | 1 | 1 | 33 | 2 | 5 | 4 | 3 | 1 | 3 | 4 | 2 | 3 |
| 10 | 1 | 1 | 29 | 1 | 5 | 7 | 2 | 1 | 2 | 1 | 3 | 2 |
| 11 | 1 | 2 | 35 | 3 | 2 | 6 | 3 | 1 | 2 | 3 | 2 | 4 |
| 12 | 1 | 2 | 31 | 1 | 2 | 5 | 2 | | 2 | 1 | 6 | 2 |
| 13 | 1 | 2 | 34 | 1 | 2 | 4 | 2 | 1 | 3 | 1 | 4 | 2 |
| 14 | 1 | 2 | 27 | 2 | 1 | 5 | 3 | 1 | 4 | 2 | 6 | 2 |
| 15 | 1 | 1 | 33 | 1 | 1 | 5 | 2 | 1 | 4 | 1 | 4 | 2 |
| 16 | 1 | 1 | 31 | 2 | 1 | 10 | 3 | 1 | 2 | 4 | 6 | 1 |
| 17 | 1 | 1 | 27 | 1 | 1 | 8 | 2 | 1 | 2 | 1 | 6 | 2 |
| 18 | 1 | 2 | 27 | 1 | 1 | 7 | 2 | 1 | 1 | 2 | 3 | 2 |
| 19 | 1 | 2 | 28 | 2 | 1 | 9 | 1 | 1 | 1 | 1 | 6 | 3 |
| 20 | 1 | 1 | 26 | 1 | 2 | 9 | 1 | 1 | 2 | 4 | 6 | 2 |
| 21 | 1 | 2 | 27 | 1 | 2 | 9 | 1 | 1 | 2 | 3 | 6 | 1 |
| 22 | 1 | 1 | 28 | 2 | 1 | 6 | 2 | 1 | 2 | 2 | 1 | 2 |
| 23 | 1 | 2 | 26 | 1 | 1 | 5 | 2 | 1 | 3 | 4 | 6 | 2 |
| 24 | 1 | 1 | 26 | 3 | 5 | 6 | 3 | 1 | 4 | 2 | 4 | 2 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 25 | 1 | 2 | 39 | 1 | 1 | 7 | 2 | 1 | 1 | 1 | 6 | 1 |
| 26 | 1 | 1 | 41 | 2 | 2 | 8 | 1 | 1 | 1 | 4 | 3 | 3 |
| 27 | 1 | 2 | 22 | 1 | 1 | 7 | 3 | 1 | 2 | 1 | 6 | 1 |
| 28 | 1 | 1 | 36 | 1 | 5 | 7 | 3 | 1 | 3 | 1 | 6 | 2 |
| 29 | 1 | 1 | 20 | 1 | 1 | 6 | 2 | 1 | 2 | 4 | 6 | 3 |
| 30 | 1 | 2 | 31 | 4 | 1 | 6 | 2 | 1 | 2 | 3 | 4 | 2 |
| 31 | 1 | 2 | 21 | 1 | 1 | 5 | 2 | 1 | 1 | 4 | 6 | 2 |
| 32 | 1 | 2 | 20 | 1 | 2 | 7 | 2 | 1 | 2 | 1 | 4 | 1 |
| 33 | 1 | 1 | 27 | 4 | 1 | 8 | 1 | 1 | 3 | 1 | 6 | 2 |
| 34 | 1 | 1 | 30 | 1 | 2 | 8 | 2 | 1 | 2 | 1 | 6 | 1 |
| 35 | 1 | 2 | 22 | 1 | 5 | 9 | 1 | 1 | 2 | 4 | 6 | 2 |
| 36 | 1 | 2 | 42 | 3 | 1 | 10 | 2 | 1 | 1 | 1 | 2 | 2 |
| 37 | 1 | 2 | 21 | 1 | 5 | 11 | 3 | 1 | 3 | 1 | 1 | 1 |
| 38 | 1 | 1 | 25 | 6 | 1 | 12 | 3 | 1 | 3 | 2 | 2 | 2 |
| 39 | 1 | 1 | 22 | 1 | 2 | 5 | 2 | 1 | 4 | 2 | 6 | 2 |
| 40 | 1 | 1 | 24 | 1 | 2 | 6 | 2 | 1 | 4 | 2 | 4 | 2 |
| 41 | 1 | 1 | 20 | 4 | 1 | 6 | 2 | 1 | 2 | 4 | 6 | 4 |
| 42 | 1 | 1 | 26 | 1 | 1 | 7 | 1 | 1 | 2 | 1 | 2 | 2 |
| 43 | 1 | 2 | 25 | 1 | 5 | 8 | 1 | 1 | 1 | 1 | 6 | 1 |
| 44 | 1 | 1 | 33 | 1 | 5 | 9 | 2 | 1 | 2 | 1 | 4 | 2 |
| 45 | 1 | 1 | 21 | 5 | 1 | 7 | 2 | 1 | 2 | 4 | 6 | 1 |
| 46 | 1 | 1 | 22 | 1 | 1 | 8 | 2 | 1 | 3 | 1 | 6 | 2 |
| 47 | 1 | 2 | 25 | 6 | 1 | 9 | 3 | 1 | 3 | 1 | 4 | 4 |
| 48 | 1 | 1 | 21 | 6 | 2 | 7 | 3 | 1 | 2 | 1 | 6 | 1 |
| 49 | 1 | 1 | 20 | 6 | 2 | 7 | 2 | 1 | 2 | 4 | 4 | 2 |
| 50 | 1 | 1 | 28 | 5 | 1 | 8 | 2 | 1 | 1 | 1 | 6 | 2 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 51 | 2 | 1 | 25 | 2 | 1 | 8 | 2 | 2 | 2 | 1 | 6 | 2 |
| 52 | 2 | 2 | 30 | 3 | 1 | 7 | 2 | 2 | 2 | 4 | 1 | 2 |
| 53 | 2 | 1 | 22 | 2 | 2 | 6 | 2 | 2 | 2 | 1 | 4 | 4 |
| 54 | 2 | 2 | 31 | 1 | 2 | 6 | 3 | 2 | 2 | 2 | 6 | 2 |
| 55 | 2 | 1 | 27 | 1 | 2 | 8 | 3 | 2 | 2 | 4 | 4 | 2 |
| 56 | 2 | 2 | 26 | 2 | 1 | 9 | 2 | 2 | 2 | 1 | 6 | 1 |
| 57 | 2 | 1 | 27 | 1 | 1 | 8 | 2 | 2 | 1 | 4 | 4 | 2 |
| 58 | 2 | 1 | 26 | 3 | 1 | 8 | 3 | 2 | 1 | 1 | 4 | 1 |
| 59 | 2 | 1 | 22 | 1 | 1 | 9 | 2 | 2 | 4 | 2 | 6 | 2 |
| 60 | 2 | 2 | 45 | 1 | 5 | 11 | 3 | 2 | 3 | 1 | 4 | 2 |
| 61 | 2 | 2 | 40 | 2 | 5 | 12 | 2 | 2 | 3 | 1 | 6 | 2 |
| 62 | 2 | 2 | 65 | 1 | 1 | 10 | 3 | 2 | 2 | 4 | 1 | 2 |
| 63 | 2 | 1 | 22 | 3 | 1 | 9 | 2 | 2 | 2 | 1 | 6 | 1 |
| 64 | 2 | 1 | 34 | 1 | 1 | 8 | 3 | 2 | 1 | 1 | 4 | 2 |
| 65 | 2 | 1 | 20 | 3 | 2 | 7 | 1 | 2 | 2 | 1 | 6 | 2 |
| 66 | 2 | 2 | 23 | 2 | 1 | 7 | 1 | 2 | 4 | 1 | 6 | 3 |
| 67 | 2 | 1 | 34 | 1 | 1 | 7 | 2 | 2 | 3 | 1 | 6 | 2 |
| 68 | 2 | 1 | 46 | 3 | 5 | 9 | 2 | 2 | 2 | 4 | 4 | 1 |
| 69 | 2 | 2 | 51 | 1 | 1 | 6 | 2 | 2 | 2 | 1 | 6 | 2 |
| 70 | 2 | 2 | 21 | 1 | 1 | 5 | 2 | 2 | 2 | 1 | 6 | 3 |
| 71 | 2 | 1 | 24 | 1 | 1 | 5 | 2 | 2 | 1 | 1 | 2 | 4 |
| 72 | 2 | 1 | 24 | 4 | 2 | 4 | 2 | 2 | 1 | 4 | 6 | 1 |
| 73 | 2 | 1 | 26 | 1 | 2 | 6 | 3 | 2 | 2 | 1 | 2 | 2 |
| 74 | 2 | 2 | 73 | 2 | 1 | 5 | 3 | 2 | 2 | 3 | 6 | 2 |
| 75 | 2 | 2 | 21 | 1 | 2 | 6 | 2 | 2 | 3 | 3 | 6 | 2 |
| 76 | 2 | 1 | 20 | 4 | 1 | 7 | 2 | 2 | 3 | 1 | 2 | 1 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 77 | 2 | 1 | 22 | 1 | 2 | 6 | 3 | 2 | 4 | 2 | 6 | 3 |
| 78 | 2 | 2 | 45 | 5 | 5 | 4 | 2 | 2 | 4 | 1 | 6 | 1 |
| 79 | 2 | 2 | 41 | 1 | 1 | 8 | 1 | 2 | 2 | 4 | 6 | 3 |
| 80 | 2 | 2 | 45 | 4 | 1 | 8 | 2 | 2 | 2 | 1 | 4 | 2 |
| 81 | 2 | 1 | 22 | 5 | 1 | 9 | 3 | 2 | 1 | 4 | 6 | 2 |
| 82 | 2 | 1 | 22 | 1 | 2 | 7 | 2 | 2 | 2 | 1 | 6 | 1 |
| 83 | 2 | 1 | 21 | 1 | 1 | 7 | 2 | 2 | 2 | 3 | 4 | 2 |
| 84 | 2 | 2 | 20 | 1 | 2 | 6 | 2 | 2 | 1 | 1 | 6 | 3 |
| 85 | 2 | 1 | 26 | 4 | 1 | 5 | 1 | 2 | 1 | 2 | 4 | 1 |
| 86 | 2 | 1 | 27 | 1 | 5 | 6 | 1 | 2 | 2 | 4 | 2 | 2 |
| 87 | 2 | 1 | 21 | 4 | 1 | 7 | 2 | 2 | 2 | 1 | 3 | 2 |
| 88 | 2 | 1 | 31 | 1 | 2 | 6 | 3 | 2 | 2 | 1 | 4 | 3 |
| 89 | 2 | 1 | 22 | 1 | 1 | 6 | 3 | 2 | 2 | 1 | 4 | 2 |
| 90 | 2 | 1 | 43 | 1 | 2 | 11 | 2 | 2 | 2 | 1 | 2 | 3 |
| 91 | 2 | 1 | 26 | 4 | 1 | 10 | 2 | 2 | 1 | 1 | 4 | 2 |
| 92 | 2 | 1 | 24 | 1 | 2 | 8 | 3 | 2 | 1 | 4 | 5 | 4 |
| 93 | 2 | 1 | 21 | 6 | 5 | 8 | 2 | 2 | 2 | 1 | 3 | 2 |
| 94 | 2 | 1 | 26 | 5 | 5 | 7 | 2 | 2 | 1 | 1 | 4 | 4 |
| 95 | 2 | 1 | 28 | 6 | 1 | 4 | 2 | 2 | 2 | 1 | 4 | 2 |
| 96 | 2 | 1 | 23 | 1 | 1 | 3 | 3 | 2 | 2 | 4 | 4 | 4 |
| 97 | 2 | 1 | 21 | 4 | 1 | 3 | 2 | 2 | 2 | 1 | 6 | 4 |
| 98 | 2 | 1 | 29 | 6 | 2 | 4 | 3 | 2 | 3 | 1 | 6 | 2 |
| 99 | 2 | 1 | 30 | 6 | 1 | 5 | 2 | 2 | 4 | 1 | 4 | 4 |
| 100 | 2 | 1 | 39 | 6 | 2 | 5 | 3 | 2 | 3 | 4 | 6 | 2 |
| 101 | 3 | 1 | 21 | 1 | 1 | 6 | 2 | 3 | 1 | 1 | 6 | 1 |
| 102 | 3 | 1 | 45 | 2 | 1 | 6 | 2 | 3 | 1 | 1 | 1 | 2 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 103 | 3 | 1 | 33 | 6 | 2 | 7 | 2 | 3 | 1 | 3 | 6 | 1 |
| 104 | 3 | 1 | 23 | 1 | 2 | 8 | 1 | 3 | 1 | 2 | 6 | 1 |
| 105 | 3 | 2 | 22 | 3 | 1 | 8 | 1 | 3 | 2 | 3 | 1 | 1 |
| 106 | 3 | 1 | 21 | 1 | 1 | 9 | 2 | 3 | 2 | 2 | 6 | 2 |
| 107 | 3 | 2 | 20 | 2 | 2 | 6 | 1 | 3 | 2 | 3 | 3 | 2 |
| 108 | 3 | 1 | 42 | 1 | 5 | 7 | 1 | 3 | 2 | 3 | 2 | 2 |
| 109 | 3 | 1 | 33 | 1 | 2 | 9 | 2 | 3 | 1 | 1 | 6 | 1 |
| 110 | 3 | 2 | 32 | 3 | 5 | 9 | 1 | 3 | 2 | 1 | 2 | 2 |
| 111 | 3 | 2 | 31 | 1 | 5 | 8 | 1 | 3 | 2 | 1 | 6 | 4 |
| 112 | 3 | 1 | 27 | 2 | 2 | 8 | 1 | 3 | 1 | 1 | 2 | 2 |
| 113 | 3 | 1 | 32 | 1 | 5 | 9 | 1 | 3 | 2 | 1 | 6 | 4 |
| 114 | 3 | 2 | 22 | 4 | 1 | 9 | 1 | 3 | 3 | 1 | 4 | 1 |
| 115 | 3 | 1 | 34 | 1 | 1 | 5 | 1 | 3 | 4 | 3 | 6 | 1 |
| 116 | 3 | 2 | 36 | 2 | 2 | 4 | 1 | 3 | 1 | 4 | 4 | 2 |
| 117 | 3 | 1 | 33 | 1 | 1 | 3 | 2 | 3 | 2 | 3 | 6 | 1 |
| 118 | 3 | 1 | 32 | 4 | 2 | 3 | 2 | 3 | 1 | 4 | 4 | 1 |
| 119 | 3 | 2 | 22 | 1 | 1 | 4 | 2 | 3 | 2 | 1 | 6 | 2 |
| 120 | 3 | 2 | 21 | 5 | 1 | 6 | 2 | 3 | 1 | 1 | 4 | 2 |
| 121 | 3 | 1 | 25 | 2 | 1 | 7 | 3 | 3 | 2 | 1 | 6 | 3 |
| 122 | 3 | 1 | 25 | 1 | 2 | 6 | 3 | 3 | 1 | 4 | 2 | 1 |
| 123 | 3 | 1 | 23 | 3 | 3 | 6 | 3 | 3 | 2 | 1 | 4 | 2 |
| 124 | 3 | 1 | 32 | 1 | 3 | 8 | 1 | 3 | 3 | 1 | 6 | 4 |
| 125 | 3 | 1 | 21 | 3 | 3 | 7 | 2 | 3 | 2 | 4 | 4 | 4 |
| 126 | 3 | 1 | 25 | 1 | 1 | 7 | 3 | 3 | 1 | 1 | 6 | 4 |
| 127 | 3 | 1 | 28 | 4 | 1 | 10 | 1 | 3 | 3 | 1 | 6 | 1 |
| 128 | 3 | 1 | 31 | 1 | 2 | 9 | 1 | 3 | 4 | 4 | 2 | 4 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 129 | 3 | 2 | 32 | 1 | 1 | 9 | 2 | 3 | 2 | 1 | 6 | 3 |
| 130 | 3 | 1 | 40 | 3 | 3 | 9 | 2 | 3 | 1 | 4 | 4 | 1 |
| 131 | 3 | 1 | 32 | 1 | 5 | 6 | 1 | 3 | 2 | 2 | 6 | 2 |
| 132 | 3 | 2 | 22 | 1 | 1 | 5 | 2 | 3 | 1 | 3 | 6 | 3 |
| 133 | 3 | 2 | 30 | 2 | 1 | 5 | 1 | 3 | 1 | 3 | 4 | 2 |
| 134 | 3 | 1 | 31 | 1 | 2 | 4 | 2 | 3 | 2 | 1 | 6 | 4 |
| 135 | 3 | 1 | 21 | 4 | 2 | 5 | 1 | 3 | 1 | 4 | 6 | 2 |
| 136 | 3 | 1 | 23 | 1 | 1 | 3 | 2 | 3 | 2 | 1 | 6 | 4 |
| 137 | 3 | 1 | 27 | 1 | 1 | 4 | 3 | 3 | 1 | 1 | 4 | 2 |
| 138 | 3 | 1 | 31 | 1 | 1 | 4 | 1 | 3 | 1 | 1 | 6 | 3 |
| 139 | 3 | 2 | 33 | 4 | 2 | 6 | 1 | 3 | 2 | 4 | 4 | 4 |
| 140 | 3 | 2 | 32 | 1 | 3 | 6 | 2 | 3 | 2 | 2 | 6 | 2 |
| 141 | 3 | 1 | 21 | 1 | 5 | 7 | 2 | 3 | 4 | 3 | 6 | 4 |
| 142 | 3 | 1 | 22 | 1 | 1 | 8 | 2 | 3 | 3 | 2 | 6 | 2 |
| 143 | 3 | 2 | 32 | 4 | 1 | 7 | 2 | 3 | 1 | 4 | 4 | 4 |
| 144 | 3 | 1 | 64 | 1 | 1 | 9 | 3 | 3 | 1 | 3 | 6 | 2 |
| 145 | 3 | 1 | 33 | 5 | 2 | 9 | 2 | 3 | 1 | 3 | 5 | 3 |
| 146 | 3 | 1 | 33 | 6 | 2 | 6 | 3 | 3 | 1 | 2 | 4 | 2 |
| 147 | 3 | 1 | 32 | 5 | 1 | 7 | 1 | 3 | 1 | 1 | 2 | 4 |
| 148 | 3 | 1 | 22 | 6 | 1 | 7 | 1 | 3 | 3 | 1 | 4 | 2 |
| 149 | 3 | 2 | 31 | 5 | 1 | 6 | 2 | 3 | 1 | 1 | 4 | 3 |
| 150 | 3 | 1 | 34 | 1 | 2 | 5 | 1 | 3 | 1 | 1 | 4 | 2 |
| 151 | 4 | 1 | 44 | 1 | 1 | 4 | 2 | 4 | 2 | 1 | 6 | 1 |
| 152 | 4 | 1 | 43 | 3 | 1 | 6 | 2 | 4 | 1 | 1 | 1 | 2 |
| 153 | 4 | 1 | 22 | 1 | 2 | 6 | 2 | 4 | 2 | 1 | 6 | 1 |
| 154 | 4 | 1 | 31 | 1 | 2 | 6 | 1 | 4 | 2 | 2 | 2 | 2 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 155 | 4 | 2 | 21 | 4 | 2 | 7 | 1 | 4 | 1 | 1 | 6 | 2 |
| 156 | 4 | 2 | 20 | 1 | 1 | 8 | 2 | 4 | 2 | 1 | 6 | 1 |
| 157 | 4 | 1 | 22 | 3 | 3 | 7 | 1 | 4 | 2 | 2 | 4 | 3 |
| 158 | 4 | 1 | 45 | 1 | 5 | 9 | 2 | 4 | 2 | 1 | 6 | 2 |
| 159 | 4 | 1 | 32 | 1 | 1 | 8 | 1 | 4 | 2 | 1 | 4 | 1 |
| 160 | 4 | 2 | 43 | 5 | 5 | 9 | 2 | 4 | 3 | 1 | 6 | 3 |
| 161 | 4 | 1 | 29 | 1 | 1 | 7 | 2 | 4 | 2 | 1 | 6 | 2 |
| 162 | 4 | 1 | 34 | 6 | 1 | 6 | 3 | 4 | 1 | 2 | 4 | 1 |
| 163 | 4 | 2 | 25 | 1 | 1 | 5 | 2 | 4 | 2 | 1 | 6 | 2 |
| 164 | 4 | 1 | 26 | 3 | 1 | 4 | 3 | 4 | 2 | 1 | 4 | 1 |
| 165 | 4 | 1 | 23 | 1 | 2 | 4 | 2 | 4 | 1 | 1 | 6 | 2 |
| 166 | 4 | 1 | 25 | 2 | 1 | 5 | 3 | 4 | 2 | 4 | 4 | 1 |
| 167 | 4 | 2 | 24 | 1 | 2 | 6 | 2 | 4 | 2 | 1 | 6 | 3 |
| 168 | 4 | 1 | 28 | 1 | 1 | 7 | 2 | 4 | 2 | 4 | 6 | 2 |
| 169 | 4 | 1 | 30 | 4 | 1 | 7 | 2 | 4 | 2 | 1 | 4 | 1 |
| 170 | 4 | 1 | 31 | 1 | 2 | 7 | 2 | 4 | 3 | 1 | 6 | 4 |
| 171 | 4 | 1 | 32 | 2 | 1 | 6 | 1 | 4 | 2 | 1 | 4 | 2 |
| 172 | 4 | 2 | 34 | 1 | 1 | 6 | 3 | 4 | 2 | 1 | 6 | 1 |
| 173 | 4 | 1 | 22 | 1 | 2 | 8 | 2 | 4 | 4 | 4 | 6 | 2 |
| 174 | 4 | 2 | 42 | 1 | 5 | 9 | 1 | 4 | 2 | 1 | 2 | 1 |
| 175 | 4 | 2 | 41 | 1 | 5 | 7 | 3 | 4 | 2 | 1 | 6 | 1 |
| 176 | 4 | 1 | 32 | 3 | 1 | 6 | 2 | 4 | 2 | 1 | 6 | 4 |
| 177 | 4 | 1 | 31 | 1 | 1 | 5 | 2 | 4 | 2 | 4 | 4 | 3 |
| 178 | 4 | 1 | 22 | 2 | 2 | 4 | 1 | 4 | 3 | 1 | 6 | 2 |
| 179 | 4 | 2 | 20 | 1 | 5 | 6 | 1 | 4 | 2 | 1 | 4 | 2 |
| 180 | 4 | 1 | 26 | 1 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 4 |

| S/NO | C/NAME | GEN | AGE | OCCUPATION | LFOREDU | HPLHH | DSMELSE | V/NAME | QCSDPSE | HOUSING | ASSET | INCOME |
|------|--------|-----|-----|------------|---------|-------|---------|--------|---------|---------|-------|--------|
| 181 | 4 | 2 | 76 | 2 | 1 | 6 | 2 | 4 | 2 | 1 | 4 | 1 |
| 182 | 4 | 1 | 25 | 1 | 1 | 6 | 1 | 4 | 1 | 4 | 6 | 1 |
| 183 | 4 | 1 | 45 | 1 | 1 | 5 | 1 | 4 | 2 | 1 | 3 | 2 |
| 184 | 4 | 1 | 23 | 4 | 2 | 4 | 2 | 4 | 1 | 4 | 6 | 3 |
| 185 | 4 | 1 | 21 | 1 | 3 | 8 | 2 | 4 | 2 | 1 | 4 | 2 |
| 186 | 4 | 2 | 24 | 4 | 2 | 9 | 2 | 4 | 2 | 1 | 6 | 4 |
| 187 | 4 | 2 | 21 | 1 | 1 | 8 | 3 | 4 | 2 | 3 | 3 | 1 |
| 188 | 4 | 1 | 31 | 1 | 1 | 9 | 3 | 4 | 1 | 1 | 6 | 2 |
| 189 | 4 | 1 | 22 | 1 | 1 | 8 | 2 | 4 | 1 | 1 | 4 | 2 |
| 190 | 4 | 1 | 30 | 2 | 2 | 9 | 1 | 4 | 2 | 2 | 6 | 4 |
| 191 | 4 | 1 | 20 | 3 | 1 | 8 | 2 | 4 | 2 | 1 | 2 | 2 |
| 192 | 4 | 1 | 27 | 1 | 2 | 9 | 3 | 4 | 3 | 3 | 6 | 4 |
| 193 | 4 | 1 | 34 | 1 | 1 | 7 | 1 | 4 | 2 | 3 | 4 | 2 |
| 194 | 4 | 1 | 36 | 2 | 1 | 6 | 2 | 4 | 3 | 1 | 6 | 2 |
| 195 | 4 | 1 | 64 | 5 | 2 | 7 | 1 | 4 | 2 | 1 | 4 | 4 |
| 196 | 4 | 1 | 34 | 2 | 3 | 7 | 1 | 4 | 2 | 1 | 2 | 2 |
| 197 | 4 | 2 | 21 | 6 | 5 | 7 | 2 | 4 | 1 | 4 | 4 | 4 |
| 198 | 4 | 2 | 31 | 4 | 1 | 11 | 3 | 4 | 2 | 1 | 2 | 2 |
| 199 | 4 | 1 | 31 | 2 | 2 | 11 | 2 | 4 | 2 | 3 | 5 | 4 |
| 200 | 4 | 1 | 30 | 1 | 1 | 12 | 3 | 4 | 2 | 2 | 4 | 2 |

Table B: Data Set for CSDP survey Community Resources and Services from Education.
C/NAME = Community Name, ENRCSDP, Enrollment of pupils in the community due to CSDP

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 1 | 1 | 1 |
| 2 | 1 | 1 |
| 3 | 1 | 1 |
| 4 | 1 | 1 |
| 5 | 1 | 1 |
| 6 | 1 | 2 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 1 |
| 10 | 1 | 1 |
| 11 | 1 | 2 |
| 12 | | 1 |
| 13 | 1 | 1 |
| 14 | 1 | 2 |
| 15 | 1 | 1 |
| 16 | 1 | 1 |
| 17 | 1 | 1 |
| 18 | 1 | 1 |
| 19 | 1 | 2 |
| 20 | 1 | 1 |
| 21 | 1 | 2 |
| 22 | 1 | 1 |
| 23 | 1 | 1 |
| 24 | 1 | 1 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 25 | 1 | 2 |
| 26 | 1 | 1 |
| 27 | 1 | 1 |
| 28 | 1 | 2 |
| 29 | 1 | 1 |
| 30 | 1 | 2 |
| 31 | 1 | 1 |
| 32 | 1 | 1 |
| 33 | 1 | 2 |
| 34 | 1 | 1 |
| 35 | 1 | 2 |
| 36 | 1 | 2 |
| 37 | 1 | 1 |
| 38 | 1 | 1 |
| 39 | 1 | 2 |
| 40 | 1 | 1 |
| 41 | 1 | 2 |
| 42 | 1 | 1 |
| 43 | 1 | 2 |
| 44 | 1 | 2 |
| 45 | 1 | 1 |
| 46 | 1 | 2 |
| 47 | 1 | 1 |
| 48 | 1 | 2 |
| 49 | 1 | 1 |
| 50 | 1 | 1 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 51 | 2 | 1 |
| 52 | 2 | 1 |
| 53 | 2 | 1 |
| 54 | 2 | 2 |
| 55 | 2 | 1 |
| 56 | 2 | 1 |
| 57 | 2 | 2 |
| 58 | 2 | 1 |
| 59 | 2 | 1 |
| 60 | 2 | 1 |
| 61 | 2 | 1 |
| 62 | 2 | 2 |
| 63 | 2 | 1 |
| 64 | 2 | 1 |
| 65 | 2 | 2 |
| 66 | 2 | 1 |
| 67 | 2 | 1 |
| 68 | 2 | 1 |
| 69 | 2 | 2 |
| 70 | 2 | 2 |
| 71 | 2 | 1 |
| 72 | 2 | 1 |
| 73 | 2 | 1 |
| 74 | 2 | 1 |
| 75 | 2 | 1 |
| 76 | 2 | 2 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 77 | 2 | 1 |
| 78 | 2 | 1 |
| 79 | 2 | 2 |
| 80 | 2 | 1 |
| 81 | 2 | 1 |
| 82 | 2 | 2 |
| 83 | 2 | 1 |
| 84 | 2 | 1 |
| 85 | 2 | 1 |
| 86 | 2 | 2 |
| 87 | 2 | 2 |
| 88 | 2 | 1 |
| 89 | 2 | 1 |
| 90 | 2 | 1 |
| 91 | 2 | 2 |
| 92 | 2 | 1 |
| 93 | 2 | 1 |
| 94 | 2 | 2 |
| 95 | 2 | 2 |
| 96 | 2 | 1 |
| 97 | 2 | 1 |
| 98 | 2 | 2 |
| 99 | 2 | 1 |
| 100 | 2 | 1 |
| 101 | 3 | 1 |
| 102 | 3 | 1 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 103 | 3 | 1 |
| 104 | 3 | 2 |
| 105 | 3 | 1 |
| 106 | 3 | 1 |
| 107 | 3 | 2 |
| 108 | 3 | 1 |
| 109 | 3 | 1 |
| 110 | 3 | 1 |
| 111 | 3 | 2 |
| 112 | 3 | 2 |
| 113 | 3 | 1 |
| 114 | 3 | 1 |
| 115 | 3 | 2 |
| 116 | 3 | 1 |
| 117 | 3 | 1 |
| 118 | 3 | 2 |
| 119 | 3 | 1 |
| 120 | 3 | 1 |
| 121 | 3 | 2 |
| 122 | 3 | 1 |
| 123 | 3 | 1 |
| 124 | 3 | 2 |
| 125 | 3 | 1 |
| 126 | 3 | 1 |
| 127 | 3 | 1 |
| 128 | 3 | 2 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 129 | 3 | 1 |
| 130 | 3 | 1 |
| 131 | 3 | 2 |
| 132 | 3 | 2 |
| 133 | 3 | 1 |
| 134 | 3 | 1 |
| 135 | 3 | 1 |
| 136 | 3 | 2 |
| 137 | 3 | 1 |
| 138 | 3 | 1 |
| 139 | 3 | 1 |
| 140 | 3 | 2 |
| 141 | 3 | 1 |
| 142 | 3 | 1 |
| 143 | 3 | 2 |
| 144 | 3 | 1 |
| 145 | 3 | 1 |
| 146 | 3 | 1 |
| 147 | 3 | 2 |
| 148 | 3 | 1 |
| 149 | 3 | 1 |
| 150 | 3 | 2 |
| 151 | 4 | 1 |
| 152 | 4 | 1 |
| 153 | 4 | 1 |
| 154 | 4 | 1 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 155 | 4 | 1 |
| 156 | 4 | 1 |
| 157 | 4 | 2 |
| 158 | 4 | 2 |
| 159 | 4 | 1 |
| 160 | 4 | 2 |
| 161 | 4 | 1 |
| 162 | 4 | 1 |
| 163 | 4 | 1 |
| 164 | 4 | 1 |
| 165 | 4 | 2 |
| 166 | 4 | 1 |
| 167 | 4 | 2 |
| 168 | 4 | 1 |
| 169 | 4 | 1 |
| 170 | 4 | 1 |
| 171 | 4 | 1 |
| 172 | 4 | 1 |
| 173 | 4 | 1 |
| 174 | 4 | 2 |
| 175 | 4 | 2 |
| 176 | 4 | 2 |
| 177 | 4 | 1 |
| 178 | 4 | 1 |
| 179 | 4 | 1 |
| 180 | 4 | 1 |

| EDUCATION | | |
|-----------|--------|---------|
| S/N | C/NAME | ENRCSDP |
| 181 | 4 | 1 |
| 182 | 4 | 1 |
| 183 | 4 | 2 |
| 184 | 4 | 1 |
| 185 | 4 | 1 |
| 186 | 4 | 2 |
| 187 | 4 | 1 |
| 188 | 4 | 1 |
| 189 | 4 | 1 |
| 190 | 4 | 2 |
| 191 | 4 | 1 |
| 192 | 4 | 1 |
| 193 | 4 | 1 |
| 194 | 4 | 1 |
| 195 | 4 | 1 |
| 196 | 4 | 1 |
| 197 | 4 | 1 |
| 198 | 4 | 1 |
| 199 | 4 | 2 |
| 200 | 4 | 2 |

Table C: Data Set for CSDP survey Community Resources and Services for Water and Transport. SWBCSDP = Sources of water before CSDP, SWACSDP = Sources of water after CSDP, MTBCSDP = Means of transport before CSDP, MTACSDP = Means of transport after CSDP

| WATER | | | | TRANSPORT | | | |
|-------|--------|---------|---------|-----------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP | S/N | C/NAME | MTBCSDP | MTACSDP |
| 1 | 1 | 1 | 2 | 1 | 1 | 4 | 6 |
| 2 | 1 | 5 | 3 | 2 | 1 | 4 | 2 |
| 3 | 1 | 2 | 1 | 3 | 1 | 1 | 4 |
| 4 | 1 | 4 | 2 | 4 | 1 | 2 | 1 |
| 5 | 1 | 1 | 4 | 5 | 1 | 4 | 6 |
| 6 | 1 | 1 | 4 | 6 | 1 | 6 | 6 |
| 7 | 1 | 5 | 2 | 7 | 1 | 4 | 4 |
| 8 | 1 | 1 | 2 | 8 | 1 | 1 | 1 |
| 9 | 1 | 6 | 1 | 9 | 1 | 4 | 4 |
| 10 | 1 | 1 | 2 | 10 | 1 | 4 | 4 |
| 11 | 1 | 2 | 2 | 11 | 1 | 1 | 2 |
| 12 | 1 | 4 | 1 | 12 | 1 | 1 | 6 |
| 13 | 1 | 1 | 2 | 13 | 1 | 4 | 4 |
| 14 | 1 | 6 | 6 | 14 | 1 | 1 | 4 |
| 15 | 1 | 1 | 1 | 15 | 1 | 4 | 2 |
| 16 | 1 | 5 | 2 | 16 | 1 | 4 | 4 |
| 17 | 1 | 6 | 6 | 17 | 1 | 1 | 4 |
| 18 | 1 | 1 | 2 | 18 | 1 | 4 | 5 |
| 19 | 1 | 4 | 6 | 19 | 1 | 1 | 2 |
| 20 | 1 | 5 | 1 | 20 | 1 | 4 | 6 |
| 21 | 1 | 1 | 2 | 21 | 1 | 1 | 6 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 22 | 1 | 6 | 6 |
| 23 | 1 | 5 | 4 |
| 24 | 1 | 1 | 2 |
| 25 | 1 | 6 | 6 |
| 26 | 1 | 5 | 4 |
| 27 | 1 | 1 | 2 |
| 28 | 1 | 5 | 2 |
| 29 | 1 | 1 | 4 |
| 30 | 1 | 5 | 6 |
| 31 | 1 | 4 | 2 |
| 32 | 1 | 1 | 4 |
| 33 | 1 | 3 | 2 |
| 34 | 1 | 1 | 3 |
| 35 | 1 | 1 | 3 |
| 36 | 1 | 3 | 2 |
| 37 | 1 | 1 | 4 |
| 38 | 1 | 5 | 2 |
| 39 | 1 | 1 | 5 |
| 40 | 1 | 1 | 2 |
| 41 | 1 | 1 | 4 |
| 42 | 1 | 1 | 5 |
| 43 | 1 | 3 | 6 |
| 44 | 1 | 4 | 4 |
| 45 | 1 | 2 | 2 |
| 46 | 1 | 3 | 1 |
| 47 | 1 | 2 | 2 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 22 | 1 | 4 | 6 |
| 23 | 1 | 1 | 5 |
| 24 | 1 | 5 | 6 |
| 25 | 1 | 4 | 5 |
| 26 | 1 | 1 | 6 |
| 27 | 1 | 6 | 6 |
| 28 | 1 | 1 | 6 |
| 29 | 1 | 4 | 2 |
| 30 | 1 | 4 | 4 |
| 31 | 1 | 1 | 2 |
| 32 | 1 | 4 | 6 |
| 33 | 1 | 4 | 4 |
| 34 | 1 | 6 | 6 |
| 35 | 1 | 3 | 6 |
| 36 | 1 | 6 | 4 |
| 37 | 1 | 4 | 5 |
| 38 | 1 | 2 | 4 |
| 39 | 1 | 4 | 5 |
| 40 | 1 | 2 | 6 |
| 41 | 1 | 4 | 4 |
| 42 | 1 | 1 | 5 |
| 43 | 1 | 5 | 5 |
| 44 | 1 | 5 | 5 |
| 45 | 1 | 1 | 4 |
| 46 | 1 | 6 | 6 |
| 47 | 1 | 5 | 5 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 48 | 1 | 4 | 4 |
| 49 | 1 | 4 | 4 |
| 50 | 1 | 1 | 2 |
| 51 | 2 | 1 | 2 |
| 52 | 2 | 6 | 1 |
| 53 | 2 | 1 | 2 |
| 54 | 2 | 5 | 1 |
| 55 | 2 | 1 | 2 |
| 56 | 2 | 4 | 6 |
| 57 | 2 | 4 | 6 |
| 58 | 2 | 1 | 2 |
| 59 | 2 | 4 | 2 |
| 60 | 2 | 1 | 4 |
| 61 | 2 | 4 | 2 |
| 62 | 2 | 4 | 4 |
| 63 | 2 | 1 | 1 |
| 64 | 2 | 5 | 5 |
| 65 | 2 | 4 | 4 |
| 66 | 2 | 1 | 2 |
| 67 | 2 | 5 | 1 |
| 68 | 2 | 4 | 5 |
| 69 | 2 | 1 | 4 |
| 70 | 2 | 5 | 5 |
| 71 | 2 | 4 | 1 |
| 72 | 2 | 1 | 2 |
| 73 | 2 | 5 | 4 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 48 | 1 | 1 | 4 |
| 49 | 1 | 4 | 4 |
| 50 | 1 | 5 | 5 |
| 51 | 2 | 1 | 4 |
| 52 | 2 | 5 | 1 |
| 53 | 2 | 1 | 4 |
| 54 | 2 | 1 | 5 |
| 55 | 2 | 2 | 6 |
| 56 | 2 | 1 | 4 |
| 57 | 2 | 5 | 1 |
| 58 | 2 | 4 | 5 |
| 59 | 2 | 1 | 2 |
| 60 | 2 | 2 | 4 |
| 61 | 2 | 1 | 6 |
| 62 | 2 | 2 | 2 |
| 63 | 2 | 1 | 1 |
| 64 | 2 | 2 | 4 |
| 65 | 2 | 1 | 6 |
| 66 | 2 | 5 | 4 |
| 67 | 2 | 1 | 4 |
| 68 | 2 | 1 | 1 |
| 69 | 2 | 5 | 2 |
| 70 | 2 | 4 | 4 |
| 71 | 2 | 4 | 4 |
| 72 | 2 | 1 | 2 |
| 73 | 2 | 4 | 4 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 74 | 2 | 6 | 4 |
| 75 | 2 | 1 | 6 |
| 76 | 2 | 4 | 2 |
| 77 | 2 | 4 | 4 |
| 78 | 2 | 1 | 3 |
| 79 | 2 | 6 | 5 |
| 80 | 2 | 1 | 2 |
| 81 | 2 | 2 | 3 |
| 82 | 2 | 4 | 4 |
| 83 | 2 | 1 | 1 |
| 84 | 2 | 2 | 2 |
| 85 | 2 | 4 | 5 |
| 86 | 2 | 1 | 1 |
| 87 | 2 | 3 | 2 |
| 88 | 2 | 1 | 2 |
| 89 | 2 | 4 | 4 |
| 90 | 2 | 2 | 6 |
| 91 | 2 | 3 | 2 |
| 92 | 2 | 4 | 4 |
| 93 | 2 | 2 | 5 |
| 94 | 2 | 3 | 6 |
| 95 | 2 | 4 | 2 |
| 96 | 2 | 2 | 5 |
| 97 | 2 | 2 | 4 |
| 98 | 2 | 4 | 2 |
| 99 | 2 | 3 | 2 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 74 | 2 | 1 | 5 |
| 75 | 2 | 1 | 2 |
| 76 | 2 | 5 | 4 |
| 77 | 2 | 1 | 5 |
| 78 | 2 | 5 | 2 |
| 79 | 2 | 2 | 3 |
| 80 | 2 | 1 | 2 |
| 81 | 2 | 1 | 5 |
| 82 | 2 | 2 | 4 |
| 83 | 2 | 1 | 2 |
| 84 | 2 | 4 | 4 |
| 85 | 2 | 2 | 2 |
| 86 | 2 | 1 | 4 |
| 87 | 2 | 6 | 6 |
| 88 | 2 | 1 | 2 |
| 89 | 2 | 3 | 2 |
| 90 | 2 | 1 | 5 |
| 91 | 2 | 3 | 2 |
| 92 | 2 | 4 | 4 |
| 93 | 2 | 2 | 2 |
| 94 | 2 | 6 | 3 |
| 95 | 2 | 4 | 5 |
| 96 | 2 | 5 | 3 |
| 97 | 2 | 4 | 4 |
| 98 | 2 | 5 | 2 |
| 99 | 2 | 4 | 5 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 100 | 2 | 4 | 2 |
| 101 | 3 | 4 | 6 |
| 102 | 3 | 5 | 6 |
| 103 | 3 | 2 | 2 |
| 104 | 3 | 6 | 6 |
| 105 | 3 | 4 | 2 |
| 106 | 3 | 5 | 5 |
| 107 | 3 | 2 | 6 |
| 108 | 3 | 4 | 5 |
| 109 | 3 | 2 | 2 |
| 110 | 3 | 4 | 5 |
| 111 | 3 | 1 | 2 |
| 112 | 3 | 1 | 5 |
| 113 | 3 | 1 | 2 |
| 114 | 3 | 4 | 3 |
| 115 | 3 | 2 | 5 |
| 116 | 3 | 1 | 3 |
| 117 | 3 | 4 | 5 |
| 118 | 3 | 5 | 2 |
| 119 | 3 | 2 | 4 |
| 120 | 3 | 4 | 6 |
| 121 | 3 | 1 | 4 |
| 122 | 3 | 5 | 2 |
| 123 | 3 | 4 | 3 |
| 124 | 3 | 1 | 4 |
| 125 | 3 | 2 | 2 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 100 | 2 | 4 | 5 |
| 101 | 3 | 1 | 1 |
| 102 | 3 | 2 | 3 |
| 103 | 3 | 1 | 1 |
| 104 | 3 | 1 | 4 |
| 105 | 3 | 3 | 3 |
| 106 | 3 | 1 | 4 |
| 107 | 3 | 1 | 4 |
| 108 | 3 | 5 | 1 |
| 109 | 3 | 1 | 4 |
| 110 | 3 | 1 | 2 |
| 111 | 3 | 5 | 4 |
| 112 | 3 | 1 | 4 |
| 113 | 3 | 1 | 1 |
| 114 | 3 | 5 | 4 |
| 115 | 3 | 1 | 1 |
| 116 | 3 | 1 | 4 |
| 117 | 3 | 4 | 2 |
| 118 | 3 | 4 | 4 |
| 119 | 3 | 2 | 1 |
| 120 | 3 | 3 | 4 |
| 121 | 3 | 1 | 2 |
| 122 | 3 | 4 | 4 |
| 123 | 3 | 1 | 1 |
| 124 | 3 | 1 | 5 |
| 125 | 3 | 3 | 4 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 126 | 3 | 4 | 5 |
| 127 | 3 | 5 | 4 |
| 128 | 3 | 1 | 5 |
| 129 | 3 | 4 | 2 |
| 130 | 3 | 6 | 4 |
| 131 | 3 | 6 | 3 |
| 132 | 3 | 4 | 2 |
| 133 | 3 | 1 | 2 |
| 134 | 3 | 4 | 3 |
| 135 | 3 | 1 | 4 |
| 136 | 3 | 3 | 4 |
| 137 | 3 | 2 | 2 |
| 138 | 3 | 4 | 2 |
| 139 | 3 | 1 | 5 |
| 140 | 3 | 4 | 4 |
| 141 | 3 | 2 | 2 |
| 142 | 3 | 4 | 3 |
| 143 | 3 | 2 | 6 |
| 144 | 3 | 4 | 2 |
| 145 | 3 | 1 | 3 |
| 146 | 3 | 4 | 4 |
| 147 | 3 | 3 | 2 |
| 148 | 3 | 4 | 4 |
| 149 | 3 | 3 | 6 |
| 150 | 3 | 1 | 2 |
| 151 | 4 | 1 | 6 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 126 | 3 | 1 | 5 |
| 127 | 3 | 1 | 5 |
| 128 | 3 | 3 | 1 |
| 129 | 3 | 1 | 4 |
| 130 | 3 | 3 | 5 |
| 131 | 3 | 1 | 2 |
| 132 | 3 | 6 | 6 |
| 133 | 3 | 1 | 4 |
| 134 | 3 | 1 | 6 |
| 135 | 3 | 2 | 5 |
| 136 | 3 | 2 | 6 |
| 137 | 3 | 2 | 4 |
| 138 | 3 | 1 | 5 |
| 139 | 3 | 5 | 4 |
| 140 | 3 | 2 | 6 |
| 141 | 3 | 4 | 2 |
| 142 | 3 | 4 | 4 |
| 143 | 3 | 4 | 2 |
| 144 | 3 | 1 | 4 |
| 145 | 3 | 2 | 2 |
| 146 | 3 | 3 | 4 |
| 147 | 3 | 4 | 2 |
| 148 | 3 | 4 | 4 |
| 149 | 3 | 5 | 2 |
| 150 | 3 | 6 | 4 |
| 151 | 4 | 6 | 5 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 152 | 4 | 5 | 3 |
| 153 | 4 | 6 | 2 |
| 154 | 4 | | 6 |
| 155 | 4 | 1 | 2 |
| 156 | 4 | 5 | 2 |
| 157 | 4 | 4 | 5 |
| 158 | 4 | 6 | 3 |
| 159 | 4 | 4 | 5 |
| 160 | 4 | 1 | 4 |
| 161 | 4 | 5 | 2 |
| 162 | 4 | | 5 |
| 163 | 4 | 4 | 4 |
| 164 | 4 | 1 | 2 |
| 165 | 4 | 3 | 3 |
| 166 | 4 | 4 | 4 |
| 167 | 4 | 1 | 6 |
| 168 | 4 | 4 | 4 |
| 169 | 4 | 4 | 2 |
| 170 | 4 | 1 | 3 |
| 171 | 4 | 4 | 4 |
| 172 | 4 | 2 | 3 |
| 173 | 4 | 2 | 2 |
| 174 | 4 | 1 | 4 |
| 175 | 4 | 4 | 5 |
| 176 | 4 | 2 | 5 |
| 177 | 4 | 1 | 2 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 152 | 4 | 4 | 4 |
| 153 | 4 | 1 | 5 |
| 154 | 4 | 4 | 5 |
| 155 | 4 | 3 | 4 |
| 156 | 4 | 4 | 6 |
| 157 | 4 | 1 | 6 |
| 158 | 4 | 5 | 5 |
| 159 | 4 | 4 | 5 |
| 160 | 4 | 5 | 5 |
| 161 | 4 | 6 | 5 |
| 162 | 4 | 1 | 6 |
| 163 | 4 | 1 | 4 |
| 164 | 4 | 4 | 5 |
| 165 | 4 | 6 | 5 |
| 166 | 4 | 1 | 3 |
| 167 | 4 | 3 | 3 |
| 168 | 4 | 6 | 6 |
| 169 | 4 | 5 | 5 |
| 170 | 4 | 2 | 5 |
| 171 | 4 | 4 | 4 |
| 172 | 4 | 4 | 4 |
| 173 | 4 | 5 | 4 |
| 174 | 4 | 1 | 3 |
| 175 | 4 | 4 | 5 |
| 176 | 4 | 4 | 5 |
| 177 | 4 | 1 | 4 |

| WATER | | | |
|-------|--------|---------|---------|
| S/N | C/NAME | SWBCSDP | SWACSDP |
| 178 | 4 | 3 | 4 |
| 179 | 4 | 4 | 6 |
| 180 | 4 | 3 | 3 |
| 181 | 4 | 1 | 2 |
| 182 | 4 | 4 | 4 |
| 183 | 4 | 4 | 2 |
| 184 | 4 | 1 | 2 |
| 185 | 4 | 1 | 5 |
| 186 | 4 | 6 | 2 |
| 187 | 4 | 1 | 6 |
| 188 | 4 | 4 | 2 |
| 189 | 4 | 1 | 3 |
| 190 | 4 | 2 | 2 |
| 191 | 4 | 1 | 4 |
| 192 | 4 | 4 | 2 |
| 193 | 4 | 2 | 3 |
| 194 | 4 | 4 | 2 |
| 195 | 4 | 2 | 2 |
| 196 | 4 | 1 | 5 |
| 197 | 4 | 5 | 4 |
| 198 | 4 | 4 | 3 |
| 199 | 4 | 5 | 4 |
| 200 | 4 | 3 | 3 |

| TRANSPORT | | | |
|-----------|--------|---------|---------|
| S/N | C/NAME | MTBCSDP | MTACSDP |
| 178 | 4 | 1 | 6 |
| 179 | 4 | 4 | 4 |
| 180 | 4 | 4 | 4 |
| 181 | 4 | 4 | 4 |
| 182 | 4 | 5 | 5 |
| 183 | 4 | 1 | 5 |
| 184 | 4 | 6 | 6 |
| 185 | 4 | 1 | 4 |
| 186 | 4 | 4 | 4 |
| 187 | 4 | 4 | 4 |
| 188 | 4 | 1 | 5 |
| 189 | 4 | 1 | 5 |
| 190 | 4 | 2 | 1 |
| 191 | 4 | 2 | 1 |
| 192 | 4 | 4 | 5 |
| 193 | 4 | 4 | 4 |
| 194 | 4 | 1 | 5 |
| 195 | 4 | 1 | 4 |
| 196 | 4 | 4 | 4 |
| 197 | 4 | 4 | 4 |
| 198 | 4 | 2 | 2 |
| 199 | 4 | 1 | 6 |
| 200 | 4 | 1 | 5 |

Table D: Data Set for CSDP survey Community Resources and Services for Health and Environment. HSBCSDP = Health services before CSDP, HSACSDP = Health services after CSDP, AEPM = Assistance on environmental protection management

| HEALTH | | | |
|--------|--------|---------|---------|
| S/N | C/NAME | HSBCSDP | HSACSDP |
| 1 | 1 | 1 | 1 |
| 2 | 1 | 2 | 1 |
| 3 | 1 | 3 | 3 |
| 4 | 1 | 1 | 2 |
| 5 | 1 | 2 | 1 |
| 6 | 1 | 4 | 2 |
| 7 | 1 | 1 | 1 |
| 8 | 1 | 2 | 2 |
| 9 | 1 | 4 | 1 |
| 10 | 1 | 1 | 3 |
| 11 | 1 | 5 | 1 |
| 12 | 1 | 2 | 3 |
| 13 | 1 | 1 | 2 |
| 14 | 1 | 3 | 1 |
| 15 | 1 | 3 | 1 |
| 16 | 1 | 1 | 1 |
| 17 | 1 | 2 | 3 |
| 18 | 1 | 4 | 1 |
| 19 | 1 | 1 | 2 |
| 20 | 1 | 4 | 1 |
| 21 | 1 | 1 | 2 |
| 22 | 1 | 1 | 1 |
| 23 | 1 | 2 | 3 |

| ENVIRONMENTAL PROTECTION | | |
|--------------------------|--------|------|
| S/N | C/NAME | AEPM |
| 1 | 1 | 1 |
| 2 | 1 | 5 |
| 3 | 1 | 1 |
| 4 | 1 | 5 |
| 5 | 1 | 4 |
| 6 | 1 | 1 |
| 7 | 1 | 1 |
| 8 | 1 | 1 |
| 9 | 1 | 4 |
| 10 | 1 | 1 |
| 11 | 1 | 3 |
| 12 | 1 | 1 |
| 13 | 1 | 1 |
| 14 | 1 | 5 |
| 15 | 1 | 1 |
| 16 | 1 | 1 |
| 17 | 1 | 3 |
| 18 | 1 | 3 |
| 19 | 1 | 3 |
| 20 | 1 | 1 |
| 21 | 1 | 1 |
| 22 | 1 | 1 |
| 23 | 1 | 2 |

| | | | |
|----|---|---|---|
| 24 | 1 | 5 | 2 |
| 25 | 1 | 1 | 1 |
| 26 | 1 | 1 | 1 |
| 27 | 1 | 4 | 2 |
| 28 | 1 | 5 | 4 |
| 29 | 1 | 1 | 1 |
| 30 | 1 | 5 | 1 |
| 31 | 1 | 5 | 1 |
| 32 | 1 | 5 | 2 |
| 33 | 1 | 5 | 4 |
| 34 | 1 | 5 | 4 |
| 35 | 1 | 5 | 4 |
| 36 | 1 | 5 | 5 |
| 37 | 1 | 4 | 5 |
| 38 | 1 | 5 | 5 |
| 39 | 1 | 5 | 5 |
| 40 | 1 | 5 | 4 |
| 41 | 1 | 5 | 5 |
| 42 | 1 | 4 | 2 |
| 43 | 1 | 5 | 1 |
| 44 | 1 | 4 | 4 |
| 45 | 1 | 4 | 5 |
| 46 | 1 | 1 | 4 |
| 47 | 1 | 2 | 4 |
| 48 | 1 | 5 | 4 |
| 49 | 1 | 5 | 5 |
| 50 | 1 | 5 | 5 |
| 51 | 2 | 1 | 1 |

| | | |
|----|---|---|
| 24 | 1 | 1 |
| 25 | 1 | 2 |
| 26 | 1 | 1 |
| 27 | 1 | 6 |
| 28 | 1 | 6 |
| 29 | 1 | 2 |
| 30 | 1 | 6 |
| 31 | 1 | 6 |
| 32 | 1 | 6 |
| 33 | 1 | 2 |
| 34 | 1 | 6 |
| 35 | 1 | 4 |
| 36 | 1 | 6 |
| 37 | 1 | 4 |
| 38 | 1 | 2 |
| 39 | 1 | 3 |
| 40 | 1 | 2 |
| 41 | 1 | 6 |
| 42 | 1 | 3 |
| 43 | 1 | 4 |
| 44 | 1 | 2 |
| 45 | 1 | 6 |
| 46 | 1 | 5 |
| 47 | 1 | 3 |
| 48 | 1 | 2 |
| 49 | 1 | 6 |
| 50 | 1 | 6 |
| 51 | 2 | 6 |

| | | | |
|----|---|---|---|
| 52 | 2 | 4 | 5 |
| 53 | 2 | 5 | 4 |
| 54 | 2 | 5 | 1 |
| 55 | 2 | 4 | 3 |
| 56 | 2 | 1 | 1 |
| 57 | 2 | 5 | 5 |
| 58 | 2 | 4 | 3 |
| 59 | 2 | 5 | 1 |
| 60 | 2 | 1 | 3 |
| 61 | 2 | 4 | 1 |
| 62 | 2 | 4 | 3 |
| 63 | 2 | 3 | 3 |
| 64 | 2 | 1 | 1 |
| 65 | 2 | 3 | 1 |
| 66 | 2 | 4 | 4 |
| 67 | 2 | 1 | 3 |
| 68 | 2 | 3 | 1 |
| 69 | 2 | 4 | 3 |
| 70 | 2 | 1 | 3 |
| 71 | 2 | 2 | 1 |
| 72 | 2 | 5 | 2 |
| 73 | 2 | 1 | 1 |
| 74 | 2 | 2 | 2 |
| 75 | 2 | 1 | 3 |
| 76 | 2 | 2 | 4 |
| 77 | 2 | 3 | 2 |
| 78 | 2 | 3 | 3 |
| 79 | 2 | 2 | 3 |

| | | |
|----|---|---|
| 52 | 2 | 3 |
| 53 | 2 | 4 |
| 54 | 2 | 6 |
| 55 | 2 | 2 |
| 56 | 2 | 6 |
| 57 | 2 | 1 |
| 58 | 2 | 1 |
| 59 | 2 | 1 |
| 60 | 2 | 6 |
| 61 | 2 | 2 |
| 62 | 2 | 2 |
| 63 | 2 | 6 |
| 64 | 2 | 3 |
| 65 | 2 | 6 |
| 66 | 2 | 3 |
| 67 | 2 | 6 |
| 68 | 2 | 4 |
| 69 | 2 | 6 |
| 70 | 2 | 4 |
| 71 | 2 | 6 |
| 72 | 2 | 1 |
| 73 | 2 | 1 |
| 74 | 2 | 5 |
| 75 | 2 | 1 |
| 76 | 2 | 6 |
| 77 | 2 | 1 |
| 78 | 2 | 2 |
| 79 | 2 | 1 |

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|-----|---|---|---|
| 80 | 2 | 4 | 3 |
| 81 | 2 | 4 | 2 |
| 82 | 2 | 2 | 4 |
| 83 | 2 | 5 | 3 |
| 84 | 2 | 3 | 4 |
| 85 | 2 | 2 | 2 |
| 86 | 2 | 5 | 4 |
| 87 | 2 | 5 | 3 |
| 88 | 2 | 3 | 2 |
| 89 | 2 | 2 | 4 |
| 90 | 2 | 5 | 2 |
| 91 | 2 | 5 | 2 |
| 92 | 2 | 3 | 4 |
| 93 | 2 | 5 | 5 |
| 94 | 2 | 2 | 2 |
| 95 | 2 | 5 | 4 |
| 96 | 2 | 5 | 4 |
| 97 | 2 | 5 | 2 |
| 98 | 2 | 5 | 4 |
| 99 | 2 | 4 | 2 |
| 100 | 2 | 2 | 2 |
| 101 | 3 | 1 | 2 |
| 102 | 3 | 3 | 2 |
| 103 | 3 | 5 | 1 |
| 104 | 3 | 2 | 5 |
| 105 | 3 | 4 | 1 |
| 106 | 3 | 3 | 2 |
| 107 | 3 | 4 | 1 |

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|-----|---|---|
| 80 | 2 | 2 |
| 81 | 2 | 1 |
| 82 | 2 | 3 |
| 83 | 2 | 1 |
| 84 | 2 | 5 |
| 85 | 2 | 1 |
| 86 | 2 | 3 |
| 87 | 2 | 1 |
| 88 | 2 | 3 |
| 89 | 2 | 1 |
| 90 | 2 | 1 |
| 91 | 2 | 2 |
| 92 | 2 | 4 |
| 93 | 2 | 3 |
| 94 | 2 | 5 |
| 95 | 2 | 2 |
| 96 | 2 | 2 |
| 97 | 2 | 3 |
| 98 | 2 | 4 |
| 99 | 2 | 5 |
| 100 | 2 | 2 |
| 101 | 3 | 3 |
| 102 | 3 | 4 |
| 103 | 3 | 4 |
| 104 | 3 | 2 |
| 105 | 3 | 6 |
| 106 | 3 | 5 |
| 107 | 3 | 1 |

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|-----|---|---|---|
| 108 | 3 | 2 | 3 |
| 109 | 3 | 1 | 2 |
| 110 | 3 | 3 | 1 |
| 111 | 3 | 4 | 3 |
| 112 | 3 | 2 | 2 |
| 113 | 3 | 5 | 1 |
| 114 | 3 | 1 | 3 |
| 115 | 3 | 4 | 1 |
| 116 | 3 | 2 | 2 |
| 117 | 3 | 1 | 1 |
| 118 | 3 | 3 | 3 |
| 119 | 3 | 4 | 2 |
| 120 | 3 | 2 | 1 |
| 121 | 3 | 1 | 5 |
| 122 | 3 | 5 | 2 |
| 123 | 3 | 4 | 1 |
| 124 | 3 | 3 | 2 |
| 125 | 3 | 2 | 3 |
| 126 | 3 | 5 | 1 |
| 127 | 3 | 1 | 3 |
| 128 | 3 | 5 | 2 |
| 129 | 3 | 2 | 1 |
| 130 | 3 | 3 | 3 |
| 131 | 3 | 5 | 1 |
| 132 | 3 | 2 | 2 |
| 133 | 3 | 1 | 3 |
| 134 | 3 | 3 | 2 |
| 135 | 3 | 5 | 1 |

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|-----|---|---|
| 108 | 3 | 6 |
| 109 | 3 | 2 |
| 110 | 3 | 1 |
| 111 | 3 | 3 |
| 112 | 3 | 4 |
| 113 | 3 | 1 |
| 114 | 3 | 6 |
| 115 | 3 | 1 |
| 116 | 3 | 1 |
| 117 | 3 | 5 |
| 118 | 3 | 1 |
| 119 | 3 | 1 |
| 120 | 3 | 1 |
| 121 | 3 | 4 |
| 122 | 3 | 1 |
| 123 | 3 | 4 |
| 124 | 3 | 1 |
| 125 | 3 | 5 |
| 126 | 3 | 1 |
| 127 | 3 | 4 |
| 128 | 3 | 1 |
| 129 | 3 | 4 |
| 130 | 3 | 6 |
| 131 | 3 | 1 |
| 132 | 3 | 3 |
| 133 | 3 | 1 |
| 134 | 3 | 1 |
| 135 | 3 | 6 |

| | | | |
|-----|---|---|---|
| 136 | 3 | 1 | 4 |
| 137 | 3 | 2 | 2 |
| 138 | 3 | 5 | 3 |
| 139 | 3 | 3 | 4 |
| 140 | 3 | 1 | 1 |
| 141 | 3 | 5 | 2 |
| 142 | 3 | 5 | 4 |
| 143 | 3 | 5 | 3 |
| 144 | 3 | 3 | 3 |
| 145 | 3 | 2 | 4 |
| 146 | 3 | 4 | 2 |
| 147 | 3 | 3 | 3 |
| 148 | 3 | 5 | 4 |
| 149 | 3 | 5 | 3 |
| 150 | 3 | 2 | 2 |
| 151 | 4 | 1 | 2 |
| 152 | 4 | 1 | 1 |
| 153 | 4 | 3 | 4 |
| 154 | 4 | 5 | 1 |
| 155 | 4 | 5 | 4 |
| 156 | 4 | 1 | 1 |
| 157 | 4 | 2 | 4 |
| 158 | 4 | 3 | 4 |
| 159 | 4 | 4 | 1 |
| 160 | 4 | 1 | 2 |
| 161 | 4 | 2 | 1 |
| 162 | 4 | 3 | 1 |
| 163 | 4 | 1 | 2 |

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|-----|---|---|
| 136 | 3 | 2 |
| 137 | 3 | 3 |
| 138 | 3 | 6 |
| 139 | 3 | 2 |
| 140 | 3 | 6 |
| 141 | 3 | 3 |
| 142 | 3 | 2 |
| 143 | 3 | 6 |
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| 145 | 3 | 2 |
| 146 | 3 | 3 |
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| 148 | 3 | 2 |
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| 150 | 3 | 3 |
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| 153 | 4 | 1 |
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| 155 | 4 | 5 |
| 156 | 4 | 1 |
| 157 | 4 | 1 |
| 158 | 4 | 2 |
| 159 | 4 | 5 |
| 160 | 4 | 2 |
| 161 | 4 | 4 |
| 162 | 4 | 1 |
| 163 | 4 | 2 |

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|-----|---|---|---|
| 164 | 4 | 2 | 2 |
| 165 | 4 | 3 | 1 |
| 166 | 4 | 1 | 2 |
| 167 | 4 | 3 | 2 |
| 168 | 4 | 1 | 1 |
| 169 | 4 | 1 | 2 |
| 170 | 4 | 5 | 2 |
| 171 | 4 | 2 | 1 |
| 172 | 4 | 5 | 2 |
| 173 | 4 | 1 | 3 |
| 174 | 4 | 5 | 1 |
| 175 | 4 | 2 | 2 |
| 176 | 4 | 1 | 3 |
| 177 | 4 | 5 | 1 |
| 178 | 4 | 5 | 2 |
| 179 | 4 | 1 | 2 |
| 180 | 4 | 2 | 1 |
| 181 | 4 | 5 | 2 |
| 182 | 4 | 2 | 3 |
| 183 | 4 | 5 | 1 |
| 184 | 4 | 5 | 3 |
| 185 | 4 | 5 | 2 |
| 186 | 4 | 2 | 1 |
| 187 | 4 | 5 | 3 |
| 188 | 4 | 2 | 2 |
| 189 | 4 | 2 | 1 |
| 190 | 4 | 4 | 3 |
| 191 | 4 | 4 | 2 |

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|-----|---|---|
| 164 | 4 | 4 |
| 165 | 4 | 1 |
| 166 | 4 | 2 |
| 167 | 4 | 6 |
| 168 | 4 | 2 |
| 169 | 4 | 6 |
| 170 | 4 | 2 |
| 171 | 4 | 6 |
| 172 | 4 | 2 |
| 173 | 4 | 1 |
| 174 | 4 | 3 |
| 175 | 4 | 2 |
| 176 | 4 | 3 |
| 177 | 4 | 1 |
| 178 | 4 | 3 |
| 179 | 4 | 6 |
| 180 | 4 | 2 |
| 181 | 4 | 1 |
| 182 | 4 | 3 |
| 183 | 4 | 2 |
| 184 | 4 | 1 |
| 185 | 4 | 6 |
| 186 | 4 | 3 |
| 187 | 4 | 1 |
| 188 | 4 | 1 |
| 189 | 4 | 1 |
| 190 | 4 | 4 |
| 191 | 4 | 1 |

| | | | |
|-----|---|---|---|
| 192 | 4 | 4 | 5 |
| 193 | 4 | 4 | 5 |
| 194 | 4 | 3 | 5 |
| 195 | 4 | | 3 |
| 196 | 4 | 4 | 3 |
| 197 | 4 | 3 | 3 |
| 198 | 4 | 4 | 3 |
| 199 | 4 | 3 | 4 |
| 200 | 4 | 3 | 3 |

| | | |
|-----|---|---|
| 192 | 4 | 2 |
| 193 | 4 | 3 |
| 194 | 4 | 2 |
| 195 | 4 | 1 |
| 196 | 4 | 1 |
| 197 | 4 | 6 |
| 198 | 4 | 6 |
| 199 | 4 | 1 |
| 200 | 4 | 6 |

Appendix 6: Focus group discussions research consent form.

I am a Ph.D. student in the Department of Agricultural extension and rural resource management, University of KwaZulu-Natal. I would like to ask you to participate in this study. The research intent is to investigate the role of CSDP in selected rural areas of Danko/Wasagu LGA of Kebbi State where completed micro-projects are located. The main aim of this study is finding out the relationship between CSDP and livelihoods activities in these communities. Your participation in this study will be important in understanding how the CSDP has influenced livelihood activities in the participating communities. The results of this study will be beneficial to the government and the policymakers towards enhancing rural development in the state. I am soliciting your cooperation to voluntarily participate in the focus group discussions which is likely to last for two hours. However, you may decide to withdraw your participation at any time during the study. Please feel free to ask the researcher any question, before or during the study. The discussion will include 12 people from the community. The researcher will ensure the confidentiality of the information provided from all the participating groups.

I have agreed to participate in this study and I will not hesitate to contact the researcher (suhasaniya@gmail.com) or his supervisor Dr. Karen Caister (caister@ukzn.ac.za) during the study for further explanation. I understand that my participation is voluntary, and I may refuse to partake at any time as so desire.

Signature of the participants_____ Date_____

Signature of the researcher_____ Date_____

Appendix 7: Gate Keeper Permission Danko/Wasagu LGA focus group discussion

DANKO-WASAGU LOCAL GOVERNMENT
KBCSDP-AF DESK OFFICE RIBAH
KEBBI STATE

Date 1st August, 2016
The HSSREC Office,
Research Office
Ethics Govern Mbeki Building
University of Kwazulu – Natal
Westville Campus
Email: hssrec@ukzan.ac.za

Sir,

With reference to your letter dated June, 2016 requesting the assistance of our office in granting Mr. Usman Hassan permission to access communities that have benefited from the community and Social Development Project (CSDP) in Danko/Wasagu Local Government Area of Kebbbi State.

The CSDP Office in Danko/Wasagu Local Government Area wish to inform you that, it has allowed Mr. Usman Hassan to conduct Focus Group Discussion in for (4) Communities of Danko/Wasagu Local Government Area selected for this study.

Sign



Planning Office

Appendix 8: Gate Keeper Permission. Danko/Wasagu LGA CSDP Survey Data

DANKO-WASAGU LOCAL GOVERNMENT
KBCSDP-AF DESK OFFICE RIBAH
KEBBI STATE

Date 1st August, 2016

The HSSREC Office,

Research Office

Ethics Govern Mbeki Building

University of Kwazulu – Natal

Westville Campus

Email: hssrec@ukzn.ac.za

Sir,

With reference to your letter dated June, 2016 requesting the assistance of our office in granting Mr. Usman Hassan permission to access communities that have benefited from the community and Social Development Project (CSDP) in Danko/Wasagu Local Government Area of Kebbbi State.

The CSDP Office in Danko/Wasagu Local Government Area wish to inform you that, it has allowed Mr. Usman Hassan to accessed CSDP survey data bank in for (4) Communities of Danko/Wasagu Local Government Area selected for this study.

Sign


Planning Office

Appendix 9: Ethical Clearance Certificate



21 November 2016

Mr Shehu Usman Hassan 214583338
School of Agricultural, Earth and Environmental Sciences
Pietermaritzburg Campus

Dear Mr Hassan

Protocol Reference Number: HSS/0704/016D

Project title: Role of Community and Social Development Project in Improving the Rural Livelihood in Kebbie State Nigeria

Full Approval – Expedited Application

In response to your application received 1 June 2016, the Humanities & Social Sciences Research Ethics Committee considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Dr Karen Calster
cc Academic Leader Research: Professor Onesimo Mutanga
cc School Administrator: Ms Marsha Manjoo

Humanities & Social Sciences Research Ethics Committee

Dr Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/53504657 Facsimile: +27 (0) 31 260 4609 Email: ximbap@ukzn.ac.za / amyman@ukzn.ac.za / mchunp@ukzn.ac.za

Website: www.ukzn.ac.za

1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

Executive Deans:                        

Appendix 10: Explanation of method followed by raw (scans)

1.1 Timelines

In the first learning activity a group of 12, participants were given a large piece of paper they were assisted by the facilitators to draw a timeline starting two (2) years before the initiation of the project and to extend (2) after the completion of the project. Information on date, time about the introduction of the project as well as present time were also to be recorded. They were requested to mentioned events of importance for the timeline; the events should be essential to project, communities and themselves. Information about significant historical events, communities and even the vulnerability context affecting livelihood strategies presently in use was sought. The procedure was conducted for each of the community participating in the study (Figure: 1).

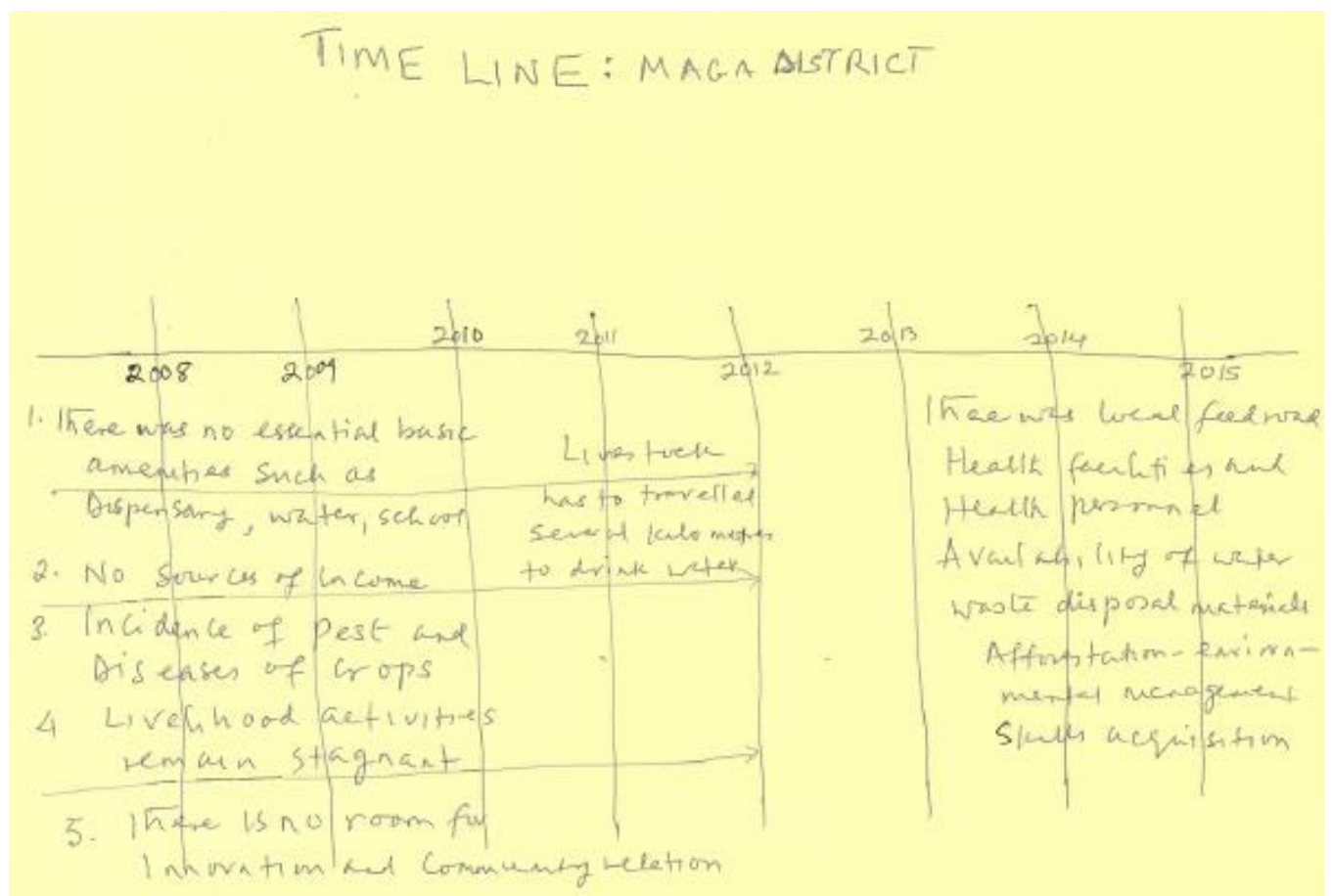


Figure 1: Timeline 2008 – 2015 for a focus group in Maga

1.2 Important activities related to the project (CSDP)

In the second action learning activity (part 1), on a new sheet of paper, the participants were asked to mention what they think are the most positive outcomes related to the project that brings successes and opportunities and the key obstacles and barriers that prevents successes. It is important to find out whether the successes are because of the project or are due to other factors. The procedure was conducted for each of the communities participating in the study (Figure: 2).

The image shows a handwritten list on a yellow background, titled 'List of positive and Negative Activities Related to CSDP (Dseme Community)'. The list is divided into two columns by a vertical line. The left column is headed 'Positive Activities that brings successes and opportunities' and lists five items: 1. Establishment of schools, 2. Provision of water, 3. Access Roads, 4. Health facilities, and 5. Environmental protection management. The right column is headed 'Negative Activities that brings obstacles and barriers' and lists three items: 1. Poor construction of some facilities, i.e. poor construction of culverts & drainage, 2. Insufficient water in some communities makes development activities difficult, and 3. Land taken to community development plan (CDPs) were not completed.

| Positive Activities that brings successes and opportunities | Negative Activities that brings obstacles and barriers |
|---|--|
| 1. Establishment of schools | 1. Poor construction of some facilities, i.e. poor construction of culverts & drainage |
| 2. Provision of water | 2. Insufficient water in some communities makes development activities difficult |
| 3. Access Roads | 3. Land taken to community development plan (CDPs) were not completed |
| 4. Health facilities | |
| 5. Environmental protection management | |

Figure 2: Positive and negative activities related to the project

1.3 Identification of economic activities related to the livelihood strategies

In the second action learning activity (part 2), the participants mentioned what they thought were the most positive economic activities related to their livelihood in the project which hinders development. Also, they should mention the most negative economic activities that prevent development opportunities. This gives insight on available resources that influenced livelihood strategies. The activity was repeated in all the participating communities in the study (Figure: 3).

| List of Economic Activities Related to Livelihood Strategies (MABA Community) | |
|--|---|
| Positive Economic Activities Related to Livelihood Strategies | Negative Economic Activities Related to Livelihood Strategies |
| <ol style="list-style-type: none"> 1. Savings from dry season farming 2. Increase income because of diversification of farming i.e. Commercial crop production 3. Informal trading because of access road. i.e. bricklaying, Carpentry, Bore hole repair and Maintenance, 4. Business by women i.e. Sale of fresh milk, frying of soybean and groundnut cake 5. Knowledge on environmental management | <ol style="list-style-type: none"> 1. Frequent drilling of borehole has deflected the underground water 2. poor construction of culvert & drain. Caused accident and increase the menace of flood 3. Stagnant water because of bore hole caused resulted to more mosquito which caused Malaria 4. poor road construction result to poor transport that affect livelihood. |

Figure 3: Positive and negative economic activities related to livelihood strategies

1.4 Venn diagram

Venn diagram was used to study the stakeholders influencing participating communities and the activities of the project. The participants identified individuals and organizations that were perceived as affecting the activities of the project, communities and collective activities of the people. Each focus group was given a piece of paper and was asked to place the name of their community CSDP at the middle of the paper and then arrange all other individuals, institutions and structures that influence them around the name of their community CSDP. The researcher and his team explained that the larger the circle containing name the more important it is to the CSDP. Where the circle intersects or overlap showed the attributes of the stakeholders. This would lead to discussion to identify the influence they have on the project (Figure 4). The procedure was repeated in each of the district in the study.

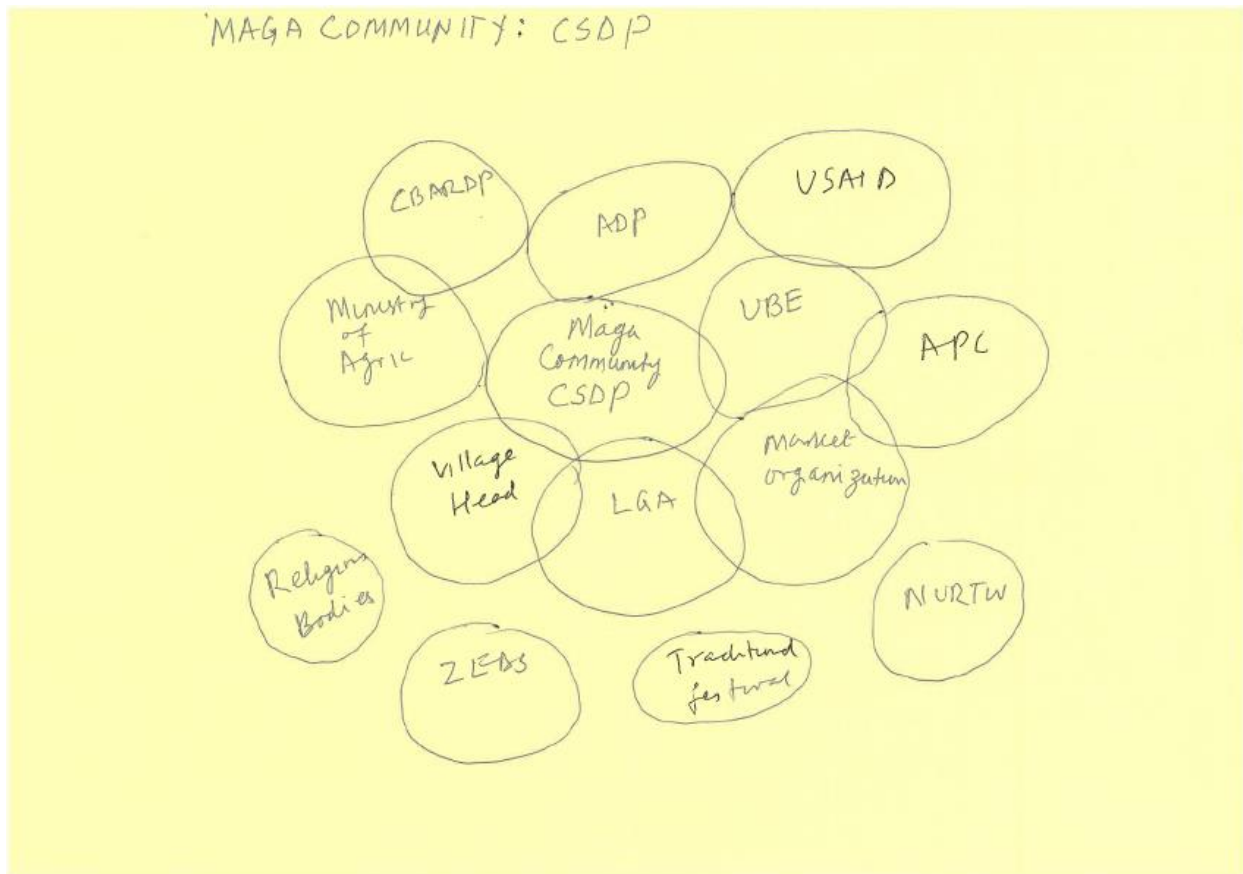


Figure 4: Relationship between Maga CSDP and the community organizations

1.5 Maps and posters

The final learning activity involve visioning. Working in groups of 12 the participants were assisted by the facilitators to design and sketch two posters. The first poster should depict physically what their local communities looks like today (map) and the second poster to describe how they would like this same communities to looks like in 2 - 4 years' time (i.e. 2018 - 2020). This triggered discussion among the participants about their future and what physical facilities are needed to change to achieve the vision for their future. This procedure was conducted for each of the participating communities.

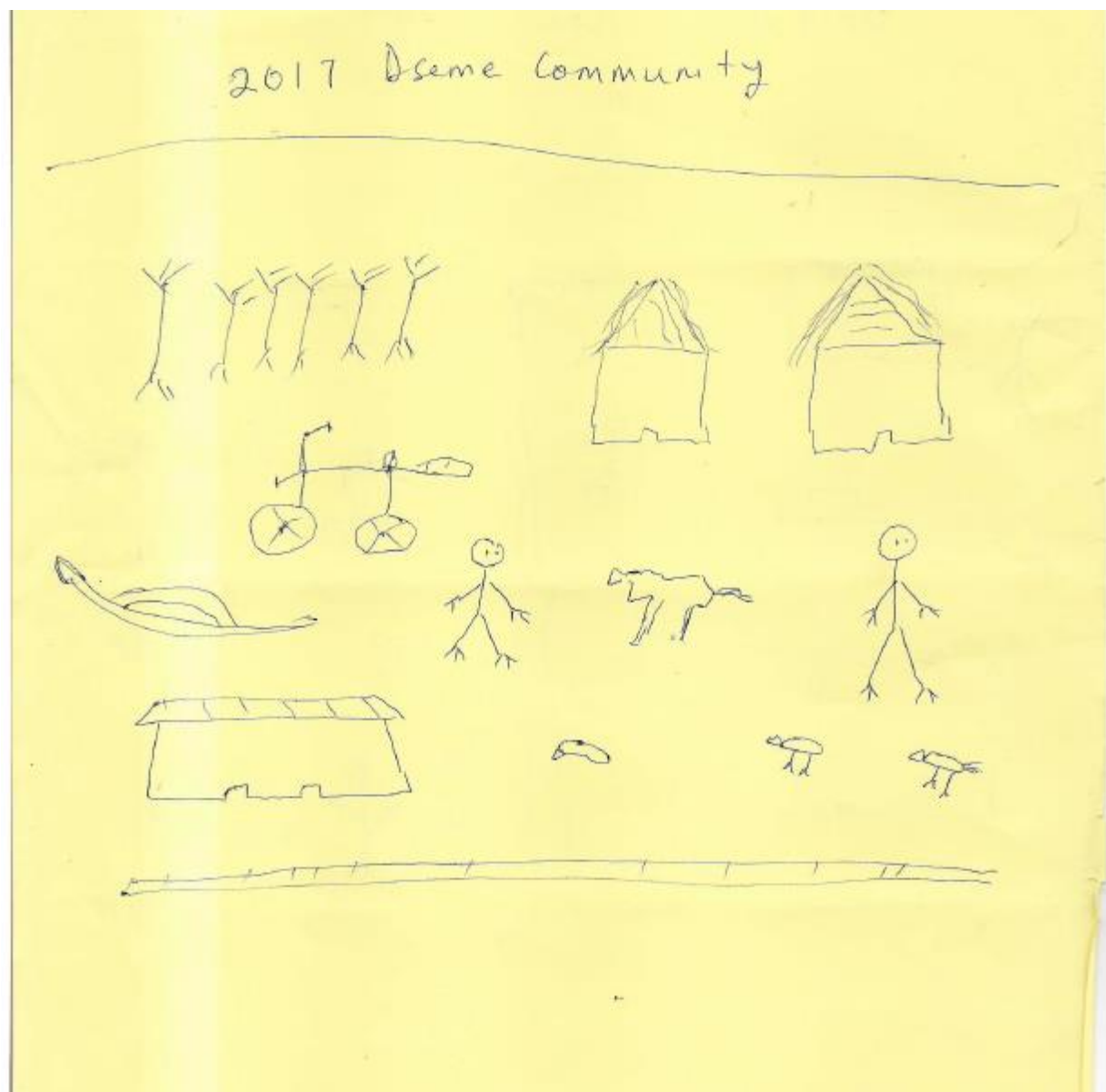


Figure 5: Focus group discussion showing map of Dseme community

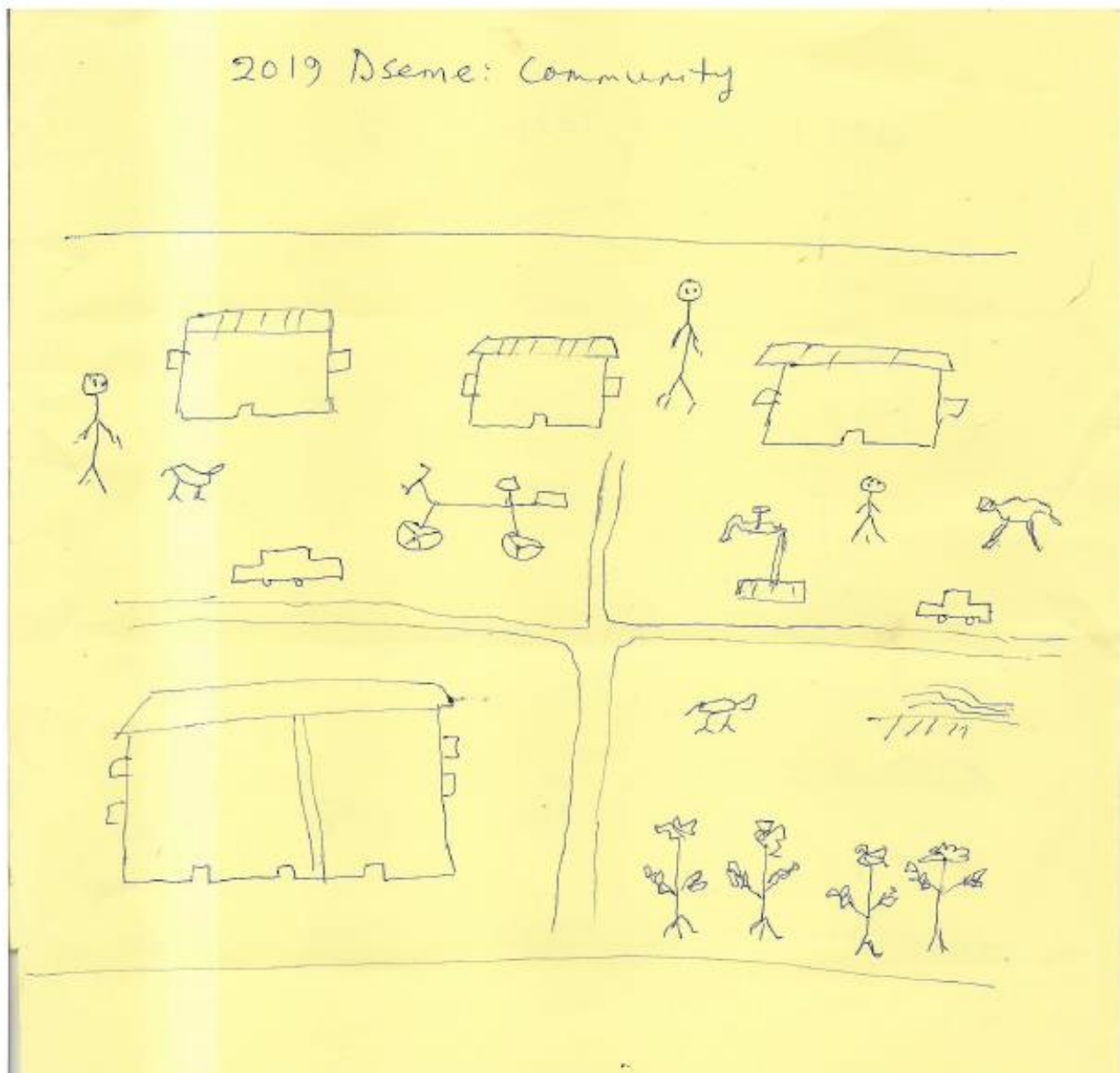
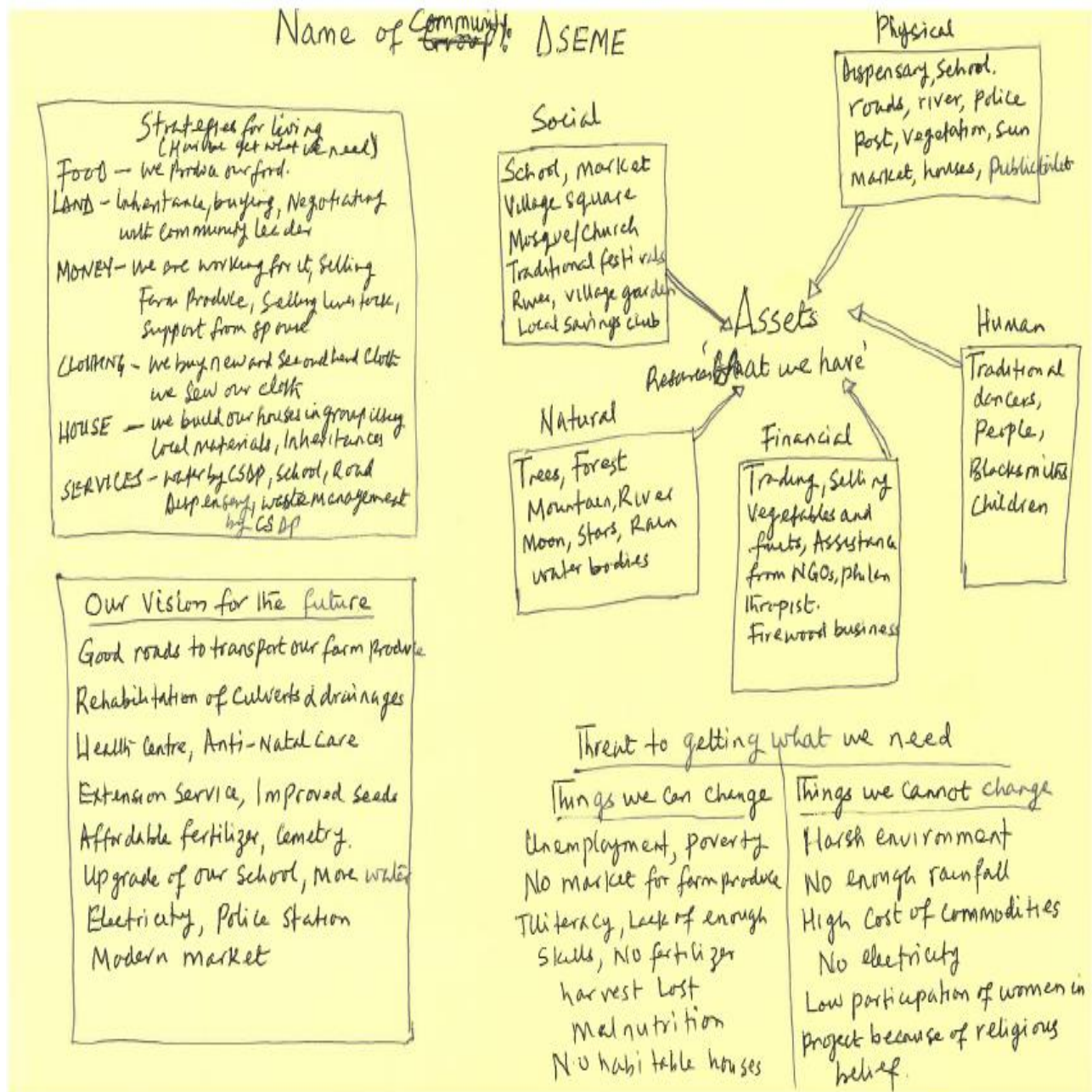


Figure 6: Focus group discussion showing Dseme community posters

Appendix: 11 Focus Group participant Livelihoods Summaries

Copies Showing Original Sustainable Livelihood Analysis Summary Sheets



Dseme community group livelihood analysis record

Name of Community: KANYA

Strategies for living
(How we get what we need)

LAND - Inheritance, buying, Negotiating with community leaders

MONEY - Selling farm produce, dry season farming, Selling fruits & vegetables, Gift from family and friends

CLOTHING - We buy, new & second hand cloth

FOOD - we produce our food, gift from friend and relatives

HOUSE - We build our houses, inheritance

SERVICES - Feeder road, School, environmental protection

Our Vision for the future

Water bank for our livestock, Environment free of disease, Modern market, Good transport system, Improved housing, Electricity, Pipe-borne water, Mobile Telecommunication, Micro-finance Bank, Trees establishment / Shelter-belt, Ambulance to take sick to hospital

Social

Market, School, Community hall, Community Police, Cultural groups, Motor park

Physical

Police Station, Market, Stalls, Shelter belt, ox-drawn plough, Community Hall



| Threats to getting what we need | |
|--|---|
| Things we can change | Things we cannot change |
| Unemployment, high cost of food, Harvest lost, No market for farm produce, Improved seeds. | Drought, Disease and pest infestation, No inorganic fertilizer, No electricity, lawlessness, Harmattan wind |

Kanya community group livelihood analysis record

Name of Community: MAGA

Strategies for living
(How we get what we need)

LAND - Inheritance, buying, Community lands

MONEY - Working for money, Tailoring, Sewing
Plumbing, Carpentry, Sewing

FOOD - we produce our food, buy from market

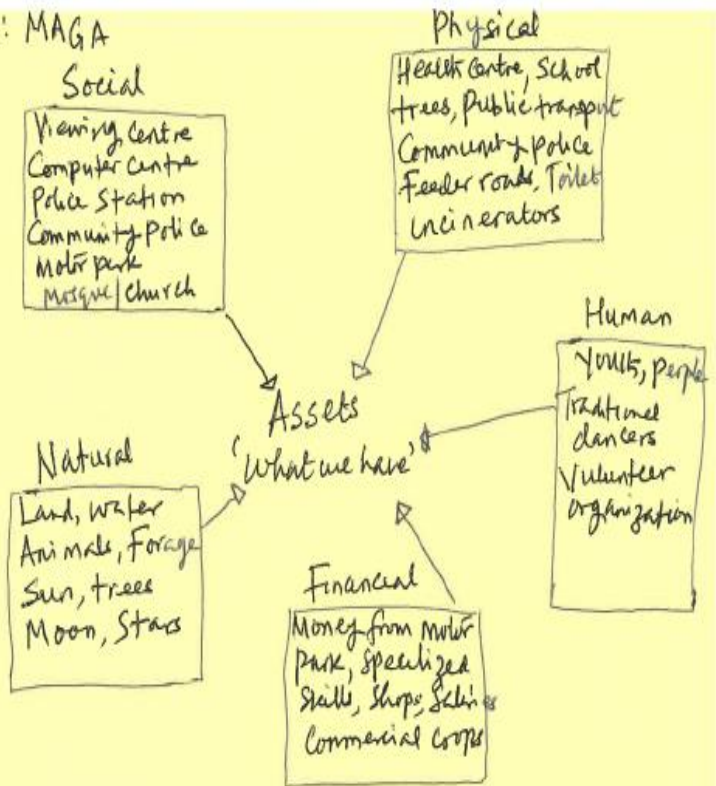
CLOTHING - we buy new, second hand cloth, we sew our cloth

HOUSES - we build our houses in group, inheritance

SERVICES - Dispensary, water, culvert and drainage by CSRP School

Our Vision for the future

Electricity, Telecommunication
Good roads, Improved drainage,
Skills acquisition centre, Internet
Cafe, Good seeds, Health centre
Employment opportunities, water
Vehicle for farming.
Training on environmental
Protection.



| Threats to getting what we need | |
|---|-------------------------|
| Things we can change | Things we cannot change |
| Lack of money | Seasonal flood |
| Unemployment, poverty | Religious extremism |
| Poor seed, Unfertile soil | No electricity |
| Political thugs. | Bad governance |
| Illiteracy | Poor rural network |
| Low rate of school enrolment, Adult & Nomadic education | Tribalism |

Maga community group livelihood analysis record

Name of Community: SHENGEL

Strategies for living
(Also what we need)

LAND - (inheritance, buying, community Leaders)

MONEY - we are working for it, selling farm produce, vegetables and fruits

FOOD - we produce our food, gift from relatives and friends

CLOTHING - we sew our cloth, we buy new and second hand cloth

HOUSES - we build our houses, take in a lady

SERVICES - schools, furniture, instructional materials, dispensary, we fer

Our Vision for the future

More Schools, Efficient transport
More water, Community Hall, Anti-Natal care, Cemetery, Improved housing, Mixed Cropping/mixed farming system, Police Station, mosque/Church, Education for children

Social

School, Market
Village Hall
Police post
Mosque/Church
Motor park

Physical

School, Dispensary
trees, Forest, River
Police station/post
Feeder roads,
open grazing Land
bore hole

Natural

Water channels
Mountain, Land
Economic trees
Vegetation, rain
Stars, Moon

Assets What we have

Financial

Money from fire
wood, tree felling
Selling grains
Livestock, Vegetation, Vegetables & fruits

Human

Sought sayers
Traditional healers,
Children
Afforestation experience

Threats to getting what we need

Things we can change

Bad drainage, Redundancy
No enough drinking water
Poor transport
Illiteracy, Child malnutrition, Unemployment. Lack of money

Things we cannot change

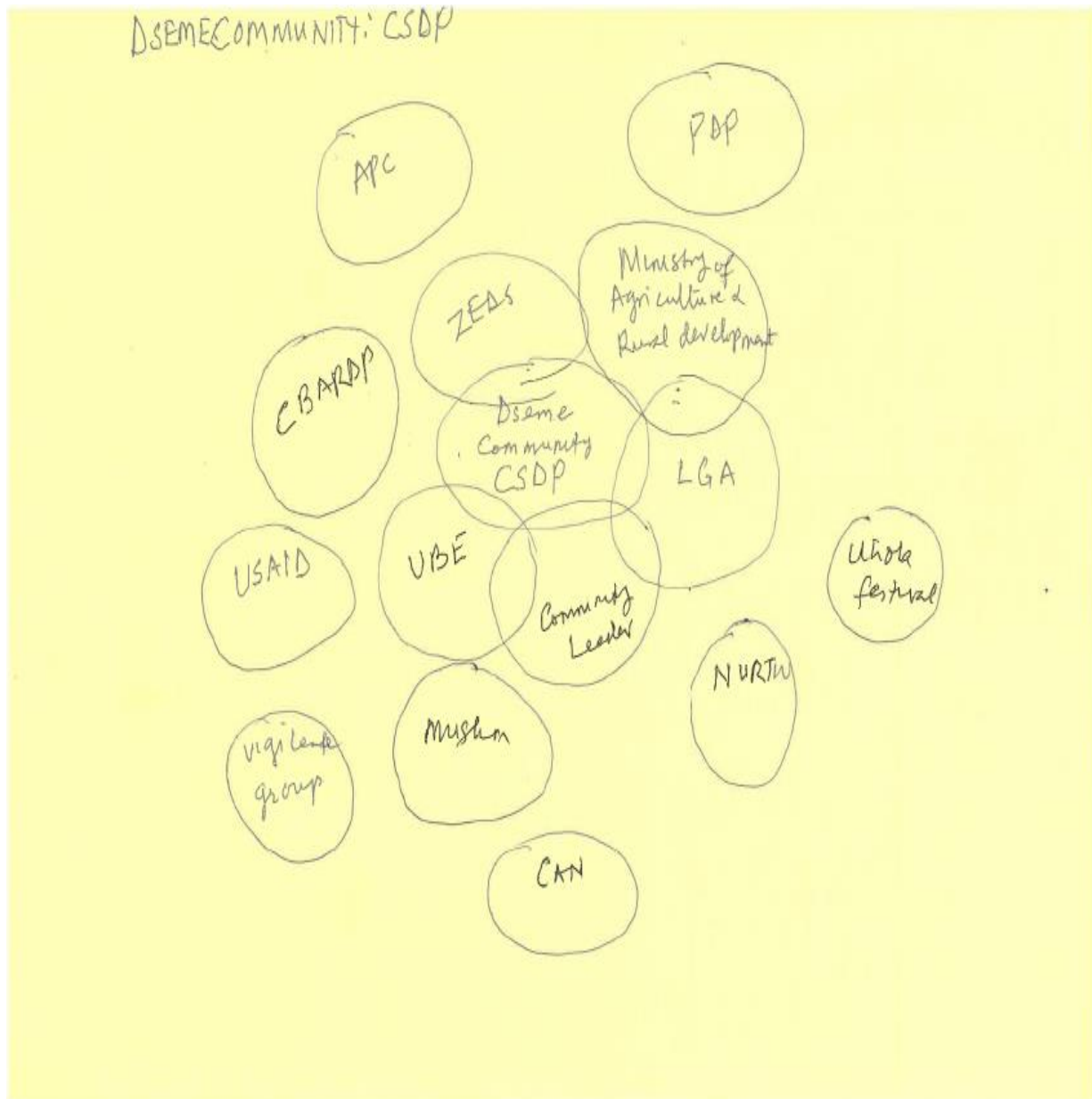
Poor harvest
Pests and disease of crops
Desert encroachment
No electricity
Over population
Frequent motorcycle accident.

Shengel community group livelihood analysis record

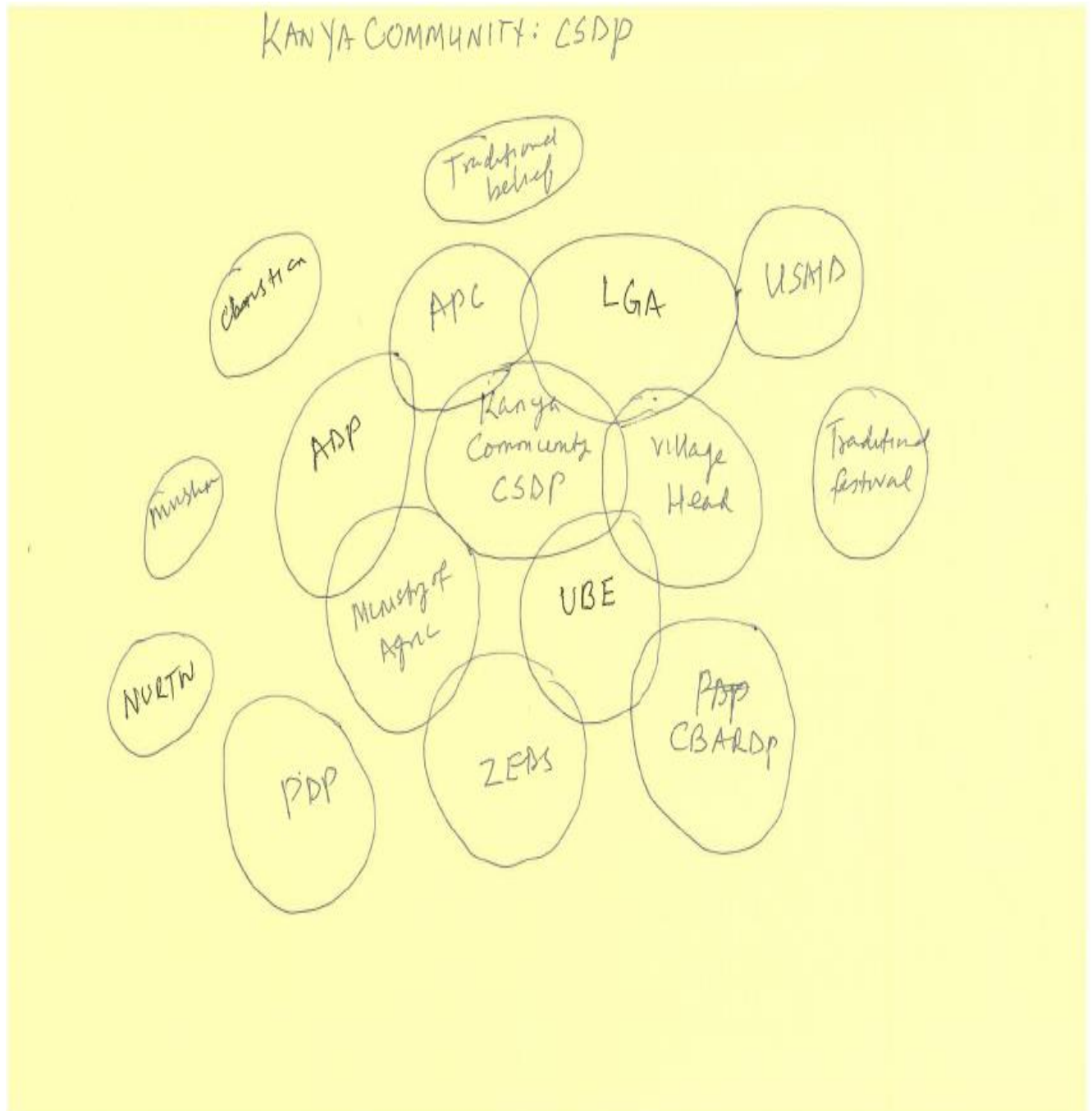
Appendix: 12 Venn Diagrams (raw data)

Raw data (diagrams)

Coded Venn diagrams (coded summary of individuals and institutions)

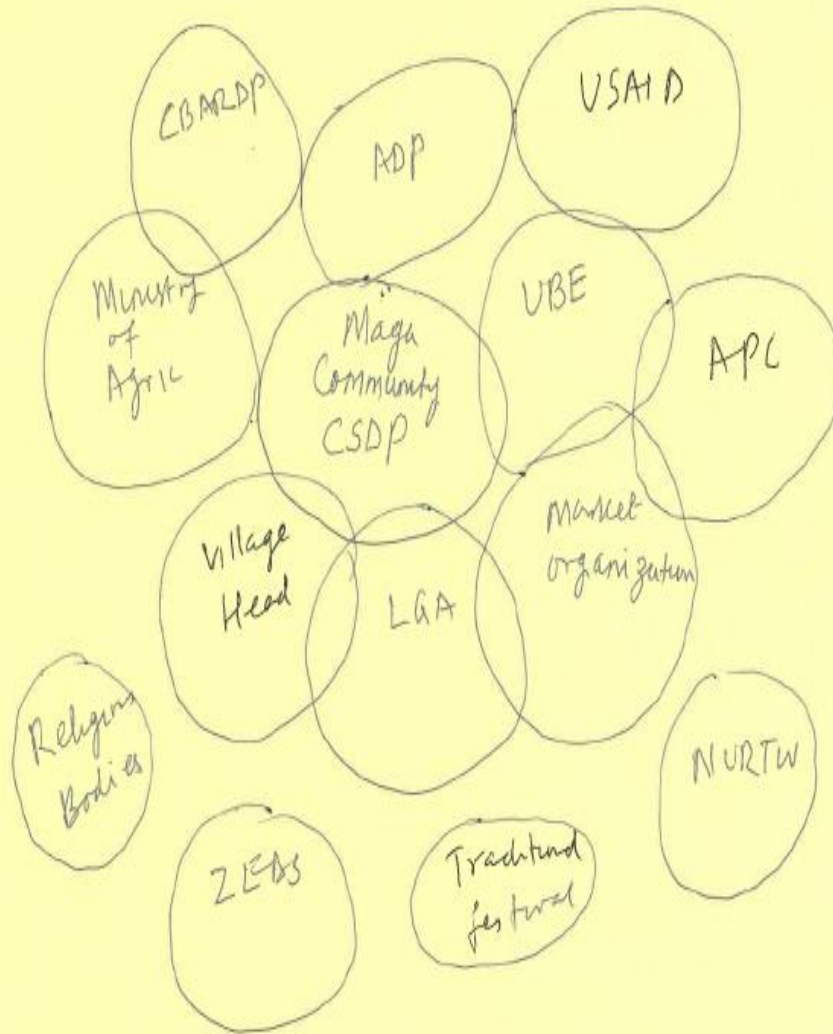


Dseme community Venn diagram



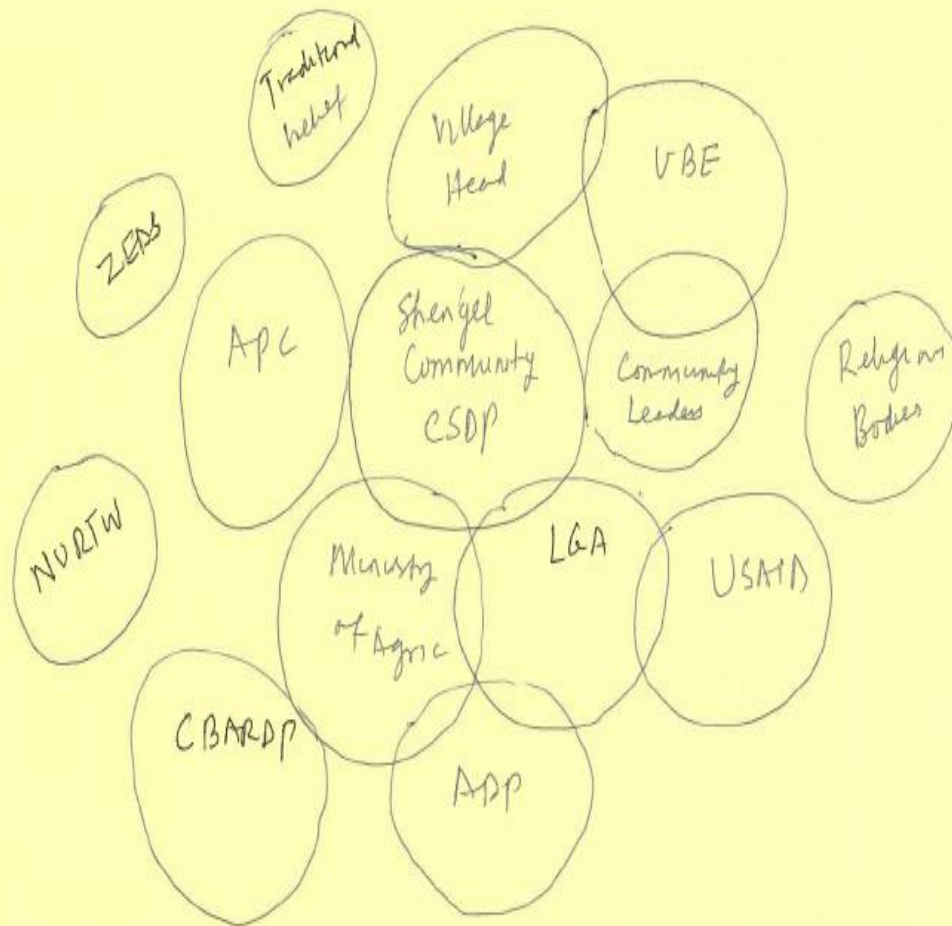
Kanya community Venn diagram

MAGA COMMUNITY: CSDP



Maga community Venn diagram

SHENGEL COMMUNITY: CSDP



Shengel community Venn diagram

Coded summary of individuals and institutions (Venn diagram)

Coded summary of individuals and institutions in CSDP

Venn diagrams

| Individuals/institutions | Name of communities | | | | |
|----------------------------------|---------------------|-------|------|---------|-------|
| Most influential | Dseme | Kanya | Maga | Shengel | Total |
| Local government | 1 | 1 | 1 | 1 | 4 |
| Ministry of agric | 0 | 1 | 1 | 1 | 3 |
| Community leaders | 1 | 1 | 1 | 1 | 4 |
| Agric development project | 0 | 1 | 0 | 1 | 2 |
| APC | 1 | 1 | 1 | 1 | 4 |
| UBE | 1 | 1 | 1 | 1 | 4 |
| Social welfare | 1 | 0 | 0 | 1 | 2 |
| USAID | 1 | 0 | 0 | 1 | 2 |
| CBARDP | 1 | 0 | 1 | 1 | 3 |
| Vigilante group | 1 | 0 | 0 | 1 | 2 |
| Zuru emirate foundation | 0 | 0 | 1 | 1 | 2 |
| Village head | 0 | 0 | 1 | 0 | 1 |
| Community leaders | 1 | 1 | 1 | 1 | 4 |
| | 9 | 7 | 9 | 12 | 37 |
| Less influential | | | | | |
| Jamaatul nasril islam | 0 | 0 | 1 | 0 | 1 |
| Christian association of nigeria | 1 | 0 | 0 | 0 | 1 |
| Market association | 1 | 0 | 1 | 1 | 3 |
| Agric development project | 0 | 0 | 1 | 0 | 1 |
| Universal basic education | 0 | 0 | 1 | 1 | 2 |
| Community policing | 0 | 0 | 1 | 0 | 1 |
| Zuru emirate foudation | 0 | 0 | 0 | 1 | 1 |
| People democratic party | 1 | 0 | 0 | 0 | 1 |
| Green party | 0 | 0 | 0 | 0 | 1 |

| | | | | | |
|---------------------------|---|---|---|---|----|
| Agric development project | 1 | 1 | 1 | 1 | 4 |
| Social welfare | 1 | 0 | 0 | 1 | 2 |
| Cultural festival | 1 | 1 | 1 | 1 | 4 |
| All people congress | 1 | 0 | 0 | 1 | 2 |
| NURTW | 0 | 0 | 0 | 0 | 0 |
| Uholo festival | 1 | 0 | 0 | 1 | 2 |
| UBE | 1 | 1 | 1 | 1 | 4 |
| | 9 | 3 | 8 | 9 | 30 |

Least influential

| | | | | | |
|---------------------------|---|---|---|---|----|
| NURTW | 1 | 1 | 1 | 1 | 4 |
| Uholo festival | 1 | 0 | 0 | 1 | 2 |
| Sami HIV/AIDS trust | 0 | 0 | 1 | 0 | 1 |
| CBARDP | 1 | 1 | 1 | 1 | 4 |
| USAID | 1 | 1 | 1 | 1 | 4 |
| Zuru emirate devpt assoc. | 0 | 1 | 1 | 0 | 2 |
| Zumunta social club | 1 | 1 | 1 | 0 | 3 |
| Village heads | 1 | 1 | 1 | 1 | 4 |
| Community assoc. leaders | 1 | 1 | 1 | 1 | 4 |
| Green party | 0 | 0 | 0 | 1 | 1 |
| D'biti harvest festival | 1 | 0 | 0 | 1 | 2 |
| UMCA | 1 | 0 | 0 | 0 | 1 |
| | 9 | 7 | 8 | 8 | 32 |

Appendix 13: Full text of livelihood strategies

Full text of livelihood strategies

Coded summary of livelihood strategies

| Name of community | Land | Money | Food | Clothing | House | Services |
|-------------------|--|--|---|---|---|--|
| Dseme | Inheritance, buying, negotiating with community leaders, gift from relatives | We are working for it, selling Farm produce, vegetables, firewood, Tailoring, sewing. Grants, selling livestock and poultry produce Support from spouses, vulcanizer and motorcycle mechanic, philanthropist, dry season farming | We produce our food, vegetable and fruits, buy from market, gift from relatives and friends, donation from philanthropist | We buy new and second-hand cloth, tailors sewn our cloth and from relatives | We build our houses in group using local materials, through inheritance, form bricks and build in group. We inherited our houses, we inherited our houses | Water (motorized borehole) provided by CSDP, dispensary by CSDP, rehabilitation of culvert and drainage by CSDP, training on environmental protection (afforestation, planting trees and grasses, incinerators) by CSDP and rehabilitation of school, building of school LGA, waste management, incinerators. No electricity |
| Kanya | Inheritance, buying, negotiating with community leaders | working for money, selling Farm produce, vegetables and fruits, firewood, | We produce our food, vegetable and fruits, buy from market. Gift from friends and relatives | We buy new and second-hand cloth, tailor sewn our cloth and from relatives, gift from philanthropist, | We build our houses in group using local materials, through inheritance, form bricks | Water (hand pump) provided by CSDP, health centre by CSDP, rehabilitation of feeder road by CSDP, training on environmental protection by CSDP and rehabilitation of |

| | | | | | | |
|---------|---|---|--|---|---|--|
| | | <p>Tailoring, sewing.</p> <p>Selling poultry produce.</p> <p>Support from spouses, motorcycle mechanic and vulcanizer, gift from family and friends, dry season farming</p> | | <p>gift from friends and relatives</p> | <p>and build in group, buy modern building materials and employed builder, inheritance</p> | <p>school. No electricity, health centre by LGA, building of school by LGA</p> |
| Maga | <p>Inheritance, buying, negotiating with community leaders</p> | <p>Working for money, tailoring, sewing, plumbing, painting, carpentry, vulcanizer and support from spouses and motorcycle mechanic, donation from NGOs, dry season farming, access to CSDP funding</p> | <p>We produce our food, vegetable and fruits, buy from market and philanthropist</p> | <p>We buy new and second-hand cloth, we sewn our cloth</p> | <p>We build our houses in group using local materials, through inheritance, form bricks and build in group, buy modern building materials and employed builder, inheritance</p> | <p>Water (hand pump) provided by CSDP, dispensary by CSDP, rehabilitation of culvert and drainage by CSDP, training on environmental protection by CSDP and provision of furniture. No electricity, health centre by CSDP, building of school by LGA</p> |
| Shengel | <p>Inheritance, buying, negotiating with community leaders, gift from relatives</p> | <p>We are working for it, selling farm produce, fruits and vegetables, firewood and support from spouses, vulcanizer and</p> | <p>We produce our food, vegetable and fruits, gift from relatives and friends, gift from neighbors</p> | <p>We buy new and second-hand cloth, tailors sew our cloth and from relatives</p> | <p>We build our houses in group using local materials, through inheritance, form bricks and build in group. We</p> | <p>Water (hand pump) provided by CSDP, dispensary by CSDP, rehabilitation of culvert and drainage by CSDP, training on environmental protection, afforestation by CSDP and provision of</p> |

| | | | | | | |
|--|--|---|--|--|-----------------------------------|--|
| | | motorcycle mechanic, NGOs, gift from family and friends, dry season farming | | | inherited our houses, inheritance | instructional materials and furniture. No electricity, building of school by LGA |
|--|--|---|--|--|-----------------------------------|--|

Coded summary of livelihood strategies

| Land | DSEME | KANYA | MAGA | SHENGEL | TOTAL |
|------------------------------------|--------------|--------------|-------------|----------------|--------------|
| inheritance | 0 | 1 | 0 | 1 | 2 |
| buying | 1 | 1 | 1 | 1 | 4 |
| negotiating with community leaders | 1 | 1 | 1 | 1 | 4 |
| gift from relatives | 1 | 0 | 0 | 1 | 2 |
| sub-total | 4 | 3 | 3 | 4 | 12 |
| Money | | | | | |
| working for money | 1 | 1 | 1 | 1 | 4 |
| selling farm produce | 1 | 1 | 0 | 1 | 3 |
| selling vegetable and fruits | 1 | 1 | 0 | 1 | 3 |
| firewood business | 1 | 1 | 0 | 1 | 3 |
| tailoring and sewing | 1 | 1 | 1 | 0 | 3 |
| from grants | 1 | 0 | 0 | 0 | 1 |
| selling livestock produce | 1 | 0 | 0 | 0 | 1 |
| support from spouses | 1 | 1 | 1 | 1 | 4 |
| poultry produce | 0 | 1 | 0 | 0 | 1 |
| plumbing | 0 | 0 | 1 | 0 | 1 |
| painting | 0 | 0 | 1 | 0 | 1 |

| | | | | | |
|---------------------|----|----|---|---|----|
| carpentry | 1 | 1 | 1 | 1 | 4 |
| vulcanizer | 1 | 1 | 1 | 1 | 4 |
| motorcycle mechanic | 1 | 1 | 1 | 1 | 4 |
| sub-total | 11 | 10 | 8 | 8 | 37 |

Food

| | | | | | |
|---------------------------------------|---|---|---|---|----|
| we produce our food | 1 | 1 | 1 | 1 | 4 |
| we buy our food | 1 | 1 | 1 | 0 | 3 |
| produce vegetable and fruits | 1 | 1 | 0 | 1 | 3 |
| buy vegetables and fruits from market | 0 | 0 | 0 | 0 | 0 |
| gift from relatives and friends | 1 | 1 | 0 | 1 | 3 |
| gift from neighbours | 0 | 0 | 0 | 1 | 1 |
| gift from philanthropist | 1 | 0 | 1 | 0 | 2 |
| sub-total | 5 | 4 | 4 | 4 | 16 |

Clothing

| | | | | | |
|---------------------------------|---|---|---|---|----|
| we buy new cloth | 1 | 1 | 1 | 1 | 4 |
| we buy second-hand cloth | 1 | 1 | 1 | 1 | 4 |
| tailor sewn our cloth | 1 | 0 | 1 | 1 | 3 |
| we sew our cloth | 0 | 1 | 1 | 0 | 2 |
| gift from philanthropist | 0 | 1 | 0 | 0 | 1 |
| gift from friends and relatives | 1 | 1 | 0 | 1 | 3 |
| sub-total | 4 | 5 | 3 | 4 | 14 |

House

| | | | | | |
|--|---|---|---|---|---|
| we build our houses using local materials | 1 | 1 | 1 | 1 | 4 |
| we build our houses using modern materials | 0 | 1 | 1 | 0 | 2 |
| we inheritate our houses | 1 | 0 | 0 | 1 | 2 |
| sub-total | 2 | 2 | 2 | 2 | 8 |

Services

| | | | | | |
|------------------|---|---|---|---|---|
| water, hand pump | 0 | 1 | 1 | 1 | 3 |
|------------------|---|---|---|---|---|

| | | | | | |
|--|---|---|---|---|----|
| water, motorized borehole by CSDP | 1 | 0 | 0 | 0 | 1 |
| open dug well by CSDP | 0 | 0 | 0 | 0 | 0 |
| rehabilitation of feeder roads by CSDP | 0 | 1 | 0 | 0 | 1 |
| rehabilitation of culverts and drainages by CSDP | 1 | 0 | 1 | 1 | 3 |
| provision of furniture by CSDP | 0 | 0 | 1 | 0 | 1 |
| rehabilitation of school by CSDP | 1 | 1 | 0 | 0 | 2 |
| provision of instructional materials by CSDP | 0 | 0 | 0 | 1 | 1 |
| health centre by local government | 0 | 1 | 0 | 0 | 1 |
| rehabilitation of health centre by CSDP | 0 | 0 | 1 | 0 | 1 |
| Local government school | 1 | 1 | 1 | 1 | 4 |
| Local government dispensary | 0 | 0 | 0 | 0 | 0 |
| dispensary by CSDP | 1 | 0 | 1 | 1 | 3 |
| provision of incinerators by CSDP | 1 | 0 | 0 | 0 | 1 |
| afforestation and orchards practice by CSDP | 1 | 0 | 0 | 1 | 2 |
| planting of trees and grasses | 1 | 0 | 0 | 0 | 1 |
| training on environmental protection | 1 | 0 | 0 | 1 | 2 |
| sub-total | 9 | 5 | 6 | 7 | 27 |

Appendix: 14 Full Text of Summary of Perceived Transforming Infrastructures

| Communities | Things we can change | Things we can't change |
|-------------|---|---|
| Dseme | Not habitable houses, unemployment, poverty, no market for farm produce, illiteracy, lack of enough skills, no fertilizer, malnutrition, harvest lost | Harsh environment, not enough rainfall, high cost of things, overpopulation, bush fire, no electricity, lack of bridge leading to village, low participation of women in project activities because of religious injunction |
| Kanya | Unemployment, high cost of food, reduce harvest, no market for our farm produce, no improve seed for farming, low harvest of crops | Drought, disease and pest infestation of crops, malaria infestation, no inorganic fertilizer, no electricity, desiccating wind during harmattan, lawlessness |
| Maga | Unemployment, lack of money, poverty, poor seed, unfertile soil, political thugs, illiteracy, adult education, low rate of school enrolment | Seasonal flood, religious extremism, law, no electricity, tribalism, bad governance, inflation, poor road network |
| Shengel | Bad drainage, redundancy, no enough drinking water, transport poor, illiteracy, child malnutrition, farmers/herdsmen's clashes, unemployment, lack of money | Bad harvest, pest and disease of crops, desert encroachment, no electricity, overpopulation of illiterate children, frequent accident motorcycle due to youth speed, inflation |

Appendix: 15 Summary of resources in the study area, 2016

Full text of resources summary

| Resources/communities | Social | Natural | Financial | Human | Physical |
|-----------------------|--|--|--|---|--|
| Dseme | School, market, village square, mosque/church, village garden, river, traditional festival, Adashe | Trees, forest, mountain, river, moon, stars, sun, underground water, rain, moon, stars | Selling firewood, vegetable and fruits, selling grains, casual labour | Traditional dancers, blacksmiths, manual labour for farming, people | Dispensary, school, roads, river, police post, trees, vegetation, sun, farmyard manure, no electricity, bore hole water, open dug-well, public toilet, shelterbelt, refuse dump, mud-house, public transport, market |
| Kanya | Market, school, market, community hall, community police, cultural troops, mosque/church, motor park | Stream water, trees, economic trees, land, animals, forage, vegetation, stars, sun, moon, rain | Money from weekly market, selling poultry and livestock, selling grains, shops | Women uhola dancer, traditional healers, children | School, market stalls, drainage, police station, health centre, public transport afforestation (shelter belt), ox-drawn plough, feeder roads, no electricity, bore-hole water, public toilet, incinerators, community hall, mud and cement houses, police post, motor park |
| Maga | Viewing centre, computer centre, school, market, police, community | Land, underground water, fadama area, vegetation, | Money from motor park, selling specialized | People, youth volunteer organization, people, | School, health centre, trees, computer centre, police station, public |

| | | | | | |
|---------|---|--|--|--|--|
| | police, mosque, skills acquisition hall, motor park, mosque/church | animals, forage, trees, sun, stars, rain, moon | skills, selling poultry and product, shops, money from market | traditional dancers | transport community policing, sun, ox-drawn plough, feeder roads, no electricity, motorized bore hole water, public toilet, incinerators, motor park refuse dump, skill acquisition centre, mud and cement houses, public toilet |
| Shengel | School, market, police station, village hall, motor park, mosque/church, Adashe | Water channels, land, mountain, economic trees, vegetation, rain, stars, sun, moon | Money from firewood, tree falling, selling grains, selling livestock | Traditional healers sought Sayers, people, youth, children | School, dispensary, trees, forest, river, police post, feeder roads, houses, farms, open grazing land, farmyard manure, no electricity, bore-hole water, shelter-belt, mud-house, public transport |

Coded summary of resources by communities

| | | | | | |
|-------------------------|--------------|--------------|-------------|----------------|--------------|
| Community number | 1 | 2 | 3 | 4 | |
| Community name | Dseme | Kanya | Maga | Shengel | Total |
| Resources | | | | | |
| Social | | | | | |
| school | 1 | 1 | 1 | 1 | 4 |

| | | | | | |
|---------------------|---|---|---|---|---|
| market | 1 | 1 | 1 | 1 | 4 |
| community hall | 0 | 1 | 0 | 1 | 2 |
| motor park | 0 | 1 | 1 | 1 | 3 |
| police | 1 | 1 | 1 | 1 | 4 |
| Natural | | | | | |
| forest | 1 | 0 | 0 | 0 | 1 |
| vegetation | 0 | 1 | 1 | 1 | 3 |
| mountain | 1 | 0 | 0 | 1 | 2 |
| economic trees | 0 | 1 | 0 | 1 | 2 |
| forage | 0 | 1 | 1 | 0 | 2 |
| trees | 1 | 1 | 1 | 1 | 4 |
| animals | 0 | 1 | 1 | 0 | 2 |
| water channels | 0 | 0 | 0 | 1 | 1 |
| rain | 1 | 1 | 1 | 1 | 4 |
| Financial | | | | | |
| money from grains | 1 | 0 | 0 | 1 | 2 |
| money from skills | 0 | 0 | 1 | 0 | 1 |
| money from business | 1 | 1 | 1 | 1 | 4 |
| market shop | 0 | 1 | 1 | 0 | 2 |
| motor park | 0 | 0 | 1 | 0 | 1 |
| Human | | | | | |
| traditional dancers | 1 | 0 | 0 | 0 | 1 |
| traditional healers | 0 | 1 | 0 | 0 | 1 |
| people | 1 | 1 | 1 | 1 | 4 |
| children | 0 | 0 | 1 | 1 | 2 |
| Physical | | | | | |
| school | 1 | 1 | 1 | 1 | 4 |
| sun | 1 | 0 | 0 | 0 | 1 |
| farmyard manure | 1 | 0 | 0 | 1 | 2 |
| ox drawn plough | 0 | 1 | 1 | 0 | 2 |
| grazing land | 0 | 0 | 0 | 1 | 1 |

Infrastructures

| | | | | | |
|--------------------|---|---|---|---|---|
| feeder roads | 1 | 1 | 1 | 1 | 4 |
| no electricity | 0 | 0 | 0 | 0 | 0 |
| mud/cement house | 1 | 1 | 1 | 1 | 4 |
| public toilet | 1 | 1 | 1 | 0 | 3 |
| motorized borehole | 0 | 0 | 1 | 0 | 1 |
| hand pump | 1 | 1 | 0 | 1 | 3 |
| refuse dump | 1 | 0 | 1 | 0 | 2 |
| incinerator | 0 | 1 | 1 | 0 | 2 |

Institutions

| | | | | | |
|----------------|---|---|---|---|---|
| police station | 0 | 0 | 1 | 0 | 1 |
| police post | 1 | 1 | 0 | 1 | 3 |

Facilities

| | | | | | |
|-------------------|---|---|---|---|---|
| motor park | 0 | 1 | 1 | 0 | 2 |
| dispensary | 1 | 0 | 0 | 1 | 2 |
| health centre | 0 | 1 | 1 | 0 | 2 |
| community hall | 0 | 1 | 0 | 0 | 1 |
| skill acquisition | 0 | 0 | 1 | 0 | 1 |
| public transport | 1 | 1 | 1 | 1 | 4 |

Appendix: 16 Summary of vision/outcomes of the communities

Full text vision/outcomes summary of the communities

| Community number | Community Name | Text version of Summary |
|------------------|----------------|---|
| 1 | Dseme | Good roads to transport our farm produce, rehabilitation of culverts and drainages, health centre, anti-natal care, extension services, improve seeds, affordable fertilizer, upgrade of our school, cemetery, modern market, motor park, rural electricity, telecommunication (mobile phones), improved housing, available water, police station |
| 2 | Kanya | Water bank for our livestock, healthy environment free of communicable disease, modern market for our grains, trucks to transport grains to city, improved housing, rural electricity, pipe-borne water, improved health services, simple farm machineries, employment opportunities, establishment of micro-finance bank/community bank, trees establishment (shelter-belt), ambulance to take sick to city |
| 3 | Maga | Electricity, telecommunication (mobile phone network), good roads, improved drainage, skills acquisition centre, internet café, more school, adult and nomadic education, improved health services, public transport system, farm implements and machinery, mechanized farming techniques, modern market with stalls, water, training on environmental protection, employment opportunities, to have our vehicle to facilitate our farming business |
| 4 | Shengel | More school, good roads, trucks to transport grains to city, water, health centre, prevention of malaria for children, anti-natal care, cemetery, modern mosque/church, community hall, public transport system, improved housing, land, extension services, improved seeds and fertilizer, education for our children, police station |

Coded vision/outcomes summary of the communities

| Visions | Community | | | | Total |
|------------------------------|-----------|-------|------|---------|-------|
| | Dseme | Kanya | Maga | Shengel | |
| Infrastructure | | | | | |
| electricity | 0 | 0 | 0 | 0 | 0 |
| improved housing | 0 | 0 | 1 | 0 | 0 |
| water | 1 | 1 | 1 | 1 | 4 |
| improved health services | 0 | 0 | 0 | 0 | 0 |
| ambulance | 0 | 0 | 0 | 0 | 0 |
| school | 1 | 1 | 1 | 1 | 4 |
| modern market | 0 | 0 | 1 | 0 | 1 |
| drainage and culvert | 0 | 0 | 1 | 0 | 1 |
| mobile phone network | 0 | 0 | 1 | 0 | 1 |
| shelterbelt | 1 | 0 | 0 | 1 | 2 |
| cemetery | 1 | 1 | 1 | 1 | 4 |
| mosque/church | 1 | 1 | 1 | 1 | 4 |
| good roads | 0 | 0 | 0 | 0 | 0 |
| Public facilities | | | | | |
| market | 1 | 1 | 1 | 1 | 4 |
| cemetery | 1 | 1 | 1 | 1 | 4 |
| education for children | 0 | 1 | 1 | 1 | 3 |
| farm machinery | 0 | 0 | 0 | 0 | 0 |
| extension service | 0 | 0 | 1 | 0 | 1 |
| improved seed and fertilizer | 1 | 0 | 0 | 1 | 2 |
| skill acquisition centre | 0 | 0 | 1 | 0 | 1 |
| community hall | 0 | 1 | 1 | 0 | 2 |
| public address system | 0 | 0 | 1 | 1 | 2 |
| Social services | | | | | |
| public transport system | 1 | 1 | 1 | 1 | 4 |
| skill acquisition centre | 0 | 0 | 1 | 0 | 1 |

| | | | | | |
|--------------------------------|---|---|---|---|---|
| community bank | 0 | 0 | 0 | 0 | 0 |
| micro-finance bank | 0 | 0 | 0 | 0 | 0 |
| vehicle for farming activities | 0 | 1 | 1 | 0 | 2 |

Facilitation of business activity

| | | | | | |
|-------------------------------|---|---|---|---|---|
| personal vehicle | 0 | 0 | 0 | 0 | 0 |
| machinery and implement | 0 | 0 | 1 | 0 | 1 |
| provision of transport system | 1 | 1 | 1 | 1 | 4 |