

Research Article

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An Assessment of the Impacts of the Runde Water Supply on the Life and Business of the Local People. A Case Study of Lundi Business Centre in Mwenezi District

Farai Mudavanhu*

Faculty of Humanities and Social Sciences, Lupane State University, Zimbabwe

Abstract

The research assesses the sustainability of small livestock pass on projects as a livelihood strategy for vulnerable households in rural communities using a case study of Africare small livestock pass on projects in Ward one Mwenezi District. The research focuses on the benefits and constraints of small livestock pass on schemes in the rural areas and if they can have life after the withdrawal of the donor. The major findings of the research include among other things that small livestock pass on projects have some benefits to vulnerable households in rural communities as well as being affected by many constraints that affect their sustainability as a livelihood strategy. An exit plan is very important for the continuation of the survival of the schemes when the donor withdraws. Issues to be addressed are, among others, control of diseases, provision of back up training and market coordination, so that beneficiaries will have to sell their livestock at a fair price at the market. Infrastructure developments are very important and follow up and monitoring after the initial implementation of the projects is vital.

Keywords: Sustainable livelihood; Heifer project international; Small livestock; Pass on

Introduction

According to [1] Heifer Project, to which Africare Zimbabwe took the idea of small livestock pass on projects, was the idea of Dan West, a church of the Brethren leader and peace advocate. In 1938, during a break in his relief work for the historic peace churches in the midst of the Spanish Civil War, West was haunted by the gaunt faces of mothers and starving children to whom he had been distributing reconstituted powdered milk. Alone under an almond tree, he scanned the grassy Spanish hillside. "These hills could easily support cows," he thought. "Why not give a cow instead of a cup of milk?" West's idea slowly caught on after he got home (US) and was expanded by the concept of sending pregnant heifers so each recipient could give the first female calf to another needy household—thereby "passing on the gift." This principle, called "Passing on the Gift," enhances dignity by assuring that each participant also becomes a donor to others. This shows the origins of the livestock pass on projects at the international level where it was later adopted by various NGOs like Africare and others for rural communities in developing countries (Initiatives 2010). Africare's reason to introduce the small livestock pass on scheme was based on the agro-ecological features of Mwenezi District, particularly climate and topography, human population density and cultural norms. Mwenezi District is in region 5, and the area is generally hot and dry, the mean annual temperature is 25 degrees Celsius, October temperatures exceed 35 degrees and rainfall is well below 600 mm per annum [2]. These conditions are good for small livestock like goats and chicken, which were chosen by Africa for their pass on scheme. In other words the organization utilized a system that was already part of the people's life. In this area, in traditional systems, the foundation stock were inherited, or received as gifts from friends or relatives (Upton 2004). In this rural community, livestock may be lent to destitute households by that are more prosperous. The borrower is then allowed to keep a proportion of the offspring. Africare Zimbabwe noted that small livestock were available from the well up who had been resettled in the acquired nearby farms in the Nuanetsi Ranch, and were prepared to sell their goats and chicken at a higher price. The importance of small livestock in the rural economy is well documented. In pastoral societies, social and economic life is centred on livestock, while in farming societies some form of livestock is kept in most farming households (although

the degree to which animals are integrated with crop production varies with locality). Mwenezi District is ideal for commercial and small-scale production of livestock like goats, cattle and sheep which soon became the main occupation of many small holder farmers. Being an arid region, most of the projects mooted for this area have largely hinged on irrigation schemes and livestock production [3]. That was why when Africare came into the district they had to choose a ward, (ward 1), where there were no big livestock (cattle), projects by other NGOs like Heifer and CARE International, to introduce small livestock pass on projects. Africare small livestock pass on projects in ward 1, Mwenezi District, began in January 2012, and is designed to provide income and nutritional benefits to drought affected households through small livestock production, utilization and marketing. Selection of the beneficiaries was mainly done with the assistance of the village heads, the local chief and AGRITEX officers (agricultural extension officers) through participatory means. The membership of this project is 290 divided into two groups, namely Group A -80 and Group B- 210. Group A members were given 4 goats per household and 5 chicken for one year (January 2012 to December 2012), before they pass on the generation 1 animals and remain with the first drop of kids and chicks. In order to be considered for Group A, one was either a widow, a child from a child headed family or an elderly woman or man. Then for Group B, those that were considered to be poor in terms of assets, food security and without any source of income together with those who had been left out for consideration in the first group were now incorporated. The major aim being to make sure that every deserving vulnerable group, be it male or female should earn something for poverty alleviation and food

*Corresponding author: Farai Mudavanhu, Faculty of Humanities and Social Sciences, Lupane State University, Bulawayo, Zimbabwe, Tel: 263773025709, +263735899487; E-mail: faraimudavanhu@gmail.com

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security. One of the major difficulties facing Africare livestock pass on projects is to ensure that livestock are distributed to the identified target group. Some of the beneficiaries have already passed on the “gift” to the next Group, B, but with some problems. Nevertheless, there are others who are yet to pass on the “gift” to the next beneficiaries. There is also a slight difference between the Heifer Project and Africare on the implementation of the pass on. Heifer pass on says the first female offspring is passed on while Africare says what is passed on are the female does and chickens given by the donor, after a year of twelve months and the first beneficiaries remain with the offsprings.

Statement of the problem

Small livestock pass on schemes have had a very mixed record in terms of sustainability with regard to poverty alleviation and food security in rural communities in developing countries. Part of the problem is that while the rhetoric of ‘poverty-focused’ projects and programmes often focus on livestock, livestock rearing as a tool for poverty alleviation and food security is poorly understood and is not well researched in most rural communities [4].

First, very little work has been done to further explicate poor livestock keepers as a distinct and important subset of the poor. Second, both the internal forces impacting households and the wider macro-economic events predicted to affect the livestock sector, are rarely accounted for by the projects. Hence, this study put the poor at the centre and thereby show how the small livestock pass on scheme improved their livelihood. Current approaches generally focus upon the multitude of activities that poor households pursue. Animal husbandry is one such activity. Indeed, it has been estimated that at least one third of the poor rear livestock [5]. Therefore, livestock keepers are one of the largest subsets of the global community of the poor. Nevertheless, it is increasingly recognized that in the application of livestock as a means of poverty alleviation, for every benefit, there is direct cost for the poor households involved. Livestock owners face increased household expenditures for animal healthcare and fodder and water. In addition, poor households often lack the labour needed for sustainable livestock production.

Purpose of the study

Vulnerable households in Mwenezi District are faced with the problem of food insecurity and poverty. The research provides a detailed assessment of how small livestock pass on projects can contribute to local livelihoods in ward 1 Mwenezi District, and whether this is sustainable.

The purpose of this research is to examine whether small livestock pass on projects in rural communities have been successful in reducing poverty in the rural areas. The reason being that some of the schemes introduced by international organizations seem to be the remedy to poverty alleviation and food insecurity but few years down the line the situation of the poor gets worse. Mwenezi District cannot be an exception to that. Since there are a great number of factors affecting these projects it is necessary to limit the examination to aspects of sustainability of small livestock pass on scheme to do with vulnerable households.

Objectives

The objectives of the study are to:

- Evaluate whether there has been qualitative improvement in the living standard of the rural people and the disadvantaged

with the introduction of small livestock pass on projects.

- Ascertain whether the programmes are reaching the targeted groups and beneficiaries.
- Assess the sustainability of small livestock pass on scheme in rural communities.

Research questions

1. What are the benefits of small livestock pass on projects to the local communities from 2012 to date?
2. What are the challenges faced by vulnerable households involved in small livestock pass on projects?
3. Can the small livestock pass on projects carry on in rural communities?

Significance of the study

Analysis of past projects and programmes on poverty alleviation and food security in Ward 1, Mwenezi District shows that benefits largely bypassed vulnerable households, that negative effects accrued to them in some cases and that overall progress was less than optimal because of underutilization of their potential and the unavailability of assessments of sustainability of these projects in the first place. The economic contribution of vulnerable households to the generation of food for consumption and the production of commodities thus turns out to be a specially relevant concern, both in the light of the interest and needs of household members themselves and with a view to the dynamics of agricultural development as a whole [6]. This will determine the problems encountered by the community, especially vulnerable households, with emphasis on small livestock pass on schemes, unsustainable livelihoods and to recommend appropriate plans of action in addressing these problems which are home grown and sustainable [7]. Livestock production is a major component of the agricultural economy of developing countries and goes well beyond direct food production [8]. Sales of livestock and their products provide direct cash income to farmers, [9]. Livestock are a living bank for many farmers and have a critical role in the agricultural intensification process through provision of draught power and manure for fertilizer and fuel. They are also closely linked to the social and cultural lives of millions of resource-poor farmers for whom animal ownership ensures varying degrees of sustainable farming and economic stability. This research considers both direct and indirect contributions of small livestock projects to food security and sustainable development in Mwenezi District. Several researches in Mwenezi District by CSC (Cold Storage Company), have concentrated on livestock projects which were done on a large scale for commercial basis, especially cattle for beef, because of the contribution that they had for the country. For example after the devastating Cyclone Eline a study was done as an emergency intervention to determine the loss and recommend restocking. Sustainability of these intervention strategies was never considered and also there was no follow up and monitoring. This study is different because it focuses on the sustainability aspect of these schemes focusing on Africare’s pass on scheme as a livelihood strategy for vulnerable households. What has come out clear is that different organizations use various animals in the pass on schemes. For example in Bulilima District, a NGO, Bothar in Zimbabwe distributed animals like guinea fowl, dairy cows, dairy goats, chickens and rabbits under the pass on scheme. Plan International distributed chickens to the most food insecure households in Chipinge and Chiredzi Districts under the pass on scheme. Of interest to note is that some NGOs projects pass on the offsprings while others pass on the given animals after they have

produced young ones [10]. Nevertheless, up to now nothing has been done to study the sustainability of such schemes in the districts they are implemented. As a result, this research will fill in the gap by executing an assessment of sustainability of small livestock pass on projects as a livelihood strategy for the vulnerable households in the rural areas.

Delimitation of the study

The study will be concerned with responses from participants in ward 1, Mwenezi district who are in the small livestock pass on projects by Africare Zimbabwe. Unfortunately, time and resource constraints, as well as problems in attending all their meetings and training sessions, will affect the inclusion of every member of the vulnerable households taking part in the small livestock pass on projects. Nonetheless, where possible their particular experiences will be highlighted.

Definition of terms

1. Vulnerable households-those households in Ward one who are unable to cope with contingencies and stresses to which they are exposed like drought and food shortage.

2. Small livestock pass on project-Africare's scheme of giving households animals, in this case, goats and chicken so that they will remain with offsprings after one year and pass on the does and hens to the next beneficiaries.

3. Livestock-in this case refers to goats and chicken given to vulnerable households in Ward one.

4. Sustainable livelihood- is a livelihood that can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

Literature Review

It was important for the researcher to study related literature so that the researcher could have a theoretical framework upon which to base the findings. Literature is reviewed under the following headings: constraints in small livestock pass on projects, benefits of small livestock pass on projects to rural communities and sustainability of small livestock pass on projects as a livelihood strategy, as these are the cornerstones of sustainability of small livestock pass on schemes. Sustainability that was summarized into three categories by Meyer, as follows: sustainability of outcomes, that is, whether the improvements in quality of life or living standard of living of project beneficiaries will endure beyond the project completion; sustainability of resources, that is, activities promoted or introduced by the project will preserve/deplete the natural resource base. In addition, sustainability of livelihood was analysed from a perspective of risk management and resilience.

Benefits of small livestock pass on projects to rural communities

Numerous examples of successful small livestock integration practices on small farms exist in developing countries as shown by some researchers. The raising of ducks to fertilize fish ponds and rice paddies is a common practice throughout Asia. In Cameroon, guinea pigs are reared on the ground under rabbit hutches in sheds or rooms to utilize forage wastes and to diversify the meat supply available to the family [11]. Manure from both species is also collected and composted for use in forage plots and gardens. In developing countries especially, local chickens are commonly used to incubate eggs from other poultry species such as guinea fowl, peafowl, quail and turkeys, either because they are less broody or to avoid interrupting egg production because of the

higher economic value of the chicks of these species. Successful small-scale and economically feasible livestock projects whether by intent or not, have in many cases brought about other benefits, such as social and gender benefits and improvements in health status, employment, functional literacy, environmental conservation and spiritual growth, in addition to increased food and income. The fulfillment of one or more of the former (primary) benefits will be more likely to lead to increased food and income (secondary benefits). Holistic transformation and empowerment of the poor can be achieved from livestock projects that are appropriately designed, albeit scaled down, ultimately successful. The livestock sub-sector comprises activities contributing to sustainable livestock production to reduce poverty, support widely shared growth, and increase food security. Sustainability in livestock production entails the provision of technology, information, supporting services, and enabling policies to ensure growth while increasing efficiency of renewable resource use.

Small livestock as a source of income: Animal products are a source of disposable income for many small-scale farmers in developing countries [12]. In fact, livestock are often the most important cash crop in many small holder mixed farming systems. Small ruminants, goats, and non-ruminants, particularly poultry, are also important for rural households, as they constitute an important safety net and rapidly disposable asset in the event of drought [13]. Upton adds that livestock are capital assets, that is, something that has been produced but has not yet been used up. It should produce a return, in terms of increased income or welfare, in the future. Disposable income is important for purchase of agricultural inputs and other family needs [14].

Asset building: The small livestock pass on scheme is consciously and deliberately about building livelihood assets [15]. The multiple roles of livestock in successful rural livelihoods in Sub-Saharan Africa are well known and have been empirically verified in numerous studies. Livestock can provide the key to the successful construction of pathways out of poverty and moderate to high level of livestock ownership confers resilience in the face of livelihood shocks.

Livestock widens and sustains three major pathways out of poverty:

- Securing the assets of the poor (LEGS, says both social and financial assets of all livestock owners).
- Improving smallholder productivity.
- Increasing market participation by the poor. (ILRI 2007 cited in FAO 2013).

Advantages of keeping goats:

1. Adaptability-goats can adapt or adjust themselves to different situations. They can live and gather food from cold windy mountains or from hot dusty deserts where few plants grow. They do not like to be wet and cold, but if they are given a good dry house, they can live in these climates.
2. Sure-footedness- goats can walk quite well on land that is far too steep or rocky for other farm animals. This means that they can gather food from places that other animals may not visit.
3. Browsing-goats are able to eat grass quite well, but they can also eat the leaves of most kinds of bushes, trees and shrubs. They can also eat plants like thistles, giant mimosa and briars, which have sharp thorns or prickles. Goats have very tough mouths; even young goats can eat prickly plants quite easily. Goats can make use of food that other animals may not touch. It is this ability to eat almost any plant that has

given goats a bad name, because if food is scarce, they may strip leaves from bushes and young trees.

4. Diseases-goats do not seem to catch many diseases and they do not have many pests. So they are tough animals that do not cause much trouble in keeping them. The main trouble is that they may get a lot of worms growing in their intestines, but this trouble can be stopped by using some worm medicine for the goats to swallow, such as Niverm.

5. Provide good food-goats are able to provide the people with two kinds of valuable food meat and milk. Goat milk is very good for children because it does not contain disease germs. The meat is also good and is just like sheep meat.

Disadvantages of keeping goats:

1. Goats need a very large amount of food each day. Goats need to find a lot of protein, so they must be able to find some legumes or other food rich in protein.

2. Goats will eat almost any kind of green feed. So if young trees have been planted, they will be eaten by the goats unless they are protected in some way.

3. If goats are not fenced in or kept in such a way that they can be brought back to their house at night, they may escape and live in the wild state. Then it may be very hard to get them back because they can run very fast and can easily run over very rough ground.

Constraints in small livestock pass on projects

1. Shortage of livestock numbers and low livestock productivity: Due to limited feed availability and quality and poor management practices the production level of livestock in developing countries is very low [16]. The 1992 drought and the widespread livestock thefts in Mwenezi district due to large movements of people from communal areas to designated farms under land redistribution contributed to massive destocking in communal areas leaving many households without livestock. The inherent features of indigenous livestock both goats and poultry, bought for this pass on scheme, are survival rather than productivity, hence their small body size. Factors such as diseases, parasites, inadequate nutrition and water coupled with their small body size and low milk yield for goats, mean that they grow slowly and often attain market weights at between 1 to 3 years of age [17].

2. Endemic diseases: A number of researches done already show that a sizable percentage of the government of Zimbabwe budget goes to animal health but still there are endemic diseases in the rural areas like New Castle and other tick borne diseases prevalent in the rural areas which need to be controlled (ONAR 2002, HPI 1998). There are little or no disease control measures in the rural areas. In some researches these backyard projects are said to be harboring many diseases. Having carried out a research on the sustainability of small scale poultry projects in India, Ahuja and Sen also add that there is a public perception that small units of production may be dangerous reservoirs of diseases, especially in the wake of recent outbreaks of HPAI. When outbreaks occur, effects are usually quiet devastating under free range system. Upton says that the control of animal disease and the provision of animal health services have an important impact on livestock productivity and the risks of loss. It is estimated that up to 30% of livestock production in developing countries is lost as a result of disease [18,19] having looked at a number of case studies from developing countries concluded that animal health is often poor due to inadequate husbandry practices and high cost of veterinary services. Poor livestock keepers seldom vaccinate their livestock, especially smaller species such as goats and poultry. As a result there is a high mortality rate, up to

65% especially in the wet season whereby there is high incidence of diseases and parasites like foot rot, blue tounge and pulp kidney [20] evaluating the impact of a Norwegian Refugee Council food security and livelihoods projects in Chipinge and Chiredzi districts, says that one unintended negative impact cited by several livestock beneficiaries was their perception that the indigenous chicken project had "brought disease" which affected the poultry within the community leading to many deaths among the birds already owned by the community. This affected the sustainability of the scheme [21] argued that the main challenge for small scale/rural poultry is organizational, not technical. Based on a review of available evidence, the paper concludes that it is important to continue to promote village poultry to contribute towards household nutrition security and livelihood support but concerted efforts must be made to find organizational solutions to minimize public health risks and provide appropriate extension support on issues like disease prevention, predation and improving hatchability.

Heifer Project International (1998) carried out an analysis of similar projects in countries like Indonesia and Zambia. In Indonesia the livestock mortality rate was high in chickens and there was a problem with diseases in young calves for the projects. In Zambia the presence of trypanosomiasis, which is spread by the tsetsefly, has been difficult to control and has caused several deaths amongst project animals in affected areas. This serves to show the impact of diseases on the sustainability of pass on schemes [22].

3. Inadequate feeding: Indigenous livestock thrive mostly on natural pastures and poultry and goats go on free range [17]. The pastures are of low quality because of overgrazing, drought and water shortage especially in the dry season [23]. The carrying capacity of the grazing lands has never been established in the area. Both goats and chicken are always at high risk of predators such as snakes, baboons and other wild animals. Feed quality is a problem for free-roaming livestock as there is no, or very limited, control over feed sources [19].

4. Scarcity of water for livestock: water for the livestock is scarce especially during the dry season because of the absence of perennial streams. Due to the traveling of long distance to get water animals get lost or stolen.

5. Inadequate infrastructure for livestock markets, abattoirs and dipping or spraying mechanism: Nearly all the recently constructed primary livestock markets in Mwenezi lack basic facilities like fencing, crushes, loading ramps, weighing bridges and toilets. Abattoirs and dips were also damaged during the devastating Cyclone Eline of 2000. Roads were also damaged during that period. Looking at the importance of infrastructure one can consider a similar case of Ecuador. Heifer Project International (1998) indicated that the major problems experienced in Ecuador in its livestock schemes have been due to the remoteness of the areas. Because the projects are in jungle areas, some projects are accessible only by small planes. That made communication and training very difficult. This impacted negatively on sustainability of the scheme.

6. Poor livestock market information network: There is a poor means of broadcasting livestock market information in the rural areas. Yet, the demand for livestock market information from the public is increasing in Mwenezi District. In the same vein, [23] carried out a research in Namibia on cattle marketing only to discover that inadequate market information flows and high illiteracy among market operators hampered livestock marketing. This shows that information networks are very important in livestock projects.

Socio-cultural constraints to small-scale poultry production

The first constraint is the value placed upon poultry for use at

ceremonies and festivals or even as a source of income in times of need but not as a source of daily food or as a regular source of income. Some regard chickens as their pets or part of the family, thus it is only the arrival of an important unexpected visitor that could allow their use as food, although they can be sold without regret and the money utilized. Another major constraint to poultry production is the high value placed upon crop production rather than livestock production. This affects the willingness to put much time, expense and effort into livestock production. Theft is also a great constraint. Villagers who have lost all their poultry to theft may be reluctant to face the expense of starting again. Another constraint is the social norm that determines ownership of livestock. Typically, where crop farming is the men's main activity, keeping livestock is perceived as a peripheral activity relegated to women and children. However, when the number of livestock increases, men usually take over the activity. There is also a technical constraint to poultry production. The most common flock size of between 5 to 20 birds seem to be the limit that can be kept by a family without special inputs in terms of feeding, housing and labour. These small flocks scavenge sufficient feed in the surroundings of the homestead to survive and to reproduce. Any significant increase in flock size often leads to malnutrition if no feed supplement is provided. In addition, larger flock size must forage at greater distances, which may involve damage to neighbours' vegetable gardens.

Sustainability of small livestock pass on projects as a livelihood strategy

From the literature that the researcher has gained access to, very little is known more generally about the true success rates of livestock transfer projects (pass on) in Southern Africa [15]. Over the years, there have been many such projects across the region, sometimes specializing in exotic species, for example exotic goat projects, and sometimes delivering local animals or birds that should already be well adapted to their environments. However, evidence that these have resulted in sustained rises in livestock ownership to the beneficiaries is seriously lacking [15]. What has come out clear is that different organizations use various animals in the pass on schemes. For example in Bulilima District, a NGO, Bothar in Zimbabwe distributed animals like guinea fowl, dairy cows, dairy goats, chickens and rabbits under the pass on scheme. Plan International distributed chickens to the most food insecure households in Chipinge and Chiredzi Districts under the pass on scheme. Of interest to note is that some NGOs projects pass on the off springs while others pass on the given animals after they have produced young ones [20]. Nevertheless, up to now nothing has been done to study the sustainability of such schemes in the districts they are implemented. As a result, this research will fill in the gap by executing an assessment of sustainability of small livestock pass on projects as a livelihood strategy for the vulnerable households in the rural areas. According to HPI (1998) one of the biggest factors in sustainability is the growth and development of institutions. The researcher would check if many institutions in the district have expanded their program scope by the provision of marketing service, feed, animal technicians, credit unions and other services. In addition to that focus would be put on training and education as these are vital tools in making livestock projects sustainable. The researcher would take time to observe if Africare is focusing on the goal of providing substantial training to all project participants. It is also important to note that another important factor in making projects sustainable is the passage of government policy which is favorable to the small farmer. Government support and favorable policy create an economic climate which increases the

sustainability of projects (HPI 1998). Africare's pass on element is a unique way in which the initial input provides continuing resources to the community: it is by the pass on that the original input is passed on from first beneficiary to the next providing project sustainability in the community [24]. Carried out a research on dairy cattle production of smallholders to find out the initial indicators of sustainability. This research was conducted in Sisaket province, Northeast of Thailand by using participatory action research (PAR) and data collected by focus group discussion (FGD), in-depth interview and participatory workshop. The results revealed that the common vision of the community views on the sustainability in dairy cattle production system of small holders, consisted of six components in: high yield production; production with continuity and persistency; production as the main occupation with marginal profit; low cost production; production under strengthened grouping and production in environmental conservation.

Theoretical Framework

In this study the researcher has chosen to use the Sustainable Livelihoods Approach which is participatory and people-centred in nature [25]. As an approach to understanding and facilitating development the 'Sustainable Livelihoods Approach' contains echoes of the basic needs approach and its evolution into concerns with food security and then poverty alleviation and reduction. It also draws on insights from 'integrated rural development; from farming systems research and from participatory approaches in development.' Drawing on the work of Chambers and Conway, a livelihood is defined as comprising the capabilities, assets (including both social and material resources) and activities required for a means of living. Sustainability is achieved when a livelihood 'can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base' [26]. The framework considers people living and working within a context of vulnerability. Analysis of vulnerability means we have to identify the risks vulnerable households small livestock producers are under and the resilience they have to cope with negative change in their environment, both short and long-term. According to [27] the Sustainable Livelihoods Framework helps us to understand the true wealth of the poor. The Sustainable Livelihood (SL) approach places priority on the livelihood systems of the poor and the ways in which the poor adapt to maintain their livelihoods under conditions of severe environmental economic or political stress. The first step is to understand the 'wealth' of the poor. Wealth may be reflected in such assets as indigenous knowledge, special skills, individual or group resourcefulness and social support systems and the strategies that people use to cope with hardships. The value of the SL approach is that often with the addition of a little scientific knowledge, improved technologies, financial assistance or changes in government policies, many adaptive strategies can be made more productive and even sustainable [27]. The SL framework can be applied at a range of different scales- from individual, to household, to household cluster, to extended kin grouping, to village, region or even nation with sustainable livelihood outcomes assessed at different levels [28].

Small livestock pass on projects and sustainable livelihoods

Small livestock pass on projects are a useful means of strengthening livelihoods because it uses and creates a range of assets. Types of capital assets needed for small livestock pass on projects:

Natural: Goats and poultry, a place to keep them, water and food.

Human: skills, knowledge, good health and strength, and marketing expertise.

Physical: tools, equipment, transport, roads, clean water, energy and buildings.

Social: help from families, friends and networks, membership of groups and access to a wider society, market information and research findings.

Financial: cash, savings and access to credit or grants.

The sustainable livelihoods model has been illustrated with a model that makes it easier to understand the different components and their interrelatedness. Satge (2002:4) cited by [29] argues that the livelihoods framework helps us to identify and value what people are already doing in order to cope with risk and uncertainty. The approach also helps in identifying measures that can strengthen assets, enhance capabilities and reduce vulnerability. Unlike earlier approaches to development, the livelihood approach recognizes heterogeneity of rural communities [30] says that it takes into account the poor as the centre of the development process and embraces the complexity of rural livelihoods from the perspective of the poor. People can achieve either a viable, sustainable livelihood outcome or a fragile, unsustainable one due to the availability of assets to them and the impacts of vulnerability factors and transforming structures and processes on the access to and use of assets. It must be noted that any Sustainable Livelihood Approach is by definition unique to the specific context within which it is applied Sustainable Livelihood Approach has since the 1990s become the dominant approach to the implementation of development interventions by a number of major international agencies. It is defined in terms of the ability of a social unit to enhance its assets and capabilities in the face of shocks and stresses over time.

Research Methodology

Methodology refers to both the research design that is the basic plan of the research and methods used to obtain process and analyse data. It includes the methods of selecting subjects to be studied, the sample selection [31]. This research is mainly based on qualitative and quantitative information that was gathered and analysed qualitatively and quantitatively using computer packages SPSS and Microsoft Excel. The methodological section will also describe how the researcher intends to analyze or evaluate his findings in terms of the research questions initially posed.

Research design

Due to the wide ranging implications of the agricultural technologies and the impacts to vulnerable households of the pass on scheme and the society at large, nonsingle method can sufficiently capture these processes and impacts on vulnerable households. Therefore, data was collected by mixing methods such as, structured questionnaires, structured interviews, and field observations. Accordingly, interviews were done using pre-tested structured questions and structured questionnaires. The research was based on the field observations, interviews and questionnaire administration. As described by [32] questionnaires, structured interviews and participant observation are the most effective instruments when a researcher uses a case study like this study [32] further states that the data is gathered directly from individuals in the natural environment for the purpose of studying interactions attitudes or characteristics of individuals or groups. An interview is a face-to-face interpersonal role situation in which an interviewer asks respondents questions that are designed to obtain answers pertinent to the research question. Any person-to-person interaction between two or more individuals with a specific purpose in mind is called an interview [33]. The structured interview was used to maintain uniformity together with questionnaire and observation

was very useful to the study. In order to obtain a better view and picture of the impacts of small livestock pass on projects to vulnerable households' livelihood, the desk study and interviews were also carried out. The main parameters observed include the number of vulnerable households in Ward 1 assisted by the small livestock pass on projects from 2012 to 2013.

Population and sample

The population consisted of all 290 beneficiaries of the small livestock pass on scheme and other stakeholders namely the AGRITEX officer responsible for ward one, the local chief, the local authority, para-vets and village heads. Under the small livestock pass on projects members are 290, divided into two groups, namely Group A 80 and Group B 210 and other stakeholders. For the purpose of this study all members of the pass on scheme had equal opportunity to take part in the study. Important to note is that the researcher chose 120 participants using random sampling of the beneficiaries from both groups and other stakeholders. From these only 30 respondents, that is more than 10% of the total population, were considered for analysis and five interviews held with the AGRITEX officer, one Field officer from Africare, the local Chief, one para-vet and a representative from the local authority. The researcher used the list of beneficiaries and stakeholders with the help of an AGRITEX officer to select at random a representative sample of the whole population. Much care was taken to make sure that all the villages were represented in the research population. According to [33] one of the best ways of administering a questionnaire is to obtain a captive audience such as people attending a function, participants in a program or people assembled in one place. This ensures a very high response rate as the researcher will find few people refuse to participate in the study. Also, as the researcher had personal contact with the study population, the researcher could explain the purpose, relevance and importance of the study and could clarify any questions the respondents may have. It is also the quickest way of collecting data and saved money on postage as the researcher personally administered the questionnaire.

Research instruments

In this study there are two main research instruments namely structured interview and questionnaire supported with observation. These instruments were validated by doing a baseline survey and asking experts like the AGRITEX Officer in charge of the projects in the ward before including all selected beneficiaries in the small livestock pass on projects, ward one, Mwenezi. The appropriateness of these instruments is justifiable since the data to be gathered was mainly qualitative, that is, included opinions and observations. It is also feasible to analyze data gathered through the use of these instruments and code the data using a computer package like SPSS and Microsoft Excel.

According to [33] none of the methods of data collection provides 100 percent accurate and reliable information. In this study the researcher tried his level best to address the issues of validity and reliability. In terms of measurement procedures, validity is the ability of an instrument to measure what it is designed to measure [33] Validity is defined as the degree to which the researcher has measured what he has set out to measure [34] According to [35], "the commonest definition of validity is epitomized by the question: Are we measuring what we think we are measuring?" in the social sciences there appear to be two approaches to establishing the validity of a research instrument: logic and statistical evidence. In this study the judgment that an instrument is measuring what it is supposed to measure is primarily based upon the logical link between the questions and the objective of the study. On the other hand, reliability of an instrument refers to its ability to produce consistent measurements each time [33] When we administer

an instrument under the same or similar conditions to the same population and obtain similar results, we say that the instrument is “reliable”- the more similar the results, the greater the reliability. The researcher addressed this issue during the baseline survey.

Primary data

Primary data was collected from beneficiaries and other stakeholders taking part in the small livestock pass on scheme in Ward 1, Mwenezi District. Primary data was collected through questionnaires, interviews and general observation. Observation is one way to collect primary data. Observation is a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place [33].

Questionnaire

This is the main method used to collect information. A questionnaire is a document that contains predetermined questions used to collect information from various respondents. A questionnaire is a written list of questions, the answers to which are recorded by respondents [33]. In a questionnaire respondents read the questions, interpret what is expected and the write down the answers. The researcher made use of structured questionnaires. Structured questionnaires confined respondents to a choice from certain sets of responses. Questionnaires were self-administered to respondents when they came for weekly meetings at the wardCentre on Wednesdays. A questionnaire was preferred because of the following advantages: It gives the respondent ample time to respond. That was the case for this study because respondents were given questionnaires well before their Wednesday meeting started and they had enough time to complete the questionnaires. A questionnaire can be left behind for completion. Large geographical coverage. Besides the above advantages, a questionnaire suffers from the following: Non-response rate. Lack of direct control over the way in which respondent’s complete questionnaires. This issue was witnessed with some respondents who felt that they could not disclose the assets and other animals they have besides those provided by the donor because they thought they would not benefit if the researcher was another donor. The researcher had to address that misconception by telling the respondents he was not a donor and that information was needed for research instead of donating anything to them.

Interviews

An interview is a specialized discussion, which focuses on a particular kind of information. Interviews are targeted mainly for other stakeholders apart from direct beneficiaries. Quick and there was room to probe further on certain issues. Respondents could seek clarification on questions. Conversational and fairly situational in approach.

Interviews could be scheduled more than twice thus delaying the data collection process. Different responses could cause problems in data analysis

Observations

The researcher also directly observed certain phenomena that were of interest for the study but which could not be captured by means of interviews. The technique allowed the researcher to get firsthand information through first hand contact with the variables in question. Furthermore, the researcher asked for access to the sales of livestock and stock sheets.

Secondary data

Textbooks, journals, newspapers, government presentations,

conference presentations and internet were used to elaborate on the concept of sustainability of small livestock projects and their impact on rural vulnerable households as a livelihood strategy.

Procedures

During data collection the researcher administered the questionnaires and interviews on the vulnerable household members in the projects both Group A and Group B. When need arose there were people like representatives of the Committees, the village heads and the extension officer responsible for ward 1, who also helped together with the para-vets trained to date. This was done mostly on their regular meetings, when mostly all the members from the ward came together at the at ward centre Hlezana Secondary School.

Data analysis plan

The data obtained was analyzed mainly using computer packages after coding the information obtained from questionnaires and interviews. The analysis was both statistical and descriptive depending on how the researcher saw it fit. Data collected is not useful until it has been analysed. In support of this view [36] notes that data collected by means of questionnaire, interviews, diaries or any other method mean very little until they are analyses.

First of all, the researcher checked the number of questionnaires completed. This was followed by checking the items completed and those not completed. Frequency tables were constructed and some of the data presented in tables. Data obtained from interviews [37] and open ended questions was grouped into classes for analysis.

Data presentation

Data is presented in tables, charts and diagrams as to be illustrative enough for the reader. These presentation methods reduce the amount of write-ups and are easier for result interpretation.

Data Analysis

Analysis of data is done using SPSS and Microsoft Excel. Non-structured responses are pre coded before using SPSS. SPSS has the advantage of advanced analysis of statistical data.

Part 1: Household demographic information (Figure 1) above show that all the villages making ward one were represented in the research with Mahlelemu village having [38] the highest representation of 27%.

Sex of respondents: Tables 1 and 2 show Age of respondents Table 3 and Figures 2 and 3 show that the highest number of beneficiaries is in the age range of 61 and above. This is an indication that households of the elderly are the most [39] vulnerable in terms of poverty and food security. Head of household (Table 4) indicates that most of the beneficiaries are female headed households. 60% are female headed households and 40% are male headed households. This can be used to support the argument that female headed households are the most vulnerable [40] when it comes to food security in the rural areas Marital status (Table 5) and (Figure 4) show that among the respondents there are no single people and those who are married are 53% of the total. This is followed by 27% who are widows. Education level of respondents Table 6 shows that 56% of the total respondents have primary education and this has an added advantage on the training of beneficiaries on small livestock keeping [41]. Religion of respondents (Table 6 and Figure 5) shows there are many respondents that belong to other religions apart from the given. 56% of the respondents belong to other religions in the area. Religion has an impact on the small livestock pass on projects because some of the respondents would not accept animals like pigs

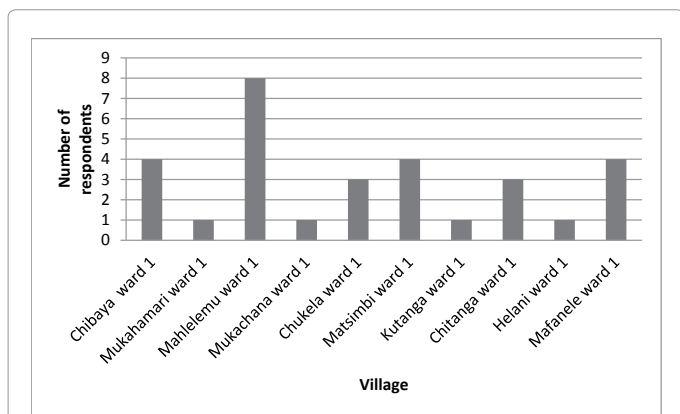


Figure 1: The research with Mahlelemu village having the highest representation of 27%.

Male	Female	Total
11	19	30

Table 1: Age of respondents.

Years	20-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61 and above
No. of respondents	3	2	4	4	4	2	2	2	7

Table 2: Age of respondents

Male headed household	Female headed household	Total
12	18	30

Table 3: Show that the highest number of beneficiaries is in the age range of 61 and above. This is an indication that households of the elderly are the most vulnerable in terms of poverty and food security

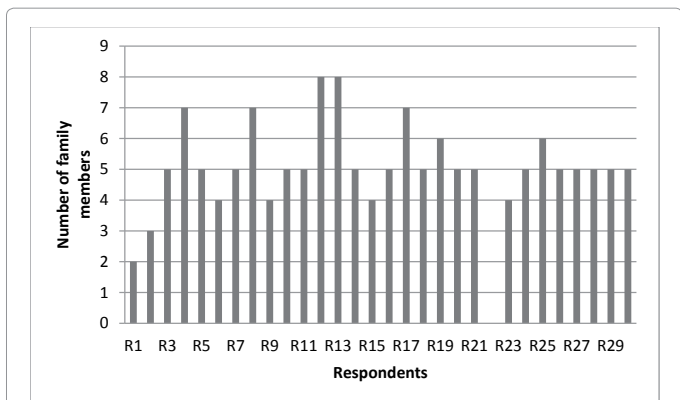


Figure 2: The respondents of a large family as an asset and source of labour.

because of their religion. Nevertheless, in this research respondents [42] were comfortable with chicken and goats given although they are of different religions. The problem comes in cases where some believe an animal can be tied with charm to have miscarriages or not to produce off springs. This has been observed by the researcher on pass on when some beneficiaries suspect animals passed on to them had been tied not to produce young ones especially goats. This affects the sustainability of the small livestock pass on projects.

The education level of family: Most families have children going to school, primary, secondary and even tertiary, both male and female.

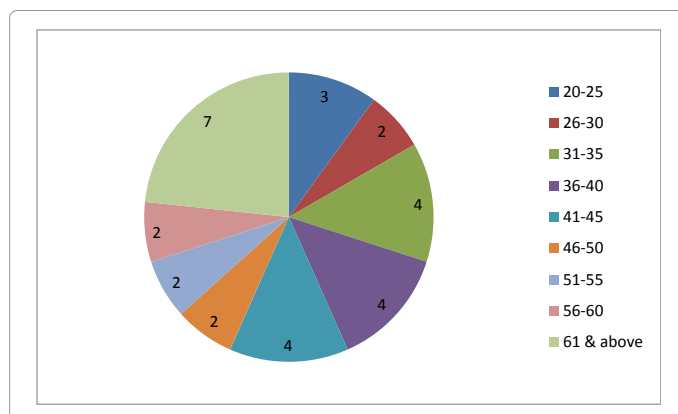


Figure 3: show that the highest number of beneficiaries is in the age range of 61 and above. This is an indication that households of the elderly are the most vulnerable in terms of poverty and food security.

Single	Married	Divorced	Widower	Widow	Total
0	16	1	5	8	30

Table 4: Indicates that most of the beneficiaries are female headed households.

Never went to school	Primary education	Secondary education	Other	Total
2	17	10	1	30

Table 5: Show that among the respondents there are no single people and those who are married are 53% of the total. This is followed by 27% who are widows

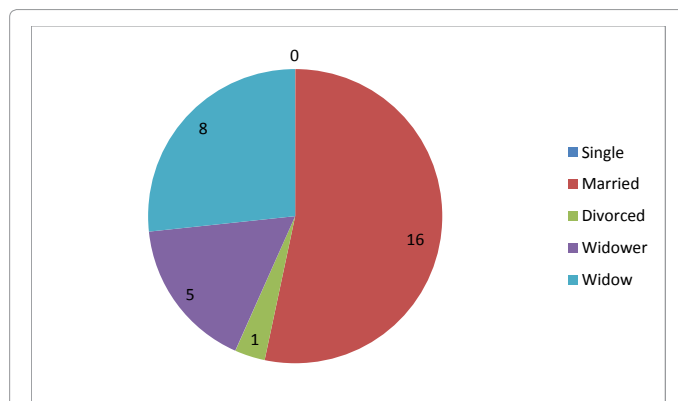


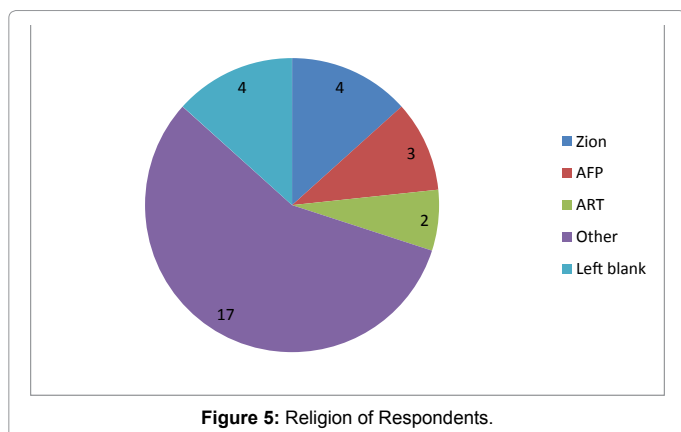
Figure 4: show that among the respondents there are no single people and those who are married are 53% of the total. This is followed by 27% who are widows.

Zion	AFP	ART	Other	Left blank	total
4	3	2	17	4	30

Table 6: Shows that 56% of the total respondents have primary education and this has an added advantage on the training of beneficiaries on small livestock keeping.

This has been attributed to the pass on scheme because beneficiaries [43] have used income obtained from the sale of livestock for the education of their children and dependents. In turn this impacted positively by reducing absence of children from schools in the ward.

Part 2: Small livestock keeping all the respondents were given small livestock, chicken and goats by Africare. They received four goats and five chickens. The beneficiaries were not given room to choose between the two either goats or chicken. This can be a problem in terms of the [44] sustainability of the pass on because beneficiaries needed to be



given room to choose. Most of the respondents received these livestock in May 2012. All the first beneficiaries were supposed to be given livestock by January 2012 but the delay strongly affects the pass on and that is why some beneficiaries are resisting the pass on. This impacts the sustainability of small livestock pass on schemes. All the respondents indicated that the major driving force for accepting the program me is both economic and home consumption. All the respondents pointed out that the extension agent and NGO, Africare, helped them most to learn about small animal rearing. Meat, manure and skins are the animal products beneficiaries get from the project. A number of respondents showed that they get 15 kg of goat and chicken meat on average per month, 150 kg of manure per month for both chicken and goats and one goat skin per month for goats. All the respondents got training on small livestock keeping. They got training from Agricultural and rural [44] training and non-governmental organization, which is Africare. They got training on animal breeding, animal shelter construction, that is, raised fowl run and goat pen, marketing information and linkage, dipping, castration all under managerial aspects. The methods used most include lecture method, demonstration and group discussion. These methods worked on well since most of the respondents had primary education and could read and write. Most of the respondents indicated that they found the training useful. Benefits gained by the respondents included development of skills on how to keep goats and chicken and marketing strategies. They also indicated that they got an understanding of effective small livestock management using available resources, on issues like feeding, inspecting, parasitic and disease control. Most respondents indicated that they are keeping their goats and chicken in raised goat pen and raised fowl run. These are more important because they prevent predators from getting to animals and also direct contact of animals and their droppings. The major reason given was to prevent small livestock from direct contact with droppings and protection from predators. Respondents indicated that chicken produce young ones three times per year while goats produce two times. On average respondents have seven goats and ten chickens. There were cases whereby animal mortality rate was high due to diseases and abortion as well as predators. Some of the respondents have sold chicken and goats from 2012 to 2013 but others indicated that they are not selling because of several reasons like the ones given under 2.18. The price of a goat and chicken is not pleasing and so they feel that they would rather sell their animals only when there is an emergence than sell them right now. Challenges faced by most farmers are that they do not have market information and they are afraid that they would receive a penalty from the donor if they sell their animals without the knowledge of the donor. What also adds on to this is that beneficiaries did not sign any contract with the donor to secure ownership of the animals and because of that it is not clear that they officially own the animals. In

terms of participation and decision making of the household, members in the project men dominate followed by women and lastly children. There is a great difference in decision making in female headed households and male headed households when it comes to the income obtained from the sell of animals. In female headed households women do make their own decision while couples wait for one another to decide together. In order to improve these decision making power differences, women themselves mentioned that there is need for training to empower them and men also to accept decisions from their wives. The government also needs to provide awareness campaigns on equal rights. Most of the respondents indicated that they are not selling their livestock but those that sell do it when there is a problem be it of illness or school fees or food shortage. There were mixed responses from the respondents on the issue of a ready market for animals and animal products. Those that sell their livestock and livestock products prefer a market found in the nearby wards, at the nearest business centre (Neshuro) and farmer to farmer, instead of going to the formal market where they feel cheated and lack information of the market dates. Most respondents sell their livestock and livestock products to local consumers, intermediaries, other farmers and whole sellers. The average price for a good grade goat is 30 US dollars and chicken is 5 US dollars as from 2012–2013. Money obtained from the sell of goats and chicken and their products was used for buying food items, clothes, school fees, house construction and medical fees. Those that saved the money obtained put the money into cooperatives, many of which are informal and not registered. A number of respondents mentioned additional benefits they got by participating in the small livestock pass on projects like buying other domestic animals and gaining social acceptance due to additional income. From the income obtained after selling the small livestock some beneficiaries had the opportunity to buy other domestic animals like guinea fowls and turkeys. There is an indication that more than 20 percent of the household expenditure of most respondents come from small livestock pass on scheme. Most of the beneficiaries were in the poor range before participating in small livestock pass on scheme but are now in the medium range in terms of wealth. 1 to 20 percent was the percentage that was saved from the sell of small livestock and their products in 2013. That includes income from sale of live animals and their products like meat, milk and skins. In terms of expenses from 2012-2013 on small livestock supplementary feeds, there is none since both chicken and goats are free range. There are risks associated with such a system because some animals got killed by predators, or got lost or contacted diseases. On shelter for goats, each beneficiary used 80 US dollars, while those with chicken used 35 US dollars. For medication each household on average used 4 US dollars. Interviewees indicated that Agricultural Extension officers, para-vets and local authority initiated the small livestock pass on projects in ward one but before the projects started there was no consultation with the local community to determine whether they wanted the projects or not and the type of livestock to be given. This highly impacts the sustainability of the scheme because beneficiaries do not feel they own the projects and hence that is why some are not even selling the livestock because they are afraid of being reprimanded by the donor if they sell before being given the go ahead. It also came out that this also contributes to tethering of animals (goats) by many respondents because they fear that they may lose the animals and the donor would report them to the police. Goats are supposed to be under free range and due to tethering some end up being slim and unhealthy. Some beneficiaries give the goats and chicken the name of the donor an indication that they have not accepted ownership of the animals. It came out from the interviews that small livestock pass on scheme is located in ward one not because it is the donor that chose the area but it was the local authority, the Neshuro Rural Development Council and

the local chief that gave the donor the area. The donor had to seek clearance from the provincial governor, district administrator; rural district council and the local chief, in order to start the scheme in ward one. This hierarchical chain impacts negatively on the sustainability of the scheme because that was the reason why some beneficiaries got the livestock late in May 2012 instead of January 2012. In terms of economic viability of the scheme, the researcher got mixed responses. Some point out that the scheme is viable since pass on has been done for about 85 percent of the first beneficiaries. However, others are arguing that it is not totally viable since some beneficiaries have sold their assets to buy medicines for the sick livestock instead of being given everything. Most of the interviewees concur that locals are benefiting from the pass on scheme because there are visible changes that were brought by the projects. Those that had no chicken and goats before are now proud owners of these livestock and have boosted their asset base. Those that could not manage to have three meals a day said that now the numbers of meals have increased together with the quality of food. The standard of living has generally improved for the beneficiaries of the scheme. Some had mud houses built with poles and daga but now due to the benefits of the pass on scheme, they are proud owners of brick houses with zinc or asbestos roofing instead of grass thatching. Interviewees indicated that there are many challenges faced in the projects and both the implementer and the beneficiaries are making every effort to address them. A summary of problems identified by respondents:

- Death and disease of livestock.
- Goats being slow at producing, miscarriage and theft.
- Long distances to water for livestock.
- Some tensions over delays in passing on livestock and some individuals not acting in good faith with regard to the passing on process.
- Problems were experienced with disease and mortality of poultry, the indigenous chickens, distributed, where mortality was more than 45 percent and also affected existing local poultry stocks.

A number of visible changes to the beneficiaries have made them to say that the pass on scheme has contributed a lot to improve their livelihoods. In terms of poverty alleviation and food security they pointed out that the projects are contributing a lot since they are now able to have enough food and sell their livestock to pay school fees for their children thereby reducing school dropout rates. Some indicated that their status in society has greatly improved with the coming of the pass on scheme. All the interviews have indicated that there is no exit plan by the donor. The absence of an exit plan negatively impacts the sustainability of the pass on scheme because the implementation period of 2 years is not adequate to achieve all intended impacts. In some cases respondents pointed out that this resulted in projects terminating before they were yielding the intended benefits (for example small livestock) or before a complete 'life cycle' could be completed. It came out that this should be part of training by the donor to beneficiaries if the scheme is to continue surviving. Many respondents are of the opinion that small livestock pass on projects are not totally sustainable as a strategy for poverty alleviation and food security because of so many constraints faced by the beneficiaries and stakeholders. Some have pointed out that it is just a way of creating employment for their people by the donor, while others said that it is because of the government that does not want training to reduce a farmer or beneficiary to totally depend on the donor.

Discussion

This discussion which follows is an attempt to find meaning to the data presented from question 1.0 to 4 on the questionnaire and the

interview. This is to address research questions given in Chapter one.

There are some benefits which accrue from the small livestock pass on schemes to vulnerable households as indicated by a number of respondents. There were responses pointing out that benefits like meat, milk, skin and manure were direct benefits to households. In addition to that, there are cases whereby the ownership of small livestock raised the status of the beneficiaries in society. Others were of the opinion that their quality of life has improved and their children are now going to school in uniform and school fees being paid for the whole term.

There is ample evidence that both beneficiaries and stakeholders face constraints in the projects. The problems are that of endemic diseases, resistance from first beneficiaries to pass on the animals to the next beneficiaries, unavailability of an exit plan by the donor, lack of monitoring and follow up as well as poor breeding by the animals given. This is further exacerbated by high mortality rates among the livestock given, goats and chicken due to abortion and high cost of medicine to prevent or treat livestock diseases. Besides the above challenges, respondents appreciate the importance of goats and chicken provided under the small livestock pass on scheme. What is lacking is enough consultation with the community and design of back up training and an exit plan by the donor. Training on small livestock rearing and management given to beneficiaries by Africare is very valuable and there is need for continued support to maintain such projects in the rural areas but making sure to maintain their sustainability

Conclusions

1. People who are taking part in small livestock pass on projects done by Africare in ward one in Mwenezi District are gaining some benefits especially income, meat, manure and goat skins. They even managed to buy some other animals like guinea fowls, donkeys and turkeys from the income they got from the scheme.
2. There are many constraints faced by beneficiaries of the small livestock pass on scheme and this affects negatively the sustainability of the scheme.
3. There is need to involve the local people in the planning of projects and decision making in order for them to feel ownership of the projects instead of passing on all decision for them.
4. There is need for an exit plan by the implementing donor so that the small livestock pass on scheme will not die away with the departure of the donor.

From the findings of the research it is recommended that:

- The donor consults widely with the local community before implementing a project that targets poverty alleviation and food security. That will enhance the sustainability of the project.
- Local communities should be allowed to choose the type of livestock they want under such schemes.
- It is also recommended that beneficiaries be given animals in time and disease prevention be done through strict monitoring and follow ups by the veterinary workers with the assistance from the government.
- There is an improvement in terms of marketing and the spread of marketing information and infrastructure like the selling pens. There is need for good maintenance of the infrastructure once built like the goat selling pens at Turn-P closer to the ward center.

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