ABSTRACT
The study sought to assess the efficacy of harnessing forest resources to enhance rural livelihood, reduce poverty and land degradation in Mushandike. In many parts of Mushandike, the remaining natural forests and the biodiversity treasures they harbor are at risk from agricultural and grazing expansion, excessive exploitation and uncontrolled wild fires. Deforestation continues because converting forests to other uses is almost always profitable for individual farmers. The human imprint on the forests emerges from millions of individual decisions in pursuit of food and livelihoods. However society as a whole bears the costs of lost biodiversity, global warming, smoke pollution, and degradation of water sources. Many people who depend on these forests for important elements of their livelihood are facing a grim future if these forests continue to degrade and disappear. The research used both quantitative and qualitative research methodologies. Questionnaires and in-depth structured interviews were the major instruments used to gather data. The research noted that farmers in Mushandike have not benefited much from forest resources; hence they are in a situational prism of ‘rich forests, poor people.’ Forests in Mushandike are constantly undervalued in both economic and social terms, with much of the environmental value of forest ecosystems falling outside of formal markets. The research further noted that sustainable forest management is essential to achieving sustainable development and is a critical means to eradicate poverty, significantly reduce deforestation, halt the loss of forest biodiversity and land and resource degradation, and improve food security and access to safe water and affordable energy. The research recommends that confronting forest conservation challenges requires assessing and managing inherent trade-offs between immediate human needs and maintaining the capacity of ecosystems to provide goods and services in the future.

Keywords: Forest Resource Conservation, Sustainable Development, Poverty Reduction, Zimbabwe

INTRODUCTION
The current production systems in Mushandike have resulted in demand for more agricultural land, thereby compromising the capacity of the forest to sustain the ever increasing demand for household food. Exploitation of forest resources in Mushandike has resulted in the diminishing of biodiversity, fragmentation of habitats, and over utilization of native species in the forests. Farmers in the study area have unclear titles to their land; thus their land tenure is insecure. The main source of vulnerability is great climatic variability and drought, leading to crop failure, weak animals and the distress sale of animals and assets. Population density is modest; however pressure on limited amount of cultivated land and forests is very high. Overgrazing is common, resulting in low livestock productivity, environmental damage and desertification. Poverty is extensive, often severe, and accentuated by droughts. There is very limited potential for agricultural development, except where irrigation can be developed and where water resources cannot be overexploited. The existence of forest resources has not benefited poor households because the elites have captured financial value which is available.

The forest and farming sector in Mushandike presents challenges. Communities in Mushandike are faced with acute food insecurity and most households are malnourished. It is attainable that forests can be conserved while poverty is being reduced, but in the study area, these two objectives have often conflicted. Without concerted efforts to resolve this conflict, forests in the study area will continue to disappear.
Striking a reasonable balance between the interests of development and equally local concerns about the environmental consequences of deforestation in the study area is one of the greatest challenges being faced. Many resettled farmers in Mushandike, have continued with traditional way of life based on communal ownership of resources. They have also intensified clearing of forests to earn a living by raising crops and livestock. Deforestation in the study area has continued because converting forests to other economic uses has been profitable for individual farmers. However, the net results have been devastating for the society as a whole. The cost of global warming, lost biodiversity, pollution and degradation of water resources has heightened household food insecurity (Chifamba and Mashavira, 2011).

The study area is losing thousands of hectares of forests every year to other land uses (Chifamba and Mashavira, 2011). However it is vital to note that none of the land use systems that replace the forests can match it in terms of biodiversity richness and carbon storage. What will replace forests (and for how long) is, therefore, always worth interrogating, both under the current mix of policies, institutions, and technologies and compared with possible alternatives (Lele and others, 2000f; IPCC, 2000; Dobie, 2001). Many of the problems associated with managing forest resources in the study area stem from a lack of systematic and operational approaches for assessing and monitoring forests depletion. As a result there is no mechanism for sound targeting of interventions. Furthermore, the removal of vegetation has left the land surface bare and exposed to degradation by water, wind and leaching. The efforts to re-establish plant and tree species in de-vegetated areas has often proved difficult because of harsh environmental conditions for germination and establishment. The threat posed on the environment by climate variability and anthropogenic factors has resulted in environmental insecurity (Carter, 1999, Chifamba and Mashavira, 2011).

Land use practices such as fuel wood collection, forest grazing and road expansion have caused degradation of forest ecosystem conditions, in terms of productivity, biomass and stand structure and species composition. Land use has also degraded forest conditions indirectly by introducing pests and pathogens, changing fire fuel loads, changing patterns and frequency of ignition sources, surface radiation balance and changing local meteorological conditions. The combined effects of land use and extreme climatic events pose serious impact, both on direct health outcomes (such as heat mortality, injury and fatalities) and on ecologically mediated diseases (Anderson, 1987). For example Hurricane Elaine which hit the study area in 2006, exhibited these combined effects: 192 people perished, widespread water and vector-borne diseases ensued and 200 000 people were left homeless (Dewees, 1996). Areas with extensive deforestation and settlements on degraded hillside or floodplains suffered the greatest morbidity and mortality.

Poverty, forest exploitation and land use in Mushandike Resettlement make a complex and challenging system with many flaws and interacting elements. Poor farmers do not want to be poor, and few choose actively to damage their environments. The reason so many are living on the edge of survival is that too many of their traditional approaches to agricultural production are breaking down. Economic growth has been insufficient to offer alternative means of employment for the rural poor in Mushandike Resettlement. Profits from farming at low levels of productivity have been too small to allow farmers to reinvest in their farms and maintaining productivity at acceptable levels (Hyde and Sedjo, 1992). Meanwhile, continual increase in population has depleted forest resource bases and social entitlements that hitherto provided a state of equilibrium in Mushandike Resettlement. Thus, an evident priority in the struggle against poverty in the study area lies in proper environmental stewardship. Unless priority is invested in conservation of forests, reducing the likelihood of crop failure in drought years through improved land and water management and multiplication of palatable, drought resistant and early maturing varieties, farmers in the study area will remain vulnerable. The regeneration of forests and natural vegetation is necessary for soil fertility management and sustainable development.

METHODS AND MATERIAL

The Study Area

Mushandike resettlement area is situated on the southern part of the country. The area has a population of 30,509 and the area covers approximately 17,874 hectares (Central Statistics Office, 2011). The area is in the agro-ecological region 4, which receives 250-300 millimetres of yearly rainfall. The study area’s main habitats are agricultural lands, forests, and rangelands that are home to 170 villages. Most farmers rely on both off-farm and on-farm income. Over the past years, farmers’ coping strategies have included relying on forest resources, intensifying agriculture or at times exiting agriculture. The major challenges Mushandike are related to the environmental, natural resource base degradation and its associated climate variability and change and its social impacts on the livelihood of the communities. The major key and pressing problem in the area is the
ongoing natural resource degradation, which leads to soil and vegetation loss, fertility decline, water stress, drying of water resources and rivers. The rainfall in Mushandike is low in amount, erratic, with uneven distribution, frequent drought is common experience. Except for valley bottom, the soils have low organic matter content, highly eroded and poor in fertility. The existence of high temperature cause high evapotranspiration rates and limit the availability of moisture. In general the ecology is fragile and the environment is unstable.

Social problems in Mushandike include low economic capacity and high risk for agricultural production and high severity of poverty. The other challenge include poor health caused by inadequate diets, contaminated water and limited infrastructure. Most importantly farmers in Mushandike value large livestock size (irrespective of land and grazing capacity) resulting in overgrazing which is one of the major causes of forest degradation in Mushandike.

Method
The study was a qualitative, descriptive study based on in-depth semi-structured interviews using open ended questions. Individual interview were the most appropriate method to gain an in-depth understanding of the impact of indigenous people, and their adaptive mechanisms. The research obtained consent from Mushandike traditional leaders and was approved by the Great Zimbabwe University Research Board committee.

Sampling of Participants
The research was purposive aiming to capture farmers, Non governmental Organisations employees, and extension officers. The initial participants were recruited during the first trip made by the researcher to Mushandike. After that the researcher conducted village heads to reach potential participants. Some of the participants were found through snowballing technique, where participants were requested to suggest other relevant participants. Participants were conducted by phone and if they agreed to participate, were asked to choose the time and place for the interview.

Data Collection
The interviews were conducted during four month in the summer of 2011. Interviews were conducted at convenient places chosen by interviewees. The interviews were digitally recorded and lasted for between 45 and 60 minutes. An interview guide was used and respondents were asked to reflect upon: the role of forests in reducing poverty; experience of changes in their environment over time; their thoughts about these changes; and the future of forest resources in the study area. Through the entire process of interviewing, the interview guide was evaluated and developed further several times using an emergent design. The researcher wrote brief notes to preserve thoughts emanating during the interviews.

Data Analysis
Data was analysed using qualitative content analysis as described by Graneheim and Lundman (2003), a method similar to one described by Krippendorff (2008). In the systematic analysis, both the manifest content and the latent meaning of the content were captured, aiming at comprehending participants’ experience of climate change. Each interview was transcribed verbatim by the researcher. Interviews were read many times to get a sense of the whole. The analysis then proceeded with detailed analysis of each interview and an open coding process with the use of the Open-code software (10, 11). The data was grouped into meaning units that were then labelled with codes, capturing the content of the units. A meaning unit comprised words, sentences or paragraphs containing aspects related to each other through their content and context. After coding the interviews, another coding was done, refining codes to make sure that the latent meaning is captured. The codes were evaluated so that they did not refer to the same aspects in-between interviews. The researcher requested a fellow lecture in the department of Rural Development to code the data, and this ensured that concordance in the interpretations and thereby increasing trustworthiness.

RESULTS PRESENTATION AND DISCUSSION
Age- Sex Profile of Respondents
Respondents were drawn from all sexes and varying age groups. Their ages ranged from slightly below 20 and 60 years Female respondents were slightly more than their male counterparts as they constituted 58 % as compared to 42 %. Those who were below the age of 20 were aging 18 and 19 years. All participants in the research area were drawn from people who had attained the 18 years legal age of majority. Participants below the age of 20 constituted 19 % of the total sample. All respondents who participated in the research were of the economically active group as they ranged from the age slightly below 20 to 60 and none was above the retirement age or a minor. Table 1 shows the age-sex composition of the sample.

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>FEMALES</th>
<th>MALES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 20 years</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>20-30 years</td>
<td>27</td>
<td>14</td>
</tr>
</tbody>
</table>
Marital Status of Respondents

The group was composed of people from all marital status as both single, married, widowed and divorcees were included in the sample. Majority of them were married and they constituted 51% and of this, 32% were females. The single also constituted a significant figure as they constituted 28% of almost equal males and females, (15% and 13% respectively). The widows constituted 14% equally divided between two groups and divorcees constituted 7%. The research noted that households with poor economic resource base usually rely on the exploitation of forests to meet household requirements. Thus, poverty is a factor which should be urgently addressed if the objective is to integrate forests in sustainable economic development. The graph 1 shows the marital status of respondents.

Graph 1: Marital Status of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Married</th>
<th>Single</th>
<th>Widows</th>
<th>Divorced</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-40 years</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>41-50 years</td>
<td>8</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-60 years</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td></td>
<td></td>
<td>42</td>
</tr>
</tbody>
</table>

Source: Survey, 2011

Educational Qualification of Respondents

The study showed that participants had attained varied educational levels, which ranged from illiterate through semi-literate to holders of tertiary education. The sample indicated that there were few participants who were in the illiterate group, as they were only 3% and all of these were women. There was also glaring evidence that women were of relatively lower educational qualifications compared to their male counterparts. The majority of them (39%) were of relatively lower educational qualifications as they had only attained Ordinary level and below. 25% of respondents who hold Ordinary level were males, and female constituted 19%. Very few females (9%) had managed to attain tertiary education. On the other hand their male counterparts were the majority in the higher levels of education as 40% had attained at least tertiary education. Generally females are still found at the lower levels of the education ladder and males dominate on the other part. The majority (97%) of participants were literate and if capacitated can participate in the conservation of forest resources to prevent cases of food shortages and environmental degradation. Table 2 shows the marital status of respondents.
Table 2: Marital Status of Respondents

<table>
<thead>
<tr>
<th>EDUCATIONAL LEVEL</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>illiterate</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Primary and junior certificate</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Ordinary level</td>
<td>25</td>
<td>19</td>
<td>39</td>
</tr>
<tr>
<td>Tertiary</td>
<td>40</td>
<td>9</td>
<td>49</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>33</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Survey, 2012

Functions and Management of Forests in Mushandike

Farmers in Mushandike have been dependent on the services that ecosystem provide. However, over the past decade, the impact of human activities on the provision of these ecosystem benefits was relatively small and localised. The scale of human activities has increased, thereby altering the ecosystems in ways that have never been experienced before. The changes experienced in Mushandike have threatened the services that forests provide.

From the participatory rural appraisal it became clear that forest in Mushandike are important to the rural households. Forests in Mushandike are source of energy, that is, fuel wood, as well as source of medicines, building poles, thatching grass, wild vegetables, grazing grass, wild fruits and mushroom. Farmers in the study area indicated that there are some products which are harvested throughout the year, and some products are seasonal. Table 3 shows some of the products which are harvested from the forests and the month in which they are harvested. Interviews indicated that among the seasonal crops which are harvested from the forests are wild fruits, wild vegetables, mushrooms, honey, charcoal and thatching grass. Other products which are harvested from the forests such as fuel wood, medicines building poles and fodder are perennial. Figure 3 shows seasonality of forest products in Mushandike.

<table>
<thead>
<tr>
<th>Forest Product</th>
<th>Jan - Feb</th>
<th>Mar - Apr</th>
<th>May - Jun</th>
<th>Jul - Aug</th>
<th>Sept - Oct</th>
<th>Nov - Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fodder</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charcoal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Poles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roots</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Survey, 2011

Forests in Mushandike provide food, fuel, fodder, herbs, construction materials and income for the rural poor. In this dry zone, where annual rainfall is low and its distribution erratic, the products obtained from the forests have been critical elements in the livelihood and survival of rural communities in Mushandike, especially in the times of drought. The collection of leaves, fruits, barks, roots and twigs from the forests have long been a method of ensuring household subsistence during droughts and in solving imbalances in the diets of rural households. In dry years, when the millet (Pennisetum glaucum) crop failed fruit trees were collected and pounded into flour that was used to prepare different kinds of food. The leaves of Maerua crassifolia, a tree that remains green all year round, are eaten to relieve hunger. The collection and sale of forest products such as stimulant leaves, fruits, medicine, fodder and firewood has provided an important contribution to household income.

The research further revealed that up to 80% of farmers in Mushandike rely traditional medicines for primary health care. Farmers harvest roots, leaves and bark for medicinal purposes. Tree barks are harvested using axes, while the roots are harvested using hand hoes. Extraction of the drugs from barks and roots is usually done by means of the processes of infusion and decoction. The use of indigenous trees for medicine is widespread probably due to poor health services which are often not stocked with drugs. The
income from forests, in absolute terms wealth households derived proportionately more of their forest use in Mushandike. Although poorer observes interesting dynamics between wealth and of food and resources are running low. The research of resources for households during times when stocks forecasts in Mushandike have provided vital backstop under the pressure of current unsustainable demand. The ability of Mushandike forests to continue to provide such forest products is the pressure of current unsustainable demand. Forests in Mushandike have provided vital backstop of resources for households during times when stocks of food and resources are running low. The research observes interesting dynamics between wealth and forest use in Mushandike. Although poorer households derived proportionately more of their income from forests, in absolute terms wealth households capture more of the financial value available. As a result, there is a large income disparity between wealth and poor households.

DISCUSSION

Emerging Problems in the Use and Management of Forests in Mushandike
The research revealed that forests in Mushandike are one of the mismanaged resources. Forests are seriously undervalued, many of their environmental benefits do not enter the markets, and poor governance has fueled illegal activities. Although some degree of deforestation is likely to continue even with strong economic management and governance, the rapid rates of deforestation in recent decades are largely a result of the spill-over of poor policies in other sectors, including macro-economic and trade policy, and lack of effective governance in the sector.

Despite significant resource flows, local concern, and political pressure, the potential of forests in Mushandike to reduce poverty, realize economic growth, and valued for their contributions to the local environment has not been fully realized. A combination of market and institutional failures has led to forests failing to contribute as significantly to address these issues as would be possible under good economic and technical management. Instead, forests in Mushandike demonstrate the failure of markets and governance to capture their full potential. The study revealed that forests in the study area have been disregarded in economic policy and have been plundered for short term gain and, frequently, removed and replaced by less valuable and less sustainable activities. Such loss with vegetation has been at the expense of local communities which depend on these forest resources for their livelihoods (United Nations Food and Agriculture, 1999). Despite Mushandike rural district’s need for financial resources for development, it has failed to capitalize on the value of the existing forests. The research noted that annual revenue loss to Mushandike District Authority from failure to collect taxes from the forest is above US$ 75 000 and the annual market value of losses from illegal cutting of forests is placed at over US$ 10 000 (Chigwenya and Chifamaba, 2010). Unfortunately, rural strategies in Mushandike have neglected forests, because these are mistakenly viewed as outside the mainstream of agricultural development. If these resources could have been adequately tapped, communities could have managed to improve their household food security. Poverty in Mushandike Resettlement cannot be reduced unless forests resources can be sustainably developed and better used.

The research further noted that conflicts over use of forests have affected sustainable exploitation of forest resources in the study area. Forest policy has become one of the most controversial and heated in rural development (Brunner and others, 2000, Binkley, 1999 and Dixon and others, 2001). To use forests for poverty reduction requires a strong institutional framework and an effective regulatory environment in which the rights of local people, especially the poor are recognized and protected, while opportunities to develop sustainable forest businesses are provided to the locals and other groups. Such a framework has been lacking in the study area. Dealing with these issues puts a premium on participation, conflicts resolution, and an institutional structure attuned not only to the technical and economic issues in forestry but also the inevitable conflicts.

The study also revealed that markets have failed to capture environmental services of forests in the study area. Forests in Mushandike deliver some products, primarily lumber and fuel wood through markets. According to Guergueva and Kirk, 2000, many of the forests’ other contributions to the environment, biodiversity, and the stability of the local climate are not recognized in terms of financial values and therefore go unrecognized in the markets. Although rarely estimated, the indirect consequences for a nation’s economy and environment of this undervaluation are likely to be even more devastating as local people lose their sources of fuel wood and fodder and the protection that intact forests offer their water and soils.
While collaborative forest management has ensured greater degree of involvement of rural users, this involvement has not always benefited the poorest of the poor (Kaimowitz, 2008; International Panel on Climate Change, 2000). Some earlier interventions were based on insufficient understanding of the circumstances under which collaborative management is appropriate and of the realities of the rural populations involved. The study also exposed serious problems in the ways in which the government has devolved responsibilities for forest management. The government has failed to transfer effective authority, restrictions on rights granted to the poor, and ineffective and frequently inequitable local institutions.

Climate change is projected to significantly alter the composition and possibly the productivity of forests in the study area. Such alterations are due to changes in the mean, variability, and extremes of temperature and precipitation, coupled with an increase in disturbance regimes, that is, pest outbreak and fires. The economic consequences of climate change are expected to fall disproportionately on the poor. Climate change has its greatest negative impact in the study area, with higher temperatures, decrease in total rainfall, El Nino-like conditions, and the increase in wind (Mc Calla and Ayres, 1997; United Nations Food and Agriculture, 1999). These changes have led to, among other things, droughts and floods which often affect the poor and exacerbate their already inadequate living conditions. Climate change has exacerbated inequalities in health status and access to adequate food, clean water, and other resources. Although some adaptation is possible, poor farmers in Mushandike are unlikely to have the institutional, technical, and financial means to adapt.

**Recommendations for Stakeholders in Forest Resources Management**

The major point for stakeholders in Mushandike Resettlement area is that without tangible incentives linked to the supply of local environmental benefits, people will continue to cut down forests. The research revealed that attempting to conserve forests in the study area is futile without addressing the needs of poor local people. The mostly commonly practiced pasture-livestock system, which occupies the vast majority of converted forestland, is profitable for smallholders (at least in the short term) but entails huge carbon emissions and biodiversity loss. The land use alternatives that are attractive to local in the study area are at odds with local environmental interests (Bass and Simula, 1999). Thus, farmers in the study area should be provided with alternatives which will assist farmers from desisting from relying more on the exploitation of forest resources.

Sustainable forest management should emphasize on harnessing the potential of forests to reduce poverty, integrating forests in sustainable forest management and protecting vital local environmental services and values. Addressing these components together makes forest conservation a complex and multifaceted. It is not only about protecting trees but also involves a complex interaction of policy, institutions and incentives. A narrow perspective on forestry, even sustainable forestry, is insufficient. To be effective, forest conservation strategy requires a multi-sectoral approach that addresses cross-sectoral issues and takes into account the impacts of activities, policies, and practices outside the sector on forests and people who depend on forests for their livelihood (Chomitz and Kumara, 2000; Gilmour and Fisher, 1991).

Effectively addressing the poverty issues related to forests is not straightforward. The study noted that remedial strategies can generate internal conflicts. Assistance should be provided judiciously to those dependent on or who live near forests so that they may develop their abilities to service the forest products market. If this is not done correctly, it can increase competition for forests, exclude access to the poorest of the poor to essential forest products, and disrupt communal systems of management by groups that traditionally have relied on common property forest resources for meeting essential fuel wood, grazing and other needs (Gregersen, 1998; Kaimowitz, 2010). The research shows that forest outcomes are crucial for poverty reduction. If forest issues are not fully incorporated in a broad assistance strategy, the broader goals of poverty reduction will not be met.

Stakeholders should focus on creating economic opportunity, empowerment, and security for rural people in Mushandike, especially the poor. The main instrument should be through policy and institutional strengthening to ensure that the rural poor are able to manage their natural resources, especially forests, for their own benefit (International Panel on Climate Change, 2000; Contreras-Hermosilla and Lele, 1997). This should assist the Zimbabwean government to build the capacity to support and regulate community use of forests. Impact should be reflected in strengthened tenure rights, improved food security, and spiritual welfare among the poorest of the poor through assured access to essential; forest products on which they depend primarily for subsistence.

The study revealed that forests in Mushandike are one of the most mismanaged resources. The reason for this is that forests are seriously undervalued, many of their environmental benefits do not enter markets, and poor governance has fuelled illegal activities. In addition the impact of on forests of policy and investments in other sectors is not well understood or is disregarded. Although some level of deforestation...
is likely to continue even with strong economic management and governance, the rapid rates of the spill-overs of poor policies in other sectors. Thus stakeholders should support efforts to bring about socially, ecologically and economically sound management of forests. In this regard stakeholders should encourage independent monitoring and certification of forests operations, an increasing accepted approach to ensuring good forest management. It will help to ensure that any direct investments in forests or indirect support through financial intermediaries are contributing to improved forest management and more sustainable outcomes, including the protection of biodiversity and ecologically sensitive areas (Treeweek, 1999; Pearce and others, 1999).

Stakeholders should work together, both financially and analytically, to realize the objectives of better forest conservation and management at local level. Partnership among stakeholders should bring to the forest sector in Mushandike knowledge that is widely shared and accepted and financing that is blended from public and private sources. According to Rozelle (2000) combining knowledge and sufficient financing will provide powerful incentives to bring forests into the mainstream of sustainable development and to assist in maintaining environmental services. Exceeding the threshold of knowledge and financing will be the most critical step to reverse the negative outcomes of increasing poverty and environmental degradation that often accompany the exploitation of forest resources in Mushandike.

Forest conservation programmes in Mushandike should give priority to poverty reduction, while also focusing on lowering the wider risks of environmental degradation, biodiversity loss and global warming. To meet these priorities, stakeholders should focus on people as well as trees. The strategy should recognize that forests are always part of larger economic, environmental, and governance systems that must work together for the goals of poverty reduction, sustainable economic development, and environmental protection to be met (Poore and others, 1999).

The study noted that sustainable use of forests requires the participation of all rural populations, including women. Although women’s needs often differ from those of men, many forest programmes have tended to overlook women’s specific needs regarding forestry, because policy makers often lack adequate data, information, and methodologies to address them (Chigwenya and Chifamba, 2010). The lack of gender awareness constrains the sustainable use and management of forests and forest ecosystems in the study area. Stakeholders should ensure that country gender assessments are designed to help identify gender dimensions of forestry and rural livelihoods in Mushandike.

It is vital to note that economic growth alone cannot combat poverty effectively. More focused intervention is required which address opportunity empowerment, and security and that acknowledge the potential conflicts inherent in addressing the different groupings of people who depend on forests in different ways. A broader livelihood approach must be taken that places forests (production capacity, institutional and legal structures, market access, and tenure) in the broader context of rural development (Treeweek, 1999; World Institute Resources, 1988; United Nations Food and Agriculture, 1999). Priority areas for stakeholders should include promoting policy, institutional and legal frameworks that ensure that the rights of local forest dependent people are protected; empowering women, the poor and marginalized groups to take a more active role in formulating and implementing rural forest policies and programmes; supporting the scaling up of collaborative forest management so that local communities can manage their own resources, rehabilitate and protect forests, market forest products and benefit from security of tenure.

The study also noted that although most farmers in Mushandike are poor in absolute terms, there are considerable variations in levels of wealth. This variation usually means that only the better endowed, or politically more powerful, are able to take advantage of the more rewarding forest production opportunities that are available. The research noted that all too often, their advancement is at the expense of the poorest, who usually find themselves excluded from access to the resources on which they rely on. Stakeholders’ activities must facilitate forests’ roles in reducing poverty, integrate forests in sustainable economic growth, and protect the local environmental and cultural values that ecosystems provide. In making these efforts stakeholders need to function at the local level. Most importantly, stakeholders’ contributions need to be based on partnerships, consultation, and participation.

Furthermore, the research noted that there is need to develop clear rural development and natural resources framework that should focus on environmental sustainability and protection of environmental commons, which includes atmosphere (climate change and ozone depletion), biodiversity, forests, food and water security, and land management; long term sustainability with emphasis on the empowerment of poor people, voice, engaging civil society in dialogue, community based development, and managing pre- and post-conflicts situations. Forest conservation strategy in Mushandike should aim to improve people’s quality of life by focusing on enhancing livelihoods and reducing environmental degradation that often accompany the exploitation of forest resources in Mushandike.
health risks and the vulnerability of the poor to natural disasters (such as forest fires) and improving the quality of the local commons through approaches that include special; financing mechanisms to compensate local communities for the incremental costs they incur to protect the commons. 

Stakeholders should promote improved understanding of the linkages among human activities, landscape change, and biodiversity preservation (World Bank, 2000b). Much of what can be considered by ecologists and foresters to be degradation or depletion of a forest resource can be considered by those who depending on it for inputs in their livelihood systems to be transformation and even improvement of the resource. There is therefore, a need for greater appreciation among stakeholders that the poor experience their own problems, which need to be addressed separately from environmental policies seeking to satisfy concerns about local values. To address these local concerns, stakeholders should seek opportunities to combine local initiatives with more situation-specific focus. Such linked initiatives should reflect the protective mechanisms that local users themselves adopt and the attributes of a resource that they value and seek to conserve.

CONCLUSION

Without tangible incentives linked to the supply of local environmental benefits, people will continue to cut down trees. Attempts to conserve forests in Mushandike Resettlement are futile without addressing the needs of poor local people. Avoiding deforestation can generate local benefits. The research shows that intermediate land uses can store significant quantities of carbon, maintain flows of ecosystem services, generate good economic returns, and reduce pressure on remaining forests.

REFERENCES


