



Participation and Challenges of Women in Environmental Management: A Case of Buhera South District, Manicaland Province, Zimbabwe

Lloyd Pisa^{1*}, Sinikiwe Dube¹, Nelson Mhlanga², Trymore Marikomo³

¹Department of Environmental Science and Technology, Marondera University of Agricultural Science and Technology, Marondera, Zimbabwe

²Oakridge Sustainability Consulting, Milton Keynes, United Kingdom

³Department of Environmental Science, Women's University in Africa, Harare, Zimbabwe

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Contact

*Lloyd Pisa

lpisa86@gmail.com

ABSTRACT

Women form the backbone of most land restoration efforts in Africa's rural communities. In agriculture and land rehabilitation, they offer at least 60-80% of the world's labour. However, women in rural areas are facing multiple obstacles in accessing finance and environmental education which is essential input to increase information dissemination to curb environmental degradation. The study assesses the position of women in environmental management within in rural communities was carried out in May 2021. The focus area for the study was ward 30 of Buhera South District, Manicaland Province. Interviews and questionnaires were used to gather data of women's precipitations, participation and challenges their faced in their involvement in environmental management. Both primary and secondary data were used in the analysis. Purposive sampling was used to isolate the 5 villages. A sample of 100 respondents were randomly selected and gave a response rate of 80%. A self-administered questionnaire was used in conjunction with the focus group discussion. The results showed that mostly women participated in environmental management projects. There was strong evidence to support that women's participation as could be improved through incentives for participation. Giving women more property rights in rural areas may also improve participation as it would give them a sense of ownership. There was a positive correlation between willingness to participate in environmental management issues and level of education. Empowering women through incentives, land rights and education may yield positive results in protection the environment and sustainably managing Africa's natural resources.

1. Introduction

Women play a major role in the fight against land degradation. They provide 60-80% labour and produce 80% of the food. Their efforts, however, go unnoticed (FAO, 2005; 2008). Land rehabilitation is guaranteed when women are empowered to assert their rights, leadership possibilities and choices. Through their toil, knowledge and nurturing capacities, rural women make tremendous contributions to the management of the environment through gully reclamation and other land rehabilitation projects. However due to power imbalances between men and women, they are unable to achieve their goals as they are not counted as agents of change. Lack of appreciation to the roles of rural women fosters policies which may be misdirected and

disadvantaging women in the process. Women continue dominating in land rehabilitation projects. Of note, women provide most workforce in gully reclamation projects and they constitute the majority of the human resource in land reclamation. Evidence shows that 80% of the land rehabilitation labour is from women.

However, no meaningful remuneration is provided for the labour. Saeed et al. (2017) noted that due to gender disparity, traditionally women were not involved in decision making. In light of this philosophy, they have for long been considered more as consumers than producers and decision makers (Kevane, 2004). In recent times however, their contributions and views as decision makers are becoming noticed. This is



a divergence from scenarios where their work has previously been often incorrectly documented as marginal. Women all over the world are now taking up the role of community management and carrying out campaigns to oppose the mismanagement of the environment. Furthermore, women as gatherers of fuel and water, care givers for families, sick and elderly have valuable information about their environment which can be tapped towards sustainable environmental management. For instance, women as primary users of water have played a critical role in managing and maintaining water resources.

Most families in this semi-arid region are vulnerable to food and nutritional insecurity due to degraded fertile agricultural land. Climate change as the major cause of many droughts contributed to the devastating El Nino and Cyclone Idai phenomena. Most rural areas have limited alternatives of clean energy sources. As a result, deforestation is rampant in most rural areas as firewood is the major source of energy. The recently experienced floods have also affected the environment resulting in erosion and formation of gullies. This has also been accelerated by poor farming methods being practiced. Planting downhill and streambank cultivation has also contributed to the formation of gullies. Rural women make incredible contributions to the management of the environment through gully reclamation and other land rehabilitation projects (Moser, 1993). However, due to social, economic and educational imbalances between men and women, contributions from women are mostly ignored and overlooked. Therefore, a gender analysis of environmental management is necessary, looking at gender aspects of the use of natural resources like water, air, forests and land (Maathai, 1988).

Environmental management should include equitable involvement by men and women in decision making and policy making processes. It is critical to acknowledge that men and women are not homogeneous groupings when discussing gender in the context of the environment. A report IUCN (2016) refers to gender as the characteristics and possibilities that come with being male or female, as well as socio-cultural context in which they exist. All societies create and define gender roles. Society also underpins behavior and actions that are deemed consistent with the meanings allocated to each gender. Because both men and women benefit from and conserve the environment, environmental sustainability is a gender problem. Though many programs aimed at improving environmental stewardship have overlooked the importance of integrating gender identities, there are various rules that govern what it means to be a man or woman in society. On one level it represents different social and cultural experience and secondly, it designates particular access and control over both natural and social resources (Hekman, 1990).

According to Sontheimer (2005), continuing existence images of women carrying heavy loads on their heads, cultivating on sloppy terrain, harvesting various products and trading on forest production have served to strengthen already existing gender inequalities and stereotypes that do not favour women and inclusion in environmental management programs. However, gender issues are important in environmental management. Thus, the

relationship between gender, environment and sustainable development can be said to be ridden with dichotomous dimensions and complexities. These dimensions center on among others the fact that men and women have a series of roles in society which decree their patterns of the use and management of the environment. Women and men's control over resources, particularly in Africa differs, with women being confined in various ways, resulting in them being an ecologically excluded group. Women and men participation in development and environmental management is not equally acknowledged. Women as opposed to men are disadvantaged in the provision of ecological management training and environmental policies often tend to subsume women and men under one group and assume similar effects on them, which is not really the case at all.

The women are depicted as the primary users of the environment in that they depend more on wood, water and soil for the family's daily survival even though their practical needs are not recognized by those who utilize the environment as a productive resource. Women all over the world are now taking up the role of community management and carrying out campaigns to oppose the mismanagement of the environment (Moser, 1993). Furthermore, women as gatherers of fuel and water, care givers for families, sick and elderly have valuable information about their environment which can be tapped towards sustainable environmental management. For instance, women as primary users of water have played a critical role in managing and maintaining water resources.

Women's role in environmental development and management needs to be acknowledged because ignoring women has negative effects on other developmental efforts. Urbanization has left many women with the gist of supporting families as men have migrated to urban areas that leaves many women as the invisible managers of their environment whether by choice or through circumstances (Khasian, 1992; Coleman and Mwangi, 2013).

The African continent has various ecosystems which imply different survival modes. There are certain fundamental resources that are crucial and pertinent to development all over Africa irrespective of the particular ecosystem. These issues have to do with the most basic necessities or resources for life. These include among others land, forests, fresh water and urban ecosystems. Livelihoods in most African countries are land dependent. The concern over land in Africa has therefore to do with the problems of land degradation, soil pollution, land distribution, access, control and propensity to benefit from it. Large scale exploration and mining in Africa have also led to the loss of forest resources. Notably, there are varying patterns of involvement across both genders in these activities. For instance, more men are involved in commercial harvesting of timber while more women are involved in firewood collection. According to UNEP (2000), deforestation on the African continent is a result of drought, civil war and bush fires. More important is that exploitation of forests and its aftermath has gender implications. Sustainable forest management thus requires a gendered strategy. While various policy measures in this regard have been advanced, the most important is perhaps the provision

of alternative income generating activities and energy sources to the majority of the rural poor both men and women who depend on forests for their daily livelihood. The use of tree by ordinary people degrades the ecosystem even more. Men often collect firewood by felling and processing trees, but women collect firewood from fallen branches, which has a lower environmental impact.

Maathai (1988) states that the Green Belt Movement in Kenya is a grass-root and community-based organization focused on mobilizing rural women to plant trees for environmental sustainability. To date the movement has enhanced the planting of over 30 million trees. Among its major objectives are conservation of indigenous trees shrubs and other flora. The movement aims at ensuring that the extinction of indigenous vegetation is curtailed through conserving the genetic resources for the maintenance of the ecological balance and to ensure sustainable provision of animal fodder, fruits, honey, timber, herbal medicine, building materials and all other related resources. The other aim is to control desertification and conservation of water.

The movement has also aimed at preventing the onset desertification by ensuring that catchment areas are protected and that new trees are planted to upgrade biomass levels. Moreover, it has endeavored to mobilize women groups to plant tree nurseries for sale thus improving landscapes and providing fuel wood in a sustainable way for many of such household. They also want to control soil erosion. The movement has at its core the objective of soil conservation, which has especially been a problem of highly cultivated marginal regions. This is a true reflection that gender issues are important in environmental management.

In the 1980s, the Zimbabwean government and other developmental agencies became much more aware of the need to consider gender issues in their environmental and natural resources management programs. According to **Agarwal (2010)**, policy makers first came to appreciate that women play an essential role in the management of natural resources including soil, water, forests and energy and often have a profound traditional and contemporary knowledge of the natural resources around them. This then led to women being viewed as major local assets to be harnessed in the interest of better environmental management.

Women's participation in water supply and sanitation projects is becoming increasingly important. However, experience with including women in water and sanitation programs demonstrates that extending women's participation beyond their conventional responsibilities necessitates extra work. Not only are services more effective as a result, but gender roles may change as well.

There is evidence that women are powerful drivers of environmental sustainability through land rehabilitation projects yet their efforts are not noted. Women in most rural communities have partnered with some Non-Governmental Organizations (NGOs) and other government departments like the Environmental Monitoring Agency, District Development Fund and the Forestry Commission in some projects to restore the degraded land. However, women have

less land rights and access to forests and participate less in forest management and decision making (**Picard, 1996**). This is likely to limit the potential of women to invest time and resources or adopt environmentally sustainable farming practice on land they do not own. The status quo is a result of a series of interrelated social, economic and cultural factors that force them into a subordinate role both at the household and communal levels. Worryingly, despite their role as the backbone of environmental management projects, women remain restricted in the access to environmental knowledge. Through the fusion of women with indigenous knowledge systems with some of the interventions, the community knowledge base and capacity to deal with localized biodiversity loss challenges will be enhanced.

Over centuries, rural women have played significant roles in land rehabilitation and gully reclamation. Women have more direct control over land. This place them in mainstream gully reclamation projects and sustainable agricultural practices. In a study conducted in Tanzania, **Mmasa (2013)**, established that both men and women jointly participate in several of agricultural activities. They are more actively involved in land preparation, sowing and planting. However, women take most of the responsibilities for weeding, harvesting, processing and storage. **FAO (2009)** weighed in and reported that women's effort should be accounted for and their significance and relevance in developing agricultural value chains should not be underestimated. Women play a critical primary role in the management of the environment and its natural resources on family and community levels. In communities around the world women manage water, sources for fuel and food as well as both forests and agricultural terrain.

Globally women provide for their livelihood for their families and simultaneously manage the environment. Women and men participation in development and environmental management is not equally acknowledged, women as opposed to men are disadvantaged in the provision of ecological management training and environmental policies often tend to subsume women and men under one group and assume similar effects on them, which is not really the case.

The existence of the indigenous knowledge system has catapulted the sustainable management of the environment in most rural areas. Indigenous knowledge system is a local knowledge developed over centuries of experimentation and is passed orally from generation to generation. It was found to be an important catalyst to sustainable development due to the community's direct connection to resource management and conservation. It can help to meet broader objectives of the society such as conserving the environment, developing sustainable agriculture and ensuring food security while its protection encourages the maintenance of traditional practices and lifestyle. The indigenous knowledge system helps in conserving the environment as some tree species are preserved because of their cultural importance and some is a taboo to use them as firewood. Fruit trees are also protected and debarking is done on one side and ring barking is still prohibited in most villages. These practices are still being practiced in Buhera South District as information is being passed from generation to generation though there

are some few challenges due to generational gap and dilution of cultural norms. Through the fusion of women with indigenous knowledge systems with some of the

interventions, the community knowledge base and capacity to deal with localized biodiversity loss challenges will be enhanced.

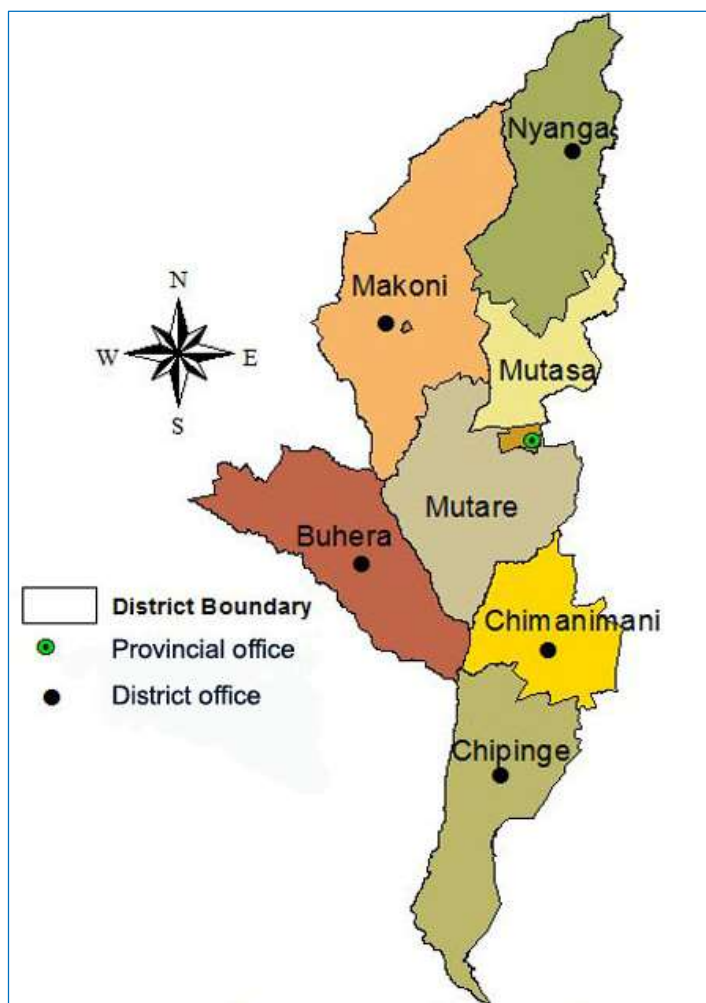


Fig. 1. Buhera District, Manicaland Province, Zimbabwe

The recently experienced floods have also affected the environment resulting in erosion and formation of gullies. This has also been accelerated by poor farming methods being practiced. Planting downhill and streambank cultivation has also contributed to the formation of gullies. A gully is a channel or a small valley especially one carved out by persistent heavy rainfall. It can also be defined as a small valley originally worn away by running water and serving as a drainage way after prolonged heavy rains.

Gully reclamation is a process of reinstating and improving land that has been disturbed by excess runoff back to its original condition and preventing further damage to it. This can include the use of stone lined drainage which involve placing of rocks along and in the stream bed and partially burying them so that they do not wash away. The use of gabions is also necessitated to make sure that the rocks are firm. In most rural areas, most of these tasks are performed by women as there are no monetary incentives to it, their male counterparts are not willing to perform as there is no dollar sign to it. Furthermore, in most land rehabilitation

programs like the food for work program, women play a big role in managing the environment (Khadka et al., (2014).

2. Method and Materials

2.1. Description of the study area

The researcher selected Buhera South District, Gunura ward 30, as the study area. The project was targeting five villages namely Ndema, Masvo, Ndasekwa, Gunura and Kufakwatenzi. The major streams in these villages are Bonda, Manyuchi and Mutorahuku which are the main sources of water for communities during dry seasons. Buhera South lies in the natural ecological region 4 of Zimbabwe.

The area is characterized by summer temperatures of 30-40 degrees celcius and mid-winters of 6-25 degrees celcius with mean yearly temperature of 22 degrees celcius. The area experiences severe dry spells during the rainy season and frequent seasonal drought. The soils are sodic with a few patches of Kalahari sands. This study was conducted and confined to Buhera South District in Manicaland Province (Fig. 1).

2.2 Study population

For the purpose of this study, Gunura ward (ward 30) has a total population of 4682 with 2152 males and 2530 females. (Census, 2012).

2.3 Sampling methods

The researcher used both qualitative and quantitative data. Qualitative methodology involved the use of interviews and quantitative involved the use questionnaires in May 2021. The selection of household was taken by simple random sampling method. In Ndema, Masvo and Ndasekwa, the questionnaire was first piloted to 25 households and in Gunura and Kufakwatenzi the questionnaire was piloted to 10 and 15 households respectively so as to remove all sources of weakness, error and bias. The researcher managed an online interview with district Environmental Management Agency (EMA) officials (EMA, 2007).

2.4 Questionnaire survey

The questionnaire designed for this survey was meant to collect information on the roles played by rural women in environmental projects. The main focus of the questionnaire was the specific strategies used in managing land degradation and promoting land rehabilitation. The other questions upon which the survey was anchored related to the different stakeholders that work with rural communities in environmental projects and the willingness of the residents to spearhead these projects.

3. Results and Discussion

The findings obtained from the research method that was used, that is, interviews and questionnaires were matched with the data obtained from secondary and primary sources. Data analysis and presentation of the findings had to be conducted after all scheduled interviews and questionnaires were over. The data was collected from five villages in Gunura Ward 30, Buhera South District.

3.1. Response rate

The response rate on the data gathering instruments used is summarized in Table 1. The questionnaire had a response rate of 80%. A total of 100 questionnaires were distributed. The high response rate may be attributed to the strong community networks in Buhera and keen interest in environmental projects as most projects are associated with some sort of direct benefit to the participants. This was made possible probably due to the interests that the research topic generated in the minds of most respondents in Ward 30 of Buhera South District. The navigation with the Buhera District was also fairly easy and this made it possible to reach more participants.

Table 1. Showing response rate from 5 villages

Village	No. of Questionnaires Sent	No. of Returned Questionnaires	Percentage (%)
Masvo	25	22	88
Ndasekwa	25	20	80
Ndema	25	20	80
Kufakwatenzi	15	11	73.3
Gunura	10	7	70
Overall	100	80	80

3.2. Respondent's level of education

Fig. 2 show the level of education the people interviewed had at the time of the interview. Most of the people interviewed had at least primary education with only 2% having to form of education. 60% had primary education and 30% having secondary education. 8% of the people interviewed had tertiary education.

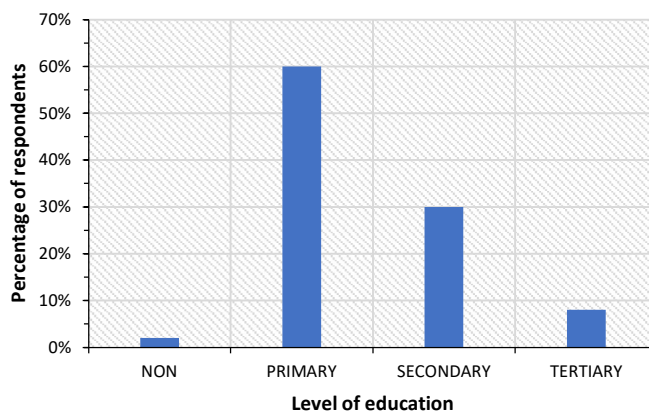


Fig. 2. Level of education

Fig. 2 shows the level of education from the response. It was observed that most of the respondents to the questionnaires attained at least a grade 7 primary level. This gave the researcher some assurance that the respondents understood the language that was used in the questionnaires. It was observed that only 2% of the respondents was illiterate.

As a result, the researcher managed to explain the contents of the questionnaire to them in vernacular. It was also observed that from the total respondents; 60%, 30% and 8% had primary, secondary and tertiary level of education respectively. Early marriages, religion, lack of financial support and family responsibilities are a major factor in determining how much rural women pursue education in Zimbabwe. Though the government has made great strides in reducing the educational gap between men and women, these issues remain. The level of education for respondents has a contributing factor on appreciating different roles women can play in trying to combat land degradation and also trying to be environmentally innovative. Those who are mature and educated have a better understanding of the sustainable ways of conserving and managing the environment. Educational systems play a fundamental role in pushing forward environmental awareness and setting up management systems (Behrman, 2012; Rao, 2017). The high standard of educational level in the Buhera district can be a good starting point in improving environmental management in the area. Attitudes towards environmental awareness and management are directly influenced by level of education. The more educated an individual is, there more likely they are to take part in environmental programmes (Pisa and Katsande, 2021).

3.3. Involvement of women in land reclamation

Respondents were asked on whether men are also involved in land reclamation projects. Their responses were recorded

in Fig. 3. The question was a closed question which needed the respondents to tick on A- yes, B-no or C-sometimes. Most of the respondents indicated the “sometimes” option. Male migration is higher from rural to urban for search of job opportunities to provide better standards of living to family. The ratio of men to women involved in land reclamation projects is 1:9. In most rural communities, young men tend to relocate in their late teens and mid-twenties to seek employment in urban areas. Most men have migrated to towns in search for employment and the few remaining are willing to be part of the program teams only if there are some monetary incentives (Pisa and Katsande, 2021). The findings of this study agreed with the findings of Khasian (1992) who concluded that in most of Africa, the lure of the towns and search for urban employment has left many women as invisible environmental managers whether by choice or through circumstances.

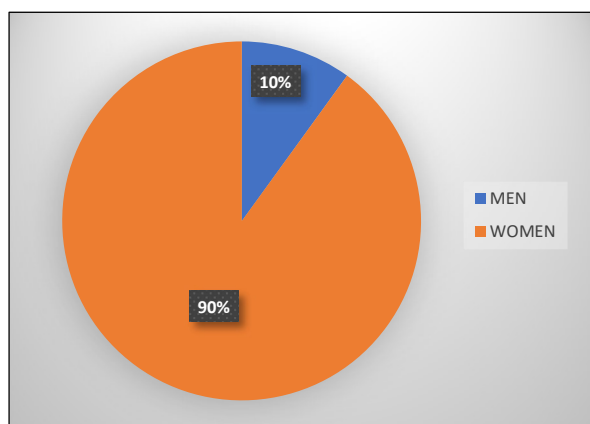


Fig. 3. Showing percentage of gender participation

However, the very few elderly men are there to assist with the indigenous knowledge to the active groups. The migration of young adults, especially men from rural to urban areas is a common episode in Africa. This migration has an adverse effect on rural communities especially on work force size food security. In most rural areas, the impact of rural-urban migration was a rapid deterioration of the rural economy leading to chronic poverty as the work force rapidly decreased. The burden to provide food, energy and manage the environment naturally fell to the women left behind. The research finding show that women have become more involved in safeguarding the environment, providing labour and ensuring food security. The most active age group is of the age group ranging between 21-30. This age group is also very active in raising some awareness campaigns in different programs of land reclamation.

The use of natural resources such as wood for fuel, fruits and roots as food and medication has for long been an important aspect in rural African communities. The burden to source and manage these natural resources falls on women. It is estimated that women in Cameroon perform a very fair proportion, about 60% of the work that has to be done in the agricultural and household domains. These women are therefore very instrumental in managing positively or negatively the rural natural environment. Accord to Chant

and Sweetman (2012), Cameroonian women make up 56.6% of the rural production workforce. The gap observed in the rate of economic activity between the rural sector (70.2%) and the urban sector (56.7%) is essentially due to the heavy participation of the Cameroonian women in environmental management activities. This shows that women can contribute significantly to environmental management if given the opportunity.

The research revealed the government environmental initiatives which are meant for land reclamation like the “Food for Work” programs, they are dominated by women. Other than afforestation, sustainable farming and gully reclamation projects; respondents are also involved in water harvesting projects which reduce erosion and siltation of water bodies. They have partnered with some NGOs for the financing of these projects as government departments like EMA under-funded. Apart from United Nations Development Programme’s Global Environment Facility’s (UNDP-GEF), the respondents highlighted that Sustainable Afforestation Association is also involved in land reclamation projects. They also highlighted that government departments in partnership with the community and some NGOs were involved in the planting of Musekesa tree; which is the tree of the year for 2021. The program was carried out under the theme, “Trees are life, lets protect them.”

3.4. Challenges or problems

Respondents were asked about the challenges they face in carrying out land reclamation projects. The major highlighted challenges include lack of funding and lack of adequate environmental information. 85% of women complained that they are usually muscled out in most projects which are funded by NGOs because there are some monetary incentives. They also complained of being sidelined in accessing environmental information as they are not perceived as agents of change. As a result, their input is normally neglected. All this concurs to what Khadka et al. (2014) has indicated in his study. He signposted that leaving out women in decision making usually prove to be detrimental even when such projects are well intentioned. The marginalisation of women particularly in the area of land management and decision making is bound to translate into more land degradation (Gaveau et al., 2017). Land tenure structures in rural areas give land rights to men rather than women, this therefore lessens their commitment and drive in participation (Giri, 2012).

Respondents were further asked their views on what needs to be done to improve stakeholder participation. The community as the biggest stakeholder highlighted that there must be some incentives for them to be strongly active in these environmental projects. 90% of the respondents actually said that they are not motivated enough to provide free labour. Maathai (1988), states that communities need to be incentivised for them to be in supportive of some of these community projects. Providing communities with incentives contributes to sustained participation in environmental conservation. On the other hand, 95% of the respondents blamed the government on its hard stance on NGOs who will be willing to partner and help the community in land reclamation projects. They highlighted that in 2021 alone,

two NGOs which wanted to assist the community were driven away by government policies which were not favorable to them. This resulted in the withdrawal of these NGOs from Buhera South District.

As a result, they encouraged policy makers to put in place policies that do not deter stakeholder participation like NGOs as they are the chief funders in most environmental projects. The NGOs deservedly or not, have gained a reputation as the leading practitioners of rural development in Africa. African governments have responded ambiguously to the presence of these new agencies, on the one hand valuing the economic resources NGOs can raise, but resisting the political pluralization implied by popular development action (Baynes et al., 2015; Green Climate Fund, 2015). This notation and school of thought has made it difficult for governments and NGOs cultivate a much more meaningful relationship.

4. Conclusion and Recommendations

Women play a fundamental role in managing the environment and natural resources. A lot of women especially the middle aged are involved in environmental awareness campaigns. They have the vigor and self-esteem to reach different communities educating them on different roles women can play in environmental management projects. They visited schools, churches and other formal gatherings to disseminate information on how to sustainably manage the environment. These variables like age played a major role in land reclamation. Whilst the young generation provided labor, the elderly provided indigenous knowledge on how the environment can be sustainably managed. The community especially women also partnered with government department like EMA and the Forestry Commission in land rehabilitation programs like afforestation, sustainable farming and gully reclamation. NGOs also gave financial support to curb land degradation and promote some reclamation projects undertaken in Buhera South District. However here is need to revisit land rights in Zimbabwe so as to give rural women a greater sense of ownership. It is also important the government and NGOs work closer to together and educate communities on their engagement. Incentives are a critical aspect to provide more sustainable environmental programmes to protect and rehabilitate the environment. It is recommended that more female extension officers be engaged so that women will feel comfortable working with them compared to their male counterparts. This will give them a chance to get the latest environmental information. Government should adequately finance its environmental departments so that they will be able to effectively manage the environment and be able to reach communities. More research has to be conducted into how the educational curriculum can become a more sensitizing tool in environmental matters and how the role of gender factors can be coherently brought out in it. It is important to continue researching on the ever-changing gender roles and gender relationships within different communities and how they relate to the changing use of the environment and development in general. There is also need to respond to community needs in the design and application of sound environmental policy. The policy should respond directly to people's apprehensions by ensuring that its

programs are relevant and translate into immediate and tangible benefits to communities. As such, communities respond positively to environmental conservation activities and begin to feel responsible for it together with seeing it from a long-term perspective. Provision of incentives for communities contributes to sustained participation in environmental conservation though in the long run communities must take over and manage their own conservation efforts without being remunerated. The government and NGOs have a responsibility to educate and help the community see that the rewards from environmental conservation are of long-term nature and of greater value than monetary compensation received.

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