



Women and Natural Resource Conservation: A Study of Chongwe District, Zambia

Inonge Milupi, D.*, Bernard Chileshe, Mirriam Sampa Moonga, Pauline Monde, N.

The University of Zambia, School of Education, Department of Language and Social Sciences Education. P.O BOX 32379, Lusaka, Zambia.

***Corresponding Author:** Inonge Milupi, The University of Zambia, School of Education, Department of Language and Social Sciences Education. P.O BOX 32379, Lusaka, Zambia.

Abstract: Women play a critical role in managing natural resources on family and community levels and are most affected by environmental degradation. In communities around the world, women manage water, sources for fuel, and food. They also manage both forests and agricultural land. Women's workload is often centred on managing natural resources, biodiversity and ecosystems; as such their experiences and perspectives are essential to sustainable development. Because of women's relationship with the environment, they can be critical agents of environmental conservation. This study's objectives were to investigate the levels of awareness and involvement in natural resource conservation among women in Chongwe district and to propose improvements required to promote their effective involvement in natural resource conservation programmes in the area. Quantitative and qualitative data were gathered through interviews and questionnaire surveys in the district. Results showed that women understood the meaning of natural resources conservation but their participation in natural resource conservation programmes was inadequate. The study concluded that conservation efforts would only succeed if government and non-governmental conservation bodies targeted rural women in several ways, among them education, empowerment, and inclusion. We therefore, recommend government to increase women's participation in decision-making to ensure success and sustainability of conservation projects. This would promote the sustainable utilisation of natural resources in the country.

Keywords: Chongwe, participation, natural resource conservation, sustainability, women, Zambia.

1. INTRODUCTION

Women play a critical role in managing natural resources both at family and community levels and are most affected by environmental degradation (Milupi 2008; Orgra 2018). This is so because the gender roles put women in direct contact with natural resources such as forests, water, land and wildlife. Since women utilize and conserve these resources to supply basic needs for their families, they are closer to nature than men (Kiran, 2015; Joshi and Bhardwaj 2015). (Kirani 2015; Kiewish 2015) assert that their closeness to nature makes women perfect managers of an ecological unit. Ecofeminists, such as Shiva (1988), have also observed that women have a special affinity with nature through their reproductive rights. Because of this closeness to nature by women; eco-feminists feel that women can care better for the environment than men (Shiva, 1988, Chileshe, 2018).

Despite women providing an important role in sustainable natural resource management as argued by Tiwari(2015) and UNEP (2016), their role is not properly identified nor explored. Joshi and Bhardwaj(2015) noted that although it is widely acknowledged that women play a key role in the management of natural resources on family and community levels, they have a much less influential role than men in the management, problem analysis and in the decision making process related to wildlife resources. Several studies(such as UNEP *et al.*, 2013) have also argued that more equality in the access to and management of natural resources could enable women to support their families more effectively and contribute to community decision-making process regarding the management of their resources.

Against this background, this study examined the levels of awareness in natural resource conservation among women in Chongwe district. The study further investigated the extent to which women participated in natural resource conservation. Evans et al. (2017: 38) defined participation as "the

process of involving stakeholders individually and collectively in order to influence and participate in decision-making, in the management and design of public policies at different levels, and in modes of administration of resources". It is imperative that both men and women participate in the conservation of natural resources to ensure the wellbeing of the environment and to contribute to the sustainable utilisation of environmental goods in the country. Therefore, this study proposes improvements required to promote effective women participation in natural resource conservation in Chongwe district.

1.1. Description of the Study Area

The study area was Chongwe, a rural district in Lusaka province of Zambia (Figure 1). The district is situated to the east of Lusaka, astride the Great North Road. Local relief in the district varies between 300 and 1300 meters above sea level (Smart Zambia Institute, SZI 2019). The geographical coordinates for Chongwe are 15° 21' 0" South and 28° 42' 0" East. The Soli people are the original inhabitants of Chongwe district under the chieftainship of Nkomeshya MukamamboII (Moonga and Moonga, 2016).



Figure1. Map of Zambia showing the Location of Chongwe district

The physiography of Chongwe district is divided into three parts. The first region consists of a series of east-west hill ranges at 1,200 – 1,500 m above sea level to the north. The second region is a plateau area in the middle at an altitude of 910 - 1,200 m above sea level. The third region is a hilly escarpment to the south that merges into the Zambezi Valleys or trough (CDC, 2006).

Chongwe district has three main types of vegetation. These include dry miombo (*Brachystegia*) woodland, mopane (*Colophospermu mmopane*) woodland, and munga (*Acacia*) woodlands. The vegetation, however, has been tempered with due to settlement, charcoal production and agriculture. In Zambia, most of the rural people derive their livelihoods from charcoal production and gardening. Both charcoal production and agriculture are very common in Chongwe district because of its proximity to Lusaka where the products find a ready market. Agriculture is the mainstay of the economy of the district. Agricultural activities include crop production, horticultural production and livestock production (Milupi *et.al.* 2019; 2020). Two forest reserves in the district, No.75 (Soli) and No. 199 (Kanakantapa) were converted to an agriculture settlement scheme in 1992 to resettle unemployed urban youths and other general members of the public (SZI, 2019).

In 2010, Chongwe district had a population of 182,174 people (CSO, 2010). Of these, 92,909 (51%) are female while 89,265 (49%) are male (CSO, 2010). The district's annual population growth rate is 2.5% while the population density is 22.2 persons per square kilometre (SZI, 2019). Due to its

closeness to Lusaka, Chongwe is experiencing rapid population growth because more and more people are looking for residential plots in the district.

The district was selected because of its close proximity to Lusaka where the researchers reside. Located only 35 km from Lusaka, Chongwe is an easy to reach town from the city.

2. MATERIALS AND METHODS

The study was based on secondary and primary data collected in September, 2019. Secondary data was derived from published materials whereas primary data were collected using household surveys and key informant interviews as outlined below. Secondary data analysis provided a better understanding of the relationship between women and natural resource conservation and the role played by women in natural resource conservation. In the present study, journal papers and national environmental policy documents were examined. These documents provided background information for the research and allowed for assessment of the suitability of the project before conducting interviews.

2.1. Household Surveys

Household surveys generated quantitative data through structured researcher-administered questionnaires which comprised both closed and open ended questions. The sampling unit was the household with the target respondents being household heads. In total, 40 randomly selected household heads were interviewed. Of these, 42.5% were males while 57.5% were females. To ensure that the questionnaire was suited to the content; a pre-test was conducted in Chongwe town.

The households were interviewed on the following aspects of natural resource conservation:

- (a) Awareness of natural resource conservation.
- (b) Extent to which women were involved in natural resource conservation.
- (c) Challenges faced by women in natural resource conservation.

2.2. Key Informant Interviews

Key informants from the Departments of National Parks and Wildlife (DNPW), Fisheries, and Water Affairs (DWA) were interviewed. The government officials provided information about the performance of natural resource conservation programmes in Chongwe in relation to women involvement. Data were categorised into relevant aspects of the characteristics that hinged on natural resource conservation. Quantitative data were coded and processed using the statistical package for Social Sciences (SPSS) software to generate frequencies of responses. Below we report the results of the study, highlighting the role of women in natural resource conservation and the extent to which women were involved in natural resource conservation in Chongwe district.

3. RESULTS

3.1. Awareness of Natural Resources Found in Chongwe District

In order to get an idea of the respondents' knowledge about conservation of natural resources, they were first asked to name the natural resources found in Chongwe district. The respondents revealed that vegetation, water, land (soil), and animals (wildlife) were the natural resources found in the district (Table 1).

Table1. Responses on natural resources found in Chongwe district

• Vegetation
• Water
• Land
• Animals (wildlife)

Source: Field data, 2019

3.2. Knowledge of the Term 'Conservation'

To get an idea of the respondents' knowledge about conservation of natural resources, the respondents were asked to indicate if they understood the term 'conservation'. Most of the respondents (98%) stated that they understood the meaning of the term. Only a paltry 2% indicated that they had no idea

of what conservation is. The study also revealed that the understanding of conservation was derived from several sources, but largely when the respondents were at school, as shown in Table 2.

Table2. Sources of natural resource conservation knowledge and awareness

Source	Frequency	Percentage	Rank
• Schools	33	82.5	1
• Radio	1	2.5	3
• Forestry Department	1	2.5	3
• Ministry of Agriculture	2	5.0	2
• Kasisi Training Centre	2	5.0	2
• Chief	1	2.5	3

Source: Field data, 2019

3.3. Participation of Women in Natural Resource Conservation in Chongwe District

The respondents were asked to indicate the level of involvement of women in natural resource conservation in Chongwe district. The results are indicated in Table 3.

Table3. Responses on participation of women in natural resource conservation in Chongwe district

Responses	Frequency	Percentage	Rank
Strongly agree	35	87.5	1
Agree	0	0	-
Not sure	0	0	-
Disagree	5	12.5	2
Strongly disagree	0	0	-
Total	40	100	

Source: Field data, 2019

Table 3 shows that most of the respondents (87.5%) strongly agreed that women were involved in natural resource conservation in the district. Only a few respondents (12.5%) did not agree.

3.4. Challenges for Women's Participation in Natural Resource Conservation

Since the participation of women in natural resource conservation has proven to be a complicated matter, respondents in this study were asked to state the challenges that women faced in participating in the conservation of natural resources in Chongwe district. The results are presented in Figure 4.

Table4. Challenges faced by women in natural resource conservation in Chongwe district.

Challenges	Frequency	Percentage	Rank
• Lack of training	11	27.5	1
• Poverty	10	25	3
• Women don't own land	14	35	2
• Insufficient funds	3	7.5	4
• No help from Government and NGOs	2	5.0	5
Total	40	100	

Source: Field data, 2019

3.5. Responses from Key Informants

Key informants from government departments such as DWA, Fisheries, DNPW and Ministry of Agriculture confirmed involving both men and women in natural resource conservation in Chongwe district. However, the study showed that men had more power over the resources than women because they (men) owned the land. With regard to wildlife resources, documents obtained from the DNPW showed that more men were employed in Community Based Natural Resource Management (CBNRM) as game scouts than women. Forestry and game management have been generally regarded as an arena mainly for men's work.

3.6. Policy Provision/Position on Women Involvement in Natural Resource Conservation

Information from policy documents which were examined, such as National Policy on Environment, stipulated explicitly that the local communities should be actively involved in natural resource

conservation but did not offer insights into specific gender roles. The policy, therefore, did not make provision for the roles of women in natural resource conservation.

4. DISCUSSION

The aim of the study was to investigate the levels of awareness and involvement in natural resource conservation among women in Chongwe district. The study also aimed to investigate the challenges that women face in conserving natural resources in the district.

From the findings, women in Chongwe district had considerable knowledge about what natural resources were and also in managing and conserving natural resources. The study further revealed that much of the knowledge about natural resource conservation exhibited by the respondents in the area was acquired while the respondents were at school. This means that government departments, such as the Ministry of Agriculture and the Forestry Department, and Kasisi Training Centre, a farmer training centre in the district, did not conduct many awareness activities on natural resource conservation knowledge in the district. The study, therefore, concluded that there wasn't much training conducted in the area with regard to natural resource conservation among women after they left school. Nonetheless, it is vitally important that government (and non-governmental organisations) deliberately undertake awareness programmes whose outcome is to enable women to participate effectively in natural resources conservation activities. Such programmes would provide new ideas, knowledge, skills, and innovations for the women participants. As asserted by Joshi and Bhardwaj (2015), rural sustainability can only be attained when stakeholders work together to promote participation in natural resource management. To achieve this, training is essential because, although people do not need technical knowledge to act pro-environmentally, they need basic knowledge about environmental issues and the behaviours that cause them in order to take action (Kempton *et al.*, 1995; Chileshe, 2018). Some elements where women may need education are values (especially biospheric values) and sustainable management of natural resources (Ngece, 2004).

On the extent of women involvement in natural resource conservation in Chongwe district, the study shows that most women were involved in the conservation of their natural resources. This agrees with earlier findings that women in the developing world are predominantly responsible for management and conservation of resources for their families and communities (UNEP, 2016). It would be useful, nevertheless, if the types of activities women were involved in were catalogued. This is because, as one study found, women who reported participation in natural resource conservation were mainly involved in informal community activities, not formal ones (Joshi & Bhardwaj, 2015). To operate formally, women must also participate at decision-making and implementation levels of natural resource management. Also, there was need to quantify the degree of success of the contributions that women made to natural resources conservation and how much they benefited from these efforts (Ngece, 2004). This would provide a clearer picture of how women participated in natural resource conservation in the district. For example, a study by Kwap (1996) in Kenya showed that women's rights to tree products were usually limited to products that are considered to have little or no commercial value (products which are mainly indigenous fruits and vegetables, fodder, and mulch) while their male counterparts harvested higher value trees for timber.

The study also showed that, despite being involved in the conservation of natural resources, women in the district faced several challenges with regard to effective participation in natural resource conservation. The challenges ranged from lack of training in natural resource conservation to lack of empowerment as most of the women in the area did not own land. The need for training among the women has already been emphasised in preceding paragraphs. Therefore, we can now discuss how land-ownership among women in the area presents a problem. Zanelli (2019, para. 2) notes that "around the world, women are routinely and systematically denied equal rights to access, use, inherit, control and own land." In Zambian rural areas like Chongwe, women do not own land because the land individualisation processes have often excluded women because land is registered in the name of heads of household who are usually men (FAO, 2020). The implication of this is that women and their children miss out on the vast advantages that come with property rights. This puts their health, safety, economic security and political rights in jeopardy. According to Horan (2013), research has shown that when women own the land they till, families tend to be better fed, better educated and healthier; their daughters tend to marry at an older age and the women tend to suffer less incidents of domestic violence. Their babies are born with higher birth weights and food security and economic development in their homes increase. Further, assets under women's control give women greater

bargaining power and often contribute more to important welfare outcomes for the household, in children's education. The solution, therefore, is gender equality in land ownership and property rights. Luckily, the Zambian National Land Policy of 2002(revised in 2007) does not discriminate against anyone on the basis of gender (FAO, 2020). Similarly, the on-going process of consultations on the Draft Land Policy and review of the Constitution is discussing many land tenure problems that still need to be addressed, including the socio-economic and cultural impediments that restrict women's land rights.

Other challenges faced by women in the district included high levels of poverty and lack of help from the government and non-governmental organisations responsible for natural resource conservation. Overcoming this problem requires lifting women out of poverty, helped by both governmental and non-governmental agencies. This requires the systematic inclusion of women in economic and political decisions. According to Grant (2019), women must be afforded the resources and opportunities necessary for growth before they are expected to lift themselves out of poverty. He suggests local programmes that provide benefits such as health services and literacy training. In addition to these, women can be provided with start-up funds (capital) to help them begin small-scale enterprises which can help them to earn an income for the family. An example of such help is the distribution of goats by World Vision Zambia in the area to empower vulnerable women and children with a livelihood. Furthermore, women have also been encouraged to start Savings for Transformation Groups (or Village Banking Groups) to raise money for various household needs (Moyo, 2019). When women are lifted out of poverty in this way, their deep dependence on available natural resources for food and other household requirements diminishes. With the extra resources they make, they can access better, more environmentally friendly and sustainable alternatives.

The study further showed that the national policy on environment does not clearly stipulate specific roles of women with regard to natural resource conservation. It is a well-known fact that women perform chores which men consider to be women's tasks. For example, they visit the forest more not only for fuel wood and food collection, but also for cultural reasons (IFAD, 1985). The policy, therefore, does not make provisions for the roles of women in natural resource conservation in the area. Therefore, to attend to this problem, women's issues should systematically be incorporated into policies related to natural resources conservation. This should include formulation and enforcement of gender sensitive policies and laws as well as ensuring female representation in natural resources management committees and associations formed at the local level.

5. CONCLUSION

The main aim of conservation is the preservation of quality environment and to ensure continuous yield of natural resources by establishing a balanced cycle of harvest and renewal. This study has revealed that Chongwe district is well-endowed with several natural resources which ranged from trees, water, land and animals (wildlife). These resources need to be conserved by both men and women as research has shown that there are higher success rates when resources are managed by men and women working together. The study also found that knowledge of natural resource conservation was exhibited by both genders. It was, however, found that the knowledge that most of the respondents had was acquired when they were still at schools rather than from initiatives undertaken by government and other stakeholders dealing with the environment. We, therefore, propose that government departments and other stakeholders working in the environmental sector should provide awareness programmes for the local people in Chongwe district in order to enhance their (local people) knowledge of natural resource conservation. Further, the study revealed that there was lack of women empowerment in the study area which emanated from the exclusion of women from land-ownership. This lack of empowerment has deleterious effects on the socio-economic wellbeing of women. It is observed, therefore, that, to improve the livelihoods of women and their families, there is need to empower women with land which they can till and manage (Evans *et al.*, 2017). The study also found out that women had a challenge in natural resources conservation because many of them are poor. To this effect, we recommend that initiatives that empower women economically, such as chicken, goat, cattle-keeping, fish farming, horticulture and crop production using climate smart crop production must be initiated in the area (Rosen stock, *et al* 2019). Lastly, policy which targets women participation in natural resource conservation also should be put in place to increase effective involvement of women.

RECOMMENDATIONS

Drawing from the conclusions of the study, we make the following recommendations:

Government and other stakeholders should increase natural resource conservation awareness activities among women in Chongwe district. In addition, Government and its cooperating partners should intensify natural resource conservation trainings in the area. Furthermore, Government and its line ministries should empower women through land ownership in the area, increase funding to natural resource conservation activities in the area. The study further recommends that Government should clearly stipulate gender roles in the national policy on environment.

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AUTHORS’ BIOGRAPHY



Inonge Milupi D. (PhD) is a lecturer and researcher of Environmental Education at the University of Zambia. Her research interest includes climate change, gender, natural resource conservation and indigenous Knowledge.



Mirriam Sampa Moonga is a lecturer/researcher and a PhD student of Environmental Education at the University of Zambia. Her research interests include Sustainability education, natural resource conservation, climate change, gender, and traditional/indigenous knowledge.



Bernard Chileshe (PhD) is a lecturer in Geography and Environmental Education at the University of Zambia. His research interest is in natural resource conservation, indigenous knowledge systems, green economy, waste management and pedagogy related research.



Pauline Monde, N. is a lecturer/researcher and a PhD student of Environmental Education at the University of Zambia. Her research interests include natural resource management and Environmental Governance and education.

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