

Forest Resource Management and Utilisation through a Gendered Lens in Namibia

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Received: September 9, 2016

Accepted: September 26, 2016

Online Published: November 11, 2016

doi:10.5539/enrr.v6n4p79

URL: <http://dx.doi.org/10.5539/enrr.v6n4p79>

Abstract

The shift in forestry policy towards resource management and access rights from state control to local community control has been a welcome step towards sustainable forest management in Namibia. The policy acknowledges the direct dependence on natural environmental resources by the proportional majority of the population that live in the rural areas of Namibia. This study was aimed at performing gender analysis by identifying relationships of various groups to natural resources. The study further assessed the influence these relationships have on control, access and use of forest resources, as well as on natural resource management and the implications thereof on various forest management efforts in the country. Data were collected from seven community forest institutions in Namibia and analysed using the Harvard Gender Analytical Framework. The findings show a gendered differentiated knowledge, control and access to forest resources and unequal participation in leadership and governance. Furthermore, the results suggest that unequal power relations among minority and vulnerable groups affect access to and control of forest resources. This study proposes participation of both men and women in the management, protection, access and utilisation of forest resources, as this will contribute to sustainable forest management and economic development of all members of society.

Keywords: Gender analysis, community forestry, access right, governance

1. Introduction

Degradation of natural forests and loss of biological diversity have been subjects of debate (Richardson, Sinclair, Reed, & Parkins, 2011; Nuggehalli & Prokopy, 2009) that prompted the need to assess the state of forest management (Nuggehalli & Prokopy, 2009; Pokharel, Neupane, Tiwarj, & Kohl, 2015). Sustainable forest management approaches have been accepted widely as the best framework for managing forest and forest resources. Such approaches are seen as the promising instruments that involve local people and integrate the environmental, social and economic values of people in the management of forest resources (Pokharel et al., 2015; Nuggehalli & Prokopy, 2009). However, developing countries, such as Namibia, have experienced challenges in applying the forest management approaches because local people rely heavily on forest resources for their livelihood (Pokharel et al., 2015). Namibia has also experienced issues of degradation resulting from high dependency on forest resources for the majority of rural people and this has led to challenges in forest management efforts. This has prompted a shift in the forestry legal framework towards resource management and access rights from the state to the local community. This has been a welcome step towards sustainable forest management in Namibia. The new trend in forest resource management acknowledges the direct dependence on natural environmental resources by the proportional majority of the population that live in rural areas in Namibia. This implies the importance of the involvement of local communities in the management and protection of forest resources, thereby improving their benefits. Both government and local communities recognise the importance of

Community Based Natural Resource Management (CBNRM), which is supported by the Namibian Association of CBNRM Support Organization (NACSO).

1.1 Conceptualising Forest Management and Gender

Sustainable forest management has its origin in the concept of Sustainable Development, which gained momentum after the Brundtland publication of *Our Common Future* in April 1987 (Pokharel et al., 2015). Further developments regarding the concepts of sustainable development were instrumental in the development of the non-legally binding statements presented at the 1992 Rio De Janeiro summit of the United Nations Conference on Environment and Development. These statements are known as “Forest Principles”, in particular Principle 2b, which states that “Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual *needs of present and future generations*” (Pokharel et al., 2015). It was this development that led to sustainable forest management to be elevated to a globally acceptable goal (Nuggehalli & Prokopy, 2009).

The concept of sustainable forest management provides the essential framework for integrating governance, utilisation, conservation (precautionary approach), community-based management and participation considerations (Pokharel et al., 2015). Therefore, with the CBNRM system becoming popular a few years later (since mid-1990s), the community forestry programme has become a vehicle for applying sustainable forest management at local level, through devolution of management power to rural poor communities that largely rely on the forest resources (Republic of Namibia, 2005). Namibia followed Nepal’s (pioneer for the implementation of sustainable forest management) foot-steps in shifting the National forestry policy from the top-down, state-dominated management approach towards a more integrative sustainable forest management in Namibia (Chhetri, Johnsen, Konoshima & Yoshimoto, 2013).

The CBNRM approach advocates for the co-management of forests and forest resources as well as the participation of users in decision-making, management and use of the resources. People or stakeholder participation in natural resource management has a long history dating back to the 1960s, starting with awareness raising (Reed, 2008), and it has become almost mandatory in planning development projects (Agarwal, 2001). Still, efforts to involve users and beneficiaries of natural resources are on-going (Reed, 2008; Lendelvo, Munyebvu and Suich, 2012). Over the past two decades, there have been debates concerning different forms of participation. These discussions concluded that at its narrowest, participation in a group is defined in terms of nominal membership and at its broadest, it is defined as a dynamic interactive process in which the disadvantaged have a voice and influence in decision-making (Agarwal, 2001). In addition, Lendelvo et al. (2012) argue that the degree of stakeholder participation could be shifting from nominal levels to interactive or empowerment levels of participation, involving minority communities and women. Furthermore, Agarwal (2009) argues that involving women in executive committees as well as in the decision-making processes extends the pool of citizens committed to forest conservation. Gender mainstreaming provides an opportunity for the disadvantaged and marginalised to participate in governing and managing CBNRM activities.

1.2 Gender and Forest Management in Namibia

1.2.1 Gender Relations in Namibia

Namibia, being a multicultural nation, has diverse ethnic groups with different cultures that define its gender roles. The different roles of men and women are based on whether the ethnic group or tribe is of matrilineal descent, bilateral descent or bifurcate descent (Jauch, Edwards & Cupido, 2009). These descent systems are also founded in cultural attitudes that tend to vary from relative equality to rigid inequality (UNAM and SARDC-WIDSAA, 2005). As in most African cultural communities, duties and responsibilities are divided among husband, wife and children based on stereotypes of what men and women should do and how they should behave, and not necessarily based on skills or ability (Ipinge, Phiri & Njabiri, 2000; UNAM and SARDC-WIDSAA, 2005). The majority of Namibian women are responsible for most of the household chores and have limited decision-making power within households and the community (Ruppel, 2008). The gender division of labour based on cultural views has shaped varied gendered relationships to the natural environment and natural resources in Namibia. The different levels of access and control regarding utilisation and management of forest products are therefore affected by these views (Ipinge, Phiri & Njabiri, 2000; UNAM and SARDC-WIDSAA, 2005).

Since Namibia’s independence in 1990, the Constitution of Namibia has laid the foundation by stipulating in Article 10 that all people are equal and free from discrimination. Subsequently, several legal frameworks and programmes addressing gender relations and elimination of discriminatory practices against women were initiated and implemented (GRN, 1990). There is a notable change in most areas of Namibia with regard to

discriminatory practices and gender representation at varying levels of institutions. However, attitudes and societal stereotypes towards gender are very slow to change (Angula, 2010) and by extension this can be seen in the management and decision making of natural resources including forest resources.

1.3 Forest Resource Management in Namibia

According to Mendelsohn, Jarvis, Roberts & Robertson (2002), forests in Namibia are found mainly in the north-central and north-eastern regions of the country where rainfall ranges from 400-700 mm per annum. Before independence, there were no major efforts invested in forest management in Namibia. The Nature Conservation Ordinance No.4 of 1975, which was used to govern forest resources in national reserves, was discriminatory as it did not make provision for communities to have rights to manage and benefit directly from forest resources. Forest management was confined to a few commercial species. A renewed focus on forest management came soon after independence in the 1990s, when a dedicated Directorate of Forestry was created with two divisions for management and research, supported by regional and field offices. This was followed by the first-ever promulgated Forest Policy of 1992, the Namibia Forestry Strategic Plan of 1996, the Forestry Policy and the Forest Act of 2001 (Republic of Namibia, 1996; 2001).

The current programmes of the forestry sector are shaped by the Namibia Forestry Strategic Plan of 1996, which brought the integrated approach to the forestry sector. The Strategic Plan included Community Level Management of Natural Forests, which led to the establishment of the Community Forestry programme in the country. The recognition of community participation has led to the rapid proclamation of community forest reserves and was strengthened by supportive legislation and local community training.

In 2008, a new strategic focus for forestry was developed as part of the overall Strategic Plan for the Ministry of Agriculture, Water and Forestry (MAWF) (2008–2012). One of the Ministry's strategies is Sustainable Natural Resources Management. The major result areas are stated as:

- Improved and integrated natural resources management;
- Coping mechanisms in place for addressing adverse effects of climate change on production (including global warming, floods, droughts and 'veld' fires);
- Reduced negative human and animal impact on environmental health (including pollution and waste management).

The above policy documents and strategies, strengthened by the Forest Act of 2001, have reinforced the need for production, protection and participation. This is consistent with the Namibian Constitution, Article 95(l) that promotes the maintenance of ecosystems, essential ecological processes and biodiversity as well as sustainable utilisation of natural resources for the benefit of all Namibians.

The community forestry programme has adopted a participatory approach to facilitate the participation of all people. The involvement of all local people, as the main implementers, is crucial for sustainable utilisation of the forest resources, leading to sustained benefits from such resources. Since 2008, the Community Forestry programme in Namibia has contributed considerably to the improvement of rural livelihoods. The establishment of community-managed forest areas in nine different regions of the country has proven to be an essential pillar of Namibia's CBNRM programme. In Kavango Region, for example, the four gazetted community forests (CFs) generated a total of N\$98,100 (US\$ 8,000-00) in 2009 (NACSO, 2010). Income varies between CFs, depending on the availability of resources, the efficiency of management procedures and the commitment of stakeholders (NACSO, 2010). Benefits are shared at regular intervals between traditional authorities, management bodies, communities' development funds and investments according to a benefit-sharing plan. CF management bodies and communities are trained to focus on sustainable forest and habitat management practices to prevent forest degradation and soil erosion, stop depletion of natural resources and protect wildlife habitats (NACSO, 2010). There is limited literature in Namibia that assesses the gendered dimension of community forest management, equitable sharing of resources and benefit sharing among rural communities.

2. Objectives of the Study

Given the intended objective of the Namibian community forestry programme to encourage inclusive participation in forest resource management and benefit sharing plan, this study is precisely aimed at investigating the equitable participation in harvesting and benefit of forest resources across gender and marginalized groups. Gender has become an important component for development in natural resources and forest management, in particular. This is because males and females have specific roles and responsibilities in the use of forest products, and therefore their opportunities to benefit from these products are not the same. In traditional societies, women are often disinclined to participate in activities that are seen to go against traditionally defined roles, which can present

obstacles to participation in conservation efforts. Furthermore, in cases where participation is characterised by unequal power relationships, this will influence available livelihood options, decision-making abilities and development outcomes. When women are unable to express their voices openly because of a dominance of male counterparts, this may affect the outcomes of natural resource management.

3. Methodology and Approach

3.1 Study Design

Namibia has a total of 34 community forests (NACSO, 2014) and 25 that are considered ‘emerging’ as they have submitted the intention to register (B.K. Nathanael, MAWF, Personal Communication, 18 August 2015). The samples for this study were taken from both registered and emerging CFs and a total of seven (7) community forests (CFs) were targeted. The sampled community forests were selected from the thirteen community forests that were identified by the Ministry of Agriculture, Water and Forestry (MAWF) as target sites of a project called Namibia Forested Lands (NAFOLA). According to the Forest Act No. 12 of 2001, Clause 15(3), community forests are required to register and be gazetted through MAWF. Amongst the thirteen CFs that were identified by MAWF, only two were gazetted; one was randomly selected, i.e., Uukolonkadhi CF. In the case of the emerging CFs, six were randomly selected out of the eleven. The six selected emerging CFs are Ehirovipuka CF, Oshaampula CF, Otshiku-tshiitholonde CF, Okondjatu CF, Talismanus CF and Otjinene CF.

The criteria for sampling the seven research sites took into consideration the status and period of existence, national distribution, land use types, language and cultural variations of the CFs. Refer to Table 1 for sampling criteria.

Table 1. Description of the selected Community Forests (Cfs)

Community Forest/ hotspot	Status	Cultural/ ethnic groups	Land use type	Region
1. Ehirovipuka	Not registered but activities have been ongoing since 2008	Ovahimba and Ovaherero	Livestock farming, no crop cultivation, wildlife conservation (conservancy)	Kunene
2. Uukolonkadhi	Registered in 2006	Aakolonkadhi, Ovahimba, Aandongona, Ovazemba	Combination of crop cultivation and livestock farming, wildlife conservation (conservancy)	Omusati
3. Oshaampula	Not registered but has been in operation since 2000	Aandongona	Combination of crop cultivation and livestock farming	Oshikoto
4. Otshiku-Tshiithilonde	Not registered and concept introduced in 1998.	Aakwambi	Combination of crop cultivation and livestock farming	Oshana
5. Talismanus	Not registered and concept introduced in 1998.	Ovaherero and Ju ’hoansi	Livestock farming, wildlife conservation (conservancy)	Omaheke
6. Otjinene	Not registered and concept introduced in 1998.	Ovaherero and Ju ’hoansi	Livestock farming	Omaheke
7. Okondjatu	Not registered and concept introduced in 1998.	Ovaherero and Ju ’hoansi	Livestock farming and wildlife conservation (conservancy)	Otjondjupa

3.2 Data Collection Procedure

The researchers used a qualitative research approach and the specific research methods used were key-informant interviews (KIIs) and focus group discussions (FGDs). Question guides were developed and engendered using the Harvard Gender Analytical Framework to ensure that gender dynamics were incorporated adequately. The Gender Analytical Framework assessed control and access to forest resources, gender, language and cultural representation in positions of leadership and decision making in forest resource management. The FGDs and KIIs solicited the respondents’ perspectives on the management of the forest resources, the utilisation, access and control of forest resources and the support needed to ensure equitable control of forest resources by adults, youth

and marginalised communities. Information on best practices in marketing forest resources and their contribution to livelihoods was also collected.

Key informant respondents were leaders in the communities, mainly managers of conservancies, community forests and water point committees, traditional leaders, officials from MAWF and the Ministry of Environment and Tourism (MET) who work closely in forest management activities. Focus Group Discussions (FGDs) were held with various community members from the seven research sites. Each FGD had a minimum of four (4) and a maximum of eleven (11) people. At each site FGDs were comprised of categories of adults, youth and people from different language groups and were further separated by gender. The study also paid particular attention to the utilisation of forest resources by marginalised and minority members and factors hindering their utilisation. During the interviews, special consideration was paid to any hierarchical and other cultural norms and taboos in the community. Finally, where necessary, translation was used during the interviews.

3.3 Data Analysis

Data analysis was done by reviewing the study's major objectives and questions in order to assist in the identification of thematic areas emerging from the interviews. Thereafter, the identified themes were categorised from topics derived from the FGDs and KIIs. The use of multiple analysts was a strategy to avoid bias, whereby all four researchers first independently identified the themes from the transcripts. The researchers then met to compare notes, identify commonalities including examples from participants' quotes and other key points. Major similarities and differences in the individual analyses were discussed until an agreement was reached among all researchers.

Among the themes that emerged from the interviews were gender representation in community forest leadership structures; capacity building in community forests; protection and monitoring of forest resources; awareness, communication and inclusion; harvesting forest resources; access and control of forest resources, marketing forest resources and contribution of forest products to livelihoods.

4. Results and Discussions

4.1 Gender Representation on the CF Management Committee

The study shows that the leadership structures of the different research sites were not the same across the board. Some CFs had independent committees responsible for forest management only, whilst others had integrated committees that were responsible for different natural resources, including forestry. Two of the CFs did not have a functional leadership committee because they were at a very early stage of development. This study has shown that for most of the emerging CFs, there is a trend towards adopting the integrated natural resource management approach, and thus avoiding the practice of managing natural resources within communities as isolated entities. Single-use management of forests should be avoided and be replaced with multiple-use management approaches that are aimed at integrating different resources found in forests for better conservation of biological diversity (Scialabba, 1998).

The sizes and gender representation of the CF leadership structures are presented as follow..

- 1) **Ehiovipuka CF** – This area uses an integrated natural resources management approach, whereby the conservancy committee governs all natural resources found in the area including forestry. This integrated conservancy committee is a 14-member structure with a gender proportion of 86% males and 14% females.
- 2) **Uukolonkadhi CF** - This area consists of different leadership structures for the Conservancy and Community Forestry. The community forestry has a two-layered leadership structure consisting of, firstly, a larger Forestry Management Committee (FMC) with a wider constituent representation; and, secondly, a smaller Executive Committee that manages the day-to-day activities. The FMC consists of 45 signed-up members with a gender proportion of 38% males and 62% females. About 5% of the FMC members are from the minority and vulnerable groups (Ovahimba and Ovazemba) with no females from these groups. The Executive Committee consists of 11 elected members with a gender representation of 82% males and 18% females.
- 3) **Oshaampula CF** - This area consists of a community forestry, which is a fully-functional body. The FMC has about 25 signed-up members, with a few members having designated tasks. The FMC for this area has an equal male and female representation, but more males are active.
- 4) **Otshiku-tshiitholonde CF** - This area also consists of the community forestry, with an FMC comprised of 18 elected members, having a gender proportion of 78% males and 22% females.

- 5) **Okondjatu CF** – This area has adopted an integrated natural resources management approach whereby the fully-functional committee governs all natural resources found in the area, including forestry. The Conservancy Committee consists of 12 elected members with a gender representation of 58% males and 42% females.
- 6) **Talismanus CF** - No functional management body.
- 7) **Otjinene CF** - No functional management body.

Representation of women and minority groups in leadership is important as it impacts on decision making (Mitchell, 2013).

4.2 Participation on CF Leadership

The participation of women in the leadership structure is important as they are the primary users of forests and this means that their contribution is valuable for forest protection (Mitchell, 2013; Reddy and Padmaja, 2014). Their involvement also permits an inclusive decision making process that is beneficial to all members of the community. The extent to which leadership structures are all-encompassing determines how community resources are accessed and controlled.

For most of the CFs with leadership committees in place, women and minority group representations on these structures were low. In addition, the chairpersons of most of these committees were predominantly men, with women mainly occupying positions such as treasurer, vice-treasurer, secretary or vice-secretary. At the Oshaampula CF, prominent committee positions such as chairperson and vice chairperson were mainly occupied by males. Whilst there was a significant number of women who were also members of the committee but did not hold any positions, most of these women were mostly delegated to attend workshops and training programmes as well as receiving visitors because of their fair educational backgrounds.

There are other crucial influences that contributed to the male dominance on these CFs or Conservancy committees. There is a compulsory representation of local Traditional Authority (TA) members on every CF committee. Thus, women felt that their participation in leadership structures was hindered by TAs, who preferred to nominate males for the CF committees. Furthermore, most CFs had a low representation of the youth and minority groups in their leadership structures. This was particularly the case in Omaheke and Otjozondjupa regions, where minority groups were excluded from leadership structures and thus could not make significant contribution.

The historically low representation of women in leadership structures is a result of discrimination and stereotyping (Stelter, 2002). During a mixed focus group discussion of both young and elderly women in Otjinene, a sentiment was raised by the discussants: *“We are discriminated against in terms of being given equal opportunities to participate in leadership structures as well as to be fully informed of the different activities and initiatives of CFs”* (Elderly female FGD participant). A similar view was also aired by women from the Ehirovipuka CF where they expressed that a separate females-only committee was needed because their male counterparts were not respecting their views or giving them opportunities to sufficiently contribute in meetings. In Uukolonkandhi CF, women and minority groups attributed their lack of participation in leadership to long distances that they had to travel to the forests.

Another phenomenon that also hinders women participation is lack of confidence to take up leadership positions in their areas. The researchers also observed that the interest of women to serve in leadership structures varied among the research sites. Among CFs in the north, women showed a lot of interest to serve in leadership structures, whilst in the eastern regions few women expressed the need to serve in leadership structures.

According to Varghese and Reed (2012), inclusiveness across a range of social groups was identified to assist in achieving social sustainability of forests. Therefore, there is a need to pay attention to how women and other marginalised groups might be excluded from sustainable forest management and/or how they can effectively participate in order to enhance inclusiveness.

Importantly, TAs are the custodians of communal land on which CFs are located. Their mandate as stipulated in the ACT involves the promotion of affirmative action among its members, in particular gender equality with regard to positions of leadership and ensuring the inclusion of marginalised communities within their areas of jurisdiction. Moreover, it is the role of the TA to provide leadership, support and consent for community forestry establishments. This research further shows that Traditional Authorities (TA) have emerged as one of the most important local institutions in the management of forest resources in CFs as they are represented on all Forest Management Committees (FMCs).

4.3 Capacity Building

There are numerous initiatives to improve the capacity of local communities, for better forest resource management. The initiatives entail, among others, empowering communities towards sustainable access and extraction of forest resources. The study revealed that both males and females in five of the seven CFs had participated in different capacity building initiatives. Some of the training initiatives were attended more by males than females. These are, especially, skills-based training on the harvesting methods of timber, veld-fire management, leadership and financial management. Women received training mainly on establishing and implementing activities that improve value addition, such as production of crafts, honey, skin oil, beads and crafts. The majority of those who attended training were young male and female members of the CFs. There were, however, training opportunities earmarked specifically for those in leadership and, at times, only for elderly women. Very limited training opportunities were targeted at benefiting marginalised communities such as Jul'hoansi in Talismanus, Okondjatu and Otjinene.

Patterns of harvesting the *Devil's Claw* are changing as it is becoming an endangered species and it is increasingly found far from the settlements. Improved or modern harvesting methods for *Devil's Claw* have been introduced in most Southern African countries to cater for the high demand of this medicinal plant due to commercialisation (Grote, 2003). Historically, the *Devil's Claw* was harvested by women, and it was used mainly for household and medicinal purposes (Grote, 2003). However, over the years, the interest in harvesting it for commercial purposes has tremendously increased, thus raising concerns that it could be over-harvested. In an attempt to preserve it, a permit is needed to harvest the *Devil's Claw*. Furthermore, a harvesting permit for this species requires a proof of training attendance, a requirement which might disadvantage women to an extent. The fact that more males were involved than females, meant that women who possessed indigenous ecological knowledge of this species were no longer in control of this resource.

The main aim of CBNRM programme is to enhance sustainable utilization of forests and natural resources. Since harvest of the Devil's Claw started to attract commercial gains for community members it had led to unsustainable methods and rates of harvest that could lead to local extinction of this valuable resource. The social benefit which women used to accrue for their families and households to treat medicinal ailments had been threatened as a result. Despite training offered to both male and female, women still lag behind in the harvesting and commercial benefits of Devil's Claw plant in their respective CFs. Their participation could also be hampered by additional household chores, children rearing and other community activities that take up their times to harvest Devil's Claw in larger quantities for commercial sales.

Similarly, mopane worms were traditionally harvested by women for household food consumption however, this research noticed a shift in men showing interest in this forest resource. The involvement of men harvesting mopane worms creates competition with women over this resource. Both men and women have realised the commercial value of this forest product. The commercialisation resulted in the need to control the sustainable harvesting of this resource, through issuing of harvesting permit.

4.4 Control of Forest Resources

Control of forest resources mainly refers to protection and monitoring, which has been vested in the local communities as per the Forestry Policy of Namibia. Protection of forest resources varies, depending on their classification. Among them are those that are under strict protection as well as, monitoring and sustainable harvesting mechanisms for resources such as *Acacia erioloba* and *Devil's Claw*. This study established a number of issues related to the rights of use, implementing regulations, issuing of permits and fining of perpetrators. Most of these regulations are enforced by the Government, but in collaboration with the CF committees. Permits are issued to users through collaboration between MAWF and local CF committees as a form of control. Traditional authorities issue letters of consent if resources are harvested in their areas of jurisdiction.

Currently, forest resources in CFs are accessed by both men and women, either directly without requiring permission from any authority, or through acquisition of permits or consent from local leadership. Households within CFs are said to have been granted rights to forest resources through their community forest committees for harvesting on a limited scale for domestic use and, under such conditions, no harvesting permits are required. However, when harvesting on a large scale for commercial purposes, a permit is required. Harvesters from outside the CF are also required to acquire a permit for the quantity they are harvesting.

CFs that are not yet registered have difficulties in enforcing laws or regulations to control the harvesting of resources. Despite these difficulties, the Directorate of Forestry (DoF) within MAWF, together with CFs, ensures that permits are issued and well-monitored, especially for the resources harvested on a commercial basis or if they exceed a certain quantity. For instance, Oshaampula CF (not yet registered) has been in operation for

more than 14 years and works together with the DoF in issuing permits to users. The Oshaampula CF and DoF has also dealt with illegal harvesters. It emerged from the study that most of the forest products that men harvest such as timber, high quantity firewood, are controlled through permits, as they are harvested for commercial purposes. On the other hand, most of the non-timber products such as thatching grass and edible and medicinal plants that women harvest for household use, do not require any permits or letter of consent from the TA leaders.

Contrarily, women also venture into traditionally male controlled forest resources. In terms of construction poles, this resource used to be harvested by men only, but currently women also apply for permits to harvest poles. During 2012, 40% of the permits in Uukolonkadhi for harvesting construction poles were issued to women. However, the study revealed that despite women accessing construction poles through permits, their direct engagement in harvesting the actual resources is still not common.

Control of resources also includes aspects of fire management and patrolling of these resources. Most functioning CFs indicated that they engage in fire management by putting up fire breaks to prevent its spread. Since this activity involves people having to travel and spend some days in the field making these cut lines, the activity is dominated by males. This study showed that women are subjected to gender-based violence when undertaking forest fire fighting duties. The TA in Uukolonkadhi narrated an incident where a young man was withdrawn from the fire-fighting exercise because of sexual harassment claims.

Patrolling of forests was done by appointed forest guards, of which the majority were males. The CF committees indicated that the functions of the forest guards included the patrol of the protected forest and reporting cases of over-harvesting, veld-fire outbreaks, illegal harvesting or any activities defeating sustainable forest management. It emerged from the interviews that active participation of women in the protection of forest resources could be hindered by issues such as the nature of the activities, long distances, odd times clashing with home responsibilities, abilities and strength required to carry out the tasks, fear of wild animals and sexual harassment from male colleagues. A young man in Uukolonkadhi referred to an old Oshiwambo saying, "*omulumentu okuti*", which equates men to a forest, to justify why he thought only men were appointed to patrol. Forest guards are remunerated either through DOF or CFs.

Participation of women in CF initiatives at Ehirovipuka is low because of how men and women are traditionally socialized. Similarly, limited participation of women in CF activities leads to women relying on their partners for most community-level information. The reliance of women on their male counterparts for information flow contributed to women having very little knowledge on the actual activities of the CFs. Low level of education and lack of information were identified as some factors that hindered active participation of women in both leadership and other forest activities in Nepal (Mitchell, 2014). Women in CFs such as Ehirovipuka showed an interest to attend and participate in community meetings. However, male dominance during community meetings seems to discourage the women from actively participating.

4.5 Accessing Forest Resources

Forest policy directives enable equitable and fair access to resources in CFs by emphasising that no one should be excluded from accessing these resources. Women and men access different forest resources. Wood resources emerged as an important forest product with the highest value to both men and women in all CFs. Although most female respondents indicated that they did not harvest wood resources, they still prioritised wood highly for its uses. Wood resources are used as construction poles, firewood, droppers and wooden crafts. Firewood is harvested by both men and women, but women focus mainly on collecting firewood within their vicinity for household use. This finding is in line with Reddy and Padmaja (2014) study that women do not venture far from their homestead when collecting firewood. In Otshiku-Tshiithilonde, Uukolonkadhi and Oshaampula the protected areas are more than 5km from the homestead, which is the vicinity where most women are fetching their firewood.

The male respondents indicated that they used donkey-carts and vehicles to collect firewood further afield, where the resources are abundant, especially for commercialisation. In general, however, distances to most resources are an inhibiting factor that could affect the participation of youth, marginalised groups and women in harvesting. Furthermore, access to forest resources is hindered by, competition over forest resources between locals and non-locals. Women in the Ehirovipuka CF lamented, "*We see more non-residents coming with their cars to camp in our forest and harvest mopane worms. We are concerned that this influx could lead to over-harvesting if not regulated or controlled; this also reduces our food supply and income generating opportunities*".

The other inhibiting factor that this study came across was the limited access to forest resources by marginalised and poor women. They raised concerns of being unable to adequately access forest resources due to illegal fencing in their community, financial constraints to afford permits and lack of vehicles to harvest on large scale.

In certain CFs, there is still rigid gender division of labour and the fear of being stereotyped. For example, in Okondjatu, Talismanus and Otjinene, among the Otjiherero women, there was a reluctance to directly harvest construction poles and droppers. However, the study established that when the women wanted to access these resources, they would hire labour. Furthermore, in Otshiku-Tshiithilonde, which has a salt pan, it appeared that traditionally only men harvested this resource as the male group revealed that *“it is a taboo for women to collect salt”*. On the other hand, the women’s group indicated that there is nothing wrong with women harvesting salt. Both men and women indicated the economic importance of this resource.

The study revealed that women mainly participate in less commercial non-timber forest resources, which include medicinal, edible plants, agro-forestry resources such as *marula* and palm tree products that contribute to household health and food security. Men stated that they also harvested these resources, but on a small scale.

A case of conflict over accessing forest resources outside the Uukolonkadhi CF surfaced during the study. The red ochre has been traditionally utilised by Ovahimba women as a cosmetic product is being commercialised by Ovazemba people. Ovahimba respondents were grieved by the fact that their traditional resource is being commercialised mainly by Ovazemba men. Whilst the demand for red ochre is increasing, Ovahimba people are resisting to change their traditional way of harvesting, thus losing the opportunity to commercialise it. The commercialisation of red ochre among the Ovazemba people is spearheaded by young men, as it is labour intensive and requires strength. The area where the ochre is mined falls outside the jurisdiction of the Forestry Committee, making it difficult to resolve the conflict.

4.6 Income Generation and Use of Harvested Resources

Studies in some African countries have reported the economic importance of forest products in rural households (Arnold and Townson, 1998; Mulenga, Richardson, Mapemba and Tembo, 2011). Mulenga et al. (2011) particularly found that non-timber forest products contributed 34% to household income in 2008. Income generated from forest resources contributes significantly to the livelihoods of rural communities. Various mechanisms are put in place to ensure access to forest resources. Out of the seven CF research sites, only two are generating income from the sale of forest resources. To access the wood resources from CFs, the DoF issues transport permits to interested harvesters, while the CF committee charges for the quantity of forest resources harvested. The Oshaampula CF case is illustrated in box.1 to reflect the income generating strategies at institutional and individual levels:

Box 1: Harvesting of forest resources in Oshaampula CF

In Oshaampula, the study revealed that those who acquire permits do not do the harvesting themselves, but the CF rather designates people from the community, mostly young males, to cut the required quantity. This process disadvantages women as it mainly involves men to cut the poles, and they receive direct compensation from the CF committee. The women in Oshaampula reported the increasing demand from outsiders for their resources, yet they do not have any direct benefits through employment and wages, except through the community benefit sharing process. Similarly, it emerged from the Oshaampula leadership that most of the CF funds are used for community development projects. A member of the Oshaampula leadership narrated thus: *‘We recently built a kindergarten and a local clinic for antenatal care and immunisation’*. Although the income generating activities of this CF are male-dominated, the benefits are used for the greater good of the entire community.

The study revealed that community members can also generate income from forest resources by trading their labour or selling the harvested forest products. It was common in most of the CFs for young people or members of the marginalised groups to harvest forest resources for others in exchange for cash income. People who are relatively well-off seem to hire labour for harvesting forest resources. They either hire local Ju|’hoansi men or unemployed men from other regions. The Ju|’hoansi people, especially from the Talismanus, Otjinene and Okondjatu CFs, do not generate substantial income from selling forest resources compared to trading labour to harvest forest resources for others. The youth in these regions also showed little interest in harvesting forest resources, resulting in job opportunities going to non-locals. One Ovaherero man in Talismanus said, *“To harvest poles and droppers you need to recruit a strong man as these activities are labour intensive. We therefore hire strong men from other regions to harvest labour intensive activities such as cutting poles and*

droppers”. Although women from the Ovaherero do not directly harvest poles and droppers, they are able to hire labour. These women sell some of the poles and droppers harvested through hired labour. In particular, OvaHerero women in Omaheke and Otjozundjupa regions said, “*We do not go to the forest to harvest, but if we want forest resources, we hire labourers and a car. People that we hire go to the forest and bring the resources to us.*”

This study has highlighted the involvement of women and men in harvesting different forest resources for commercial purposes. Resources such as *Devil's Claw*, *mopane* worms, construction poles, droppers, firewood, *marama* beans and some edible plants are harvested commercially. Some of these resources have organised markets that provide opportunities to both males and females to sell high valued products such as *Devil's Claw*.

5. Conclusion

The gendered analysis of participation in the harvesting, benefits and management of forest resources in CFs revealed distinct inequalities in access, control, monitoring and use of forest resources. These inequalities are differentiated by gender, level of marginalisation and ethnicity. The institutional arrangements allow equal gender representation in management structures of all CF reserves. However, this study revealed that the representation of women in CFs committees is low. There are cases where the representation is equal or is characterised by a higher number of women in CF committees that govern the utilisation and benefit sharing of forest resources at local level. In such cases, men predominantly occupy strategic and prominent positions of chairperson and vice-chair person. This ultimately acts as a barrier for marginalised groups, minority ethnic groups and women's participation in decision-making. Women, being the carriers of indigenous knowledge of most forest products, will not be able to share this knowledge if they are not adequately involved in the decision-making processes. It has been proven that both scientific and indigenous knowledge are critical to contribute to resource sustainability.

The study also revealed that when forest resources that were traditionally harvested by women become commercialised, men also start to harvest these resources. This trend not only negatively affects the access of women to those resources, but also disrupts the social relations and learning process that women traditionally engaged in when harvesting these resources. The increasing participation of men in harvesting forest resources for commercial purposes coupled with women continuing to harvest for household consumption could lead to rapid depletion of some of the forest resources. Furthermore, as resources are getting scarce near homestead, it becomes increasingly difficult for women to access them due to the physical distances women have to travel to access such resources. Consequently, less access for women and marginalised groups implies that income generated and supplies for household consumption from these forest resources is reduced, increasing the vulnerability of these households.

Factors that restrict women's participation are similar in other countries and regions of the world. Social norms define household chores and childcare as women's roles, thereby affecting effective participation in the harvest and monitoring of forest resources. Activities that require women to travel distances and spend more time away from their household chores inhibit the level of participation in the harvesting of commercial products by women. Women from low-income families and marginalised groups are facing challenges that inhibit their participation the most.

This study concludes that access to and control of forest resources have improved in Namibia if one looks at the number of harvesting permits issued to female applicants. However, control of and decision making regarding harvesting and benefits of forest resources may reveal a different pattern. Although the issuing of harvesting permit system has proven to be trusted control mechanism, caution needs to be put when harvesting for commercialization. This will require continuous and consistent monitoring of the resources and for use patterns to ensure sustainable equitable access to these forest resources.

This study therefore, recommends further research to interrogate the impact of benefits accrued from forest resources as well as control and decision-making power over the use and benefits of CF products.

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