

**THE DISTRIBUTION AND UTILIZATION OF BENEFITS DERIVED FROM PLANTATION-STYLE
COMMUNITY FORESTS IN ESWATINI:
A CASE OF NGCAYINI AND EZIKHOTHE NI CHIEFDOMS**

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ABSTRACT

The aim of this study was to assess how benefits derived from plantation-style community forests are distributed and utilized within and beyond the communities. Data were collected by selecting and interviewing respondents comprising heads of households, members of the community inner council, Natural Resource Management Committee members, as well as the *Inkhundla* Local Government Council (*Bucopho*) at both Ngcayini and Ezikhotheni chiefdoms. The research findings indicate that resources extracted from plantation-style community forests are sold to community members, and the proceeds are then used to fulfil the needs of the community concerned. For instance, at Ngcayini, they fund community leaders when attending royal duties and buy a royal kraal stamp and its accessories (37% of the heads of households and 100% of the community leaders). At Ezikhotheni they financed a water project and support neighbourhood care points (6% of the heads of households and 18.2% of the community leaders). Noteworthy is that the manner in which the benefits are distributed and utilized enhances sustainable management of community forests in the case study areas.

Keywords: Plantation-style community forests, distribution and utilization of benefits, Natural Resource Management Committee, Ngcayini and Ezikhotheni

INTRODUCTION

The Kingdom of Eswatini is located between longitudes 30 and 33 degrees East and latitudes 25 and 28 degrees South in the south-eastern part of Africa (Brown, 2011; Magagula, 2003) with a population of about 1 093 238 people with an annual population growth rate of 0.7% (Government of the Kingdom of Swaziland, 2017). The country is landlocked by the Republic of South Africa and Mozambique. In terms of areal extent Eswatini covers an area of 17 364 km², with a population density of 63 inhabitants per km². Irrespective of such a small areal extent, the Kingdom of Eswatini is characterized by six distinct agro-ecological regions (Figure 1), which are clearly distinguished on the basis of elevation, topography, climate, geology and soils (Remmelzwaal, 1993; Government of Swaziland, 2005). These zones are Highveld (33%), Upper Middleveld (14%), Lower Middleveld (14%), Western Lowveld (20%), Eastern Lowveld (11%) and Lubombo Range (8%) (Government of Swaziland, 1997).

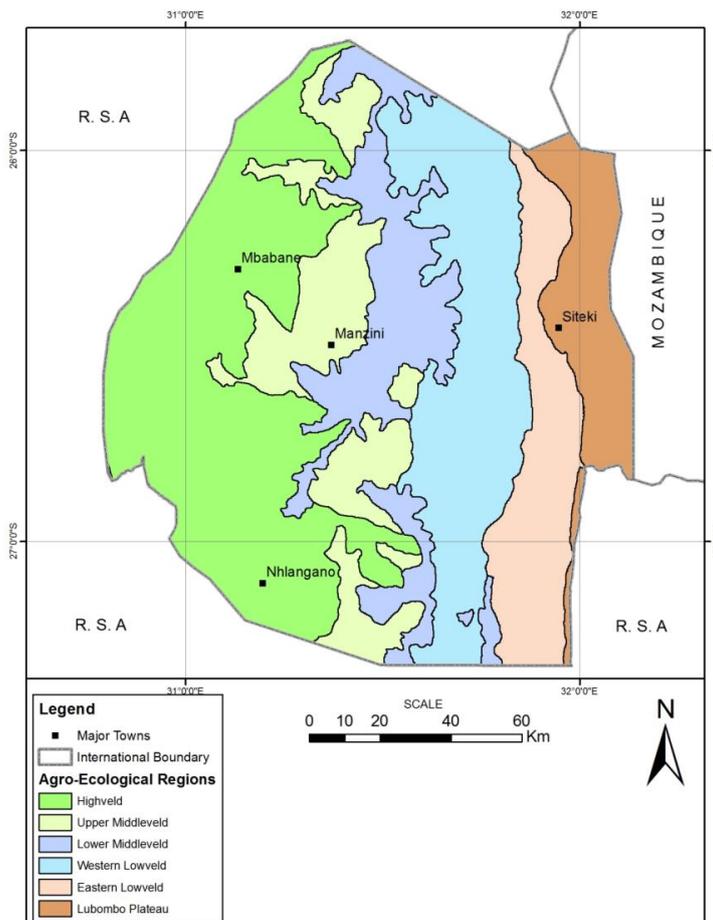


Figure 1: The agro-ecological regions of Eswatini

Source: University of Eswatini (UNESWA), Department of Geography, Environmental Science and Planning (GEP) (2018)

There are considerable annual variations in the rainfall (Figure 2), something which leads to both drought and floods. Years with lower than normal rainfall occur recurrently, particularly in the Lowveld, which has a semi-arid climate leading to drought. The variation in the amount of rainfall received across the physiographic regions of the country has a bearing on the distribution of vegetation types (Figure 3). It must be pointed out that, as much as drought has detrimental effects on vegetation distribution; floods are also a menace. This study mainly focuses on sustainable management of community forests in particular plantation-style community forests.

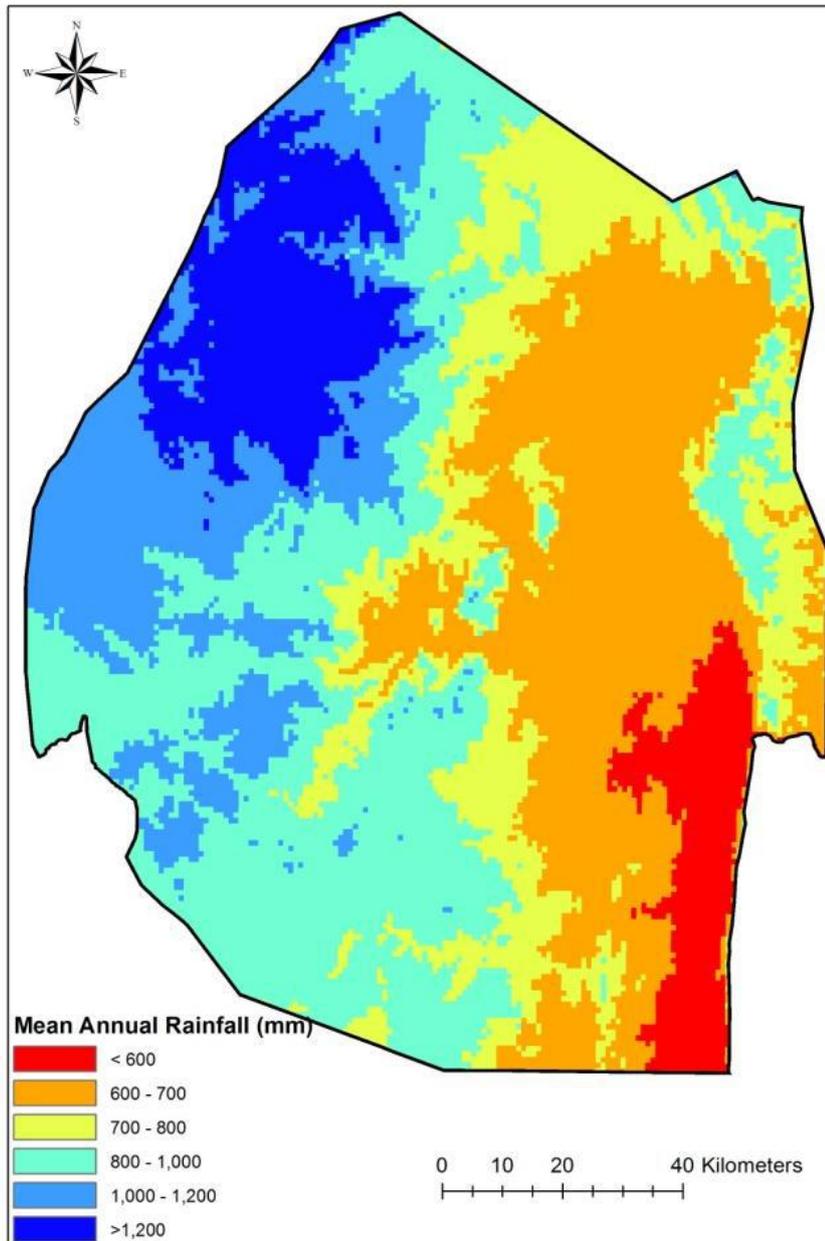


Figure 2: Distribution of Mean Annual Rainfall (mm) in Eswatini
Source: Brown (2011)

Community forests

By way of definition, a forest is a large tract of land covered with trees and underbrush; woodland with a tree canopy of more than 10 per cent and a minimum area of more than 0.5 hectares, as well as a minimum tree height of five (5) meters (FAO, 2001). A community forest is a village level forestry activity, decided on collectively and established on communal land, where community members participate in the planning, implementation, sustainable management and harvesting of forest resources and therefore get a major share of the socio-economic and ecological benefits from the forest (Kafle, undated; Sillah, 2003). Community forests' areas provide a myriad of basic inputs; free of direct cost to local homesteads such as fuel wood and timber, animal fodder, green manure and fruits, as well as medicinal products.

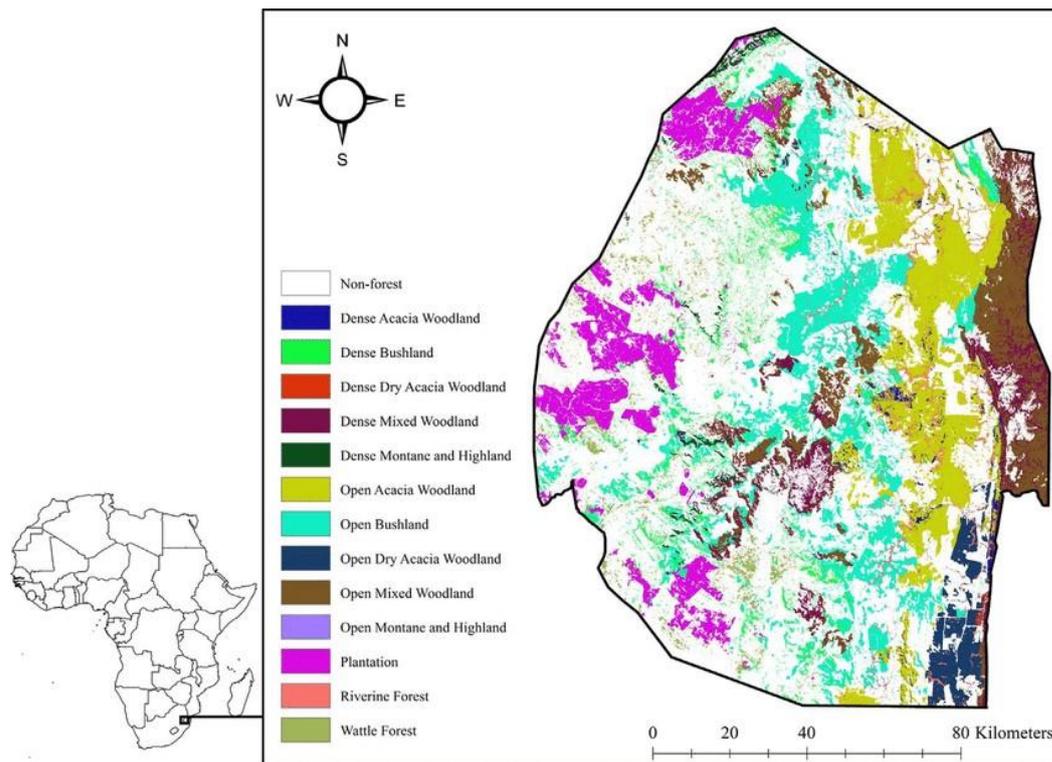


Figure 3: Forest types in Eswatini in 1999
 Source: Thurland (2000)

According to Tempel and Schmidt (2010:13), “In all Community Forests, community funds are established. These funds often start as saving funds, but with the time, the proceeds from fees for the use of forest products, sales, fines for illegal activities and donations by visitors contribute to the funds”. Considering the avenues of funds generation, the Community Forest Programme has the potential to actually contribute to the improvement of rural livelihoods, thus enabling sustainable development. The most critical issue regarding benefits is how they are shared amongst the stakeholders concerned, since an inequitable distribution may trigger conflicts and ultimately jeopardize the entire exercise of local sustainable management of resources. Moreover, inequitable distribution of benefits may encourage illegal harvesting and other illicit activities because they provide instantaneous financial gains (Kuzee, 2003). Furthermore, the Government of Swaziland (2005) elucidates that local people only support conservation initiatives if they see concrete benefits and improvements to the quality of their lives. Lack of information on whether such an arrangement applies to communities such as Ngcayini and Ezikhotheni where there have been interventions in the form of plantation-style community forests to rehabilitate land degradation served as a motivation for the present study.

It is important to highlight the contrast between a natural forest and a forest plantation. A natural forest is mainly composed of naturally growing indigenous forests and woodlands (Dlamini, 1998) which are not classified as a forest plantation. This suggests that natural forests normally comprise a wide diversity of tree species. FAO (2001) avers that a forest plantation is established by planting or/and seeding in the process of afforestation or reforestation and it comprises exotic or in some cases indigenous species. Notably, the tree species grown in forest plantations in the Kingdom of Eswatini include wattle (*Acacia mearnsii*), eucalyptus (*Eucalyptus spp.*) and pine (*Pinus spp.*).

In a plantation-style community forest, people living in and around the forest participate in forest management decisions and also benefit both financially and/or in kind from the results of the management exercise as observed by Carter

(2010). According to The National Forest Policy, community forestry refers to the participation of community members in the planning, implementation and sustainable management of forests in the local environment (Government of Swaziland, 2002). Community forestry also relates to homestead or farm forestry, agro-forestry, woodlots, and planting as well as use of trees in conservation, rehabilitation or other rural schemes. Furthermore, community forestry in Eswatini involves the use and sustainable management of natural forests and woodlands, as well as wattle and eucalyptus forests within the community boundaries (Government of Swaziland, 2002). Therefore, in the Kingdom of Eswatini, community forestry comprises both plantation-style community forests, and natural forests and woodlands. This study however, concentrated on plantation-style community forests established in an effort to rehabilitate land degradation at Ngcayini and Ezikhotheni chiefdoms. The choice of these chiefdoms is motivated by the fact that they have badly degraded areas where interventions through establishment of community forests were undertaken between 2001 and 2003. There is however, a dearth of information on the effectiveness and sustainability of the interventions made, in particular regarding the distribution and utilization of benefits derived from the sale of the plantation-style community forest resources.

Knowledge gap addressed by the research

In the Kingdom of Eswatini, community forests are mainly grown to alleviate land degradation as well as supply forest resources due to a shortage instigated by dwindling natural forests. Moreover, there has been a resurgence of a market for timber derived from plantation-style forests (*Acacia mearnsii* and *Eucalyptus spp.*), something which has stimulated their heavy exploitation; hence they are not spared from depletion. It is however, indistinct how the proceeds from the sale of resources from community forests are distributed and utilized; hence the present study addresses that subject. The objectives of the study were:

- To determine the distribution of benefits to individuals and to the community at large.
- To investigate how the benefits derived the sale of resources from community forests are utilized.
- To determine the ecological importance of forests.

MATERIALS AND METHODS

Study area

The study was carried out in two chiefdoms namely Ngcayini and Ezikhotheni. Ngcayini chiefdom is located in the Manzini district under Kukhanyeni constituency, while Ezikhotheni chiefdom is found in the Shiselweni district under Shiselweni one (1) constituency in Eswatini. In terms of absolute location, Ngcayini is found between longitudes 31°21' 34"E and 31° 24' 15"E, and latitudes 26° 16' 17"S and 26° 18' 31"S (Figure 4) whereas Ezikhotheni lies between longitudes 31° 23' 09"E and 31° 29' 18"E, and latitudes 27° 09' 02"S and 27° 14' 56"S (Figure 5).

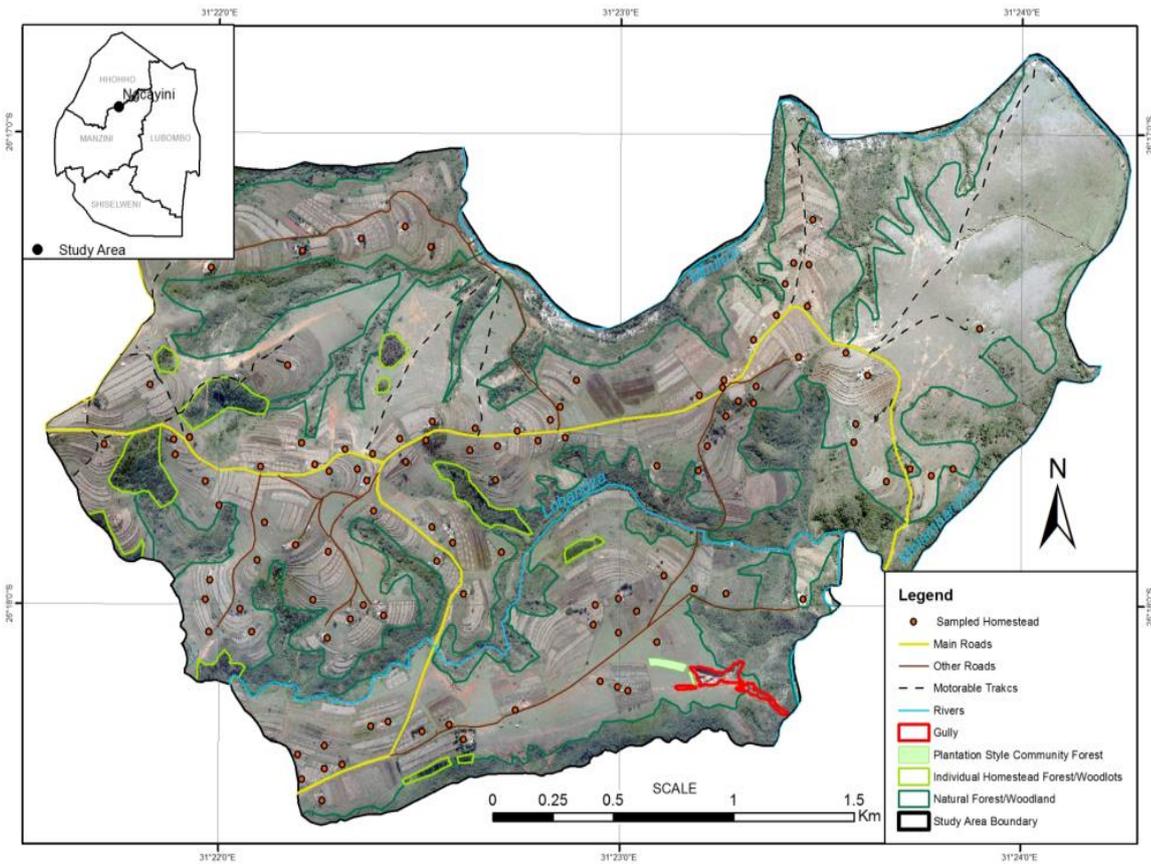


Figure 4: Ngcayini chiefdom

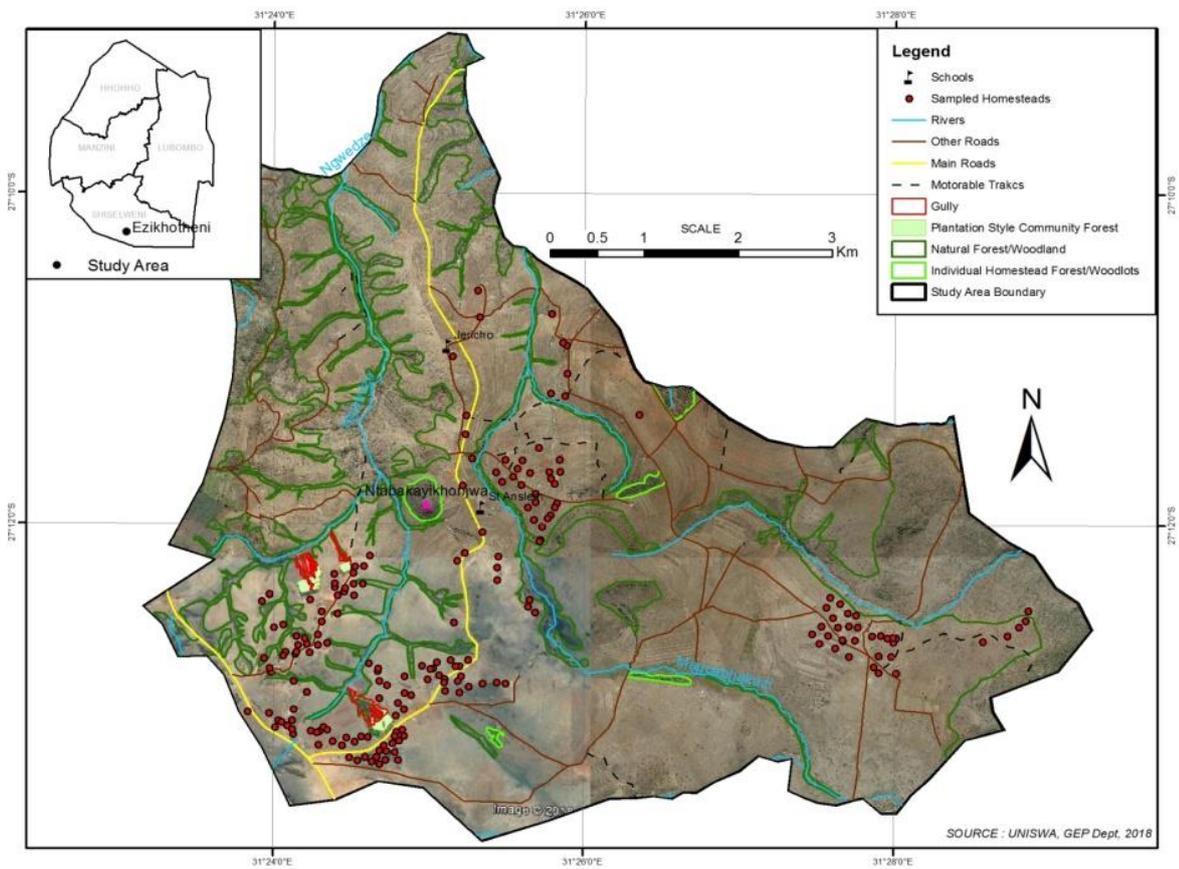


Figure 5: Ezikhotheni chiefdom

Methods of data collection

Data were collected using in-depth interviews guided by a questionnaire administered to heads of households and community leaders at Ngcayini and Ezikhotheni chiefdoms. In terms of population distribution, according to a personal interview with the *Inkhundla* Local Government Council (*Bucopho*) during the field reconnaissance survey in the year 2017 it was gathered that Ngcayini had 103 homesteads (three homesteads being new arrivals), while Ezikhotheni had 508 (eight homesteads being new arrivals) (Field reconnaissance survey, 2017).

In terms of selecting respondents, since at Ngcayini there were 100 eligible homesteads, they were all included in the study. At Ezikhotheni on the other hand, where there were 500 eligible homesteads 40 per cent, which is 200 homesteads were selected through simple random sampling for inclusion in the study. Simple random sampling technique was used to ensure that all homesteads in this case had an equal chance of being selected for the sample in accordance with Strydom (2005).

In the quest of implementing simple random sampling a list of the homesteads was solicited from the traditional authorities through the *Bucopho*. Then the homesteads were numbered from the first to the last. At that juncture, the table of random numbers was used to come up with the homesteads which participated in the study. Worth noting is that in some homesteads there were more than one household, in such cases only one head of household was interviewed. The reason for interviewing one instead of all the heads of households is because of the homogeneity of households in the sense that by virtue of belonging to the chiefdom they are bound to participate in the management of the community forests. In the household, the interview was administered to either the man or woman as a head of the household. In the event of their unavailability however; the eldest household member responsible for making decisions was interviewed as suggested by Marambanyika and Beckedahl (2017). It must be noted that in the event that a selected respondent refused to participate in the study another homestead was selected until the intended sample size was attained. All in all, the sample comprises 300 homesteads with 100 from Ngcayini (Figure 4) and 200 from Ezikhotheni (Figure 5).

Regarding selection of key informants in the study they were purposively selected for in-depth interviews based on their role in the communities regarding development and governance of community forests. Key informants in this study comprise the following:

- three (3) NRMC members from each chiefdom who were selected through convenience sampling;
- the Headman (*Indvuna*);
- three (3) inner council members and three (3) ward elders from each chiefdom who were selected through convenience sampling;
- *Inkhundla* Local Government Council (*Bucopho*);

The data in this study is presented as narratives, crosstabs and graphs. Responses were coded and inputted for analysis using the Statistical Package for Social Scientists (SPSS) program version 20. In this study, Chi-square (χ^2) statistical analysis was employed to determine the level of significance in the difference between the two chiefdoms regarding distribution and utilization of benefits derived from community forests.

FINDINGS AND DISCUSSION

The role played by community forests in the socio-economic life of people and sustenance of the natural environment cannot be overemphasized. For instance in the Kingdom of Eswatini, rural communities live in and around the forests and woodlands where they use the following resources; fuel wood, charcoal, poles for construction, bark for tannin and pulpwood, thatching grass, medicinal plants, honey, as well as wild fruits and vegetables (Magagula, 2003). These resources are normally obtained for free from communally owned forests and are vital in the survival of community members. Therefore, to ensure a perpetual supply (sustainability) of the resources from communally owned forests and posterity, there is a need for community members to join forces in their management. It is on that basis that this study investigated the distribution and utilization of benefits derived from the sale of community forests' resources to individuals and to the community at large. It is important to note that the resources exploited for sale from plantation-style community forests were mainly poles particularly rafters.

Distribution of benefits to individuals and to the community at large

The benefits derived from the sale of resources from plantation-style community forests to individuals, were distributed by NRMC members (83.2%) at Ezikhotheni and by community leaders (59.5%) at Ngcayini. There were also heads of households who claimed to be oblivious on who distributed benefits to individuals (16.8% at Ezikhotheni and 40.5% at Ngcayini). According to community leaders, at Ezikhotheni the benefits accrued from sale of resources from plantation-style community forests were mainly distributed by NRMC members to individuals (90.9%). At Ngcayini, the benefits were distributed by community leaders (18.2%). There were community leaders who claimed to be uninformed on who distributed benefits to individuals (9.1% at Ezikhotheni and 81.8% at Ngcayini). Noteworthy is that, the presence of community members who are oblivious on the distribution of benefits is a serious threat to the sustainability of the resources at community level as well as at national level. Therefore, to ensure sustainable management of community resources and sustainable development in general community members must be on the same page.

In terms of distributing benefits accrued from sale of resources from plantation-style community forests to the community at large, 89.1% of the heads of households at Ezikhotheni indicated that it was mainly a responsibility for NRMC members. At Ngcayini, 100% of the heads of households declared that it was a prerogative of community leaders. Moreover, 10.9% of the heads of households at Ezikhotheni claimed to be in the dark concerning who distributed benefits derived from the sale of forest resources from plantation-style community forests to the community at large. Once again, this is a threat to the sustainability of the resources. According to 90.9% of the community leaders at Ezikhotheni, it was mainly a responsibility of NRMC members. On the other hand, 100% of the community leaders at Ngcayini revealed that it was solely a responsibility for community leaders. Moreover, 9.1% of the community leaders at Ezikhotheni claimed to be unaware on who was responsible for the distribution of benefits to the community at large. This reflects that there is clear leadership in the management of community resources in the respective chiefdoms.

When applying the chi-square (χ^2) test on the findings concerning distribution of benefits accrued from the sale of resources from plantation-style community forests to individuals and the community at large to establish the level of significance, a *p* value of 0.000 is attained for both the views of the heads of households and for the community leaders. These values indicate that there is a high level of significance in difference between Ezikhotheni and Ngcayini chiefdoms

regarding distribution of benefits accrued from the sale of plantation-style community forests resources to individuals and the community at large.

The findings regarding distribution of benefits accrued from sale of forest resources are in agreement with those of Sillah (2003) in The Gambia, where revenues derived from community forests comprise a Local Forest Fund which is solely administered by the village. In the distribution, 15 per cent of the revenue is paid to the Forestry Department for service, while 34 per cent is saved for investing in the forest, and 51 per cent is for village developments as observed by Sillah (2003). This practice is a guarantee for sustainability of the community forests and hence sustainable development.

Furthermore, evidence depicts that forests and their products are sources of various foods, which supplement and complement what is derived from agriculture, for example firewood with which to cook food, and a wide array of medicines and other products that contribute to health and hygiene in accordance to Harrison (2006); Rosa (2011); Makhado and Saidi (2011); and Njoroge and Muli (2011). In Rwanda for instance, production of charcoal is a huge business, with the charcoal and firewood market having a value of US\$120-150 million per year as observed by Njoroge and Muli (2011). Remarkable is that 50 per cent of the revenue remains in rural areas, where it is distributed among farmers/wood growers and charcoal makers as reported by Njoroge and Muli (2011). Thus, it is a huge source of income for rural farmers and therefore, plays an important role in reducing poverty and ensuring sustainable management of the environment.

A most significant aspect of distributing benefits is to ensure a transparent and an equitable distribution. For instance, often times the distribution of benefits varies on the basis of socio-economic status and gender, such that the poor and women are often marginalized as observed by Timsina (2002). In this study however, the distribution and utilization of resources was not in any way influenced by socio-economic status and gender. Notably, community members complained about lack of transparency among community leaders concerning the distribution and utilization of proceeds from sale of resources in community forests. In actual fact, lack of transparency is normally an ill towards sustainable management of resources; hence it must be corrected through involving all stakeholders in decisions that have to do with community resources.

Utilization of benefits derived from community forests

The study also investigated utilization of benefits accrued to individuals and to the community in general from the sale of forests' resources. Evidence from the findings indicates that a majority of the heads of households disclosed that there were no benefits accruing to individuals (100% at Ezikhotheni and 95% at Ngcayini). On the contrary, 5% of the heads of households from Ngcayini indicated that individuals benefited through refreshments during special community meetings; when the community has visitors. Community leaders' perspective on the benefits accruing to individuals reflects mixed views. For instance, 90.9% of the community leaders at Ezikhotheni and 81.8% at Ngcayini indicated that there were no benefits from sale of forest resources which accrue to individuals. It must be noted that, this reflects that the sustainability of the forests resources hangs on a balance. On the other hand, 18.2% of the community leaders at Ngcayini indicated that individuals benefited through refreshments during special community meetings; particularly when there are guests in attendance in the course of the meeting. Furthermore, 9.1% of the community leaders at Ezikhotheni mentioned that all the money was taken by the Chief. This only applied to a forest that was planted by *Yonge*

Nawe, which is not managed by the NRMC like the other plantation-style community forests (Plate 1). This is largely because when it was planted, a NRMC was not established to oversee its sustainable management. Instead a person was bestowed with the responsibility of overseeing the forest and that person reports directly to the Chief.

When applying the chi-square (χ^2) test on the findings concerning benefits accrued by individuals from the sale of community forests' resources to establish the level of significance, a p value of 0.007 is attained for the views of heads of households and a p value of 0.217 for community leaders. The p value for heads of households of 0.007 shows a high level of significance in the difference between Ezikhotheni and Ngcayini chiefdoms regarding benefits accrued by individuals from the sale of community forests' resources. On the other hand, the p value for community leaders of 0.217 depicts that there is no significant difference between Ezikhotheni and Ngcayini chiefdoms regarding benefits accrued by individuals from the sale of community forests' resources.



Plate 1: A plantation-style community forest planted by *Yonge Nawe* at Ezikhotheni
Source: Google Earth (2017)

Looking at benefits accrued at the community level, the findings on the one hand depict that a majority of the heads of households (64.1% at Ezikhotheni and 63% at Ngcayini) indicated that there were no benefits accumulated (Figure 6). Once again, it is noteworthy that no benefits accrued yields unsustainable management of the resources concerned. On the other hand, 29.9% of the heads of households at Ezikhotheni indicated that the money accrued through the sale of forest resources from community forests was used in financing a community water project (Figure 6). At the same time, 37% of the heads of households at Ngcayini, stated that the money was used to fund community leaders when attending royal kraal duties, as well as catering for community needs like buying the royal kraal stamp and its accessories (Figure 6). This indicates that community members are not involved in making decisions on how to use the proceeds from the sale of resources from community forests or they do not support the manner in which the money is used. Notably, lack of involvement in decision-making is a serious threat to sustainable development.

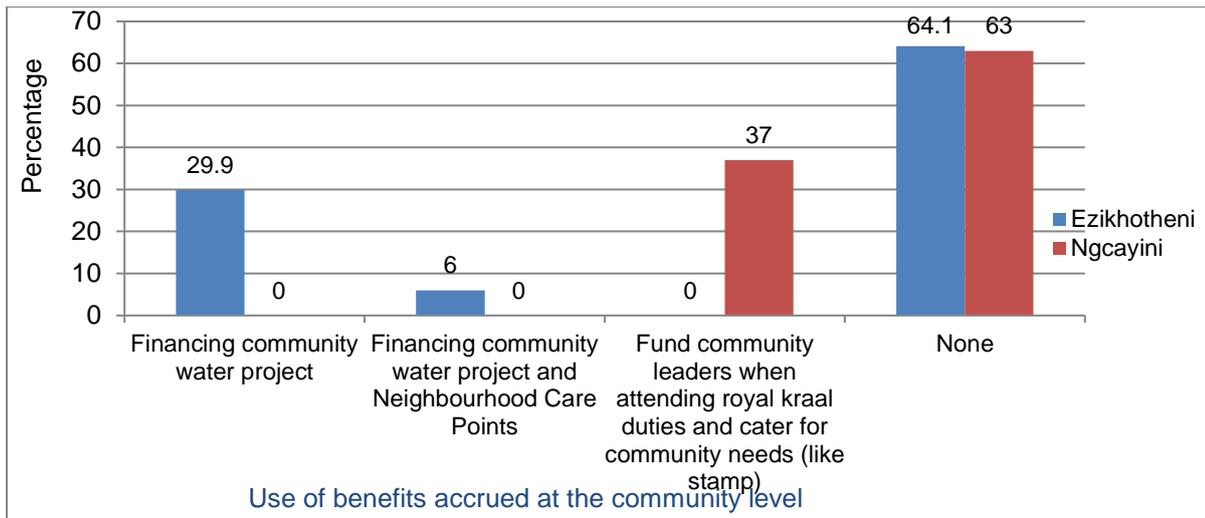


Figure 6: Heads of households' views on benefits accrued by the community at large at Ezikhotheni and Ngcayini chiefdoms

Likewise, the views of the community leaders on the money accrued through the sale of forest resources from community forests were not deviating much from those of the heads of households. For instance, 45.5% of the community leaders at Ezikhotheni revealed that the money was mainly used for funding a community water project (Figure 7). At Ngcayini on the other hand, the money was specially used to fund community leaders when attending royal kraal duties, as well as in catering for community needs like buying the royal kraal stamp and its accessories (100%) (Figure 7).

Furthermore, at Ezikhotheni 9.1% of the community leaders revealed that all the money accrued was taken by the Chief (Figure 7). As already indicated, this pertains to a community forest that was planted by *Yonge Nawe*, which is not managed by the NRMC (Plate 1). Finally, according to 6% of the heads of households and 27.3% of the community leaders at Ezikhotheni, some of the proceeds from the sale of community forest resources were also used in financing both the community water project and neighbourhood care points (Figure 6 and Figure 7).

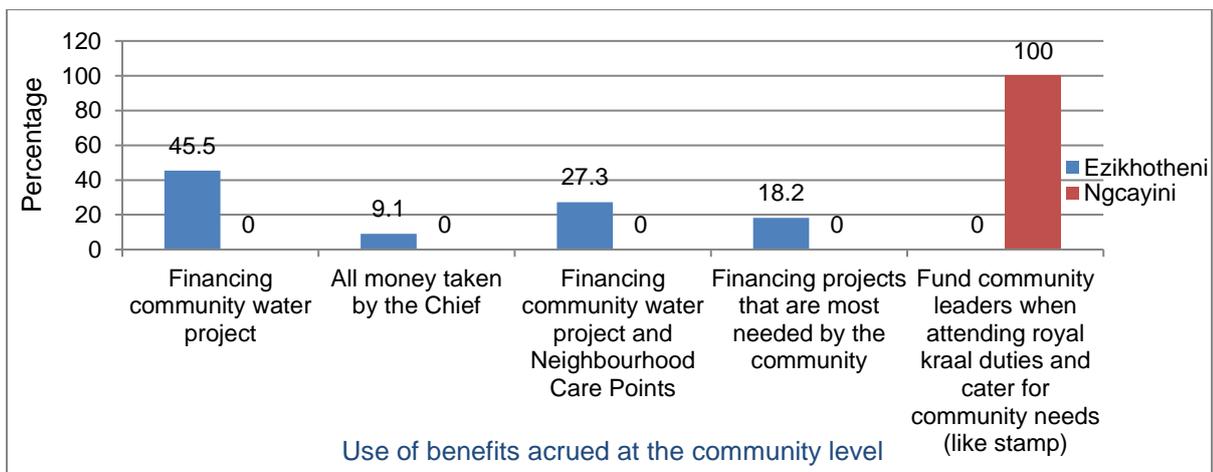


Figure 7: Community leaders' views on benefits accrued by the community at large at Ezikhotheni and Ngcayini chiefdoms

Regarding the purchase of a royal kraal stamp and its accessories, this is evident through the fact that at Ezikhotheni a stamp fee of E50 is charged by the royal kraal for any document that requires to be stamped. Yet, at Ngcayini, there is no stamp fee levied for documents that requires the royal kraal stamp. Therefore, in the final analysis the procurement of a royal kraal stamp and its accessories using community funds removes the burden of stamp fees from community and non-community members in need of the stamp. Notably, this ensures sustainable management of community resources in particular and sustainable development in general.

Applying the chi-square (χ^2) test on the findings concerning benefits accrued by the community at large from the sale of community forests' resources to establish the level of significance, a p value of 0.000 is attained for both the views of the heads of households and for the community leaders. These values indicate that there is a high level of significance in difference between Ezikhotheni and Ngcayini chiefdoms regarding benefits accrued by the community at large from the sale of community forests' resources.

The findings regarding utilization of benefits derived from community forests are corroborated by Ezzine de Blas, Ruiz-Perez and Vermeulen (2011) in a study conducted in Cameroon where they state that logging offers direct and indirect benefits to community forest user groups. The direct benefits are mainly monetary and in-kind, whereas indirect benefits comprise an improvement of community services. Noteworthy, the logging rent is managed by a Management Committee of each community forest, such that community forest members are paid for participating in logging operations specifically; inventorying, transporting (carrying), and or sawing timber as reported by Ezzine de Blas, Ruiz-Perez and Vermeulen (2011). In-kind benefits comprise goods distributed to all families such as roofs for houses, whereas indirect benefits are improvement of community amenities like schools (*i.e.* building or rehabilitation of schools, payment of teachers' salaries, and grants for students), roads and water sources as observed by Ezzine de Blas, Ruiz-Perez and Vermeulen (2011). The degree to which benefits are significant and equitably distributed increases the motivation of people for cooperating in ensuring sustainable management of community forests.

The ecological importance of forests

Forests are part and parcel of the ecosystem hence they not only serve human needs; instead they provide a variety of ecosystems services even to non-human elements of the environment. It is on those bases that this section of the study concentrates on the importance of community forests to animals, water catchments, and significance of the tree species in the culture of Eswatini. The importance of forests to animals was confirmed by a majority of the respondents in both chiefdoms (100% of the heads of households at Ezikhotheni and 99% at Ngcayini). Notably, 1% of the heads of households at Ngcayini negated that forest are important to animals. Community forests were considered to be important to domestic animals in terms of grazing and browsing, while in the case of wild animals they afford them food plants, foraging space and habitats. These sentiments were shared by both heads of households and community leaders. Domestic animals which are kept in both chiefdoms include cattle, goats, sheep, pigs and donkeys. On the other hand, wild animals include; rabbits, mice, bees, grey duckers, snakes, mangooses and birds. Once again, these views were shared by both the heads of households and community leaders. These findings are in agreement with those of Makhado and Saidi (2011) who observed that forest plantations afford neighbouring communities access to free grazing for livestock in South Africa. Just like in South Africa, in Lesotho; a large number of livestock acquire fodder, shade, and shelter from the scanty indigenous woody vegetation as reported by Maile (2011).

Forests are very important in protecting water catchments especially through reducing the rate of evaporation and soil erosion. Likewise at Ezikhotheni and Ngcayini, community forests are important in the protection of catchments for the rivers traversing these areas. At Ezikhotheni, the catchments are for Ngwedze, Mhlakela, Mdakane and Magcabhakazi rivers. At Ngcayini, the catchments are for Lobanda, Mhlambanyoni, Bhudlweni and Mkhosana rivers. This basically indicates that Ezikhotheni and Ngcayini chiefdoms are well drained. For instance, in an effort to maximize the usage of water from the rivers some community members have vegetable garden along the rivers. They use the water from the rivers for irrigation. Noteworthy is that, when people realize the benefits of a resource their zeal in ensuring its sustainability is enhanced, which warrants sustainable development.

The findings regarding protection of water catchments are supported by Udo, Oribhabor, Nwosu, Daniel and Akpan *et al.* (2011) who observed that in Nigeria, mangroves are crucial to fish and invertebrate nurseries, erosion control, and water quality control. Likewise, evidence from Lesotho in accordance to Maile (2011) highlights that indigenous trees and shrubs by providing vegetative cover play a critical role in protecting land from soil erosion, especially because such forests mainly occur in catchments and river valleys.

By the same token, there are tree species which are designated as royal trees in the country. For instance, royal tree species which were found at both Ezikhotheni and Ngcayini chiefdoms include *Imbondvo lemnyama* (*Combretum molle*) and *Lusekwane* (*Dichrostachys cinerea*). There were however, species such as *Umphahla* (*Brachylaena spp.*), *Masweti* (*Manonhotaxis caffra*), *Umlahlabantfu* (*Zizyphus mucronata*) which were found at Ngcayini. On the other hand, *Umnucuma* (*Olea spp.*) was found at Ezikhotheni chiefdom.

In terms of the uses of royal tree species, 96% of the heads of households at Ezikhotheni and 79% at Ngcayini reflected that a majority of them were for constructing kraals (Figure 8). Tree species which are used in the construction of kraals include; *Imbondvo lemnyama* (*Combretum molle*), *Lusekwane* (*Dichrostachys cinerea*), *Umphahla* (*Brachylaena spp.*), *Umnucuma* (*Olea spp.*), and *Umhlume* (*Adina spp.*). At the same time, tree species such as *Umhlume* (*Adina spp.*) and *Umphahla* (*Brachylaena spp.*) are also used in the building of huts and hut enclosures. It must also be noted that *Umhlume* (*Adina spp.*) and *Umphahla* (*Brachylaena spp.*) have a spiritual value attached to them, that is, they prevent lightning strikes.

The findings also reveal that there is a tree species which is used for making caskets for royalty namely *Masweti* (*Manonhotaxis caffra*) (3% at Ngcayini) as well as those used for making royal necklaces (*Ematinta*) for royal women (1% at Ngcayini) namely *Umlahlabantfu* (*Zizyphus mucronata*) (Figure 8). These necklaces are normally worn by royal women who are breastfeeding. At the same time, *Umlahlabantfu* (*Zizyphus mucronata*) is also used for burials. That is to say, after the grave has been constructed a branch of *Umlahlabantfu* (*Zizyphus mucronata*) is normally laid on it symbolizing that the person has indeed been laid to rest. According to community leaders, royal tree species are mainly used for constructing kraals (90.9% at Ezikhotheni and 90.9% at Ngcayini), as well as constructing hut enclosures (9.1% at Ezikhotheni and 9.1% at Ngcayini).

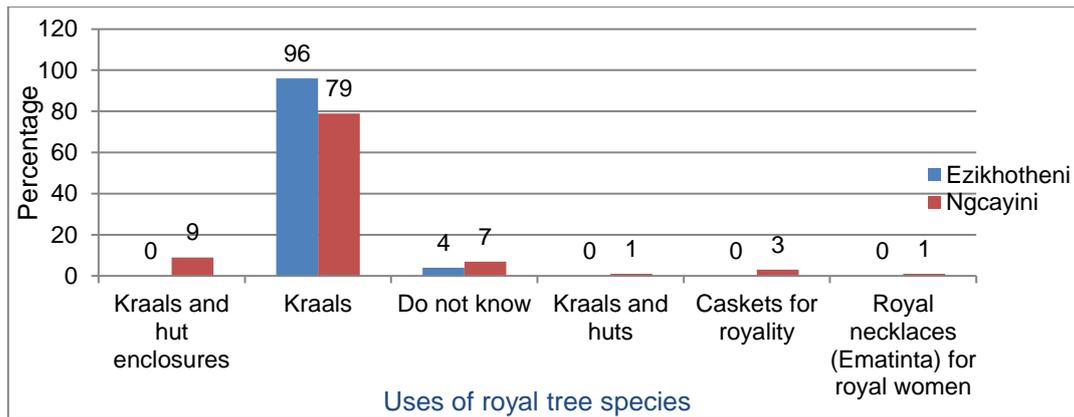


Figure 8: Ezikhotheni and Ngcayini heads of households' views on uses of royal tree species in the royal kraals

Considering the significance of the tree species in the culture of Eswatini, the study also investigated how they are protected to ensure their sustainability. Findings from the heads of households indicate that it is prohibited to cut and use royal tree species in your homestead (87% at Ezikhotheni and 14% at Ngcayini). On the other hand, 1% of the heads of households at Ezikhotheni and 77% at Ngcayini declared that royal tree species are not protected, because people access them without permission as they are part of the natural forests. Furthermore, 12% of the heads of households at Ezikhotheni and 9% at Ngcayini claimed to be ignorant on how the royal tree species are protected. Community leaders on the other hand, revealed that it is prohibited to cut and use royal tree species in your homestead (100% at Ezikhotheni and 36.4% at Ngcayini). Moreover, some community leaders stated that royal tree species are not protected since people access them without permission as they are part of the natural forests (63.6% at Ngcayini). It is worth noting that a majority of both heads of households and community leaders at Ngcayini asserted that royal tree species are not protected. This is largely because there was no substantive Chief at Ngcayini, hence people deliberately disobeyed rules. This however, jeopardizes the sustainability of the resources.

Applying the chi-square (χ^2) test on the findings concerning the protection of tree species used in royal kraals to establish the level of significance, a p value of 0.000 is attained for the views of the heads of households and a p value of 0.001 for the community leaders. These values indicate that there is a high level of significance in the difference between Ezikhotheni and Ngcayini chiefdoms regarding protection of tree species used in royal kraals.

The findings regarding the cultural significance of forest products are validated by Makhado and Saidi (2011) in South Africa, who reported that apart from providing forest products and availing employment opportunities; forests provide beautiful sites for tourism, recreation, spiritual healing, leisure, and religious practices.

CONCLUSION

Community forests are vital in the socio-economic life of people and in the sustenance of the natural environment. In particular, people in rural communities who live in and around the forests and woodlands use a myriad of forest resources such as fuel wood, charcoal, poles for construction, bark for tannin and pulpwood, thatching grass, medicinal plants, honey, as well as wild fruits and vegetables. Generally, forest resources are normally obtained free from communally owned forests and are vital in the survival of community members. Nonetheless, resources from plantation-style community forests are particularly sold to both community and non-community members. The proceeds from the sale of

resources from plantation-style community forests are distributed and utilized for the benefit of all community members. This encourages the beneficiaries to sustainably manage community forests. For instance, the distribution in the case study chiefdoms is carried out by Natural Resource Management Committees and traditional authorities. Specifically the money is used to fund community projects and activities in the respective chiefdoms. It is important to mention that for an equitable distribution and sustainable utilization of the resources, there is a need for a strong and accountable leadership in the chiefdom.

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