Non Timber Forest Products (NTFPs) Harvesting and Forest Degradation: a study of Kabaru Forest Nyeri County, Kenya

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LIVE ON LAND
Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Forest cover from the current 6.99 per cent which is below the UN recommended 10 per cent.
Presentation Outline

• Background of the Study
• Problem statement
• Purpose of the study
• Research Questions
• Study objectives
• Literature review
• Development Theory
• Conceptual framework
• Research methodology
• Key research findings
• Discussions/ Conclusions/Recommendations
Background of the Study

• Globally, forests have been very important to forest adjacent communities because they form an important source of their livelihood besides environmental benefits.

• More than 11% of the world’s forests are managed or owned by forest adjacent communities in the developing world and the proportion of forest managed by forest adjacent communities is 22% (White & Martin, 2002).

• 77 million hectares of publicly gazetted forest land is designated for use by communities and indigenous groups all over the world and much of these estimates reflects timber products which have been quantified and understood (Binkley & Dykstra, 1987), unlike the non-timber forest products (NTFPs).

• In Kenya, participatory forest management approach has been adopted to allow forest adjacent communities to exploit NTFPs while at the same time participating in forest protection and conservation (Kenya Forest Act 2005).
Problem statement

Forests form an important source of livelihood to communities besides environmental benefits. Forest protection and conservation is highly dependent of the benefits obtained from the forest by adjacent communities. Over 65% of participants in forest activities are women and they derive their livelihood from forest user rights despite many challenges as guided by the Forest Act 2005. Without effective forest governing laws forest protection and conservation is grim.
Purpose of the study

- Shortcoming of Kenya’s forest policy on NTFPs
- No guidelines on the NTFPs utilization
- No charges put in place on these products.
- NTFPs commercialisation potential
- Recognition of the importance of NTFPs in poverty reduction by all stakeholders
- Obstacles facing NTFPs users and exploiters.
- The NTFPs value chain is domination
- Unorganized, illegal and secretive market for NTFPs
- Lack of maximum benefits for women
- Maximum returns to private companies and outsiders not linked to conservation efforts
Research Questions

• Does lack of appropriate technology affect the harvesting and value addition of NTFPs and does it influence the quantity and the quality of the end products?

• Does competition with other livelihood activities done by women affects exploitation of NTFPs and to what extent?

• What is the level of influence of the Forest Governing Laws and forest user rights in relation to exploitation of NTFPs?
Study objectives

• To determine how lack of appropriate technology in value addition affects sustainable exploitation of NTFPs
• To ascertain the extent to which competition with other livelihood activities done by women affect sustainable exploitation of NTFPs
• To find out whether the forest laws interfere with sustainable exploitation of NTFPs
Literature review

Theoretical review

• Economic, social and environmental value of for the benefit of present and future generations by Dangi, R. B. (2008).

• Sustainable NTFPs exploitation is founded on the principle of maximum sustained yield (MSY) which is a management strategy designed for the harvesting of a forest produce that does not exceed replacement rates.

• Forest Act 2005 -The study was informed by the concept of participatory forest management (PFM) which places importance in involving communities living adjacent to forests in the management of the forests.

• Ludwig Von (1928) describes key concerns in community development; understanding the dynamics of inter-group relationships.
Literature review

• Ongugo et al., 2008 - It is a multi-stakeholders approach
• Ngece, Kakuru & Kimani, 2007 - The reason for the inclusion of local communities in the management of forests is to make them support forest sustainability as well as biodiversity conservation efforts

Empirical review

• There is a gap in the exploration of (NTFPs) harvesting and forest degradation and the relationship between use of appropriate technology and trends in sustainable exploitation of NTFPs.
• Few studies have explored the connections between weak governance and lack of clear policies on NTFPs impact of women empowerment in the exploitation of NTFPs.
Literature review

Although women dominate rural labour in many subsistence economic activities related to the collection and sale of NTFPs, very few studies have been conducted to examine collection strategies, NTFPs preferences and also the challenges that rural women face in their collection.

Other authors who did studies on NTFPs but failed to capture the challenges facing women in their exploitation and impact on forest conservation

• Arnold and Perez (2001)
• Endress, Gorchov, and Robert’s (2004)
• Coomes, 1995; Peluso, 1992; Potter, 1996
• Lampietti & Dixon, 1995; Panayotou & Ashton, 1992
• Silva & Atal, 1995
Development Theory

• Exploitation of NTFPs is somewhat driven by the availability of the market.
• Adam Smith Economics theory which states that relative prices are determined by supply or costs of production and the role of demand.
• This improves the community’s value for the forest and it motivates them to engage in forest conservation activities as a way of protecting their livelihood (Mwatika, 2013; Padoch, 1992; Ros-Tonen & Wiersum, 2003).
• NTFPs provide a substantial source of income to the rural poor for provision of basic needs and subsistence living (Peters, Gentry, & Mendelsohn, 1989).
**CONCEPTUAL FRAMEWORK**

**Independent variable**
- Ability to sustainably Utilise NTFPs
- Availability of technology
- Availability of resources
- Implementation of Forest Laws

**Intervening variables**
- Appropriate technology
- Competition with other livelihood activities
- Forest Laws

**Dependent variables**
- Sustainable Exploitation of Non Timber Forest Products (NTFPs)
- Poverty reduction – Adjacent communities
- Improved economic standards of women involved in NTFPs
- Create employment in the NTFPs value chain.
Research Methodology

• The research adopted descriptive research design to understand the challenges faced by women in the exploitation of NTFPs.
Study area: Kabaru Forest Block
Target population

• The Study used members of Thegu Block within Kaburu location because it had the highest concentration of NTFPs (T. Thenya Kabaru Forest Management Plan, 2008).

• The sampling process yielded a sample of 90 women who live along the slopes of Mt. Kenya West around Kabaru Forest.

• This sample consisted of 5 user groups under the umbrella group, Kabaru Forest Association. Proportionate sample size method was used to decide on the sample size distribution across the sub-groups.
Stratified random sampling technique

<table>
<thead>
<tr>
<th>Type of Non timber Forest product</th>
<th>Community Members involved</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree Seeds/ Nuts</td>
<td>70</td>
<td>21</td>
</tr>
<tr>
<td>Soil</td>
<td>100</td>
<td>30</td>
</tr>
<tr>
<td>Foliage</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>Medicinal plant leaves and Tree</td>
<td>30</td>
<td>9</td>
</tr>
<tr>
<td>Bark</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild Fruits</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>TOTAL</td>
<td>300</td>
<td>90</td>
</tr>
</tbody>
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Data collection methods

• Documents and records
• Questionnaire - that consisted of both closed-ended and open-ended items
• Face-to-face interviews
• Focus group discussion
• Observations
• Key informants interview
Data collected

Data collected included;

• Types of Non timber Forest product
• The main NTFPs collected from the forest in order of priority
• The main market for NTFPs
• Gender of the respondents
• Level of education of the respondents
• Frequency of collection of NTFPs
• Availability of Market for Non-Timber Forest Products
• Level of involvement of respondents in value addition
• Challenges Facing Women In The Exploitation of NTFPs
Data analysis

• Quantitative analysis was carried out on close-ended questions.
• This involved the use of descriptive statistics, such as frequencies and percentages to summarize and present findings.
Education Levels of NTFPs collectors

- Primary, 46, 51%
- Secondary, 9, 10%
- Above Secondary, 9, 10%
- No Formal Education, 26, 29%
Key findings - Frequency of collection of NTFPs
Availability of the Market for the Non-Timber Forest Products
## Collection in percentages of Non Timber Forest Products

<table>
<thead>
<tr>
<th>NTFP</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass/Fodder</td>
<td>53.3 per cent</td>
<td>46.7 per cent</td>
</tr>
<tr>
<td>Herbs</td>
<td>77.8 per cent</td>
<td>22.2 per cent</td>
</tr>
<tr>
<td>Forest Tree Seeds and nuts</td>
<td>85.5 per cent</td>
<td>14.5 per cent</td>
</tr>
<tr>
<td>Forest Soil</td>
<td>73.3 per cent</td>
<td>26.7 per cent</td>
</tr>
<tr>
<td>Wild Fruits</td>
<td>6.7 per cent</td>
<td>93.3 per cent</td>
</tr>
</tbody>
</table>
Discussions

• 60 per cent understood clearly the existence of forest Act 2005 and that the forest adjacent communities had user rights in joint forest management

• 80 per cent of the respondents stated that communities can effectively and sustainably protect forest destruction if they were allowed to exploit the NTFPs in the regions.

• The collection or harvesting of NTFPs is done by women of all age groups, although women aged 35-50 years were noted to be the majority of those involved in the collection. 85% of women collected NTFPs on weekly basis.
Research findings and discussions

- 98% of the respondents indicated that the market is readily available from the private companies and brokers.
- Results of key informants and stakeholders revealed that the general public is aware of the existence of NTFPs and the role they play in livelihood improvement.
- 60% of respondents knew about the Forest Act 2005.
- 80% of the respondents stated that communities can effectively and sustainably protect forest destruction if they were allowed to exploit the NTFPs in the forest.
- Women lack appropriate tools to use while harvesting of NTFPs.
- Women harassment by forest wardens, men grazers was mentioned as a challenge.
- 80% of the respondents not involved in any value addition activities due to lack of appropriate tools and technology.
- 20% of the respondents who engaged in value addition did so for herbs and fodder grass.
Conclusions and recommendations

• NTFPs contribute significantly to poverty reduction by providing safety nets which reduce the vulnerability of economically disadvantaged women when crops fail.

• Appropriate technology is necessary to enhance sustainable exploitation of NTFPs. Improving forest laws might empower women to harvest NTFPs in ways that did not pose threat to forest sustainability.

• Women’s exploitation of NTFPs makes them engage in forest protection and conservation activities.
Conclusions and recommendations

• There is need to improve the women’s capacity to engage in value addition as this will improve their economic benefits from the NTFPs.

• The forest adjacent communities need to be trained to improve their harvesting, post-harvesting techniques, processing of NTFPs because this adds value to products hence economic benefits.

• There is need to strengthen policy to deter illegal exploitation of NTFPs. Such policy should ensure exploiters are registered and operate under the umbrella CFA
Thank you for listening