The Key Factors Affecting Tree Producer Associations Involved in Private Commercial Forestry in Kenya

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Abstract: Formal tree producer associations are critical for the sustainable management of private commercial farm forests in Kenya. However, there is limited information on their current status and the key factors driving their operations in the country. This paper sought to address this informational gap by reviewing the existing literature in the country from the theoretical background of sustainable development and later validating the obtained findings with the current state of knowledge at regional and global levels. Results from document content analysis indicate that there are over 10,000 tree growing farmers organized into planting groups across the country after many years of piloting by the government and private sector players. At the national level, there are two associations. These include Kenya Forest Growers Association (KEFGA), mainly composed of large scale planters, and Farm Forestry Smallholder Producers Association of Kenya (FFSPAK), targeting small-holders. Besides these two, six major sub-national associations are seeking to improve members’ welfare by enhancing the acquisition of livelihood assets. Further, various socio-cultural, economic, and political factors affect their operations in Kenya. These associations have deployed multiple strategies to benefit their members. However, the formation of savings and credit cooperative societies (SACCOs) seems to be their preferred mode of community empowerment. In conclusion, even though these associations are still at the infancy stage, their future remains promising in view of the observed behavioral change in their governance, which appears to favor entrenched equality and equity towards sustainable development.

Keywords: private commercial forests; tree producer associations; sustainability; livelihoods; equity; equality

1. Introduction

Tree producer associations involved in private commercial forestry have the capacity to address the growing wood demands in developing countries and hasten strides towards sustainable development if the factors that affect their operation are clearly understood and documented. From their nature, tree producer associations represent the collective voices of farmers, forest-dependent people, indigenous groups, and rural communities. Besides, they provide essential services to their members and are the building blocks of local democracy, which is often questionable in many developing countries. Moreover, whether formal or informal, effective tree producer organizations identify and agree upon the means to manage their natural resources, thereby promoting environmental protection through participatory governance.

In Kenya, forests—including private commercial forests—play a critical role in the national economy; they contribute 3.6% to the gross domestic product (GDP). Besides, the sector contributes over US$200 million worth of goods to the economy annually and employs 50,000 people directly and another 300,000 indirectly [1]. However, the establishment rate of small-holder on-farm forests in the country is still low, despite the existence of formal tree producer associations and a seemingly
favorable legal and policy environment for the development of a vibrant private commercial forestry sector. For instance, sections 53–58 of the Forest Conservation and Management Act, 2016 in Kenya, recognizes tax and fiscal incentives for forestry as customs and excise waivers with respect to imported capital goods or tax rebates to forest industries and other establishments investing in plants, equipment, and machinery for improved forest produce utilization, and using different energy resources instead of hydrocarbons. Further, the Act proposes an exemption from payment of all or part of land rates or other such charges as may be levied to landowners with private forests, as well as income and other tax deductions to landowners, in exchange for forest conservation easements.

As of the year 2016, there was approximately 160,000 ha of private commercial forests in Kenya [1]. These forests are expected to expand further, given the country’s projected socio-economic development trajectory. The Ministry of Environment and Natural Resources (MENR) posits that the recent population growth and economic expansion may increase the demand for energy resources, especially fuelwood and construction materials such as sawn timber, and in turn spur the growth of private commercial forests [1]. According to MENR, the country is only able to meet about 70% of this demand through sustainable domestic supply, leaving an annual deficit of 12 million m$^3$ that is to be met by formal and informal imports plus unsustainable extraction from natural forests. This wood deficit is projected to increase as demand for wood rises to 66 million m$^3$ by 2030, while sustainable supply from the existing state and community forests is expected to stay almost static. If the status quo remains, the study explains further that this would see the annual wood deficit nearly treble to 34.4 million m$^3$.

In this paper we argue that the existing tree producer associations involved in private commercial forests in Kenya can contribute immensely to addressing growing wood demand in the country, but the limited information on their current status, especially the key factors affecting their growth and operation, is slowing the achievement of sustainable forest management and socio-economic development in Kenya. Therefore, this study seeks to explore these associations and determine the key factors affecting their operations in the country. In order to adequately address this research problem, two critical research questions were asked. Firstly, are Kenya’s forestry producer associations providing the supporting factors for successful small-scale private commercial forestry? Secondly, how can forestry producer associations in Kenya be improved to support sustainable forest management and community development? This study is essential because, unlike previous studies which appear to have explored the subject from other backgrounds such as social exchanges theory, this study will review the state of knowledge on tree producer associations and their impacts on livelihoods from the theoretical background of sustainable development at the global level. Later, findings from these reviews will be compared with empirical data from Kenya to draw the policy implications of the study.

2. Commercial Farm Forestry and Sustainable Development

Farm forests, including commercial farm forests, can be defined variously. De Marsh et al. define trees standing on land not designated as forest or other wooded lands and covering an area less than 0.5 ha as farm forests [2]. However, the farm forests under discussion in this study are the ones collectively described in Kenya’s Farm Forestry Rules of 2009 as trees occurring singly, in rows, lines, boundaries, or in woodlots or private forests and are often found in agricultural lands, many agroforestry systems, home-gardens, and on the roadside [3].

Private commercial forestry as forms of farm forests is increasingly gaining acceptability as an avenue for achieving sustainable development and empowerment of rural communities in terms of food security, income generation, and foreign exchange earnings. Globally, the total private sector plantation investments in developing countries are estimated at US$ 1763 million (excluding “Reducing Emissions from Deforestation and Forest Degradation”, or REDD). Latin America accounts for a vast majority of annual investments, with US$ 1464 million or 83% of the total global amount. Investments in Asia and Oceania are estimated at US$ 279 million or 16% of the global total. In contrast, private
commercial investments in plantation forests in Africa are estimated at US$20 million, or just 1% of the total global value.

With regard to the above contributions, this paper considers that Africa’s 1% worth of investments could be improved because of the severe environmental protection and socio-economic development challenges. In most African countries, natural capital—including private commercial forests—accounts for between 30% and 50% of total wealth. Over 70% of people living in sub-Saharan Africa depend on forests and woodlands for their livelihoods. Land is an economic development asset as well as a socio-cultural resource. Moreover, a significant share of these resources is used unsustainably while others are lost through illegal activities, meaning that the stream of benefits generated from these resources is being reduced over time [4]. Further, the World Bank posits that major poverty challenges remain rampant, especially in regions with rapid population growth [5]. In this paper, we submit that, collectively, Africa has a lot to gain if her forest resources, including private commercial forests, are harnessed to finance the continent’s development agenda towards prosperity. One of the ways of achieving this prosperity is to enhance the growth and operation of tree producer associations, which exist to promote the interests and rights of landowners, especially small-scale farmers. However, in view of the low investments in private commercial forests, the status of these associations may not be fully known. Therefore, these findings reinforce the need for investigations on the status of tree producer associations and their impacts on livelihoods and the environment in Africa, including Kenya.

In other regions—although Latin America draws the most private forest investment—it is unevenly allocated: Brazil accounts for more than 80% of the regional total. Interestingly, there is a similar trend of regional imbalance in the estimated 66 million hectares of commercial, production-oriented forest plantations in developing countries, about one-third of which are privately owned. Privately owned plantations are spread over 18.7 million hectares in Latin America and comprise 78% of the total commercial-production plantations. Nonetheless, given that most Latin American countries are developing, they are likely to be grappling with issues of poverty and environmental protection as well. Thus, there is a need to investigate the structure of tree producer associations in these regions and how they contribute to increased investments in private commercial forestry.

In contrast, there are only 5.1 million hectares of private commercial plantations in Asia and Oceania and only 0.3 million hectares in Africa. These private commercial forests, in general, employ 1% to 2% of the global workforce [6]. Also, while there is no sure way of estimating the monetary value of ecosystem services from forests, the estimated value of private commercial forests ranges between $16–54 billion [7]. These statistics clearly indicate the role played by private commercial forestry investments in various regions, their contribution to economic development globally, and why producer associations should dominate the current global discourses on environmental protection and sustainable development. Further, this study establishes that investments are widely varied and attributes these differences to the varied contextual factors, including but not limited to, many socio-cultural, political, environmental, and economic factors. It is therefore critical to study the regions independently in order to understand the specific issues. This reinforces the need for such studies in Kenya.

2.1. Tree Producer Associations Involved in Private Commercial Forestry

In this paper, the term ‘producer association’ refers to institutions that produce, process, and market the products that originate from farmlands. These producer associations represent the collective voices of farmers, forest-dependent people, indigenous groups, and rural communities. Besides, they provide essential services to their members and are the building blocks of local democracy. Whether formal or informal, effective producer organizations identify and agree upon the means to manage their natural resources. De Marsh et al. reckon that local producer associations are truly inclusive, and with the right support, their management choices are more sustainable, and the benefits are more equitably shared [2]. Further, they posit that producer associations offer solutions for many issues that otherwise hinder our ability to achieve the sustainable development goals on poverty alleviation.
and environmental protection. For this reason, it is estimated that between 500 million to one billion small-holder farmers worldwide grow farm trees or manage remnant forests for subsistence and income [8]. There is a growing consensus in developing countries that producer organizations are critically important for the sustainable use of natural resources, including private commercial forests. Africa, Asia, Latin America, and Oceania are some of the regions with the greatest potential for tree domestication that could contribute to sustainable development [9]. However, in view of the slow pace with which environmental protection and sustainable development goals are being met in these regions, there is a need to explore these regions for the key factors affecting the growth of tree producer associations involved in private commercial forestry.

According to Slusser et al., farm forest producer associations vary in size and institutional form [10]. Their composition may include indigenous people, local community organizations, umbrella groups, and federations. Their membership is composed of women, men, small-holder families, and local communities who have a strong association with farm forests. These producer associations, whether formal or informal, are mostly engaged in the sustainable management of natural resources in their custody. Moreover, producer associations are increasingly gaining recognition as platforms for sharing knowledge and experience, engaging in advocacy, helping members to secure tenure and access rights to local resources, expanding markets, and improving incomes for sustainable livelihoods. Besides, effective producer associations tend to have an integrated perspective on what constitutes achievements, especially on how competitiveness has meshed with economic viability. This calls for sustainable landscape stewardship, development of human potential; respect for cultural practices; and resilience to environmental, social, and economic shocks.

Moreover, there should be financial and political independence, democratic leadership, and internal governance with a broad representation of women and youth. Also, farm forest producer associations are increasingly gaining recognition because of their significant contribution to the emerging discourses on climate change, biodiversity conservation, and sustainable development [11–13]. In this paper, the authors note that despite these benefits, producer associations can also offer disadvantages to group members when these organizations are poorly managed.

2.2. Key Factors Affecting Tree Producer Associations

Existing literature indicates that there are several social, economic, political, and environmental preconditions for successful operation and growth of tree producer associations. Firstly, a producer association needs a robust internal governance mechanism that is anchored on values of inclusivity and democracy. As Macqueen et al. and De Marsh et al. report, the purpose of any producer association is to speak powerfully on behalf of its members to lobby policymakers or reduce transaction costs [2,14]. To achieve this role, De Marsh et al. posit that producer associations require independence from government agencies and other organizations, clarity of roles and responsibility, and financial fidelity [2]. However, Slusser et al. make an interesting assertion that could deepen the understanding of what brings unity in the producer associations [10]. The study reckons that internal governance mechanisms ought to understand and take pride in the value of cultural heritage and how it contributes to the cohesion of producer groups as well as the whole community.

Secondly, tenure and governance are critical for the operations of a producer association. Land tenure addresses the terms and conditions under which rights to land and land-based resources are acquired, held, transferred, or transmitted. It is the quantum of property rights that a country has decided to allow individuals or groups thereof to hold and the conditions under which those rights are to be enjoyed. Because it determines access to land and land-based resources, land tenure is a critical variable in the management and conservation of the environment. This also explains why the state retains powers to regulate private land use and not entirely abrogate property rights in land in the interests of environmental conservation. The right to access land incentivizes members of producer associations to restore and sustainably manage their farm forest resources. However, in this paper, we note that emphasis should not be laid on accessing land but rather on the ability to harvest farm forest
products grown on that land to benefit from collective communal labor inputs. Analyses of recent trends on land property rights indicate a growing trend toward more community access and control over land [15,16].

Thirdly, opportunities for capacity building are critical for the success of producer organizations. The learning value of sharing experiences between the producer associations cannot be over-emphasized. These are important stages of organizational development that can be achieved through membership to federated umbrella organizations. The capacity building enables associations to access influence and also to influence. Slusser et al. reckon that sustainable ranching and restoration of forests on agricultural landscapes in Panama conclude that investing in building capacity and farm forest producer associations empowers the landowners to make positive land-use decisions [10].

The fourth condition for successful associations is the availability of service providers, governments, and international organizations that can support the formation and strengthening of producer organizations by helping to develop suitable conditions. These conditions include secure tenure, fair market access, and high-quality support services for capacity development. However, of vital importance is the promotion of interactions at all levels for joint learning to share experiences, gain ideas, spread innovations and build best practices that can help producer organizations reflect on and strengthen their effective functioning, and gain confidence in what they do in specific contexts.

Finally, producer associations need linkage to markets and business opportunities to balance their competitiveness and economic viability. Building brand recognition and forest certification schemes are avenues for market linkage. Moreover, producer associations need to be linked to credit facilities. Overall, producer organizations need to have a democratic and open structure and will benefit greatly from the support of a federation, if it belongs to one. This helps to secure rights to land, allow participation in debates, advocate for changes to these rights, and ensure justice for their members. Capacity and influence are crucial, as is external support in some form or other, and all these together lead to securing markets for forest and farm products, financial benefits, and the resulting economic viability that underpins an organization’s sustainability and its ability to fulfill its many responsibilities, both social and environmental. But unless there are fundamental changes in the context in which producer organizations operate, real and lasting changes, and the positive impacts that they would bring, may be limited and short-lived. However, Bingen and Simpson, in their concluding remarks on farmer organizations, caution that the government can, at times, deliberately curtail the activities of strong producer associations [17]. They conclude with a quote from a Ugandan activist, including the observation that, “Strong grassroots organizations and mobilization processes pose a formidable political risk for most governments; it is therefore not surprising that many organizations of small farmers have remained weak . . . . In most cases, these cooperatives keep small-scale farms in the background, forced to work under oppressive market relationships” (p.23).

Nonetheless, there is an increasing emphasis on strengthening these producer associations through addressing issues surrounding equity and equality and encouraging the peaceful transfer of power. Moreover, more bold but conscious decisions are required to include producer associations in all programs and plans related to climate change, nutrition, landscape restoration, rural livelihoods, and engagements with the private sector.

For instance, research reports from Uganda indicate that the Ugandan Timber Growers Association (UTGA) is a rapidly growing organization with more than 490 members [18]. After its formation in 2007, UTGA now boasts of having members from across the country comprising of both big and small scale planters with a total planted area of approximately 50,000 hectares and an investment over US$100 million. However, much still needs to be done to address the challenges posed by fire, state policies that do not favor wood as the preferred construction material, timber obtained from unsustainable sources, the poor state of infrastructure which affects wood processing facilities, and limited sources of financing UTGA activities that are currently partly financed by external sources [18]. Nonetheless, in general, at the global level, there are substantial studies on tree producer associations and the factors affecting their operations. Existing literature appears to suggest that government
support through legislation and goodwill provides the proper environment for operations of producer associations and seems to be the most crucial factor affecting their formation and operation. Based on these varied global level findings on the status and critical factors driving producer associations, it will be interesting to apply these results in the Kenyan situation and find out how these organizations could be strengthened. Based on findings in the literature, we summarize the key factors affecting the growth and operation of producer associations, areas outlined below.

According to Figure 1, tree producer associations organized around private commercial forests are essential for grassroots empowerment and sustainable livelihoods. However, there are certain vital preconditions that are to be met for producer associations to generate a sustainable impact on environmental protection and community development. They include supportive policy and legal framework, business and managerial skills, the secure land tenure system, market access and incentives, robust internal governance, availability of external support, and available commercial forest products.

**Figure 1.** Concept map for key factors affecting tree producer associations.

### 3. Materials and Methods

#### 3.1. Study Area

Socio-Economic and Environmental Characteristics of Kenya

Following promulgation of the 2010 Constitution, a two-tier system of governance was introduced comprising of one national government and 47 counties. The objective of this administrative arrangement was to improve democracy and spur the process of Kenya’s socio-economic development by bringing government services closer to the people. In this administrative arrangement, Nairobi, Kisumu, and Mombasa retained their status as city counties under the Urban Areas and Cities Act of Kenya. The remaining 44 counties are mainly rural counties as demarcated based on statistics obtained from the Kenya National Bureau of Statistics. In terms of population distribution, Nairobi City County is the capital city of Kenya and the most populous county with 4,397,073 people. This
followed by Kiambu with 2,417,735, Nakuru with 2,162,202, and Kakamega with 1,867,579 people in the fourth position as per data held by Kenya National Bureau of Statistics in the year 2019. For purposes of sustainable forest management, the counties or devolved units grouped in broad ecologically demarcated areas called forest conservancies. The arid and semi-arid lands (ASALs) of Kenya make up 89% of the country with a total population of about 16 million people. ASAL counties are confined in coastal, eastern, and northern regions of Kenya. Agriculture is the primary means of livelihood for most inhabitants across rural counties.

3.2. Data Collection and Analysis

This paper sought to document the status of tree producer associations and further investigate the key factors driving these associations engaged in private commercial forestry in Kenya using document content analysis methodology. According to Bowen, document content analysis is a form of qualitative research in which documents are interpreted by the researcher to give voice and meaning around an assessment topic. Analyzing documents incorporates coding content into themes. Further, a rubric can also be used to grade or score documents. In this study, content analysis entailed finding, selecting, appraising (making sense of), and synthesizing data from the literature review as described by Bowen and the review of the status of identified tree producer associations in Kenya.

The process of data acquisition and analysis entailed a review of excerpts, quotations, and/or entire passages obtained from the identified literature, following Bowen and O’Leary’s approach for qualitative research [19,20]. This approach entailed an eight-step planning process, involving creating a list of texts to explore (e.g., population, samples, respondents, participants); considering how texts will be accessed with attention to linguistic or cultural barriers; acknowledging and addressing biases; developing an appropriate research concept map; considering strategies for ensuring credibility; knowing the data to search; considering ethical issues (e.g., confidential documents); and having a data backup plan.

Later, the obtained information was organized into major thematic areas, categories, and case examples. Both primary and secondary data were collected and analyzed in this study. Primary data acquisition entailed email correspondences and a review of tree producer associations’ official webpages. Further, the following key documents were consulted in order to gather secondary data: The Constitution of Kenya, 2010; Forest Conservation and Management Act, 2016; Associations Bill, 2018; Agriculture (Farm Forestry) Rules, 2009; Charcoal Rules, 2009; Draft Forest Policy, 2014; and Environmental Management and Coordination Act, 1999. The focus on the review of key documents was to evaluate whether or not their objectives and implementation mechanisms supported the advancement of private commercial forest tree producer associations. Further, Kenya offers the most appropriate site for this study because, first, it is located in Africa, which has low investments in private commercial forests. Secondly, the country has vast land resources that could be tapped to develop a vibrant private commercial forestry sector. Thirdly, the country has made significant strides to improve democracy and the rule of law as a result of the promulgation of the 2010 Constitution. It will, therefore, be interesting to explore how to improve the activities of tree producer associations in the country.

Document content analysis was the most appropriate research methodology for this particular study because obtaining and analyzing documents was far more cost-efficient and time-efficient than conducting a completely new study. Also, as indicated by Bowen, “documents are stable, ‘non-reactive’ data sources, meaning that they can be read and reviewed multiple times and remain unchanged by the researcher’s influence or research process” [19,20] (p. 31). Later, results from case examples were compared with findings from regional and global literature accessed on Google Scholar in order to discuss the policy implications of this study.
4. Results

4.1. Private Commercial Forestry in Kenya

In Kenya, since 1990 trees on farms (ToFs) have expanded considerably. As shown in Table 1 below, ToFs increased by 48%, with a marginal increase of 1% in private commercial forests. The tree density of ToFs varies greatly depending on land potential. For instance, researchers found that most farms in Central Kenya had 76 stems per hectare and can host up to 155 different tree species or, in some cases, up to 200 species [19–21]. However, there is a report that for high potential areas, the trees per hectare should not exceed 100 to minimize competition for water, light, and nutrients [22]. These trees are used for many purposes. For example, the Mount Kenya East Pilot Project (MKEPP) found that the majority (93%) of tree owners in Central Kenya used firewood, but cautions that there was minimal evidence of replacement after tree harvesting [23]. Similar results are recorded by Chisika et al. in the case of Lugari sub-county in western Kenya [24–26]. Many factors motivate small-holders to engage in tree growth. Many researchers indicate an increased population that creates demand for products, income, and land size [24–26]. However, in general, according to Cheboiywo, farm forestry for large landholdings is on the rise due to demand for transmission poles and sawn timber.

Small-scale farm forestry owners also experience many challenges that range from lack of tree evaluation techniques, low tree prices, permit requirements from the local administration, restricted tree felling during the food crop growing season, inadequate information on wood utilization, desperation for cash, family conflicts regarding tree ownership, and wrong spacing and siting of trees, which may affect harvesting operations. Others, for instance, Ongugo et al., have cited challenges like poor road networks, high harvesting and log assembly costs, and poor stem quality [27].

Table 1. Forest and tree cover trend in Kenya for the period 1990–2010 (Source: [3,28–31]).

| Forest type                  | 1990     | 2000     | 2005     | 2010     | Change (%), 2010–2000 |
|-----------------------------|----------|----------|----------|----------|------------------------|
| Indigenous closed forests (ha) | 1,240,000 | 1,190,000 | 1,165,000 | 1,140,000 | −5.00                  |
| Indigenous mangroves (ha)   | 80,000   | 80,000   | 80,000   | 80,000   | 0.00                   |
| Open woodlands (ha)         | 2,150,000 | 2,100,000 | 2,075,000 | 2,050,000 | −5.00                  |
| Public plantation forests (ha) | 170,000  | 134,000  | 119,000  | 107,000  | −3.15                  |
| Private plantations (ha)    | 68,000   | 78,000   | 83,000   | 90,000   | +1.10                  |
| **Subtotal (ha)**            | 3,708,000 | 3,582,000 | 3,357,000 | 3,467,000 | −12.05                 |
| Bush land (ha)              | 24,800,000 | 24,655,000 | 24,570,000 | 24,510,000 | −14.50                 |
| Farms with trees (ha)       | 9,420,000 | 10,020,000 | 10,320,000 | 10,385,000 | +4.25                  |
| **Total (ha)**              | 41,636,000 | 41,819,000 | 40,769,000 | 41,829,000 | +5.93                  |

In general, most private commercial forests belong to tea estates owned by multi-nationals and local companies that planted eucalyptus plantations as a substitute for oil furnaces for curing tea. Lately, large companies have been purchasing land for tree growing. Still, there is limited room for expansion due to a shortage of land and competition from alternative land uses, especially agriculture and settlement. Table 1 shows the trend of forests and tree cover in the country.

Private commercial forestry appears to be steadily growing, judging by the trend of private plantations and farms with trees, as highlighted in Table 1. Further, the legal and policy framework for the operation of producer associations in Kenya appears to be favorable. The key instruments promoting these associations include the Constitution of Kenya, 2010; Forest Conservation and Management Act, 2016; Associations Bill, 2018; Agriculture (Farm Forestry) Rules, 2009; Charcoal Rules, 2009; Draft Forest Policy, 2014; and Environmental Management and Coordination Act, 1999 [3,28–31]. However, the National Forest Programme (NFP) of Kenya for the period 2016–2030 is more explicit in this regard [32–34]. While acknowledging that appropriate conservation and management strategies of a country’s natural resources spur its economic development, the NFP estimates that about 10 million hectares of farmlands have the potential for agroforestry, including private commercial forestry. According to the NFP, when tree plantations are established in people’s farms, it provides an alternative to sourcing timber from gazetted forests, thereby ensuring increased forest cover.
In general, save for the absence of regulations on private commercial forestry as envisaged in the Forest Conservation and Management Act, 2016, all these policies and legal documents appear to be in harmony in terms of providing the needed impetus for promoting livelihoods through private commercial forestry activities. These documents appear to establish a robust framework that favors the growth of sound producer associations in Kenya. However, the literature suggests that there are few studies on the impact of tree producer associations overall in Kenya.

4.2. The Status of Tree Producer Associations

According to Cheboiywo, estimates indicate that there are already 10,000 tree growing farmers who have organized into planting groups across the country after many years of pilot trials and support from NGOs and public agencies [25]. These include the Charcoal Producers Association (CPA) and the Kenya Forest Growers Association (KEFGA). Technical and commercial organizations in secondary forest production include the Timber Manufacturers Association (TMA), whose objective is to promote the interests of saw millers across the country. Another group, the Kenya Wood Preservers Association (KWPA), is a membership organization that draws the bulk of its members from wood treatment plant owners, suppliers of treatment chemicals, and other persons and entities interested in wood preservation activities.

National Level Tree Producer Associations

According to researchers, two national organizations promote the management of ToFs [24,25]. They include Farm Forestry Smallholder Producers Association of Kenya (FFSPAK) and Kenya Forest Growers Association (KEFGA). The Standard newspaper of 20 February 2020 documents that as of 2014, KEFGA had 5000 members, planted over 17,000 ha of private commercial forests worth Ksh. 1.2 billion. Besides, through the implementation of their activities, KEFGA has created over 30,000 jobs and supplied timber to over 200 saw-millers in the country.

FFSPAK is an umbrella organization based in Nairobi that works with farmer groups in Kenya to promote and champion the interests of farm forestry small-holders. It was registered in 2013 with offices in Nairobi and Nakuru and worked with small-holder farm forestry farmers across the country. Its mission is “to strengthen the capacity of member organizations to enable farm forestry producers to improve their livelihoods” [26]. FFSPAK membership is open to any registered association/cooperative whose activities are related to farm forestry. The association/cooperative makes an application to become a member, and if approved, the member pays the registration and annual subscription fees as approved by its constitution. FFSPAK has a strategic plan covering the period 2015–2020. Its constitution provides for office bearers who include the chairman, vice-chairman, secretary, organizing secretary, treasurer, and assistant treasurer. Notably, all the office bearers have to be fully paid-up members of the society and shall be elected at the annual general meeting, according to the FFSPAK constitution. Other decision making organs of the organization include the committee, which consists of all the office bearers of the society and three other members elected at the annual general meeting. Such committee members hold their office for three years [26].

Currently, FFSPAK is implementing only one project funded by the Swedish International Corporation Agency (SIDA). The members of FFSPAK and their membership details are summarized in Table 2 below.
Table 2. Farm Forestry Smallholder Producers Association of Kenya (FFSPAK) affiliate groups (source: [26]).

| Groups                                              | Number of Beneficiaries |
|-----------------------------------------------------|-------------------------|
|                                                     | Total | Women | Men  |
| Western Tree Planters Association (WTPA)            | 17,880 | 10,192 | 7688 |
| Meru Environment Community group (MEFECAP)          | 830   | 523   | 307  |
| Kisii Tree Planters Association (KTPA)              | 5606  | 3139  | 2467 |
| South Coast Forest Owners Association (SCOFOA)       | 445   | 227   | 218  |
| Central Highlands Tree Growers Association (CHTGA)  | 3192  | 1756  | 1436 |
| Community Food and Environment Group (COFEG)        | 201   | 82    | 119  |
| Nakuru Smallholder Timber Association (NASTA)        | 1619  | 761   | 859  |
| North Coast Farm Forestry Association (NCFFA)        | 321   | 135   | 186  |
| Total                                               | 30,094 | 1699  | 13,095 |

4.3. Key Factors Affecting Tree Producer Associations

The results from document content analysis indicate that various contextual factors affect the operations of tree producer associations. They can be broadly classified as socio-cultural, economic, environmental, political, depending on the research setting, as indicated in the review of the literature. When the concept map in Figure 1 was applied, case results from Kenya also substantiate these findings; results from key literature show that there are six key factors enabling the operations of tree producer associations in the country, and they are briefly highlighted below. Relevant case examples have also been cited.

4.3.1. The Secure Land Tenure System

The land is a critical factor of production. As such, three types of land tenure systems exist in Kenya, i.e., private, community, and public land. These tenure classifications enable different actors involved in private commercial forests to engage in many gainful land-based investments. It is on this basis that all the examined associations (both national and sub-national) have registered significant land-based investments. For instance, KEFGA has established over 17,000 ha of forests on private lands in the country. Moreover, all the affiliate members of FFSPAK have invested in tree nurseries in both rural and urban areas, e.g., CHTGA which has tree nurseries in Thika and Murang’a town. Also, case results show that some associations, e.g., SCOFOA, has offices sitting on private lands. These investments, due to secure land tenure may be the ones driving the operations on these associations.

4.3.2. Availability of External Support

This has been noted as a critical factor behind the operations of producer associations in Kenya. The availability of external support from both government and international organizations by way of availing resources for group formations, training, and partnerships for general capacity building has immensely contributed to the growth of tree producer associations in Kenya. Cheboiywo indicated that tree producer associations had been established in Kenya following a long period of trial that was supported by the government, including KFS and private sector agents. External agents such as Forest Action Network (FAN) have been instrumental in establishing the Western Tree Planters Association (WETPA) through financing and capacity building. FFSPAK is implementing a project funded by the Swedish International Corporation Agency (SIDA). In 2015, COFEG received a grant from Farm and Forest Facility to promote its operations.

4.3.3. Supportive Legal and Policy Framework

The Constitution of Kenya, 2010; Forest Conservation and Management Act, 2016; Associations Bill, 2018; Agriculture (Farm Forestry) Rules, 2009; Charcoal Rules, 2009; Draft Forest Policy, 2014; and Environmental Management and Coordination Act, 1999 all support the activities of tree producer
associations in the country by establishing regulatory institutions that guide the registration and management of associations. In view of this support, most associations are increasingly being recognized and are now engaged in strategic partnerships towards the implementation of their activities. Case results have indicated that most sub-national associations have established some form of partnership or collaboration geared towards benefitting their members. For instance, COFEG partnered with Baraka Institute to promote organic farming, with KFS to encourage tree planting and nurseries, and with Maendeleo Endevlu group for sustainable agriculture.

4.3.4. A Ready Market for Forest Products

All the sub-national associations identified in this study have market access for various farm-forest products, which have promoted the existence of these associations. Seedlings and timber are the most traded products providing a lifeline for these associations. For instance, COFEG sells its tree seedlings to individual members of the community, institutions like nearby schools, and the county government of Nakuru. Central Highlands Tree Growers Association has a total of six registered groups operating several individual tree nurseries that are estimated to have 350,000 assorted indigenous and exotic seedlings and 7760 fruit trees. The association has been majorly focusing on the production and sale of avocado and macadamia nuts. For Kisii Tree Planters Association, their main products are tree seedlings which they produce individually but market together through the cooperative to factories within Kisii County, individuals, groups, and other institutions. Some individual members have woodlots and fruit trees (mainly avocado) and produce charcoal and firewood for sale. SCOFOA has two key primary products. The poles are sold to Ashanti capital in Mombasa County. Other key products for SCOFOA include honey, firewood, and nutraceuticals from the Neem tree. WETPA produces mainly tree seedlings and honey, sold mostly to individual members in western Kenya.

4.3.5. Good Governance and Willingness to Accept Change within and between the Associations

There are two types of duly registered national associations for tree producers in the country (national and sub-national). These associations are governed differently depending on their members, whether large scale or small-holder. All associations have a physical office and seemingly all the appropriate governance instruments. These associations appear to be conforming their governance style in accordance with international best practices and are adopting modern technology in the course of serving their members. FFSPAK seems to be the only association with a website that displays the organization’s vision, mission, core services, and details about its location. According to its website, FFSPAK conducts many activities, including networking and value addition, capacity building, lobbying and advocacy, linkages to service providers, awareness creation, organizational development, and resource mobilization. They have also provided links for downloading the minutes of the previous annual general meetings conducted in 2012, 2013, 2014, 2015, and 2016 for members’ records. SCOFOA has a strategic plan for its activities. Moreover, good governance needs to be gender inclusive and fair, allocating benefits and rewards to group members, especially with regards to vulnerable groups in society such as women, youth, and people living with disabilities. Case results indicate that for MFFSPK, most women are now engaged in tree planting as opposed to the initial stages; for COFEG, the organization has improved gender and financial representation; for Kisii Tree Planters Association, the organization has improved inclusivity of women, youth, and people with disabilities. For WETPA, there is a well-organized and cohesive group with a teamwork spirit and is gender-sensitive. There is an anti-corruption policy in place, coupled with improved finance management by keeping updated accounting records and financial management systems. The sharing of benefits in most associations is by the formation of savings and credit cooperative organizations, e.g., Central Highlands Growers Association has 776 active members and has formed two cooperatives, namely, Kariara cooperative society in Murang’a County and Ndiko cooperative society in Kiambu County. COFEG and WETPA have promoted the Village Savings and Loan Association (VSLA) model to several groups, and SACCOs are slowly emerging.
4.3.6. Goodwill from Both National and County Governments

This has been overtly cited as a critical factor by MFFSPK in Meru County. Results show that the association was formed through an initiative of members who wanted to lobby for tree and tree products as a farming business. The organization was registered by the Ministry of Labor and Social Security Services and Meru County in August 2014. Currently, it has 400 members. The main objective of forming the association was to mobilize members and non-members to plant trees on their farms and to stop relying entirely on community forests and state forests.

5. Discussion

Existing literature indicates that there is a convergence that forests, including private commercial farm forests, are important for societal livelihoods and sustainable development [6,7]. Therefore, many governments are exploring legal and extra-legal strategies in a bid to promote sustainable management of these forests. Amongst other strategies, on-farm tree producer associations are increasingly gaining recognition as platforms for promoting the interests of farm owners. They found that, with the right support, these associations can help members to make better decisions. However, in our opinion, Slusser et al. are rather explicit on the impact of these associations [10]. The study notes that, given their significant contributions, these associations are fast emerging in the current global discourses on climate change, biodiversity conservation, and sustainable development [7–13,35].

5.1. Status of Tree Producer Associations in Kenya

Kenya is also experiencing similar gains from these associations in the development of private commercial forestry with all indications pointing toward the improvement of livelihoods through the accumulation of physical, natural, financial, social, and human assets by forest owners. Cheboiywo reported that there are over 10,000 private tree growers in the country [27]. Further, the report highlighted that, in general, large private commercial forestry landholding is on the rise as a response to the growing demand for transmission poles. Interestingly, this private commercial forestry appears to be dominated by large foreign multi-national companies that mainly grow eucalyptus tree species for curing tea. On the part of small-holder commercial forestry, many researchers concur that there are several positive impacts of private commercial forests in Kenya. Still, there are challenges as well, and these include limitations of the policy, the inadequacy of infrastructure, and social and economic problems [24,25,27]. Even though there are limited documented sources of information about tree producer associations in the country, the few available pieces of literature indicate there are up to six major sub-national, and two national-level tree producer associations formed to champion for the interests of on-farm growers. Results indicate that these associations seem to have revolutionized the management of on-farm forests in the country with far-reaching social, economic, and environmental impacts. For instance, at the national level, KEFGA, has spearheaded massive investments in private commercial forestry and is contributing immensely to environmental protection and sustainable development in the country which clearly demonstrates the link between tree producer associations and the discourses on climate change, biodiversity conservation, and sustainable development, as illustrated by various researchers [11–13,36].

Further, results from Kenya indicate that FFSPAK; another national-level association has built the capacity of its affiliate associations (sub-national associations) to find markets for their tree growing membership. Also, results have shown that FFSPAK members may have benefitted differently depending on the location of the affiliate association, which determines the interests of members. However, in general, harvesting of non-timber forest products (NTFPs) such as honey, medicinal herbs, and fruits alongside timber seems to be a common practice across the examined sub-national associations. Nonetheless, this study decries the absence of an inventory-based system for tracking the utilization of NTFPs in the country, which affects quantification of the real impact of tree producer associations on the livelihoods of communities.
In general, results have shown that SACCOs are the preferred investment platforms for these associations, as shown in the case of Central Highlands Tree Growers Association, which has two SACCOs. The SACCOs appear to be generating significant gains to these associations in terms of improving gender and financial inclusivity for vulnerable groups, as shown in the case of COFEG, WETPA, and MFFSPK. Perhaps MFFSPK is rather overt on these gains because results show that most women are now engaged in tree planting activities as opposed to the initial stages where they were not allowed. This result appears to justify that tree producer associations are a powerful tool for transforming societies and preventing exploitation by middlemen [2,10]. However, this study notes that it is important to be cautious of what Bingen and Simpson found in the case of Uganda where they indicated that “in most cases, these [SACCOs] keep small-scale farms in the background, forced to work under oppressive market relationships” [17] (p.23).

Interestingly, the objectives, strategies, achievements, and plans of these national and local level associations are similar to those reported in other regions; for instance, UTGA [18]. Further, social equity and equality outcomes appear to be one of the greatest achievements of these associations, as indicated in the case of FFSPAK in Table 2, where women appear to be the biggest beneficiaries of their activities. Besides, other associations such as COFEG, MFFSPK, and WETPA have also registered improved gender representation, but details on the degree of gender mainstreaming remain scant. Nonetheless, this finding seems to agree with De Marsh et al., who found that producer associations are instrumental in realizing inclusivity toward sustainable development [2]. Moreover, all associations have listed improved knowledge amongst tree growers as an outcome besides improved financial gains related to increasing membership to these associations. This appears to mimic the trends of regional and global level associations reviewed in this paper.

The only available accounts of challenges faced by these associations are on KEFGA as contained in the Standard newspaper, where the association was calling for the inclusion of commercial forestry in the Forest Bill due for debate in Parliament [36]. KEFGA argued that the law had mainly been driven by the conservation of natural forests and limited state forests, while private commercial forestry was hardly recognized. Further, the newspaper reported that commercial forestry not only has economic benefits but also contributes to conservation by reducing pressure on natural forests and enhancing the forest cover to achieve the recommended 10% forest cover. However, this challenge appears to have been resolved with the enactment of the Forest Conservation and Management Act, 2016, which has incentives for promoting private commercial farm forestry activities.

On the part of FFSPAK, the information contained on their website states that, “as a membership organization of small-holder farm forestry operators, we are acutely aware of the challenges faced by producers, including inadequate technical knowledge and capacity, exploitation at markets and other vulnerabilities due to poor organization and limited awareness among producers” [26]. However, in our opinion, these challenges need to be validated through household surveys to verify them objectively. Nonetheless, in comparison at the regional level, UTGA reported that major challenges affecting the operations of the producer association in Uganda include forest fires; biased state policies that promote the consumption of materials other than wood; timber obtained from unsustainable sources; poor state of infrastructure, which affects wood processing facilities; and limited sources of financing activities, which are currently partly financed by external sources. In the case of Uganda, these findings appear to agree with Bingen and Simpson, who, in their concluding remarks, cautioned that the government could, at times, deliberately curtail the activities of strong producer associations [17]. They warned that “[…] strong grassroots organizations and mobilization processes pose a formidable political risk for most governments; it is therefore not surprising that many organizations of small farmers have remained weak […]”. However, in the case of Kenya, this study observes that given the relative scarcity of information on progress made so far by these producer associations, this study concurs with Cheboiywo, who observed that producer associations were still at the infancy stage of development but have immense potential to develop and become vibrant institutions [27]. But there is a need to
use different methodologies to undertake a study on the real challenges being experienced by tree producer associations in the country at the household and community level.

5.2. Key Factors Affecting Tree Producer Associations in Kenya

Based on the above discussions, there is a myriad of political, legal, policy, technological, economic, and socio-cultural factors that affect the success of tree producer associations in Kenya. Slusser et al. identify internal governance that respects the cultural heritage of members, secure land tenure system, opportunities for capacity building, availability of external support through financing, and ease of access to market information and credit [8]. Results from UTGA in Uganda (a regional case) appear to concur with the factors identified by Slusser et al., although in the negative sense by identifying the challenges facing UTGA in Uganda. UTGA states that major challenges include state policies that do not favor wood as the preferred construction material, timber obtained from unsustainable sources, the poor state of infrastructure which affects wood processing facilities, and limited sources of financing UTGA activities which are currently partly financed by external sources. Interestingly, for Kenya, similar preconditions are identified through case examples. The key ones are briefly discussed below.

5.2.1. The Secure Land Tenure System

The Constitution of Kenya, 2010, establishes three land tenure categories. This has promoted the activities of tree producer associations by improving trust and confidence against tenure violations amongst their members. Secure land tenure is vital to develop and improve property taxation [15,16,30]. In a devolved system such as Kenya, land tenure helps county governments raise revenue through tax. Secure land tenure is also crucial for unifying land markets, providing access to finance (i.e., loans/mortgages), guaranteeing investments, and in the provision of public services; it also allows property insurance, including for private commercial forests. For this reason, both national and sub-national associations have established various investments. The secure land tenure system has also promoted the growth of private commercial forests in Latin America and part of Asia, as indicated in the literature.

5.2.2. Availability of External Support

Cheboiywo indicated that tree producer associations had been established in Kenya following a long period of trial that was supported by the government, including KFS and private sector agents. External agents such as Forest Action Network (FAN) have been instrumental in establishing the WETPA through financing and capacity building. Further, Cheboiywo indicated that the SIDA has been responsible for the capacity building of FFSPAK, a producer association targeting small-holder commercial forests [25]. On a regional scale, external support is frequently cited as a major factor behind the success of UTGA in Uganda, where Food and Agriculture Organization of the United Nations (FAO), Sawlog Production Grant Scheme (SPGS), European Union, and the Norwegian government have supported capacity building of individual planters and provide commercial forestry development grants to them. Case results also show that COFEG has received some external support from collaboration with other stakeholders. The group partnered with various agencies and institutions such as Baraka Institute for organic farming, KFS for tree planting and nurseries, and Maendeleo Endelevu for sustainable agriculture. KTPA and MFFSPK have also partnered externally to benefit their members. In this study, the authors observe that such collaborations and partnerships ought to be upscaled to amplify the impact of tree producer associations.

5.2.3. Supportive Legal and Policy Framework

The legal and policy framework for activities of producer associations in Kenya appears to be robust and supports the operations of tree producer associations. Key documents reviewed, including the Constitution, 2010, the Forest Conservation and Management Act, 2016, and the Associations Bill, 2018, indicate there is harmony geared toward promoting the growth and development of tree
producer associations. Besides the constitution, which establishes a secure land tenure system, the Forest Conservation and Management Act, 2016 has various incentives for promoting the development of private commercial forestry. However, the Agriculture (Farm Forestry) Rules of 2009 are more attractive. Besides providing opportunities for holders of agricultural land to form tree-planting groups, the agriculture rules offer opportunities for compensation for tree damage occasioned by various causes. Moreover, the Associations Bill, 2018 could further improve the recognition of tree producer associations by providing a legal framework for the coordination of community groups for better grassroots empowerment and sustainable livelihoods. However, regulations for implementing the incentives for private commercial forestry have not yet been drafted and approved by the Ministry of Environment and Forestry in Kenya. In contrast, in other countries research has reported the existence of repressive state policies that appear to hinder the operations of tree producer associations, for instance in the case of UTGA in Uganda which indicated that state policies that do not favor wood as the preferred construction material thus negatively affect the activities of the association [18].

5.2.4. A Ready Market for Forest Products

Existing literature indicates that Kenya’s population is growing steadily and stands at 47 million in the year 2019. This population growth is bound to increase the demand for forest products arising from accelerated human needs [9,10]. Other studies that concur with findings, for instance, MENR, indicate that with the growing population the wood deficit is projected to increase, as demand for wood rises to 66 million m$^3$ by 2030 [1]. This may be a motivation for tree growers who may strive to produce more tree products for sale. In this paper, we consider that the above findings may be stimulating owners of private farms to practice private commercial forestry. Case results indicate that tree producer associations are involved in tree seedling production and sale of other timber and non-timber products to various stakeholders who include private and public organizations. However, trade in non-timber forest products is highly encouraged because it does not involve cutting of trees and therefore putting in place a non-timber products inventory system is a top priority for sustainable forest management [10].

5.2.5. Good Governance and Behavioral Change amongst Producer Associations

Results from reviewed literature indicate that good governance is the hallmark of success for producer associations [8,9]. To achieve this status, producer associations need to put in place open and democratic structures for effective functioning. Therefore, there is a need to build the capacity of producer groups to boost their survival, for example, in management, record-keeping, financial management, and entrepreneurship. Besides, producer organizations should be demand-driven and have a strategy and proper structure; they should develop a tool kit for developing skills [11–13,17]. Available data from the literature review indicates that there is significant progress toward enhancing good governance in Kenya’s national producer associations. Firstly, the online presence of FFSPAK inspires confidence amongst actors and makes it easy for members to access information. Secondly, the minutes available on their website indicate that the association has held over five annual general meetings. Thirdly, FFSPAK has a constitution that spells out the rules and regulations for engaging with members. Fourthly, FFSPAK has a physical office with a precise address in Nairobi and the affiliation of over five local producer associations. Also, this study notes that the FFSPAK website appears to be a useful tool that may even endear the youthful Kenyan population and further the impact of the association. It provides links to its social media accounts, including Facebook, Twitter, and Google+. However, the website’s lack of language choice, lack of live web-chat option, and low web accessibility rating for disadvantaged groups such as those with visual impairment could be limiting the number of responses from online readers. Results also indicate that the six local producer associations have embraced good governance practices such as holding regular meetings, but they should also be encouraged to establish some online presence. Case results have also shown that sub-national associations have also made efforts to strengthen their governance and are willing to promote societal
equality and equity. For instance, SCOFOA has written a strategic plan for implementing its activities and has put in place mechanisms for enhancing gender inclusiveness and fairness while allocating benefits and rewards to group members, especially the vulnerable groups in society such as women, youth, and people living with disabilities. Further, for MFFSPK most women are now engaged in tree planting as opposed to the initial stages. At the same time, COFEG and KTPA have improved gender representation, and WETPA is gender-sensitive. There is an anti-corruption policy in place, coupled with improved finance management by keeping updated accounting records and financial management systems. Moreover, sharing of benefits in nearly all the associations is by way of SACCOs. For instance, the Central Highlands Growers Association, with 776 active members, has formed two cooperatives, namely, Kariara cooperative society in Murang’a County and Ndiko cooperative society in Kiambu County. COFEG and WETPA have promoted VSLA model to several groups, and SACCOs are slowly emerging.

6. Conclusions

Formal tree producer associations are fast emerging as agents of transformative change in Kenya’s private commercial forestry sub-sector. Judging by their organizational objectives, achievements, and challenges to date, and in comparison with regional and global cases from the perspective of sustainable development, these associations are poised to support greater grassroots empowerment in Kenya. Moreover, even though both national and sub-national associations appear to be in the infancy stage, national-level associations seem to be getting stronger and better compared to the sub-national associations. Nonetheless, the future of both national and sub-national associations remains promising considering the country’s rising demand for forest products attributed to population growth, availability of external support, and the seemingly robust legal and policy framework that supports producer groups. However, the absence of private commercial forestry regulations as envisaged in the Forest Conservation and Management Act, 2016 could slow down the operations of tree producer associations. Moreover, behavioral change to include and involve women, youth, and other vulnerable groups in society appears to be an attribute that is gaining traction within these associations. More analyses are required to establish a level of willingness to involve these groups. Further, due to some degree of uncertainty in the data used in this study, there is a need to conduct more empirical analyses at the household or community level to review these impacts further.

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References

1. Ministry of Environment and Natural Resources Report. 2013. Available online: www.environment.go.ke (accessed on 17 April 2020).
2. DeMarsh, P. Making Change Happen: What Can Governments Do to Strengthen Forest Producer Organizations? Food and Agriculture Organization of the United Nations (FAO): Roma, Italy, 2014.
3. Agriculture (Farm Forestry) Rules. Available online: http://www.fao.org/faolex/results/details/en/c/LEX-FAOC101360 (accessed on 20 February 2020).
4. UNEP Webpage. 2020. Available online: https://www.unenvironment.org/regions/africa/our-work-africa (accessed on 10 May 2020).
5. Kathleen, B.; Christiaensen, L.; Dabalen, A.; Gaddis, I. “Poverty in a Rising Africa, Africa Poverty Report” Overview. In License: Creative Commons Attribution CC BY 3.0 IGO; World Bank: Washington, DC, USA, 2016.
6. Renner, M.; Sweeney, S.; Kubit, J. Green Jobs: Towards Decent Work in a Sustainable, Low-Carbon World; UNEP: Nairobi, Kenya, 2008.
7. Costanza, R.; d’Arge, R.; d’Groot, R.; Farber, S.; Grasso, M.; Hannon, B.; Limburg, K.; Naeem, S.; O’Neill, R.V.; Paruelo, J.; et al. The value of the world’s ecosystem services and natural capital. *Nature* 1997, **387**, 253–260. [CrossRef]

8. Scherr, S.J. Building opportunities for small-farm agroforestry to supply domestic wood markets in developing countries. *Agrofor. Syst.* 2004, **61**, 357–370.

9. Simons, A.J.; Leakey, R.R.B. Tree domestication in tropical agroforestry. In *New Vistas in Agroforestry*; Springer: Dordrecht, The Netherlands, 2004; Volume 1, pp. 167–196.

10. Slusser, J.L.; Calle, A.; Garen, E. Sustainable ranching and restoring forests in agricultural landscapes, Panama. *ETFNR News* 2015, **57**, 31–38.

11. Bowler, D.; Buyung-Ali, L.; Healey, J.R.; Jones, J.P.; Knight, T.; Pullin, A.S. The evidence base for community forest management as a mechanism for supplying global environmental benefits and improving local welfare. *CEE Rev.* 2010, **48**, 8–11.

12. Macqueen, D.; Andaya, E.; Begaa, S.; Bringa, M.; Greijmans, M.; Hill, T.; Humphries, S.; Kabore, B.; Ledeceq, T.; Lissendja, T.; et al. Prioritizing Support for Locally Controlled Forest Enterprises; IIEP: London, UK, 2014.

13. Stevens, M.; Vitos, M.; Altenbuchner, J.; Conquest, G.; Lewis, J.; Haklay, M. Taking participatory citizen science to extremes. *IEEE Pervasive Comput.* 2014, **13**, 20–29.

14. MacQueen, D.; Bose, S.; Bukula, S.; Kazoora, C.; Ousman, S.; Porro, N.; Weyerhaeuser, H. *Working Together: Forest-Linked Small and Medium Enterprise Associations and Collective Action*; International Institute for Environment and Development (IIED): London, UK, 2000.

15. Rights and Resources Initiative. *What Rights? A Comparative Analysis of Developing Countries’ National Legislation on Community and Indigenous Peoples’ Forest Tenure Rights*; RRI: Washington, DC, USA, 2012.

16. Seymour, F.; La Vina, T.; Hite, K. *Evidence Linking Community-Level Tenure and Forest Condition: An Annotated Bibliography*; Climate and Land Use Alliance: San Francisco, CA, USA, 2014.

17. Bingen, R.J.; Simpson, B.M. *Farmer Organizations and Modernizing Extension and Advisory Services: A Framework and Reflection on Cases from Sub-Saharan Africa*; MEAS Discussion Paper 5; Michigan State University: East Lansing, MI, USA, 2015.

18. Uganda Tree Growers Association Website. Available online: [www.utga.ug](http://www.utga.ug) (accessed on 17 December 2019).

19. Bowen, G.A. Document Analysis as a Qualitative Research Method. *Qual. Res. J.* 2009, **9**, 27–40. [CrossRef]

20. O’Leary, Z. *The Essential Guide to Doing Your Research Project*, 2nd ed.; SAGE Publications, Inc.: Thousand Oaks, CA, USA, 2014.

21. Tyndall, B.P. *The Socioeconomics of Grevillea Robusta within the Coffee Land-Use System of Kenya*; International Centre for Research in Agroforestry: Nairobi, Kenya, 1996.

22. Betser, L.; Mugwe, J.; Muriuki, J. *On-Farm Production and Marketing of High-Value Tree Products in the Central Highlands of Kenya*; Temu, A.B., Ed.; World Agroforestry Centre: Nairobi, Kenya, 1999.

23. Oginosako, Z.; Mathenge, S.; Simons, T.; Simutu, P. Composition and Structure of Indigenous and Exotic Tree Species in the Agro-Ecological Zones of the Southern Foot of Mount Kenya; 2003; In press.

24. Beer, J.; Muschler, R.; Kass, D.; Somarriba, E. Shade management in coffee and cacao plantations. *Agrofor. Syst.* 1997, **38**, 139–164. [CrossRef]

25. Mount Kenya East Pilot Project (MKEPP). Project Completion and Validation Report. Available online: [https://www.ifad.org/documents/38714182/39729786/Kenya+PCRV.pdf](https://www.ifad.org/documents/38714182/39729786/Kenya+PCRV.pdf) (accessed on 17 December 2019).

26. Chisika, S.N.; Park, J.; Yeom, C. The impact of legislation on sustainability of farm forests in Kenya: The case study of Lugari sub-county in Kakamega county, Kenya. *Sustainability* 2019, **12**, 1–15.

27. Cheboiwo, J.K. *Private Forestry Sector in Kenya: Status and Potential*; AFF Report; African Forest Forum: Nairobi, Kenya, 2016.

28. Sikuku, F.O.; Apudo, M.G.; Ototo, G.O. Factors influencing development of farm forestry in Lugari district, Kakamega county, western Kenya. *J. Agric. Vet. Sci.* 2014, **7**, 6–13. [CrossRef]

29. Ongugo, P.O.; Langat, D.; Oeba, V.O.; Kimondo, J.M.; Owuor, B.; Njuguna, J.; Okwaro, J.; Russell, A.J.M. *A Review of Kenya’s National Policies Relevant to Climate Change Adaptation and Mitigation: Insights from Mount Elgon*; CIFOR: Bogor Barat, Indonesia, 2014.

30. The Forest Conservation and Management Act. 2016. Available online: [http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/ForestConservationandManagementActNo34of2016.pdf](http://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/ForestConservationandManagementActNo34of2016.pdf) (accessed on 20 February 2020).

31. The Associations Bill. 2018. Available online: [https://www.statelaw.go.ke/wp-content/uploads/2018/09/Associations-bill-2018.pdf](https://www.statelaw.go.ke/wp-content/uploads/2018/09/Associations-bill-2018.pdf) (accessed on 20 February 2020).
32. Forest (Charcoal) Rules. 2009. Available online: http://extwprlegs1.fao.org/docs/pdf/ken101362.pdf (accessed on 20 February 2020).

33. Forest Policy. 2014. Available online: http://www.kenyaforestservice.org/documents/Forest%20Policy%202014%20(Revised%202-2-2014).pdf (accessed on 20 February 2020).

34. National Forest Programme Launched. Available online: http://kenyaforestservice.org/index.php?option=com_content&view=article&id=531:national-forest-programme-launched&catid=81&Itemid=538 (accessed on 20 February 2020).

35. Porter-Bolland, L.; Ellis, E.A.; Guariguata, M.R.; Ruiz-Mallén, I.; Negrete-Yankelevich, S.; Reyes-García, V. Community managed forests and forest protected areas: An assessment of their conservation effectiveness across the tropics. For. Ecol. Manag. 2012, 268, 6–17. [CrossRef]

36. Standard Digital. Available online: https://www.standardmedia.co.ke/article/2000102986/n-a (accessed on 20 February 2020).

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