

Review Article

Effectiveness of Government Policies in Governing Arabuko-Sokoke Forest Reserve in Kenya

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Received Date: 18 February 2022

Revised Date: 11 April 2022

Accepted Date: 18 April 2022

Abstract - The forests resources form part of the most precious natural resources as they balance the survival of the world's ecosystem. However, it is unclear how effective forest governance policies can manage participatory forest management arrangements in the current literature. Thus, the study sought to examine the effectiveness of the Kenyan government policies in governing the Arabuko-Sokoke Forest Resources. The researchers purposively sampled 100 respondents from communities involved in the participatory forest management arrangement and 90 non-participating communities in the forest participatory management arrangement. Also, 30 key informants from heads of government agencies, namely: the Kenya Forest Service, Kenya Wildlife Service, National Museum of Kenya, Non-Governmental Organizations such as Nature Kenya, Community Based Organizations, and Leaders from the business community working the Arabuko-Sokoke Forest Management, were interviewed. The analysis of the collected qualitative data from written notes and audio recordings was coded into similar themes and used to answer the study objectives. The results show that the government policies regulating the Arabuko-Sokoke forest resources are important. Therefore, it is recommended that there is a need for effective forest governance policies for sustainable forest management.

Keywords - Arabuko-Sokoke, Forest Resources, Government Policies, Governing, Kenya.

I. INTRODUCTION

Forests form part of our most precious natural resources, and they are essential to the continued balance and survival of the world's ecosystem (Chomba et al., 2015). Unfortunately, they have suffered from serious depletion in the past, and unless vigorous steps are taken to conserve them, their future existence is threatened (Adinoyi, 2015; Girma et al., 2015). Thus, government policies are needed to maintain forest resources (Chomba et al., 2015). Also, forest governance depends on the extent and quality of enabling policy, legal and institutional conditions (Proskurina, and Vakkilainen, 2018; Monditoka, 2011). According to Krott (2008), forest governance is seen as forest policy-making, which takes

place in a social bargaining process to regulate the various interests and conflicts in forests in a self-organizing network of either public or private groups without state dominance. Thus a government's effectiveness in governing the forest resources depends on developing effective policies and improving community awareness (Mutune and Lund, 2016). Policy-making requires that the various stakeholders, i.e., community members and government agencies, appreciate each other's goals and perspectives and facilitate communication even if the concerned parties fail to resolve a particular problem (Ming'ate et al., 2016). Open communication would help steer learning of the policy, improve mutual understanding and trigger new solutions (Krott, 2008). Also, effective policy formulation requires that local governments are downwardly accountable to resource users, rely on the technical capacity of the local communities to which governance responsibilities are being devolved, and have a secure source of funding (Andersson, 2006).

Adinoyi (2015) argues that upgrading protected areas to conserve biodiversity is realistic when all the people, such as community members, are involved, and their safety is guaranteed. Further effective government policies enable the provision of forest protection assistance from global forest conservation partners such as the Global Environmental Facility, International Union of Nature (IUCN), and other organizations with similar visions (Boitt, 2016). Proskurina and Vakkilainen (2018) have pointed out that the challenges that face forest governance include a lack of well-developed forest infrastructure, underdeveloped public participation, sophisticated legislation, and often poor forest management.

The Kenyan forest policy has provided a wider mandate for forest management, including the management of forest reserves, private forests, and community forests. It allows the involvement of forest-adjacent communities and other stakeholders in forest management and conservation (GoK, 2005). Studies by Adinoyi (2015) and (Anup, 2016) observe that forests in Kenya have experienced various forms of environmental degradation due to the rising potential of environmental



hazards resulting from anthropogenic activities. Further, the effectiveness of the government policies in managing forest resources in Kenya has been wanting, as there have been many cases of forest destruction (Hitimana et al., 2010). As established by (Chebet 2013), Kenya faces high deforestation rates, which endangers both its fauna and flora. It has been estimated that since Kenya's independence in 1963, the forest cover has dropped from 10% to 6%, thus making the country lose approximately 12,000 hectares of forest cover annually (GoK, 2005; Musila et al., 2018). This loss has made the Kenya Forest Service (KFS) raise concern over the ongoing destruction of forests, especially the Arabuko-Sokoke Forest Reserve (Musila et al., 2018).

KFS has established that the existing forest protection laws are too weak to enforce protection and conservation measures, thus warning that logging and other human activities could wipe out Arabuko-Sokoke Forest Reserves' prized flora and fauna (Mutune et al., 2016; Schürmann et al., 2020). The Arabuko forest is the largest coastal forest in East Africa (Ming'ate 2014 a). It hosts 30 and 20 percent of Kenya's butterfly and bird species, respectively (Schürmann, 2020). Hence, effective policies are needed to protect the forest from further destruction. Thus, the study sought to examine the effectiveness of the government policies in governing the Arabuko-Sokoke Forest resources.

II. MATERIAL AND METHODS

Arabuko-Sokoke consists of 420 km² of forest. It is found in Kilifi County 110 kilometers North of Mombasa at the latitude of 3°20' S and a longitude of 39 ° 50' E (Schürmann, 2020; Ming'ate 2014 a&b) Figure 1. The forest is a lowland, completely dry forest on the Kenyan Coast (Ming'ate 2018). About 54 villages surround the forest (Ming'ate 2104 a).

The study used a case study research design utilizing a qualitative approach for data collection (Creswell and Creswell 2017). The researchers purposively sampled participating and non-participating respondents in the management of the Arabuko-Sokoke Forest Reserve and the heads of government agencies such as Kenya Forest Service, Kenya Wildlife Service, National Museum of Kenya, Non-Governmental Organizations such as Nature Kenya, Community Based Organizations, and Leaders from the business community working in the Arabuko-Sokoke Forest Management. However, because the researchers used a qualitative data collection process, the sample size for data collection stopped when the saturation point was attained (Saunders et al., 2012). Hence the sample size for the study stopped at 100 for forest management participating communities and 90 non-participating communities in forest management (Table 1). Semi-structured questions were administered to the participating and non-participating forest management households to collect data to answer the study objectives on the effectiveness of government policies in governing Arabuko-Sokoke Forest Reserve.

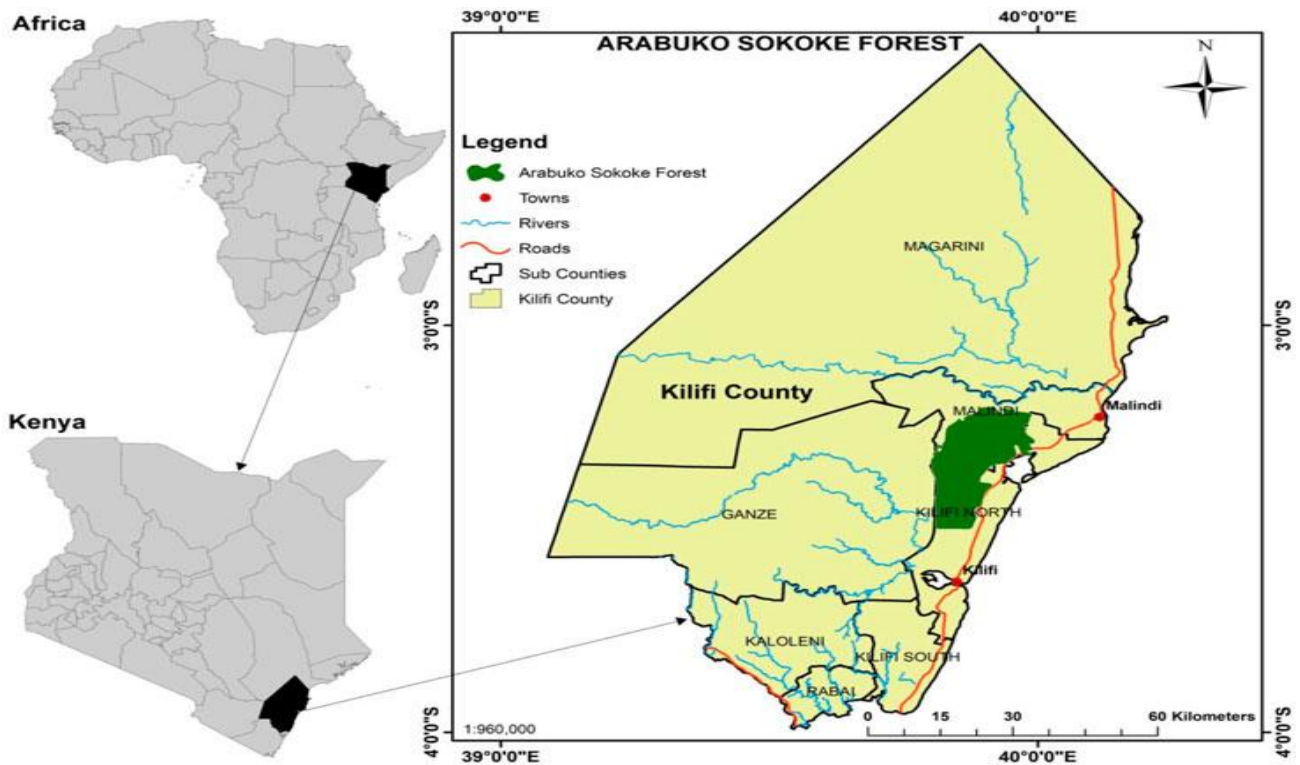


Fig. 1 Study area

Table 1. The sample size for the study participant

Type of respondent	PFM participating communities	Non-PFM participating communities
Households staying adjacent to the Arabuko-Sokoke Forest Reserve	100	90
Kenya Forest Service officials	5	-
Kenya Wildlife Service Officials	8	-
National Museums of Kenya Officials	3	-
Kenya Forest Research Institute Officials	5	-
Village elders	4	-
Chiefs	1	-
Leaders from the business community (LBC)	4	-
Total Participants	130	90

This study utilized a qualitative data analysis. All the data collected were coded based on the various categories of the respondents to ensure anonymity.

The respondents are assigned codes as follows technique (Table 2).

Table 2. Codes were given to respondents

S/N0.	Type of respondent	The coding done
1	PFM participating communities	PH
2	Non-PFM participating communities	NPH
3	Kenya Forest Service officials	KFS
4	Kenya Wildlife Service Officials	KWS
5	National Museums of Kenya Officials	NMK
6	Kenya Forest Research Institute Officials	KEFRI
7	Village elders	VE
8	Chiefs	CF.

III. RESULTS AND DISCUSSION

The study sought to examine the effectiveness of the government policies in governing the Arabuko-Sokoke Forest Resources in Kenya by studying the participating and non-participating households in Participatory Forest Management (PFM). The PFM participating communities reported that the policy allows resource users to collect only dead logs and not cut the live ones (PH2). Also, the Kenya Forest Services and KWS (Kenya Wildlife Services) supervise the protection of the forests (CF). Furthermore, it is illegal to cut down mangrove trees, as per the forest act and forest management plan (LBC 4).

Moreover, the respondents argued that the Kenya Forest Act 2016 and KWS Act 2018 and all other PFM policies had helped communities, especially resource users, understand the scope of sustainable forest conservation (PH4).

Further, it also became apparent that the government policies have supported governance rights of the forest-dependent communities like collecting firewood, timber, herbal medication, grass for roof thatching and grazing their animals, leisure activities, and scientific research (PH16), and provided a framework for effective provision of permits for accessing forest resources (PH16, PH75, and PH36). It is worth noting that discussions with non-participating communities in PFM on the effectiveness of the forest governance policies found that the forest

management policies mainly favor the communities involved in the forest management arrangement (NPH3, NPH8, NPH 36, and NPH58 (Chebet, 2013). This was seen as a loophole as it may lead those communities not involved in the forest management arrangements to engage in forest destruction (Mutoko and Shisanya, 2015; Mujawamariya and Karimov, 2014).

Also, the government policies were found to have ensured no forest destruction and have thus helped when prosecuting the culprits that break the forest management regulations (CF), like those found destroying the forest were immensely punished, and even sometimes, their forest access.

License or permits for accessing forest resources revoked (PH4).

The government policies have enabled the community to establish tree nurseries (LBC1). Forest nurseries are advantageous in propagating recalcitrant seeds, dormant seeds, and tree species with irregular flowering, thus providing a suitable avenue for vegetative propagation (PH17).

The study found that the government policies have facilitated plenty of fish availability (PH4); as a result of the forest's conservation, there is plenty of water flowing

from the forest reserve, which has led to an abundance of fish, especially at the Mida Creek (VE4 and VE1).

The government policies have also facilitated communities to harvest firewood, practice beekeeping and butterfly harvesting (PH57), enabled the CFA households to understand the user right to the resource users (PH38), and facilitated law and order in the usage of forest resources (VE2).

The study found that the best way to improve the effectiveness of the forest policy is by enhancing the governance of the Arabuko-Sokoke Forest Reserve by involving communities in monitoring and protecting the forest resources to reduce deforestation and forest destruction in general (LBC 3), development of enforcement laws and bylaws for the entire forest, development of a constitution for forest resource management (VE2 and PH54), the building of communities' awareness on the implementation of sustainable forest management policies (PH17 and NPH4) and warning of the rogue people by providing for systems of reporting them to the authority responsible for forest governance such as KFS, KEFRI, KWS (PH34) (Mutune, 2016, Adinoyi 2015 and Pringle, 2017).

IV. CONCLUSION AND RECOMMENDATIONS

The study sought to examine the effectiveness of the government policies in governing the Arabuko-Sokoke Forest Resource in Kenya by using participating and non-participating households in PFM as a case study. It can be concluded that the Kenyan forest management policies are largely helpful in the management of the forest resources at Arabuko-Sokoke, even though the policies are mainly applicable in the communities participating in the PFM arrangement. To improve forest governance policies, the study has confirmed that involving communities in monitoring and protecting forest resources, developing forest resource management laws, and creating forest awareness management policies are important in forest management. Therefore, it is recommended that there is a need for effective forest governance policies for sustainable forest management.

ACKNOWLEDGMENT

The authors acknowledge the National Research Fund for their support in the data collection and writing this paper. They also most sincerely acknowledge Kenyatta University for providing the necessary environment for carrying out the research.

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