

Role of Advocacy Efforts in Conservation of Pangolins Species in Kenya

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ABSTRACT

Pangolins, the unique and enigmatic scaly mammals, are facing an existential crisis due to rampant poaching and habitat loss, particularly in Kenya, where three species reside. This study assessed the role of advocacy efforts in conservation of pangolins species in Kenya. Advocacy efforts play a crucial role in the conservation of pangolin species in Kenya by raising awareness, influencing policy changes, and mobilizing resources for conservation initiatives. Pangolins face severe threats due to illegal wildlife trade, habitat loss, and lack of strong legal protections. Effective advocacy can address these challenges through various means. Firstly, advocacy efforts contribute significantly to raising awareness about the plight of pangolins among the public, policymakers, and key stakeholders. By highlighting the ecological importance of pangolins and the threats they face, advocates can generate public support and empathy, leading to increased conservation action. This awareness can also foster behavioral change, such as reducing demand for pangolin products, which is critical in combating illegal trade. Advocacy also plays a pivotal role in influencing policy changes and strengthening legal frameworks for pangolin conservation. Advocates work with policymakers to enact and enforce laws that protect pangolins from poaching, trafficking, and habitat destruction. This includes advocating for stricter penalties for wildlife crimes and advocating for the inclusion of pangolins in international conservation agreements. Furthermore, advocacy efforts help mobilize resources for pangolin conservation projects. By engaging with governments, non-governmental organizations (NGOs), and international donors, advocates can secure funding and support for research, enforcement efforts, and community-based conservation initiatives. This financial backing is essential for implementing effective conservation strategies on the ground. Community engagement is another critical aspect of pangolin conservation advocacy. Advocates work with local communities to promote sustainable livelihoods that reduce dependency on pangolin-related activities, such as bush meat hunting or illegal trade. Empowering communities through education and alternative income-generating projects not only helps protect pangolins but also fosters long-term conservation efforts. In Kenya, advocacy efforts are also focused on addressing broader conservation challenges, such as habitat loss and fragmentation. By advocating for the protection of critical pangolin habitats, such as forests and savannahs, advocates contribute to the overall biodiversity conservation landscape. This holistic approach recognizes the interconnectedness of species conservation and ecosystem health. Advocacy efforts also contribute to international collaboration and knowledge-sharing on pangolin conservation. By participating in global forums, conferences, and campaigns, advocates can leverage international support and expertise to amplify conservation efforts and promote best practices.

Keywords: Advocacy, Conservation, Community engagement, Resource mobilization, Legal frameworks, Public support, International collaboration

INTRODUCTION

Pangolins, the unique and enigmatic scaly mammals, are facing an existential crisis due to rampant poaching and habitat loss, particularly in Kenya, where three species reside: The Temminck's ground pangolin, the giant pangolin and the white-bellied pangolin. These remarkable creatures often referred to as the world's most trafficked mammals, have roamed the Earth for millions of years, playing a vital role in maintaining the balance of ecosystems (AICGS, 1999). However, their survival is now threatened by the insatiable demand for their scales, meat, and skin in traditional medicine and as a luxury food item, fueling a lucrative illegal trade that has pushed them to the brink of extinction.

Advocacy efforts in the conservation of pangolin species in Kenya operate within a framework that spans global, regional, and local levels. At the global level, organizations and advocates collaborate to address international issues such as illegal wildlife trade and habitat loss, which threaten pangolin populations worldwide. Global advocacy initiatives often involve engaging with international conventions and agreements, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), to strengthen protections for pangolins and enhance cross-border cooperation in combating trafficking (Afoloke, 2016). By participating in global forums and campaigns, advocates contribute to shaping policies and priorities that impact pangolin conservation not only in Kenya but across their entire range.

Regionally, advocacy efforts focus on addressing specific challenges and opportunities within Africa, where several pangolin species are native. Regional conservation organizations and networks play a crucial role in coordinating efforts among countries that share pangolin habitats. In East Africa, including Kenya, regional cooperation enhances law enforcement, facilitates information sharing, and promotes best practices in pangolin conservation. Regional advocacy initiatives leverage collective resources and expertise, to implement effective strategies for protecting pangolins and their habitats at a broader scale, benefiting local populations and ecosystems (UNODC, 2020).

At the local level in Kenya, advocacy efforts are tailored to address on-the-ground conservation needs and engage with communities directly impacted by pangolin conservation issues. Local advocates work closely with wildlife authorities, local governments, and communities to raise awareness about the importance of pangolins and the threats they face. Community-based initiatives empower local stakeholders to participate in conservation activities, such as habitat restoration, anti-poaching patrols, and sustainable livelihood projects that reduce dependence on pangolin-related activities (Ibid). By fostering local ownership and engagement, advocacy efforts contribute to building sustainable conservation solutions that benefit both pangolins and local communities in Kenya. This Journal article focuses on analyzing the nature and forms of advocacy efforts towards the conservation of endangered pangolin species in Kenya.

STATEMENT OF THE PROBLEM

The conservation of pangolin species in Kenya faces a multitude of challenges, which underscore the critical role of advocacy efforts in addressing these issues. One of the primary problems is the rampant illegal wildlife trade driven by demand for pangolin scales and meat, particularly in Asian markets where pangolin products are highly prized for traditional medicine and culinary purposes. This illegal trade has led to a drastic decline in pangolin populations across Africa, including Kenya, where both the Temminck's ground pangolin and the black-bellied pangolin are found. Another significant problem is habitat loss and degradation due to deforestation, agricultural expansion, and human encroachment. Pangolins are highly

dependent on specific habitats, such as forests and savannahs, for their survival, and the loss of these habitats threatens their existence. As Kenya undergoes rapid development and urbanization, natural habitats are increasingly fragmented, isolating pangolin populations and reducing their access to food and shelter.

In addition to external threats, the lack of strong legal protections for pangolins exacerbates their vulnerability. Current wildlife conservation laws in Kenya may not adequately address the specific needs and challenges faced by pangolins. Weak enforcement of existing regulations further undermines conservation efforts, allowing poaching and trafficking to persist with impunity. Furthermore, there is also a critical lack of public awareness and understanding about the importance of pangolins and the threats they face. Without widespread awareness and support from the public, conservation initiatives struggle to gain traction and secure necessary resources. Education and outreach efforts are essential to mobilize public opinion and encourage behavioral changes that reduce demand for pangolin products and promote habitat conservation.

Lastly, limited resources and capacity hinder effective conservation action. Government agencies, conservation organizations, and local communities often operate with constrained budgets and manpower, limiting their ability to implement comprehensive conservation programs. Adequate funding, technical expertise, and collaborative partnerships are essential to strengthen conservation efforts and sustain long-term protection for pangolins in Kenya. Thus addressing these issues requires concerted advocacy efforts at various levels to raise awareness, strengthen policies, mobilize resources, and engage communities in pangolin conservation. Advocacy plays a pivotal role in amplifying the urgency of these challenges and galvanizing collective action to safeguard pangolins and their habitats for future generations

CONCEPTUAL FRAMEWORK

A conceptual framework serves as a theoretical structure or model delineating the essential concepts, variables, relationships, and assumptions guiding a research study or academic inquiry. It provides a framework for comprehending the phenomenon under investigation and guides the formulation of research questions, hypotheses, and data collection methods (Bass and George, 2022). Independent Variable (Advocacy Efforts represented by various forms of advocacy activities aimed at pangolin conservation, such as public awareness campaigns, community engagement, policy advocacy, and international collaboration. Advocacy efforts are considered independent variables as they are believed to influence the conservation of pangolins. The Dependent Variable (Conservation of Pangolins) represents the outcome of interest, which is the conservation status of pangolins in Kenya. It reflects the effectiveness of advocacy efforts and the legislative and institutional framework in ensuring the survival and well-being of pangolin populations. While Conservation Challenges are external factors or conditions that may hinder effective pangolin conservation efforts. They are considered as external influences that may affect the relationship between advocacy efforts, the legislative and institutional framework, and the conservation of pangolins. This conceptual framework provides a structured representation of the relationships between key variables involved in pangolin conservation in Kenya, highlighting the potential influence of advocacy efforts and the legislative and institutional framework on the conservation outcomes, as well as the role of conservation challenges as intervening factors.

Independent Variable

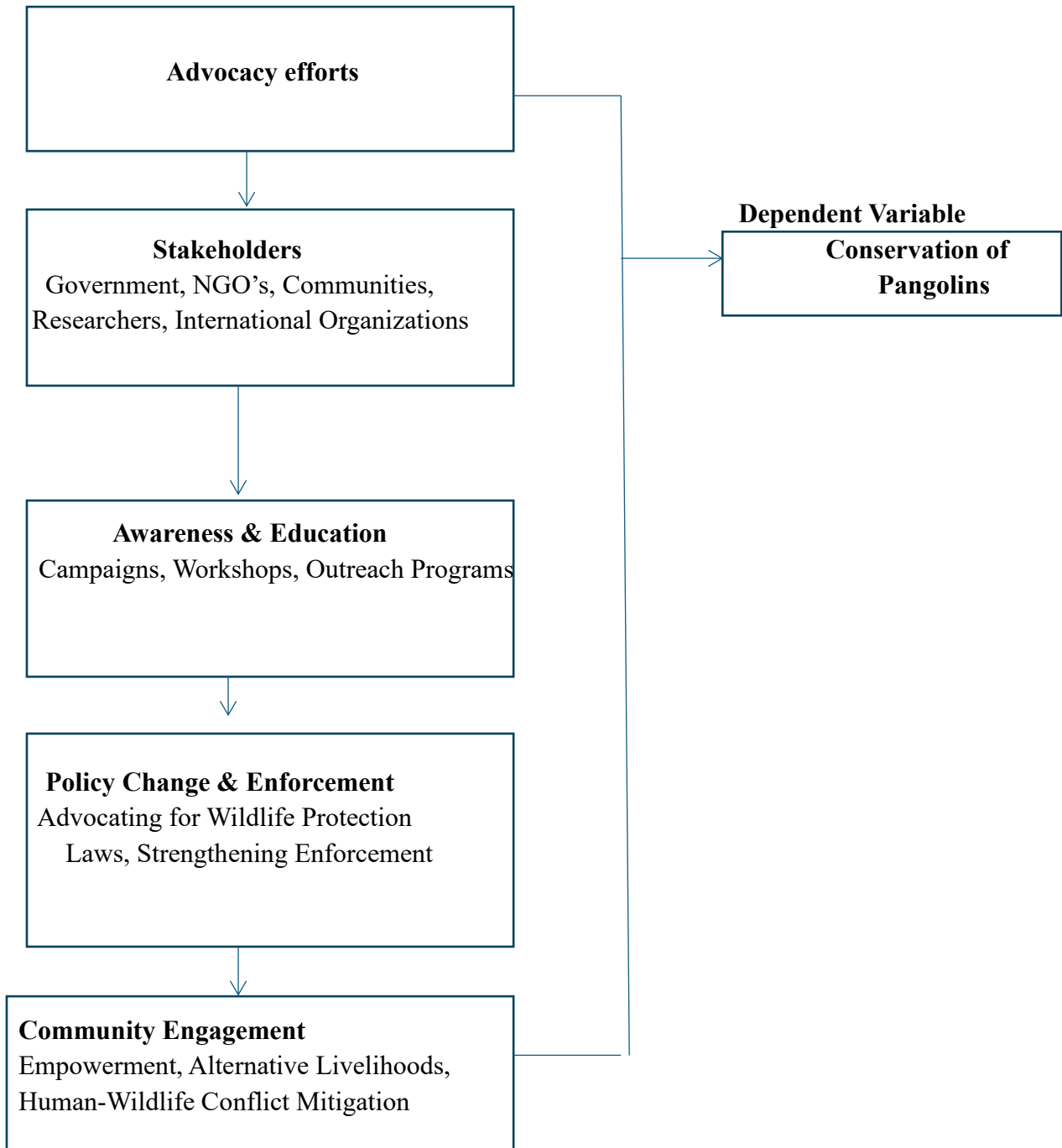


Figure 1.1 Conceptual Framework

This conceptual framework demonstrates how advocacy efforts interact with stakeholders and other components, to drive conservation actions and ultimately achieve the conservation goals for pangolins in Kenya. Each component plays a critical role in the overall process of advocating for and implementing conservation measures to protect pangolin species and their habitats.

THEORETICAL FRAMEWORK

The role of advocacy efforts in the conservation of pangolins in Kenya can be understood through the lenses of Protected Area Theory and Collaborative Conservation Theory, both of which offer valuable frameworks for addressing conservation challenges. Protected Area Theory emphasizes the importance of establishing and effectively managing protected areas to conserve biodiversity and natural resources (Cumming and Allen, 2017). Advocacy efforts play a crucial role in advocating for the establishment and expansion of protected areas that support pangolin habitats. Advocates work to raise awareness among policymakers and the public about the ecological significance of pangolins, and the necessity of safeguarding their habitats through designated protected areas, such as national parks, wildlife reserves, and community conservancies.

Advocacy efforts also promote the effective management of these protected areas to ensure they provide suitable habitats and sufficient protection for pangolins. This includes advocating for adequate funding, staffing, and enforcement measures within protected areas to combat illegal activities like poaching and habitat destruction. By applying Protected Area Theory, advocacy initiatives aim to strengthen the conservation status of pangolin populations by securing safe and well-managed habitats where these species can thrive and reproduce (Naro-Maciel, Sterling, and Rao, 2008).

Collaborative Conservation Theory underscores the importance of partnerships and collaboration among diverse stakeholders, including government agencies, local communities, NGOs, and international organizations, in achieving conservation goals (Conley and Moote, 2001). In the context of pangolin conservation in Kenya, advocacy efforts leverage Collaborative Conservation Theory by fostering partnerships and alliances that promote shared responsibility and collective action (Alex and Moote, 2001). Advocates facilitate collaborative approaches that engage local communities in pangolin conservation efforts, recognizing their role as stewards of natural resources and key stakeholders in conservation outcomes. By involving communities in decision-making processes and co-designing conservation strategies, advocacy initiatives empower local people to contribute to pangolin protection while addressing their own livelihood needs in sustainable ways.

Collaborative Conservation Theory also emphasizes the importance of integrating traditional knowledge and practices into conservation strategies. Advocacy efforts seek to bridge scientific expertise with indigenous knowledge systems, respecting local perspectives on pangolins and fostering cultural appreciation for these species. This inclusive approach builds mutual trust and cooperation, enhancing the effectiveness and sustainability of conservation efforts over the long term.

METHODOLOGY

The methods employed in this study are designed to provide a comprehensive and multifaceted understanding of the role of advocacy efforts in the conservation of pangolins in Kenya. By adopting a mixed-methods approach, the research aims to capture the nuances and complexities inherent in this critical topic, drawing upon both qualitative and quantitative data sources.

This study focused on engaging diverse agencies in Kenya tasked with responsibilities such as wildlife conservation, enforcement, research, and environmental diplomacy. Accordingly, the study focused on key government agencies, academia, and non-governmental organizations. These include the following with the relevant departments shown: The Kenya Wildlife Service (KWS) – Conservation, Wildlife Security and Diplomacy, National Museums of Kenya (NMK) – Research and Biology, Kenya Forest Service (KFS) – Ecosystem conservation, The Pangolin Project (NGO) – Research, Flora and Fauna International

– Conservation and Academia – Research. From these groups, 80 respondents were selected purposively based on their expertise. The researcher used a questionnaire as primary data collection instrument. The study also employed an interview guide for top-level expert/key informant interviews.

Qualitative Data Collection

At the heart of the qualitative component lies a meticulous analysis of the relevant legal documents that underpin pangolin conservation efforts in Kenya. This includes a thorough examination of the Constitution of Kenya (2010), the Wildlife Conservation and Management Act of 2013 (WCMA) [Amended 2019], the Environmental Management and Coordination Act (EMCA), and the Forest Act (Wanyanga, 2021). Each of these legal instruments was scrutinized to assess the extent to which they address pangolin conservation, habitat protection, and wildlife management. Other sources of secondary data were sourced from the government ministries, departments, and NGOs, alongside academic journals, theses, dissertations, monographs, online reports, government website postings, and global reports on environmental diplomacy and conservation of endangered species, as well as statistics. The systematic review of these sources shed light on the strengths and weaknesses of the existing legal framework, identifying areas that may require further strengthening or clarification.

On primary data, Focus Group Discussion (FGD) was used on respondents from Kenya Wildlife Service/National Museums of Kenya representing 14 (18.9 %), Kenya Forest Service (KFS) representing 15 (23.3%). The use of Focus Group Discussion (FGDs) was deemed essential for gathering pertinent insights from these three key institutions. The Kenya Wildlife Service holds the mandate for conservation efforts and actively engages in international diplomacy to safeguard the species. The Kenya Forest Service is critical in habitat management, specifically the forests that serve as the natural habitat for pangolins and hence it will help to elucidate the interplay between pangolin conservation and the preservation of their natural environments. The FGDs provide a unique perspective, allowing for a nuanced understanding of the challenges and successes encountered in pangolin conservation efforts. Furthermore, 16 (21.6%) officials from The Pangolin Project (NGO) responded to the interviews, and at the same time, 15 academicians representing (20.3 %) as well as 14 (8.9%) officials from Flora and Fauna International filled the questionnaires.

Data Analysis

The collected qualitative data, including legal document analysis and interview transcripts, underwent a rigorous thematic analysis process. This involved coding and categorizing the data into recurring patterns, themes, and perspectives. Through this systematic analysis, the study identified key issues, challenges, and opportunities related to the legal and institutional framework for pangolin conservation in Kenya. Quantitative data from surveys and field observations were analyzed using appropriate statistical methods, such as descriptive statistics, inferential statistics (e.g., t-tests, ANOVA), and regression analysis. These analyses were facilitated using statistical software packages like SPSS, R, or Stata, enabling efficient data management and robust statistical modeling.

LITERATURE REVIEW

Pangolins are among the world's most trafficked mammals, facing severe threats due to illegal wildlife trade and habitat loss. In Kenya, pangolin populations are declining rapidly, prompting urgent conservation action. Advocacy efforts play a crucial role in raising awareness, influencing policy, and mobilizing resources for pangolin conservation. This literature review examines the nature and various forms of advocacy initiatives aimed at protecting pangolins in Kenya.

Awareness Campaigns Targeted at Reducing Consumer Demand

Public awareness-building represents a vital first line strategy to engender protective attitudes towards pangolins and disincentivize consumption. Often general environmental education lacks specifics on the ecological roles of lesser-known species like pangolins. Over 85% of rural Kenyans still consume bush meat with 1 in 5 having directly eaten pangolin meat, especially men between 19-35 years involved in hunting. Targeting such key demographics through contextual messaging could make citizen campaigns more impactful. Conservation groups have harnessed traditional and social media for demand reduction messaging - the most prominent being the Africa Network for Animal Welfare (ANAW). ANAW leverages artwork competitions in schools and video PSAs broadcast on public buses viewed by up to 50,000 citizens (Martens & Berstermann, 2023).

Their award-winning 'Tunza Pangolin' artwork calendar sensitized thousands of children by reaching 550 schools in a year. However, retaining engagement levels and measuring attitudinal change requires sustained multimedia efforts and on-ground activities beyond one-off initiatives. For instance, classified wildlife crime units under the KWS and NGO allies regularly conduct raids on poaching hotspots and illegal bushmeat markets to reinforce zero tolerance messaging through apprehended contraband. The fundamental idea underpinning awareness drives is to make pangolin consumption socially taboo and deter would-be poachers and traders since they primarily respond to lucrative market incentives rather than conservation motives or legislation currently. Sustained national campaigns localized to community languages and customs can achieve this over time with pangolin protection resonating as a deep-seated social norm rather than just legal ordinance.

Community-Based Conservation Programs

As pangolins inhabit areas near rural settlements, conservation solutions require community participation to succeed. Traditionally communities would hunt pangolins at sustainable levels for subsistence use. However, the rising commercial trade has led to unchecked poaching without allowing populations to recover. Building local stewardship for protecting pangolins as part of the ecological heritage of traditional Kenyan hunting tribes is thus vital. Several models of incentive-based involvement of communities as stakeholders focused on pangolins show early promise. The head start model drives income generation activities conditional on assisting wildlife ranger patrols to maintain zero poaching zones (Fowler, 2020). One pilot by conservation alliance Mawingo in Taita Taveta has trained 22 village scouts now monitoring a 500km² range protecting the Taita Hills tree pangolin stronghold through camera traps with geo-tagged data. The project brought together customary leaders, youth groups and women for conservation enterprises like apiculture and indigenous tree nurseries where the community has begun sustaining anti-poaching operations itself after initial external support. Such participatory planning integrating traditional ecological knowledge on patterns of pangolin sightings, birthing seasons and their ideal habitats also builds a sense of inclusive ownership and pride to conserve flagship species which can inspire large-scale governmental efforts.

A key challenge will be providing sustained alternative income for erstwhile hunters as conversions take time. Additionally, monitoring impacts on pangolin population numbers after interventions through field surveys remains difficult and costly due to the solitary burrowing natures of pangolins. More cross-sectional data gathering on consumption levels over time through random sampling household surveys combined with ranger patrol poaching observations can refine insights on attitudinal transformations on the ground towards pangolins (Stracquadiano, 2023). With greater policy mainstreaming, devolved

community conservation can synergize with national level demand reduction messaging and enforcement drives.

Strengthening Enforcement against Trafficking

Robust law enforcement action forms the backbone for a comprehensive strategy against swelling commercial pangolin poaching rackets in Kenya. At the policy level, conservationists have helped enlist pangolins under the protected animal categorization in the Wildlife Act of Kenya entailing stiff penalties for offenders. However lax implementation, procedural loopholes and corruption have hampered convictions to date. Wildlife trafficking is now a specialized desk under the national Criminal Investigations Department (CID), but field capacities remain weak (Liddick Jr, 2020). Frontline officers lack tactical training in gathering field intelligence, conducting informant debriefs, setting up covert sting operations and asset seizure procedures to apprehend kingpins and organized crime groups like Al Shabaab and Somalia's pirate networks known to control the illicit pangolin supply chains. Basic evidence collection using DNA sampling and identification techniques for seized pangolin derivative contraband also needs scaling up for higher prosecution success.

The judiciary also requires extensive sensitization on the disastrous ecological impacts of pangolin poaching to hand down maximum sentences to the powerful cartels running regional trafficking rackets. Recent research on poaching hotspots suggests moving court hearings to local environments where the most damage occurs so judges realize conservation consequences first-hand to issue harsher verdicts. The extreme profits from the pangolin scales and meat trade, allows cartels to quickly regroup after arrests so enforcement requires persistent disruption tactics. Kenya has had some cooperation success through global partnerships like INTERPOL operations leading to crackdowns on smuggling routes into Vietnam (Orsini, 2022). But bilateral pacts with transit nations like South Africa and Mozambique also offer potential channels for intelligence sharing and joint investigations to trace transnational kingpins commanding the lucrative trade preying on Kenya's threatened pangolins through local networks across international boundaries.

The precarious existence of Kenya's endangered pangolins underscores the need for intensified conservation efforts to curb the rampant poaching and trafficking threatening the survival of these unique species. As reviewed, a multi-pronged strategy is essential given the complex drivers of the escalating commercial pangolin trade in the country. First, shifting public attitudes and tamping down demand requires persistent multimedia messaging and sensitization campaigns localizing the plight of pangolins to engender protective social norms that make consumption unacceptable. Second, community-based programs creating economic incentives and alternative livelihoods for participation of rural tribes in wildlife stewardship builds sustainability through inclusive participation while utilizing traditional ecological knowledge. Third, strengthening enforcement encompasses boosting capacities for intelligence-driven investigations, water-tight prosecutions, and transnational partnerships to dismantle the entrenched trafficking networks profiting off Kenya's pangolins. Ultimately the solution lies in transitioning pangolins from being viewed as common bushmeat or tradable commodities to treasured signatures of Kenya's natural heritage warranting national pride and grassroots protection. For this, conservation approaches require innovation, adaptation, and persistence in implementation. More empirical research into pangolin population dynamics, hunter profiles, consumption economics and trafficking typologies can help fine-tune evidence-based policies. Saving Kenya's pangolins necessitates all of society working in unison - from rural communities bearing coexistence costs to law enforcers dismantling underground commercial networks to policymakers championing conservation against vested

interests exploiting pangolin resources - with the collective aim of allowing these unique species to thrive again in the wild. The time for action is now before populations vanish completely from key ranges. With concerted efforts across multiple fronts prioritizing pangolin welfare based on ecological science and ethics, the tide can still turn to preserve Kenya's natural heritage.

LITERATURE GAPS

Firstly, there is a notable gap in assessing the overall effectiveness of advocacy initiatives targeting pangolin conservation in Kenya. While existing literature discusses various forms of advocacy such as awareness campaigns, policy advocacy, and community engagement, there is limited systematic evaluation of their impact on conservation outcomes. Future research should focus on conducting rigorous assessments to determine which advocacy strategies are most effective in influencing behavior change, policy decisions, and conservation actions related to pangolins. Another significant literature gap lies in understanding the dynamics of community participation and local perspectives within pangolin conservation advocacy. While community engagement is recognized as essential, there is a need for deeper exploration of local attitudes, beliefs, and socio-economic factors influencing human-wildlife interactions in pangolin habitats. Research should delve into community perceptions towards pangolins, as well as the effectiveness of participatory approaches in fostering sustainable conservation behaviors.

Furthermore, gaps exist in the analysis of existing policy and legal frameworks relevant to pangolin conservation in Kenya. More research is required to assess the adequacy and enforcement of wildlife protection laws specific to pangolins, as well as the role of advocacy in shaping policy outcomes and advancing legal reforms. Understanding the strengths and weaknesses of current policies will inform targeted advocacy efforts aimed at improving conservation governance. Cross-sectoral collaboration and networking represent another area where literature gaps are apparent. While collaborative partnerships are crucial for effective advocacy, there is limited research on the challenges and opportunities associated with engaging diverse stakeholders, including government agencies, NGOs, local communities, and international organizations, in pangolin conservation initiatives. Future studies should explore effective strategies for fostering multi-stakeholder collaboration and enhancing synergies across sectors.

Additionally, literature gaps exist in assessing the long-term impact and sustainability of advocacy efforts on pangolin conservation. Research is needed to evaluate the durability of behavior change interventions, the resilience of conservation outcomes, and the adaptive capacity of advocacy initiatives to address evolving threats. Understanding the factors contributing to sustained conservation success will guide the development of more robust and adaptive advocacy strategies. Lastly, there is a need for more research on integrating traditional ecological knowledge (TEK) into pangolin conservation advocacy. Despite increasing recognition of the value of TEK, gaps remain in understanding how indigenous perspectives and traditional practices can be effectively incorporated into advocacy efforts. Future studies should explore the contributions of TEK to pangolin conservation, promote indigenous participation in advocacy initiatives, and facilitate knowledge exchange between traditional and scientific conservation approaches.

FINDINGS AND DISCUSSIONS

Response Rate

Seventy-four (92.5%) respondents of the targeted sample of 80 respondents participated in the study. From these respondents, 14 (18.9 %) were from the Kenya Wildlife Service (KWS) and National Museums of Kenya 14 (18.9 %). At the same time, 15 academicians (20.3 %) responded to the questionnaires. All the

16 (21.6%) officials from The Pangolin Project (NGO) responded to the interviews, and 15 (23.3%) of Kenya Forest Service (KFS) Officials responded to the Focus Group Discussion Guides. Finally, 14 (8.9%) officials from Flora and Fauna International also filled the questionnaires. The response rate is depicted in Table 1 as follows

Table 1 Response Rate

Category	Target Sample Size	Response	Response Rate (%)
1. Kenya Wildlife Service (KWS) Officials and National Museums of Kenya	16	14	87.5
2. Academicians or the Scholars	16	15	93.8
3. Officials from The Pangolin Project (NGO)	16	16	100.0
4. Kenya Forest Service (KFS) Officials	16	15	93.8
5. Flora and Fauna International	16	14	87.5
Total	80	74	92.5

Source; Field Data, 2024

Demographic Information

The 1 respondents were asked to indicate their gender. Their responses were summarised and are presented in Table 2.

Respondents' Gender

From the findings, respondents from each gender category were evenly distributed at 51.4% male and 48.6% female as shown in Table 2.

Table 2 Respondents' Gender

Sex	Frequency	Percent
Male	38	51.4
Female	36	48.6
Total	74	100.0

Source; Field Data, 2024

Level of Education

The respondents were asked to indicate their levels of education. The findings are shown in Table 3.

Table 3 Levels of Education

Highest education level	Frequency	% Frequency
Undergraduate	39	52.7
College	19	25.7
Secondary	12	16.2
Postgraduate	4	5.4
Total	74	100.0

Source; Field Data, 2024

General Information on Environmental Diplomacy and Endangered Species Legislation

The study sought to find out whether the respondents’ organizations had been involved in environmental diplomacy. Forty two percent (42%) of the NGO’s staff, 67% of government officials and 50% of academicians stated that they had been involved in environmental diplomacy and endangered species legislation. About 8% of government officials and 50% of academicians had not engaged in environmental diplomacy and endangered species legislation. However, 58% of NGO’s and 25% of government officials were not sure if they had engaged in environmental diplomacy and endangered species legislation as shown in Table 4.

Table 4 General information on environmental diplomacy and endangered species legislation

	NGO’s	Government Officials from (KWS, NMK AND KFS)	Scholars or Academicians
Yes	5	16	5
% Yes	42	67	50
No	0	2	5
% NO	0	8	50
Not sure	7	6	0
% Not Sure	58	25	0

Source; Field Data, 2024

The findings in Table 4 show that most of the environmental diplomacy and endangered species legislation in Kenya is mostly led by government and supported by NGO’s as well as academicians.

One of the NGO officials pointed out that:

Five species are critically endangered. According to the International Union for the Conservation of Nature (IUCN), this designation corresponds to the highest degree of risk, indicating that the animals have a 50 per cent likelihood of going extinct within ten years or three generations. Nine further species have been classified as endangered (Respondent 1)

The respondent went on to list the at least three endangered mammal species in Kenya including the Elephant, White Rhino and pangolin. The respondent highlighted the significance of pangolins due to being the world's most trafficked mammal, despite an international ban on the trade of all pangolin species since 2017. As per the information provided by the Kenya Wildlife Service (KWS) official, a global operation in 2023 resulted in the seizure of 25 tons of African pangolin scales, equating to approximately 50,000 deceased pangolins, valued at an estimated market worth of USD \$7 million. Pangolin scales are sought after in traditional Chinese medicine, while its meat is considered a delicacy in certain regions of Asia.

Respondents noted that in 2016, all eight pangolin species were elevated to Appendix I of CITES, affording them the highest level of protection against international trade. In Kenya, the IUCN identifies 463 endangered species of flora and fauna. Section 44(1-4) mandates that all wildlife conservation areas must establish officially designated management plans. Nevertheless, one of the NGO officials posited that:

But, while most range countries have laws on the books protecting pangolins, lack of enforcement and light penalties have allowed for unabated poaching and smuggling (Respondent 2).

General Information on Environmental Diplomacy and Pangolin Species Conservation Legislation in Kenya and Internationally

The study endeavored to seek information from the participants on their knowledge on pangolin. The results are depicted in Table 5.

Table 5 Knowledge of the Pangolin Species by the Respondents

	NGO's	Government Officials	Scholars or Academicians	Total
Yes	8	14	2	24
% Yes	67	58	20	52
No	4	10	8	22
% NO	33.3	42	80	48

Source; Field Data, 2024

About 52% of the respondents overall have encountered pangolin species in the country. According to Table 5, the presence of pangolin species in their respective areas has been observed by 58% of government official and over 66.7% of the NGO's representatives staff. , The respondents also described the pangolin. To this end, a KWS official said:

Pangolins are the only mammals wholly-covered in scales and they use those scales to protect themselves from predators in the wild. If under threat, a pangolin will immediately curl into a tight ball and will use their sharp-scaled tails to defend themselves (Respondent 8).

Another respondent, an official from the Pangolin Project (NGO) asserted that;

Pangolins eat ants, termites and larvae and are often known as the scaly anteater. Because they have no teeth, pangolins pick up food with their sticky tongues, which can sometimes reach lengths greater than the animal's body (Respondent 9).

According the findings in Table 6, pangolins are mainly found in Masai Mara National Park, Tsavo National Park and Nyakweri Forest in Trans Mara.

Table 6 Location of pangolins in Kenya

	NGO's	Government Officials from (KWS, NMK AND KFS)	Scholars or Academicians
Where Sighted	Nyakweri forest- Trans Mara Tsavo national park Masai mara national park	Nyakweri forest- Trans Mara Tsavo national park Masai mara national park	Tsavo national park

Source; Field Data, 2024

Poaching is one of the key threats to the Pangolin species in Kenya and trade in pangolin products, where there has been an increasing trend in the number of people arrested with pangolin products in Kenya from 2015-2022. The other threat is associated with habitat loss, one of the respondents from The Pangolin Project (NGO) asserted that;

Habitat loss poses a significant threat to pangolins in Kenya, as it disrupts their natural ecosystems and reduces available resources essential for their survival. Factors such as deforestation, agricultural

expansion, urbanization, and infrastructure development contribute to habitat loss in Kenya (Respondent 10).

This corroborates the findings of Musila, *et al.* (2023) who posit that, habitat loss emanates from Charcoal burning and livestock overgrazing which continue to destroy the remaining natural habitat for these animals.

The Nature and Forms of Advocacy Efforts towards the Conservation of Endangered Pangolin Species in Kenya

The first objective of the study was to assess the nature and forms of advocacy efforts towards the conservation of endangered pangolin species in Kenya. Using a Likert Scale ranging from 1-5 where; “1 = strongly disagree (SD), 2 = disagree (D), 3 = neutral (N), 4 = agree (A), 5 = strongly agree (SA)” the respondents indicated their level of agreement regarding statement relating to the nature and forms of advocacy efforts. The results are shown in Table 7.

Table 7 The Nature and Forms of Advocacy Efforts

Statement	1	2	3	4	5	Total	Weighted Mean
From your opinion Advocacy organizations and NGOs play a crucial role in raising awareness about pangolin conservation in Kenya	0	5	15	30	24	74	3.42
Community-based conservation initiatives involving local communities are essential for pangolin conservation	0	0	10	20	44	74	4.00
Policy advocacy efforts influence government policies and regulations to better protect pangolins and their habitats	0	2	2	20	50	74	3.59
International collaboration and cooperation are crucial for addressing the transboundary nature of pangolin conservation	0	10	20	10	34	74	2.92
Diplomatic channels can be further utilized to enhance public awareness and support for pangolin conservation.	0	0	10	20	44	74	4.00
Public awareness campaigns effectively educate the public about the importance of pangolin conservation	0	2	2	20	50	74	3.59
Policy advocacy efforts influence government policies and regulations to better protect pangolins and their habitats	0	0	10	20	44	74	4.00

Source; Field Data, 2024

According to Table 7 there is generally a positive perception among respondents regarding the role being played by advocacy organizations and NGOs in raising awareness about pangolin conservation in Kenya. Specifically, respondents strongly agreed that advocacy organizations and NGOs have significantly contributed in raising awareness about pangolin conservation in Kenya, with a weighted mean of 3.42.

Moreover, the participants expressed agreed that community-based conservation initiatives involving local communities are essential for pangolin conservation evidenced by a weighted mean of 4.00.

While the respondents had a moderately positive perception regarding international collaboration and cooperation as crucial for addressing the transboundary nature of pangolin conservation (weighted mean of 2.92), they also showed optimism that diplomatic channels can be further utilized to enhance public awareness and support for pangolin conservation, with a weighted mean of 4.00. Additionally, respondents believed that Public awareness campaigns effectively educate the public about the importance of pangolin conservation, albeit with a moderately positive perception (weighted mean of 3.59).

The participants strongly agreed that policy advocacy efforts influence government policies and regulations to better protect pangolins and their habitats, all with weighted means of 4.00. Moreover, respondents expressed a belief that, policy advocacy efforts influence government policies and regulations to better protect pangolins and their habitats with a moderately positive perception (weighted mean of 4.00).

Overall, the responses emphasize the perceived importance advocacy efforts play in mobilizing support, raising awareness, and influencing decision-makers to take action to protect pangolins and ensure their survival for future generations. This is in line with the findings by Wild in Africa (2023) advocacy campaigns play an instrumental role in creating awareness about the ecological importance of pangolins, their role in maintaining ecosystem balance, and the threats they face from poaching, habitat loss, and illegal wildlife trade. By educating the public about the value of pangolins and the need for conservation measures, advocates can foster a greater appreciation for these unique creatures and garner support for conservation initiatives.

The researcher interviewed participants on their experience on the nature and forms of advocacy efforts in protecting pangolin species in Kenya. The participants stated that advocacy efforts play a crucial role in creating awareness about pangolin conservation in Kenya. To this end, one of the respondents said:

Awareness campaigns in raising awareness about pangolin conservation utilize various communication channels such as media, social media, community events, and educational programs to disseminate information about pangolins, their ecological significance, and the threats they face to the public (Respondent 13).

Another responded opined:

Community-based conservation initiatives that involve local communities in pangolin conservation efforts empower communities to actively participate in pangolin monitoring, habitat restoration, and anti-poaching patrols, fostering a sense of ownership and stewardship over pangolin habitats (Respondent 14).

Participants in the focus group acknowledged that advocacy efforts have contributed significantly to creating awareness about pangolin protection at the local level in Kenya. To this one of the participants said:

The international collaboration and cooperation facilitated by diplomatic efforts have led to regional and international forums to advocate for stronger regulations, enforcement mechanisms, and cross-border cooperation to combat pangolin trafficking” (Respondent 15).

Furthermore, Focus group participants highlighted Policy Advocacy efforts have contributed to awareness and advocacy for pangolin conservation. To this end, one of the participants said:

There is need for policy advocacy efforts to influence government policies, laws, and regulations to better protect pangolins and their habitats. Advocates work to strengthen wildlife protection laws,

increase penalties for pangolin poaching and trafficking, and improve enforcement mechanisms to combat illegal wildlife trade (Respondent 16).

The findings show that advocacy efforts have also helped in conveying the shared responsibility of protecting wildlife particularly the pangolin, fostering a sense of pride and ownership among the local population.

CONCLUSION

In conclusion, the role of advocacy efforts in the conservation of pangolin species in Kenya is pivotal and multifaceted, encompassing a range of strategies and collaborations aimed at addressing complex conservation challenges. Advocacy serves as a catalyst for change by raising awareness, influencing policy, mobilizing resources, engaging communities, and fostering international cooperation. Firstly, advocacy efforts play a crucial role in raising awareness about the plight of pangolins among diverse stakeholders, including policymakers, local communities, and the general public. By disseminating information about the importance of pangolins in ecosystems and the threats they face from illegal wildlife trade and habitat loss, advocacy fosters empathy and support for conservation initiatives. Advocacy also contributes to policy change and enforcement by advocating for stronger legal protections and effective implementation of wildlife conservation laws. This involves engaging with government authorities, advocating for wildlife-friendly policies, and strengthening law enforcement measures to combat poaching and trafficking of pangolins.

In addition, advocacy initiatives are instrumental in mobilizing resources for pangolin conservation projects. By partnering with donors, NGOs, and international organizations, advocates secure funding and technical support to implement conservation programs, conduct research, and strengthen capacity-building efforts. Community engagement is central to successful pangolin conservation, and advocacy efforts empower local communities to participate in conservation activities. Through education, capacity building, and alternative livelihood programs, communities become allies in pangolin protection, contributing to sustainable conservation outcomes. Collaboration at the international level is also facilitated by advocacy efforts, enabling knowledge-sharing, coordinated action, and harmonized policies across borders. By participating in global conservation networks and campaigns, advocates amplify the urgency of pangolin conservation on the global stage.

The comprehensive role of advocacy efforts in pangolin conservation in Kenya underscores the interconnectedness of various strategies and stakeholders involved in conservation action. Advocacy serves as a bridge between conservation science, policy-making, community engagement, and international cooperation, ultimately contributing to the conservation and sustainable management of pangolin species not only in Kenya but also globally. Continued and strengthened advocacy efforts are essential for ensuring the survival and well-being of pangolins, protecting biodiversity, and fostering a harmonious relationship between humans and wildlife in Kenya and beyond.

RECOMMENDATIONS

Based on the discussion on the role of advocacy efforts in the conservation of pangolin species in Kenya, the journal article recommends the following recommendations;

Raising public awareness and education; the government should also prioritize public awareness campaigns and community engagement initiatives to mobilize public support for pangolin conservation. Environmental diplomacy can play a crucial role in disseminating information, fostering public dialogue,

and mobilizing resources for conservation activities, thereby empowering local communities to participate in pangolin protection efforts.

Engaging Local Communities in Pangolin Conservation Efforts; this can involve providing training, resources, and incentives for community members to actively participate in pangolin monitoring, habitat restoration, and anti-poaching patrols. Collaborating with local leaders, traditional authorities, and community-based organizations can help build trust, foster ownership, and ensure the sustainability of conservation efforts.

Advocating for policy and legal reforms is essential to strengthen pangolin conservation efforts; this include lobbying for the development and implementation of robust wildlife protection laws, regulations, and enforcement mechanisms that specifically target pangolin trafficking and trade. Advocacy efforts should also focus on addressing gaps in existing legislation, increasing penalties for wildlife crimes, and enhancing collaboration between law enforcement agencies, judiciary systems, and conservation organizations to effectively combat pangolin poaching and trafficking networks.

Fostering Partnerships and Collaboration among Stakeholders; forging partnerships with other entities to leverage resources, expertise, and networks for pangolin conservation. Collaborative initiatives can include joint research projects, conservation programs, and policy advocacy campaigns that promote multi-stakeholder engagement and collective action towards pangolin conservation goals.

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