

Perceptions toward cost-sharing projects in hard times: Lessons from Amboseli, Kenya

David Owino Manoa

Born Free Foundation, P.O. box 1519-Karen, Nairobi, Kenya

Abstract: The community perceptions and the economic ability to make their contributions toward the cost-share project dubbed-predator-proof boma was assessed. The project reinforces the traditional Maasai homestead with recycled plastic poles, twisted chain-links and the flattened drum oils. The fortified home stead (also called predator-proof bomas) are meant to prevent night time predation of livestock by predators, particularly hyena and lions. The study was initiated to give reasons behind the delayed contributions of the community's 25% cost share, and give recommendations to the implementing organizations Born Free Foundation and Land Rover. Sixty respondents (30 who had applied and another 30 who had not applied for predator-proof boma) were selected at random and interviewed. The results revealed that 100% of community members applied for PPB because they have either lost their livestock predators or are living in wildlife migratory corridors with possible livestock attack treats; drought had reduced the 'purchasing power' of the community, with the market price of livestock going down by about 50%; the community members were comfortable to pay about 17% of the total cost of a boma; it would take at least a month for most applicants(62%) to make their cost-share payments, and 75.56% of the applicants were struggling to raise the cost share amount; about 30% of the community members still required BFF to talk to them about benefits of adopting the plastic recycled posts and PPBs in reducing livestock predation; 20 % also required their boma to be measured to know their cost-share. It was recommended to the management that the cost-share for the community be revised downward, and popularization of newly adopted recycled plastic poles among the community be intensified.

Keywords: Cost-share, livestock, perceptions, predator-proof bomas.

1. INTRODUCTION

The human-wildlife conflict (HWC) is fast becoming a critical threat to the survival of both large and rare globally endangered species (MEA, 2005). Conflicts caused by livestock predation lead to retaliatory killing of large carnivores. This is perhaps the most serious threat facing large carnivores amidst the ever-expanding human population (Kissui, 2008). In Kenya, more than 50% of wildlife habitat is outside protected area in communal grazing lands and group ranches, where wildlife, people, and livestock all interact and compete for the same natural resources increasing the rate of conflicts. Livestock predation can cause significant economic losses among pastoralists. For example a study by Butler (2000) recorded economic loss averaging \$13 or 12% of each household's net annual income in Zimbabwe, while Patterson *et al.* (2004) estimated livestock predation to represent 2.6% of the herd's economic value in a Kenyan ranch which incurred a loss of \$8749 per annum. As a result, conservation organizations have devised various approaches that can be used to eliminate or minimise the loss both to the communities and wildlife. One such approach is the predator-

proof bomas, which entails reinforcing the traditional pastoralist homesteads with rolls of chain-links, strong posts and flattened oil drums. As study by Manoa (2015) found out that predator-proof bomas resulted to reduced depredation on livestock and time spend guarding at night thereby positively enhancing the livelihood of the respondents. Manoa's study further revealed that majority of the interviewed community members were conversant of the role of predator in the ecosystem (66%) and 73% were of the opinion that predators should be protected because they bring more benefits than harm and indication of the community's level of awareness.

The Born Free Foundation in partnership with other stakeholder's have been implementing the predator-proof bomas in the Amboseli-Kilimanjaro ecosystem since 2010. In 2014, BFF under the sponsorship of Land Rover, planned to upgrade 50 traditional bomas in communal land around Amboseli. Unlike before, the wooden posts were replaced with recycled plastic poles. Community meetings were held to explain to the community the reasons and benefits for adopting recycled plastic posts. Adoption of recycled plastic posts was one of the key recommendations in an evaluation report conducted on 27 PPBs in West Kilimanjaro in July 2013 (BFF & AWF, 2013) . It was found out that wooden posts are not long lasting, as they are destroyed by termites and water logging. Although, the recycled posts came with more advantages, the cost per piece was about three times (Ksh 1160) the wooden post (BFF, 2014). In August 2014, BFF revised the overall cost of the boma to include operation costs, raising the overall cost of an average PPB (180m circumference) by about 36%. At the same time, community contribution was reviewed down ward from the 50% to 25% (BFF, 2014). This was meant to encourage more community members to cost share and upgrade their bomas to predator proof status. Surprisingly, the community has not responded to the project as anticipated. This is contrarily to the previous years, when community 'took' advantage of the cost share to reinforce their bomas.

Only 16 PPB had been constructed since April, 2014 in the entire Amboseli region (11 in Eselenkei and 5 in other group ranches), yet from the application data-base, there are more than 100 community members who had expressed interest in having their boma upgraded. All the applicants, cost share contributions have been calculated and communicated to respective beneficiaries (BFF, 2014).

With the project not gaining momentum as planned, this study sort to establish the reasons by conducting a survey to capture individual's opinions.

The purpose of this study was to assess the attitudes of the Amboseli community attitude toward the cost-share initiatives for the PPBs project with the intentions of answering the following questions:

1. What are the reasons behind the delayed contributions of the community's 25% cost share?
2. Has the newly revised boma cost affected the community's response?
3. Are applicants still interested in getting a PPB?
4. Why have some members of the community not applied for a PPB?
5. On average how much would the community be willing to contribute toward the PPB?
6. What are the best approaches for BFF to adopt to influence more community people to pay their cost share?

2. METHODS

The survey area was clustered into three major areas based on the group ranches-Ol gulului group ranch (OGR); Eselenkei group ranch (EGR) and Mbirikani group ranch (MGR) (Figure 1). In each group ranch, two locally trained research assistants randomly selected and interviewed thirty (30) respondents (15 who had applied for a PPB, and 15 who had not applied) using a questionnaire. Data from the questionnaires was tallied and entered into a Microsoft excel-pivot table and SPSS and analysis according to the study thematic areas.

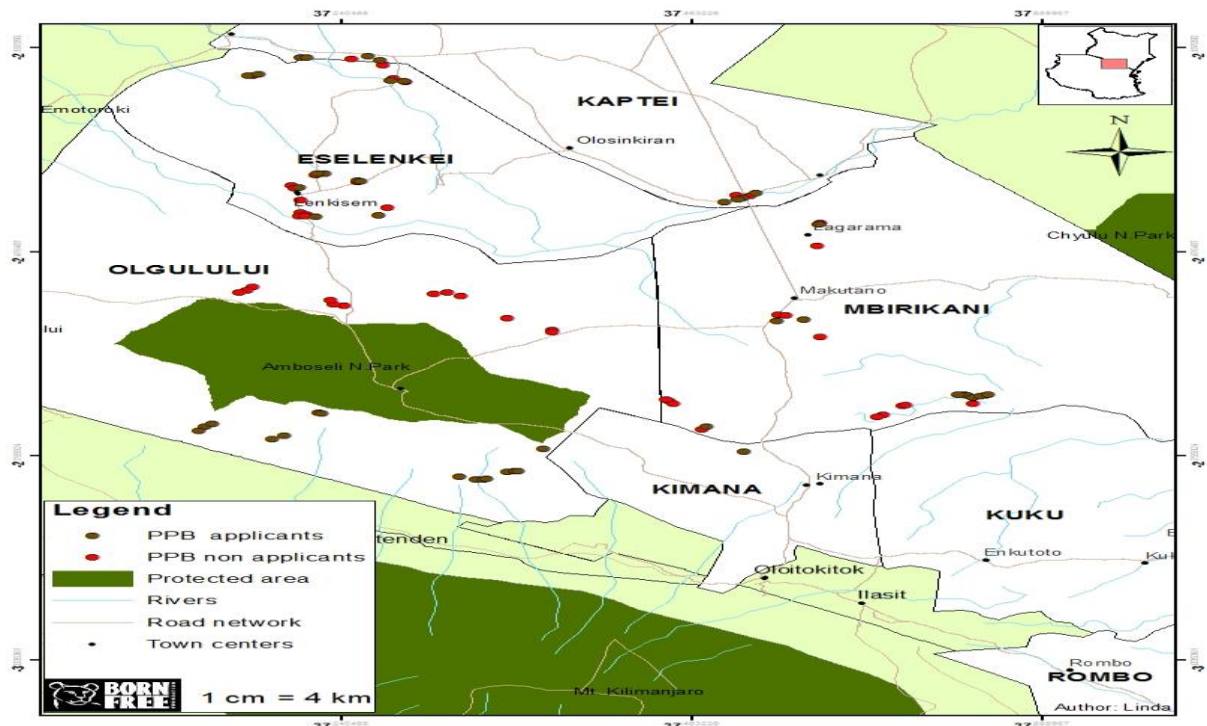


Figure 1: Study area

3. RESULTS AND DISCUSSIONS

3.1. Characteristics for existing PPBs APPLICANTS:

Reasons for applying for a PPB

All the respondents (n=30) applied for a PPB as result of having lost their livestock to predators. Living in the migratory corridor (31%) was also cited as a reason for applying for the PPBs (Figure 2) This suggest that predator-proof bomas are addressing an issue that the community is interested in. It is also a strong indication that the pastoralists have confident in the effectiveness of the PPBs in mitigating the human-predator conflicts. This findings support those of Manoa (2015) where 62 % (n=45) of the respondents rated predator-proof bomas as 'Excellent' in reducing livestock killings at night.

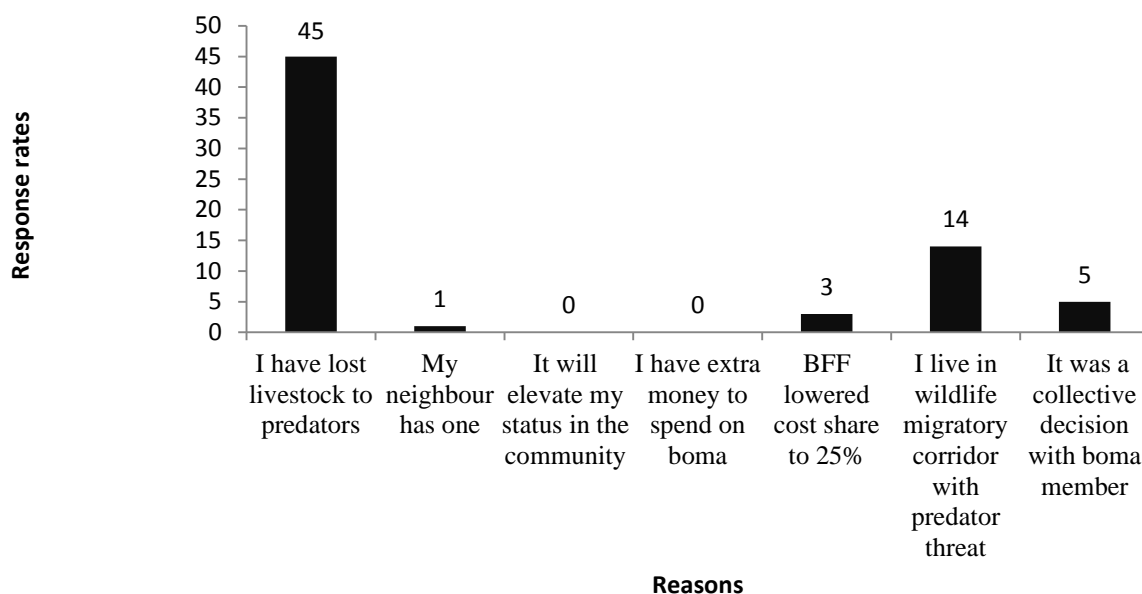


Figure 2: Reasons for applying for a predator-proof boma

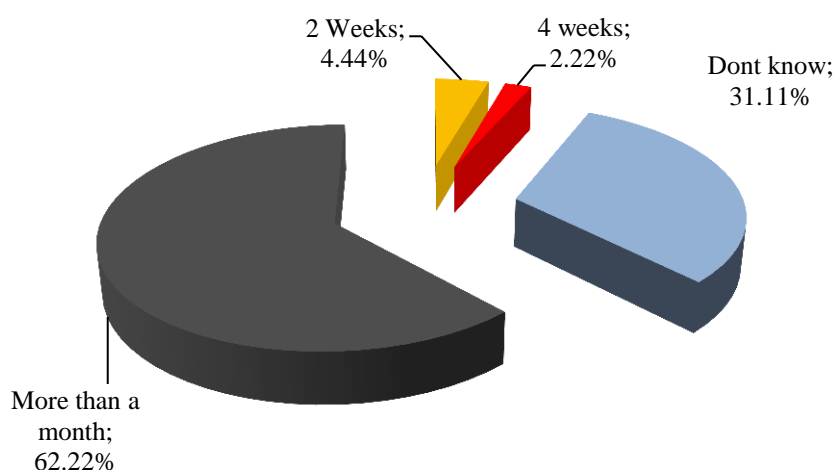
Time when respondents applied for PPB:

The respondents when asked if they were still interested in having a PPB, 100 % (n=45) said Yes. All the respondents were aware of how much they needed to contribute toward PPBs cost share contributions. However, only 11% of the applicants had gathered some of the cost share amount.

Table 1: Time when applications for PPB was done

Time of PPB application	Total
Jan	2.22%
Feb	4.44%
March	24.44%
April	6.67%
May	26.67%
June	15.56%
July	6.67%
September	13.33%

The total amount expected to be received from the 45 applicants was Ksh 2,162,756; of which only 4% has been gathered by the applicants. It would take more than a month for most of the community (62.22%) to fully gather the required 25% contribution, and only 4.44% would be able to pay within two weeks from the day of the interview. Majority (75.56%) of the applicants are struggling to raise the cost share amount. The drop in the market price for livestock (66.7%); expenditure of the money on school fee (44.4%), and cost-share amount being high (35.6%) were main reasons cited for the delayed cost share payments. The pastoralists depend on their livestock for food, medicine, clothing and school fee. The persistent drought that was being experienced in Amboseli could have adversely affected pastoral communities through depletion of water and pasture resources, decline in livestock productivity, increase in livestock mortality and morbidity, and severe food insecurity. This could probably have reduced their income and therefore shifting their priorities to food, water and school fee. The school is the only place where parents can send their children, not only to learn, but also to get food, water and medical attention.

**Figure 3: Time it would take the applicants to gather the cost share amount**

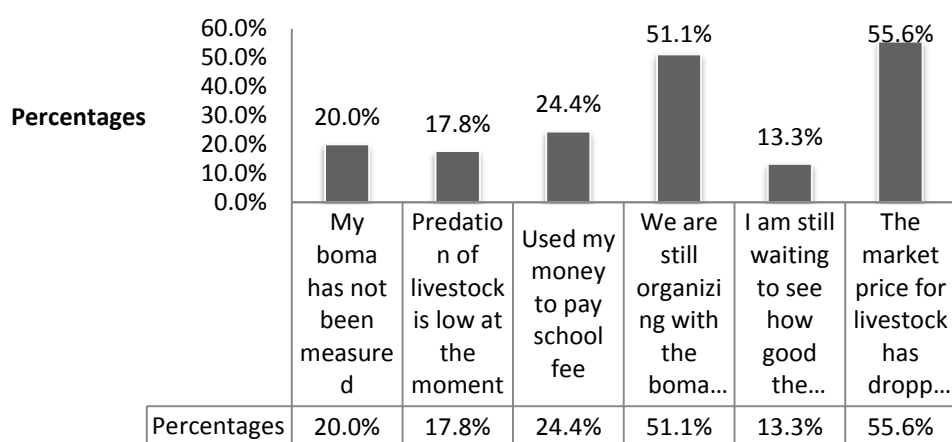
When asked why other community applicants had not paid their cost share, 64.4% said the revised cost share amount is high, 44.4% of them said money had been used to pay school fee, 20% attributed it to current low livestock depredation; 17.8% did not know how to apply for a PPB; and only 11.1% had no information on the benefits of recycled posts. This calls for a series of community outreach campaigns to highlight again the benefits of recycled posts and how to apply for a PPB. Most applicants are ready to sell an average of 5 shoats and 2 cattle to get a PPB. This translates to about 17 % cost share.

Table 2: Number of Cattle and shoats conversion to cost share rate

Current Average market price		
1. Cattle	15,000	KES 30,000.00
2. Shoat	2000	KES 10,000.00
	Total	KES 40,000.00
Average cost of PPB		KES 240,000.00
% Community is willing to contribute		16.7

3.2. Characteristics for NON-APPLICANTS OF PPBs:

Large proportions (89%) have plans of applying for a PPB. However, most are being delayed by the low market price of livestock (56.6%) and not having agreed with their boma members (51.1%).

**Figure 4: Reasons for community members having not applied for a PPB**

Most of the respondents (61.36%) required at least a month to gather the cost-share amount while 31.82% were not sure when they would have the money. However, most community members interviewed are willing to exchange an average of 6 shoats and 1 cattle for a PPB. This translates to about 17 % cost-share contributions (Table 3 & 4).

Table 3: Likely time for paying cost-share contribution

WHEN TO EXPECT FINAL PLAN TO PAY FOR PPB	TOTAL
3 WEEKS	4.55%
4 WEEKS	2.27%
DON'T KNOW	31.82%
MORE THAN A MONTH	61.36%
GRAND TOTAL	100.00%

Table 4: Number of Cattle and shoats conversion to cost share rate

Mean shoats	6.090 ±0.790	
Mean cattle	1.89± 0.293	
Current Average market price(September/October 2014)		
1. Cattle	15,000	KES 28,350.00
2. Shoat	2000	KES 12,180.00
Total		KES 40,530.00
Average cost of PPB		KES 240,000.00
% Community is willing to contribute		16.9

4. CONCLUSION, RECOMMENDATIONS & IMPLICATIONS

Persistent drought and hard economic times can largely affect the community's participation in conservation projects. This calls for a proper planning based on the seasons of the area so as to take full advantage of the available cash-flows to implement the projects. A slight rise in HWC during the hard times is likely to make the individuals to be less tolerant to wildlife particularly the predators. There is also a need to extend the project in the entire Amboseli-Kilimanjaro Land scape so as to ensure the predators that crisscross the Kenya-Tanzania boarder are safe.

Recommendations	Reasons	Implications
1. Review of cost-share rate during dry seasons	Reduced community purchasing power & fall in market price of livestock	Community may adopt the lowered rate as standard
	Very few people had paid their cost-share	More people may pay their cost-share.
		Targeted number of PPBs may reduce
2. Conduct an awareness campaign	About 30% of the people still have not fully understood the benefits of recycled posts and PPBs	All the people in the project catchment area are informed A budget on awareness
	Pro-active measure to ensure there is no retaliatory killings of lions	
3. Give West Kilimanjaro additional 10 PPBs	West Kilimanjaro is in the same Ecosystem, wildlife move from Kenya to Tanzania and conflict is spread across.	Reduction in PPBs allocation for Amboseli region Possibilities Land Rover resistance for their funds to 'cross' boarder
	Community had requested for additional PPBs, with many ready to make payments after 'a bumper' harvest.	Predators-can be safe on either side of the Kenya-Tanzania boarder.

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