Attitudes concerning conservation in two different wildlife areas in Kenya

Attityder beträffande bevarande i två olika vildmarksområden i Kenya

Karin Larsson

Etologi och djurskyddsprogrammet

Maasai village near the Maasai Mara National Reserve, Kenya, 2010. (Photo: Karin Larsson)

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Studentarbete 320, Skara 2010

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Handledare: Jens Jung, Sveriges lantbruksuniversitet, Inst. för husdjurens miljö oh hälsa, Box 234, 532 23 Skara
Biträdande handledare: Lena Dahlström, Styrsögatan 5a, 414 74 Göteborg
Examinator: Anna Lundberg, Sveriges lantbruksuniversitet, Inst. för husdjurens miljö oh hälsa, Box 234, 532 23 Skara

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Sveriges lantbruksuniversitet
Fakulteten för veterinärmedicin och husdjursvetenskap
Institutionen för husdjurens miljö och hälsa
Avdelningen för etologi och djurskydd
Box 234, 532 23 SKARA
E-post: hmh@slu.se, **Hemsida:** www.hmh.slu.se

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SUMMARY

All over the world, scientists agree that to succeed with a conservation project, it is important to have a good relationship with the local people. If they do not receive a good impression of the project, they will not be willing to collaborate and the project will probably fail.

According to previous studies, there are different factors affecting attitudes to conservation, like the level of education of the participant. Many studies have shown that the higher education the people have, the more positive attitude they have to adjacent conservation areas. Economical factors are also important, it is often stated that having more money results in a better attitude. The source of the income also has an effect. Those who earn money from conservation are more positive than those who earn money from other sources. Age and gender also affect the attitudes.

In this study the attitudes of local people in two different areas in Kenya was examined. There are conservation work going on in both areas but they area managed in different ways. In the study a group of employees was also included, who all worked with conservation in one of the two areas.

In general the results agreed with the literature and the participant thought that the adjacent conservation area worked well and fulfilled its purpose. As expected was the group with the employees most positive towards conservation. There was also a big difference in attitudes between those who had an income from the conservation area and/or an education and those who had neither. Having both income and education gave the most positive attitude.

This study indicates that education is a very important part in conserving animals and plants. At the same time it is also very important that the local people can receive their rightful part of the benefits and income that conservation can generate.

SAMMANFATTNING

Över hela världen är forskare överens om att för att lyckas med ett bevarandeprojekt måste man ha en god relation med lokalbefolkningen. Om inte de får ett gott intryck av projektet och inte är villiga att samarbeta kommer det troligen inte att lyckas.

Enligt tidigare studier finns det olika faktorer som påverkar attityden till bevarande. Ett exempel är graden av utbildning hos den tillfrågade. Många studier visar att ju högre utbildning, desto positivare är människorna till närliggande bevarandeområden. Även inkomst är en viktig faktor, där det oftast anses att ju mer pengar man har desto bättre attityd har man. Var inkomsten kommer ifrån är viktigt då de som tjänar sina pengar från bevarande är mer positiva än de som tjänar pengar på annat håll. Även ålder och kön har effekt på attityden.

I denna studie undersöktes attityderna hos lokalbefolkningen i två olika områden i Kenya. De två områdena ligger båda nära bevarandeområden men dessa har funnits olika länge och drivs på olika sätt. Med i studien var också en grupp med anställda, som alla arbetade med bevarande i ett utav de två områdena.

Överlag överensstämde resultatet med litteraturen och deltagarna tyckte att närliggande bevarandeområde fungerade bra och uppfyllde sitt syfte. Inte helt oväntat var det gruppen med det anställda som var mest positiva till bevarande. Man kunde också se en väldigt stor skillnad på de som hade en inkomst från bevarandeområdet och/eller hade någon form av utbildning och de som inte hade någonting utav det, där de förstnämnda var väldigt mycket mer positiva än de sistnämnda. De som hade båda hade den mest positiva attityden.

Denna studie tyder på att utbildning är en väldigt viktig del i arbetet med att bevara växter och djur, samtidigt som det är oerhört viktigt att den lokalbefolkningen får ta del av de fördelar och inkomster bevarande kan ge.

1. INTRODUCTION

All around the world conservationists are trying to save and protect rare species and ecosystems from extinction. Earlier the conservation work focused on just protecting areas from human use (Infield, 1988) but now scientists begin to realize that the conditions for a succeeding conservation project also includes a good relation and collaboration with local residents (Newmark et al., 1993; Sekhar, 2003). It is important to know their opinion to be able to involve them in the right manner (Infield, 1988). If they do not perceive a positive experience of the adjacent conservation work, they will not be willing to collaborate (Nyhus et al., 2000). It is hard to succeed without their assistance (Infield, 1988) since they are the ones using and living in the area (Arjunan et al., 2006).

Many studies have been carried out on people's attitudes to conservation and protected areas (Sekhar, 2003; Arjunan et al., 2006; Tomićević et al., 2009). Mostly local residents have a positive approach to the conservation concept (Carr & Tait, 1991; Newmark et al., 1993; Sekhar, 2003; Arjunan et al., 2006). However, there are many factors influencing their attitude. One important factor is education (Romañach et al., 2007; Tomićević et al., 2009). According to these studies, people with higher education have a more positive attitude to conservation while those with almost no education tend to be more negative. However, there are also studies that do not show any correlation between attitude and higher education (e.g. Gadd, 2005).

There is also a big economic question involved (Infield, 1988). Infield (1988) found that people with a high income and a large capital often think better of conservation than those with less money. Arjunan et al. (2006) concluded, however, that it is those who have the least to lose that are most positive.

The way how people use their land recourses affects their opinion to conservation (Infield, 1988; Daoutopoulos & Pyrovetsi, 1990; Newmark et al., 1993; Lindsey et al., 2005; Arjunan et al., 2006). In Africa, cultivators are more concerned about having their crops destroyed by wild animals, while pastoralist are worried about their livestock being killed (Gadd, 2005). However, pastoralists are more tolerant to wild animals according to Gadd (2005). The most positive are those who commit their land for tourism (Lindsey et al., 2005). More and more rural citizens abandon the pastoral lifestyle to start with agriculture (Thompson & Homewoode, 2002; Reid et al., 2003), which could be negative for the tolerance of conservation areas (Gadd, 2005). Many people think it is almost impossible to practice cultivation in an area with wild animals, because of the risk of having their crops destroyed (Nyhus et al., 2000; Lamprey & Reid, 2004).

One of the most important factors affecting the attitude are received benefits (Infield, 1988; Sekhar, 2003; Gadd, 2005; Arjunan et al., 2006). The importance of receiving personal benefits such as job opportunities for a positive approach to adjacent conservation work is seen in many studies (Romañach et al., 2007; Tomićević et al., 2009). It has also been shown that losses due to conservation worsen the attitude (Newmark et al., 1993; Nyhus et al., 2000; Bandara & Tedell, 2003). An important factor in conservation work is the possibility to receive benefits from tourism (Adams & Humle, 2001; Thompson &

Homewoode, 2002). However, often does not much of the income earned from tourism benefit local people but may go to the leaders of the projects (Walpole & Goodwin, 2001; Lamprey & Reid, 2004; Gadd, 2005).

As in many other situations, the employees working in a project have a great impact on the attitude of the local people (Newmark et al., 1993). Bad experiences of the employees working within adjacent conservation projects are a substantially cause to negative attitudes to conservation (Newmark et al., 1993). People often have good thoughts about conservation itself but do not think that the project fulfill its goals (Songorwa, 1999). One reason is bad protection of their captive animals from wild animals, which many think is one of the employees' most important functions (Newmark et al., 1993). This could be due to lack of information to the local people about the purpose of the conservation area (Newmark et al., 1993), leading to citizens handling the problem in their own way, e. g. by poaching (Nyhus et al., 2000; Ogada et al., 2003).

Other important factors affecting attitude is gender and age (Tomićević et al., 2009) and influences from modern traditions (Infield, 1988). Some studies show that women are more negative to conservation than men (e.g. Tomićević et al., 2009) but there are also studies that show the opposite (e.g. Arjunan et al., 2006). Still the two studies agree in the fact that younger people are more positive than older, as does Lindsey et al. (2005). Also own values and experiences affect the attitude (Kellert, 1991)

To be able to take all this factors into consideration, in the 1980's a new conservation paradigm took form, called Community-Based Conservation (CBC) (Adams & Humle, 2001). CBC focuses on giving the nature recourses back to where it once belonged, to local people (Songorwa, 1999). An important function is also to involve them in the conservation work and make sure they receive their part of the benefits it brings (Adams & Humle, 2001). In Kenya all wildlife is owned by the government trough the Kenya Wildlife Service (KWS) (Bond et al., 2004). Even the animals on private land belong to the KWS. Nevertheless, there is a big movement with community conservation going on in Kenya with conservancies and reserves spread all over country. Still the conflict between humans and wildlife increases in Kenya (Gadd, 2005) and a major reason for this is the rapid increase of the population, 4.4% per year in the early 2000's (Lamprey & Reid, 2004) which causes a big pressure on nature (Newmark et al., 1993).

1.1 Study area

The study was conducted in two areas. One of them was close to the Maasai Mara National Reserve (MMNR) which is situated in southern Kenya in the Narok and Trans Mara districts. The reserve is divided in two parts that are managed by Narok country council and The Mara Conservancy, respectively (Seno & Shaw, 2002). Conservation work has been pursued in different ways in the area since the 1960's (Lamprey & Reid, 2004). MMNR is a part of the Mara-Serengeti ecosystem which reaches into Tanzania in the south (Seno & Shaw, 2002). It is surrounded by other

Figure 1. Map of Kenya, with grey area marking Narok and Transmara district and striped area marking Kajiado district. (Modified by Karin Larsson)

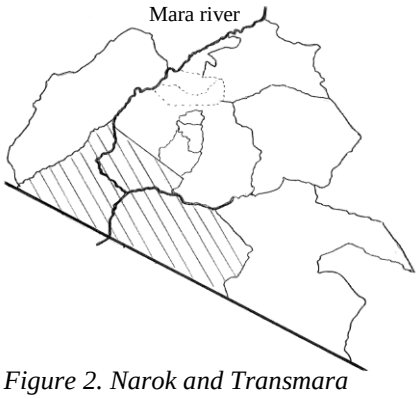

Figure 2. Narok and Transmara district, with striped area marking the Maasai Mara National Reserve. (Modified by Karin Larsson)

conservancies, which are operated by different group ranches (Jacana, 2006; see figures 1 and 2). MMNR is mostly known for the big migration of wildebeest and zebras that occurs every year but also for its rich wildlife all year round (Jacana, 2006; Kolowski & Holekamp, 2006). This is due to the good supply of water from rain falls and streams like the Mara River. Grass grows the whole year around and makes a great resort for ungulates and also carnivores during the dry-season (Seno & Shaw, 2002). The MMNR is not big enough for a sustainable animal population; therefore are the surrounding areas, the so called buffer zones, very important for the animals' survival (Bandara & Tisdell, 2003; Gadd, 2005).

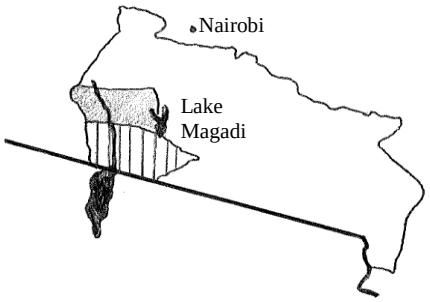

Figure 3. Kajiado district, with grey area marking Olkiramation group ranch and striped area marking Shompole group ranch. (Modified by Karin Larsson)

The other study area is the South Rift Resource Centre (SRRC) which is situated in the Kajiado district, west from Narok district near Lake Magadi on the Olkiramation group ranch (Lambin & Mertens, 2001; see figures 1 and 3). In the area there are two conservancies, Shompole, which started in 1998 and Olkiramation, which started in 2004. Both areas are managed by the group ranches in the area (Morris et al., 2008; S. Russell, personal communication, 10 March 2010). The areas surrounding the SRRC, like the areas surrounding the MMNR, have a rich wildlife due to rivers, swamps and marshes but do not have as much tourism as the MMNR (Lambin & Mertens, 2001). Hence, due to the lower income from tourism the regulations in the SRRC area cannot be as strict as in MMNR (J. Jung, personal communication, 6 May 2010).

A big part of the inhabitants in the two areas belong to the Maasai tribe (Lamprey & Reid, 2004). Traditionally they live in small settlements, called *bomas* in Swahili or *manyatta* in Maa (Seno & Shaw, 2002), where they also keep their livestock during the nights (Ogada et al., 2003). They are pastoralists and traditionally herd their animals freely during the days (Thompson & Homewoode, 2002; Ogada et al., 2003; Jacana, 2006). During later years the Maasai have started to leave the nomadic lifestyle and instead settles down permanently (Reid et al., 2003) but their main occupation is still livestock production (Seno & Shaw, 2002). Though there is a growing trend towards agriculture, also within the Maasai tribe (Thompson & Homewoode, 2002; Reid et al., 2003).

1.2 Aim of the study

The aim of this study was to compare attitudes of local people to conservation in the two areas described above. It also aimed to compare changes in the attitudes of local people with people when they work with conservation in the two areas. Further, other factors that may influence attitudes, such as education, occupation and received benefits was examined.

2. MATERIALS AND METHODS

2.1 Data collection

The study was carried out in March 2010 and aimed to compare the attitudes to conservation of the local people living adjacent to two different conservation areas in southern Kenya; the Maasai Mara National Reserve (MMNR) and the South Rift Resource Centre (SRRC). These two areas have similar wildlife but SRRC has not yet attracted as many tourists as MMNR. Hence the local people have not had the chance to receive all the benefits that wildlife can bring. Still there are conservancies in the area, though not as many and not as strictly regulated as in and around MMNR.

The data in the study was obtained by interviews. In total did 35 persons participate in the study, divided into three groups with 12 persons in each group except the group from SRRC, which consisted of 11 persons. The first group contained of local people living adjacent to SRRC (SRRC group). The second group contained of local people living adjacent to the MMNR (MMNR group). The third group contained of people employed in some kind of conservation work in MMNR or SRRC (EMP group), six from each area. The employed people were also locals from the study areas and as in the other two groups they were all of the Masai tribe.

The native participants were selected randomly from different settlements and from different households in the two areas. The samples were as diverse as possible concerning age and gender, though all of the participants were over 20 years. The participants in the EMP group were all assisting in some kind of conservation work in one of the two areas. They were all employed by researchers active in the areas, and they had an income from this employment. Since there were only men working as assistants, no women were included in this group.

The questionnaire consisted of a total of twenty questions, whereof some demographic and socioeconomic questions concerning age, gender, tribe, occupation and education and some questions concerning knowledge and attitudes to the adjacent conservation area. The questionnaire aimed on answering the following main questions:

- ✓ The participants' occupation
- ✓ The participants' possession of livestock
- ✓ The participants' education
- ✓ The participants' involvement in adjacent conservation work
- ✓ The participants' attitudes to adjacent conservation area

These main questions were chosen with regards to results from similar studies, in which it has been shown that occupation, possession of livestock, education and received benefits have a great impact in the attitude to conservation. The questions were formulated in an easy language to prevent misunderstanding caused by language confusions. The order of the questions was also carefully prepared, so that an earlier question should not affect a following one. There were both closed and open ended questions. The closed questions

could be answered with Yes, No or Do not know and were in general followed by an open subsequent question. The answers on the open ended questions were quoted literally. This setup made it possible to carry out statistical analyses and interpretations as well as deeper analyses of the participants' attitudes and let them express their own opinion. The whole questionnaire is attached in Appendix 1.

Before the study was carried out, a pilot study was tested on three assistants. This led to reformulation of some of the questions to avoid misunderstandings. The interviews of the MMNR group and the EMP group were performed by the author and in SRRC, a taught assistant who was well informed about the questions, interviewed the SRRC group. When the participant did not speak English, interpreters were used for the local languages Maa and Swahili. Before the interview the participants were all informed that it was a part of a study and that the questionnaire was anonymous. Only persons who attended willingly were interviewed; no payments were made. In order not to insult the participant, no questions about income or capital was asked. Each interview last for approximately 15 min and was carried out individually.

2.2 Data analysis

The data were first inserted in Microsoft Excel (Microsoft Office 2007). The occupation stated by the participants were divided into three classes;"farmer" (including mostly pastoralists but also cultivators),"seller" (including women who sold jeweler to tourists) and "guide/assistant" (including people involved with some kind of work in the conservation area). Education was divided in two groups; no education or any kind of education.

Then the data were analyzed in Minitab 15 and Minitab 16. The nonparametric Chi-square test was used to assess differences in attitudes between the groups and which factors affected the attitude.

3. RESULTS

3.1 Demographic background

A total of 35 persons participated in the study. The participants in the SRRC group were not able to tell their age, therefore that question was cancelled. In the SRRC and MMNR group eight out of 23 people were female, four in each group. In the EMP group, all were males since no women were employed. All participants belonged to the Maasai tribe. According to themselves, the occupations of the participant were 21"farmers", five"sellers" and nine"guides/assistants" (Table 1). There was a statistically significant difference in the number of participants that had some kind of education between the three groups (χ^2=17.258; DF=2; P<0.001) with three persons having some kind of education in each of the SRRC - and the MMNR group and 12 in the EMP group (see table 1).

Group	N	% Males	% Females	% Farmers	% Sellers	% Guide/Ass.	% Educated
SRRC	11	64 (7)	36 (4)	91 (10)	9 (1)	0 (0)	27 (3)
MMNR	12	67 (8)	33 (4)	42 (5)	33 (4)	25 (3)	25 (3)
EMP	12	100 (12)	0 (0)	50 (6)	0 (0)	50 (6)	100 (12)

Table 1. Demographic data of the participants. The numbers in parenthesis is the effective number of participants.

All participants possessed livestock, in particular sheep and goats (called shoats) and also some cattle. Everyone except three (two in the EMP group and one in the MMNR group) had experienced problems finding food for the livestock; 28 stated it was due to the last draught. Five persons also complained about rangers hunting and disturbing their livestock. All but one had experienced problems with wild animals and the most common animals were hyenas and lions (77% and 71%, respectively). No one had received any compensation for their loss.

3.2 Attitudes

The attitude to adjacent conservation area was received from question 11 in the questionnaire (see appendix 1). Of the three groups in the study the EMP group was the most positive with 100% answering that the conservation area fulfills its purpose. The SRRC group was the least positive with only 27%. In the MMNR group 50% thought the area worked well. There was a statistically significant difference in attitude between the groups (χ^2=13.41; DF=2; P=0.001). In three of the columns the expected value was lower than five, therefore the result is questionable. The group that differed mostly from the expected value and had the biggest impact on the χ^2-value was the EMP group (see figure 4).

There was no statistically significant difference in the attitude between the two areas, when dividing the 35 participants in two groups, with 53% being positive in SRRC and 67% in MMNR. The same result was found when comparing gender, with no statistically significant difference between males (56%) and females (75%). In two of the columns the expected value was lower than five.

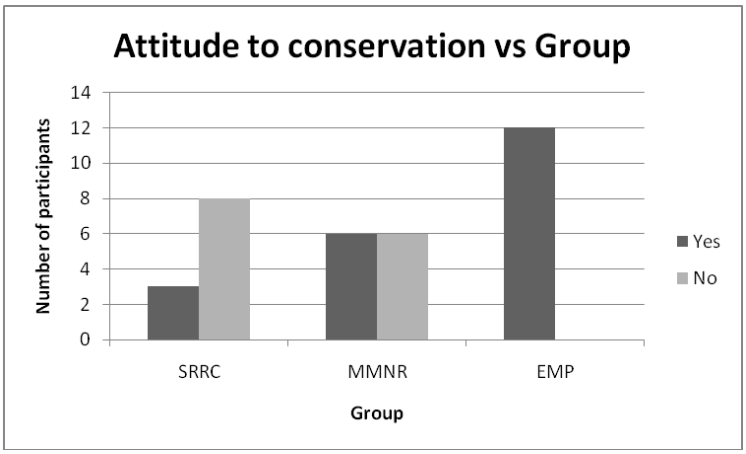

Figure 4. Answers on question 11"Do you think the conservation area fulfill its purpose?" *regarding group.*

Regarding the occupation of the participants,"farmers" were most negative to the adjacent conservation area with only 43% positive, while "guides/assistants" were entirely positive. "Sellers" were in between with 60% being positive. There was a statistically significant difference between the"farmers" and the"guides/assistants" (χ^2=8,571; DF=2; P=0.014). However, since"sellers" were so few, only five, the test is not reliable. The group that differed mostly from the expected value and had the biggest impact on the χ^2-value were the"guides/assistants". In three of the columns the expected value was lower than five.

Some of the participants in the EMP group answered that their occupation was "farmer"; despite they were employed in the conservation area. Therefore a new factor was made with two classes;"income from the conservation area" and "no income from the conservation area". Those who had stated that they were "guides/assistants" and also the "sellers", who got their income from selling crafts to tourists, were listed together with the whole EMP group, with 20 people in this group. The other 15 people were listed as"farmers". There was a statistically significant difference between the two classes in the attitude, 90% of the persons with an income were positive whereas only 20% of the people without income were positive (χ^2=17.50; DF=1; P<0.001).

The participants who had any kind of education were more positive to the conservation work than those entirely missing education. In particular, 89% of the educated thought the area work was done well compared to only 24% among the non-educated people (χ^2=12.89; DF=1; P<0.001).

Since there was a difference in the distribution of "income from the conservation area" and education between the three groups, a test was made to see which of them that affected the attitude most. The participants were divided into four groups; those with "neither income nor education", those with "income but no education", those with "no income but education" and those with "both income and education", with 13, 2, 4 respectively 16 in each group. The result was that 94% of those with "both income and education" were positive, whilst only 15% of those with "neither income nor education" were positive. Either income or education increased the positive attitude to 75% respectively 50%. Due to

the small sample in the two groups in the middle, “income but no education” and “no income but education”, a test for difference could only be made between the group who had “both income and education” and the group who had “neither income nor education” and there was a statistically significant difference between those two groups (χ^2=18.16; DF=1; P<0.001). This indicates that an income from the conservation area or an education both affects the attitude and if you have both you have the most positive attitude (see figure 5).

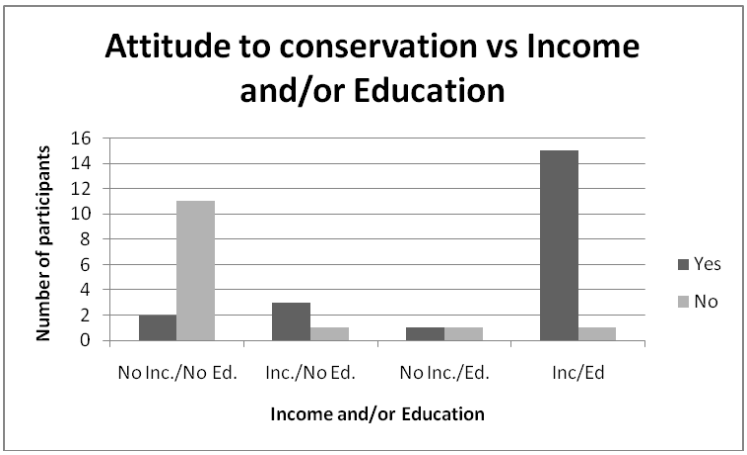

Figure 5. Answers on question 11”Do you think the conservation area fulfill its purpose?” *regarding income and/or education.*

There was no statistically significant difference in attitudes between the ones who thought they had been well informed about the conservation area and those who did not thought they had get enough information, 65% respectively 47%.

There was a 100% positive response in all groups when asked if it is important to protect wild animals and plants. The reasons given were mostly economic but also naturalistic and resource conditioned.

The advantages of getting benefits from the conservation area did not affect the attitude, as opposed to the literature. 65% of those who said they had received benefits were positive and 56% of those who said they had received no benefits.

All participants believed that tourists were important for the conservation area and all except one believed tourists were important for the local people. The main reason of the importance was that they generated an income to the community and the villages, 74% answered that income was the most important reason for the community and 89% thought income was the main reason for tourism for the local people. Two persons also thought tourists could contribute with new knowledge and understanding to the local people.

When asked who should be responsible for the conservation area, 83% of all the participants said that it was the local people who should be responsible. Four (11%) of these persons said that the locals needed help from an organization or the government. Five persons (14%) answered that an expert organization should be responsible and only one thought that the government alone should decide over the area.

4. DISCUSSION

In general the participants were relatively positive about the adjacent conservation areas; 57% of them thought the conservation area fulfilled its purpose. That is in conformity with earlier studies (Carr & Tait, 1991; Newmark et al., 1993; Sekhar, 2003; Arjunan et al., 2006).

As predicted, there was a statistically significant difference between the three groups in their attitudes, although the result was doubtful because of the small sample size. The EMP group was the most positive and the SRRC group was the most negative. The reason for this can depend on several factors like income and education of the participant. To test if it was occupation or education that affected the attitude the most, four cross-over groups were made. This showed that both occupation and education affected the attitude separately but having both had the greatest effect. The SRRC group had the same number of educated participants as the MMNR group but there were fewer with an income from the conservation area, which could be a reason to them being more negative.

The occupation of the participants alone had a great effect on the attitude. The ”guides/assistants” were the most positive and the”farmers” were the most negative. This was expected since the assistants get their salary from the area and the”farmers” do not. The “sellers” get their income from the area indirectly when tourists are buying their crafts. However, what is strange is that some of the participants in EMP group answerers that their occupation was “farmer” instead of “assistant” or “guide”. All of them had livestock at home but they had an employment and an income from the conservation area. The same thing happened with the question about received benefits. Many of the employees said they had received no benefits from the conservation area, although they had a salary from their employment. Could this be due to that they have not been enough informed about the purpose and benefits of conservation as Gadd (2005) suggests?

As shown in this study, a very important factor when predicting attitude to conservation is the participants grade of education. This has also been claimed by scientists in India in a study by Karanth et al. (2008), where they said that educating local people and people working in the conservation area is one of the most important things when managing a conservation project. A study by Caro et al. (2003) resulted in that students on a university were able to give more reasons to conservation after a course in conservation biology. It is though very important to accommodate the education to the situation of the people (Daoutopoulos & Pyrovetsi, 1990). In Daoutopoulos & Pyrovetsi (1990), different educational programs were suggested for fishermen using different fishing strategies. But as mentioned earlier, in Gadd (2005) did the level of education not correlate with the attitude, whereas received benefits did.

Although it is important that conservation gives benefits to the local people, it is also important not to forget the non-economical value of the nature (Gadd, 2005). Gadd (2005) rather suggests that you have to highlight the nature and predicate the conservation work on non-economic features. The people living in MMNR and SRRC participating in the study presented did not only state economical values as a reason to protect wild animals and

plants but also the value of nature as a part of life. One person answered that "we should protect wild animals because they have the rights to live like we do" and another stated that "we have to protect the trees because they provide shadow and rain". The same reasons can be found in other studies (Newmark et al., 1993; Arjunan et al., 2006; Lindsey et al., 2006), which is a sign that it may be possible to build conservation on both economical and non-economical values.

In the same time many local people are concerned because wild animals destroy their crops and carnivores take their livestock (Lindsey et al., 2005). The participants in the study presented here, stated that hyenas and lions were the carnivores causing most problems. This is similar to other places in Africa (Lindsey et al., 2005; Kolowski & Holekamp, 2006; Romañach et al., 2007). Although the will to protect carnivores is big, more has to be done to protect the livestock from being taken, otherwise the people will not accept having carnivores near their own animals (Lindsey et al., 2005; Ogada et al., 2003). In some places citizens are allowed to kill problem animals but O´Connell-Rodwell et al. (2000) have shown that this does not improve the attitudes to the carnivores. None of the participants in the study presented had ever been compensated for their losses and that seems often to be the case. In those places where compensation is given, it is mostly not relevant and comparable with to the loss (Nyhus et al., 2000; Bandara & Tisdell, 2003). Compensation for lost animals could improve the attitude to wild animals (Nyhus et al., 2005).

Almost all the participants in this study believed that tourists were good both for the conservation area and for the local people. However, according to Mehta & Kellert (1998), people can be positive to tourists and in the same time be negative to conservation. Gadd (2005) believes that this is because they are not aware of the source of the income that tourism brings. He also shows that if a project is working well and if the people is well informed, they could be positive to conservation as well, with the example of Koija in Kenya, a community-owned ranch were all income from tourism are chaired within the community. Sekhar (2003) and Lindsey et al. (2005) suggest that local people know that a well working ecosystem can attract more tourists and also bring good revenue. One question is if tourism can affect the local people and the local culture negatively. One person in this study stated that because of the tourism some people had left school to work with tourism instead, which could be bad for the community and another thought tourist were good for the community as long as they were not too many. The participants in Sekhar´s study from 2003 do not think that tourism could harm the culture and see hence no problem with tourists. One thing that could happen is that when exposed to tourism, people can change their lifestyle to a more modern way of living and according to Infield (1988) the modernity of the household has a big effect on the attitude to conservation. Surprisingly the most modern families in Infield's study were the most positive to conservation, together with the most traditional families. This could probably be explained by the fact that more modern families are more educated, which leads to a better attitude (Romañach et al., 2007; Tomićević et al., 2009) and also the old traditions to live side by side with the nature.

This study showed no difference in attitude with regards to gender, though there was a tendency that women were a bit more positive. Earlier studies have shown that women tend to be more negative to conservation than men (e.g. Tomićević et al., 2009). According to

Seno & Shaw (2002) this could be due to the fact that women are not allowed to possess any land and therefore cannot receive any of the benefits it brings. It is also the men, who get employed in the conservation areas and get educated (Tomićević et al., 2009). In a study by Lindsey et al. (2005) the women were the most positive but they also conclude that it was the women who got the most benefits in that area, because of a special women-project, which is often not the case. The study presented here was not balanced between sex against income and occupation etc. for the three groups, e.g. were all in the EMP group men. Hence, the conclusions in terms of gender effects of the data are very limited

Since no one in the SRRC group answered the age-question, it was not possible to make an analyze on the attitude with regards to age but there are many studies that show that younger people are more positive than older (Bandara & Tisdell, 2003; Lindsey et al., 2005). According to Bandara & Tisdell (2003) it is due to the fact that younger people often are more educated and Lindsey et al. (2005) say this is a good thing because those are the ones taking over.

A big difference between the two areas is the way the conservation work is managed. In MMNR the area is managed almost like a national park, which means that no livestock are allowed to graze there and on no people are allowed to live inside the reserve (J. Jung, personal communication, 6 May 2010). On the other hand are the conservation areas in SRRC are according to Jung (2010) much less regulated since there are much fewer tourists in the area that can generate money to the community. This should mean that the people in SRRC have less to loose and therefore should be more positive but that is not the case in this study. Could this be because it is such a new concept in this area and the people have not yet seen the benefits from it?

It would be interesting to find out if the participants in this study were a part of a community that manages a conservancy and then compare the attitudes of those involved with a conservancy and those who are not. Some of the participants in the study stated that they received money from the conservancy because they were involved with campsites in the area and, as mentioned earlier, benefits like money can improve the attitude (Infield, 1988; Sekhar, 2003; Gadd, 2005; Arjunan et al., 2006). So is Community-Based Conservation and Conservancies a good alternative? Lindsay et al. (2005) suggest that members of conservancies are more positive to conservation than non-members. Romañach et al. (2007) on the other hand concludes that pastoral conservancy members are more negative to conservation than non-pastoral conventional farmers. However, this may be because they are not as exposed to problems caused by wild animals as the pastoralist and therefore it is questionable if they can be compared, instead they should have compared ordinary pastoralist with conventional farmers. Songorwa (1999) also found a vague interest for conservation in his study in Tanzania. A reason to this could be that the benefits from the conservancy often does not reach the most important destination, the local people (Walpole & Leader-Williams, 2001) and the community members do not receive what they are promised (Songorwa, 1999). It is important that conservation is a part of the development of the community (IUCN, 1980). The local people must be allowed to engage in the conservation work (Infield, 1988; Sekhar, 2003) and the distribution of the benefits must improve (Hartup, 1994; Sekhar, 2003). According to Tomićević et al. (2009) the local people are willing to work for conservation and though some participants in the study

presented here thought it would be good if an organization or the government helped, they wanted to have the full responsibility and right of determination over their own land.

5. CONCLUSIONS

There was a difference in attitude between the three groups in this study, probably because the participants have different sources of income but also because if the different ways the two areas are managed. The level of education was also important, especially in combination with income.

Although the sample size in this study was small and the results are only representative for this group of people, it can with help of the literature be concluded that education and source of income have a big impact on the attitude to conservation. Consequently, it is important to integrate education in the planning of conservation and also to make sure that the local people receive their part of the benefits that a conservation area can offer. It is also important to keep them well informed and let them be a part of the work. In some cases it can be necessary to make arrangement to protect livestock and crops of the local people from the wild animals. It is very important to improve the attitude to conservation of the local people to succeed in conservation.

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APPENDIX 1

Attitudes concerning conservation in two different wildlife areas in Kenya

Questionnaire

Personal fact
A: Maasai Mara National Reserve or South Rift Resource Centre?
B: Employee or non-employee
C: Male or Female
D: Which age group do you belong to? _____
E: To which tribe do you belong? _____

Occupation
1. What is our current occupation? _____

2. Do you possess any livestock? YES NO
2b. If yes, what kind of livestock? _____

3. Have you experienced any problems finding food to your cattle?
YES NO Don't know
3b. If yes, what kind of problem? _____

4. Have you experienced any problems with wild animals?
YES NO Don't know
4b. If yes, what kind of problem? _____
4c. Which animals? _____
4d. How often does this happen? _____

5. Have you received any compensation for lost livestock?
YES NO Don't know

Education/Experiences
6. What level of education do you have? _____

7. How far do you live from the closest conservation area? _____

8. Have you been well informed about the purpose of the conservation area?
YES NO Don't know
8b. If yes, by whom? _____

9. Have you participated in any conservation work? YES NO Don't know
9b. If yes, in which way?_____

Attitudes
10. Do you think it is important to protect wild animals and plants?
YES NO Don't know
10b. If yes, why? _____

11. Do you think the conservation area fulfill its purpose?
YES NO Don't know
11b. If no, why? _____

12. Have you personally received any benefits from the conservation area?

YES NO Don't know

12b. If yes, what kind of benefits? _____

13. Do you think the tourists are important for the conservation area?

YES NO Don't know

13b. If yes, why? _____

14. Do you think the tourists are important for the local people?

YES NO Don't know

14b. If yes, why? _____

15. Who do you think should be responsible for the conservation work in this area, the government, an organization or the local people? _____

Thank you for participating!