



# **Rural and urban attitudes towards wildlife - a comparison within Kenya and with Sweden**

*Landsbygds- och storstadsinvånares attityder gentemot vilda djur - en jämförelse inom Kenya och med Sverige*

**Maria Barlow**

**Etologi och djurskyddsprogrammet**

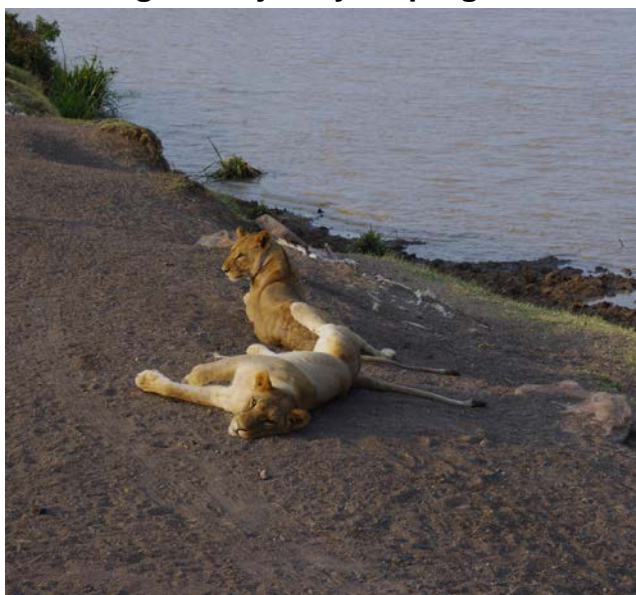


Bild: Maria Barlow

---

**Sveriges lantbruksuniversitet  
Institutionen för husdjurens miljö och hälsa  
Etologi och djurskyddsprogrammet**

**Skara 2012**

**Studentarbete 426**

*Swedish University of Agricultural Sciences  
Department of Animal Environment and Health  
Ethology and Animal Welfare programme*

*Student report 426*

ISSN 1652-280X



## **Rural and urban attitudes towards wildlife - a comparison within Kenya and Sweden**

*Landsbygdens och storstadens attityder gentemot vilda djur - en  
jämförelse inom Kenya och med Sverige*

**Maria Barlow**

Studentarbete 426, Skara 2012

**G2E, 15 hp, Etologi och djurskyddsprogrammet, självständigt arbete i biologi, kurskod  
EX0520**

**Handledare:** Jens Jung, Sveriges lantbruksuniversitet, Institutionen för Husdjurens Miljö och  
Hälsa, Box 234, 532 23 Skara

**Examinator:** Maria Andersson, Sveriges lantbruksuniversitet, Institutionen för Husdjurens  
Miljö och Hälsa, Box 234, 532 23 Skara

**Nyckelord:** attitudes, wildlife, wild animals, urban, rural, Kenya, Africa, conflict, wolf,  
Sweden

### **Sveriges lantbruksuniversitet**

Fakulteten för veterinärmedicin och husdjursvetenskap

Institutionen för husdjurens miljö och hälsa

Box 234, 532 23 SKARA

**E-post:** [hmh@slu.se](mailto:hmh@slu.se), **Hemsida:** [www.slu.se/husdjurmiljohalsa](http://www.slu.se/husdjurmiljohalsa)

---

I denna serie publiceras olika typer av studentarbeten, bl.a. examensarbeten, vanligtvis omfattande 7,5-30 hp. Studentarbeten ingår som en obligatorisk del i olika program och syftar till att under handledning ge den studerande träning i att självständigt och på ett vetenskapligt sätt lösa en uppgift. Arbetenas innehåll, resultat och slutsatser bör således bedömas mot denna bakgrund.

## Table of contents

ABSTRACT .....	4
1. INTRODUCTION .....	5
1.1 <i>Background</i> .....	5
2. AIM OF THE STUDY .....	7
2.1 <i>Questions</i> .....	7
3. MATERIALS AND METHOD .....	8
3.1 <i>Study areas</i> .....	8
3.2 <i>Data collection</i> .....	8
3.3 <i>Choice of method and compiling of data</i> .....	9
4. RESULTS .....	10
4.1 <i>Personal opinions</i> .....	10
4.2 <i>Background</i> .....	11
4.3 <i>Problems – Personal experiences</i> .....	12
4.4 <i>Past experiences influencing attitudes</i> .....	13
5. DISCUSSION .....	14
6. CONCLUSION .....	17
POPULÄRVETENSKAPLIG SAMMANFATTNING .....	17
ACKNOWLEDGEMENTS .....	18
REFERENCES .....	18
APPENDIX 1. ....	21

## Abstract

Conflicts between man and animal have existed and persisted for a very long time. The most common sources of conflict are predation and destruction of crops, as well as land, caused by wild animals. Studies have shown that the most usual causes influencing attitudes are profession, previous experiences, proximity to wildlife (i.e. where you live) and if you own any animals such as livestock and pets. In this study we compare attitudes between two groups of people with socio-demographic differences in Kenya. One group consists of rural residents of the Maasai tribe, who are pastoralists and keep livestock and/or farmland for a living. These Maasai live in community-based conservancies, which gives the local residents some income by wildlife and wildlife-related tourism. The other group consists of urban residents who work as bankers, opticians and mechanics etc. in the city of Mombasa. This last group have no contact with wild animals in their everyday life while the Maasai live close to the wildlife and usually come in contact with them on a daily basis. This study also compares the attitudes reflected in the interviews between these two groups of people with the prevailing attitudes of Swedish residents concerning the persisting wolf conflict there.

This study reveals that even though all of the rural respondents had personal experiences from predation and/or destruction of crops and farmland they were all positive towards the wildlife in the area. They all acknowledged that there were problems with wildlife but that the benefits received from them in form of money, employment and education were of greater importance than the negative ones. The majority of the urban respondents reflected on wildlife in a positive manner. However, they were of a different opinion as to why they regarded wild animals as something positive than the Maasai were. Their responses were emotionally stressed as they talked about the animals as “beautiful creatures” rather than sources of money.

Studies in Sweden show that attitudes towards wolves shift with distance from their territories; the closer people live to a wolf territory the more negative the residents seem to be towards the animal. This means that it is mostly rural residents who hold negative attitudes towards the wolf in Sweden. But what would happen if the Swedish government would implement benefit systems in accordance to the ones in the Maasai communities studied in this thesis? Would the attitudes shift and become more positive towards the animal in similarity to the Maasai communities?

## 1. Introduction

In many parts of the world, man and animal have to share their habitats with each other (Hemson et al., 2009). This is a common cause for negative attitudes and conflict between human residents and wildlife. These conflicts are often due to predation of livestock by large carnivores (Hemson et al., 2009), but even wild herbivores or omnivores can pose big problems to farmers' crops (Sekhar, 2003) and livestock. They can cause destruction to fields, eat planted fruits and crops (Sekhar, 2003), destroy livestock grazing areas and spread diseases (Prins, 2000).

### 1.1 Background

Several studies have been conducted within this subject, concerning the human-wildlife relationship (Kiss, 1990; Bandara & Tisdell, 2003; Madhusudan, 2003; Sekhar, 2003; Berenguer et al., 2005; Distefano, 2005; Arjunan et al., 2006; Romañach et al., 2007; Hemson et al., 2009; Tomićević et al., 2009). As the conservation of endangered wild species relies on the human conception of them it is very important to bring the genuine attitudes of people living in proximity to wildlife into light (Tomićević et al., 2009). To be able to conserve the existing biodiversity the peoples' attitudes and feelings have to be taken seriously and action has to be taken to solve persisting problems (Sekhar, 2003). As these are the people living closest to the wild animals they are also a determining factor of preserving them for the next generation (Sekhar, 2003).

#### *1.1.1 Possible conflicts*

Conflicts between humans and carnivores, often due to fear and livestock attacks, are a big threat towards local carnivore populations (Hemson et al., 2009). This can cause an anti-wildlife mentality within the local human population, which undermines conservation projects and other conservation initiatives. A lot of effort is put into solving the livestock-predation problem as an approach to solving the wildlife-human conflict (Hemson et al., 2009). Efforts are also made in understanding the attitudes and drivers of the people that conservationists expect to share their land with carnivores. To understand the actions and feelings of the people is very important as it contributes to a possibility to increase the tolerance for large carnivores (Hemson et al., 2009). It also encourages the communities to reduce their losses to carnivores without decreasing carnivore populations to unsustainable levels (Hemson et al., 2009).

A diet overlap between livestock and wild herbivores may cause conflicts and problems since food is limited creating competition between domesticated and wild animals (Prins, 2000). Also diseases spread between wildlife and livestock, and vice versa, are a ground for negative attitudes and conflicts (Prins, 2000).

#### *1.1.2 Factors influencing attitudes*

The success of biodiversity conservation depends a lot on the local peoples' support which is often linked to the direct benefits communities get from the protected areas (Sekhar 2003). Kiss (1990) suggests that the success of any community-based plan to save wildlife will depend on ensuring that individuals derive benefits from the conservation and sustainable management of the resource. Studies suggest that stressing the possibility to revenue generated by wildlife, and revealing the benefits wildlife can bring to the society, will increase the willingness to manage local wildlife in a sustainable way (Sekhar, 2003; Hemson et al., 2009). Hence, economic incentives are one way to create a

united front, change persisting attitudes and conserve threatened wildlife. Tourism is often one of the things mentioned as a benefit to the community brought by a vast wildlife. It has, however, been questioned whether tourism as such is a positive thing and a benefit to the community or not (Kiss, 2004).

For this strategy to succeed scientists have to make sure that the link between benefits and wildlife are clear and obvious to the local people (Arjunan et al., 2006). Studies have shown that measurable progress in the efforts of increasing the tolerance of wildlife have been rare due to the linkage between conservation and development being unclear (Arjunan et al., 2006).

Compensation is another financial incentive created to reduce the actual loss for the individual in case of loss of income due to interference by wildlife (Madhusudan, 2003). This is supposed to increase tolerance of predators and other “problem species” (Madhusudan, 2003). This cannot be labelled as a “benefit” as such as it strictly compensates for an actual loss. Nevertheless, it creates a higher tolerance for wildlife as it decreases the financial loss (Madhusudan, 2003) that will otherwise inflict a large burden on the individual farmer or pastoralist. This is, however, not the case in Kenya anymore as these compensation programs have been stopped due to overstocking which led to conflict between predators and young ungulates (Romañach et al., 2007).

Attitudes towards wildlife have also been shown to shift with levels of education, wealth, age, gender and whether the individual has worked with conservation or not (Romañach et al., 2007; Tomićević et al., 2009). Romañach et al. (2007) states in a study concerning the determinants of attitudes towards predators in central Kenya, that the ones with the highest tolerance towards these animals are the ones with high income. The more you have to loose, in relation to what you have, the lower the tolerance towards predators. The same study reveals that individuals with income from tourism and/or with higher education are more tolerant towards loss of livestock to predators.

### *1.1.3 Rural vs. urban*

Contact with wildlife occurs in both urban and rural areas but it is generally more common in protected rural areas (Distefano, 2005). In general urban residents have more positive attitudes towards wildlife and conservation, but it is the rural residents who live close to the wild animals and hence also experience the problems and pests thought to be connected with these animals (Distefano, 2005). As the survival of the wildlife depends on the attitudes of both stakeholders, it is important to include both parties when working to preserve endangered species (Bandara & Tisdell, 2003).

Berenguer et al. (2005) compared a sample of rural residents with a sample of urban residents in Spain in regard to their environmental concerns. The results showed that both sample groups had high levels of environmental concern but low levels of pro-environmental behaviour. When compared with each other the urban sample showed high environmental responsibility values but low pro-environmental actions, while the rural sample showed high environmental responsibilities and at the same time behavioural intentions as to how they would go about protecting the environment. This is significant as city residents usually are of higher education than residents in rural areas (Berenguer et al., 2005).

#### *1.1.4 A widespread problem*

MacLennan et al. (2009) have shown that conflicts between wildlife and humans range over continents with very diverse social and economic circumstances. Hence, these conflicts are not secluded to developing countries or countries with a rich and diverse wildlife. The connecting factor is, as mentioned before, the intolerance for large carnivores due to depredation on livestock, often leading to the extirpation of these predators (MacLennan et al., 2009).

In Sweden the prevailing conflict is mostly concerning the wolf, one of Sweden's largest predators (Ericsson & Heberlein, 2002; Karlsson & Sjöström, 2007). In a study concerning the attitudes towards the wolf in Sweden, Karlsson and Sjöström (2007) found that the attitudes are positively associated with distance to the nearest wolf territory. They found that people living in wolf territories had a more negative attitude towards the presence of the wolf than people living outside. Further, the authors claim that attitudes have little to do with direct experience of these animals. Having seen a wild wolf did not affect the attitudes whereas owning a hunting dog or livestock had a negative impact on attitudes (Karlsson & Sjöström, 2007). Experiencing depredation on livestock or pets also creates negative attitudes (Ericsson & Heberlein, 2002). Other studies made on the same subject state that age, gender, income, education, living on a farm or belonging to interest groups also are important variables influencing human attitudes (Bjerke et al., 1998; Karlsson & Sjöström, 2007).

## **2. Aim of the study**

The aim of this study is to improve the understanding of attitudes towards wildlife of people living in rural areas close to wild animals versus people living in urban areas far from them in Kenya and to compare these with attitudes in Sweden. The study also tries to explain why eventual differences exist.

### **2.1 Questions**

- Can any differences in attitudes towards wildlife be seen between the rural and urban residents?
- What differences can be seen?
- Do the attitudes comply with attitudes towards wildlife found in Sweden?
- What are the underlying factors for the differences in attitudes?
- What efforts can be made to increase the tolerance for wildlife within the communities living in proximity of wild animals?

### 3. Materials and method

#### 3.1 Study areas

People living in two different residential areas, one rural and one urban, were selected for the data collection. The rural residential area is located in the Kajiado District, in the South Rift Valley located in southern Kenya (Lambin & Martens, 2001; Morris et al., 2008). A majority of the residents in this area belong to the Maasai tribe. The Maasai are pastoralists but over the past decades a drastic change towards cultivation has been seen (Lambin & Mertens, 2001). The Maasai live very close to nature and have coexisted with the surrounding wildlife for many centuries (Hazzah et al., 2009). Within this region several CBC (Community-Based Conservation) projects have been established and two conservancies were visited in this area, the Shompole Group Range and the Olkiramation Group Range. These are communally owned parcels of land and a part of the revenues, in form of for example tourist income, goes back to the community (Lily Maynard, Lale'nok South Rift Resource Centre, personal communication, February 2012). Both conservancies harbour a rich and valuable wildlife and the region constitutes an important wildlife refuge during the dry season (Lambin & Martens, 2001; Morris et al., 2008).

The second half of the data was collected in the urban area of Mombasa with adjacent townships. Mombasa is the second largest city in Kenya and the regional centre has more than 700 000 inhabitants (Awour et al., 2008). The Kenyan government classified Mombasa in 2004 as one of the regions in Kenya with high frequency of poverty. Estimations has been made that more than 50 per cent of the residents live below the poverty line, i.e. earning less than 1 USD per day (Akama & Kieti, 2007).

#### 3.2 Data collection

Data for this study were collected in different parts of Kenya in February and March of 2012. The preparatory work and the fieldwork were conducted in collaboration with another student, Cassandra Ekdahl. Interview questions were drafted before departure and later on rephrased with the help from research assistants from the Lale'nok South Rift Resource Centre (SRRC) on site in Kenya. The SRRC functioned as a base for the first half of the data collection in this study. This resulted in five questions concerning attitudes towards wildlife answered in the present study (see appendix 1) and five questions regarding wildlife conservation matters which are answered in Cassandra Ekdahls study. Two sample groups, of ten participants each were chosen for the interviews. The samples were as diverse as possible concerning age (all of the participants were over 20 years of age) and each group had a relatively even sex distribution (see table 1).

The first study group consisted of people from the Olkirimatian and Shompole Maasai communities. Research assistants working at the SRRC chose the interviewees for us according to our criteria. Our criteria were to have a group with an even sex distribution, different age groups represented, people from different clans within the Maasai community, people owning livestock and/or farmland and not working with, or in any other way directly benefitting from, conservation work. To avoid misunderstandings the interview questions were formed in simple English and then translated into Maa, the local language, by the research assistants. To ensure correct understanding by the translators we were thorough in discussing each question's meaning and purpose. The questions were asked in Maa and then recounted to us in English during each interview.

The second study group consisted of people living and working in the urban environment of Mombasa. The interviewees were randomly selected with a couple of criteria in mind. Firstly, it was important that they did not, in any way, benefit personally from tourism and/or



conservation work. Secondly, we preferred respondents not owning any livestock and/or farmland. We selected the interviewees by walking into various shops, banks, opticians etc. asking if we could interview one or more of the employees. These interviews were conducted in English. We did not use the help of translators for this part of the data collection.

Table 1. Summary of respondent basic data

	Age (years)			Gender		Origin*				Profession	
	20-40	41-60	61-80	Male	Female	City		Village		Pastoralist	Other**
						Animals	No animals	Animals	No animals		
<b>Urban</b>											
Percentage	80	20	0	70	30	20	30	40	10	0	100
Quantity	8	2	0	7	3	2	3	4	1	0	10
<b>Rural</b>											
Percentage	60	10	30	50	50	0	0	100	0	100	0
Quantity	6	1	3	5	5	0	0	10	0	10	0
<b>Total</b>											
Percentage	70	15	15	60	40	10	15	70	5	50	50
Quantity	14	3	3	12	8	2	3	14	1	10	10

\* Origin is divided into two groups depending on whether the respondent was brought up in a city or a village. These two groups are in turn divided into two subgroups depending on whether the respondent was raised with or without farm animals.

\*\* Opticians, bankers, mechanics, drivers, entrepreneurs, accountant.

All respondents in both groups were informed about our background and the purpose of the study before the interviews started. None of the respondents received any incentives for their participation. All the interviews were recorded with a tape recorder and also written down during the interviews to assure nothing being missed and to make sure that we got all of the information right. The interviews were conducted in a private manner where the interviewees could not listen to each other and be influenced by each other's answers.

The urban respondents were only asked question number four (appendix 1) if they previously had owned, or at the time of the interviews owned, any livestock or farmland. This means that the results for this question does not include all ten urban respondents and hence does not reflect the numbers and percentages of all of them.

### 3.3 Choice of method and compiling of data

Before the execution of the actual study, a smaller pilot study was conducted. With the help of translators we test-interviewed two Maasai men working at the SRRC. This made it apparent that re-evaluation and rephrasing of the questions was required.

The interviews were conducted in a semi structured way. We used both closed and open-ended questions during the interviews. The use of open-ended questions gave the participants the possibility to think for themselves and freely express their feelings and opinions from which we could get a deeper analysis of the participants' attitudes and opinions. We also had the possibility to ask counter-questions when it was apparent that the respondent was confused or had misunderstood the question. The interviews lasted about 20 minutes each.

The research data was compiled by going through all the answers and comparing them within and in-between the two groups of respondents. The answers were interpreted and "translated", for example, answers like "money" and "revenue" were interpreted as having the same meaning. The results were then written down under head titles connected to the actual interview questions.

## 4. Results

### 4.1 Personal opinions

Question asked: What is your *personal opinion* about wild animals?

#### ***Rural answer***

When asking the Maasai respondents about their personal opinions about wild animals they almost exclusively answered that they could see a lot of benefits in connection with them. Some stated that there absolutely were benefits but failed to specify what those benefits were. However, half of the rural respondents answered that one of the benefits brought by wildlife was employment. This concerned employment by research camps as guides, drivers and scouts etc. but it also included other jobs brought by tourism like cooking or washing of clothes. Another received benefit was money. Eighty per cent of the rural respondents had the opinion that wild animals generated benefits as they brought revenue from tourists. These respondents claimed that this money enabled them to send their children to school, create an improved livelihood and that it also brought development to the community in form of for example research facilities. Before conservation became a part of the community they would have to sell a cow in order to do this but now they could save that cow and hence improve their livelihood somewhat. They also stated that before the conservation project started in the area they did not have any knowledge about the benefits the wildlife could bring. They used to kill predators and hunt for game meat but now they see the benefits and keep the wild animals as a “second cow”. The wildlife is very important as the community is in need of donors and money. Although, a problem brought up by many of the rural respondents, due to wildlife, were attacks on livestock by predators.

#### ***Urban answer***

When asking the urban residents the same question 50 per cent stated that they liked or loved wild animals. The answers were in general emotionally stressed with respondents stating that “wild animals are beautiful creatures”, “they are great to be around”, “they make Kenya a beautiful country” and “they make you feel happy”. One respondent stated that “Kenyans should take pride in their wildlife”; another one said that “Kenyans are a privileged people to be able to go and see these wild animals in their natural habitats”. One of the respondents took it a bit further and argued that wildlife is a part of the ecosystem and, when it comes down to it, we are all animals but of different species, we all have to learn to live side by side. Only two of the urban respondents mentioned money and income to the country when being asked this question. Although 80 per cent of the urban respondents had opinions of a positive nature towards wildlife, two respondents deviated from this pattern. These two respondents both said that they feared wild animals, that they were dangerous and that animals should be kept as far away from humans as possible as they can kill people and destroy their properties.

#### ***4.1.1 Negative or positive?***

Question asked: Do you consider any wild animals as an asset, benefit, something positive?

- In what way do they contribute to something positive?

#### ***Rural answer***

When asking the rural respondents this question all answered that they absolutely regarded these animals as being something positive. They regarded wildlife as an asset and mentioned tourists and activity as a positive result of the presence of wild animals. One respondent stated that all species of wildlife are important as tourists want to see a lot of different species when they come to Kenya. Further on, the same respondent stated that conservation of these

animals is very important for the community. Although all of the Maasai respondents had positive attitudes towards wild animals they acknowledged the conflicts and problems wildlife could bring. Several respondents mentioned predation as a problem.

#### ***Urban answer***

The urban respondents were generally of positive attitudes towards wildlife; 80 per cent answered that they regarded wild animals as something positive and as an asset. The remaining 20 per cent could not see anything positive at all with these animals. Out of the total of the urban respondents 30 per cent stated money and income as a reason to why wildlife is an asset to the country of Kenya and also the reason to why these animals should be preserved. Employment was mentioned only by one respondent. Other answers included statements like “it’s an asset to have such animals around”, “God created them and they are a part of the ecosystem”, “we need the flora and fauna as they contribute a lot and we all depend on each other”. However, one respondent mentioned that wildlife could be negative for other people, depending on where you live and what lifestyle you have.

#### **4.2 Background**

Question asked: Were you brought up in a city or a village?

- Did your parents own any farmland and/or livestock (cattle, sheep, goats)?

#### ***Rural answer***

All of the rural respondents were brought up in villages and had been pastoralists all their lives. All of them owned livestock when they were young and six out of ten also owned farms with crops.

#### ***Urban answer***

The urban respondents differed a bit from each other concerning upbringing. Five out of ten were brought up in a city of which three did not own any animals or farmland when they were young and two owned both animals and farms. The remaining five were brought up in a village; of which one did not own any animals but a farm and four owned livestock, domesticated animals and farmland.

Of the respondents brought up in cities with no animals all three of them regarded wild animals as an asset. Two of them mentioned money as a contributing factor to why they regarded these animals as assets. Also other statements like “I love animals” and “God created them” were recorded from these respondents. Two of the respondents brought up in a city without animals regarded it as an asset just to be able to be around wildlife. It was also mentioned that the government should work harder to stop poaching of these animals so that preservation could take place. Of the respondents brought up in a city with animals, two stated that they like animals while one feared them and had no positive feelings towards them at all. One mentioned wildlife as an asset to the country. There was only one respondent who was brought up in a village without any animals this respondent’s attitude towards wildlife was negative, a lot due to fear of wild animals. All of the respondents brought up in a village with animals stated that they regarded wildlife as an asset. One of these mentioned money and one mentioned that these animals simply made her happy. Another respondent within this category mentioned that the wild animals are a part of the ecosystem which makes them a big asset to us humans.

### 4.3 Problems – Personal experiences

Question asked: Do you personally perceive any wild animals as a problem?

Have *you* had any problems with:

- Predation?
- Destruction of fields/crops caused by wild animals?
- Diseases brought by wild animals?
- Co-grazing → that the wild animals eat the livestock's food?

#### ***Rural answer***

On the general question 80 per cent of the rural respondents answered yes. The most common concern was predation with lions as a perceived dominating problem. Also leopards and buffaloes were mentioned as problems. Buffaloes were not regarded as problems due to predation but as they are dangerous towards both humans and domesticated animals. Two respondents simply answered “No” to this question and one respondent answered that problems with predation persist but that there are more benefits than problems concerning wild animals.

#### ***Urban answer***

On the same question as above eight of the urban respondents answered that they did not personally perceive any wild animals as a problem. However, the majority of them could understand that other people, living closer to wildlife, could have problems with these animals. The respondents who answered “No” on this question mentioned the distance to the wildlife as a reason to why they did not see any problems with these animals, “there is no wildlife in my area”. Another respondent stated that she did not perceive wild animals as a problem “as long as they don’t come to kill me”. The two respondents who answered “Yes” to this question stated fear and destruction of farmland as the biggest problems. The majority of the urban respondents had heard of wild animals causing problems in other areas, but had never experienced it for themselves.

#### ***4.3.1 Predation***

##### ***Rural answer***

All of the respondents had some kind of personal experience of predation. The most common form of predation experienced was lions killing livestock, but also leopards were mentioned.

##### ***Urban answer***

Half of the respondents who had owned animals had personal experience of predation. Predators mentioned were leopards and hyenas. The remaining 50 per cent answered that they had not had any experience of predation; one of these respondents mentioned that there was not a lot of wildlife where he was from.

#### ***4.3.2 Destruction***

##### ***Rural answer***

Eighty per cent of the respondents claimed to have personal experience of destruction of crops due to wildlife interference. Animals mentioned were for example velvet monkeys, elephants, baboons, porcupines and warthogs destroying crops like bananas and corn. The remaining respondents said that they had not personally experienced destruction of crops but that they had heard of people who had.

### ***Urban answer***

Of the eight respondents who had owned farmland five had personally experienced destruction of crops. Animals mentioned were velvet monkeys, baboons and elephants. The rest of these respondents had no personal experience of destruction by wild animals.

### ***4.3.3 Diseases***

#### ***Rural answer***

Sixty per cent of the respondents had experience of some kind of disease spread from wildlife to their livestock. One respondent stated that wildebeest bring diseases to the community areas and die on ground where livestock graze which results in the spread of disease to livestock. Three of the respondents mentioned ticks, brought by for example buffaloes, as a big problem affecting their livestock.

#### ***Urban answer***

Only one of seven respondents mentioned diseases spread by wildlife as a problem; this statement concerned ticks.

### ***4.3.4 Co-grazing***

#### ***Rural answer***

All the respondents claimed to have problems with co-grazing. The majority of them stated that wildlife had eaten all the grass in the area surrounding where they lived. This resulted in them having to move their livestock, sometimes to areas with a lot of predators, which in itself brought further problems. But at the same time they acknowledged that their livestock does not have the sole right to eat, “there is little grass due to *both* wildlife *and* livestock”.

#### ***Urban answer***

None of the urban respondents, that had owned animals when younger, had any personal experience of problems concerning co-grazing.

## **4.4 Past experiences influencing attitudes**

Question asked: Do you think these experiences have influenced your opinions towards wild animals?  
- In what way?

### ***Rural answer***

On this question 60 per cent answered “Yes”. Hence, 40 per cent simply answered “No”. The respondents that answered “Yes” believed that these changes in attitudes were an effect of the conservation project in the area and due to the knowledge the researchers contributed with as to how the community could benefit from preserving wildlife. Also negative attitudes were mentioned, almost exclusively due to predation and co-grazing. Hence, these respondents felt that past experiences of predation and co-grazing had influenced their feelings and attitudes towards wildlife.

### ***Urban answer***

When the urban respondents answered the same question as the rural respondents above, only 20 per cent answered “Yes” and hence 80 per cent answered “No”. One respondent that answered “Yes” stated that “after experiencing a wild lion in real life you realise that they are not really that scary”. The ones answering “No” almost exclusively stated that they had always liked wild animals and that wildlife had always been a part of their lives. The answer “No” was therefore not negatively emphasized in this case.

## 5. Discussion

It is obvious that people have feelings, opinions and attitudes towards wildlife despite residency. It is also obvious that these attitudes differ in character depending on who is answering the questions. The majority of the respondents answered that they thought that wild animals have a purpose and value in some way or another. However, these attitudes were expressed in different manners. In order to explain environmental behaviour, it is necessary to understand the social context in which individuals develop it (Berenguer et al., 2005). As the interviews reflect the respondents' attitudes in relation to their residency there is possibility to compare the two different groups of respondents with each other.

A tendency towards expressing attitudes with emotion and feelings can be detected in the answers from the urban respondents. Many of these interviewees stated that they like wild animals, that they regard wildlife as something positive, and showed it by revealing their feelings in the matter. They said things like "I think they are beautiful", "I like to watch them" and "I love them". Hence, the urban residents recognised, over all, that animals have a value in themselves and that it would be a major loss for the country to lose them. The rural respondents, however, had in total a more practical and financial outlook on wildlife in general. As some of the perceived benefits for the rural residents from wild animals were money, employment and ability to send children to school it is clear that these are of a more monetary form than the emotionally stressed answers from the urban residents. An interesting factor is however that although the Maasai participating in this study only received a very small amount of money from the conservancies in the area, they still believed that the monetary benefits exceeded the financial losses from for example depredation. These people have a personal gain in protecting wildlife and trying to live in harmony with them. The urban residents also have a personal gain in these animals existing, but of a whole different nature, the emotional one.

In a study concerning wildlife conflicts in Botswana, Hemson et al. (2009) found that negative attitudes towards lions were widespread amongst farmers but less so amongst people living in more urbanised areas and societies. These results suggest that there would be a more fundamental difference between urban and rural peoples' attitudes towards wild animals in general and predators in particular. This would be the most obvious conclusion as the rural residents live closer to and come more often in contact with wild animals (Distefano, 2005) and hence more often experience the problems connected with them first hand (Bandara & Tisdell, 2003). However, the results from the present study suggest something else. One very interesting thing, clearly going against the studies mentioned above, is that the only genuinely negative attitudes came from two urban respondents. They based these attitudes on fear and none of the two had actually been in contact with a wild animal before. As these opinions were of such strong magnitude one could just assume that they were created by stories being told from people with similar attitudes, hence hearsay and ignorance. The studies above do not reflect the case with the rural respondents in this study either. This as they have been given an incentive to protect the wildlife in their surrounding area, which contributes to a positive outlook on wild animals; they actually regard these animals as a benefit to the community instead of a problem. However, they acknowledge the fact that there are currently problems, foremost with predation, but still regard the wildlife as an asset. The benefit in form of money and the fact that everyone within the community had agreed upon caring for these animals within the conservancy seemed to be enough of an incentive to induce positive attitudes towards wild animals. This confirms suggestions made by several studies which state that received benefits in different forms contributes to positive attitudes towards wild animals otherwise perceived as something negative (Kiss, 1990; Sekhar, 2003; Hemson et al., 2009).

It also confirms the suggestion made by Romañach et al. (2007), who states that individuals with income from tourism and/or with higher education are more tolerant towards loss of livestock to predators. The same authors also suggest that people with high income and education, and less to loose from problems concerning wildlife, are in general more tolerant towards these animals. As the present study does not reveal the income of the respondents we cannot say with certainty that the urban residents had higher income than the rural ones, I can only assume that this is the case. I can also assume that the majority of the urban residents have higher education (Berenguer et al., 2005) than the rural ones as their professions demand it. My belief is that this serves as the foundation to some of the urban respondents' answers. One could regard the ecosystem aspect given by a few of the urban interviewees as a result of education and a more elaborated way of reasoning.

Consequently we can conclude that benefits can generate positive attitudes towards wildlife. But the issue of compensation is not as clear-cut as this. The question of compensation programs as a tool to increase wildlife tolerance has been discussed earlier in this study and is a controversial issue. As studies have shown, these programs can work as incentives to increase tolerance towards "problem species" of wild animals (Madhusudan, 2003; Romañach et al., 2007). It can, however, also backfire and make farmers and pastoralists less cautious and alert, resulting in higher rates of depredation and destruction of crops and farmland (Lily Maynard, Lale'nok South Rift Resource Centre, personal communication, February 2012). Hence, the rural conservancies concerned in this study have chosen to distance themselves from incentives in form of compensations. When talking to the Maasai respondents it was detectable that most of them would prefer to get compensation for killed livestock and destroyed farmland. But they were, never the less, pleased with the researchers from the local research camp coming up with solutions to help them to prevent these problems from ever happening. It was evident that an important factor for these people was to be seen and to have their problems taken seriously.

As previously mentioned Distefano (2005) and Bandara & Tisdell (2003) all concluded in their studies that negative attitudes towards wild animals is predominant in rural areas due to the proximity to the wildlife and the experienced problems related to them. However, this study reveals that all of the rural respondents have had some kind of personal experience with predation and problems with co-grazing. Eighty per cent have had problems with destruction of crops and farmland and 60 per cent have had problems with diseases spreading from wild animals to their livestock. Despite this all of the rural respondents said that they regarded wild animals as something positive and as an asset to the community. Subsequently 50 per cent of the urban respondents, who had ever owned any animals, claimed to have personal experience with predation and none of these regarded the wildlife as something negative. The two respondents that actually had negative attitudes had never had personal experiences of predation and didn't live in proximity to them as they lived in an urban area. Hence the suggestion that proximity to, and past experiences of, wildlife are the most dominant factors when measuring negative attitudes towards wild animals is in this case false.

In accordance to the mentioned studies above Swedish scientists have concluded that there are a few factors that influence peoples' attitudes towards the grey wolf more than others (Bjerke et al., 1998; Ericsson & Heberlein, 2002; Karlsson & Sjöström, 2007). Two of these factors were proximity to a wolf territory (Karlsson & Sjöström, 2007) and whether the person in question own livestock or pets (Ericsson & Heberlein, 2002). According to these studies the negative attitudes become more frequent the closer you get to the wolf territories, which, in general, are located in rural areas of Sweden. Hence the majority of the negative attitudes towards the wolf are to be found in rural Sweden, which in turn confirms the conclusions

made by Distefano (2005) and Bandara & Tisdell (2003). Interesting in this context is that the urban Kenyan respondents in my study mentioned their distance to wildlife as a reason to why they did not perceive wild animals as a problem. One respondent even stated that she was ok with wild animals as long as they did not come to kill her. This would confirm that there is an underlying fear of wild animals which distance seems to blur. However the suggestion that actual experience of wild animals can inflict negative attitudes towards them are questioned by the conclusion Karlsson and Sjöström (2007) makes in their study. Karlsson and Sjöström (2007) claim that experiences have little to do with the attitudes of people towards the wolf. Having seen a wolf did not inflict negative feelings towards them, but owning livestock or pets did. One could then wonder why indirect experiences in form of depredation by a wolf on livestock or pets are not seen as personal experience by these authors. As mentioned by Romañach et al. (2007) it is the people with the most to loose by interference by wild animals who are the most negative towards them. In that aspect the real experience lies within the loss of livestock, pets and/or money, not in seeing a wolf in the woods.

With this knowledge we can claim that there is a relatively big difference in attitudes towards wildlife between Sweden and the Kenyan respondents in this thesis. The rural residents included in my study had an overall positive attitude towards wild animals while the rural people of Sweden generally seem to have the opposite attitude (Bjerke et al., 1998; Ericsson & Heberlein, 2002; Karlsson & Sjöström, 2007). So what is the key determinant for these differences in attitudes? The rural Kenyans all had experienced depredation on their livestock and most of them had also other experiences of problems caused by wild animals. Consequently the problems and experiences as such cannot be the determining factors as both groups have similar experiences yet different attitudes. However, for the Kenyan group the positives of the wildlife seem to be greater than the negatives as they perceive the benefits exceeding their losses and giving them new possibilities within the community. Hence, to me it is obvious that benefit systems can work and serve a purpose as long as the people connect the received benefits with the wildlife (Arjunan et al., 2006). So what would happen if such a system was to be implemented in Sweden? A system that would give the people living in wolf territories an incentive to care for, and preserve, the wolf. This would not only be positive for the wolf as a species in Sweden but also for the people in these areas. In Sweden people who lose livestock, pets or get crops and farmland destroyed by wild animals can get compensation (Viltskadecenter, 2012). This seems, however, to make little difference, as the general attitudes still are negative. Would the possibility to actually earn money off of, or in any other way generate benefits from, these animals affect the attitudes of the urban Swedish residents as they obviously have done in the conservancies of Shompole and Olkiramation in Kenya? Further studies and research are needed on this subject and are of great importance as the biodiversity is crucial not only for nature and animals, but also for us humans. As one of the respondents put it “we are all part of the ecosystem, we need each other”.

To be able to read this study in a correct manner a description of possible sources of error is in order. As always when conducting interviews of any kind sources of error are hard to eliminate completely. When interviewing the Maasai we had to do this via translators. This is a very delicate thing to do as the interpreters can misunderstand the questions themselves and translate them in a wrong manner. They can also interpret the answers given by the respondents before translating them and hence not actually translate what the respondent said back to us. Our counter questions could also be misunderstood and translated in a wrong manner, as the translators had not had time to look these over before the interviews as with all the other questions. When interviewing the urban residents this factor was eliminated as we interviewed them ourselves in English. This also gave us a better chance to ask counter questions and make sure that the respondents really understood the questions. Another source



of error could be that the respondents answered the way they thought we wanted them to answer. This could imply a bias to the study as it does not reflect the respondents' opinions and attitudes but what they thought we would like to hear. It would have been preferable to interview a larger number of people in each group, a total of 20 respondents does not provide adequate data for a significant result. This was, however, not possible in this study as time and resources in Kenya was limited. All these things could lead to false results and a misleading study and should be considered while reading it.

## 6. Conclusions

Attitudes towards wildlife are not constant; they are ever changing. Just as humans and animals are ever changing creatures so are the perceptions, feelings and attitudes towards wildlife if the circumstances allow them to. There are several factors influencing human attitudes and if these factors imply something positive to the individual so can the attitude of that individual transform and become a more positive and tolerant one. It does not matter if the perceived benefits from wildlife are money, happiness or just the satisfaction that these animals exist. When it comes down to it, animals do not care about money or the reason to why we fight to preserve them. What matters is that we recognise that these animals need, and deserve, to be preserved and that we find a way to do it, together.

## Populärvetenskaplig sammanfattning

Över hela världen delar människa och djur marken de bor och lever på. Detta kan ibland skapa konflikter dessa två parter emellan. Ofta orsakas konflikterna av vilda djur som söker föda och följaktligen dödar boskap och förstör fält och grödor. Dessa konflikter kan skapa negativa attityder hos människor som lever på marker som ofta besöks av vilda djur, vilket i sin tur kan komma att utgöra ett hot mot djurens existens i dessa områden.

Det finns många olika faktorer som påverkar människors attityder gentemot vilda djur. Bland dessa faktorer inkluderas bland annat ålder, kön och utbildning. Dock har man i flertalet studier kommit fram till att det finns faktorer som verkar påverka attityderna mer än andra. Bland dessa faktorer finner man bland annat yrke, tidigare upplevelser, närhet till de vilda djuren och om man äger egna djur eller ej. Det har visat sig att de som har mest att förlora är de som oftast har de mest negativa attityderna. Bor man i en storstad livnär man sig antagligen inte på jordbruk eller genom att hålla boskap. Predation är därmed inget man varken är utsatt eller rädd för. Bor man däremot i ett mer lantligt område, med boskap och jordbruk som enda sysselsättning och inkomst, är man mer utsatt och predation kan innebära stora problem. Samma sak gäller om man har fält och/eller odlar grödor, vilda djur kan, i sökandet efter föda, förstöra hela skördar och på så sätt påverka människors möjlighet att försörja sig. Enligt studier är det större sannolikhet att en person har negativ attityd gentemot vilda djur om denne haft personliga upplevelser av predation och/eller förstörelse av grödor och mark orsakat av dessa djur.

I denna studie besökte, och intervjuade, vi två olika samhällsgrupper av människor i Kenya för att försöka utröna om de faktiskt har olika attityder i enlighet med studier och faktorer nämnda ovan. Den ena gruppen bestod av Maasaierna som lever och verkar på Kenyas landsbygd under väldigt skrala förhållanden. Den andra gruppen bestod av stadsbor som bland annat jobbar inom bankväsendet, som optiker och som mekaniker. Den sistnämnda gruppen människor kommer inte i kontakt med vilda djur i vardagen medan Maasaierna ständigt lever

sida vid sida med dem. Nämnas bör även att de intervjuade Maasaierna tillhör två samhällen där pengar som genereras via bl.a. turister går tillbaka till invånarna.

Det som framkom i denna studie var att trots att alla Maasaier hade personliga upplevelser av predation och andra problem orsakade av vilda djur så var de positiva till dessa djurs existens. Även de urbana invånarna var generellt positiva till vilda djur och såg dem som en tillgång för landet. Intressant är att de två respondenter som var de enda med genomgående negativa attityder gentemot vilda djur var stadsbor. Dessa personer hade ingen egen erfarenhet av vilda djur, de byggde sina attityder på rädsla och såg enbart negativa saker i dess existens.

Så hur kan det komma sig att Maasaierna var så positivt inställda mot dessa djur? Som nämnts tidigare fick de ta del av den inkomst som de vilda djuren inbringade vilket betydde att dessa djur helt plötsligt innebar individuell inkomst likt folkets egen boskap. Maasaierna kunde alltså koppla ihop de vilda djuren med något positivt, som var till fördel för folket, vilket ändrade attityderna från negativa till positiva.

Om man jämför detta med de attityder som råder gentemot vargen i Sverige så stämmer den tidigare nämnda forskningen väl in på den forskning som utförts inom landet i detta ämne. Man har kommit fram till att ju längre bort en individ bor från ett vargterritorium desto mer positiv blir dess attityd. Detta betyder att de individer som bor inom ett vargterritorium, oftast på landsbygden, är de som håller den mest negativa attityden gentemot dessa djur. Vad kan man då dra för lärdom av studien och de utförda intervjuerna i Kenya? I denna studie visas att förmånssystem kan fungera för att skapa positiva attityder gentemot vilda djur. Detta betyder att ett liknande system, där invånarna i ett samhälle kan dra fördel av vargens existens och närhet, skulle kunna medföra en ändring i attityder även här. Det krävs mer forskning inom detta ämne eftersom den biologiska mångfalden är viktig, inte bara för naturen och djuren, men även för människan!

## Acknowledgements

I would like to thank all the people who made this study possible. A big thank you to Cassandra Ekdahl who made this experience a wonderful one. Also a big thank you all the people on site in Kenya, the translators, the scientists and the respondents. You all made it a pleasure to make this study happen. Thank you to all the fabulous teachers at SLU who have supported and helped us students through these past three years of studies. And the greatest thank you of all goes out to my family who has supported me in everything I do and encouraged me in every step of this study.

## References

Akama, J. S. and Kieti, Damiannah. (2007) Tourism and Socio-economic Development in Developing Countries: A case study of Mombasa resort in Kenya. *Journal of Sustainable Tourism* 15:735-748.

Arjunan, M., Holmes, C., Puyravaud, J-P. and Davidar, P. (2006) Do developmental initiatives influence local attitudes toward conservation? A case study from the Kalakad–Mundanthurai Tiger Reserve, India. *Journal of Environmental Management* 79:188–197.

- Awour, C.B., Prindi, V. A. and Adewera, A.O. (2008) Climate change and coastal cities: the case of Mombasa, Kenya. *Environment and Urbanization* 20:231- 242.
- Bandara, R. and Tisdell, C. (2003) Comparison of rural and urban attitudes to the conservation of Asian elephants in Sri Lanka: empirical evidence. *Biological Conservation* 110:327–342.
- Berenguer, J., Corraliza, J.A. and Martín, R. (2005) Rural-Urban differences in environmental concern, attitudes, and actions. *European Journal of Psychological Assessment* 21(2):128–138.
- Bjerke, T., Reitan, O. and Kellert, S.R. (1998) Attitudes toward wolves in southeastern Norway. *Society and Natural Resources* 11:169–178.
- Distefano, E. (2005) *Human-Wildlife Conflict Worldwide: collection of case studies, analysis of management strategies and good practices*. Available at: [http://www.fao.org/SARD/COMMON/ecg/1357/en/HWC\\_final.pdf](http://www.fao.org/SARD/COMMON/ecg/1357/en/HWC_final.pdf)
- Ericsson, G. and Heberlein, T.A. (2002) Attitudes of hunters, locals, and the general public in Sweden now that the wolves are back. *Biological Conservation* 111:149–159.
- Hazzah, L., Mulder, M, B. and Frank, L. (2009) Lions and Warriors; Social factors underlying declining African lion populations and the effect of incentive-based management in Kenya. *Biological Conservation* 149:2428-2437.
- Hemson, G., Maclellan, S., Mills, G., Johnson, P., and Macdonald, D. (2009) Community, lions, livestock and money: A spatial and social analysis of attitudes to wildlife and the conservation value of tourism in a human–carnivore conflict in Botswana. *Biological Conservation* 142:2718–2725.
- Karlsson, J. and Sjöström, M. (2007) Human attitudes towards wolves, a matter of distance. *Biological Conservation* 137:610-616.
- Kiss, A. (1990) Living with wildlife: wildlife resource management with local participation in Africa. In: *World Bank Technical Papers*. World Bank, Washington, DC, p. 236.
- Kiss, A. (2004) Is community-based ecotourism a good use of biodiversity conservation funds? *Trends in Ecology and Evolution* 19:232–237.
- Lambin, E.F. and Mertens, B. (2001) Abrupt and periodic shifts in a marsh location and their impact on biodiversity and farming activities in Shompole, Kenya. *International Journal of Remote Sensing* 22:711-716.
- Maclellan, S.D., Groom, R.J., Macdonald, D.W. and Frank, L.G. (2009) Evaluation of a compensation scheme to bring about pastoralist tolerance of lions. *Biological Conservation* 142:2419–2427.
- Madhusudan, M.D. (2003) Living amidst large wildlife: livestock and crop depredation by large mammals in the interior villages of Bhadra Tiger Reserve, South India. *Environmental Management* 31:466–475.

Morris, D.L., Western, D. and Maitumo, D. (2008) Pastoralist's livestock and settlements influence game bird diversity and abundance in a savanna ecosystem of southern Kenya. *African Journal of Ecology* 47:48-55.

Prins, H.H.T. (2000) Competition between wildlife and livestock in Africa. Chapter 5. *Wildlife Conservation By Sustainable Use*. Kluwer Academic Publishers. Boston.

Romañach, S.S., Lindsey, P.A. and Woodroffe, R. (2007) Determinants of attitudes towards predators in central Kenya and suggestions for increasing tolerance in livestock dominated landscapes. *Oryx* 41:185-195.

Sekhar, N.U. (2003) Local people's attitudes towards conservation and wildlife tourism around Sariska Tiger Reserve, India. *Journal of Environmental Management* 69:339-347.

Tomićević, J., Shannon, M.A. and Milovanović, M. (2009) Socio-economic impacts on the attitudes towards conservation of natural resources: Case study from Serbia. *Forest Policy and Economics* 12:157-162.

Viltskadecenter, 2012.

[http://www.viltskadecenter.se/index.php?option=com\\_content&task=view&id=90&Itemid=3](http://www.viltskadecenter.se/index.php?option=com_content&task=view&id=90&Itemid=3)  
26. Använd 2012-05-13.

## Appendix 1.

### Interview questions

- 1) What is your *personal opinion* about wild animals?
- 2) Were you brought up in a city or a village?
  - Did your parents own any farmland and/or livestock (cattle, sheep, goats)?
- 3) Do you consider any wild animals as an asset, benefit, something positive?
  - In what way do they contribute to something positive?
- 4) Do you personally perceive any wild animals as a problem?
  - Have *you* had any problems with:
    - Predation?
    - Destruction of fields/crops caused by wild animals?
    - Diseases brought by wild animals?
    - Co-grazing → that the wild animals eat the livestock's food?
- 5) Do you think these experiences have influenced your opinions towards wild animals?
  - In what way?

Vid **Institutionen för husdjurens miljö och hälsa** finns tre publikationsserier:

- \* **Avhandlingar:** Här publiceras masters- och licentiatavhandlingar
- \* **Rapporter:** Här publiceras olika typer av vetenskapliga rapporter från institutionen.
- \* **Studentarbeten:** Här publiceras olika typer av studentarbeten, bl.a. examensarbeten, vanligtvis omfattande 7,5-30 hp. Studentarbeten ingår som en obligatorisk del i olika program och syftar till att under handledning ge den studerande träning i att självständigt och på ett vetenskapligt sätt lösa en uppgift. Arbetenas innehåll, resultat och slutsatser bör således bedömas mot denna bakgrund.

Vill du veta mer om institutionens publikationer kan du hitta det här:  
[www.slu.se/husdjurmiljohalsa](http://www.slu.se/husdjurmiljohalsa)

---

**DISTRIBUTION:**

Sveriges lantbruksuniversitet  
Fakulteten för veterinärmedicin och  
husdjursvetenskap  
Institutionen för husdjurens miljö och hälsa  
Box 234  
532 23 Skara  
Tel 0511-67000  
**E-post: [hmh@slu.se](mailto:hmh@slu.se)**  
**Hemsida:**  
**[www.slu.se/husdjurmiljohalsa](http://www.slu.se/husdjurmiljohalsa)**

*Swedish University of Agricultural Sciences  
Faculty of Veterinary Medicine and Animal  
Science  
Department of Animal Environment and Health  
P.O.B. 234  
SE-532 23 Skara, Sweden  
Phone: +46 (0)511 67000  
**E-mail: [hmh@slu.se](mailto:hmh@slu.se)**  
**Homepage:**  
**[www.slu.se/animalenvironmenthealth](http://www.slu.se/animalenvironmenthealth)***

---