



Project overview

Lions and the Maasai in Ngorongoro – New Pathways to Coexistence

*Educational Film for the Maasai
approximately 45 min*





Funding sought for the production of educational film!

The famous lions of Ngorongoro are endangered. Korongoro People's Lion Initiative, KopeLion, aims to produce an educational film as groundwork for discussion for improved coexistence between lions and the Maasai. The film will be made in close cooperation with the Maasai in Ngorongoro, Tanzania. It will address the local challenges of coexistence, building on our ongoing research and conservation work which is run with local participation.

Our project brings together lion researchers, Maasai representatives, the film crew and advisors with relevant local and international experience.

Do you want to be a part of this project?

You can make a difference in the effort to save the lions of Ngorongoro and help the Maasai get better protection from lion attacks.

When you contribute to the project you get access to the latest research results from KopeLion. You will also get opportunities to meet the lions we know well in the Ngorongoro area up close, as well as Maasai people far beyond the usual tourist routes. Your name, organization or company will be promoted in different contexts.



Introduction film 10 minutes

The attached film gives the background and demonstrates the need for an educational film specifically aimed at the Maasai in the Ngorongoro area. It was made during a reconnaissance trip, and in it we meet **Ingela Jansson**, lion researcher and Director of KopeLion, **Paul Funston**, Ph.D, Senior Director, Panthera's Lion Program and **Saningo Ole Dorop**, student and son of the Elder of Misigiyo Village.

Project team

Project Manager

Ingela Jansson, Director KopeLion

Film Crew

Bobo Lindblad, camera

Mette Lindblad, script, sound, editing

Advisory Board

Paul Funston

Philipp Henschel

Camilla Sandström

William Ole Seki

Contact

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KOPE LION

Korongoro People's Lion Initiative,

KopeLion is a collaboration between lion researchers and the Maasai. The goal is to promote co-existence between the Maasai and lions in Ngorongoro, Tanzania. Korongoro is the original name for Ngorongoro.



Lions and the Maasai – New Pathways to Coexistence

KopeLion works to promote coexistence between lions and the Maasai in Ngorongoro. Increased knowledge is a prerequisite for success, and film is an effective tool for knowledge sharing. To this end we want to produce an information film addressed directly to the Maasai. It will serve as the basis for knowledge exchange and discussion.

About a third of the world's remaining lion population is located in Tanzania. A large part of these lions live in the Serengeti, the Ngorongoro crater, and in the area in-between – a country they share with the Maasai. The Maasai are pastoralists, and therefore very vulnerable to predatory animals. To protect their valuable livestock they often kill lions, both as acts of retribution and also as a ritual. As the population grows and spreads out the pressure on the lion increases. In the Ngorongoro area this problem is now urgent.



KNOWLEDGE IS KEY

My name is Ingela Jansson and I am a lion researcher. I try to find solutions to better co-existence between the Maasai and lions. After six years of long-term work in remote villages I have achieved a unique position and I have gained the Maasai's confidence. Together we have created KopeLion to increase the exchange of knowledge between the Maasai and researchers.

A major challenge is to reach out with information at the grassroots level. We need an effective tool – a film – to demonstrate the lion's vulnerability in the area in a simple way, and how we together can change the situation in a sustainable manner for both lions and the Maasai.

The planned film should be aimed at the Maasai population in the Ngorongoro area to inform about the lion's ecology and threatened situation, the work of Kope Lion, how to gain employment in the organization and how the Maasai can protect their livestock against lion attacks. The film will serve both as an information tool and a basis for discussions where the Maasai can contribute their experience to achieve the project's objectives.



"Roimen and I collect excrement samples for analysis. They provide important information about the lions feed and genetics."



MY WORK AND THE NEED FOR A FILM

Over the years that I've worked with lions in the Ngorongoro area, I have seen a worrying development. The population is growing and competition for resources increases. Despite these trends, I see a bright future. This is because the Maasai people I meet daily have a reverential attitude to wildlife and especially the lion.

The Maasai lack knowledge about the threatened status of the lion. As I see it, the only path to successful coexistence is to raise awareness about the lion's situation and how to avoid lion attacks. Here is where I see that a purpose-made film could make a big difference.

I have worked in the Serengeti Lion Project since 2006. It is a research project that has been ongoing since 1966 to study the population ecology of lions in the Serengeti in Tanzania. The project has followed the life story of several generations of lions.

In 2011 my work expanded to include the Ngorongoro area. I am now Director of KopeLion, which is a separate project with its own funding – still concerned with the study of lion ecology and genetics – but with increased focus on conservation in collaboration with the Maasai. The main aim of the project is to study how the Maasai and their livestock are affected by, and in turn affect predators, especially the lion, and how coexistence can be promoted. This research is also part of my doctoral work.

To date KopeLion has employed over 20 Maasai as field assistants. The work gives status, provides valuable income and increases participation in the lion conservation effort. Among the tasks are to report any sign of lions and warn Maasai shepherds, report lion attacks, find and return lost livestock, assist in treating wounded cattle and help strengthen corrals after a predator attack, and also to gather lion feces for our genetic study.

Many of these field assistants are active or former warriors who themselves have speared lions. They are the absolute best ambassadors for the cause of lion conservation.



"We follow the lions using GPS collars, camera traps, field observations and tracking, and we can identify them by their unique whisker patterns."



"I travel all around the Ngorongoro area and talk about my work. The Maasai call me Mama Simba – "Mama Lion"



FILM AS AN INFORMATION TOOL

How do you reach out to the grassroots? Because of inadequate schooling not many here can read or write, and I rarely see other media such as radio or newspapers. That is why film is such an effective means of communication in reaching out to people in rural areas. Furthermore, if the film is set in the local familiar surroundings, the relevance to the audience is very high.

I have done many film screenings in the villages and there is always a large turnout, great curiosity and lively discussions. Our film will be used as a basis for discussions in order to jointly find ways to better coexistence.

Content of the film

The film will be dramatized based on a few key individuals, and it will reflect the Maasai's own experience and knowledge. It will be in Maa, the Maasai language, with Maasai field assistants of KopeLion as narrators. Many of these are former warriors and thus strong role models. The following points will be woven into the plot:

- **The threatened situation of the lion in the world, Tanzania and the Ngorongoro Area**
- **Lions in the Ngorongoro area.** About the lion individuals we know in the Ngorongoro area outside the crater. How we follow them through GPS collars, camera traps, tracking, observations, and through DNA samples from feces. How we can identify lions and how, through camera traps, we can calculate predator density. Show photos of lions taken by camera traps in the area.
- **The Crater Lions** (Ngorongoro Crater), their history and great vulnerability, and the fact that they only have their relatives available to breed with! The consequences of inbreeding such as increased susceptibility to disease and poorer reproduction.
- **Lion Ecology.** Differences in lifestyle between males and females. How they move over large areas. The females' vulnerability when they have cubs. The high mortality of cubs. The vulnerability of young nomad males. Threats and challenges. Common prey.



Young nomadic males are facing an uncertain future. Many are killed by other males in territorial fights.

- **Predation.** Present the collected data, for example that the most common predator attacks on livestock are done by other predators than lions.
- **Herding Techniques and protection.** Current practices of Maasai shepherds and how they can be improved, e.g. herding cattle with older shepherd boys and fewer livestock per shepherd. To be extra vigilant at dusk and to not return home with the cattle in the dark – the lions' prime time for livestock attack. How to reinforce enclosures.
- **The lion as a resource.** To see the lion as a resource, cultural symbol and source of income in the tourism industry, with an ecological value and rightful place among us.
- **Legal and economic repercussions** when wildlife is killed.
- **Veterinary advice,** wound care. How to deal with livestock mauled by predators.
- **Employment.** How the Maasai people can gain employment as field assistants in KopeLion and what the work entails.
- **Pastoralists in other parts of the world.** If space and funds permit, short sequences of other pastoralist peoples living with predators. e.g. Swedish Lapland and the Indian Gir Forest, including sequences from Jan Lindblad's "The Lion Forest", about the Maldhari people living side by side with the Indian lion in the Gir forest, to which Bobo Lindblad has the film rights.



EXPERIENCED CREW

Mette and Bobo have the qualifications required to create a film that engages. Mette is a biologist with previous experience of working with indigenous peoples. Bobo is a photographer and cinematographer with experience of filming in the tropics, and he has interest in nature in his blood – his father was the famous naturalist and filmmaker Jan Lindblad. Together, Mette and Bobo have a great track record, including two documentaries for Swedish television with over a million viewers. Thanks to their film "Maten som Skövlar" (The Food that Devastates) the palm oil problem became known to the general public in Sweden, which in turn contributed to the tightening of labeling rules and that major players in the food industry switched to certified palm oil.

I was impressed by Mette's and Bobo's approach during their reconnaissance visit. They showed great humility and honest interest, and blended easily in among the Maasai and in all situations. A big plus is that they are very flexible being just a two-person team.



"In my work, it is important to be able to communicate in a way that is easily understood by the grassroots in the villages."



FILM SCREENING IN MAASAI VILLAGES

The film will be shown in large and small Maasai villages in the Ngorongoro area. Screenings can be held in churches and schools. In areas where people live seasonally and larger premises are lacking, screenings will take place outdoors using a large screen with the sky as backdrop. We also plan to have screenings for children and young people in the two high schools and several elementary schools in the district.


To take advantage of the ability of the film media to initiate discussions and maximize learning, we plan to hold discussions immediately after each viewing.

Wider use of the film

The film can also be used in broader contexts to spread knowledge about the situation in Ngorongoro:

- Scientific communities
- Government agencies
- Sponsors – as an inspirational part of lectures on KopeLion
- YouTube, Facebook and KopeLion's website (excerpts)
- As part of the discussion on human-predator conflicts

It can also be adapted into a television documentary about Ingela and her work with KopeLion.



Serengeti National Park and the adjacent Ngorongoro Conservation Area are UNESCO World Heritage sites, and home to one of the world's most important lion populations.


The survival of the Lion is threatened

During the past century, the number of lions in the world has declined. It is estimated that today there are approximately 20,000 lions left, and that this number is dropping at an alarming rate. Except for an isolated population of around 200 lions in India, most live in Sub-Saharan Africa. There are also a few endangered small populations in West Africa.

Tanzania is one of the most important countries, perhaps the most important, for the lion's long-term preservation. Four of the six remaining large healthy populations live here. One of these resides in the Serengeti ecosystem (Serengeti National Park, Ngorongoro Conservation Area and neighboring wildlife parks). This population has two sub-populations; the larger Serengeti population, and the smaller and genetically impoverished crater population with only about 60 individuals. In the area in-between, which is shared with the Maasai, there are a few smaller groups and roaming individuals.

The growing Maasai population, who need to use more of the land in order to survive, creates a barrier that is becoming increasingly difficult to penetrate for the lions who want to move between the Serengeti and the Ngorongoro Crater. Thus the crater has become more and more isolated, with inbreeding as a result. This has led to reduced litter size and heightened susceptibility to diseases. In the long term, survival of the lion in the crater is threatened.

See map on page 10



When cattle is herded inside the crater, the lions show little interest – there is plenty of natural prey around.



A few hundred years ago the Maasai migrated from the North and settled in the Serengeti and Ngorongoro area. The vast grass plains were well suited for the cattle breeding Maasai.

When the Serengeti National Park was created in 1951, they were evicted. In 1959 the eastern part was made into a separate park, Ngorongoro Conservation Area, NCA, where the Maasai were permitted to live. The Maasai population has since grown tenfold and conflicts with predatory animals has become a large problem.

Maasai lifestyle, population growth and conflict with predators

Ngorongoro Conservation Area (NCA) is one of the world's first so-called "multi-use areas" – a structure that makes it possible for people to live in areas with environmental protection status. This means that the Maasai, who constitute about 98% of the population in the area have permission to live here and keep their cattle in the traditional way, but that agriculture is not allowed. The exception to the multi-use principle is the Ngorongoro crater, which is completely protected. Here the Maasai may water their livestock, but not settle.

When the NCA was established in 1959, about 7,000 Maasai lived here. In 2012, when they held the last census, the population had grown to 87,000 inhabitants, a natural increase because no immigration is allowed.

As pastoralists they live with their cattle, and some seasonal migration still takes place. The Maasai settlements are spread out in order to utilize more space for cattle, but do not constitute a complete barrier to the passing wildlife, including lions who can move quite close by at night.

The Maasai traditionally do not hunt, nor do they eat game, and they live side by side with the wildlife on the savannah. It is not uncommon to see a group of zebras graze close to or even in the midst of a herd of cows.

Lions occasionally do kill livestock. The NCA lions mainly hunt grazing cattle and only very rarely kill livestock in enclosures. Our studies have shown that lions account for about 20% of reported predator attacks on livestock.

Of the large predators – lion, leopard, hyena, cheetah and even the jackal – it is the lion who runs the greatest risk of being killed by the Maasai, despite the fact that the other predators account for most of the killed cattle.

That's because the other predators are shyer and better able to slip away after a cattle attack. A lion on the other hand often stays with the kill to guard it, and is more inclined to go on the defensive when challenged.

Maasai warriors kill lions both as revenge for cattle attacks and as a ritual element of their culture. To thrust the first or second spear into a lion, preferably a large male, is considered proof of superior courage. The lion has great symbolic value for the Maasai, and even though it is difficult to live with, they do not want to lose it completely.



- **Serengeti National Park** is a large protected area where the Maasai are not allowed to live. This is the habitat of perhaps the world's most important lion population.
- The adjacent **Ngorongoro Conservation Area (NCA)** is a so-called "multi use area" where the Maasai are allowed to live in the traditional way.
- **The Ngorongoro crater** in the NCA's eastern part is completely protected. Here the Maasai are not allowed to settle. The important – and since the 1970s well-researched – Ngorongoro crater lion population resides here, comprising only some 60 individuals today.

Both the Serengeti National Park and Ngorongoro Conservation Area are UNESCO World Heritage Sites.

Presentation of the project group

Project Manager



Ingela Jansson

KopeLion

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Ingela Jansson

Director Koronogoro People's Lion Initiative KopeLion, a collaborative project between lion researchers and the Maasai to promote coexistence between the Maasai and lions in Ngorongoro. The only lion researcher stationed year round in Ngorongoro.

Since 2006, Ingela has worked in the Serengeti Lion Project, under the guidance of Prof. Craig Packer, Director of the Lion Research Center, University of Minnesota (www.lionresearch.org). In 2011 she took over responsibility for the Ngorongoro research area and initiated KopeLion.

Biologist and PhD student since 2015 at the Department of Wildlife, Fishery and Environment at SLU (Swedish University of Agricultural Sciences) in Umeå. The main subject being "Co-existence between large carnivores and pastoral populations; interactions and effects, how coexistence can be promoted."

Master's degree in biology at Umeå University, specializing in ecology. Majoring in Scandinavian Brown Bear Project, "Habitat choices of bears in Dalscarlia".

Crew

Jan "Bobo" Lindblad jr

Photographer and documentary filmmaker

Selected film productions:

Three SVT documentaries with audience of millions:

- 2003 "The food that Devastates" 58 min. Documentary film from Indonesia, Brazil and Sweden about how consumption of palm oil and soy leads to disregarded human rights and devastation of valuable natural areas. Funded by WWF and SIDA.
- 1999 "With a Knack for Horses" 58 min. Documentary film from Sweden and USA on old and new horsemanship.
- 1993 "In the Pasture of Hyland" 29 min. Documentary film from India and Småland with Lennart Hyland and Åke Thambert, the founder of Indiska.

Other, relevant to the film

- "A Dreamer's Way" SF. Cinematographer for Arne Sucksdorff in Brazil (1994) in his unfinished last feature film.
- Advertising film, corporate films, reportage and vignettes for TV4, Swedish Games, AMF Pension, Volvo and SSAB.
- "The Bitter Fruit of Palm Oil" ("Pahitnya buah kelapa Sawit"). 30 min. educational film in Indonesian on the issue of palm oil directed at the affected population in Indonesia. For Wahli and the Swedish Society for Nature Conservation.
- School edition of "The Food that Devastates" for the WWF. A shortened version for grades 7-9 and high school.



Bobo Lindblad

Mette Lindblad

Biologist, graphic designer, documentary producer

Master's degree in Biology at Lund University, specializing in conservation and ecology. Conservation Biology (Professor Charles Krebs), wildlife management and forest fire science at UBC, the University of British Columbia, Canada. Trained as designer at Bergh's School of Communication.

Selected film productions:

Two SVT documentaries with audience of millions:

- 2003 "The food that devastates" 58 min. + "The Bitter Fruit of Palm Oil". See above.
- 1999 "With a Knack for Horses" 58 min. See above.

Other, relevant to the film

- Responsible for the mammalian part of PROVEPA, Vertebrados Proyecto del Paraguay, a SIDA financed project to map the biodiversity of Paraguay along with local expertise. Collaborative projects between the Natural History Museum in Sweden and Paraguay.
- Field work in anthropological study in Paraguay: "Aché indian Impact on Wildlife in the Rainforest Reserve Mbaracayu", where indians are permitted to hunt with traditional bow and arrow. Mapping of mammal occurrence using tracktraps and indians as field assistants. Professor Kim Hill, Arizona State University.
- Field work in Arctic Fox Project, Ammarnäs mountains. Professor Anders Angerbjörn, Stockholm University.
- Field work in Lynx Project in Hälsingland. Olof Liberg, associate professor SLU.



Mette Lindblad

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Advisory board



Paul Funston, PhD

Senior Director, Lion & Cheetah Program, Panthera
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Dr Paul Funston is an internationally recognized carnivore biologist with a keen interest in how ecosystems work and how they can be maintained in parallel with human development. Paul's doctoral dissertation focused on the relationship between predators and prey, and territorial behavior of the African lion in the Kruger National Park, South Africa. Paul has published over 50 scientific articles, many reports, two books and scripts for several documentary films.



Philipp Henschel, PhD

Survey coordinator, Lion Program, Panthera
www.panthera.org

Philipp is an internationally recognized expert on big cats and has published over ten articles and book chapters, and his extensive scientific research has been funded by various grants and awards from the German Academic Exchange Service, the Global Carnivore program, and the Society of Conservation Biology. Philipp's doctoral thesis is entitled "The Conservation Biology of the Leopard (*Panthera pardus*) in Gabon: status, threats and strategies for conservation".



Camilla Sandström, PhD

Associate Professor of Political Science at Umeå University
www.umu.se

Camilla's research includes three related topics: rural development, natural resources management and attitudes to animals and nature. Her research is conducted in the following projects: "Sustainable rural development – on whose terms?", "Future Forest", "HUNTING for Sustainability", "Indigenous rights and nature conservation" and "Adaptations of Sami reindeer husbandry to climate and social changes". Camilla is the co-author of 50 published scientific articles.



William Ole Seki

Community member at Kope Lion, Korongoro People's Lion Initiative. B.A. in Development Studies at Kampala International University, Uganda. William was born and raised in Ngorongoro and have returned there after his studies. In addition to various assignments, including the Pastoralist Council and the Ngorongoro Conservation Area Authority, he lives on his cattle. William has great knowledge of the social, economic and political dimensions of coexistence in the Ngorongoro Conservation Area. His areas of expertise are preservation, development and multiple land use.