



# **Effectiveness of the Mbirikani Predator Consolation Fund on Mitigating Human-Lion Conflict**

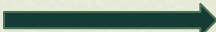
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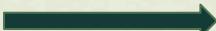
*Kilimanjaro Biodiversity Camp, Kajiado, Kenya*

**May 6th, 2024**

# Importance of Lions



TOURIST REVENUE



MANAGE LARGE HERBIVORE POPULATIONS



CONTROL OVERGRAZING FROM WILDLIFE



DECREASE SPREAD OF DISEASE



Photo by Luke Chavez

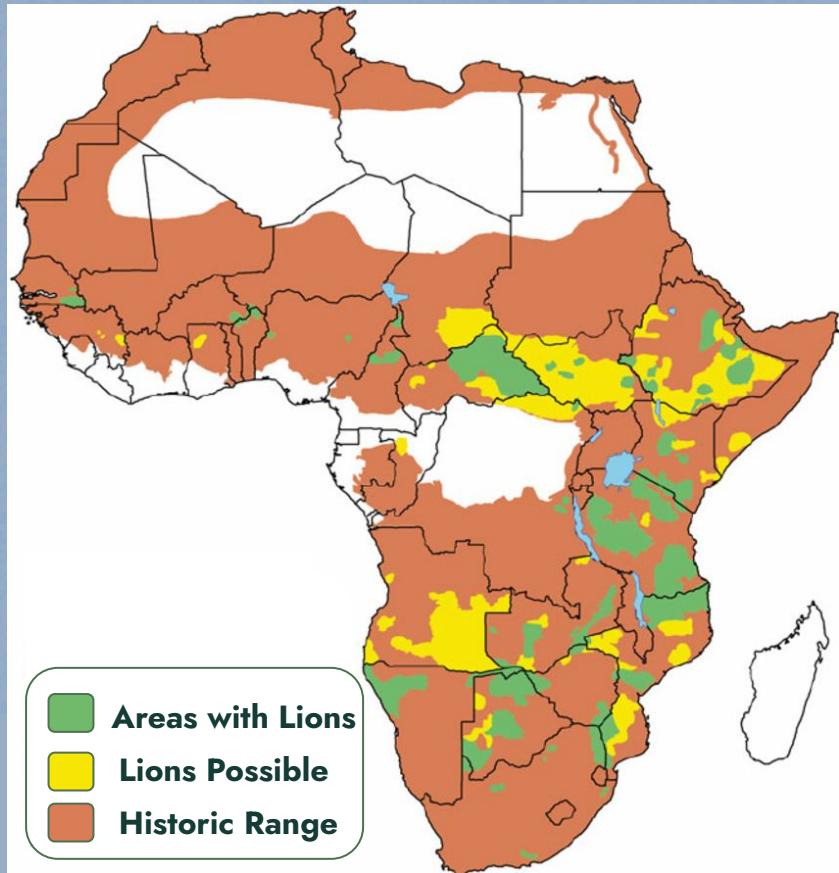
# Lion Population Trends

*Historic and present distribution of the lion  
*Panthera leo* in Africa<sup>1</sup>*



Photo by Luke Chavez

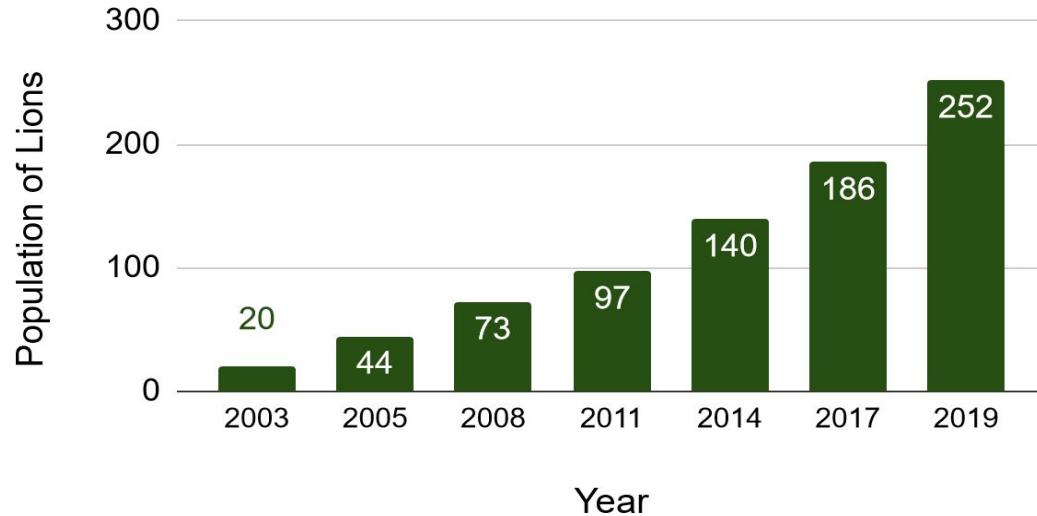
<sup>1</sup> The Decline in the Lion Population in Africa and Possible Mitigation Measures (Trinkel, M & Angelici, F. M., 2016).



- [Green square] Areas with Lions
- [Yellow square] Lions Possible
- [Orange square] Historic Range

# Lion Population Trends

Population of Lions vs. Year



*Lion Population in Amboseli ecosystem<sup>1</sup>*

# Research Objectives

1. Evaluate the **operational framework** of the MPCF
2. Analyze **effectiveness** of MPCF in mitigating human-lion conflicts
  - *Retaliatory attacks* on lions
  - Community *attitudes* towards lions
  - Community *tolerance* towards lion predation
3. Examine **challenges** and possible **improvements**



# **Mbirikani Predator Consolation Fund (MPCF) Goals**

**Established in 2003**

**Increase Lion Population**

**Reduce Retaliation**

**Improve Attitude & Tolerance**

# Programs Run By Big Life



**Consolation**



**Employment**



**Scholarships**

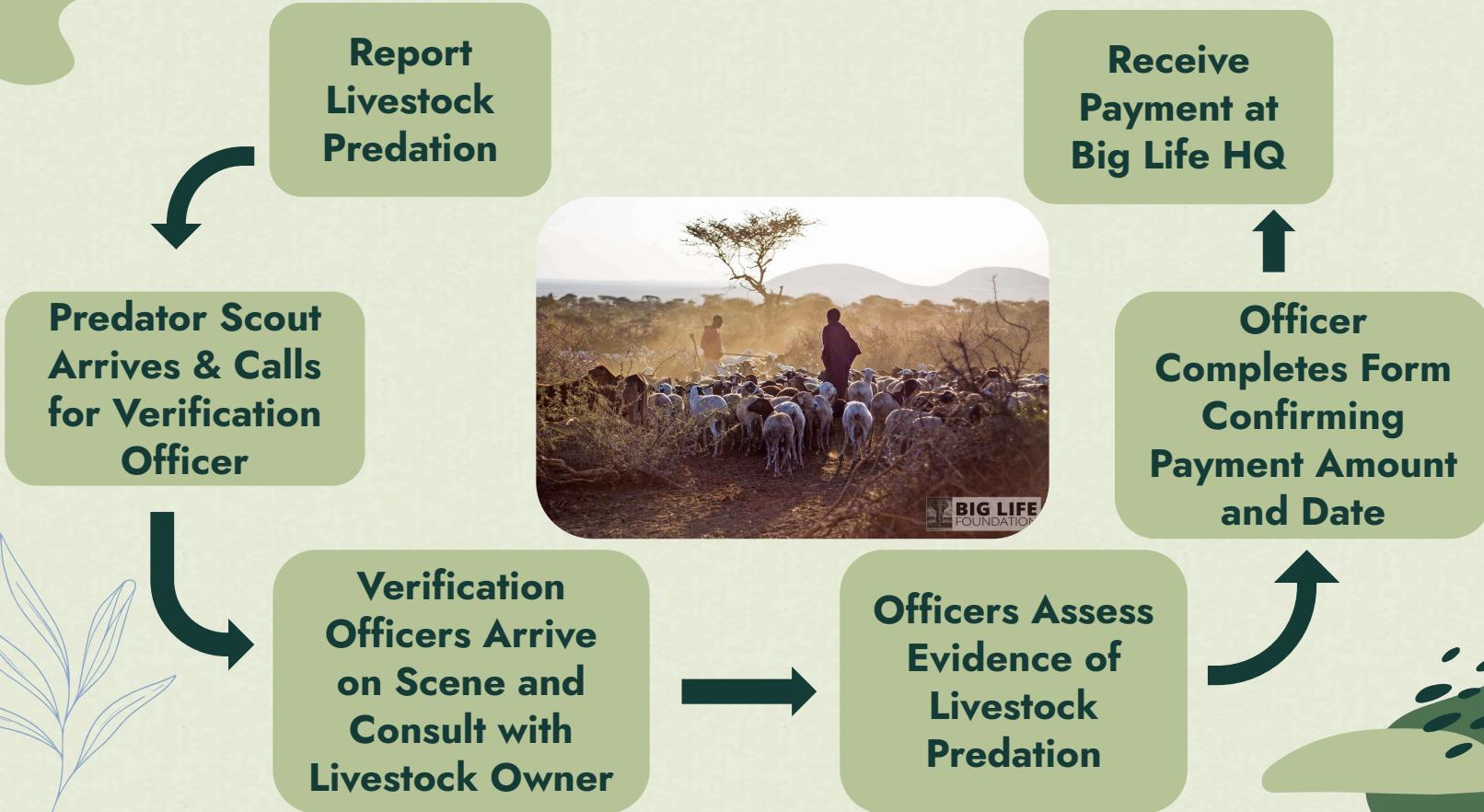


**Educational Outreach**



**Wildlife Monitoring  
and Intervention**

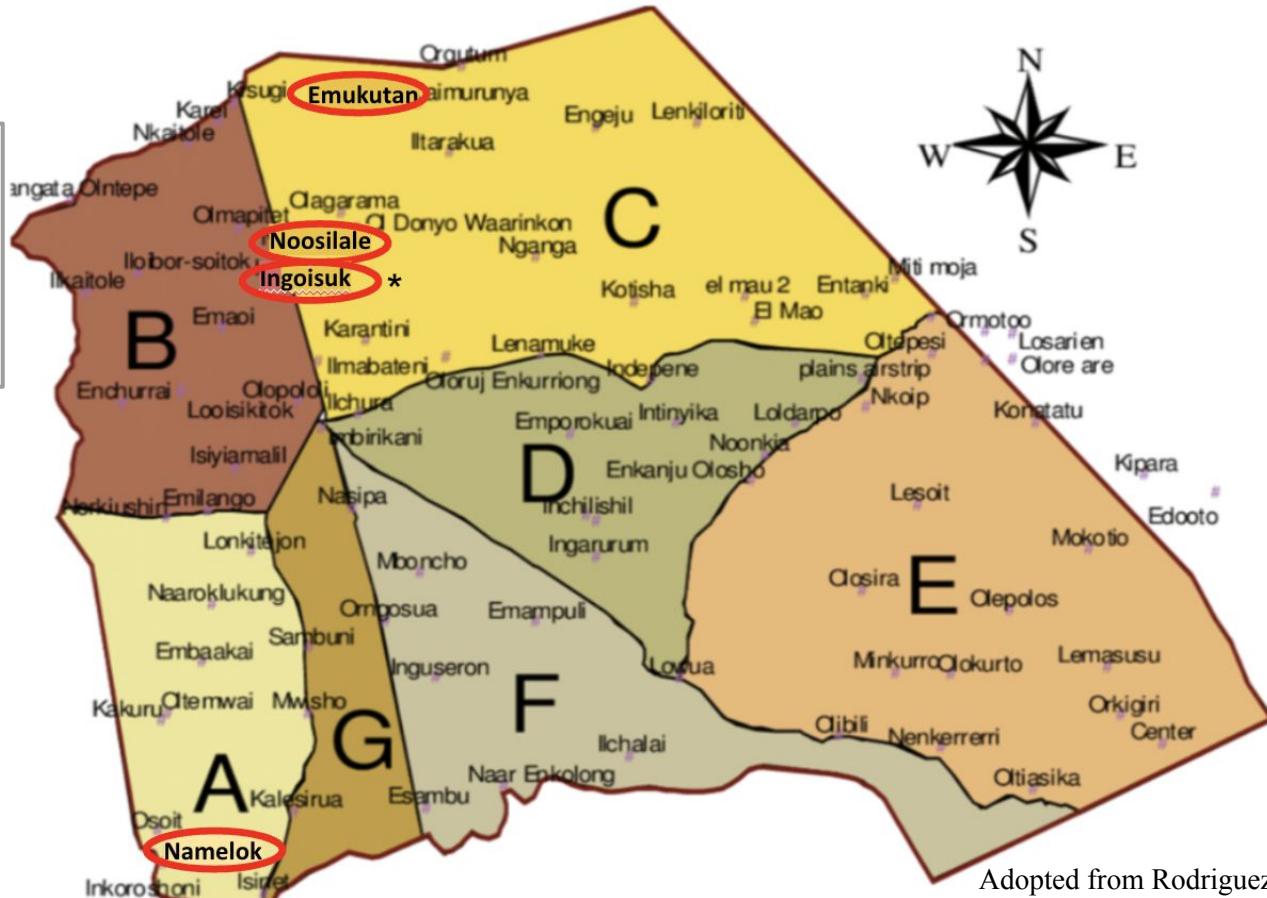
# MPCF Process



# MPCF Payment Amounts + Penalties

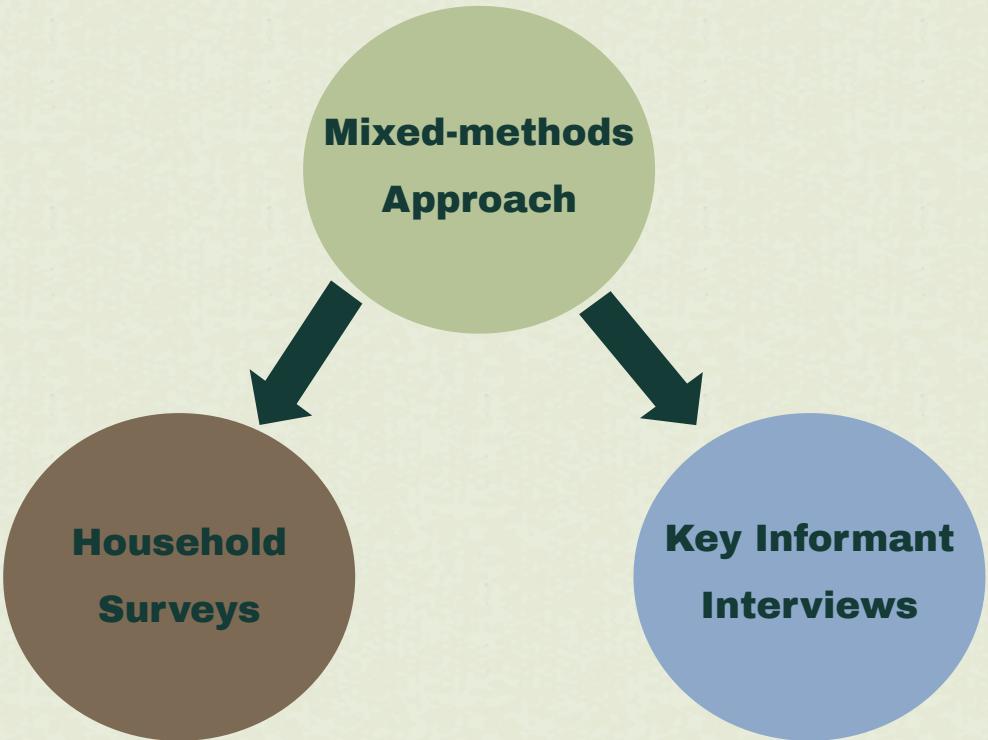
# Methodology: Study Site

1. Emukutan
2. Noosilale
3. Inkoisuk
4. Namelok



Adopted from Rodriguez, 2008

# Research Methods



# Sample Description

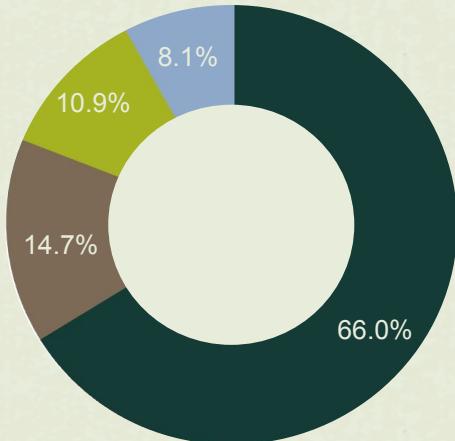
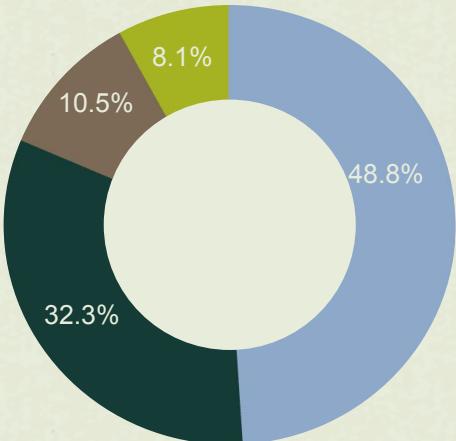
**285 Surveys**

**Gender**  
147 Male  
137 Female

**Age**  
49% were ages 18-35

**Livelihood**  
66% were pastoralists

- 18-35
- 36-49
- 50-60
- Above 60



- Casual Labor
- Pastoralism
- Agropastoralism
- Agriculture

# Ethical Considerations

Informed consent



Voluntary survey



Confidentiality



# Limitations

- ❖ Translation nuances
- ❖ Social biases
- ❖ Different phrasing of questions
- ❖ No comparable data



# Findings



# Retaliatory Attacks and Livestock Predation



**98%**  
Respondents  
*Retaliations have decreased since the start of MPCF*



**62%**  
Respondents

**Have experienced livestock predation in the last 12 months**



**70%**  
Respondents

**Lion attacks on livestock have increased in the past 5 years**

# Reasons for Decline in Retaliatory Attacks



**1. Consolation for Predation**



**2. Scholarship & Educational Aid**



**3. Employment Opportunities**



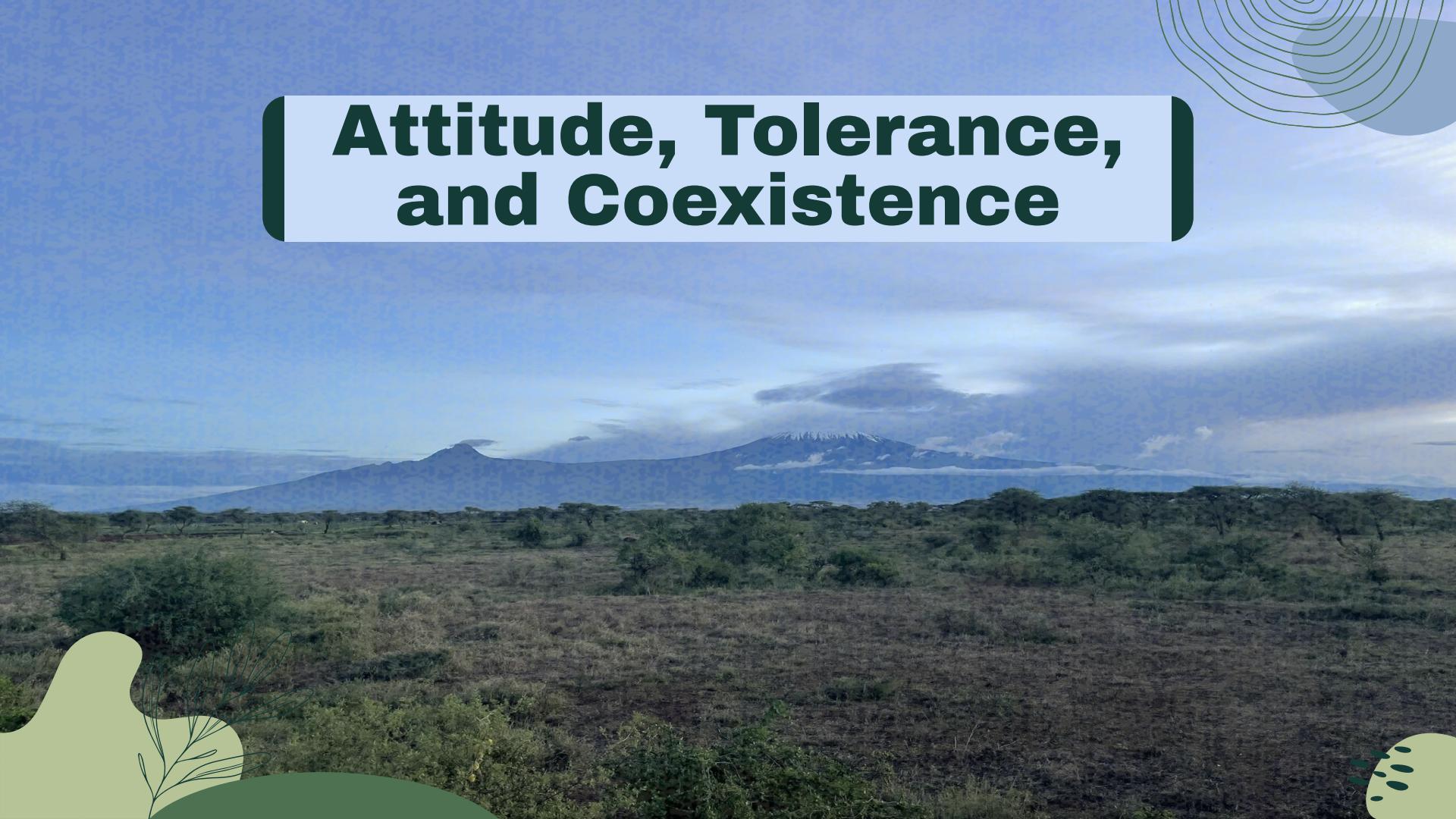
**4. Surveillance by Game Scouts**



**5. Perceptions on Value of Lions**

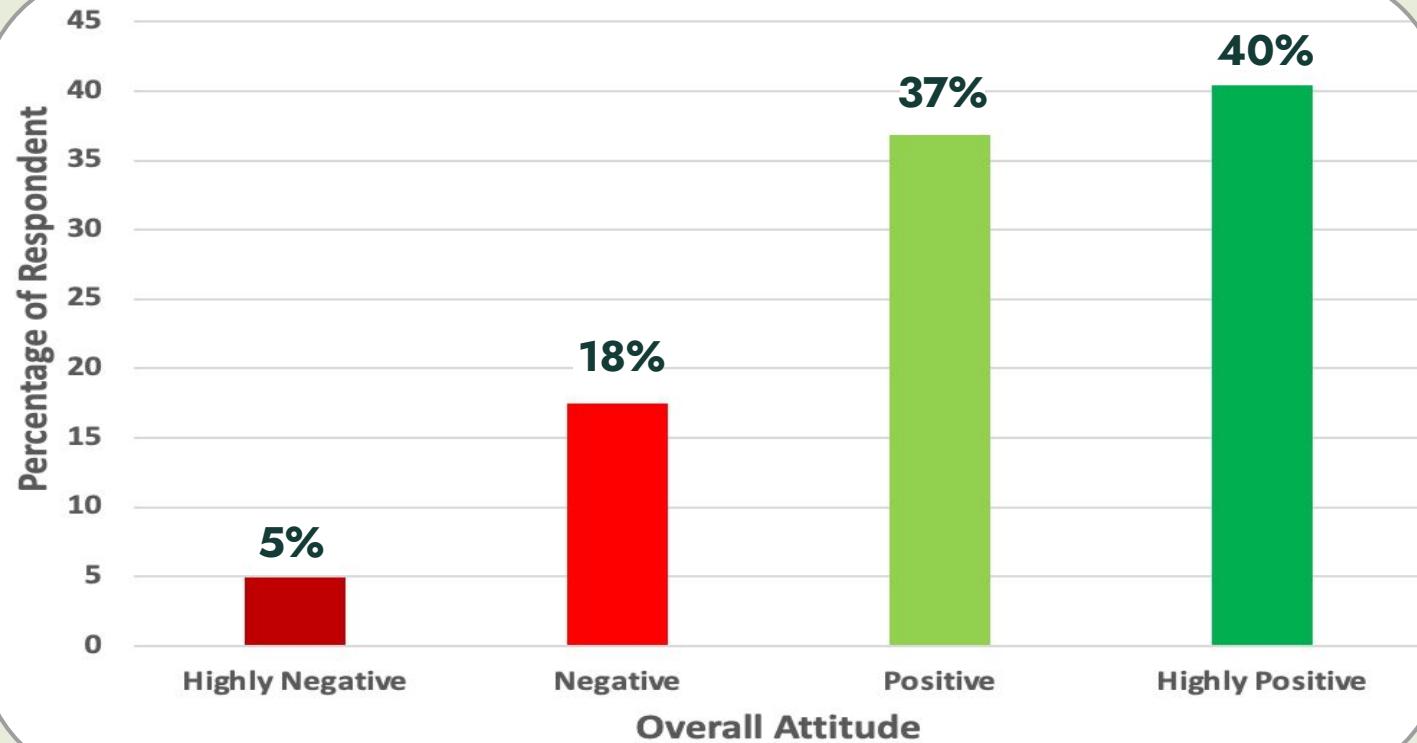


**6. Law Enforcement & Fines**

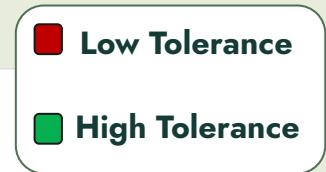


# **Attitude, Tolerance, and Coexistence**

# Overall Attitude Levels



# Attitude Breakdown



**Big Life cares  
more about  
lions**



**Report to Big  
Life if lion is  
seen**



-100%

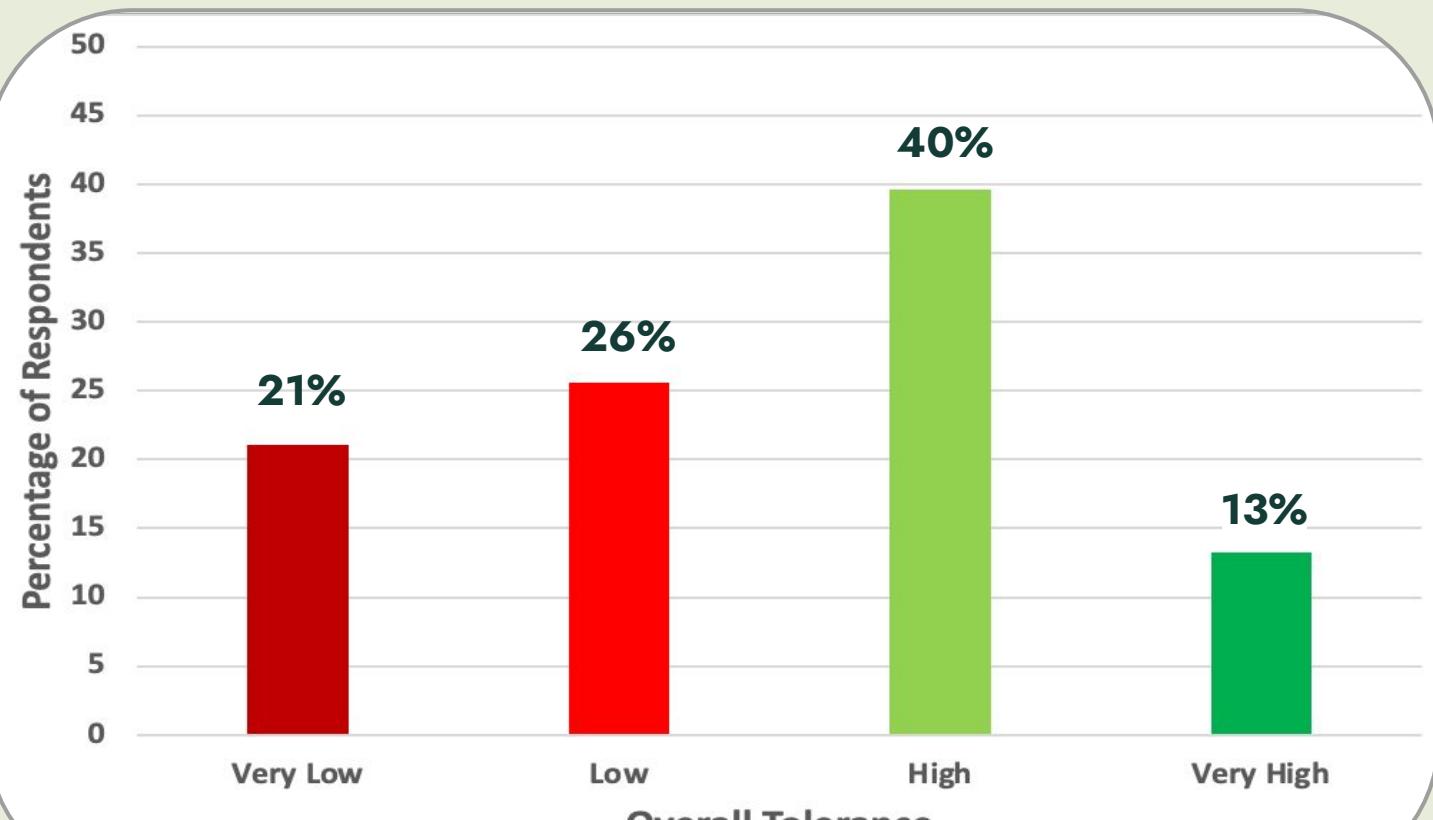
-50%

0%

50%

100%

# Overall Tolerance Levels



## Tolerance - 'High' Overall

- Overall tolerance level is 'high' - 52.9 percent of respondents report high/very high tolerance level
- Tolerance was similar across all villages, and both gender
- Primary and no education had significantly higher tolerance level than secondary and tertiary education

# Tolerance Breakdown

High Tolerance  
Low Tolerance

**Would have lions fenced off in National Parks**



**People in community would kill a lion when a human is killed**



**People in community would kill a lion when livestock is killed**



**Less worried about livestock predation because of MPCF**



-100%

-50%

0%

50%

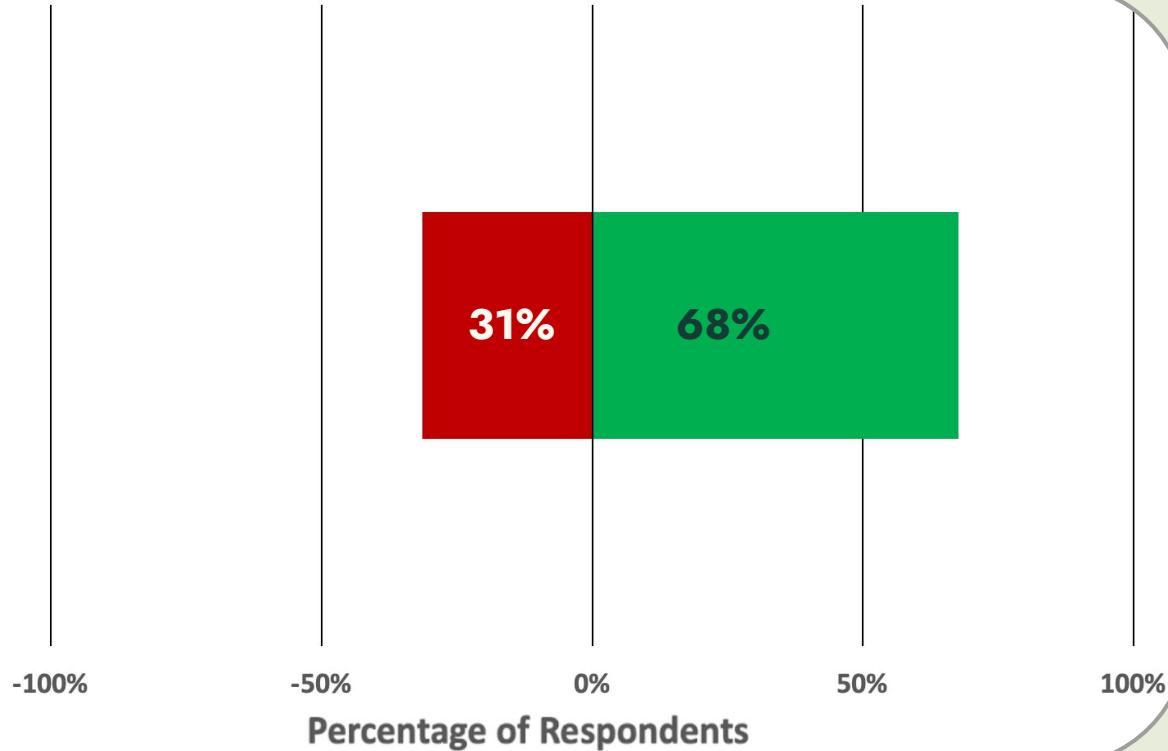
100%

# Effectiveness of MPCF with Tolerance

**People in the community are less worried about livestock predation because of MPCF**

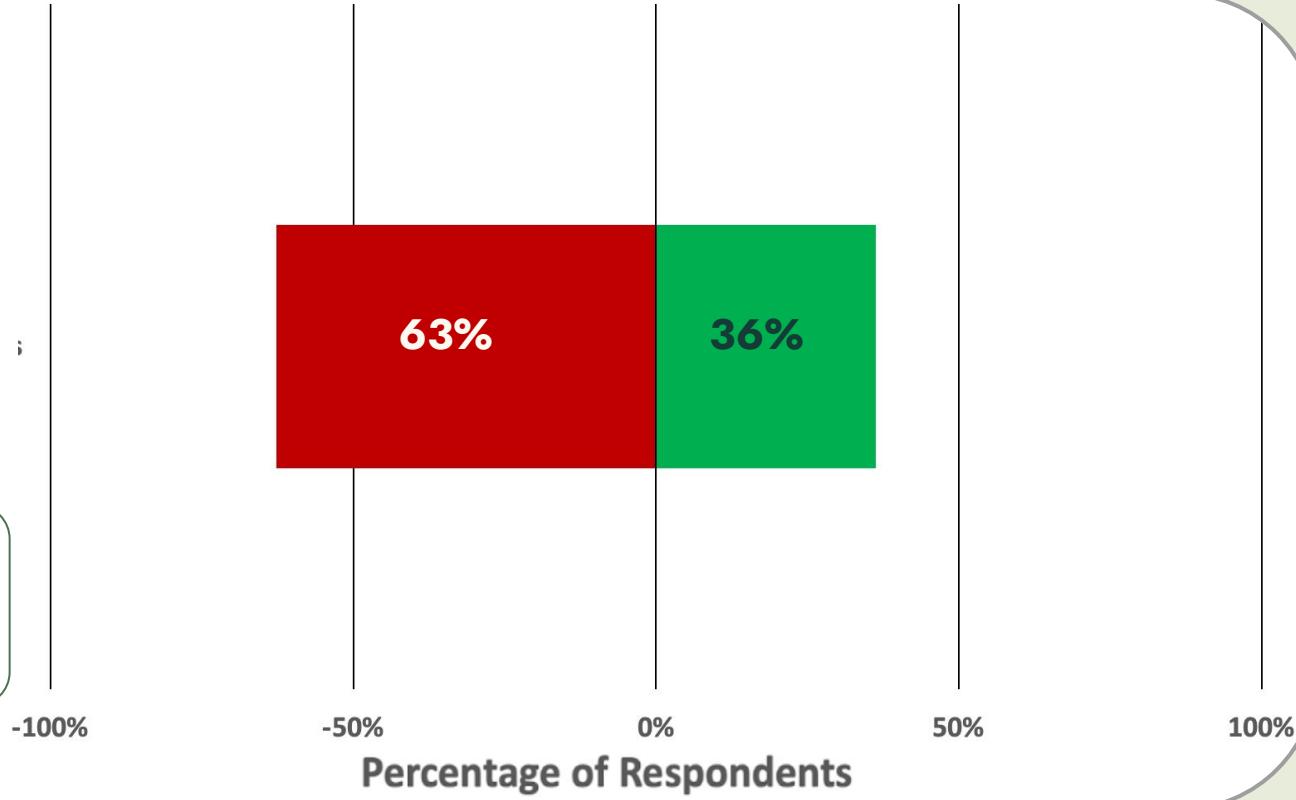
■ Low Tolerance

■ High Tolerance

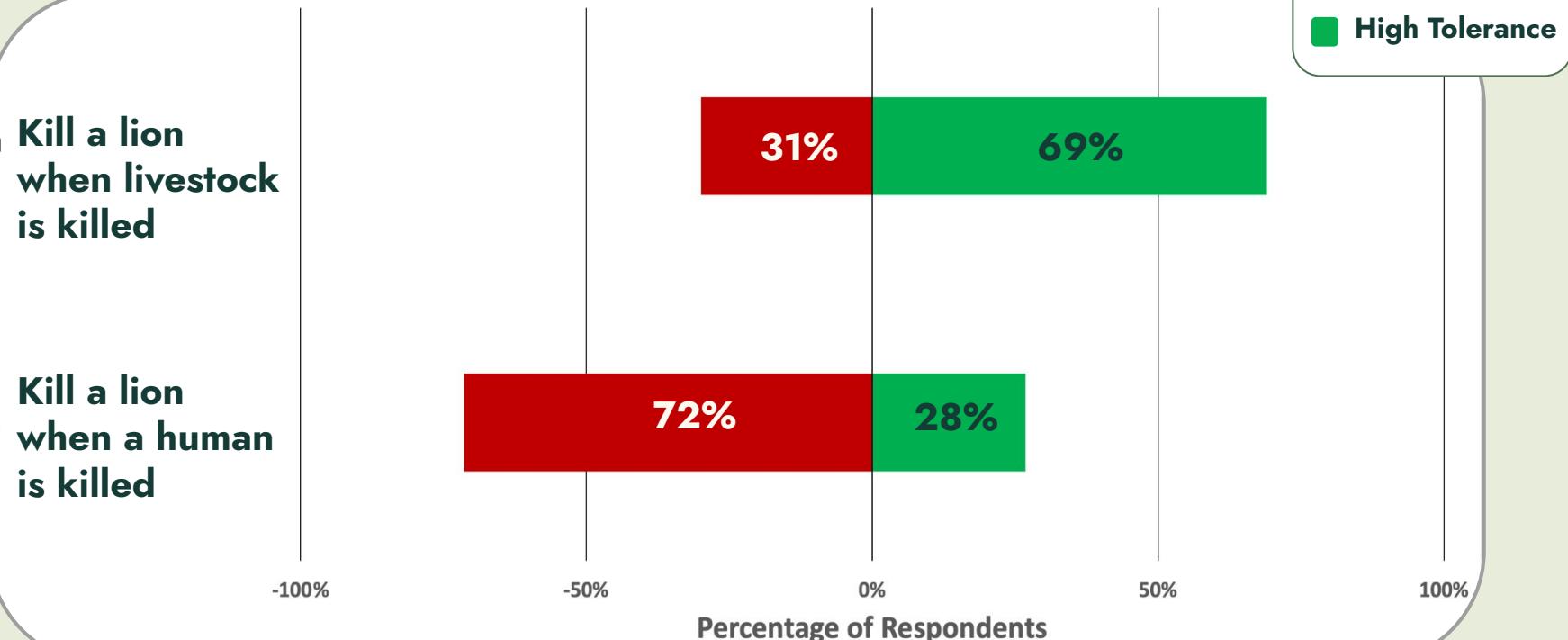


# Responses Indicating Low Tolerance

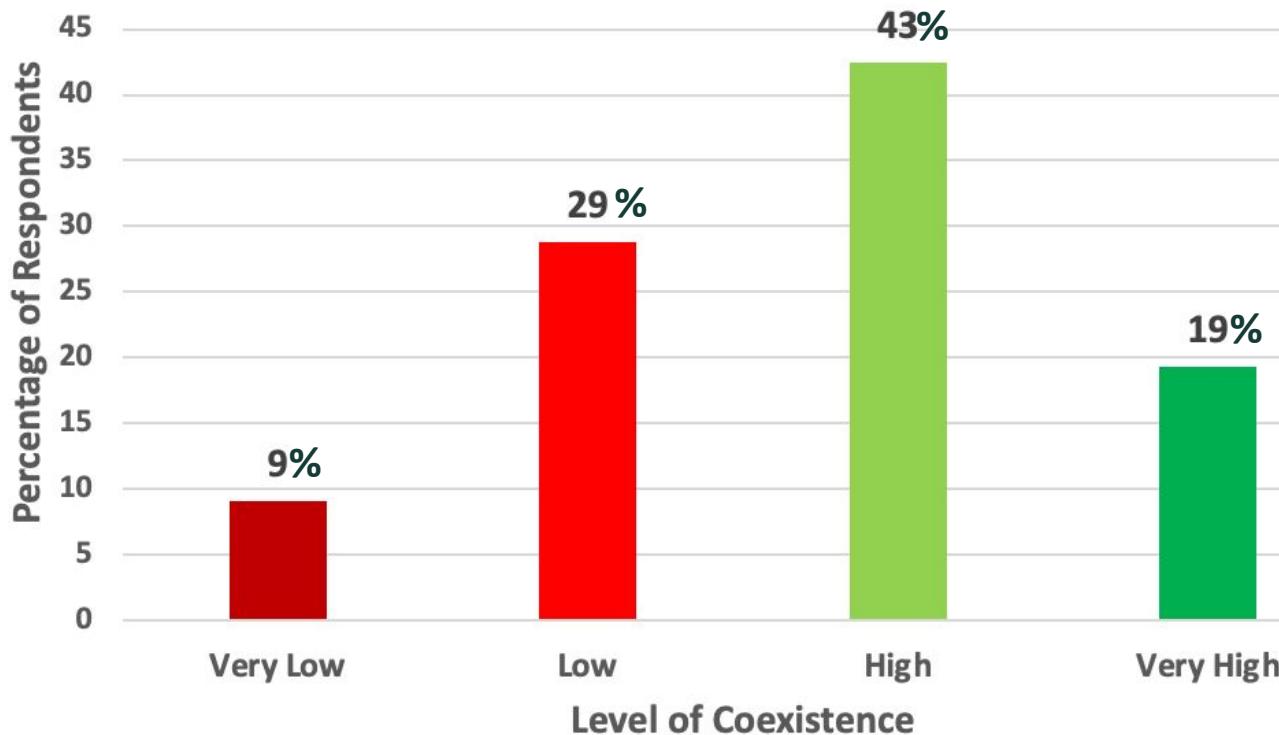
Lions should  
be fenced off  
in national  
parks



# The Threshold of Tolerance



# Overall Coexistence Levels



# Coexistence - 'High' overall

- Namelok had the lowest coexistence level among all villages
- Significantly higher level of coexistence with men than women



# MPCF Challenges at Community Level n=227



**Consolation amounts (57%)**



**Time taken to receive consolation (26%)**



**Lack of understanding of community needs (11%)**



**Conditional consolation fines (10%)**



**Disagreements over facts of attack (6%)**

# Challenges at Program Level



**Changing Maasai perceptions of lions**



**Increasing funding**



**Increasing scholarships**



**Mitigating verification disputes**

# Suggested Improvements from the Community

Respondents  
(n=285):

Agreement  
48%



## Response (n=131)

93%

Reduce response time

14%

Increase number of rangers

14%

Improve communication

6%

Ensure competency in employees



Agreement  
34%

## Verification (n=93)

63%

Improve accuracy of reports

25%

Reduce verification response time

24%

Better professionalism and fairness



## Processing (n=158)

68%

Shorten consolation processing period

38%

Increase consolation amount

Agreement  
58%

# Conclusions

- Community members have indicated a decrease in retaliatory attacks, which can be attributed to the incentives BLF offers
- Attitude, tolerance, & coexistence are all high
- Many grievances at the community level stem from miscommunications
- BLF is working on a holistic approach to lion conservation, the biggest limitation to the program remains funding

# Recommendations

1. Continue **predator consolation**
2. Continue **holistic approach** to lion conservation
3. Enhance **communication** with community members
4. Strengthen **partnerships** with other Amboseli-Tsavo NGOs (i.e., Born Free, Lion Guardians)
5. Further **educational outreach**
6. **Future research**

# Acknowledgements





Thank you for Listening!

**QUESTIONS?**



