CONSERVATION INCENTIVE PAYMENTS AS A MEANS OF MITIGATING HUMAN-LION CONFLICT IN THE NGORONGORO CONSERVATION AREA, TANZANIA

HUMAN-LION CONFLICT IN NGORONGORO
- The Ngorongoro Conservation Area (NCA), a 3200-square-mile multi-use protected area in northern Tanzania, forms part of the greater Serengeti ecosystem and is a critical site for lion conservation.
- The NCA is unique among Tanzanian protected areas because it is home to almost 100,000 people, the vast majority of whom are Maasai pastoralists who make their living raising cattle.
- In the NCA, human-wildlife conflict is a serious problem for both people and lions: people lose valuable livestock from lion attacks, and lions suffer from retaliatory killings.

Given the importance of pastoralism in Ngorongoro, the losses caused by lions and other carnivores constitute a significant burden on the NCA’s residents. The retaliation resulting from these losses has caused lions to disappear from much of their historical range within the NCA and has now largely isolated the Ngorongoro Crater population from the rest of the Serengeti ecosystem.

CONSERVATION INCENTIVE PAYMENTS (CIPs)
- In Africa, the main economic approach to mitigating human-carnivore conflicts—compensating livestock owners for their losses—has been fraught with challenges and has largely failed to mitigate the problem.
- CIPs are fundamentally different from compensation schemes because they do not reimburse people for their livestock losses. Instead, a CIP program allows people to earn benefits for achieving agreed-upon conservation goals, such as fostering an increase in carnivore numbers.
- By linking benefits to conservation, CIPs can transform carnivores from a financial burden on local people into a financial benefit to them. As a result, CIPs have the potential to improve attitudes towards carnivores and engage local people as conservation partners. CIPs have been effectively used to mitigate human-carnivore conflicts in Europe and Asia but have had only limited use in Africa.

Purpose of study
In light of the urgent need to mitigate human-lion conflict in the NCA, the failure of compensation schemes elsewhere, and the effectiveness of CIP programs in other contexts, we explored the feasibility of establishing a CIP program as a potential model for promoting the coexistence of people and lions in Ngorongoro.

Methods
- From June to September 2017, we conducted focus groups and in-depth interviews with members of four key stakeholder groups:
  1. The NCA Authority (the governmental agency that oversees the NCA)
  2. The Pastoral Council (advisory body representing the interests of local people)
  3. Tourism companies (lodge, safari guides) that operate in the NCA; and
  4. NCA residents from three villages within KopeLion’s study area with historically differing levels of human-lion conflict.
- With each stakeholder group, we obtained views on conservation and human-lion conflict in the NCA, opinions on the establishment of a lion CIP program, and preferences with respect to the design of such a program.
- In total, we conducted 14 focus groups and 15 interviews.
- We also analyzed the legal framework under which a CIP program would need to be implemented and consulted with experts and administrators of other programs.

Findings
Community attitudes towards lions
- While some people asserted that lions were dangerous and destructive animals, most expressed more nuanced views and acknowledged the inherent value of lions in Ngorongoro. “What benefit do we get from killing lions?” asked one warrior. “If a cow is taken and we kill the lion, we lose both.”
- Our results revealed that negative attitudes towards lions and other carnivores were largely a product of two beliefs. Specifically, many community members felt that:
  1. Wildlife have historically been prioritized over people by the NCA Authority; and
  2. Local people have not benefited sufficiently from wildlife. “Ngorongoro is our home, our land. It produces a lot of money, but we have not benefited enough from it.” –Elder

Linking benefits to conservation
- Several NCA Authority officials noted that, although the NCA Authority has provided considerable benefits to the NCA’s residents, those benefits have never been associated with conservation. As a result, most people do not see a link between benefits and wildlife. Changing this perception is a key challenge going forward.

Enthusiasm for incentive-based benefits
- Community members and NCA Authority officials alike expressed enthusiasm about establishing a CIP program.
  1. “This type of a program can be an inheritance to our children. We conserved the wildlife here in Ngorongoro, now our children can derive the benefits of these wildlife.” –Elder.
  2. “A CIP program is good because it provides measurable commitments on the part of the communities.” –NCA Authority official

Designing a potential CIP program
- We explored stakeholder views on four key issues relating to the design and operation of a CIP program: (1) village conservation commitments and methods for earning benefits; (2) the provision and management of program benefits; (3) program funding; and (4) program administration.

Focus group participants were supportive of using camera traps and other tools as a means of verifying the presence of lions on village land and determining the benefits earned under a CIP program.

- Stakeholders observed that one of the greatest benefits of a CIP program would be improved community-NCA Authority relations. As one elder explained, a CIP program would “come with the possibility of negotiations and discussions with the NCA Authority, which is itself a benefit.”
- NCA Authority officials were supportive of the NCA funding a pilot phase of a CIP program. As one official noted, “You need to spend money to solve the problem.”

One potential benefit of a CIP program that received widespread support was the provision of access to markets, whereby the program would facilitate transportation of cattle to cities in exchange for a village achieving agreed-upon conservation goals.

Next steps
- Review of findings and recommendations to all stakeholder groups.
- Presentation to Tanzania Association of Tour Operators and survey of tourists to assess potential sources of long-term program funding.
- Three-day joint-stakeholder workshop to review findings and recommendations and collaboratively develop the structure of a potential lion CIP program in the NCA through discussion and joint-decision-making exercises.

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