

Lion numbers could improve with new sustainable hunting quotas

December 16 2013



This image shows lions in the Serengeti National Park, Tanzania. Credit: Nils Bunnefeld

Researchers have devised a simple and reliable way to set sustainable quotas for hunting lions, to help lion populations to grow, in a new study.

Trophy hunting occurs in 9 of the 28 African countries that have wild populations of lions. Hunting is legal in these countries but quotas are set

to restrict the numbers of lions that can be killed.

Whilst such hunting is controversial, evidence suggests that it can help [conservation](#) efforts because it generates substantial revenue. Hunters can pay up to US\$125,000 to shoot a male [lion](#). This enables governments to leave wilderness areas as habitats for wildlife, rather than turning the land over for other uses such as farming.

However, there is much uncertainty over the sustainability of quotas, as conservation authorities lack reliable information on the total number of lions inhabiting their countries. This has contributed to a decline in the number of lions across Africa, from an estimated 100,000 fifty years ago to roughly 30,000 today.

In a new study in the journal *Proceedings of the National Academy of Sciences*, conservation scientists from Imperial College London and the Universities of Stirling and Cape Town devised a method that should ensure more sustainable hunting quotas. They created an algorithm that uses data about how long it takes to find and shoot a lion in a given area to estimate how many adult males can be hunted, whilst allowing the lion population to grow.

The researchers modelled the effects of introducing their new method for setting hunting quotas in a heavily depleted lion [population](#) and found that the number of [adult males](#) would grow from around 38 to 100 individuals in 30 years. During the same time, the sustainable quota could increase from 15 to 22 lions, thus benefiting hunters.

Professor E.J. Milner-Gulland, one of the authors of the research from the Department of Life Sciences at Imperial College London, said: "Many people don't feel happy about the idea of hunting animals for sport, especially animals that are as beautiful and impressive as lions. However, in some areas, the money that comes in from hunting is what

enables the land to be set aside for wildlife and this provides the lions with a home.

"As conservation scientists, we want to ensure that populations of lions can thrive. Our model shows that it is possible for lion numbers to grow even where there is hunting, but this only works if you set quotas for [hunting](#) at the right level, and in many places this is not happening at the moment. Our new method for setting quotas relies on information that is easy for governments to get hold of and it should be simple for them to use. It could also be used to set reliable quotas for other animals which are hunted by searching for individuals, such as wild sheep or deer. The next step is for us to test the method in the field and if it proves successful, we hope it can be widely adopted."

More information: "Data-poor management of African lion hunting using a relative index of abundance," *Proceedings of the National Academy of Sciences*, 16 December 2013.
www.pnas.org/cgi/doi/10.1073/pnas.1219615110

Provided by Imperial College London

Citation: Lion numbers could improve with new sustainable hunting quotas (2013, December 16) retrieved 24 April 2024 from <https://phys.org/news/2013-12-lion-sustainable-quotas.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.