



Position Statement

The Culling of the Mauritius Fruit Bat *Pteropus niger*



IUCN SPECIES SURVIVAL COMMISSION





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IUCN SSC Position Statement on the Culling of the Mauritius Fruit Bat *Pteropus niger*

The Species Survival Commission (SSC) of the International Union for Conservation of Nature (IUCN) is aware that the Government of Mauritius is implementing its third cull of the Mauritius Fruit Bat *Pteropus niger* in response to actual and perceived damage they cause to commercial and backyard fruit crops.

Mounting pressure from the public and orchard owners has been key in influencing the Government to act by implementing mass culls of the bats in 2015 and 2016. As a globally threatened and endemic species, the decisions for mass culls is of great concern to the IUCN SSC and conservation organizations worldwide since a reduction in population increases the bat's risk of extinction. In July 2018, a reassessment of the Mauritius Fruit Bat for The IUCN Red List of Threatened Species was published and, using the best available evidence, the species had moved to a higher threat category from Vulnerable to Endangered.

The 2015 and 2016 culls were the primary cause of the population decline, but the bats are also threatened by elevated levels of illegal hunting and killing associated with the culls, accidental deaths on power lines, and ongoing degradation and loss of natural habitats. They are also highly vulnerable to stochastic events such as cyclones. The population has been reduced to 60-65,000 individuals since 2015; the current additional cull of a proposed 20% of the population is of grave concern since a further reduction in the bat's population could trigger an up-listing to Critically Endangered.

Of note is the need for population viability analyses (PVA) which can guide management by identifying which elements of a species' biology, behaviour and environment have most influence on its long-term well-being, leading to better targeted action. Detailed information on the Mauritius Fruit Bat's life history, demography, and human-caused mortality are needed for informative

analyses. PVA can also help us understand "minimum viable population sizes" (MVPs), or the population sizes needed to prevent extinction under particular circumstances or management approaches. However, the SSC recommends against the adoption of MVPs as population size targets. Target population sizes should include broader consideration of issues such as the roles played by species in the integrity of natural systems. These are likely to require greater levels of abundance than those prescribed solely to prevent extinction. Population size targets are ideally set as part of a comprehensive and cohesive conservation strategy, underpinned by detailed understanding of the species and its environment.

It is appreciated that commercial and backyard growers are concerned about loss of fruit and damage to the trees by the bats and that there are strong public opinions associated with the noise and mess they create. However, IUCN remains committed to providing expertise and assistance to the Government of Mauritius to find non-lethal solutions to crop damage and amenity loss in accord with the 2016 Resolution (WCC-2016-Res-019) "Protection of wild bats from culling programmes" overwhelmingly adopted by IUCN members (94% of national and international NGO'S and 97% of governments). The Resolution:

"...urges governments to seek non-lethal solutions/mitigation measures to conflicts between humans and bats, as part of a strategy that combines scientific research on bat ecology and ecosystem services, as well as on life-history characteristics that support population models; and urges governments to not authorise or sanction culls of wild bat populations unless there is peer reviewed evidence of the significant impact of bats on food security or public health, all non-lethal solutions have been exhausted, there is clear scientific evidence and opinion that a cull will resolve the issue and not threaten species survival, and any decision to authorise a cull is underpinned by rigorous scientific evidence regarding the population structure and dynamics of the species and understanding of the impact of the proposed cull".

The mitigation of crop-damage by the bats needs engagement by all relevant stakeholders – the fruit growers and traders, netting importers and distributors, researchers, and government agricultural officers – who can agree on and work together to achieve a long-term and sustainable strategy. To this end, the SSC has been pleased to contribute to the initiative, "The people, bats and fruit industry of Mauritius: a process towards a common solution", developed in 2017. This initiative emphasizes the importance of allowing stakeholders and members of the public on the

island an opportunity to express their ideas / concerns, while also ensuring experts are on hand to provide advice in the process of jointly identifying effective and realistic solutions to resolve the challenge of damage to fruit trees by bats.

Through a series of key events which have engaged experts with the relevant experience and understanding of this issue, practical recommendations are now available (and will be supplemented by others currently in development) which focus on e.g., reducing the damage of the fruit bats through netting and improved orchard management (with the aim of improving fruit production and export markets), behaviour change, and identifying the research needed to fill the current gaps in knowledge around the topic of human-bat conflict (please refer to the Annex for more detail).

A third meeting is planned for early 2019, which aims to bring together stakeholders together with representatives from the general public, tourism sector, the media, and others who are affected by, and influence, the discourse and decision-making around Mauritius Fruit Bats. This meeting seeks to actively encourage an open dialogue for opinions to be expressed, information to be provided and potential resolutions to be proposed.

IUCN respectfully appeals to the Mauritian Government to halt culling of the Mauritius Fruit Bat and make a strong commitment to the search for effective non-lethal strategies to address the conflict between the Mauritius Fruit Bat and fruit growers, through adopting and implementing recommendations and research strategies arising from the workshops it has sponsored under the "The people, bats and fruit industry of Mauritius" initiative. This has been a hugely valuable collaborative effort and, although the issue is a challenging one, there is clear commitment across diverse sectors to a lasting solution. We reiterate the willingness of our experts in the SSC network to help in moving towards a long-term and sustainable coexistence with the fruit bats.

ANNEX

The **Net Benefits Stakeholder Workshop** on netting and management of fruit bat damage to orchards was held in August 2017 and was hosted by the Ministry of Agro-Industry and Food Security via its Food and Agricultural Research Extension Institute (FAREI). Participants were drawn from small orchard owners, commercial orchard managers, netting importers and distributors extension officers and research staff from FAREI, researchers and staff of National Parks and Conservation Service (NPCS) and Mauritian Wildlife Foundation (MWF), fruit exporters, and fruit traders. In addition to the Mauritian participants, five specialists from overseas participated: lychee farmers with successful experience in netting against bats in Australia, an expert in fruit bat ecology and bat damage prevention from Thailand, and human-wildlife conflict experts from the IUCN SSC Task Force on Human Wildlife Conflict, and Chester Zoo.

The workshop comprised presentations, site visits and breakout sessions wherein working groups discussed key issues and strategies for reducing damage by bats and improving lychee productivity more generally. Resulting recommendations focused on:

1. Nets and netting – provision of white, 40% UV-treated small mesh-size nets and assistance with materials/construction of net frames.
2. Pruning of fruit trees – to a maximum of 4 m (ideally 2 m).
3. Equipment and training – mechanisms for assistance with equipment hire or purchase needed.
4. Model orchards (of two types):
 - a) existing orchards modified to improve production and ease of netting; and
 - b) new orchards planted and managed to provide optimum production, ease of harvest and netting.
5. Development of export markets for tropical fruit – recognizing that to be competitive in overseas markets crops must be ethically sourced.
6. Backyard growers – behaviour change (uptake of net use) requires peer-behaviour incentive measures e.g., social marketing).
7. Continued dialogue and collaborative action.

The full report of the Net Benefits Stakeholder Workshop can be found at <http://www.mauritian-wildlife.org/application/templates/default/images/gallery/Mauritius%20Fruit%20Bat/Netting%20Workshop%20Report%20Aug17%20Combined%20Final%20draft..pdf>

The **Mauritius Fruit Bat Research Strategy Workshop** was hosted by the National Parks and Conservation Service (NPCS) of the Ministry of Agro-Industry and Food Security in May 2018. This workshop was prepared and planned jointly by NPCS, the IUCN SSC Human-Wildlife Conflict Task Force, the IUCN SSC Bat Specialist Group, the Mauritian Wildlife Foundation (MWF) and Chester Zoo. Mauritian and international experts from a range of disciplines gathered to assess the state of knowledge on the human-bat conflict topic and discussed aspects including bat ecology, behaviour and conservation, as well as the social, political, agronomic and economic components of this issue.

Participants worked together to identify gaps in current knowledge needed to found sustainable coexistence of people and fruit bats on Mauritius. Research questions to fill these gaps were specified and prioritized by consensus and will form the basis of a National Research Strategy that outlines the key research topics and priorities areas whilst placing them into the context of national biodiversity and agricultural strategies and policies.

The full report of the Mauritius Fruit Bat Research Strategy Workshop can be found at <http://www.mauritian-wildlife.org/application/templates/default/images/gallery/Mauritius%20Fruit%20Bat/Mauritius%20Fruit%20Bat%20Research%20Strategy%20Workshop%20FINAL.pdf>