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Environment
Institute of
Australia and
New Zealand
SOUTH EAST QLD DIVISION

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Committee Secretariat
PO Box 6021
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Re: Comments on the Parliamentary inquiry into Flying-foxes

Thank you for giving the opportunity for the Environment Institute of Australia and New Zealand, South East Queensland Division (EIANZ-SEQ) to make a submission about the management of nationally protected flying-foxes in the eastern states of Australia.

EIANZ is a non-profit, multi-disciplinary association of environmental practitioners. Our membership is represented by a diverse range of technical disciplines including scientists (including ecological consultants), policy makers, engineers, lawyers and economists. The South-East Queensland Division is the largest in Australasia with over 30% of the organisations membership.

EIANZ has developed and implemented the Certified Environmental Practitioner Scheme (CEnvP) (www.cenvp.org), to assess and certify competent experienced environmental practitioners working in government, industry, academia and the community. This includes specialist competencies such as Ecology, Impact Assessment, Contaminated Lands and Climate Change. EIANZ is an advocate for research, policy, environmental assessment and monitoring investigations and reports being certified by suitably qualified and experienced persons for completeness and scientific rigour. One of the ways of recognising a suitably qualified practitioner is through their membership of, and certification by, an organisation that holds practitioners accountable to a code of ethics and professional conduct, such as the EIANZ.

EIANZ-SEQ congratulates the Department for commencing this inquiry and supports the intention of the review to strengthen conservation outcomes for flying-foxes (FF) and ensures that the current regulation framework aligns with modern and best practice for managing FF across Australia, while reducing conflict with humans.

Term of Reference 1: The circumstances and process by which flying-foxes are listed and delisted as threatened species at both the state and Commonwealth levels.

Currently only two FF species occurring in Queensland are listed as threatened. The Grey-Headed Flying-fox (GHFF) is listed as Vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (the Act), and Vulnerable under the Nature Conservation Act 1992. Similarly, the Spectacled Flying-fox (SFF) is also listed as Vulnerable under Commonwealth and Queensland legislation.

There are many factors than can influence the risk of extinction of a species and thus its conservation status. Factors such as the number of individuals remaining, overall increase or decrease in the population over time, breeding success rates, change in geographic distribution and known threats should be analysed in a scientific manner prior to advising on the conservation status of a species.

The issue of threat classification and management for GHFF and SFF has been controversial, due both to the perceived extent and contraction of the populations and the interactions FF continue to have with the orchard industry and other human activities.

For a species to be found eligible to be removed from the threatened species list, evidence must be provided to demonstrate that the species no longer meets any of the five criteria for listing and is therefore not considered threatened with extinction. Scientific evidence must also demonstrate that the removal of conservation management programs for the species as a result of it being removed from the list of threatened species would not result in the species becoming eligible for listing in the foreseeable future.

The 2015 CSIRO report on the Status and Trends of Australia's EPBC-listed flying-foxes estimated that the population of GHFF has declined slightly since 2005. Given that the known threats to the species continue to be threats and that new threats such as extreme heat events as a result of climate change are emerging; the report suggests that the conservation status of the GHFF should at the very least remain as Vulnerable.

The National Flying-fox Monitoring Program established a reliable benchmark on the size of flying-fox populations in 2013 and monitors population trends in subsequent years. However, the program is likely to show broad and long term trends and early declines can be missed. Trends are unlikely to be detectable within a 10-year time-frame given the level of error in counts undertaken by volunteers and non-government organisations. While the collection of this data is important, the determination of conservation status should not rely solely upon the result of the national monitoring program. Rather, additional scientific investigation must be provided. In addition, it is not possible to identify the cause of any decline, or address whether the Commonwealth's policy is achieving its stated aim to ensure that there are no significant impacts on these EPBC Act listed flying-fox species, due to actions to manage their camps and foraging resources.

Recommendations

While the process for listing a new species under the NC Act has not been reviewed since 2006, the EPBC Act process has been subject to previous review, first in 2009 in The Australian Environment Act – Report of the Independent Review of the EPBC Act (Hawke 2009), and then again in the Major Project Development Assessment Processes report (Productivity Commission 2013).

EIANZ-SEQ recognises that a streamlined process can be achieved between the two legislations, but emphasis that national and international good practice in threatened species listing should dictate that formal, legislated review processes be in place. The Species Technical Committee should still assess listing applications with input from scientific experts, supported by scientific and up-to-date data.

The National Flying-fox Monitoring Program should continue and the methodology be reviewed to better contribute to this data collection around FF movement. There have been marked variations in population estimates from this national census, indicating limitations in predicting the trajectory of the population. A review and improvement of this program to help with the species recovery should be undertaken.

Term of Reference 2: The interaction between the State and Commonwealth regulatory frameworks

Flying-fox roosts and foraging habitat often exist across multiple jurisdictions, local government areas and indeed the States, and management of any one site can involve various landholders, councils, animal welfare organisations and State environmental departments. Under the current legislation, the response to the complex issue of managing flying-fox interactions with humans involves both State and Commonwealth governments but the implementation of management actions seems to have been entirely thrust upon local councils. EIANZ-SEQ believes that the long-term protection of these species should be addressed at a national level with specific input from each relevant state, as this species travel across jurisdictions and their recovery is likely to require a national approach.

Since early 2013, local governments in Queensland have an 'as-of-right' authority to manage FF roosts in defined urban areas. Management of FF roosts in other areas or by non-council entities requires a permit from the Queensland DEHP.

It is important to recognise that any management decisions made by one landholder may impact on another, and so decisions need to be made with consideration of these potential impacts. Consequently, it is essential to have overarching legislation that would ensure the long-term protection of a threatened species and manage potential cumulative impacts.

In December 2014, the Australian Government drafted the camp management for GHFF and the SFF – Draft EPBC Act Policy Statement. Within this policy statement, the GHFF and SFF were both considered to exist as single national populations. This makes national coordination important in managing these species. The intent of this policy was to ensure that there are no significant impacts on these EPBC Act listed

flying-fox species resulting from actions to manage their camps. The policy describes which actions at camps of EPBC Act listed flying-foxes are likely to have a significant impact. While the policy is still in draft, EIANZ-SEQ sees potential in using this document to create a regulatory framework that would be implemented by all relevant states.

Recommendations

EIANZ-SEQ is supportive of the consultative approach with scientists and experts in the field and encourages the development of appropriate regulatory frameworks for the conservation of the FF. This targeted approach should be extended to broader environmental practitioners (such as environmental impact assessment specialists and CEnvPs) who administer the legislation on behalf of proponents and engage ecological consultants. EIANZ-SEQ has a diverse membership that includes ecological consultants, environmental planners and environmental impact specialists and would be well placed to provide targeted input and advice through the subsequent stages of the review.

EIANZ-SEQ recommends that the Commonwealth, state and territory governments prioritise their work towards reducing duplication and inconsistency between the EPBC Act and state lists of threatened species, consistent with the aim of achieving a harmonised national list capable of accommodating regional or geographic listings within or across individual states. EIANZ-SEQ further recommends that the Commonwealth, state and territory governments work to establish uniform and integrated processes for the future listing of threatened species and communities.

We also note that FF act as a single, migratory and transient population and it is essential that the Commonwealth maintains the highest level of involvement to oversee the cumulative impacts on threatened species.

Term of reference 3 - Strategic approaches to managing species at a regional scale

FF remains part of our environment and it is important to balance the concerns of human residents and the protection of FF and their habitat. A number of councils have developed a Regional FF Management Strategy and Statement of Management Intent that outlines councils' approach to FF management. Councils' management of FF and their camps focusses on addressing lifestyle impacts experienced by human residents caused by FF in the immediate vicinity of their homes or businesses while enabling the conservation of, and co-existence with, FF. To reduce the risk of spreading conflict to other areas, any management activities should be aimed at minimising interference with FF and their roosts.

Management strategies for urban camps need to be developed at a range of spatial scales including local, state, range-wide and national, as individual FF visit a number of roost sites that may come under the jurisdiction and responsibility of various governments, conservation agencies and landholders.

The often-erratic changes in camp size reflect the irregular nature of local food resources and the migratory responses of FF. All species move long distances as they

track flowering and fruiting of plant species in their diet. Therefore, it is essential that regional (SFF), and even a national approach (for GHFF), is provided.

Recommendations - A National Flying-Fox Strategy

EIANZ-SEQ believes that a National approach to FF management should be undertaken for the long-term protection of threatened FF species. On 07 September 2016, EIANZ-SEQ organised a National Flying-fox Forum that brought together 75 people, including local government environment officers, flying-fox carers, ecological consultants, Queensland and New South Wales environment department officers, and Department of the Environment and Energy staff, to work towards a National Flying-fox Strategy. The forum was an event jointly sponsored by EIANZ's Ecology Special Interest Section (SIS) and the EIANZ-SEQ, and was held at the Eco Centre at Griffith University's Nathan Campus.

The purpose of the forum was to establish a consistent and strategic approach to FF management across eastern Australia to mitigate impacts associated with FF while ensuring their conservation. The forum was set up around the following four themes:

- Flying-fox's species and habitat conservation;
- Camp management;
- Policy and research; and,
- Responsibilities and stewardship.

A key outcome of the forum was the development of a draft National Flying-fox Strategy. The strategy is intended to be used as a policy-level document to complement the more detailed documents already developed by others. The draft Strategy is provided as an attachment to this submission.

EIANZ will continue to work on the strategy with relevant authorities, and trust that we can continue to make relevant contributions to this subject matter. EIANZ will also continue the momentum it has generated by creating a small working group representative of the various stakeholders, including current groups/committees, to facilitate effective communication and coordination and by meeting with elected members and government agencies to endorse our approach and encourage uptake. EIANZ-SEQ offers to strongly collaborate with the Australian Government to ensure best practice is undertaken in the development of the Strategy.

Term of reference 4 - Opportunities to streamline the regulation of flying-fox management

EIANZ-SEQ considers that the potential changes to the EPBC Act and Queensland environmental legislation can leverage improvements that would result in reduced decision making times; reduced costs to project proponents; and improve management action and processes for the protection of FF while maintaining the needs and aspirations of communities.

In this regard, EIANZ-SEQ supports the following recommendations:

- The need for better coordination and streamlining of environmental policies. However, a strategic approach must be followed, based on scientific evidence and best practice.

- Certification by 'suitably qualified and experienced' persons that documentation such as management plans relating to the EPBC Act, are scientifically and technically accurate and that proposed measures for avoidance, mitigation and remediation will, if implemented, achieve the objective of reducing the decline of threatened FF and is consistent with the recovery action for this species.
- Ensure ongoing value associated with the initial investment, and over time, growth in the value of that investment through addition of new data, monitoring and analyses. Data must be collected in a way that allow it to be warehoused electronically so that it can be subsequently accessed by and added to through future project proponents.
- Increasing harmonisation of legislative / policy approaches to good practice across jurisdictions.

Term of reference 5 - The success or otherwise of management actions, such as dispersal of flying-fox camps in urban areas

Flying-foxes play a vital role in maintaining healthy ecosystems. However, the potential cost of losing the ecological services that FF provide, has yet to be defined. Their mobility, size, territorial feeding activities, and colonising behaviour result in wide-ranging dissemination of pollen and seeds, which contributes to the reproductive and evolutionary processes of forest and woodland communities. Their ability to move freely among habitat types allows them to transport genetic material across fragmented, degraded and urban landscapes. For example, GHFF have been recorded to fly over 400km in one night. The benefit they bring to supporting a healthy ecosystem should be valued and communicated to the community. No other species in Australia provides this level of ecosystem service.

To manage nationally threatened FF populations, it is essential to understand the issue of FF population reduction and treat the problem at its source. Commonwealth and State Governments seek ways to manage human-FF conflicts. However, most of these conflicts involve a very small number of camps and community for a short period of time. The following recommendations are based on the principle that any management actions should treat the sources of the issue rather than the symptoms.

Increase Education Programs

Education regarding the real health risk of flying-foxes as opposed to what people may believe is essential. According to the recent survey undertaken by Biosecurity Queensland, Australian bat lyssavirus (ABLV) is more likely to be found in a sick or injured bat. Surveys of wild bat populations have also indicated less than one percent of bats carry ABLV. Transmission of ABLV is easily prevented, and includes not touching a bat when it is on the ground. Rather than promoting this, news media have spread fear across communities by disseminating misinformation that causes panic and reactive management actions. Worryingly, dispersal of FF camps leads

to increased stress for dispersed individuals and, consequently, makes them more susceptible to contracting ABLV.

Education must be emphasised across all jurisdictions. Educational programs must outline education about FF themselves, their key role in the ecosystem, their life history, their movements, their behaviour, the ecological services they provide and the real health risk and easy prevention method supported by scientific data. Perceived impacts of bats needs to be quantified and assessed.

Community engagement and education must be part of any new policies around FF. It is essential that, every level of government be involved in education aimed at promoting safe and positive messages to communities.

Better knowledge and communication on dispersal methods and outcomes

The abundance of fruit and blossoms within a 20-50 km radius of a camp site is a key determinant of the population size of a camp at any given time. Understanding the availability of foraging resources goes beyond general knowledge of usual fruiting and flowering times. The majority of eucalypts do not flower every year in a local area and several rainforest species do not fruit annually.

An assessment of the outcome of 17 dispersals in NSW (1990-2013) was undertaken by Roberts B.J et al. (University of NSW) who demonstrated that:

- Although dispersals sometimes caused animals to move from the original camp, in all cases, dispersed animals did not abandon the local area.
- In 16 of the 17 cases (94%), dispersals did not reduce the number of FF in the local area.
- Dispersed animals generally formed new camps located close to the original site (64% within 600 m; 91% within 2 km) and the close proximity of new camps typically resulted in ongoing conflict within the local community.
- It was not possible to predict or pre-determine where new replacement camps would form.
- Conflict was usually not resolved. In 12 of the 17 cases (71%), conflict persisted either at the original site or at replacement camps within the local area after the initial dispersal actions.
- Repeat actions were required to keep animals from returning to the original site. Often dispersal actions were repeated over months or years to keep animals from returning.
- Financial and social costs were high. For example, Eurobodalla Shire Council estimates that it cost \$6.2m to disperse the Batemans Bay FF camp. While actions appear to have been effective in dispersing most of the FF, it is still unknown what the long-term impacts will be. Also, experts advised that the amount of fruit and nectar available may have largely helped with the current success of the dispersal, but FF are likely to return in the long-term. A lingering question is whether the funds expended would have been better used for educational programs or for the rehabilitation of suitable habitat?

Keys message that came out of the above analysis included the importance of maintaining habitat linkages to acceptable locations such as river and riparian vegetation. Pre-existing camps in close proximity would also likely impact on the

successful dispersal of the camp and, vice versa, the isolation of a camp to the neighbours are susceptible to ongoing conflict.

Animal Welfare

Animal welfare should be addressed as a key consideration in any management plan. The authors of such plans need to be realistic about the effectiveness and outcomes of intervention methods and weigh the cost of undertaking such activities with the likelihood that the plan may fail.

Land Use Planning

Ensuring that both humans and animals have the space they need is possible. Protecting key areas for threatened FF populations, creating buffer zones and investing in alternative land uses are some of the solutions.

We note that Queensland State Department has recently released the draft Regional Plan for South-East Queensland. Interestingly, the regional plan has not referred to any of the FF camps located in the region or provided any buffers to minimise potential future conflicts between existing camp and future residential development. An example of the inconsistencies between planning and biodiversity management is illustrated by the Caboolture West Master Plan, which proposed development of communities around the known West Caboolture Wararba Creek FF roost (known to support 50,000 FF). The additional vegetation clearing that will be required to support the increased residential development will further isolate the FF population. This will likely result in more human-FF conflicts. This is one of many examples that illustrate the lack of communication between planning and biodiversity agencies that will, ultimately, result in community outrage. Better planning decisions must be part of any strategy that hopes to ensure the protection of threatened species while accommodating people.

Restore suitable habitat

The Management and Restoration of Flying-fox Camps: Guidelines and Recommendations developed by SEQ Catchments Ltd (2012) outlines physical characteristics of camps which should be taken into consideration when restoring habitats for FF and planning for long term relocation. Research indicates that flying-foxes in coastal lowlands of SEQ and NSW choose to roost in vegetation with at least some of the following general characteristics:

- closed canopy at least 5m high
- complex vegetation structure – upper, mid- and understorey layers
- dense vegetation within 500 m of a river or creek
- within 50 km of the coastline or at an elevation < 65 m above sea level
- level topography, <5o incline
- at least one hectare in size
- large enough to accommodate and sustain large numbers of flying-foxes
- within nightly commuting distance (generally <20km) of sufficient food resources to support the population.

This information is critical for the future management of FF across the nation and should be included in every planning scheme and other restoration tool to ensure the long-term protection of threatened FF.

Summary of Recommendations

In summary, EIANZ-SEQ recommends the following actions:

- Employ a national approach to manage threatened species.
- Employ measures to gain community cooperation and commitment. Consult and educate the community with scientific based data.
- Hold meaningful consultation with those who act in the interests of FF (and have helpful expertise) before a revised policy is developed.
- Develop and properly fund a FF education program that aims at reducing community/FF conflict. This should include providing resources for community groups to conduct education, in recognition of their expertise and effectiveness.
- Set realistic goals. Consideration for determining camp site management should include the current pattern and history of utilisation by FF, the site health and sustainability, the community needs and concerns, available food resources and site buffers.
- Consider FF camps and movement when developing planning schemes.
- Continue to monitor and increase locations at which camps are monitored to obtain an improved understanding of the movements of this threatened species across the landscape.
- Utilise resources of existing suitably qualified experts when developing policies.
- Restore suitable FF habitat based on species preference, not on where people want to live.
- Take your time in developing policy. It is about our environmental and the future of our community.

We thank you for the opportunity to make provide this submission on the management of flying-fox species in Australia and would welcome the opportunity to assist the Committee further, if required. Please contact me directly on 0400 412 212 or at seq@eianz.org, if you have any questions regarding our submission.

Yours faithfully,



Dr. Mark Breitfuss
President EIANZ SEQ

References

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Biosecurity Queensland

<http://conditions.health.qld.gov.au/HealthCondition/condition/14/217/10/Australian-Bat-Lyssavirus>

Office of Environmental and Heritage

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Attachment 1: National Flying-fox Strategy Draft



The National Flying-fox Strategy

DRAFT

Our goal

To establish a consistent and strategic approach to flying-fox management across Australia to mitigate impacts associated with flying-foxes while ensuring their conservation.

Core themes

The National Flying-fox Strategy is based on four key themes:

- species and habitat conservation
- camp management
- policy and research
- responsibilities and stewardship.



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Species and habitat conservation

- Principle 1: Protection is afforded to all species with increased emphasis on our threatened species to allow population recovery
- Principle 2: Threatening processes to flying-foxes are identified and their impacts are understood in order to prevent further population decline
- Principle 3: Foraging and roosting habitat is protected and enhanced through designation and restoration to enable population recovery and maintenance

Camp management

- Principle 4: Advocate for appropriate management actions that are humane, legal and minimise risk of harm to flying-foxes and their habitat
- Principle 5: Ensure consistent spatial and temporal monitoring around camp management actions
- Principle 6: Encourage a strategic approach to resolving human/flying-fox conflict where mediation and education are the primary focus
- Principle 7: Camp management is to be risk-based with actions backed up with scientific evidence

Policy and research

- Principle 8: Advocate for the appropriate level of protection for flying-foxes and their habitat
- Principle 9: Land use planning policy is used effectively to prevent future human/flying-fox conflict
- Principle 10: Continue research to better understand flying-fox movements and population dynamics in order to find more innovative ways to address

Responsibilities and stewardship

- Principle 11: Build relationships with community, industry and government stakeholders
- Principle 12: Encourage a coordinated and consultative approach to conservation and management at a national level
- Principle 13: Improve public perception and profile of flying-foxes

Acknowledgements

The National Flying-fox Strategy
has been prepared on behalf of EIANZ by:



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Adair Ecological Solutions	Green Tape Solutions
Australasian Bat Society	Healthy Waterways and Catchments
Australian Bat Clinic	Hinchinbrook Shire Council
Balance Environmental	Hunter Councils
Bat Conservation & Rescue Qld Inc	Ipswich City Council
Bat Rescue	Logan City Council
Brisbane Airport Corporation	Mackay Regional Council
Brisbane City Council	Moreton Bay Regional Council
Cairns Regional Council	Mount Isa City Council
City of Gold Coast	Noosa Council
CSIRO	Northern Beaches Council
Department of Environment & Heritage Protection	Office of Environment and Heritage
Department of the Environment and Energy	Redland City Council
Eco Logical Australia	Somerset Regional Council
Ecology and Heritage Partners	Sunshine Coast Regional Council
Ecosure	Sutherland Shire Council
EIANZ SEQ	Sydney Botanic Gardens
Energex	University of Melbourne
Eurobodalla Shire Council	Whitsunday Regional Council

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