

Flying-fox Camp Management Policy Review
PO Box A290
Sydney South
NSW 1232

1 December 2014

Re: Draft Flying Fox Camp Management policy

Thank you for the opportunity to comment on the draft Flying Fox Camp Management in NSW policy. Whilst there are some positive aspects of the policy, overall it does not seem to be in favour of the bats and has some serious flaws.

Executive summary

The language used conveys the image that flying foxes are a nuisance and a health risk. The 3rd paragraph states that: "the overriding purpose of this policy is to minimise health impacts on flying fox camps on people". I would have thought that another purpose would be to protect and conserve the bats. In addition, all it does is to further fuel the perception that flying foxes are a major health risk when in reality, the health risk to people (and their pets) is very low.

Whilst acknowledging the intelligence and importance of flying-foxes in the ecosystem, the 6th paragraph and the overall document, does not convey strongly enough that flying-foxes are a keystone species and indeed crucial pollinators for many rainforest species, including some commercial hardwood timber species.

The 7th paragraph is of great concern. Firstly, classifying tree lopping as low impact. In the previous paragraph, it is stated that the "loss of foraging and roosting habitat has meant that flying foxes increasingly occur in urban centres". Hence, there is some recognition that habitat loss is having a detrimental impact on the bats. Having said this, in the next paragraph it is now classifying this loss of habitat, in the form of tree lopping, as having a low impact. Whilst I understand that at times there may be no alternative but to lop trees, I would not classify this as low impact. In fact, any disturbance to the flying foxes would hardly be called 'low impact' if it is in fact disturbing the bats.

The more disturbing statement follows. To say that: "camp dispersal can be a successful way to remove impacts on local communities" is extremely misleading. Surely the government is aware that it has been shown that in 85% of cases, camp dispersal does not work? In all cases, it is not possible to predict where flying foxes will relocate and if they do, they usually relocate to an area nearby. How can the government blatantly state that camp dispersal is a viable option?

Another disturbing statement follows in the next paragraph where it states that shooting may be authorised for orchardists in rural and peri-urban areas. Not only is this not an objective that relates to human health (as the policy is supposed to be about apparently) but it is cruel and ineffective as a method to control flying foxes in orchards as the governments own review in 2009 found. Additionally, following that review the NSW Government committed to phasing out the use of shooting as a method by June 2014 and to use netting instead. Clearly the Government has gone back on that commitment although I do note the roll out of netting across the state which is to be commended. Shooting should be prohibited now instead of delaying it once again by another years.

Nowhere in the dot point objectives listed is there any mention of animal welfare although this does not come as a surprise since the use of shooting is still allowed and camp dispersal is considered a control option.

1. Introduction

Hidden amongst this introduction is only a single sentence of the importance of flying foxes in the ecosystem. One lines which state that they play an important role in the pollination and seed dispersal of many plants. Flying foxes do not simply “play an important role”. It is well known that they are a keystone species and play an integral role in pollination and seed dispersal and in fact, are the only known pollinators of some rainforest species.

Again, in the 6th paragraph, last sentence, the language reinforces the fear in the community about health risks from flying foxes. Yes, humans can contract bat lyssavirus from flying foxes but the chances of this are very low. If it were not, more people working with bats such as researchers and wildlife carers who are in close contact with these animals, would have become ill and died. Yet this is not the case. And according Queensland Health, there are only three documented cases of Australian bat lyssavirus infection in humans and all three were in Queensland¹. People can only catch this via the saliva of an infected individual via an open wound or mucous membrane, hence from a bite of scratch. NSW Health states that: “humans are not exposed to the (lyssa) virus if flying foxes fly overhead or feed or roost in gardens. Nor is it spread through droppings in urine, or if one lives, plays or walks near their colonies”². Both Queensland and NSW Health clarify that there is “no evidence that (Hendra) virus can be passed directly from flying foxes to humans”¹. Similarly, there is no evidence of people contracting salmonellosis, histoplasmosis, or leptospirosis from flying foxes¹.

NSW Health clarifies the wrongly perceived significant health risk from proximity to flying fox camps as:

“There are no reports of any infections with Hendra virus or Australian Bat Lyssavirus among wildlife handlers working with flying foxes or in people living in proximity to flying fox colonies. This suggests that living near a flying fox colony does not pose a significant risk for infection with these viruses.

Direct handling of flying fox droppings should be avoided. The health risks associated with flying fox droppings relate mainly to the small potential risk to humans of gastrointestinal diseases. Flying foxes may carry a range of bacteria in their guts and, similar to domestic pets and birds, their droppings may contaminate the environment and potentially cause illness in humans if swallowed”.³

Sadly, this draft policy does not provide such clarification. It does nothing to allay the unfounded fears of people in the community about flying foxes and health risks.

2. Policy objectives for flying-fox camp management

Again, as stated earlier, nowhere does it say in the objectives that animal welfare is one of the Government's objectives in this policy.

Neither is there an objective in regards to educating the community about flying-foxes, that is, changing the view of some in the community that flying-foxes are “disease-ridden vermin”.

The 2nd objective: “provide a balance between conservation of flying-foxes and their impacts on human settlements” yet this draft policy contributes very little to the conservation of flying foxes. It appears to lean heavily towards the interests of a few in the community, such as orchardists and those who are inconvenienced by living near flying-foxes.

One of the objectives is to “provide options for land managers to obtain upfront 5 year licensing to improve flexibility in the management of flying-foxes”. Hopefully the licence is flexible in favour of the bats. In years of heat stress or food shortages or high mortality there should be flexibility to provide for this. Licences should be specific to a particular situation and a particular site otherwise there is danger that a landholder could undertake actions on flying foxes wherever they occur on their property.

The 6th objective includes the word “sustainably” in terms of managing flying-foxes. Neither shooting nor camp dispersal is sustainable.

Consideration of the behaviour, habitat and food requirements of flying-foxes as in the 7th objective is valuable. However, animal welfare and social structure should also be considered. Provision should also be made for weather events such as storms (knocking off food sources) and extreme heat.

The final objective, again, also valuable, regarding encouraging land managers to establish and protect food supplies and roosts. However, there is nothing about how this will be done. Explaining this further in the policy would be useful.

3. Managing flying-foxes

The introductory paragraph to this section states that: "Their response to management intervention can be unpredictable". Again, this is very misleading. The response of flying-foxes to intervention *is* unpredictable as studies have shown. Also misleading is the last sentence in this paragraph referring to intervention that "there may be undesirable impacts arising from the dispersal of a camp". Given that in 16 of 17 cases studied by Peggy Eby and Billie Roberts from 1990-2013, dispersals did not reduce flying fox numbers in the local area and that in all cases dispersed animals did not abandon the local area, I would conclude that rather than "may", the policy should be truthful and say "like to be" undesirable impacts given that the desirable impacts for those involved would be for the bats to move well away from the local area. As it reads, it appears that the Government is being deliberately misleading and giving false hope to local Council and other landholders.

And once again, the next paragraph mentions "health impacts". Yes, mental health is valid but what are the other so-called health impacts? This is very subjective. The noise and odours of flying foxes may be unpleasant to some but not to all people. Living next door to someone with farm animals or a barking dog or a motorcycle or who cooks a particular type of food may also be unpleasant in terms of noise and/or odour. When does it become excessive and require intervention?

What does the policy mean by "pro-active management"? Camp dispersal, tree lopping, shooting? There is nothing about public education and clarifying the health impacts.

Nor is there anything to quantify any impacts from flying-foxes. Should the pro-active management of spending thousands of dollars and the stress on the animals (which may be unlikely to succeed anyway) be employed when it is affecting one household or twenty households? What is the exact impact zone and what assessment has been done to quantify the true impacts (whether noise, smell, vegetation damage etc) and therefore whether direct intervention (ie, disturbance or shooting) is a valid response. This is not quantified. I consider this lack of quantification and justification of intervention a major flaw in this draft policy.

Routine Camp Management Actions (Level 1 actions)

The first dot points, removal of limbs or whole trees which pose a health and safety risk, would already be something Council's and other landholders would be carrying out. And same with the second dot point regarding noxious weeds.

As many people know, one can usually find an arborist who will tell you that just about any tree you ask about poses a health and safety risk at some point. Citing this dot point, it would be easy for a determined landholder to abuse and remove many healthy trees as regularly occurs within parts of Australia. And they may do so in a manner which distressed and/or injures the bats. As such and given the fact that landholders are already aware they can remove trees, or apply to, which pose a genuine risk, there is no need to list it here. It will only serve as a loophole.

Some sort of mechanism needs to be built in to ensure that Level 1 actions do not harm flying-foxes and warnings given that there are penalties under legislation if this occurs.

Creation of Buffers (Level 2 actions)

Similarly, Level 2 actions could also quite easily harm flying foxes and even trigger a dispersal. It appears, however, that the reasoning for this Level of action is to trigger a dispersal as stated: "to nudge flying-fox populations away from urban settlements". As already stated, disturbance of colonies has unpredictable results. All this may do is move the bats to even more undesirable locations as has occurred in several camps up and down the coast (eg, Maclean to Illuka).

As above, warning needs to be given that Level 2 actions should not harm the animals and penalties apply.

Both Level 1 and 2 activities should have a caveat which states that these activities will not be undertaken when females are pregnant or carrying young or during extreme weather conditions or when food sources are scarce.

Camp disturbance or dispersal (Level 3 actions)

I must say, I am totally shocked and appalled that a government document would actually state that "Camp dispersal is a successful way to remove impacts on local communities and is supported by this policy"!!!! How can the government actually say this to the public when it is a well known fact that camp dispersal is NOT a successful way to remove impacts on local communities? This is total deception. I presume that the people that wrote this policy did some research into camp dispersals, and if so, there is no way they would not come across various research papers stating this.

All this does, other than deceive the public, is put pressure on local Government and other landholders, to undertake such activities and waste thousands of dollars. People living in close proximity to flying-fox camps will expect their local Council to disperse the camp believing that it is an effective method.

Yes, the policy says that dispersal "can have uncertain outcomes". What an understatement. Can the NSW Government show any report where the outcomes of camp dispersal in terms of removing impacts on the community have been certain?

In regards to the dot points outlined when dispersal is not recommended, specifically those that relate to that to pregnant and lactating females as well as high temperatures, given that during such times if camp dispersal was undertaken it would result in suffering and high mortality of the animals, stronger wording is needed rather than just "recommended". Having said that, I do not think camp dispersal should be an option at any time.

The final dot point in this section says that dispersal is not recommended "when it is likely, due to proximity, flying-foxes disturbed from a camp will join camps in nearby towns or form 'satellite' camps". How will this be determined? What constitutes are 'nearby' town or a 'satellite camp'? Again, given past examples, this is something that is actually very highly likely. Given this fact, why would such dispersal be supported in this policy?

To quote one research paper:

"The results of this study further suggest that roost relocation is unlikely to have the desired goal of permanently shifting a local flying-fox population from an area. As in the case of culling actions, even if relocation activities do induce flying-foxes to move away in the short term, empty roosts are likely to be reoccupied during subsequent months or years or, alternatively, new roost sites may be established nearby"⁴.

Other than the ineffectiveness of camp dispersal as a method to remove impacts, it is also a method which is cruel. Methods used in attempts to disperse camps such as using paintball guns, hosing with fire hoses, helicopters flying overhead, birdfrite, fireworks, smoke, horns, banging pots and other items will definitely result in distress to the animal. The animals fly around exhausted looking for somewhere to roost and if there are young, they can be left behind to starve, or females can abort young. This has been illustrated in recent times during attempts in Charters Towers in Queensland.

Roberts states that:

"Few studies have examined the effects of human generated disturbance on flying-fixes but it is generally recognised that disturbance causes considerable stress to the animals. Disturbance may cause flying-foxes to become fatigued as they are forced to fly around frantically, often with limited alternative roosting habitat near by. These impacts can be more severe for females that are heavily pregnant or carrying young. There are reports of significant juvenile mortality after the disturbance of a maternity camp. This may have occurred because dependant young, that were unable to fly, starved to death when separated from their mothers"⁵.

Is shooting of flying-foxes allowed?

It seems quite deliberate that this draft policy partially quotes the 2009 NSW Flying-fox Licensing Review Panel stating: "an independent review panel, found shooting to be effective in reducing levels of crop damage in certain circumstances. However, when larger numbers of flying-foxes visit orchards, shooting may prove ineffective". Yes, the panel did certainly find that but it also overall concluded that shooting was an ineffective method and recommended "a cessation of the shooting permit system"⁶. This has conveniently been overlooked in this policy.

To quote a more recent paper (2012) regarding the usefulness of shooting as a management tool:

"These attempts at relocation and local control have ignored the capacity of flying-foxes to conduct long-distance frequent movements. This study has provided new data which support previous suggestions that culling cannot be a practical tool for reducing the impacts of flying-foxes, whether these comprise crop damage or disease risk. Culling individuals can achieve only short-term population reduction at a local scale....Indeed during more than a century of culling flying-foxes in Australia and a longer-term reduction in their overall population size, the incidence of damage to fruit crops appeared unchanged."⁴

The 2009 Review Panel found that the only effective method to protect crops is full exclusion netting and that the industry could rely on exclusion netting alone. To this government's credit, it has now rolled out a program of netting across the state. This is to be commended. But what is perplexing, is why then has shooting been allowed to continue?

As in addition to be ineffective, shooting is inherently cruel and unacceptable in terms of animal welfare. Indeed, the 2009 Review Panel concluded that:

"The animal welfare issues that result from shooting as a method of mitigating crop damage caused by flying-foxes are in no way acceptable ethically or legally".

Shooting is inhumane for a number of reasons including the difficulty of accuracy in shooting a small, dark, moving target at night. The bat itself having a very small target area, the head, but a wide area capable of being wounded (1m diameter wing span).

A 2007-2008 assessment of 155 dead and injured flying-foxes collected from three orchards in NSW found that just 5% had been shot in the head. It was found that the bats had severe injuries which left them incapacitated but not dead. If they had not been collected for the study, they would have suffered for days succumbing to predation, infection, dehydration, and/or starvation.

Plus the ripening and harvesting of many fruit crops in NSW coincides with the pregnancy and raising of young flying-foxes. Many bats entering orchards in search of food are lactating mothers. By shooting these animals, the young are guaranteed to die a slow and painful death.

Additionally, most species of flying-foxes shot in NSW are for Grey-headed. These are listed as a threatened species under the *NSW Threatened Species Conservation Act 1995* (TSC Act) as well as the Commonwealth *Environmental Protection and Biodiversity Conservation*

Act 1999. Listing a species under these pieces of legislation is meant to afford them a higher level of protection. Yet by allowing shooting, the NSW Government undermines the principles and very purpose of these Acts.

When the Grey-headed Flying-Fox was listed as Vulnerable under the TSC Act in 2001, the then Director-General of the then National Parks and Wildlife Service publicly announced that shooting of the species would be phased out within three years. This did not happen. This commitment was again made by the NSW Government following the 2009 Licensing Review Panel's outcomes and shooting was meant to be phased out by June this year. Yet again the Government has gone back on its' word. This is unacceptable. Shooting has been proven to be ineffective as a control method and also inherently cruel and the Government has implemented a netting program for orchardists, so there is no excuse now to prohibit shooting of flying-foxes.

4. How to write a camp management plan

In addition to what is specified here, a plan should also include a section on public education. Education regarding the real health risk, being low, of flying-foxes as opposed to what people may believe but is not true. It should also include education about the flying-foxes themselves, their key role in the ecosystem, their life history, their movements, their behaviour etc.

Perceived impacts of the bats needs to be quantified and assessed.

Animal welfare should also be addressed as a key consideration in any management plan.

And the authors of such plans need to be realistic about the effectiveness and outcomes of intervention methods (unlike this policy!) and weigh the cost of undertaking such activities with the likelihood that it may fail or shift the problem to someone else's backyard.

5. Engaging the community

There seems to be very little emphasis regarding community engagement and education in this policy. Yet the policy seems to be a reactive response to a minority within the community rather than a realistic approach which conserves protected native fauna.

More emphasis needs to be placed on this aspect. One has to wonder why the NSW Government has done very little over the years in regards to public education. In many parts of the world, flying-foxes are viewed in awe and are an actual tourist drawcard (including some parts of Australia). The NSW Government has been very slow on this uptake.

6. Other issues to consider

The 3rd paragraph is positive in terms of protecting and enhancing maternity camps.

The second last paragraph acknowledges that conflicts between humans and flying-foxes can result in "ineffective a short-term and reactionary management approaches" yet that is precisely has occurred in this draft policy, particularly in relation to supporting camp dispersal and shooting.

The studies into establishing flying-fox habitat elsewhere may be of interest but perhaps we should learn from what has been happening since white settlement in this country. People have been trying to move flying-foxes from their camps for a very, very long time yet this has not worked. Flying-foxes are a single population, a migratory and transient population and we just have to learn to live with it. Given that many of the camps have been around for decades and decades, our local planning needs to take this into account. Rather than looking at how can people move the bats out, perhaps we should be looking at how can we move the people out and make better planning decisions in the future to accommodate the bats and the people.

7. How will OEH regulate flying-foxes?

It is noted that approvals will be given for 5 years. There needs to be a mechanism where these approvals can be amended and/or revoked. Such an approval needs to be very prescriptive in terms of site, actions, seasons, etc etc.

In regards to the application for a section 91 licence, how is a land manager to determine if an issue is immediate and significant? If it is immediate, ie, that a large number of flying-foxes have moved in, perhaps this is just temporary, such as when Little Reds in huge numbers move into an area for a couple of months.

9. Roles and responsibilities

OEH – should include conserving and protecting not just managing
Community – should include protection, understanding, appreciation

Seek assistance from OEH when required

The first sentence about selecting the appropriate level of intervention. This policy should not steer land managers straight to intervention as already discussed.

Again, the true picture of health risks from flying-foxes is not given. It says risks are very low but that's it. Needs to be better explained.

Appendix A

Confusing. Shouldn't a Level 3 action require a s91 licence? And if level 1 or 2 don't work and a land manager is seeking to go to level 3, shouldn't the management plan be amended and resubmitted for approval?

Appendix B

How will care be taken to avoid incidental harm?

There should be a standard provision to check for young and pregnant mothers when about to embark on tree lopping, trimming, removal etc, not just have an arborist come. A faun consultant or wildlife carer should be employed.

Dispersal activities on days where temperatures are over 32 degrees should not be undertaken. When flying-foxes are at rest in their camps and days are over 38 degrees they regularly succumb to heat stress. But if you are scaring them into the air on a hot day when their body is usually resting, you will stress them and force them to fly when they would not normally. Doing this on a hot day will have negative results and will increase the risk of them ending up with heat stroke.

Summary

The irony is that this policy states that its main purpose is to protect human health but by disturbing the flying foxes through the interventions supporting in this policy (particularly camp dispersal and shooting) and therefore causing considerable stress to the animals, this policy may actually be creating a public health risk given that a stressed organism is more likely to disrupt its healthy equilibrium and increase the incidence of disease.

The overall tone of the policy does not convey the importance of flying foxes in the ecosystem but weight heavily on appeasing people who fear there is a health risk from the bats and see them as a nuisance. It does not convey the impression that the government is serious about upholding its' obligations to protect a threatened or protected species nor animal welfare standards. It purports to be sustainable yet there is little if any evidence in the draft as it is to this effect.

Nor does it seem to tell the whole truth in relation to the effectiveness of proposed intervention methods. This policy needs to be more transparent and honest in its approach to the flying-foxes.

The Government should stick to the promise of banning shooting given the cruelty and ineffectiveness of this as a control method but also since it has now rolled out the netting program for farmers. Camp dispersal should also be removed as an option as it mostly does not work and only pushes the perceived problem elsewhere whilst distressing the bats.

I hope that the NSW Government upholds its legal and ethical obligations and amends this draft policy as discussed above to reflect that.

Your sincerely,

Philip Gary
Phil108@bigpond.net.au

References:

1. http://access.health.qld.gov.au/hid/infectionsandparasites/viralinfections/batsandhumanhealth_is.asp
2. <http://www.health.nsw.gov.au/environment/factsheets/Pages/flying-foxes-questions.aspx>
3. <http://www.health.nsw.gov.au/environment/factsheets/Pages/flying-foxes.aspx>
4. Robert, B.J., Catterall, C., Eby, P., Kanowski, J (2012) Long-Distance and Frequent Movements of the Flying-Fox *Pteropus poliocephalus*: Implications for Management. PLoS ONE 7(8): e42532. Doi:10.1371/journal.pone.0042532
5. Roberts, BJ (2006). Management of Urban Flying-fox Camps: Issues of Relevance to Camps in the Lower Clarence Valley, NSW. Valley Watch Inc., Maclean.
6. Woodland, A., Biel, E., O'Shannessy, D., Martin, L. (2009) NSW Flying-fox Licensing Review Panel – Report to NSW Department of Environment and Climate Change.
7. Bellamy, T. (2008) Interim Report on Non-Fatal Shooting Injuries affecting Grey-headed Flying Foxes.