

The cost to orchardists in the management of the Grey-headed Flying-fox. Who pays? A community benefit approach

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ABSTRACT

The NSW government has seen fit to list the Grey Headed Flying-fox (GHFF) as Vulnerable. The listing will limit the ability of fruit growers to protect their crops from damage by this species. The GHFF has been protected by government on behalf of the community. In my submission, it is then equitable that the whole community, which benefits from the protection of this animal, help the fruit grower cover the cost associated with the protection. There are several ways this could be accomplished: by funding research into methods by which GHFF can be deterred from damaging crops, by making it possible for the grower to net his crop where feasible, by allowing him to protect his livelihood through judicious and timely culling, or by compensation for loss. There are a number of instances where the community currently meets, or will soon be required to meet, the extra costs of conserving biodiversity. In my view it is only right and just, and indeed may even be an obligation, for the community to assist and/or compensate fruit growers with any extra costs associated with listing the GHFF as Vulnerable.

Background

The NSW government, using the Threatened Species Conservation Act, has seen fit through the Scientific Committee to list the Grey-headed Flying-fox (GHFF) as vulnerable. This action was taken due to a belief that the species has suffered a decline in numbers, said to be 30%, in recent years. I must say at the outset, that I have not seen any decline in the numbers of GHFF visiting my orchard in the past few years. In fact, I have noted a worsening in damage to my crops (stone and pome fruit) and an increase in the numbers of bats seen in, around and flying over the orchard. I find it hard to accept the finding of the Scientific Committee, as they have not released the specific research that led them to this conclusion.

However, as the species has been listed as vulnerable, I will move on.

The GHFF was deemed by the NSW Government as worthy of protecting for the benefit of the people of NSW. We are told that

this animal plays an important role in the ecology of our bushland ecosystems. I have no qualms with this assertion. The animal, if vulnerable, needs protection, for the good of the community and to maintain biodiversity in our environment.

The GHFF, like us, has a need to eat to survive. His most favoured foods, we are told, are the native blossoms and fruits that occur in the bushland and rainforests of the eastern seaboard of Australia. Unfortunately, most of the people who have lived in Australia since 1788, have also chosen to live on the eastern coastal strip. These people cleared large tracts of native bush to build cities and roads, they built industry which created wealth and led to an increase in population, which led to the cycle continuing. Farmers were needed to grow food and fibre for these people and for export, but little thought was given to what the GHFF was going to eat when the forests were removed.

Hunger is one of the strongest urges that drive all animals. It is essential to eat to survive. So in order to survive, the GHFF had to adapt to eating things other than its native food. One of the things that the GHFF learned to eat, was exotic fruit.

The lack of native food was not caused by the fruit grower, but by the people who lived in the cities. It is they who build their houses from the timber taken from the forest; they who travel on the railways and in the cars on the roads which criss cross the countryside; they who wear the clothes and eat the meat and vegetables farmed on the coast. The amount of land cleared by fruit growers for their orchards is minute in comparison. Generally, fruit growers purchased already cleared land that had been used for dairy and beef cattle grazing. If anything, fruit growers are responsible for revegetating this land by planting fruit trees.

A community benefit approach to managing flying-foxes on fruit crops

If the GHFF is protected by the government on behalf of the community, then is it fair that the fruit grower alone should bear the cost associated with the protection of this species? Should the grower lose income because the animals have no native food available for them? In my submission, it is equitable that the whole community, which benefits from the protection of this animal, help the fruit grower cover these costs - the Beneficiary Pays principle (Aretino *et al.* 2001).

There are several ways this could be accomplished: by funding research into methods by which GHFF can be deterred from damaging crops, by making it possible for the grower to net his crop where feasible, by allowing him to protect his livelihood through judicious and timely culling, or by compensation for loss.

Aversion agents, protective structures and culling are the preferred methods of crop protection, but if these methods are unavailable to fruit growers, because of cost, legislation, or ineffectiveness, then it is, in my submission, only right and just that growers be compensated in monetary terms for the losses they suffer through the feeding of GHFF on their crops.

An alternative to the Beneficiary Pays principle I am proposing is the Polluter or Impacter Pays principle (Aretino *et al.* 2001). Under this principle, impacters are required to contribute to the costs of

activities that ameliorate or prevent biodiversity damage in proportion to their impacts on biodiversity. As impacters may pass on some of these costs as higher prices, consumers who benefit from activities that adversely impact biodiversity will also meet a portion of the costs.

It has been said that farms are businesses and farmers should themselves bear the extra costs of farming in a sustainable and ecologically sensitive way. If the Impacter Pays principle is applied to GHFF management in crops, these costs could theoretically be passed onto consumers of their products rather than taxpayers.

In my view, the Impacter Pays principle cannot successfully be applied to the Australian fruit industry as the industry is not in a position to pass on to the consumer extra costs such as those associated with crop loss to GHFF. Fruit production in Australia is highly competitive. The industry is made up mostly of small, family-run businesses with little individual strength in the market. The retail sector, on the other hand, is dominated by a very small number of large chain stores with huge market power. This imbalance in the marketplace forces growers to become “price takers” rather than “price setters”. We generally grow a perishable product, that cannot be stored for long periods, even in refrigeration, it must be sold quickly or spoil. Thus, the fruit industry must accept prices set by those with market power.

The supermarkets, retailers and overseas importers have little sympathy for the extra costs sustained by growers through conservation restrictions. They pay the lowest price they can, and we are forced to take it.

We on the eastern seaboard must also compete with growers from other regions who do not have GHFF problems. Thus we suffer a competitive disadvantage. We try and overcome this by being more efficient and growing a better product. However, if our costs are unfairly increased, I believe we will not be able to compete.

Farmers, and specifically fruit growers in NSW, do not want to be compensated for the normal costs associated with our farming enterprises; unlike the American apple growers, who were last year granted US\$150 million by Congress for loss of profit due to market conditions. What we are asking for is that where we suffer an increase in our cost of production or a reduction in our income due to constraints on crop management from the listing of GHFF as Vulnerable, our financial loss be

mitigated in some way by the beneficiaries of GHFF conservation, i.e. the community.

Australians living in cities are compensated by the Government for their losses, both financial loss and loss of amenity, when they are impacted by change that occurs for the public good; for example, when they live near airports and are affected by a change in flight paths and noise levels, or, when expressways are constructed past their homes. Mitigation measures, such as sound barriers and soundproofing are installed at taxpayers' expense, payments are made for diminished land value, or properties are bought outright. I suggest that GHFF conservation is in the public good and that a similar approach be taken.

The Productivity Commission in a research paper described a 'public good' as having two characteristics: firstly, once it is provided to one individual then it is provided to all (i.e. 'non excludable'); secondly, enjoyment of the good by one individual does not diminish its benefits to others (Aretino *et al.* 2001). Conservation of flying-fox populations would clearly fit this description.

The community benefit approach in practice

There are a number of instances where the community currently meets, or will soon be required to meet, the extra costs of conserving biodiversity. Some of these are:

Goulburn Broken Catchment – Victoria.

The Goulburn Broken Catchment covers around 2.4 million hectares (Goulburn Broken Catchment Management Authority 1999). The Catchment Management Authority recently completed a Native Vegetation Plan, which outlines activities needed to address biodiversity loss and increase native vegetation levels (Goulburn Broken Catchment Management Authority 2000). Such activities include for example, fencing and de-stocking to protect remnant native vegetation and the establishment of vegetation corridors to connect habitats. These initiatives will be funded through a cost sharing arrangement (Crosthwaite 1998).

Coorong District Local Action Plan – South Australia.

The Coorong and Districts Local Action Plan (LAP) addresses various environmental issues facing the region, including dryland salinity, erosion, water quality decline and feral species

invasion (Coorong and Districts Local Action Plan Steering Committee 1997). Projects under the LAP are eligible for government funding if they improve the environment.

Extra incentive payments are also available to landholders who adhere to specific guidelines in undertaking conservation activities. Detailed cost sharing arrangements under the LAP are based on the 'beneficiary pays' principle (Dames and Moore 2000). The framework recommends cost sharing between landholders, the local community and the wider community. Landholders pay only 6 per cent of the costs of activities aimed at remnant vegetation, wetlands and habitat conservation, while the local community pays 17 per cent and the wider community pays 77 per cent. This arrangement implies that these activities generate mainly public benefits that accrue to the general community.

Liverpool Plains – New South Wales

The Liverpool Plains area in northern New South Wales is experiencing various natural resource problems, including dryland salinity, flooding and soil erosion (Liverpool Plains Land Management Committee 2000). To address these issues, a modelling approach to evaluate on-ground activities was undertaken to provide input to the Liverpool Plains Catchment Investment Strategy.

The Liverpool Plains Land Management Committee considered that the uneven distribution of benefits and costs across the catchment emphasised the need to develop intra-catchment cost sharing arrangements. In other words, the direct beneficiaries of some activities within the catchment should share the costs of activities undertaken in other Land Management Units. This is consistent with the 'user pays' component of the 'beneficiary pays' principle.

Natural Heritage Trust

The Natural Heritage Trust supports a variety of conservation programs, including Bushcare and Landcare. It offers funding assistance for community-based projects. Most Natural Heritage Trust programs assign cost shares according to the maximum 1:1 rule (Natural Heritage Trust 1999. (see also Australian National Audit Office 1998; pers. comm. Victorian Department of Natural Resources and Environment, Bendigo Office, October 2000).

The community benefit approach in principle

The concept that the community must assist landholders and others in carrying the cost of biodiversity conservation has been accepted by a number of organisations, governments and conventions that play an active role in biodiversity conservation in Australia. For example:

Australian Conservation Foundation

The Australian Conservation Foundation in its submission to the House of Representatives Inquiry into the Cost of Conservation on Landholders in May 2000 stated, “However, where a disproportionate cost may be borne by an individual, enterprise or group due to a conservation initiative or regulation, it is important that fair and effective means of sharing or reducing that cost be found, so that conservation measures can proceed in the interests of the broader community” (Australian Conservation Foundation 2000).

The Foundation further argued, “Provision of Commonwealth and State funds to assist with industry restructuring and incentive payments for appropriate conservation and natural resource management measures is a key way of ensuring that all Australians contribute to the necessary level of national investment in maintaining our rural landscapes. ... in the interests of the broader society as well as the farming community.”

NSW Government

In its submission to the House of Representatives Committee the NSW Government stated, “The imposition of additional conservation requirements on farmers with fixed resources may alter the capacity of the business to make the profits necessary to remain viable. If those conservation requirements provide some public benefit then there may be a case for government assistance” (NSW Government 2000).

Murray Darling Basin Commission

In 1996, the Murray-Darling Basin Commission proposed that the ‘Beneficiary Compensates’ principle required anyone (including government, on behalf of the general community) who derives an indirect benefit from an activity to contribute to the cost of undertaking it (Murray-Darling Basin Commission 1996). This principle was considered an equitable approach for sharing the costs of the biodiversity conservation activities of the Commission to the extent that it required those who benefit from an activity to pay the

costs (Australian Association for Computational Mechanics 1995).

International Convention on Biological Diversity

Australia is a signatory to the International Convention on Biological Diversity (Secretariat of the Convention on Biological Diversity 2001). Under Article 10(e) of that convention we are bound to, “encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources.”

Further under Article 11. “Each Contracting Party shall, as far as possible and as appropriate, adopt **economically** (*my bolding*) and socially sound measures that act as **incentives** for the conservation and sustainable use of components of biological diversity.”

Again under article 20 (1) “Each Contracting Party undertakes to provide, in accordance with its capabilities, **financial support and incentives** in respect of those national activities which are intended to achieve the objectives of this Convention, in accordance with its national plans, priorities and programmes.”

National Strategy for the Conservation of Australia’s Biological Diversity

The Federal Government’s National Strategy for the Conservation of Australia’s Biological Diversity was endorsed by the NSW Government in January 1995 (Environment Australia 2001). It has as one of its objectives, “Achieve the conservation of biological diversity through the adoption of ecologically sustainable agricultural and pastoral management practices.” and further: Improving knowledge by, “conducting additional coordinated research into developing improved techniques to integrate farm land use... to promote the conservation of biological diversity.” (Objective 2.2 and 2.2.1 (b))

Conclusion

In my view it is only right and just, and indeed may even be an obligation, for the community to assist and/or compensate fruit growers with any extra costs associated with listing the GHFF as Vulnerable. Fruit growers may have no means at their disposal of preventing damage to their crops, and may be compelled to allow the GHFF to feed in their orchards, thereby causing themselves a financial loss and providing a benefit (food), to the flying-fox.

Finally, I would stress that it is our preferred position that funding be provided urgently, for research to be carried out to find an effective and economical method of aversion, or a cost effective and affordable method of exclusion,

combined with a judicious and timely culling program of protection. If this is not possible, then full monetary compensation must be provided for losses suffered by growers in the public good.

References

- Aretino, B., Holland, P., Matysek, A. and Peterson, D. 2001.** *Cost Sharing for Biodiversity Conservation: A Conceptual Framework*. Productivity Commission Staff Research Paper, AusInfo, Canberra.
- Australian Conservation Foundation. 2000.** *Submission to the House of Representatives Standing Committee on Environment and Heritage Inquiry into Public Good Conservation — Impact of Environmental Measures Imposed on Landholders*. <http://www.aph.gov.au/house/committee/enviro/index.htm> submission no.159.
- Australian Association for Computational Mechanics. 1995.** *Cost Sharing for On-Ground Works: Discussion Paper*. Report prepared for the Murray-Darling Basin Commission, South Australia.
- Australian National Audit Office. 1998.** *Preliminary Inquiries into the Natural Heritage Trust. Audit Report No. 42*. Commonwealth of Australia, Canberra.
- Coorong and Districts Local Action Plan Steering Committee. 1997.** *The Coorong and Districts Local Action Plan – Protecting Agriculture and Natural Resources: A Draft for Public Discussion*. Coorong District Shire, Mimeo, South Australia.
- Coorong and Districts Local Action Plan Steering Committee. 2000.** *Coorong District Local Action Plan: Protecting Agriculture and Natural Resources, Draft Report*. Coorong and Districts Local Action Plan Steering Committee, Adelaide, SA.
- Crosthwaite, J. 1998.** *Cost Sharing Approaches for Native Vegetation Management in the Goulburn Broken Catchment*. Background Report to the Goulburn Broken Vegetation Management Plan Steering Committee. Institute of Food and Land Resources, University of Melbourne.
- Dames and Moore 2000.** *Cost Benefit Analysis and Cost Sharing Frameworks for the Coorong District Local Action Plan*. Final Report for the Coorong District Local Action Plan Committee, Adelaide, SA.
- Department of the Environment, Sport and Territories. 1996.** *The National Strategy for the Conservation of Australia's Biological Diversity*. Department of the Environment, Sport and Territories, Canberra, ACT.
- Environment Australia. 2001.** *A National Strategy for the Conservation of Australia's Biological Diversity*. <http://chm.environment.gov.au/strategy/index.html>.
- Goulburn Broken Catchment Management Authority. 1999.** *Annual Report 1998–99*. Goulburn Broken Catchment Management Authority, Shepparton, Victoria.
- Goulburn Broken Catchment Management Authority. 2000.** *Draft Goulburn Broken Native Vegetation Plan, Volume 1: Goulburn Broken Native Vegetation Management Strategy*. Goulburn Broken Catchment Management Authority, Shepparton, Victoria.
- Liverpool Plains Land Management Committee. 2000.** *Investment Programs and Institutional Arrangements for Effective Natural Resource Management: Draft Project Report Final*. Liverpool Plains Land Management Committee, Tamworth, NSW.
- Madden, C. 1996.** Cost sharing — the Goulburn Broken Catchment experience. Pp. 44–52 in *Sustainable Management of Natural Resources: Who Benefits and Who Should Pay? Occasional Paper no. 01/92*. edited by R. Price. Land and Water Resources Research and Development Corporation, Canberra, ACT.
- Murray–Darling Basin Commission. 1996.** *Cost Sharing for On-Ground Works*. Murray-Darling Basin Commission, Canberra, ACT.
- Natural Heritage Trust. 1999.** *Guide to New Applications 2000–2001*. Department of Environment and Heritage and Department of Agriculture, Fisheries and Forestry, Canberra, ACT.
- New South Wales Government. 2000.** Submission to the House of Representatives Standing Committee on Environment and Heritage. *Inquiry into Public Good Conservation — Impact of Environmental Measures Imposed on Landholders*.
- Secretariat of the Convention on Biological Diversity 2001.** *International Convention on Biological Diversity*. United Nations Environment Program Na.92-7807. <http://www.biodiv.org/convention/articles.asp?lg=0>.
- Wiebe, K., Tegene, A. and Kuhn, B. 1996.** *Partial Interests in Land: Policy Tools for Resource Use and Conservation*. Agricultural Economic Report no. 744. US Department of Agriculture, Washington DC.

CAROL BOOTH: (Queensland Conservation Council). I'm not sure if New South Wales has any general environmental duty, or duty of care in legislation, but I wonder if you see any distinction between a duty of care and extra actions that might come under the ambit of public interest actions.

ED BIEL: Certainly, as a land-holder and a farmer who is conscious of his responsibilities to the land, we do have a duty of care. Exactly how far that duty of care extends is the question, and that question is being looked at by older and wiser heads than mine. We do have a duty of care but where it stops and the community takes over, that's the point we need to establish.

ROY GRIFFITH: Have you ever thought of planting native plants on the perimeter of your property to help preserve your own fruit from the flying-foxes? They will go for native food before they will go for the fruit-growers' crops.

ED BIEL: Yes, my particular orchard is surrounded by native bushland and there are times when the bush blossoms, and the flying-fox fly past that blossom and onto our crops. It's been said that in times of heavy rainfall where the nectar is washed out of the flowers they'll go to our crops instead of the native blossom. In fact last year we had a tremendous flowering in the bush. We had ironbarks, Sydney grey gums - they were in profusion but we still suffered pretty extraordinary damage to our crops. I think it's the scale of the food and the quality of the food.

ROY GRIFFITH: I have noticed flying-foxes fly past the ironbark. We've got them up in a schoolyard behind our place.

ED BIEL: They do, yes.

DAN LUNNEY: Ed, thank you very much.