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**Utilisation of native wildlife  
by indigenous Australians:  
commercial considerations**

**J.C. Altman, L.M. Roach and L.E. Liddle**

**No. 135/1997**



**DISCUSSION PAPER**

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- identify and analyse the factors affecting Aboriginal and Torres Strait Islander participation in the labour force; and
- assist in the development of government strategies aimed at raising the level of Aboriginal and Torres Strait Islander participation in the labour market.

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September 1997

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ISSN 1036-1774  
ISBN 0 7315 2570 1

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THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
RESEARCH REPORT

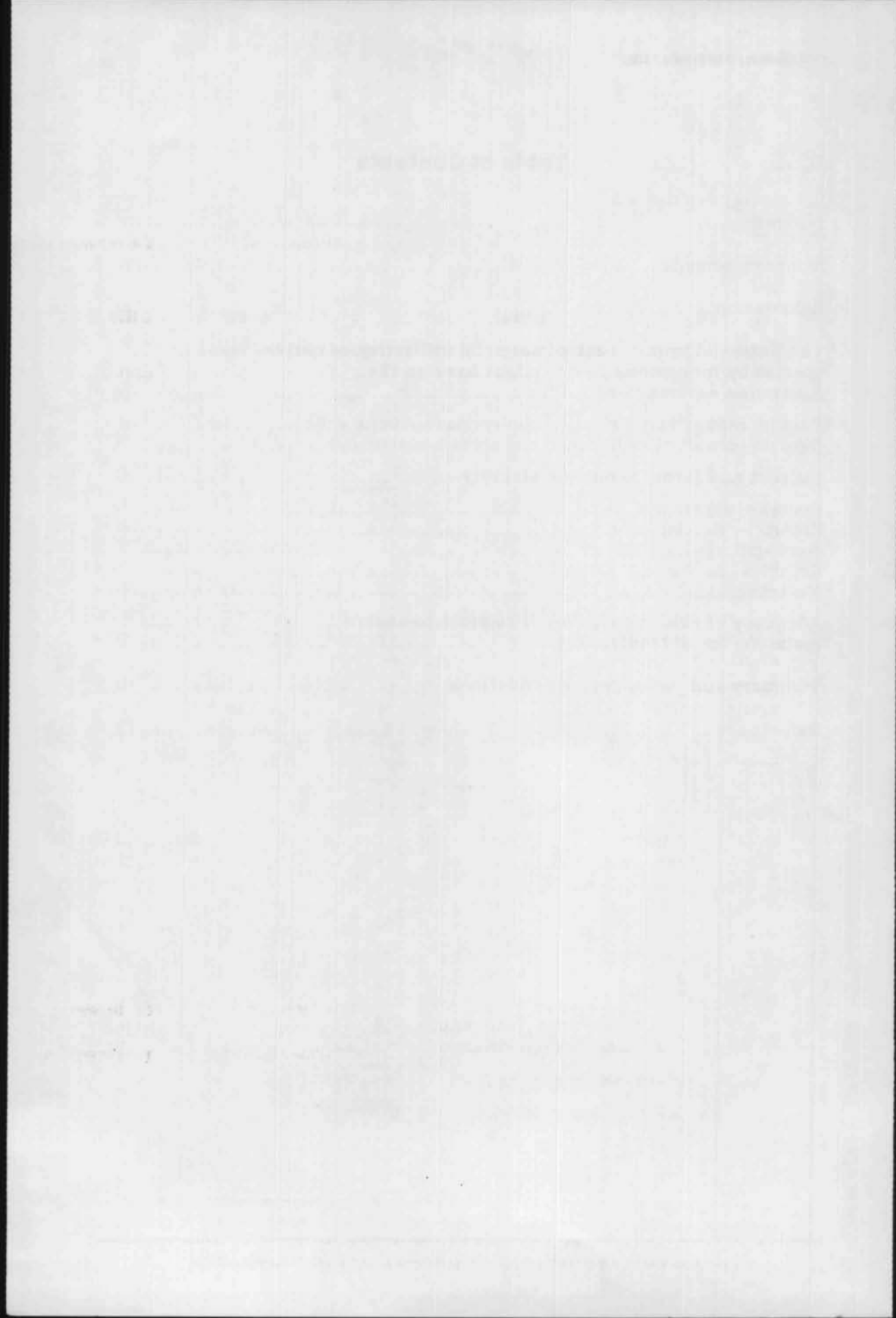
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CHICAGO, ILLINOIS

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## Summary

This paper is based on a submission to the Senate Rural and Regional Affairs and Transport References Committee Inquiry into the commercial use of Australian native wildlife. It uses secondary sources and is also based on primary research.

### **The research outlines indigenous people's present interest in wildlife utilisation, including past and future issues:**

- Indigenous Australians have a special interest in commercial utilisation of wildlife due to their subsistence activities, religious associations with many species, present and future rights to tracts of land under land rights legislation and, potentially, following the passage of the Native Title Act.
- Indigenous people's interest is also based in their growing involvement in sustainable utilisation of species for ecotourism and their desire to become less economically dependent on government support.
- Indigenous people desire input into species management to ensure maintenance of biodiversity.
- Aboriginal people have few economic opportunities in remote communities and are seeking further commercial opportunities in wildlife enterprises. However, past experience of indigenous enterprises is chequered due to locational, cultural and human capital constraints.
- Marketing and other problems associated with wildlife products hamper present enterprises.
- There are few data on the impact of commercial utilisation or subsistence usage of species.

### **The research recommends that:**

- In the best interests of commercial utilisation of wildlife in a sustainable manner, there is a need for an enhanced role for indigenous interests in species management. This could be achieved through their indigenous organisations and via joint management processes. This is necessary because many species are endemic to Aboriginal-owned land that accounts for 17 per cent of Australia. Some precedents exist in joint management of inhabited national parks particularly in the Northern Territory.
- It is essential to achieve a balance between subsistence use, commercialisation and preservation of wildlife, taking into account possible tradeoffs with the commercial value of tourism based on the non-harvesting of species.
- Opportunities are greatest for indigenous people when harvesting is from the wild, rather than by farming species. Joint ventures, royalty arrangements, property rights in species and joint management plans also

offer opportunities for indigenous people to become involved in commercial utilisation and management of wildlife.

- Given the limited economic opportunities of remote Aboriginal communities, there is a need to explore options to convert indigenous leverage with respect to species to their advantage. If commercial wildlife use is to expand, it is important that indigenous people have equal opportunities to participate in it, and that expansion by non-indigenous interests does not hamper the subsistence and commercial options available to indigenous people.
- Joint-venturing, possibly with non-indigenous partners, is an important means that must be considered to enable indigenous people to participate in the economic benefits from commercial utilisation of wildlife.
- Another issue requiring investigation in the aftermath of native title legislation is whether there is a need (or statutory requirement) to recognise existing and potential indigenous property rights in species. Indirect options to attract rents from utilisation of wildlife, either via direct involvement as joint venturers or as sellers of property rights in species, need to be assessed as a way to provide financial returns to indigenous communities.
- There is a need to recognise that from the indigenous perspective, in some situations, subsistence utilisation of species may make greater economic sense than commercial utilisation. In other words, the 'outstation gate' market replacement value of species used for subsistence may exceed their monetary market price.

### **Acknowledgments**

Thanks are due to Hilary Bek and Jennifer Braid for editorial work. We would like to thank Ray Hall, Environment Research Institute of the Supervising Scientist, for information on ecological studies in the Top End; Ian Munro and Dean Yibarbuk for information on the Bawinanga Aboriginal Corporation's environmental program and support for commercialisation of wildlife; Michael Vardon, Wildlife Management International Pty Limited, for recent survey data; and Nicolas Peterson, Department of Archaeology and Anthropology, Australian National University (ANU) for information from recent fieldwork in coastal Arnhem Land.



On 30 October 1996 the Senate referred the following matter to the Senate Rural and Regional Affairs and Transport References Committee. The Terms of Reference for the Inquiry are to examine:

- i the potential impact which commercial utilisation of native Australian wildlife might have on the Australian environment;
- ii the current and future economic viability of these commercial activities; and
- iii the adequacy of existing Federal Government regulations and controls to ensure maintenance of biodiversity.

The Centre for Aboriginal Economic Policy Research's (CAEPR) submission addressed these terms of reference from an economic policy perspective that emphasises indigenous interests. The Commonwealth Government is committed to improve the economic wellbeing of indigenous Australians to levels commensurate with those of other Australians, while also allowing indigenous people the choice of where and how to live under the broad ambit of the policy of self-determination. The High Court's Mabo decision in 1992 and the *Native Title Act 1993* potentially advance these policy aims. From a policy perspective, it is important to consider whether enhanced indigenous involvement in the commercial utilisation of wildlife will further enhance goals to improve the socioeconomic status of Aboriginal and Torres Strait Islander people, while ensuring maintenance of biodiversity.

When CAEPR initially considered preparing a submission to this inquiry early in 1997, there were no submissions representing indigenous interests on this important issue. Subsequently, the Northern Land Council and the Central Land Council have made submissions. Their submissions address broadly similar issues to CAEPR's, but their perspectives are somewhat different being prepared on behalf of their regions and constituents and being more broadly based. Another submission by Dr Graham Webb is also somewhat similar to CAEPR's particularly as it is research focused. However, Dr Webb writes from a private sector, rather than a macro-policy, perspective, focusing mainly on the sustainable commercial utilisation of one species: the estuarine crocodile.

CAEPR's submission is more research and economic-policy oriented. It is also university-based and consequently does not represent any particular interest group. It supplements early research in this area undertaken at CAEPR. As in the past, we have requested the permission of the Senate Committee to publish our submission, virtually unchanged, in the interests of wider information dissemination and transparency.

## Submission

This submission presents a research perspective on interests that indigenous Australians have in commercial utilisation of Australian native wildlife. It utilises

information from secondary sources which relate to the topic, as well as that from scholarly investigations, some of which have been undertaken at the CAEPR. CAEPR does not have a vested interest in any commercial native wildlife projects but has a mandate to research indigenous economic policy issues. The perspective here gives due recognition to indigenous people's rights of access to wildlife resources primarily for subsistence purposes. It also canvasses opportunities that commercial utilisation of wildlife resources might provide. It is noted in this submission that the submission by the Northern Land Council (1997) utilised some of the CAEPR research presented here.

CAEPR's perspective is based on the following assumptions:

- A recognition that indigenous Australians may have a special interest in commercial utilisation of native wildlife, arising from economic interests in such utilisation, and ethical and religious associations with species and places based on prior occupation of the Australian continent. Many indigenous people see native wildlife as their preserve and responsibility. Indigenous Australians often utilise native wildlife for production of artefacts for ceremonial and market exchange and for subsistence purposes; in remote areas levels of health and wellbeing are correlated with the utilisation of wildlife resources (Altman 1987, 1989; Altman, Bek and Roach 1996).
- A recognition that as a result of the *Aboriginal Land Rights (Northern Territory) Act 1976* and State land rights acts indigenous people now own significant tracts of land (677,000 square kilometres or 17 per cent of Australia in 1995, much of which is in remote regions) where many native species are endemic and abundant (Altman, Bek and Roach 1996).

In policy terms, the following are worthy of the Committee's consideration:

- The *Native Title Act 1993* recognises that indigenous Australians may have property rights in species even if they do not have property rights in the land on which species are located, such as national parks, and pastoral leases. Indigenous people may also utilise resources on vacant crown land. The *ATSIC Amendment (Indigenous Land Corporation and Land Fund) Act 1995* provides resources for the acquisition and management of land where native title has been extinguished: nearly \$1.5 billion over ten years has been allocated to the Land Fund.
- There is a growing indigenous involvement in the provision of eco-tourism and tourism more generally. Indigenous people in some situations are linking ownership of major tourist destinations (like Uluru National Park or Nitmiluk National Park) with a demonstrable competitive advantage in providing information to tourists about native species. This is a value-adding and very sustainable means of utilising native species, as is recreational fishing based on catch return.
- There are growing aspirations expressed by many indigenous leaders in remote indigenous communities to become less economically dependent on government support and to consider local and regional economic

development strategies. Government policy also emphasises the need for enhanced economic development. In many locations, utilisation of native wildlife provides one of the few avenues to supplement incomes. However, poor market linkage owing to remoteness, often offsets any competitive advantage that indigenous interests may enjoy.

The Committee is focusing on three issues: potential impact of commercial utilisation of native wildlife on the environment, economic viability, and adequacy of existing regulatory regimes. We deal with these from an indigenous policy perspective.

### **The potential impact that commercial utilisation of native species by indigenous people might have on the Australian environment**

In terms of the impact that commercial utilisation of native species might have on the Australian environment, the issue here is the recognised need, by both indigenous people and others, to maintain species biodiversity in accordance with national and international conventions and strategies. The three most pertinent are the International Convention on Biological Diversity, the subsequent National Strategy for the Conservation of Australia's Biological Diversity, 1993, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) of 1975. CITES aims to establish worldwide control over trade in endangered wild species to ensure trade does not threaten them with extinction. Australia is a signatory to CITES and its principles are reflected in Commonwealth and State legislation on commercial utilisation of native animals (Biological Diversity Advisory Committee 1992; Wilson, McNee and Platts 1992; Webb 1996).

A crucial aspect of the impact of commercial utilisation on the Australian environment is achieving a balance between utilisation and preservation of wildlife, especially with respect to the relative commercial value of tourism activity based on non-harvesting of species. Kakadu National Park, for example, is divided into zones, only some of which allow wildlife utilisation by indigenous people (for subsistence purposes). While other areas are available for tourists to utilise, indigenous organisations receive income from tourist visitation to the park (Altman, Bek and Roach 1996; Commonwealth of Australia 1996).

Another management issue is the appropriate balance between commercial utilisation and subsistence use. Commercial utilisation of a resource by indigenous people, or by others, might well mean that less is available for subsistence use. This issue is most clearly articulated in situations like the Torres Strait where, for example, Islanders are concerned that commercial prawning is causing the traditional fish catch for subsistence to decline (Johannes and McFarlane 1991: 117; Williams 1994: 67). Although there are no assessments of

reef fish stocks this decline is unlikely to be related to traditional catch levels because as Williams (1994: 50-1) reports, reef fisheries are only lightly exploited. Research has revealed a connection between fishing effort in the prawn trawling industry and fish population levels, with bottom-dwelling species being the most affected (Williams 1994: 68). This problem is occurring despite the Torres Strait Treaty provisions to manage commercial fisheries for the long-term benefit of the indigenous inhabitants (Williams 1994: 53). A similar problem is reported off the coast of Arnhem Land where indigenous people from Croker Island and Cobourg Peninsula are concerned about the impact of prawn trawling on dugong which they exploit for subsistence, including the effect of boat engine noise and the destruction, by trawling, of seagrass beds grazed by dugong. Additionally, commercial fishing boats in the area that do not use modified exclusion devices on long nets (principally because of cost) to prevent large animals being caught, results in dugong and turtle deaths. Indigenous people are also concerned about the fishing by-catch which results in the wastage of a large amount of fish (N. Peterson 1997 pers. comm.). This point may be particularly pertinent if it were legal for indigenous people to communally exploit resources presently used only for subsistence purposes, as many desire to. Vardon's study in the Top End of the Northern Territory showed that 80 per cent of a small sample of indigenous people interviewed regarded commercialisation of wildlife resources positively and 90 per cent thought it would create much needed employment. Most wanted to buy wild foods in supermarkets if they could do so legally (see Vardon et al. 1997).

### **Data on commercial utilisation and species sustainability**

It is noteworthy that in Australia there are poor regional data sets on the impact of commercial utilisation on species sustainability (Altman, Bek and Roach 1996). However, some species, such as crocodiles, kangaroo, muttonbirds and emus, presently utilised for commercial purposes, are reasonably well researched.

Crocodiles became the focus of research because both *Crocodylus porosus*, the saltwater crocodile, and *Crocodylus johnstoni*, the freshwater crocodile, were heavily exploited until the 1970s and were listed by CITES (*porosus* was placed on CITES Appendix 1). State governments enacted legislation to protect crocodiles and populations are now recovering (Wilson, McNee and Platts 1992). Detailed monitoring of survival and growth rates on farms has been carried out for government to compare the performance of different farms. Trials indicate eggs can be gathered from the wild (for stocking crocodile farms) without affecting adult population numbers. Programs monitoring the wild population are in operation in the Northern Territory (Webb, Missi and Cleary 1996: 178; Webb 1997).

Kangaroo numbers are controlled by research-based management plans, resulting in culling in some areas and protection in others. Present commercial exploitation, under a permit system, is based on these plans. Grigg (1995: 52)

suggests that, from an environmental perspective, there are too many herbivores 'trying to make a living on the pasture' and that farming kangaroos with sheep, with a concomitant reduction in sheep numbers, would reduce the total number of herbivores. Grigg argues that kangaroos, being soft-footed, cause less erosion on rangelands than sheep.

The commercial harvest of muttonbird chicks on the coast and islands of Tasmania began in 1903. However, the industry is in decline because of a dropping demand for the product and reduced interest of younger indigenous people in the activity. The annual harvest for meat, feathers and oil is of traditional social and economic importance to Tasmanian Aboriginal people. Licences are issued under management plans based on the monitoring of populations (Skira 1996: 171).

In Western Australia emu farming was appraised and considered technically feasible. By 1990 there was an extensive database on wild breeding, biology, captive breeding and growth. In this State only, the emu can be taken with a damage permit but cannot be sold commercially. Permits are based on data-based management plans which aim to conserve the emu while protecting farmers' crops from damage. It is also suggested that indigenous people could harvest wild emus where the population is high (Wilson, McNee and Platts 1992: 76-9).

The data regarding species presently utilised commercially indicates that the results of commercialisation under management plans are on the whole positive in terms of protecting species biodiversity, although, as Bomford and Caughley (1996) point out, there are never absolute guarantees.

### **Data on subsistence utilisation and species sustainability**

There are also very few data sets on species utilised for subsistence purposes to indicate maintenance of biodiversity although a recent brief study in the Top End of the Northern Territory showed widespread and high levels of use of many wildlife species for subsistence (Vardon et al. 1997: 9). An exception to this information void is data on the harvest of the magpie goose which is monitored annually in the Northern Territory. There is no evidence of decline in their numbers (Vardon et al. 1997: 9). Other exceptions are the monitoring surveys of dugongs such as that undertaken at Lockhart River, and the marine harvest monitoring program operating in some communities in the Torres Strait Protected Zone. Monitoring of subsistence utilisation of dugongs in the Lockhart River area indicates that exploitation is unlikely to be significant at a regional scale, but may have an adverse impact locally; and monitoring indicates that the total harvest of dugongs in the Torres Strait may not be sustainable (Marsh 1996: 141; Roberts, Klomp and Birkhead 1996: 161).

There is some evidence that, in terms of biodiversity, overall healthy native wildlife populations are useful indicators, and also evidence that invasions by feral introduced species (of flora as well as fauna) can have negative environmental and biomass impacts. There is a need for research and surveys on

the extent of degradation on Aboriginal land (Young et al. 1991: ix). Indigenous people in Australia have been involved in the land care aspects of wildlife biodiversity. These programs have been outlined by Young et al. (1991: 78-9) and are now being updated in a consultancy 'Indigenous Lands and Biodiversity Conservation' by Dan Gillespie and Peter Cooke commissioned by the Biological Diversity Advisory Council.

Although some scientific data are available for particular wildlife species, there is little overall understanding about impacts on biodiversity and the Australian environment from commercial utilisation and further research is needed. This would be especially the case if the number of species to be utilised commercially is to be increased.

### **Current and future economic viability**

As a general rule, ventures that utilise native wildlife are only viable if undertaken on a small scale, as in the case of family-owned and run enterprises rather than community enterprises (Daly 1994).

### **Historical experience**

The historical experience of indigenous Australians in enterprise development is very chequered, partly due to a number of structural, locational, cultural, financial, and human capital constraints in enterprise operation and the labour force generally (Daly 1994). The unsuccessful Aboriginal-run, government-sponsored, crocodile farm at Wyndham, Western Australia (Wilson, McNee and Platts 1992), and the turtle farms in the Torres Strait that aimed to combine ecological initiatives with job creation are examples of such failures (Beckett 1987). Recently, there have been more positive outcomes from commercial community native wildlife utilisation. For example, the Bawinanga Aboriginal Corporation in Arnhem Land has installed a crocodile egg incubator to provide stocks of eggs and hatchlings for export to crocodile farms. Eggs are gathered from the wild. Returns from crocodile eggs are good (\$5 per egg, and \$45 per hatchling) and there is great potential to increase this according to Vardon (1997 pers. comm.). However, while such activity is commercially viable, it generates little additional income when averaged across all indigenous participants.

### **Enterprise development**

Indigenous interests are seeking commercial opportunities especially in situations where there is no labour market and few commercial options (Altman and Taylor 1987; Altman, Bek and Roach 1996). Commercial harvesting of wildlife is one obvious option. The Miller Report (1985) on Aboriginal employment and training provisions commented that there were few government incentives that allowed Aboriginal people to enter such industries and the problem remains. Enterprise development in remote areas is focused on in the recent Aboriginal and

Torres Strait Islander Commission (ATSIC) and Department of Employment, Education, Training and Youth Affairs (DEETYA) draft economic development policy on strategies to further the economic development of Aboriginal and Torres Strait Islander peoples. The document suggests government programs such as the Community Development Employment Projects scheme should encourage such initiatives (ATSIC 1996: 2, 10, 14). But the development of new enterprises, especially if supported by Commonwealth resources, need to be carefully and strategically planned. In particular, careful consideration need to be given to market demand for produce, and whether new markets can be created. There is some consumer resistance to certain products both domestically and overseas. For example, there is overseas resistance to kangaroo products, fostered by influential animal rights groups; and in Australia there is some resistance to consuming kangaroo meat, although this is slowly changing (Wilson, McNee and Platts 1992). Also careful consideration needs to be given to which options are suitable for heterogenous indigenous interests. Some options might not suit some groups. An example of this is that some groups, for religious reasons, do not wish to be involved in the commercial utilisation of the kangaroo (Wilson, McNee and Platts 1992) or magpie geese (Vardon 1997, pers. comm.).

Opportunities for indigenous people are often greatest when harvesting from the wild because there is opportunity for commercial returns without the significant financial investment, and risk, that ranching or farming entail. Crocodile egg harvesting from the wild is an example of this. Webb, Missi and Cleary (1996: 181) suggest that crocodile harvesting offers a low-risk opportunity for indigenous people. However, the extent of the harvest would probably need to be controlled and monitored over time to ensure sustainability.

### **Joint ventures**

Joint venturing, or joint ownership of enterprises, with non-indigenous partners is one possible solution to overcoming the structural barriers indigenous people face in becoming involved in wildlife enterprises. In such arrangements the non-indigenous party would generally provide the finance and both parties would provide their own particular specialist skills. An important requirement is the full and equal involvement of all partners. This also aligns with the philosophy of the above-mentioned draft economic development policy (ATSIC 1996: 10). Such shared arrangements already exist in some areas of commercial enterprise involving indigenous people.

### **Royalties**

Royalty arrangements could provide a viable means for indigenous people to make financial gain from native wildlife. Royalties could be paid to indigenous people for non-indigenous utilisation of native (or introduced) wildlife. This utilisation could be consumptive, such as fishing on Aboriginal land, or non-consumptive such as a bird-watching enterprise. Royalty arrangements are in place for crocodile egg harvesting by the Parks and Wildlife Commission of the

Northern Territory in Aboriginal-owned Arnhem Land. Indigenous landowners are paid royalties for eggs harvested for sale to crocodile farms (Webb 1997). Royalties were paid to indigenous landowners for buffalo, a non-native species, taken from Aboriginal land during the tuberculosis and brucellosis eradication campaigns.

### Marketing

Recent research in Arnhem Land suggests that many indigenous people are interested in selling harvested wildlife species which they presently utilise only as food, such as goannas, file snakes, sand monitors, bush turkeys and magpie geese, as mentioned above. Preliminary research suggests that the market, both within and outside the indigenous community, might be sufficient for viability and that people are prepared to pay good prices for produce (Vardon et al. 1997). However, at present, sale of these native species by indigenous people is illegal, as regulatory regimes prevent their commercialisation and existing laws only allow utilisation for subsistence purposes (Vardon et al. 1997). It would seem, however, that the real costs of marketing these species, including meeting health legislation, have not as yet been investigated.

When assessing the possibilities for further indigenous involvement in commercialisation of native wildlife the viability and difficulties of existing wildlife products and ventures need to be taken into account. The problems of consumer resistance to kangaroo products has already been mentioned. Another problem is that farming or ranching of native wildlife requires high financial, technological and management inputs to succeed, but the price gained for products is often low in relation to this input. For example, although inputs are high in crocodile farming, the present low prices for products mean that it is not a highly profitable industry (Webb 1997; Wilson, McNee and Platts 1992: 73).

Wilson, McNee and Platts (1992: 80) point out that a major factor keeping the prices of presently harvested species low is poor product development and marketing. Grigg (1995: 55) suggests the need for a marketing strategy for kangaroo products aimed at overcoming consumer resistance hence increasing demand and price (depending on elasticity of supply). In relation to the emu, although it is attracting interest and the industry is expanding, the market for present emu products is poor. Wilson, McNee and Platts (1992) suggest that even though the emu is valuable in the United States, and some ventures have tourist potential, it may be wise for indigenous people to assess cautiously the profitability of the current ventures before starting new ones. Another example of product development problems is the muttonbird industry. Its present decline is due to low prices and the small market for the product. Wilson, McNee and Platts (1992) suggest research needs to be undertaken to assess whether the product can be made to better fit current consumer tastes; for example, smoking muttonbird to convert it into a 'luxury good' could be tried. A result of the decline in demand for muttonbirds is that processing technology is being lost due to lack of interest by young Tasmanian Aboriginal people (Skira 1996: 170).



## **Adequacy of existing regulatory regimes to ensure maintenance of biodiversity**

There is a view that existing regimes over-regulate and that opportunities for commercial utilisation are being hampered. The emu is a case in point. As a native species, it is protected, except in Western Australia where it can also be shot with a damage permit and is subsequently wasted. Wilson, McNee and Platts (1992: 79) suggest that if harvesting from the wild and commercial utilisation was approached more liberally, indigenous people could harvest emu in areas where populations are very high, such as at Merredin and Mullewa near the barrier fence. As many emus are shot as pests and then not used in Western Australia, it would seem that they could be utilised commercially without threat to the species.

From an indigenous perspective, there is a desire for management input into species management to ensure maintenance of biodiversity. Indigenous people could be involved in the formulation of the species plans of management legally required for commercialisation of wildlife. They could be involved, for example, in species population counts, and their often extensive knowledge of species resource ecology could be included in management plans. This detailed knowledge could supplement present sparse scientific knowledge of species and thus assist in commercialisation of further native species, especially those species previously utilised only for subsistence which indigenous people themselves wish to sell commercially (Webb 1996: 97-103; Vardon et al. 1997). A precedent for this type of arrangement has been set by other countries. For example, in Quebec, Canada, the Cree are paid a fixed income under the Income Security Program for hunting and for conservation practices such as monitoring the population numbers of hunted game (Altman and Taylor 1987: 53-8). If a similar innovation was introduced in Australia it would ensure biodiversity as well as financially assisting Aboriginal people who wish to reside in remote situations such as outstations and undertake productive activities utilising native wildlife (Altman and Taylor 1987: 33).

There are some examples of the inclusion of indigenous people's knowledge and involvement in native wildlife studies and management planning. The bilby and mala reintroduction scheme run cooperatively with the Parks and Wildlife Commission of the Northern Territory and the Warlpiri people over 12 years in the Tanami Desert (Young et al. 1991: 162) and the Uluru vertebrate Fauna Survey are examples of the incorporation of indigenous and scientific knowledge (Webb 1996: 106). Another example is the Environmental Research Institute of the Supervising Scientist (ERISS) coordination (through the Northern Land Council) with Bawinanga Aboriginal Corporation (BAC), on ecological studies of wetlands in the Maningrida area under the Top End Indigenous Peoples Wetlands Program. Ecological studies were identified by BAC members as a priority for background information on ecosystems and their health as well as identifying potentially valuable species (pers. comm. Ray Hall, ERISS). As well, BAC is presently setting

up a biological laboratory to study native species, initiate management plans for commercialisation of species, and investigate requests for possible commercialisation of native species. Fauna investigations and surveys are being undertaken on species already assessed as having commercial potential such as trepang. These incorporate both indigenous and scientific knowledge. Aboriginal rangers work with Aboriginal land owners, providing information on commercialisation and sustainable utilisation of native species (pers. comm. Ian Munro, BAC).

The enhanced adoption of this joint approach in Australia for managing native wildlife would comply with recent international emphases placed on biodiversity and the role of indigenous people in environmental management (Webb 1996: 97-103). However, as pointed out above, presently indigenous interests are more likely to couch aspirations in wildlife management in terms of land management generally rather than species management specifically as evidenced by their greater involvement in this aspect of species management (Young et al. 1991).

### **Summary and policy recommendations**

CAEPR's submission can be summarised with the following six observations that each have policy implications and can be further developed in discussions with the Senate References Committee Rural and Regional Affairs and Transport Inquiry into Commercialisation of Australian Native Wildlife.

First, there is a need for an enhanced role for indigenous interests in species management, given that many species are endemic to Aboriginal-owned land that currently accounts for a significant 17 per cent of Australia. There is a need for indigenous interests, especially through their representative organisations, to persuasively articulate indigenous aspirations for such enhanced participation.

Second, given the circumscribed economic opportunities that many Aboriginal communities, especially in remote regions face, there is a need to explore options to convert any leverage with respect to species to economic advantage. If commercial utilisation of wildlife in Australia is to expand, it is imperative not only that indigenous people have equal opportunities to participate in such growth, but also that expansion by non-indigenous interests does not limit the subsistence and commercial options available to indigenous people.

Third, one very important means that needs to be carefully considered to enable indigenous people to participate in the economic benefits from commercial utilisation of wildlife is joint venturing, possibly with non-indigenous partners. The appropriate joint venturing options to actively incorporate indigenous interests as stakeholders in commercial utilisation of wildlife need to be explored.

Fourth, another issue that needs to be explored is whether there is a need (or statutory requirement) to recognise existing and potential indigenous property

rights in species. Such issues arise especially in the aftermath of native title legislation. Indirect options to attract rents from utilisation of wildlife, either via direct involvement as joint venturers or as sellers of property rights in species (some precedents exist with respect to introduced species) need to be assessed as a means to provide financial returns to poor indigenous communities.

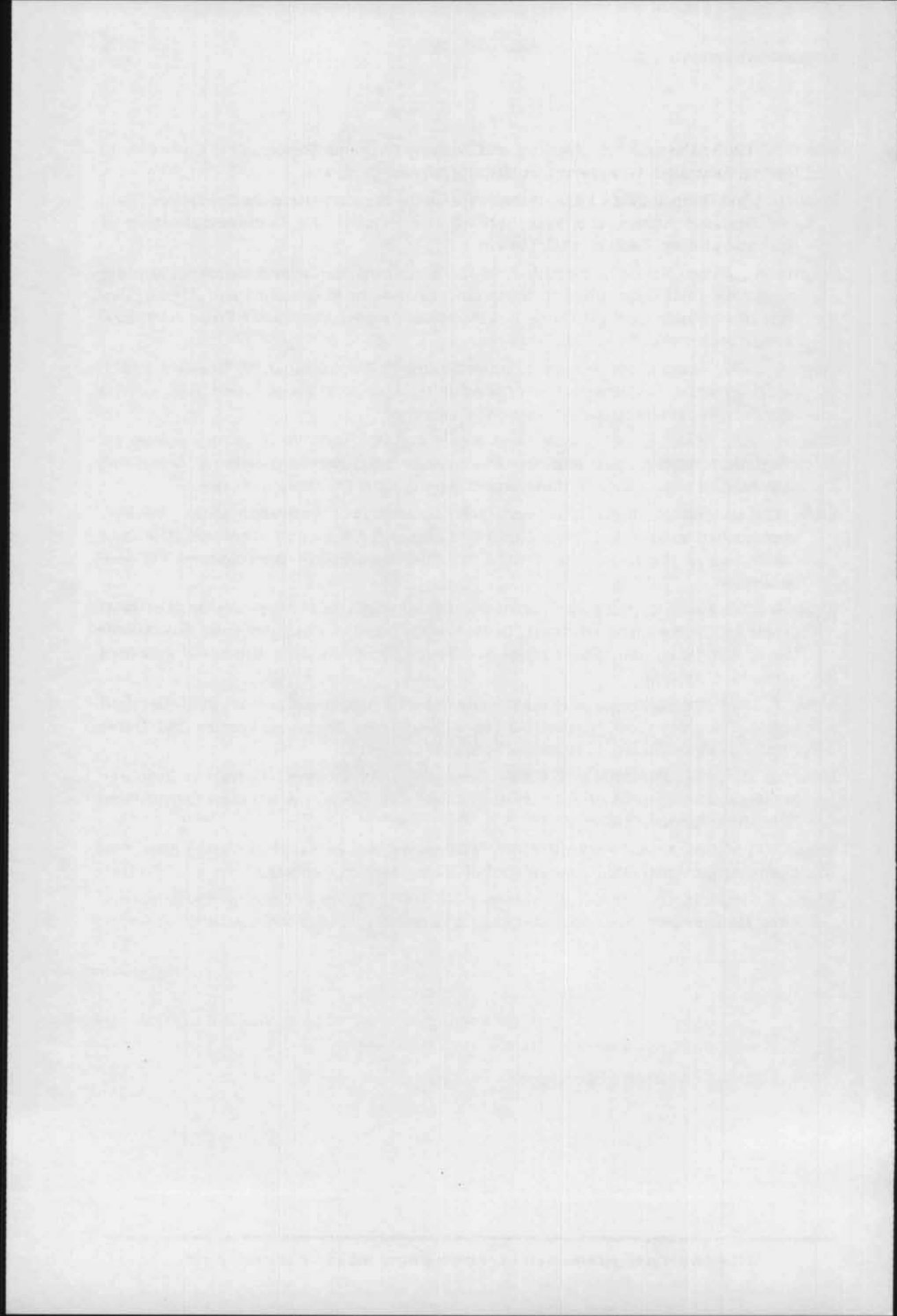
Fifth, there is a need to recognise that from the indigenous perspective, in some situations, subsistence utilisation of species may make greater economic sense than commercial utilisation. In other words, the 'outstation gate' market replacement value of species used for subsistence may exceed their market price.

Finally, there is a need to consider options for incorporating indigenous interests in management processes, possibly via joint management arrangements. Some impressive precedents exist in joint management of national parks like Kakadu, Uluru and Nitmiluk in the Northern Territory. In the best interests of commercial utilisation of wildlife in a sustainable manner that maintains biodiversity it is important that indigenous interests are incorporated in wildlife management.

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