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ACIL ALLEN CONSULTING, AN ANALYSIS OF CHANGES TO THE LICENSING FRAMEWORK FOR THE KANGAROO MANAGEMENT PROGRAM, NOVEMBER 2017

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GLOSSARY OF TERMS

ABS      Australian Bureau of Statistics
EU       European Union
GSP      Gross State Product
IPART    Independent Pricing and Regulatory Tribunal
ITQ      Individual Transferable Quota
KMP      Kangaroo Management Plan
KMS      Kangaroo Management Section
NPWS     National Parks and Wildlife Service
NSW      New South Wales
OEH      NSW Office of Environment and Heritage
PWC      Price Waterhouse Coopers
QLD      Queensland
SA       South Australia
TAC      Total-allowable-harvest
The Office of Environment and Heritage (OEH) commissioned ACIL Allen Consulting (ACIL Allen) to assess the economic impact of increasing or removing the cap on fauna dealer wholesaler licences on the industry and licensing framework.

ACIL Allen took a three pronged approach informed by best available information including stakeholder consultation, economic theory and assessment of publically available data from the OEH and other sources.

We use this review to inform the development of an econometric approach to explain where possible the factors influencing the commercial kangaroo industry and the potential impacts of reform on the economy and the environment.

First it is important to understand why and how kangaroos are managed in NSW. Essentially, kangaroos need to be managed due to the existence of a dual environmental and socio-economic problem which commonly arises with a wild harvest resource such as kangaroos.

Kangaroos are an iconic native species protected by law. However, in large numbers, as is currently the case, kangaroos can have considerable adverse impacts on the environment. This include the impact on landholders, farming and livestock as well as the potential for land degradation, exacerbated in periods of drought, and potential impact on other native flora and fauna.

As a result of this dual problem, kangaroos, like other wild harvest resources are often managed by a quota or a licence system or a combination of both as is the case in NSW. In NSW there is a competitive quota and a licence framework, administered by OEH under the Biodiversity and Conservation Act 2016 with the intent to ensure a sustainable kangaroo population and that the harvest is humane. This quota system and licence framework has been in existence since the 1980s and has been reviewed multiple times. As a result of multiple reviews and changes over time there has been the development of a legacy licence cap policy associated with the fauna dealer wholesaler licence, which is one of the licences administered by OEH. This restrictive cap policy has seen the emergence of sub-licencing arrangements that undermine the cap which have created further distortion in the market.

Economic theory suggests that the cap policy has more adverse impacts when coupled with a competitive quota as is the case in NSW. Economic efficiency cannot be achieved with both systems in place.

ACIL Allen shows, using best available data, primarily from stakeholder consultation that, the licence cap arrangement is at best contributing to unnecessary regulatory burden and impeding development of the commercial kangaroo industry at worst it is creating and sustaining anti-competitive behaviour which is entirely outside the scope of the licence framework and its intent.
1.1 Objectives

The Kangaroo Management Section of the NSW Office of the Environment and Heritage (OEH) commissioned ACIL Allen Consulting (ACIL Allen) to provide a better understanding of the economic and environmental impact of the kangaroo licence framework.

There has been significant previous review of the licence framework including an analysis conducted prior to the introduction of the new Biodiversity Conservation Act 2016. There is further scope for reducing red tape through changes to the remaining suite of licences, specifically increasing or removing the legacy cap on the number of Fauna Dealer Wholesaler licences (S 124) which are restricting growth and competition in the market.

The objective of this project is to determine what environmental, economic and social changes may occur if the fauna dealer wholesaler cap is increased or removed relative to the status quo. The findings of this analysis will be used to make the case for further regulatory reform.

1.2 Context

Since the introduction of European farming methods there has been considerable growth in the kangaroo population.\(^1\) This is primarily due to the availability of feed from pasture production and water provided by farmers for farmed livestock such as sheep and cattle. Kangaroo numbers in NSW have been increasing in line with climatic conditions.

There are three key reasons why kangaroos need to be managed:

1. kangaroos are a protected species
2. minimise the impact of kangaroos on the environment
3. meet the demand for kangaroo products

Commercial kangaroo harvesting is managed by a quota and a licence framework under the Biodiversity Conservation Act 2016. OEH are responsible for setting a quota to ensure the kangaroo populations are sustainable and administrating a licence framework to ensure humane methods for commercial (and non-commercial) harvest. NSW Food Authority also regulates the processing of kangaroo meat for human and animal consumption.

As a wild population there is great variation over time of the numbers of kangaroos, and OEH ensure that the quota is set at a level that allows for a sustainable population (i.e. so kangaroos cannot be over harvested). Since monitoring began in 1982, kangaroo take has never exceeded the quota, and

in the last 15 years the proportion of kangaroos harvested relative to the quota has been in decline (see Figure 2.1). This has led to greater pressure on the natural environment and agriculture as kangaroos compete for feed and water with livestock and may damage the land. The adverse effect of high numbers of kangaroos on landholders is significant according to stakeholders, and this coupled with the lack of demand for kangaroo product is hampering the efforts of the current kangaroo management system to control kangaroos.

The licence framework although intended to solely to sustain the kangaroo population and ensure humane harvest has by legacy and policy design become a barrier to the commercial market for kangaroo product. This is because of:

— the cap on the number of fauna dealer wholesaler licences which limits the number of processors able to operate in the market and stops new entrants

— the restricted fauna dealer wholesaler licence arrangements which places an unfair restriction on business and competition imposed by the primary licence holder

Further, the commercial kangaroo industry is a national industry with operations using NSW (and other state’s) kangaroos in NSW, Queensland, Victoria and South Australia. The cap on the fauna dealer wholesaler licence imposes restrictions above and beyond the regulatory requirements of other states where licence frameworks operate for the same purpose, but with no restrictions on trade or business. Further, the licence cap is in breach of National Competition Policy which requires a licence should not restrict competition unless it can be demonstrated that the benefits of doing so outweigh the costs, and that the objectives of the legislation can only be achieved by restricting competition.

5.1 The guiding principle is that legislation (including Acts, enactments, Ordinances or regulations) should not restrict competition unless it can be demonstrated that: (a) the benefits of the restriction to the community as a whole outweigh the costs; and (b) the objectives of the legislation can only be achieved by restricting competition.

*Competition Principles Agreement – 11 April 1995 (As amended to 13 April 2007)*

Removing the fauna dealer wholesaler licence cap and associated sub-licence arrangements from the licence framework will ensure that there are no structural impediments imposed by OEH on the commercial kangaroo industry.

### 1.3 Approach and methods

In order to determine what may happen in the light of regulatory reform, ACIL Allen took an approach informed by best available information including stakeholder consultation and analysis of publicly available information from the OEH and other sources.

We undertook a review of the best available information and the theory of wild harvest economics. Then using information collected from stakeholder consultation, we conducted a qualitative analysis of the potential effects on stakeholders of two options for changes in the licence regime, relative to the status quo, and examine the expected impacts under different scenarios.

The rest of this report is structured as follows:

— Chapter 2: provides an overview of why kangaroos are managed in NSW

— Chapter 3: explains how kangaroos are managed in NSW

— Chapter 4: identifies the current problem

— Chapter 5: examines previous attempts for reform and some rationale for removing the licence cap

— Chapter 6: outlines two options for OEH to consider and analyses them in relation to the potential effects on stakeholders and relative to the status quo.

— Chapter 7: summarises the key findings.

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2 Beyond kangaroo management commercial harvest licensing each state has their own food safety regulation and export requirements are at a national level through AQIS.

Why are kangaroos managed?

The commercial harvest of kangaroos requires management to sustain the population and allocate rights to harvest. There are three reasons why kangaroos are managed - the protection of the species, potential for adverse environmental and economic impact and to utilise a wild harvest resource for commercial gain.

This creates a need for management to maximise net social benefit for the kangaroo population, broader society, the rural and regional community including landholders, the economy and the natural environment.

2.1 Kangaroos are protected under legislation

Kangaroos are native and iconic fauna considered integral to the Australian landscape and Australian society. As a wild animal with symbolism, protection of the species is critical for not only biodiversity but also for Australian culture.

The kangaroo population is mobile across state borders and is influenced by environmental and biological effects such as reproductive capacity, climatic conditions including drought and flood, predation and disease (refer Figure 2.1)4 This makes it difficult to monitor the population and requires concerted management of the commercial harvest by state government departments across Australia.

2.2 Kangaroos can have an adverse impact on the environment

When kangaroo numbers are high the following costs are incurred primarily on farmers and those residing in regional areas but also the natural environment:

— grazing pressure imposes cost on livestock producers, especially in times of drought, or in areas where there is significant land degradation. Costs, estimated to be around $55 million in 19885, may include:
  — limits to livestock numbers and/or livestock weight and health due to competition for feed sources
  — fencing costs
— crop damage
  — a 1992 study estimated that the reduction in winter wheat yield due to the presence of kangaroos is around 10 per cent6

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5 Gobson, L.M. and Young, M.D., 1988, Kangaroos: counting the cost: the economic effects of kangaroos and kangaroo culling on agricultural production, Report for CSIRO.
animal related vehicular damage and accidents, of which kangaroos and wallabies are considered the predominant species (44.8 per cent) involved in ‘serious’ road accidents in Northern Queensland.\(^7\)

Recent studies at Australian National University and Deakin University also suggests that large numbers of kangaroos can reduce the occurrence of native grasses and can also affect the biodiversity other native flora and fauna.\(^8\)

**FIGURE 2.1 FLUCTUATION IN ABSOLUTE NSW KANGAROOS POPULATIONS BETWEEN 1975 AND 2015**

![Graph showing fluctuation in absolute NSW kangaroos populations between 1975 and 2015](image)

Note: The graph shows temporal variation of kangaroo populations in relation to wet and dry periods during commercial harvest activities. The pattern of a slower population recovery, following sudden decline of kangaroo populations, is similar throughout the period. Kangaroo populations have not been affected by the rate of harvest, under the method used to set a quota. Survey methods to estimate population size have varied over time from monitoring seven sample blocks (striped line), to 200-metre (black line) and 100-metre strip transects (dotted line).


2.3 There is a commercial market for kangaroo product

Historically, kangaroo meat and skins have been valuable commodities and a domestic and export market mean there is utilisation of kangaroos.

Kangaroos can be considered a wild harvest resource, and in an open access scenario (i.e. when there is no regulation) the resource is likely to be depleted sometimes to the point of the collapse of the system and extinction of the species.

This is similar to the management of fisheries where licensing is a mechanism used to deal with scarcity and the allocation of rights, see Box 2.1 for further details.


Fisheries management relates to the total fishing system, consisting of the resource base and the (harvesting and processing) industry.

The natural resource base consists of the resource endowment - stocks of fish species, and the supporting natural environment or habitat.

Fishery resources are finite, stocks are exhaustible and interrelationships are highly complex, traditionally fish and their habitats have been considered common property. Knowledge of stock magnitude, behaviour and response to fishing pressure therefore is imperative for intelligent management.

The primary aims of fisheries management is

- optimisation of the aggregate social benefit derived from these activities as a whole
- protection of that habitat
- conservation of the fish stocks

Due to the institution of common property in fishery resources and open and costless access for resource users, the market mechanism does not work and without regulation, leads to the over fishing of commercial fisheries. Converting the right of common property to some form or forms of private property, i.e. a licence providing the right to the use of a state property for individual fishing enterprises (persons, groups, communal organizations corporations, etc.). This right in some instances may be an identifiable discrete stock, or in other instances to a share in a total allowable harvest (TAC).

Such rights are granted on a long-term basis and, to facilitate entry, adjustment and exit (except for provision against abuse, e.g. monopolisation), they would be freely transferable.

By motivating producers to operate at lowest private cost, this arrangement might be expected to:

(a) optimize net social benefits from the fishery harvest
(b) minimise state involvement in regulatory activity in the fisheries.


The symbolism, biology, the potential environmental costs of kangaroos and the economics of a wild harvest resource create a dual environmental and socio-economic problem which justifies the need for regulatory management of the commercial harvest of kangaroos.
How are kangaroos managed?

This dual socio-economic and environmental problem discussed in Chapter 2 led to the introduction of formal kangaroo management programs and commercial harvest arrangements across Australia in the 1980s.

State and territory governments have responsibility for managing kangaroos. Sustainable commercial harvest is practiced in NSW, Queensland, South Australia and Western Australia.

The Commonwealth has legislated under the Environment Protection and Biodiversity Conservation Act 1999—that all states with commercial harvest arrangements develop kangaroo management plans.

These plans are required to demonstrate that the harvest of kangaroos is ecologically sustainable and does not have a detrimental impact either on the harvested species or their ecosystems. Plans must also include annual quotas for commercial harvest purposes and that the population of each harvested species monitored and adjustment of quotas are made annually to reflect changes in population. All states and territories have legislation to protect animal welfare.9

3.1 Kangaroo management in NSW

Kangaroo management is a compliance based program to ensure the legislation, policies and conditions outlined in the National Code of Practice for the Humane Shooting of Kangaroos (the Code) and the NSW Kangaroo Management Plan (KMP).

The primary aims of the management of the commercial harvest of kangaroos, in NSW, under the Biodiversity Conservation Act 201610 are to:

1. ecologically and sustainably manage the kangaroo population achieved by:
   — components of monitoring and surveillance of population dynamics of the four main kangaroo species red kangaroo (Macropus rufus), eastern grey kangaroo (Macropus giganteus), western grey kangaroo (Macropus fuliginosus) and the wallaroo (Macropus robustus).

2. ensure animal welfare standards (humane harvest) under the Code, achieved by:
   — a licence framework used to regulate the commercial harvest

Licensing is prescribed as a mechanism necessary to monitor compliance under the Code, legislated under the Biodiversity Conservation Act 201611 and administered by the OEH’s Kangaroo Management Program (KMP).

The ability to ensure that the activity is undertaken humanely creates the need to regulate the harvest as an assessable activity, noting that there are currently many provisions that are unnecessary. Licencing is necessary for monitoring compliance with the National Code of Practice for the Humane Shooting of Kangaroos and Wallabies (eg. so that carcasses can be traced to the harvester if body-shot wound is detected).


The program has fourteen defined geographical zones across NSW. A quota for commercial harvest is set within each zone based on the scientific understanding of an ecologically sustainable kangaroo population. A map of the zones is presented in Figure 3.1 below. The monitoring and surveillance program ensures that the implementation of the commercial harvest of kangaroos does not have critical effects on the kangaroo population.

Quotas are determined annually relative to the previous year's population estimates. They are calculated just below the maximum sustainable yield and are typically set at 15 to 17 per cent of the previous year's population. Harvesting at or above the maximum sustainable yield would cause population decline. Currently the take in NSW is just 14 per cent of the quota (2016), see Figure 4.1.

The KMS also conducts the following activities including:

— administering the licence framework
— facilitate adaptive management and research
— undertake program reporting and review
— promote community awareness and participation.

3.2 The NSW licence framework

The commercial harvest of kangaroos operates under a licence framework legislated in the Biodiversity Conservation Act 2016 to ensure that the population of kangaroos remains sustainable and that kangaroos are harvested in a humane manner. Previously this was legislated under the National Parks and Wildlife Act 1974.

Although licencing is a prescribed mechanism, the intent of OEH's licence framework is solely to ensure humane harvest and sustainable harvest. These obligations rest solely with the commercial harvester licence (S 123) and the tag arrangements.

This means there is no specific legislative objectives, under the Biodiversity Conservation Act 2016, on any of the other licences (S124, S 124a or S 125) in the framework. There is a case to suggest that these licences provide a role in maintaining integrity in the system but there is no legislative need or requirement to restrict competition in the commercial kangaroo industry (See Box 3.1 below).

BOX 3.1 BEST PRACTICE LICENSING REVIEWS AND NATIONAL COMPETITION POLICY

It is important in the design of best practice licences that principles of best practice regulation, such as those incorporated in the National Competition Policy (NCP) are considered.

The NCP encompasses the principle that legislation (including licensing regimes) should not restrict competition unless it can be demonstrated that the benefits of doing so outweigh the costs, and that the objectives of the legislation can only be achieved by restricting competition.

Where the application of IPART's Best Practice Licence framework concludes that licensing is the best option, then the analysis will also need to satisfy the principle of not restricting competition.

SOURCE: PWC, 2013, A BEST PRACTICE APPROACH TO LICENSING GUIDELINES.

Table 3.1 overleaf presents the licences and the current licence fees.

Other jurisdictions with kangaroo management programs have similar licence frameworks although none of these jurisdictions have a cap on the number of fauna dealer wholesalers or any sub-licence arrangements. These are presented in Appendix A.
In addition to the licence fees, there are registration charges for chiller premises ($390.00) and skin dealer premises ($281.00). Each licence and sub-licence in the NSW framework under the Biodiversity Conservation Act 2016 is detailed below.

### 3.2.1 Harvester licences (S 123)

The rationale for commercial kangaroo harvester licences are to ensure the ecological and sustainable management of the kangaroo population and to uphold animal welfare standards (humane harvest) under the National Code of Practice for the Humane Shooting of Kangaroos (the Code). When kangaroo management began in 1968 harvesters were only permitted to take kangaroos from within their zone. This has since changed and harvesters are permitted to shoot state wide. Currently there are 311 S 123 Professional Commercial Fauna Harvester (professional harvesters) licence holders in NSW. In 2008 there were 880 commercial harvester licence holders. Quota allocations are set through a tag system (Box 3.2) based on the population size as monitored by the OEH on an annual basis.
3.2.2 Fauna Dealer Wholesaler licences (S 124)

The fauna dealer wholesale licence is a legacy provision established in 1968 to manage kangaroo harvesting within NSW National Parks and Wildlife Service zones. One dealer licence was allocated to each of the eleven National Parks zones. Since 1968 new zones have been introduced and some have been amalgamated and quotas continue to be set per zone but harvesters are not restricted to one zone.

Under the KMP only licenced fauna dealer wholesalers can purchase and process kangaroos harvested in NSW. Each premises engaged in fauna dealer wholesaling (or skin dealing) must be licenced. These licences were originally granted in perpetuity and are renewable annually with no need to re-apply.

Even though there are now 14 zones there are still only eleven licences in existence. Of these three are held by a single fauna dealer wholesale and the eleventh is currently unallocated.

Of the ten licences that are allocated there are currently, three fauna dealer wholesale licences held by dealers with operations in NSW, two in Queensland, two in Victoria and three in South Australia.

The unallocated licence was not renewed in 2010 at the request of the former licensee, and has not yet been reissued by the Minister.

Due to this effective legacy ‘cap’ on the number of licences in this category any new business wanting to enter the industry can only purchase an existing licence by negotiation with existing licence holders. Consultation with stakeholders suggests the cost to purchase a licence from an existing fauna dealer wholesaler is between $60,000 and $500,000.

This process means that licences are transferable – meaning they are sold (transferred) by licence holders to potential new entrants. As this arrangement is unofficial there are no rules governing the transfer process. The NSW government does not participate in any business transactions or licence transfers.

As a result of the restrictiveness of the licence regime, primarily the cap on the number of fauna dealer wholesaler licences (S 124) an informal sub-licence arrangement has been developed with the S 124a Restricted Fauna Dealer licence. Sub-licensing was developed and implemented by OEH (based on legal advice) as a way to allow others to operate as wholesalers without removing the licence cap policy.

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12 This unwritten policy was in place under the National Parks and Wildlife Act 1974.
13 Personal communication with stakeholders.
Box 3.2 USE OF TAGS IN QUOTA ALLOCATIONS FOR COMMERCIAL KANGAROO HARVEST

Tags were established as a condition of an occupier’s licence under section 121(2) and clauses 52 and 53 of the National Parks and Wildlife Regulation 2009. The key points are listed below:

- OEH must issue plastic tags in a quantity equal to the number of kangaroos a person is authorised to harvest under the occupier’s licence.
- A fee (fixed by the Chief Executive) must be paid to OEH for the tags.
- The tags must be self-locking, from a series issued specifically for that year, individually numbered and with a different colour for each consecutive year.
- Tags are issued for a specific property and harvester, and are not transferable to another property or harvester.
- The tags must be attached to the skin and locked to prevent removal.
- A tag can only be removed from the kangaroo skin during the skin tanning process.
- All kangaroos taken under commercial licence must be tagged, whether or not the carcass is sold.

Tags are a condition for harvesting in the Code, in the Plan and are a requirement of the National Parks and Wildlife Act and regulation. Processors and the NSW Food Authority can use tags to identify the source of contaminated meat. Tags can also be used to monitor kangaroos that have not been harvested in accordance with the Code.

Tags generate revenue for OEH and help to recover the costs of licensing officers. The cost of tags was identified as an issue for kangaroo harvesters, but most harvesters discounted these costs as a business expense.

As kangaroos migrate and follow resources (food, water etc) tags are now issued to harvesters directly, and are not property specific. Harvesters need to report the properties each kangaroo was harvested on for OEH to monitor the quota available and the quota allocation.

Source: Office of Environment and Heritage

3.2.3 Restricted Fauna Dealer licence (S 124a)

S 124a Restricted fauna dealer licence is a sub-licence that provides ‘an authority to deal as a fauna dealer wholesaler’. This arrangement was established by OEH to enable others (people not holding fauna dealer wholesaler licences) to operate chiller boxes and processing plants.

These sub-licences allow the cap policy to be circumvented so that new entrants can operate in the market. However, this means that a prospective restricted licence holder needs to have a relationship with an existing licenced fauna dealer wholesaler. Then terms and conditions, including the payment of a royalty per kangaroo and often restrictions on trade, are prescribed by the principal licence holder. This process does not involve the government and any payments made are in addition to the annual licence fee paid to OEH. Restricted fauna dealer licence holders are also obligated to provide record keeping to the principal licence holder for compliance purposes.

These arrangements have created an unintended consequence as they limit the restricted licensees’ ability to control their own business operations. There are currently five of these sub licences.

3.2.4 Other unlegislated sub-licence arrangements

There are a series of informal sub-licensing arrangements outside the legislation which OEH describes as follows:

- A section 123 licence holder approaches an existing S124 licence holder to access a supply of kangaroos from harvesters for processing.
- A ‘fee’ for operating as a sub-licensee is charged either on a per head charge or through the return of the skin to the fauna dealer wholesaler licence holder.

As these are unregulated sub-licences there is no definitive measure of the number of these arrangements in NSW.
What is the problem?

There are a series of factors at play which mean that kangaroos and the management of the commercial harvest of kangaroos are now a significant problem in NSW. These include:

— overpopulation of kangaroos
— commercial harvest being well below the quota for an extended period of time
— extended depression of the market for kangaroo products.

Each of these issues are discussed below.

4.1 There are lots of kangaroos

Kangaroo numbers in NSW (and across Australia) have been increasing in line with climatic conditions. OEH confirm the methods used for population surveys and monitoring are based on best practice approaches. The reality of surveying animal populations is difficult and the mobility of kangaroos across borders may mean the population may be even higher than the reported estimates. This is further evidenced when looking at the national population estimates of kangaroo. This is currently reported to be around 50 million.

The Commonwealth Department of Environment and Energy notes that estimates do not include kangaroo populations for states where commercial harvesting does not occur (e.g. Victoria, Tasmania, ACT and the Northern Territory) suggesting that actual national populations would be significantly higher still.

4.1.1 Supply is well above demand for kangaroos

The current rate of commercial kangaroo harvest in NSW is well below the quota and has been in decline since 2002. This can be seen in Figure 4.1 which shows the change in kangaroo population, quota and take over time. In 2015 the commercial harvest was less than 15 per cent of the quota in that year.

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Generally the commercial take is rarely equal to the quota, with all state Kangaroo Management Plans recently reporting an under-utilisation of quotas. The utilisation of quotas may reflect shooters’ perceptions about the value of kangaroo harvest.


The main reason for such low levels of take is understood to be the low levels of demand for kangaroo products (see Section 4.1.3 for more details). Other reasons as to why kangaroos are not being harvested at higher levels include several socio-economic factors that affect the capacity of the industry to harvest kangaroos, such as:

- the ability to take the quota can be impeded by periods of extreme weather (specifically rainfall – in periods of higher rainfall harvesters are less active than at other times).
- For example, localised flooding in the years 2010, 2011 and early 2013, combined with a reported lack of overseas demand for kangaroo meat meant that the industry experienced its lowest harvesting with 1.46 million kangaroos harvested for commercial purposes.
- an increase in the cost of production over time.

This may be due to:
- labour costs
- transport (fuel) costs
- regulation and compliance demands including licence fees, tags and hygiene standards
- public liability insurance
- availability of labour which is highly substitutable into other more lucrative industries e.g. mining
- consolidation of number of chiller boxes
- consolidation of the number of processors.

Apart from low levels of demand, there may be other reasons for low take.
4.2 There is little or no demand for kangaroo product

Demand for kangaroo product is considered low both in terms of the domestic market and the export market and also across categories of pet food, kangaroo meat for human consumption and skins (see Box 4.1 below).

Very little data is available on the demand for kangaroo product and the most recent publically available report was published in 2013 and uses data from 2011-12. In 2011-12 the estimated value of the kangaroo industry was approximately $88.8 million. Of this, 52 per cent was export value, 40 per cent was domestic meat consumption and the remaining 8 per cent of value is attributable to the domestic pet food market.

BOX 4.1 THE MARKET FOR KANGAROO SKINS

Kangaroo skins are either sourced as a by-product of the meat industry, or in some states (not NSW) kangaroos are harvested specifically for their skins. Kangaroo skins, furs and leather were exported to 15 countries in 2012, with the key markets in Europe and Asia. Skins are exported in different stages of treatment: raw salted, pickled (semi-processed) and finished leather.

Most skins that are commercially harvested are exported for use in footwear. In 2005-06 the export value of kangaroo hides and leather was of $55.4 million, in 2011-12 the value of kangaroo skin had fallen to just $25.7 million. There are two reasons for this:

- animal protection advocates raising awareness of the animal welfare concerns of the industry
- competition from new synthetic technologies.

The kangaroo industry has reportedly contracted due to a variety of economic factors. These factors include:

- the loss of a key export market (Russian Federation) for meat products
- weak international demand for kangaroo skin, hides and leather
- a stronger Australian dollar
- competition with the mining sector for labour
- variability of supply from extreme climatic fluctuations
- consumer concern over meat hygiene
- animal welfare concerns (see Box 4.2 overleaf).

The loss of the export meat market to the Russian Federation in 2007-08, due to food safety concerns, had a significant impact on the industry, reducing the export market value for kangaroo meat to approximately $20 million in 2011-12 down 56 per cent from over $40 million in 2006-07.

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22 The most recent study of the commercial kangaroo industry in Australia was conducted in 2011-12, to our knowledge there is no further data or analysis publically available.


24 Ibid.

25 Ibid.

26 Ibid.
BOX 4.2 ANIMAL WELFARE AND INDUSTRY RESPONSE

The kangaroo industry works closely with state governments

The management of kangaroos in Australia has been designed to uphold the highest principles of animal welfare. Commercial kangaroo harvesters are skilled professional harvesters who must comply with the Commonwealth’s, Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes. The Code was developed in consultation with industry, government, animal welfare groups, the scientific community and the public. All state legislation relating to kangaroo management refers to compliance with the Code.

Under state government kangaroo management plans, all commercially processed kangaroos are taken by professional licensed harvesters who must undergo training by government authorities in the animal welfare controls. They must be assessed by the regulators as competent in their knowledge and practices. Extensive regulations and monitoring ensure they deliver humane outcomes.

The welfare outcomes of the harvest have been audited by the Royal Society for the Prevention of Cruelty to Animals (RSPCA) as well as via direct in-field observations by the University of New South Wales. The 2012 audit demonstrated that 99.6 per cent of all kangaroos targeted by professional harvesters are harvested instantaneously in compliance with the regulations.

An industry solution

In 2013 the Kangaroo Industry Association introduced a policy to see the industry move to a male only take. By harvesting male kangaroos only there are no issues around how to deal with orphaned joeys at foot or in pouch. The breeding cycles of female kangaroos mean that they may have multiple dependent young at any one time. Since the introduction of this industry policy, females taken have declined from 30 per cent of the overall take to less than 5 per cent across NSW and Queensland. The major fauna dealer processors in the industry have adopted this voluntary industry policy.

Following the collapse of the export market, the numbers of kangaroos harvested declined and this has been attributed to causing an excess supply of kangaroo meat that put downward pressure on the price paid to harvesters per carcass.27 As a result many harvesters switched from full time to part time shooting or exited the industry. This effect was likely compounded by the mining boom which became a lucrative source of income for rural and regional labour.28

Poor demand has led to consolidation of the market. Since 1997 there have been a total of 24 companies operating as fauna dealer wholesalers under the NSW kangaroo licence framework.29 Given the capped system there are only a maximum of 11 licences available meaning that not all these firms could have operated at any one time. Prior to the collapse of the Russian market in 2007 there were 10 firms operating, now, in 2017, there are only 8 companies who hold fauna dealer wholesaler licences.

Figure 4.2 and Figure 4.3 provides an indication of the quantum of change in the industry in NSW over the last decade in terms of the numbers of kangaroos processed and the number of fauna dealer wholesaler licence holders. Some of these companies have gone out of business or have been consolidated or bought out or no longer hold fauna dealer wholesaler licences. In this period there have been only two new entrants – one being a Victorian operation of an existing firm and one being a brand new player (Macro meats). Five of the businesses operating in 2017 were also in operation in 1997 when these records were first collected.

SOURCE: ADAPTED FROM KANGAROO INDUSTRY ASSOCIATION OF AUSTRALIA, AVAILABLE AT: HTTP://WWW.KANGAROOINDUSTRY.COM/INDUSTRY/ANIMAL-WELFARE.ASPX AND FROM PERSONAL COMMUNICATION WITH STAKEHOLDERS.

27 Ibid.
28 Ibid.
29 Data provided by OEH.
### FIGURE 4.2 NSW FAUNA DEALER WHOLESALERS 2007

![Graph showing the number of kangaroos processed by various dealers in 2007.](source: OEH DATA)

### FIGURE 4.3 NSW FAUNA DEALER WHOLESALERS 2017

![Graph showing the number of kangaroos processed by various dealers in 2017.](source: OEH DATA)
4.2.1 Domestic markets

There are two main domestic markets for kangaroo meat in Australia:
- pet food market
- meat for human consumption

Prior to the mid 2000s approximately 70 per cent of kangaroo meat used domestically was in pet food. The pet food market in 2011-12 was 5,300 tonnes down 400 per cent since 2004-05.30

Over the last two decades there has been a significant shift towards human consumption of kangaroo meat but kangaroo meat for human consumption is still considered a niche market accounting for less than 0.5 per cent of total red meat consumed in Australia in 2011.31 This compares with shares of around 35 per cent for other red meats.

This shift in demand over time has meant that the price of kangaroo meat for pet food has increased due to competition from the human consumption markets. Pet food producers, however, can easily substitute kangaroo meat for other cheaper cuts of meat or substitute products such as chicken.

A small niche market for kangaroo meat to zoos to feed their carnivores exists, however, this is a low price, low volume market (Environment Australia, 2003).32

4.2.2 Export markets

In 2011-12 the EU was the largest volume and value market (see Figure 4.4) for kangaroo products internationally. Germany is the largest single importer followed by South Africa.33 In 2011-12 approximately 2,317 tonnes of kangaroo meat was exported to the EU at a value of $14 million.34

In the EU kangaroo is considered game-meat and consumer demand has grown due to outbreaks of livestock disease such as Foot and Mouth and Bovine Johne’s Disease.35 The majority of prime kangaroo cuts are exported to the EU with prices varying from $5.08 per kilogram in Germany to $6.69 per kilogram in the Netherlands.36

Another important and growing market is South Africa accounting for 28 per cent of exports in 2011-12, up from 5 per cent in 2006-07. However, lower grade meat is exported to South Africa ($2.69 per kilogram) and the majority of export production is sold to the consumer as ‘meat’, and not marketed as kangaroo.37

31 Ibid.
32 Ibid.
33 Ibid.
34 Ibid.
35 Ibid.
36 Ibid.
37 Ibid.
4.3 Kangaroo is a national and highly regulated industry

Kangaroos are mobile and are not restricted by state borders, the industry is a national industry with several major processors who operate across states and are beholden to multiple state legislation (including food safety regulation, see Box 4.3). The Commonwealth co-ordinates the export of kangaroo meat and skins from all states with commercial harvest arrangements.\(^{38}\)

The commercial kangaroo industry nationally, is a small and heavily regulated industry dominated by many price taking harvesters and a small number of processing firms (fauna dealer wholesalers). Many of these processors source kangaroos from several states and operate national businesses. To be able to process kangaroos harvested in NSW, processors must hold a NSW fauna dealer wholesaler licence or a restricted fauna dealer wholesaler licence regardless of where their processing facility is located. This same system (of requiring a licence from the state where the kangaroo was harvested to be able to process kangaroos) is employed in other states. However, NSW is the only state where the licence framework, by legacy of a cap, inhibits industry development.

The national market is dominated by several large fauna dealer wholesalers who operate across state boundaries and control a significant share of the market (it is estimated that two major players control 85 - 90 per cent of the market share in meat production).\(^{39}\) The remaining 10 - 15 per cent of the market is made up of smaller companies, some of which operate only in one state.

**Figure 4.5** below presents a schematic representation of how the fauna dealer wholesaler licence interacts with the kangaroo industry. In the commercial kangaroo industry profitability is low because of the industry’s underlying structure of high fixed costs (licence fees and setting up a processing plant) and low variable costs (costs of labour etc).

This highlights the large number of small players in the professional harvester (supplier) sphere and the concentration of market power amongst the fauna dealer wholesalers.

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\(^{39}\) Personal communication with stakeholders.
The high level of regulation in the industry is important in maintaining integrity. Integrity is a critical component of the commercial kangaroo industry due to:

— the wild harvest resource and its need for sustainable management through a quota
— animal welfare concerns which include:
  — legislated humane harvesting provisions
  — industry led policies such as the ‘male only policy’ (see Box 4.2 above).
— food safety and phytosanitary requirements enabling quality standards to be upheld (see Box 4.3 below).

Integrity in the supply chain is crucial for the future of the industry, but it is important to note that it is not one single piece of legislation or policy that provides this integrity, but multiple regulatory and industry led policies that work together. This means that removing the licence cap will not, in itself, affect sustainability, animal welfare or food safety standards.

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**FIGURE 4.5** THE KANGAROO INDUSTRY AND FAUNA DEALERS

- High barriers to market entry
- Low threat of new industry in current regulatory environment
- Fauna dealer licences currently capped at 11; high concentration in the market (one wholesaler holds 3 licences)
- Existing dealers have established systems and processes and potential capacity to process more kangaroos

- Large number of harvesters (> 300)
- Small amount of market power – harvesters are price takers with relatively high fixed and variable costs
- Harvesters are paid per kilogram
- Low switching costs between harvesters
- Harvesters can shift to other employment (e.g. mine work) with relative ease (substitution effect)

- Small number of large players
- Price setters on the supply side; price takers on the demand side
- Small market domestically and internationally
- Market can substitute easily for roos from other states
- Product is niche for high value but low value (75% of market is pet food) is highly substitutable

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**SOURCE: ACIL ALLEN CONSULTING**

*Industry integrity is critical but is not dependent on a licence cap*
The commercial kangaroo industry in Australia is heavily regulated nationally and within and across states.

**Environmental and animal welfare legislation**

Commercial harvest arrangements, if adopted, are legislated the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and animal welfare is protected under the National Code. This Act also allows for the export of kangaroo products.

Each state, that has commercial harvest of kangaroos (NSW, Queensland, SA and WA) must have a kangaroo management plan which in NSW falls under the *Biodiversity and Conservation Act 2016*, which is also the mechanism for the licence framework.

**Food safety legislation**

Harvesting and processing of meat for human and animal consumption in Australia is regulated by each state under state legislation (e.g. in NSW *Food Act 2003*, *Food Regulation 2015*) and under an Australia New Zealand Food Standards Code (the Food Standards Code).

The NSW Food Authority has prepared the Wild Game Meat Field Harvesters Food Safety Program to help harvesters meet their legal requirements.

In NSW, operators of game meat processing plants also need to meet multiple requirements set out in:

— Food Act 2003 (NSW)
— Food Regulation 2015, including relevant parts of the Meat Food Safety Scheme
— Food Safety Schemes Manual
— Food Standards Code, including:
  — Food Standards Code 1.3.1 - Food Additives
  — Food Standards Code 3.2.3 - Food Premises and Equipment
  — Food Standards Code 3.2.2 - Food Safety Practices and general requirements - Premises and Equipment
— Australian Standard AS 4464–2007, Hygienic production of wild game meat for human consumption

**Export requirements**

Licensees are required to comply with *Meat Notice Number: 2009/18 Additional Requirements for Wild Game Meat Processing for Export* and references the Australian Standard for the Hygienic Production of Wild Game Meat for Human Consumption (AS 4464:2007).

**Other legislative requirements**

In addition, to the above, businesses must comply with registration and other requirements and any greenfield development of a meat processing plant may require state and/or local government planning and development approval.

There have been multiple reviews of the kangaroo management licence framework since its development in the 1980s consistent with the NSW Government’s commitment to reduce red tape and regulatory costs to business and the community.

The fauna dealer wholesaler licence cap policy has been under scrutiny since it was introduced, and has been the subject of several economic analyses of the NSW kangaroo industry. Several of these studies are over 15 years old and as a result the focus here is on the findings of the three most recent studies – NSW National Parks and Wildlife Services Review 2003 and the results from an OEH analysis using the Independent Pricing and Regulatory Tribunal (IPART) Best Practice Licensing Framework, and industry survey conducted by OEH in 2014.\textsuperscript{40}

The first two studies suggest that removing the fauna dealer wholesaler licence cap is necessary from an economy theory perspective and from a best practice licensing approach. Further the OEH study showed overwhelming support for a review of the licence cap policy with the aim to increase business opportunities and reduce red tape.

5.1 NSW National Parks and Wildlife Services Review 2003

In 2003 a report was commissioned by the NSW National Parks and Wildlife Service (NPWS) to review the licensing of fauna dealer wholesales under the Section 124 of the \textit{National Parks and Wildlife Act 1974}.\textsuperscript{41}

The following sections present the economic theory of kangaroo harvesting as presented in the 2003 review of licence arrangements\textsuperscript{42} and examines the theory of licensing and regulation in wild resource based markets such as the commercial kangaroo market.

\textbf{Kangaroo harvest economics}

Commercial harvest of kangaroos NSW is not currently subject to pressures on the resource and there is no real threat on the sustainability (as evidenced in Chapter 2, \textit{Figure 2.1}). This differs from the more traditional wild harvest resource management such as commercial fisheries.\textsuperscript{43} However, regardless of this difference the economically efficient use and allocation of resources underlying basic fisheries economics can be applied to the kangaroo harvest industry.

\textsuperscript{42} Ibid.
Economic efficiency in the use of resources over the long run as defined below, can be represented in Figure 5.1 overleaf which shows simplified cost and revenue functions. Economically efficient resource use is defined as where any given output is produced at minimum cost (this implies avoiding waste and technical inefficiency). Economically efficient allocation of resources is defined in terms of when it is not possible to change the existing resource allocation so that someone could be made better off and no one can be made worse off. If this occurs it means the existing resource allocation must involve waste.

**FIGURE 5.1** LONG RUN REVENUE AND COST CURVES FOR COMMERCIAL HARVEST OF KANGAROOS UNDER TWO REVENUE SCENARIOS

In Figure 5.1 the vertical axis represents both revenue from kangaroo harvesting (i.e. revenue to kangaroo harvesters and fauna dealer wholesalers) and the cost of harvesting in dollars. The horizontal axis represents the effort required by harvesters and processors which is determined by the:

- number of harvesters and fauna dealer wholesalers operating in the industry
- number of days shooting per annum
- size/power of vehicles
- effectiveness of equipment
- number and location of chillers, servicing of chillers, processing capacity, etc.

The linear cost curve, assuming costs are constant for each unit of effort, includes kangaroo harvesting costs such as:

- wages
- inputs (fuel, ammunition, power, etc.).
— depreciation and normal returns to capital which implies that costs include an allowance for profit.\textsuperscript{44} The revenue curve (R1) shows the level of effort used in the industry to the value of the kangaroo harvest. Assuming a constant price for kangaroos (i.e. price does not change with quantity harvested), the shape of the revenue curve will be the same as the shape of the expected yield curve (not shown), which relates the level of effort to the level of harvest. To begin, there is an increase in total harvest and revenue with each additional unit of kangaroo harvesting effort but over time as the total stocks of the kangaroo population are reduced, the additional harvest and revenue from each additional unit of effort decreases.

Maximum sustainable yield (see Figure 5.1, point E3) is the point where any additional unit of effort no longer increases total harvest or revenue. Even if additional effort is sustained, both total harvest and total revenue will decline

Economic theory suggests that if quota is the primary tool used for sustainable resource management, as is the case for management of the commercial harvest of kangaroos, then the quota is likely to be set at, or just below, the maximum sustainable yield (given good knowledge of the population dynamics and the yield function). Quotas work by capping the volume of harvest and hence influences the level of harvesting effort without impacting on the shape or position of the cost or revenue curves.

Theoretically the quota can be set as equal to the maximum economic yield which is the point (E2) where the revenue from the kangaroo harvest (including processing) exceeds the cost and economic efficiency is maximised (i.e. marginal cost equals marginal revenue). In reality the quota will be set somewhere below the maximum sustainable yield to protect the population, this may or may not be at the same level as the maximum economic yield.

Two general conclusions can be drawn from the relationships illustrated in Figure 5.1.

— While there is a positive cost of harvesting kangaroos, the effort required for the maximum economic yield (M1) is always less than the effort required for the maximum sustainable yield (i.e. E2 < E3). This ensures that long-term economic efficiency will always be consistent with resource sustainability.

— The lower the costs of harvest (or the higher the price received), the closer the level of effort needed for the maximum economic yield will be to the maximum sustainable yield.

For some stakeholders (e.g. farmers and landholders) reducing the number of kangaroos is also important in the management of the resource. The theory shows us, however, that pest mitigation will not be achieved when prices are low and/or costs are high.

Assuming a decline in prices for kangaroos, representative of the current situation, gives the lower revenue curve (R2) presented in Figure 5.1.

— the effort required for maximum sustainable yield is unchanged at E3.

— the effort required for maximum economic yield is now at M2 (effort falls from E2 to E’). This would mean that kangaroo harvesting effort and, therefore, pest mitigation are reduced.\textsuperscript{45} This study also note that any costs imposed by the cap on fauna dealer wholesaler licences increases costs to the industry (e.g. the costs of sub-licensees).\textsuperscript{46} This is shown in Figure 5.1, as higher costs for fauna wholesalers and processors will translated into lower prices harvesters (shifting the revenue curve from R1 to R2). This restricts harvesting effort at, for example, point E5 rather than E3. This has two important outcomes: the economic rent will be lower at E’ rather than E2, translating to a lower level of economic efficiency and less pest mitigation, than if those costs were not imposed on the industry.

\textsuperscript{44} An important difference between the kangaroo industry and fisheries is that the level of investment by kangaroo harvesters (vehicle, guns, etc.) is generally lower than the level of investment by fishers (hull, engine, electronic equipment, gear, vehicle, etc.). This means that any problem of overcapitalisation is likely to be much greater for fishers than it is for kangaroo harvesters. In the kangaroo industry, it is the processors, or fauna dealer wholesalers where the problem of overcapitalisation is more likely to occur.

\textsuperscript{45} A similar set of conclusions can be derived for if we assumed a cost increase rather than a price decline.

How does economic theory relate to the management of the commercial harvest of kangaroos and the licence framework?

1. Limiting the number of players in an industry, such as fisheries, can be used as a management tool (in conjunction with input control measures) to control harvesting effort and sustainably manage a population.
   - In the case of fisheries where limited entry would normally apply to a cap on the number of fishers rather than the number of fish wholesalers or processors.
   - In the kangaroo industry, although commercial harvesters are relatively independent of the fauna dealer wholesalers, the nature of the commercial relationships and location of chiller boxes indicates that fauna dealer wholesalers have a high degree of influence over the level of harvesting effort by harvesters.\(^{47}\)

2. Limiting the number of players in an industry may help to pursue the objective of economic efficiency because, if it were an open access resource, there is an incentive for new operators to enter the industry and existing operators to invest in more and better equipment.
   - With a competitive quota, individual harvesters have an incentive to take as much as they can before someone else does. This may lead to over-investment in the industry and an inefficient use of resources.
   - A different type of quota such as a system of individual transferable quotas (ITQs), the incentive to over-invest would be removed.\(^{48}\)

In conclusion, economic theory suggests that if the cap on the number of fauna dealer wholesaler licences did have an effect of limiting the amount of investment (and therefore capacity) in the kangaroo product wholesaling and processing sectors, then the existence of a licence cap may be assist in achieving economic efficiency.\(^{49}\)

However as there are no restrictions on a fauna dealer wholesaler on the number of chillers or number of chiller sites or processing plants that can be registered, the cap on licence numbers has no real impact on the industry’s capacity.

Other key findings include:
- competition was being restricted, opportunities for pest mitigation or marketing opportunities are unable to be optimised
- fauna dealers perspective was that the quota limits the size of industry and current licensing encourages investment in infrastructure, which is evident with increased human consumption of kangaroo meat
- Queensland and South Australia have no caps on fauna dealer wholesale licences and following a period of increased entrants to the market and periods of destabilisation the original fauna dealer wholesalers consolidated their market share.\(^{50}\)

**Box 5.1** presents an overview of fauna dealer licence changes in the 1990s.


\(^{48}\) This would involve the creation and allocation of tradeable statutory kangaroo harvesting rights.


\(^{50}\) Ibid.
### BOX 5.1 QUEENSLAND FAUNA DEALER LICENCE REFORMS

In the mid-1990s the Queensland government removed the fauna dealer licence in Queensland to open the market to new fauna dealer wholesales. The below points summarise what eventuated:

- new entrants increased price paid for carcasses to capture market share
- a number of businesses failed due to large set-up costs in infrastructure and lack of market share
- further consolidation of market, which increased market share of key fauna dealer wholesales
- decrease in kangaroo harvest relative to quota available
- Queensland Parks and Wildlife were not concerned with market concentration, considered it a market place at work.

**Source: Macarthur Agribusiness & EconSearch, 2003**

- economic theory implies that under the current kangaroo management licensing arrangements (with a competitive quota and a licence cap) it is not possible to achieve an economically efficient utilisation of the resource.
- the practice of sub-licensing by existing licence holders further undermines any benefit that the cap on the number of licences might provide.\(^{51}\)

Given the current licence framework with respect to the fauna dealer wholesaler licence and the restricted fauna dealer wholesaler licences is still the same as it was in 2003, these arguments continue to remain valid and provide an economic rationale for removing the cap on the fauna dealer wholesaler licences.

### 5.2 OEH and IPART review of the licensing framework

OEH assessed the licences under the *National Parks and Wildlife Act 1974* using IPART’s best practice framework\(^{52}\) in 2014.\(^{53}\) The framework, designed by PriceWaterhouseCoppers (PwC), is an assessment tool for regulators to use when assessing their existing and proposed licences. It consists of four key stages which require a regulator to:

- establish the rationale for licensing
- assess its design
- assess its administration
- confirm that licensing is the best response.

Applying the IPART best practice framework (See Figure 5.2) to an existing or proposed licence should highlight any deficiencies in its justification, design or administration. The framework has been designed so that a decision to retain an existing licence, or proceed with a proposed licence means that:

- there is a clear case for a licence
- the licence’s design is ‘fit for purpose’ and imposes the minimum necessary requirements or burdens on licensees
- the licence’s administration follows best practice
- the licence is the best response to address identified problems or objectives.

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Best practice reviews showed the fauna dealer wholesaler licence was appropriate but this did not consider National Competition Policy principles.

OEH’s review\(^\text{54}\) identified the following licences as being inappropriate S 121 Occupier’s licence, S 123 Occupier Professional licence and S 124a Restricted Fauna Dealer’s licence (see Box 5.2)\(^\text{55}\). The S 121 Occupier’s licence, S 123 Occupier Professional licence are not part of the new licence framework under the Biodiversity Conservation Act 2016.

This review did confirm the fauna dealer wholesaler licence (S124) to be an appropriate licence\(^\text{56}\), however, this review did not consider the licence cap and did not consider the application of National Competition Policy principles.

It is important in the design of best practice licences that principles of best practice regulation incorporating in the National Competition Policy principle that legislation (including licensing regimes) should not restrict competition unless it can be demonstrated that the benefits of doing so outweigh the costs, and that the objectives of the legislation can only be achieved by restricting competition.

Clearly in this case the objectives of the legislation (i.e. sustainable kangaroo population and humane harvest) do not require any competitive restrictions on fauna dealer wholesalers (and in any case the obligation of the legislation rests primarily with professional harvesters).

**BOX 5.2 SUB-LICENSING IS BAD PRACTICE**

In OEH’s review of its kangaroo management licences using IPART’s best practice licensing framework (see Figure 5.2) the 124a Restricted Fauna Dealer’s licence failed in stage 1.

— There is no need for the government to intervene.
— A full S 124 fauna dealer wholesaler licence is an alternative licence which achieves the same objective/fixes the same problem
— There is no ongoing need for specific regulation in this area
— Licensing is not required to address the policy objective.


\(^{54}\) Ibid.
\(^{55}\) S124a is an unlegislated sub-licence – that remains if the cap on the S124 licence remains.
5.3 Licensee perspectives – a stakeholder survey

In 2014, OEH conducted 56 in-depth interviews and a survey of approximately 460 stakeholders across the NSW kangaroo industry to identify possible reforms to the kangaroo management programme. Overall it was shown that there was scope for licence reform and that lack of business opportunities and low market demand were having an adverse effect on the commercial industry. The key findings from this survey by stakeholder group are summarised below.

Issues expressed by industry participants that do not hold a fauna dealer wholesaler licence

- harvesters and landholders believe that the fauna dealer wholesaler licence cap is limiting business opportunities.
  - existing industry participants that wanted to obtain a 124 licence believed market access opportunities were possible.
  - if more fauna dealer wholesaler licences were available then business and the kangaroo harvesting industry would improve

- other opportunities for reform included occupier licences (S 121), licence duration and tags.
- compliance was not identified as a significant issue as it was considered ‘part of running a business’.

Issues expressed by current fauna dealer wholesalers

- court action was threatened if the NSW government removed the licence cap
- any market opportunities have already been capitalised and there is no scope for further players in the market

It is clear from much of the analysis above that the problem of kangaroos is not easy to solve. There are multiple structural, market and environmental impediments. However, this review (and previous reviews) note that although it would not be a silver bullet, removing a legacy cap on a licence which creates a distortion in the system is not only best regulatory practice but will have no adverse impact on the sustainable and humane management of the commercial harvest processes surrounding kangaroos.

6.1 Proposed options

Under the licence framework, there are two improvements that OEH could make which would assist the market to become more competitive, removing the costs imposed by the licence caps which may make the industry more profitable without reducing the industry’s integrity.

This analysis focuses on two options within OEH’s remit, relative to the base case (status quo):

Option 1 – removing the restricted fauna dealer licence (and allowing current restricted licence holders to assume fauna dealer wholesaler licences).

Option 2 – removing the fauna dealer wholesale licence cap and the restricted fauna dealer licence.

In the absence of data it is not possible to quantify the costs or benefits of either of these options. As the next best alternative, the sections below provide a qualitative argument for and against each of these options and the expected impact that each option would have on a variety of key stakeholders. The key stakeholders identified include:

— landholders
— commercial fauna harvesters (professional)
— commercial fauna dealer wholesalers
— restricted fauna dealer wholesalers
— potential new entrants to the market
— OEH and the NSW government
— broader society

In addition to low market demand and an anti-competitive environment, detailed in Chapter 4, best available information from stakeholder consultation suggests that existing processors (including restricted fauna dealer wholesalers) are operating well below capacity.58

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58 Both fauna dealer wholesalers and restricted fauna dealer wholesalers report operating at below capacity between approximately 30 and 60 per cent of the total operating capacity.
This suggests that existing capacity of incumbents may operate as an alternative barrier to entry\(^{59}\) other than the licence cap policy and sub-licensing arrangements. This may mean that new players may still be unable to enter the market regardless of increases in demand or changes to the licence framework.

We assume for the purposes of our analysis of Option 2 that low market demand is the status quo but that there is no overcapacity limiting new entrants. In Section 6.3 below we consider an alternative market scenario.

### 6.2 Options analysis

#### 6.2.1 Option 1 – removing the restricted fauna dealer licence arrangements

This option removes the unintended consequence created by the restricted fauna dealer sub-licence arrangement under Section 124a of the Act. We suggest that in removing this sub-licence all five existing restricted fauna dealers be licensed under the fauna dealer wholesaler licence (S 124).\(^{60}\) It should be acknowledged that this is only a partial solution as it does not allow new entrants into the market.

The main beneficiaries of removing the sub-licence arrangements are:

- the five restricted fauna dealer wholesalers as there would a significant cost saving as they would no longer be subject to restricted trade conditions and not be required to pay royalties to a primary fauna dealer wholesaler. Stakeholder consultations suggest that this may be a saving of around $1 per kangaroo processed.
- OEH would no longer be imposing an unintended regulatory burden on this class of licence holder
- society would also benefit from the reduced administrative costs and the removal of considerable red tape.

However, as mentioned above this is only a partial solution as by not removing the cap, best practice could still not be achieved.

Costs would likely be incurred to existing fauna dealer wholesalers who consider the cap to have made the fauna dealer licence a valuable asset. Increasing the cap would mean a devaluation of the licence ‘worth’. Stakeholder consultation suggested that licences are currently worth between $60,000 and up to about $500,000. In the absence of data to support or refute this value, we assume that the value of licences would be closer to the lower end of that range.

Table 6.1 overleaf presents the expected costs and benefits from removing the sub-licensing arrangements.

If we assumed that each of the 10 fauna dealer licences were worth approximately $100,000 each then by increasing the cap to include the five restricted fauna wholesalers would devalue the licences by approximately 1/2 or $50,000 each. The total potential cost incurred could be in the order of $500,000 million. Evidence presented in Chapter 4 suggests that only five of the existing licences have been ‘purchased’ from other operators suggesting that this figure is more likely half that ‘cost’. In the absence of actual data we assume that these costs are perceived costs not real costs and the true value of a licence that is not officially tradeable and is provided by the government for a small annual fee is effectively zero.

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\(^{59}\) There are many possible barriers to entry to a market, they may include regulatory constraints such as a licence, they may be due to asymmetric information or they may be exist because of market power. Barriers also exist when incumbents carrying significant unused capacity which means that new entrants, unless already set up with processing facilities, would not be able to absorb any increase in demand faster than the incumbent, allowing the incumbent to further increase their market power.

\(^{60}\) This would mean there would be 16 fauna dealer wholesaler licences. This in effect is the equivalent to increase the cap, but has the real benefit of removing the perverse incentive created by the restricted licence.
### TABLE 6.1 EXPECTED IMPACTS OF OPTION 1

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Expected impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landholder</td>
<td>Little or no change relative to the status quo</td>
</tr>
<tr>
<td>Harvester</td>
<td>Possible minor benefit of higher prices paid to harvesters if the five licence</td>
</tr>
<tr>
<td></td>
<td>holders were to pass their cost savings on to harvesters</td>
</tr>
<tr>
<td>Fauna dealer wholesaler</td>
<td>Perceived cost of loss of some market share and devaluation of licence</td>
</tr>
<tr>
<td></td>
<td>‘worth’, some perceived benefit in maintaining a licence cap policy</td>
</tr>
<tr>
<td>Restricted fauna dealer wholesaler</td>
<td>Benefit of cost savings, increased market access and a level playing field</td>
</tr>
<tr>
<td>Potential new entrant</td>
<td>No change relative to the status quo</td>
</tr>
<tr>
<td>Kangaroo industry</td>
<td>Little or no change relative to the status quo</td>
</tr>
<tr>
<td>Animal welfare advocates</td>
<td>Little or no change relative to the status quo</td>
</tr>
<tr>
<td>Government</td>
<td>Some benefit of reduction in red tape, no significant costs</td>
</tr>
<tr>
<td>Society</td>
<td>Some benefit of reduction in red tape, no expected costs</td>
</tr>
</tbody>
</table>

**SOURCE:** ACIL ALLEN CONSULTING, 2017 - INFORMED BY STAKEHOLDER CONSULTATIONS

Any benefits accrued to the government and society due to the reduction in red tape are expected to be small but tangible however, best practice cannot be achieved as the cap policy still stands. For simplicity we assume that compliance costs would remain unchanged in this option relative to the status quo as there would not be a significant difference to the current system and OEH would see a small increase in revenue which would likely cover these costs, as the annual fee for a fauna dealer wholesaler licence is greater than the fee for a restricted licence.

Therefore, on balance, we expect the net benefits of removing the restricted fauna dealer licence would be greater than the status quo, but less than the expected benefits of also removing the licence cap policy.

### 6.2.2 Option 2 – removing the fauna dealer wholesale licence cap and the restricted fauna dealer licence

This option requires the removal of the S 124 fauna dealer wholesaler licence cap and the associated sub-licensing arrangements. It is expected that this option may lead to increased competition in the market relative to the base case which may in turn create increased demand for kangaroo product.

Beneficiaries would still include restricted fauna dealers, government and society. Converting the five existing restricted fauna dealer wholesalers to S 124 fauna dealer wholesalers levels the playing field across these two classes of licences and generates the same significant cost savings for current restricted fauna dealers as in Option 1.

However, the government and society would benefit more under Option 2 than Option 1, as removing the cap policy and the restricted licences would bring the licence framework in line with best practice as removing the cap as well as the sub-licensing arrangement would allow the kangaroo licence framework to align with National Competition Policy as the licence would no longer restrict competition.

More costs may be incurred to existing fauna dealer wholesalers under Option 2 relative to Option 1, as new entrants may further ‘devalue’ the licence. However, these costs are likely perceived costs, not real costs as the true value of a licence that is not officially tradeable and is provided by the government for a small annual fee is effectively zero.

Stakeholder consultation suggested that another perceived cost to fauna dealer wholesalers is that the integrity of the industry would be undermined by removing the cap. We consider this cost to be perceived only, as the integrity of the industry is governed by other licences within the kangaroo licence framework (e.g. the professional harvester licence), other regulation such as food safety regulations and standards, and industry policy, such as the male only policy, all of which is still maintained regardless of whether there is a cap on the fauna dealer wholesaler licence or not.
There may be additional compliance costs for OEH associated with removal of the cap if more licences were granted, however this should be covered by the cost of the licence under cost recovery principles.

It is likely that the costs to existing fauna dealer wholesalers of ‘devalued’ licences will be greater under Option 2 relative to Option 1. Under Option 2 the ‘worth’ of each licence could be effectively eroded to zero as there would be the theoretical potential for infinite numbers of new entrants in the market.

Evidence presented in Chapter 4 suggests that only five of the existing licences have been ‘purchased’ from other operators meaning the other five were provided ‘free’ from the government (excluding the annual licence fee). If we assumed that each of the five fauna dealer licences purchased from other operators are worth approximately $100,000 then the total potential cost incurred could be in the order of $500,000. Alternatively if these licences were bought for only $60,000 this cost would be less. In the absence of actual data we assume that these costs are likely perceived costs not real costs.

Another important consideration under Option 2, is that if this perceived cost is greater than the actual value of the fauna dealer wholesaler’s business operations then the fauna dealer may be forced to exit the market. This would then be a cost to any fauna dealer who is operating at those margins. We know that many fauna dealers are small operators who operate in low value pet food markets. If we proposed half (five) of the current licence holders are in this position then it might be possible that five companies would be forced to close. It is difficult to determine the effect that this may have on the industry. The effects of this could be viewed in multiple ways.

First that there would be transitional costs associated with the loss of these firms and second that turnover (exit and entry) is part of doing business and is especially high in an industry plagued with low demand such as the current situation in the kangaroo industry. Further transitional cost may be realised whilst new entrants set up their operations and absorbed the market created by exiting firms. It may also be possible that any new entrants could buy out the marginal incumbents businesses as a whole, circumventing the time it takes to set up a processing plant and distribution networks.

The artificial arrangements created by the cap will make it more difficult for marginal operators than ones operating in a more competitive space but there is, equally, a high chance that these businesses could collapse if poor demand conditions continue. This is evidenced in the fact that there has been a consolidation of players even within the constraints of the capped system since the collapse of the Russian export market. If further periods of low demand were realised it would be expected that further consolidation of the market would occur. In some senses, this would be a far worse outcome if the cap is maintained, because it is highly unlikely that anyone new would enter the market, particularly in a period of depressed demand, unless the cap is lifted.

Table 6.2 overleaf presents the expected costs and benefits from removing the cap and the sub-licensing arrangements.

On balance ACIL Allen consider the benefits from levelling the playing field and the potential opportunities for innovative new entrants in the market, coupled with the benefits accrued to the government and society due to the reduction in red tape, would be greater than any actual costs.

Removing the licence cap and the sub-licence arrangement is expected to see net benefits relative to the status quo and it is expected that the benefits of Option 2 are greater than the benefits of Option 1.
### Table 6.2: Expected Impacts of Option 2

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Expected impact of Option 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landholder</td>
<td>Possible benefit of more kangaroos harvested (demand) and less adverse impact on livestock, crops and land – noting that this benefit is likely due to the increase in demand and not the increase in the number of licences available.</td>
</tr>
<tr>
<td>Harvester</td>
<td>Possible benefit of increased competition (demand) in the market which may in turn increase prices paid to harvesters. This is likely attributable more to the increase in demand than to the number of players in the market.</td>
</tr>
<tr>
<td>Fauna dealer wholesaler</td>
<td>Perceived cost of loss of market share and devaluation of licence to zero</td>
</tr>
<tr>
<td>Restricted fauna dealer wholesaler</td>
<td>Benefit of cost savings, increased market access and a level playing field.</td>
</tr>
<tr>
<td>Potential new entrant</td>
<td>Potential benefit due to opportunities not previously available.</td>
</tr>
<tr>
<td>Kangaroo industry</td>
<td>Possible benefit of increased competition (demand) in the market. This is likely attributable more to the increase in demand than to the number of players in the market.</td>
</tr>
<tr>
<td>Animal welfare advocates</td>
<td>No change relative to status quo</td>
</tr>
<tr>
<td>Government</td>
<td>Benefit of reduction in red tape, possible increase in compliance costs</td>
</tr>
<tr>
<td>Society</td>
<td>Benefit of reduction in red tape</td>
</tr>
</tbody>
</table>

**Source:** ACIL Allen Consulting, 2017 – informed by stakeholder consultations

### 6.3 Sensitivity analysis

Any expected net benefits from regulatory reform, however, this will depend on the demand for kangaroo product at either a domestic or export level. The current market demand for kangaroo products is low and there is no reason to expect a resurgence in the export market.

In conducting a qualitative sensitivity analysis we consider the effects of two different market scenarios on the base case and the Options.

**Scenario 1** – current market conditions prevail (e.g. low demand) but we assume existing processors have spare capacity.

**Scenario 2** – significant increase in market demand above and beyond absorbing current processing capacity.

Under Scenario 1 the expected impact of Option 1 would not change from the analysis above, as there is no potential for new entrants in the market.

Even with the cap policy removed, under Option 2, there may still be little or no incentive for new processors to enter the market with low demand and the assumption that incumbents are not operating at capacity. This could suggest that the expected impact of a removal of the licence cap under current market conditions and assuming that capacity is not constrained is in effect not significantly different to the status quo but for the exception of a reduction in red tape. Alternatively, what Option 2 does offer even with incumbent capacity, is the potential for new entrants.

In Option 2, there may be less transition costs associated with marginal business turnover if incumbents have excess capacity. For example, if a small pet food operator went out of business, or even five small companies went out of business, it is possible that the larger incumbents with capacity would be able to accommodate their markets and continue to supply their consumers. This would reduce transactions costs to the industry.

Under Scenario 1, there are more beneficiaries associated with Option 2 than in Option 1. As it may now be possible for new innovative operators to enter the market and source opportunities not currently considered by the incumbent firms.
Under Scenario 2, an increased demand for kangaroo would see greater benefit under Option 2 relative to the status quo, as there may be more need for new entrants to service demand. It is also possible, as noted above that Option 2 creates and/or contributes to increased demand. Other benefits may also accrue to landholders under a scenario with increased demand and new market entrants.

This should however be considered in light of the fact that it would be difficult to attribute benefits to changes in the licence framework if they coincided with an increase in market demand as increased demand would likely dwarf any benefit to the industry from reform. Regardless, the net benefit to government and society of reducing regulatory burden and bringing the licence framework in line with best practice and in accordance with National Competition Policy are not insignificant gains.

ACIL Allen also expects that the chance of Scenario 2 being a reality in the short to medium term is very small.

6.4 Conclusion

In summary, for both Option 1 and Option 2, it is clear that increasing market demand is far more beneficial than any measures of regulatory reform. However, in the interests of complying with best practice and National Competition Policy Option 2 is likely to be of greater actual benefit than any costs even under current market conditions, and Option 1 would still return benefits relative to the status quo.

ACIL Allen expect that beyond regulatory reform, the biggest potential benefit under current market conditions is actually that new entrants may bring with them new technology, innovative business models or novel marketing ideas which may develop the industry. Without this potential, there does not seem to be any room for renewal of the commercial kangaroo industry due to long term decline in demand which shows little or no sign of improvement.

6.4.1 Other possible changes to the regulatory environment

Other changes that OEH could consider in future regulatory reviews include:

1. Reducing commercial harvester licence fees and/or tag prices in an attempt to stimulate the industry – this may have a short term impact of increasing the number of commercial harvesters and increasing the take. However, the effects are likely to be short lived if the market remains depressed and the fauna dealer wholesaler licence cap continues to inhibit competition.

2. Changing the quota from a competitive quota to a system of individual transferable quotas (ITQs) removing any incentive for the industry to exploit the resource or over-invest. This would require the creation and allocation of tradeable statutory kangaroo harvesting rights. This would apply to professional harvesters rather than fauna dealers. Questions have been raised regarding the application of ITQs to highly variable populations owing to the technical problem of determining an appropriate total allowable harvest each year. 61

3. Consideration of competitive tendering processes for the allocation of licences. This would mean that a licence would be re-applied after a pre-defined term to ensure that allocation was equitable. It should noted that completing a re-application form can be costly for applicants and government.

61 See: http://www.fao.org/docrep/007/y5442e/y5442e07.htm
This chapter provides a high level summary of the key findings of this review.

7.1 Overall summary

Overall the context and the problem can be summarised as follows:

— kangaroo numbers in NSW have been increasing relative to climatic conditions and in the last 15 years the proportion of kangaroos harvested relative to the quota has been in decline

— kangaroos impact different stakeholders in different ways creating a dual environmental and socio-economic problem

— this is managed in NSW by a quota and a licence framework under the *Biodiversity Conservation Act 2016*

— OEH are responsible for:
  — setting a quota to ensure the sustainable population of kangaroos
  — administrating a licence framework to ensure humane harvest for commercial use

— the commercial kangaroo industry is a national industry with operations using NSW (and other state’s) kangaroos in NSW, Queensland, Victoria and South Australia

— integrity in the industry is crucial and is primarily attributable to state base food safety regulation and Australian and New Zealand food standards.

Results from this review and analysis support the removal for the fauna dealer wholesaler licence cap policy.

There are several key reasons for this:

— the intent of the licence framework administered by OEH is to ensure a sustainable kangaroo population and a humane harvest

— in theory, economic efficiency cannot be achieved with a competitive quota and a licence cap

— the cap is an outdated legacy arrangement that is restricting trade and creating unnecessary regulatory burden (especially through sub-licence arrangements)

— although a fauna dealer licence is considered an important component to a best practice approach under the IPART framework the existence of a cap is in contravention of National Competition Policy principles as it cannot be demonstrated that the benefit of the cap outweighs the cost and it is not necessary to have a cap on fauna dealer wholesaler licences to legitimise the intent of the licence framework

— removing the unintended consequence created by the associated sub-licensing is an option to reduce red tape in line with best practice regulation
— removing the licence cap policy and the sub-licensing arrangements would further reduce red tape and have a greater net benefit that solely removing the sub-licence arrangements
— there is an expected net benefit of Option 1 or Option 2 relative to the status quo regardless of the market scenario
— all previous studies reviewed as part of this report also agree that removing the cap is the best approach for the industry.

The licence cap policy and associated sub-licensing arrangement should therefore be removed but this in itself is not a solution to the whole problem of the management of the commercial harvest of kangaroos in NSW.
Kangaroos are managed in a similar manner in other jurisdictions. Queensland, South Australia and Western Australia have systems like that in NSW under state and Commonwealth legislation. Kangaroos are a protected species under legislation in Victoria and Tasmania and these states do not have commercial harvest arrangements. Table A.1 presents a comparative overview across the jurisdictions and further details are provided below.

**TABLE A.1** KANGAROO MANAGEMENT ACROSS AUSTRALIA, 2016

<table>
<thead>
<tr>
<th></th>
<th>NSW</th>
<th>Queensland</th>
<th>South Australia</th>
<th>Western Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of kangaroos harvested</td>
<td>358,451</td>
<td>896,144</td>
<td>106,787*</td>
<td>22,236</td>
</tr>
<tr>
<td>Proportion of quota harvested</td>
<td>14%</td>
<td>23%</td>
<td>19%*</td>
<td>17%</td>
</tr>
<tr>
<td>Harvester licence fees</td>
<td>$894</td>
<td>$153.50</td>
<td>$1,065</td>
<td>$60</td>
</tr>
<tr>
<td>Wholesaler/processer licence fees</td>
<td>$5,571</td>
<td>$1,915 (fixed)</td>
<td>$2,134</td>
<td>$510</td>
</tr>
<tr>
<td>Cost per tag</td>
<td>$1.17</td>
<td>$0.92</td>
<td>$1.60</td>
<td>$0.00**</td>
</tr>
</tbody>
</table>

*Most recent available data for South Australia is 2015 data.
**Tags are included in the harvester licence fee in Western Australia, effectively making the tag price $0.

**SOURCE:** ACIL ALLEN FROM VARIOUS SOURCES

### A.1 Queensland

In 2016, Queensland issued 1055 commercial wildlife harvesting (harvester) licences. There were 93 commercial wildlife (dealer) licences, seven commercial wildlife licences for meat processing and three commercial wildlife licences tanning.62

Dealer returns, reported to 28 February 2017, shows 896,144 macropods were commercially harvested, representing 22.9 per cent of the overall quota. The harvest was predominantly for carcasses used for both human consumption and pet food.63

Licence fees in Queensland are reported in Table A.2 below.

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63 Ibid.
TABLE A.2 FEES IN QUEENSLAND

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fee for a macropod skin or carcass tag - for a commercial wildlife harvesting licence (each lot of 50 tags)</td>
<td>$46.00</td>
</tr>
<tr>
<td>Fee for a macropod skin or carcass tag - for a commercial wildlife harvesting licence (each lot of 500 tags)</td>
<td>$460.00</td>
</tr>
<tr>
<td>Commercial wildlife harvesting licence for macropods</td>
<td>$153.50</td>
</tr>
<tr>
<td>(annual fee)</td>
<td></td>
</tr>
<tr>
<td>Commercial wildlife licence for dead macropods - for a term of 1 year or less</td>
<td>$674.00</td>
</tr>
<tr>
<td>(annual fee)</td>
<td></td>
</tr>
<tr>
<td>Commercial wildlife licence for dead macropods - for a term of more than 1 year</td>
<td>$1,915.00</td>
</tr>
<tr>
<td>Commercial wildlife licence (using a mobile facility)</td>
<td>$5,828.00</td>
</tr>
<tr>
<td>(annual fee)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Fees valid until 31 December 2017.

SOURCE: SEE HTTPS://WWW.QLD.GOV.AU/ENVIRONMENT/PLANTS-ANIMALS/WILDLIFE-PERMITS/MACROPODS-FEES#FEES

A.2 South Australia

In 2015, the commercial kangaroo harvest in South Australia was 106,787 representing 19 per cent of the approved quota. 64

The South Australian Department of Environment, Water and Natural Resources introduced changes to administering the harvest of kangaroos in 2015. Sealed tags are now sold directly to kangaroo field processors (harvesters), who can use the tags anywhere within a given harvest sub-zone (providing they have permission from the landholder to be on the land for the purpose of harvesting kangaroos).65 See Table A.3 below.

TABLE A.3 FEES IN SOUTH AUSTRALIA

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permit to harvest and sell or use protected animals – kangaroo field processor permit (class 14)</td>
<td>$1,065.00</td>
</tr>
<tr>
<td>(annual fee)*</td>
<td></td>
</tr>
<tr>
<td>Permit to sell protected animals- kangaroo meat processor (carcasses and skins – class 7)</td>
<td>$2,134.00</td>
</tr>
<tr>
<td>(annual fee)*</td>
<td></td>
</tr>
<tr>
<td>Permit to sell protected animals- tannery and skin permit (class 8)</td>
<td>$1,065.00</td>
</tr>
<tr>
<td>(annual fee)*</td>
<td></td>
</tr>
</tbody>
</table>

Note: Fees valid until 30 June 2018.

* A bi-annual fee is to be available from 1 January 2018 at a reduced rate.


Tags are purchased at a cost per tag is $1.60.66

64 Department of Environment, Water and Natural Resources Government of South Australia, Quota Report for Commercial Kangaroo Harvest in South Australia, 2017.
65 Ibid.
A.3 Western Australia

In 2016, the commercial kangaroo harvest in Western Australia was 22,236 representing 16.9 per cent of the approved quota. See Table A.4 for current fees.

**TABLE A.4 FEES IN WESTERN AUSTRALIA**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional shooter’s licence – Licence to take kangaroos for sale</td>
<td>$60.00 (annual fee)</td>
</tr>
<tr>
<td>Direct dealers’ licence – Licence to deal in carcasses of fauna</td>
<td>$110.00 (annual fee)</td>
</tr>
<tr>
<td>Licence to process</td>
<td>$400.00 (annual fee)</td>
</tr>
<tr>
<td>Licence to deal skins</td>
<td>$120.00 (annual fee)</td>
</tr>
</tbody>
</table>

Note: Fees valid until 31 December 2017.

SOURCE: VARIETY OF GOVERNMENT WEBSITES, INCLUDING HTTPS://ABLIS.BUSINESS.GOV.AU

In Western Australia, the royalty tags are allocated and provided as an inclusion under the shooter’s licence fee.

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ABOUT ACIL ALLEN CONSULTING

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