# COMMERCIAL MACROPOD HARVEST MANAGEMENT PLAN

**QUEENSLAND** 

2008

**ANNUAL REPORT** 

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Data was gathered from Dealer returns and reflects purchases only, data is current as of 1 April 2009.

#### **SUMMARY**

The Department of Environmental and Resource Management (DERM), through the Macropod Management Unit, manages the commercial harvest of macropods in Queensland (Qld). The Wildlife Trade Management Plan for Export - Commercially Harvested Macropods – 2008-2012 (management plan) has been developed to satisfy the requirements of the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 and to meet the legislative and other requirements of the Qld Government including the Nature Conservation Act 1992, Nature Conservation (Wildlife Regulations) 2006 and the Nature Conservation (Macropod) Conservation Plan 2005.

Currently there are three species of macropods harvested commercially in Qld under the requirements of the management plan and are therefore subject to management programs approved by DERM:

- Red kangaroo (*Macropus rufus*);
- Eastern grey kangaroo (M. giganteus); and
- Common wallaroo or euro (M. robustus).

The primary goal of the management plan is to ensure that the commercial harvest of macropods is ecologically sustainable and this will be achieved through the application of best practice management based on best available scientific knowledge and monitoring of outcomes to ensure the viability of the macropod populations.

The management plan incorporates adaptive management provisions to facilitate the investigation of different strategies using scientific experimentation to support amendments to management practices, improve knowledge and inform future program reviews.

This annual report summarises the activities of the Qld Macropod Harvest Program for the period January 2008 to December 2008, addressing performance indicators set out in the management plan and provides information regarding:

- actual harvest, by zone and species
- harvest quota management
- non-commercial culling statistics
- compliance statistics
- unusual circumstances
- research and experiments

#### 1. BACKGROUND

Managing commercial harvesting of macropods involves setting annual harvest quotas based primarily on estimates of absolute population size. Wildlife authorities rely primarily on aerial surveys to provide population estimates, although these are supplemented with other techniques. Aerial surveys of macropod populations have been conducted regularly over large areas of the rangelands in Queensland (Qld) since the 1970s.

Currently there are three species of macropods harvested commercially in Qld under the requirements of the *Wildlife Trade Management Plan for Export – Commercially Harvested Macropods – 2008-2012* (management plan) and are therefore subject to management programs approved by DERM:

- Red kangaroo (*Macropus rufus*)
- Eastern grey kangaroo (*M. giganteus*)
- Common wallaroo or euro (*M. robustus*)

The main aims of the management program for macropods can be summarised as "ensuring the conservation of each macropod species across its natural range whilst allowing culling of animals for both commercial purposes and for damage mitigation." The harvest is essentially managed for ecologically sustainable use, although quotas are set conservatively to minimise risk of over harvest.

Each year a Harvest Period Notice is made by DERM chief executive which defines the start and end dates for the macropod harvest period, the sizes of macropods that may be taken and the shires in Qld where each species may be harvested. The annual harvest can be reviewed at any time to consider changing circumstances such as the effects of drought or disease. Based on such information, or if the harvest approaches the annual quota, the harvest period may be closed.

Currently the Commonwealth Government sets quotas on how many macropods of a particular species can be harvested commercially in Australia. In Qld the Minister for Climate Change and Stability proposes a commercial quota for the state and submits it to the Commonwealth Minister for the Environment, Heritage and the Arts for approval.

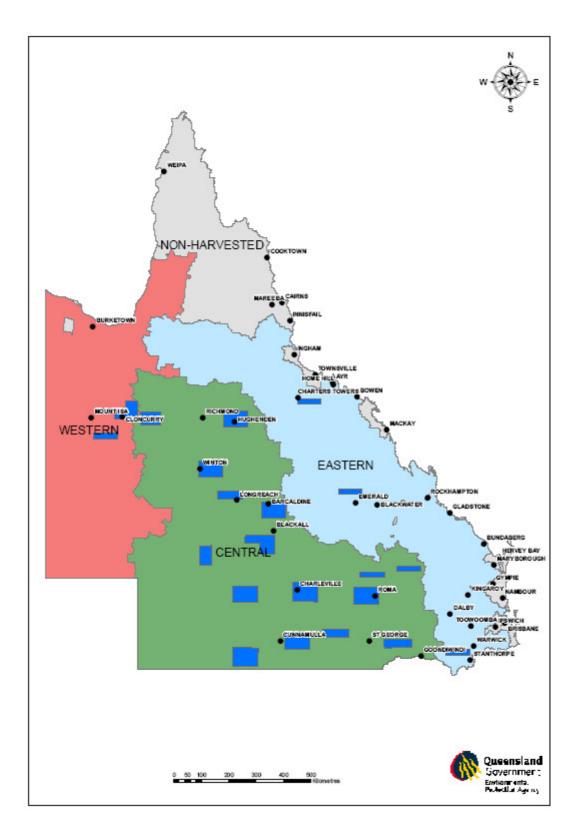
The proportion of the population of each species that can be taken is based on research. Annual quotas for each species are set on the basis of:

- current population trends
- review of previous harvests
- weather trends (for example, drought)
- the extent of non-commercial harvest
- the proportion of the population not subject to harvesting
- non-harvest mortality

Currently, quotas in Qld are set between 10 and 20 percent of the estimated population for each species. Harvesting at these levels will ensure a safe sustained yield and long-term conservation of macropod populations.

In the past, the quotas for each species were set for the whole state of Qld. Under this system, the harvest was sustainable on a state-wide basis but it was possible that over harvesting may have occurred in different regions of the state. In 2003, using detailed monitoring data, quotas were set for eastern, central and western regions (Figure 1).

Figure 1. Queensland harvest zone Different shading indicates the different management zones.



#### **2 ACTUAL HARVEST**

In 2008 DERM issued 2101 Shooters licences and 236 Dealers licences. Dealer returns indicate that there were 1,249,761 macropods taken in Qld which represents 64.10 percent of the overall combined quota. Of the 1,249,761 animals taken there were 406,224 red kangaroos, 591,789 eastern grey kangaroos and 251,748 common wallaroos (See Figure 2 and Table 2.1).

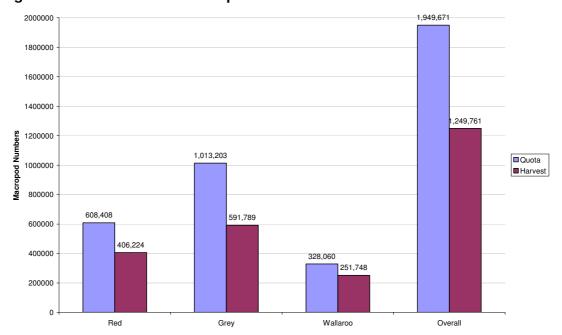


Figure 2: Total number of macropods harvested in 2008

Quotas for individual species in each harvest zone were not exceeded in 2008, the maximum commercial take, as a percentage of the approved quota, of 91.04 percent being for the red kangaroo in the eastern zone (see Figure 3 and Table 2.2).

Table 2.1: Actual total harvest in 2008

Species	Population Estimate	Quota	Harvest	% q	% p	Sex ratio (% males)	Sex ratio (% females)
Red	3,435,635	608,408	406,224	66.77	11.82	77.98	22.02
Eastern Grey	7,307,595	1,013,203	591,789	58.41	8.10	79.48	20.52
Common Wallaroo	2,343,408	328,060	251,748	76.74	10.74	99.77	0.23
Total	13,086,638	1,949,671	1,249,761	64.10	9.55	83.08	16.92

Table 2.2: Actual harvest of red kangaroos by zone in 2008

Zone	Population Estimate	Quota	Harvest	% q	% p	Sex ratio (% males)	Sex ratio (% females)
Eastern	82,626	8,263	7,523	91.04	9.10	76.83	23.17
Central	3,112,950	576,139	378,619	65.72	12.16	78.58	21.42
Western	240,059	24,006	20,082	83.65	8.37	67.07	32.93
Total	3,435,635	608,408	406,224	66.77	11.82	77.98	22.02

Table 2.3: Actual harvest of eastern grey kangaroos by zone in 2008

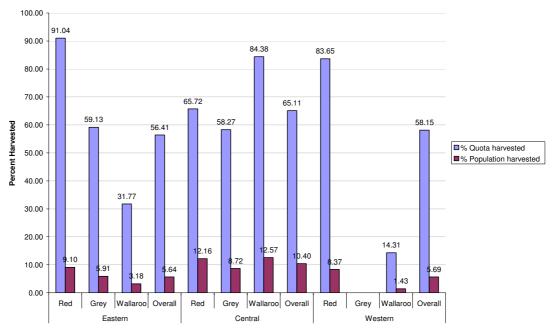
Zone	Population Estimate	Quota	Harvest	% q	% p	Sex ratio (% males)	Sex ratio (% females)
Eastern	1,585,062	158,506	93,720	59.13	5.91	70.13	29.87
Central	5,713,887	854,697	498,069	58.27	8.72	81.24	18.76
Western	8,646	Nil	0	0.00	0.00	0.00	0.00
Total	7,307,595	1,013,203	591,789	58.41	8.10	79.48	20.52

Table 2.4: Actual harvest of common wallaroo by zone in 2008

Zone	Population Estimate	Quota	Harvest	% q	% p	Sex ratio (% males)	Sex ratio (% females)
Eastern	290,671	29,067	9,235	31.77	3.18	99.55	0.45
Central	1,913,097	285,029	240,515	84.38	12.57	99.78	0.22
Western	139,640	13,964	1,998	14.31	1.43	99.85	0.15
Total	2,343,408	328,060	251,748	76.74	10.74	99.77	0.23

<sup>%</sup> q = commercial take as percentage of approved quote; % p commercial take as percentage of population estimate

Figure 3: Macropods harvested by zone in 2008



Current harvesting rates (quota percentages ranging from 10 percent to 20 percent depending on species and region) are considered sustainable and trends in populations over time show no harvesting impact. None of the three commercially harvested species has shown a consistent decline in abundance since 2001 (Figures 4.1-4.4), which would necessitate a reassessment of conservation status.

Figure 4.1: Overall macropod population trends, 2001 to 2008 Whiptail kangaroos numbers not included.

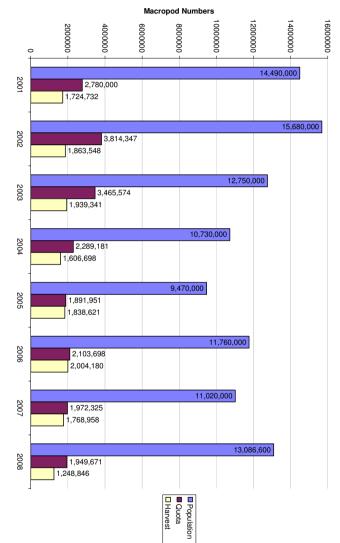
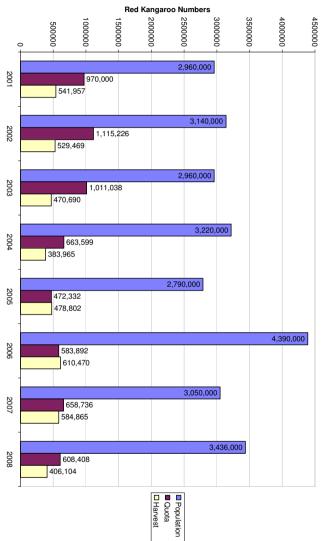


Figure 4.2: Red kangaroo population trends, 2001 to 2008



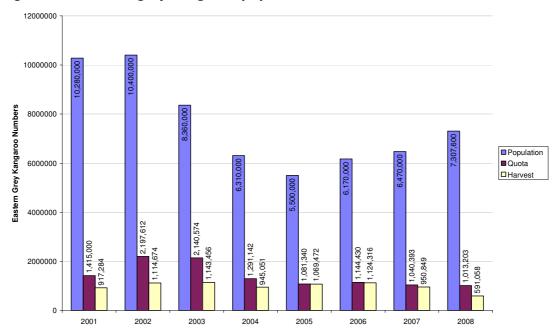
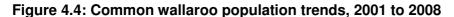
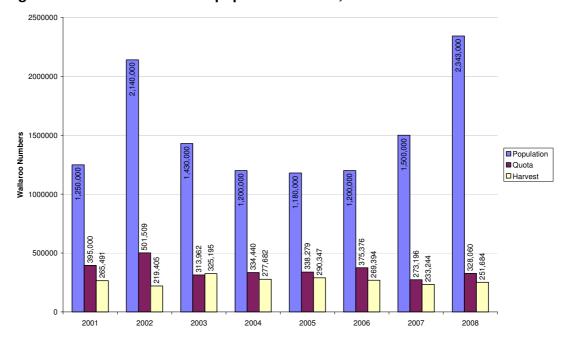


Figure 4.3: Eastern grey kangaroo population trends, 2001 to 2008





Note: Harvest Numbers used for Figures 4.1 - 4.4 for 2003 - 2005 are from shooter returns, 2001 - 2002 and 2006-2008 are from dealer returns.

#### 3. HARVEST QUOTA MANAGEMENT

All macropod species and subspecies are 'protected animals' in Qld under the Nature Conservation (Wildlife) Management Regulations 2006. The Nature Conservation (Administration) Regulations 2006 provide for the licensing of a range of activities in relation to the commercial harvesting of macropods in Qld. All species of commercially harvested macropod are currently listed as 'least concern' wildlife in Qld.

Macropods can only be taken in accordance with the management plan under a licence issued by DERM. Moreover, under the management plan the commercial harvesting of macropods in Qld is presently restricted to the commercial macropod harvest zones illustrated in Figure 1.

#### **Tags**

The harvest is controlled by self locking numbered plastic tags with a unique colour code for each year (2008 tags were yellow):

- the DERM macropod program must issue plastic tags to harvesters each year throughout the harvest period
- a fee (fixed by regulation) must be paid to the DERM macropod program for the tags
- the tags are individually numbered and of a different colour for each consecutive vear
- tags are issued to a specific harvester and are not transferable to another harvester
- the tags must be self-locking
- tags must be attached to the skin of macropods commercially utilised and locked in to prevent removal
- a tag can only be removed from the macropod skin during the skin tanning process at a licensed tannery

#### Movement of macropods

Licensed commercial macropod harvesters are required to complete a movement advice before moving the carcass or any part of a macropod and forward that advice to the chief executive no more than seven days after moving the carcass or part.

This does not apply if the harvester is moving it to his residential address or the premises of a licensed dealer.

A licensed commercial wildlife holder or dealer must fill out a movement advice before moving macropods within, into or out of Qld.

The macropods must be accompanied by a copy of the movement advice.

#### 4. SEX RATIO BY SPECIES AND ZONE

Commercial harvest is typically biased towards males as they tend to be larger and heavier than females. In 2008 the total harvest for each species comprised between approximately 77 and 99 percent males. Data gathered throughout 2008 indicates 17 per cent of the overall harvest was female (Figure 5), which is below the 3 year average of 24 percent females (Figure 6).

Figure 5: Sex ratio by species in 2008

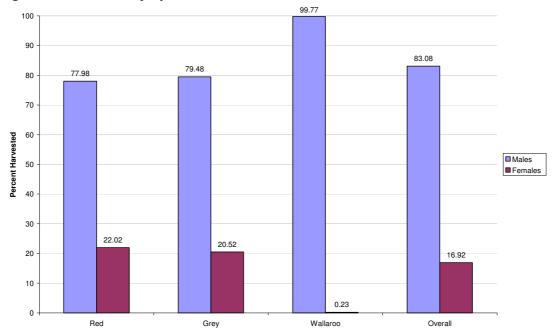


Figure 6: Overall sex ratio 2006 – 2008

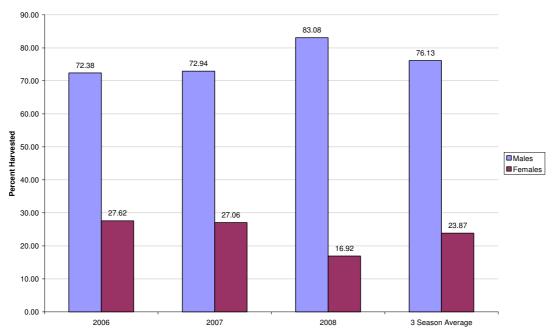


Figure 7.1: Reds kangaroo sex ratio 2008

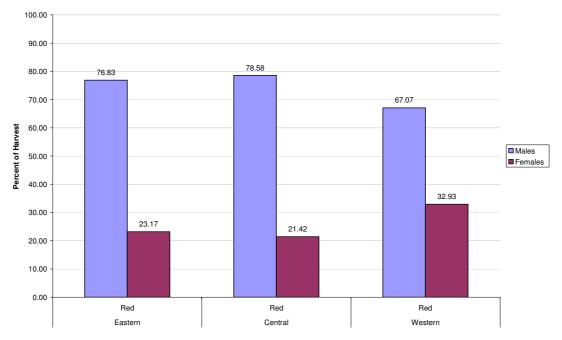
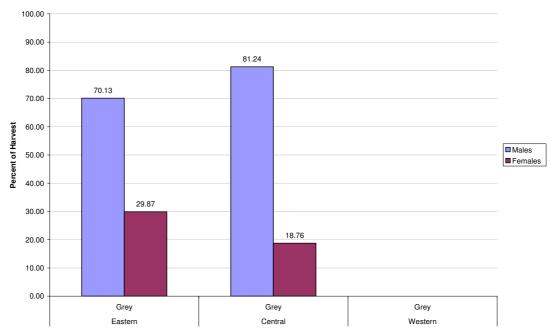


Figure 7.2: Eastern grey kangaroo sex ratio 2008



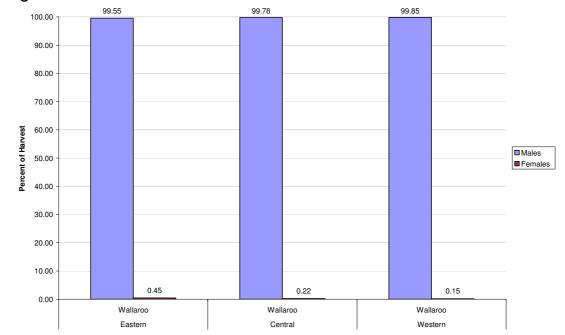


Figure 7.3: Common wallaroo sex ratio 2008

### **5. NON-COMMERCIAL CULL STATISTICS**

A total of 123 Damage Mitigation Permits (DMP)'s were issued for macropods in Qld in 2008, with a quota for 34,356 red kangaroos, 73,076 eastern grey kangaroos and 23,434 common wallaroos (Table 3). The quota issued for harvest zones and species were below the allowable take, except the common wallaroo DMP quota in the central harvest zone which was exceeded, leading to an excess of 7.5 percent (Table 3 and Figure 8).

The combined take of common wallaroos for both DMP's and commercial harvesting in 2008 in Central Harvest Zone was 260, 290 animals which represents 91.32 percent of the 2008 commercial quota.

Table3: DMP quotas in2008

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DMP Quota 2008	Central	Eastern	Non-harvested	Western	Grand Total		
Red	31,130	826	0	2,401	34,356		
Eastern grey	57,139	15,851	0	86	73,076		
Common wallaroo	19,131	2,907	0	1,396	23,434		
DMP's Issued	22	96	0	5	123		

**Table 4: Percent DMP quota issued** 

Table 4: I credit biiii quota issueu						
Quota Used	Central	Eastern	Non-harvested	Western	Grand Total	
Red	53.36%	0	0	0.00%	53.36%	
Eastern grey	49.47%	12.44%	0	34.70%	96.61%	
Common wallaroo	103.37%	4.13%	0	0.00%	107.49%	

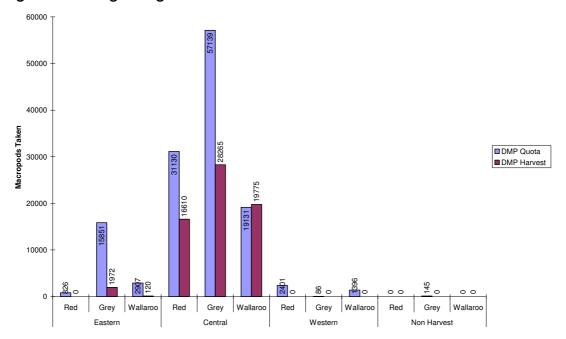


Figure 8: Damage Mitigation Permit details

#### **6. MONITORING COMPLIANCE**

The Macropod Management Unit undertakes collaborative compliance work with the Qld Police Service, in particular the Stock and Rural Crime Investigation Squad, DERM wildlife rangers and New South Wales (NSW) macropod management compliance officers.

Penalty infringements totalled \$12,877.60 for 2008 with compliance breaches against various legislation including failing to comply with weight requirements in the Harvest Period Notice (Section 13 of the *Nature Conservation (Macropod) Conservation Plan, 2005*), failure to record relevant particulars within prescribed period (Section 125 *Nature Conservation (Administration) Regulation, 2006*) and harming protected fauna (*National Parks and Wildlife Act, 1974*).

The most common breach in 2008 was for failure to give a return for operations for each period and within the prescribed time (Section 32 *Nature Conservation (Macropod) Conservation Plan, 2005*), (Table 5).

Table 5: Macropod management compliance breaches and actions for 2008

Compliance Breach	Action	Result
Fail to carry	1 warning notice issued	
authority/properly endorsed		
authority/identification while		
in possession of tag		
Fail to comply with weight	2 warning notices issued, 4	Penalties of \$300.00 each
requirements in Harvest	penalty infringement	
Period Notice		
Fail to ensure information in	8 letters sent, 2 warning	Penalties of \$300.00 each
return is complete and	notice issued, 2 penalty	
accurate/legible/completed in	infringement	
ink		
Fail to give return for each	3 letters sent, 16 warning	Penalties of \$300.00 each
period/by prescribed time	notice issued, 9 penalty	Penalties of \$400.00 each
	infringement	·

Compliance Breach	Action	Result
Fail to keep record/return book at prescribed place for prescribed time	4 warning notices issued, 1 penalty infringement	Penalties of \$300.00 each
Fail to properly attach tag immediately after Macropod is dressed	2 warning notices issued, 3 penalty infringements	Penalties of \$300.00 each
Fail to record relevant particulars within prescribed period	4 warning notices issued, 2 penalty infringement	Penalties of \$300.00 each
Relevant authority or identification not available for inspection	6 warning notices issued, 1 penalty infringement	Penalties of \$150.00 each
Interfere with tag attached to wildlife without lawful authority	1 penalty infringement	Penalties of \$225.00 each
Take keep or use protected wildlife without lawful authority	4 convictions Qld Police Service	Penalties of \$800.00 each
Weapons Infringements	2 Offences	Dealt with by Qld Police Service

#### Compliance priorities

DERM has prepared a Strategic Compliance Plan for 2009. The Priorities for Compliance in 2009 are:

- 1) Tracking the annual harvest and ensuring that quotas for each species are not exceeded. This will be achieved by ongoing analysis of dealer and harvester returns.
- 2) Ensuring adherence with the *National Code of Practise for the Humane* Shooting of Kangaroos and Wallabies for Commercial Purposes 2008.
- 3) DERM to work in collaboration with the NSW authorities to investigate and take action, where required, regarding the on-going reports of cross border quota fraud, illegal harvest of animals across the border and secondary offences against Qld legislation.
- 4) Submit an annual report to the Commonwealth Government that describes activities and outcomes against performance indicators contained in the *Qld Wildlife Trade Management Plan for Export Commercially Harvested Macropods 2008-2012.*

#### Strategic Approach to Compliance for 2009

DERM's commercial macropod compliance program for 2009 will proactively focus on Dealers and dealer sites through a series of planned inspections with opportunistic inspections of Harvesters during these inspections.

The series of planned inspections of Dealers sites has been designed and prioritised using the following factors:

- Seasonal activity of dealers
- Volume
- Knowledge of current, historical or anecdotal compliance issues

Logistical constraints

#### 7. UNUSUAL CIRCUMSTANCES

In 2008 there was differential pricing for kangaroos. In Queensland dealers were paying approximately twice the price per kilogram for carcasses weighing over 17kg.

#### **8. RESEARCH AND EXPERIMENTS**

No research projects or adaptive management experiments have been undertaken or initiated by other institutions during 2008 nor have any been approved or funded in this period.

DERM intend to conduct a detailed analysis of Dealers versus Shooters returns for 2008 during 2009. This project aims to identify inconsistencies in harvest reporting and develop strategies to provide for adaptive management and continued improvement of the Qld Macropod Harvest Program.

## 9. APPENDICES

Table 6: Progress against performance indicators in 2008

AIM	ACTION	PERFORMANCE INDICATOR	PROGRESS IN 2008
AIM 1 – MANAGE AND ADMINISTER COMMERCIAL OPERATORS VIA LICENSING	ACTION 1 – All relevant activities are licensed in accordance with the applicable Qld legislation and DERM policy.	1.1 - All licences across Qld are assessed, processed and issued in accordance with Qld legislation and DERM Policy.	Achieved
AIM 2 – ENSURE HUMANE TREATMENT OF KANGAROOS	ACTION 2 – DERM will work with Qld institute of TAFE or other accredited provider to ensure that all harvesters are competent to achieve the standards set out in the Code of Practice for the Humane Shooting of Kangaroos.	2.1 – All successful applicants for harvester's licences have completed the approved accreditation and their accreditation is current.	Achieved
	ACTION 3 – DERM staff will monitor compliance with the Code of Practice for the Humane Shooting of Kangaroos by commercial macropod industry operators.	3.1 – All licensees who are found to have breached licence conditions relation to animal welfare are issued with, Warning Notices, Penalty Infringement Notices (PIN) or are prosecuted as appropriate.	Achieved, see section 6.
AIM 3 - MONITOR INDUSTRY COMPLIANCE	ACTION 5 – DERM and Safe food Qld staff will undertake both regular and opportunistic monitoring of compliance by commercial <i>kangaroo</i> industry operators.	5.1 – On receipt of harvesters licence applications the authorised DERM officer assessing the applications will ensure that applicants have both a valid and current Qld accreditation and a current Firearms Licence.	Achieved
		5.2 – All chiller premises are inspected on average every three months during the life of this plan by DERM Staff and/or staff of the Safe-food Qld to ensure compliance with Qld legislation and licence conditions.	DERM has developed a commercial macropod compliance plan that includes planned inspections at dealer premises – see section 6.  In 2008 there were 76 inspections of dealer premises.

AIM	ACTION	PERFORMANCE INDICATOR	PROGRESS IN 2008
		5.3 – All macropod processing works in Qld are inspected by DERM staff and/or staff of Safe-food Qld to ensure compliance with Qld legislation and licence conditions. This will be contingent on the MoU being signed and agreed to by both parties.	An MoU has not yet been signed.
		5.4 – During the life of this plan harvesters vehicles loaded with macropod carcasses are inspected opportunistically to ensure compliance with Qld legislation and licence conditions and the results of these inspections are documented.	Achieved- there were 123 inspections of harvesters in 2008.
	ACTION 6 – Activities not in accordance with the Qld legislation and the management plan will be investigated and where an offence has been committed and it is appropriate, prosecute.	6.1 – Reports of unlicensed activities and activities in breach of legislation are investigated to the fullest extent possible, and where sufficient evidence is available offenders are issued with, Warning Notices, Penalty Infringement Notices or prosecuted as appropriate	Achieved – see section 6
	ACTION 7 – The accuracy of industry returns will be continually monitored during the life of the management plan.	7.1 – During the life of the management plan, incoming industry returns are scrutinised and discrepancies are investigated and resolved.	Achieved
	ACTION 8 – A compliance database will be maintained to support investigations, inspections and audits.	8.1 - A compliance database is maintained.	A compliance database is maintained to record enforcement actions. In 2009 all compliance actions will be recorded.
AIM 4 – MONITOR MACROPOD POPULATIONS	ACTION 9 – Population surveys will be conducted for each of the zones using the transect survey method.	9.1 – Macropod population estimates are obtained using standard transect survey method throughout the life of this plan.	Achieved

AIM	ACTION	PERFORMANCE INDICATOR	PROGRESS IN 2008
	ACTION 10 – Commercial macropod harvest quotas will be set in accordance with the provisions of the management plan.	10.1 – All commercial <i>macropod</i> harvest quotas are set in accordance with the provisions of the management plan throughout the life of the plan.	Achieved
	management plan.	10.2 – The Commonwealth Government is advised of commercial harvest quotas for the following calendar year by 31st October.	Achieved
		10.3 – If Commonwealth approval is required for quotas set above the rates specified in the plan as part of an adaptive management experiment, such approval is obtained before the additional quota is implemented.	Not applicable
		10.4 – The Quota Report is made available to the public via the DERM web page.	Completed
	ACTION 11 – Special kangaroo harvest quotas will be set in accordance with the provisions of the management plan.	11.1 Special <i>macropod</i> harvest quotas are set and utilised in accordance with the provisions of the management plan.	Not applicable
	ACTION 12 – Macropod populations will continually be monitored indirectly throughout the life of the management plan.	12.1 – Where a region showed greater that 40 percent female take, and then it was investigated through the analysing and monitoring of returns, then appropriate action would be taken.	Not applicable
AIM 5 - FACILITATE ADAPTIVE MANAGEMENT AND RESEARCH	ACTION 13 – Historical data relating to the commercial <i>macropod</i> harvest in Qld will be analysed during the life of the management plan to identify	13.1 – Analysis of historical macropod harvest and management data is undertaken during the life of the management plan.	
	trends; this analysis will be considered in future <i>macropod</i> management programs	13.2 – The results of analysis and research using historical <i>macropod</i> harvest and management data are	Not applicable

AIM	ACTION	PERFORMANCE INDICATOR	PROGRESS IN 2008
		published in an appropriate forum.	
	ACTION 14 - Where practicable experiments will be performed to test deliberate management interventions during the life of this plan.	14.1 – All proposals to undertake active adaptive management experiments are reviewed and assessed by DERM in accordance with the criteria outlined in this plan.	Not applicable
		14.2 – All necessary approvals are obtained prior to experiments testing deliberate management interventions commence.	Not applicable
		14.3 — All adaptive management experiments are continuously monitored and conducted according to approval conditions.	
		14.4 – Results of all experiments testing deliberate management interventions are published in an appropriate forum.	
	ACTION 15 – DERM will facilitate research into the ecology and harvest management of kangaroos.	15.1 – Issues associated with the ecology of harvested species and the management of the commercial harvest are identified and a research prospectus is prepared and distributed to universities and other research institutions during the life of this plan.	In Progress
AIM 6 – UNDERTAKE PROGRAM REPORTING AND REVIEW	ACTION 16 – An annual report on the management plan will be prepared and submitted to the Commonwealth.	16.1 — An annual report on the operation of the management plan for the previous calendar year is submitted to the Commonwealth by the end of March of the following year.	Annual report submitted in April 2009
		16.2 – All annual reports prepared during the life of this plan are posted on the DERM web page.	In progress

AIM	ACTION	PERFORMANCE INDICATOR	PROGRESS IN 2008
	ACTION 17 – The review of the management plan will commence no later than twelve months prior to the expiry of this plan.	17.1 – The Schedule of the management plan review activities initiated no later than 12 months prior to the expiry date of this plan 17.2 – The success of the current plan in achieving its goal is assessed by	Not applicable In progress
		measuring performance indicators.  17.3 – The results of the plan review are presented to the Commonwealth and are placed on Macropod Management Program web page.	In Progress
AIM 7 - PROMOTE COMMUNITY AWARENESS AND PARTICIPATION	ACTION 18 – Relevant public documents will be made available on the DERM web page  ACTION 19 – Publicly available information will be provided to	<ul> <li>18.1 – Throughout the life of the management plan the DERM web page contains the required information.</li> <li>19.1 – Publicly available <i>macropod</i> management information is distributed</li> </ul>	uploading the required information to the web page. This issue is being addressed.
	interested parties on request.  ACTION 20 – Where appropriate relevant DERM Macropod Management Program staff will participate in media interviews and prepare media releases.	to interested parties as soon as practicable after such a request.  20.1 – DERM staff participate in interview with the media where appropriate.	None required in 2008
		20.2 – Media releases are prepared when appropriate for issues of interest to the community such as population surveys and the release of quota for the next calendar year.	None required in 2008

AIM	ACTION	PERFORMANCE INDICATOR	PROGRESS IN 2008
AIM	ACTION  ACTION 21 – Relevant information regarding licensing arrangements will be developed as required and distributed to all licensees.	21.1 – A copy of the current Harvest Period Notice and current Code of Practice for the Humane Shooting of Kangaroos is issued with every harvesters and dealers licence throughout the life of this plan to ensure that licensees are apprised of relevant licensing requirements and responsibilities.	The current Harvest Period Notice and current Code of Practise are issued to all new licence holders and
		•	