

Queensland Commercial Macropod Management Program

Annual Report 2009

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Department of Environment and Resource Management

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Contents

Introduction	4
Background	5
Actual harvest.....	7
Long-term population, quota and harvest trends	15
Special quotas.....	18
Damage mitigation permits	18
Compliance	20
Unusual circumstances	20
Research and experiments	20
Program improvements	21
References	22
Appendix	23

Introduction

The Department of Environment and Resource Management's (the department) Commercial Macropod Management Program administers the commercial harvest of macropods in Queensland. Species that can be commercially harvested are the:

1. red kangaroo (*Macropus rufus*).
2. eastern grey kangaroo (*Macropus giganteus*).
3. common wallaroo (*Macropus robustus*).

This annual report summarises the activities of the Commercial Macropod Management Program from 1 January 2009 to 31 December 2009. In accordance with the Wildlife Trade Management Plan for Export – Commercially Harvested Macropods (2008-2012), the report addresses:

- actual harvest by zone and species compared to quota
- sex bias, average carcass weights and skin take
- any special quota utilised
- non-commercial culling
- compliance statistics
- unusual circumstances
- research and experiments
- program improvements.

In 2009, the department issued 1 952 harvester's licences and 206 dealer's licences. Dealer returns indicate there were 1 206 346 macropods commercially harvested, representing 55 per cent of the overall quota. Of the 1 206 346 animals harvested, there were 369 708 red kangaroos, 591 878 eastern grey kangaroos and 244 760 common wallaroos.

Quotas for each species in each zone were not exceeded in 2009. The highest percentage of quota was for common wallaroos in the central zone at 69 per cent. In all harvest zones, the percentage of the population harvested for each species was 10 or below.

Commercial harvest is typically biased towards males due to their generally larger size and weight when compared to females. For 2009, the harvest for each species was biased towards males by 86 per cent or greater. For each commercially harvested species in each zone, the harvest take was composed predominantly of carcass take. The largest skin take in 2009 was for eastern grey kangaroos in the central zone at 22 678, followed by red kangaroos in the central zone at 20 424.

No special quotas were set in 2009. However, a total of 125 Damage Mitigation Permits were issued for macropods, with a quota for 45 520 red kangaroos, 73 272 for eastern grey kangaroos and 27 410 common wallaroos. The number of animals taken for each harvest zone and species was below the quota. The highest percentage of quota used was for the common wallaroos in the central zone at 86 per cent

Compliance in 2009 included a total of 1 774 interventions, with penalty infringements totalling \$13 000. These interventions comprised seven prosecutions, 22 infringement notices, 87 warning notices and 1 654 compliance letters. The majority of interventions in 2009 related to failure to submit returns within the prescribed period and failure to ensure information on returns is complete, accurate, legible and completed in ink.

In 2009, the commercial macropod industry had access to its major meat export market in Russia temporarily suspended due to food verification and integrity issues. It is highly probable that the commercial harvest of macropods was depressed as a consequence. No research or experiments were undertaken in 2009, however, the department continues to respond to queries from researchers as they arise. The department introduced a number of administrative revisions in 2009 that have improved the operation of the program.

Background

The Department of Environment and Resource Management's Commercial Macropod Management Program administers the commercial harvest of macropods in Queensland. There are three main aspects to the program:

1. monitoring populations
2. setting quota.
3. managing the harvest.

Three species can be commercially harvested in Queensland:

- red kangaroo (*Macropus rufus*).
- eastern grey kangaroo (*Macropus giganteus*).
- common wallaroo (*Macropus robustus*).

These commercially harvested species are abundant over a broad area of Queensland and Australia. None of these species are listed as threatened under State or Commonwealth legislation; all are listed as 'least concern' wildlife under the Nature Conservation (Wildlife) Regulation 2006.

The harvesting of these macropods is regulated through the:

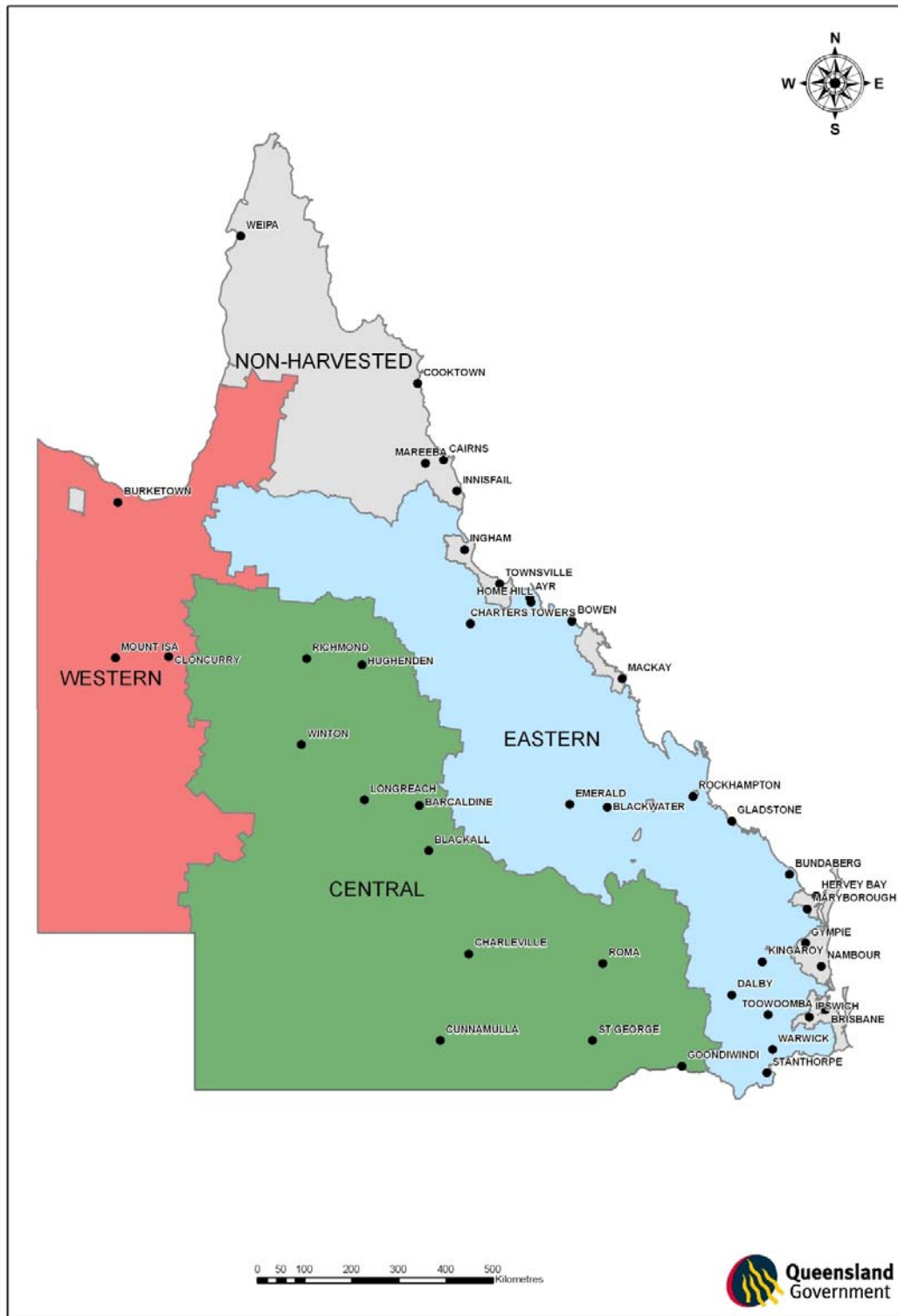
- *Environment Protection and Biodiversity Conservation Act 1999*
- Queensland Wildlife Trade Management Plan for Export – Commercially Harvested Macropods (2008-2012)
- *Nature Conservation Act 1992*
 - Nature Conservation (Administration) Regulation 2006
 - Nature Conservation (Wildlife Management) Regulation 2006
 - Nature Conservation (Wildlife) Regulation 2006
 - Nature Conservation (Macropod) Conservation Plan 2005
- *Animal Care and Protection Act 2001*
- *Food Production (Safety) Act 2000*.

The department administers the harvest in accordance with the following overarching goal: 'to provide sustainable use, conservation of the species and their habitats in accordance with the principles of ecologically sustainable development' (Anon 2008).

Management of the harvest is facilitated via quotas that set the number of animals that can be taken. Quotas are determined largely based on population estimates derived from annual aerial surveys of the commercially harvested species. In the past the quotas for each species were set for the whole of Queensland. Under this system, the harvest was sustainable on a state-wide basis but it was possible harvesting pressure was focussed on particular regions of the state. Since 2003, to address this issue, quotas have been set for each species for four harvest zones (Figure 1):

- non- harvest zone (quota zero)
- eastern harvest zone
- central harvest zone
- western harvest zone.

Figure 1. Queensland harvest zones



Quotas are calculated using a fixed proportion of the estimated macropod populations within the harvest areas. Proportions are adjusted for each species across the harvest zones in relation to the margins of error present in population estimates derived from the aerial surveys. The maximum proportions used for each species are 15 per cent of the populations for eastern grey kangaroos and common wallaroos, and 20 per cent of the population for red kangaroos for the central zone. For the eastern and western zones, where survey effort is less extensive when compared to the central zone, the more conservative maximum proportion of 10 per cent is applied for all three species.

These sustainable-use harvest proportions are based on research and modelling undertaken by Caughley et al.(1987) and Hacker et al.(2002) and are currently accepted by the scientific community, and the State and Commonwealth Governments, for determining state quota limits.

In Queensland, the Minister for Climate Change and Sustainability sets quotas annually and provides them to the Commonwealth Minister for the Environment, Water, Heritage and the Arts (DEWHA) for endorsement. Following this endorsement, the Director-General of the department declares a harvest period open annually via a harvest period notice.

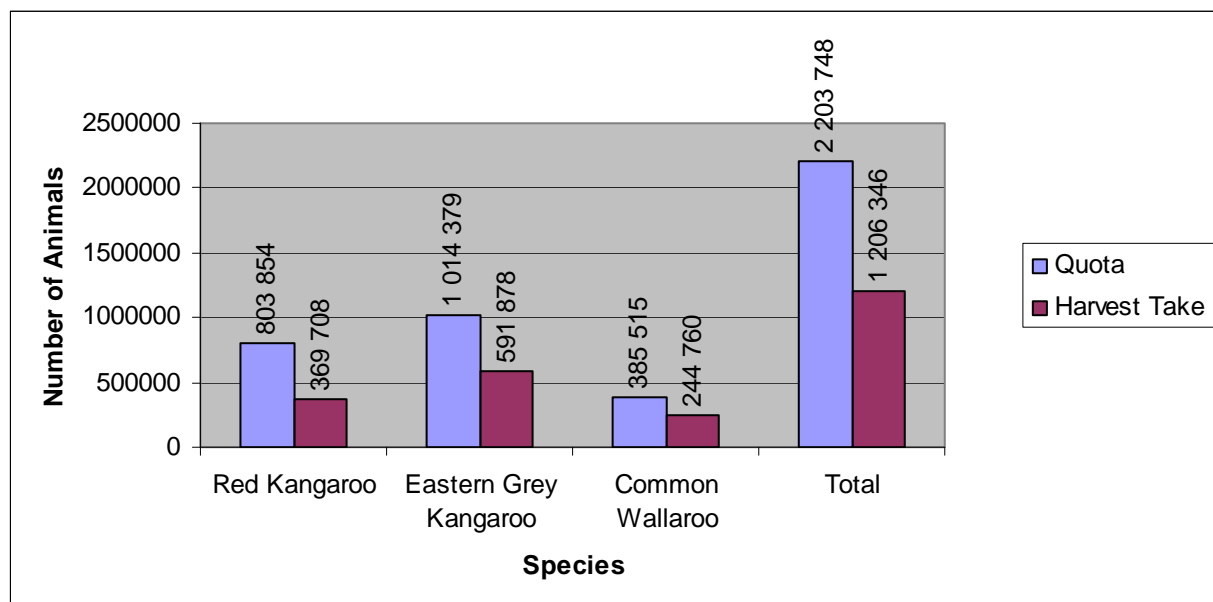
This annual report summarises the activities of the Commercial Macropod Management Program from 1 January 2009 to 31 December 2009. In accordance with the Wildlife Trade Management Plan for Export – Commercially Harvested Macropods (2008-2012), the report will address:

- actual harvest by zone and species compared to quota
- sex bias, average carcass weights and skin take
- any special quota utilised
- non-commercial culling
- compliance statistics
- unusual circumstances
- research and experiments
- program improvements.

Actual harvest

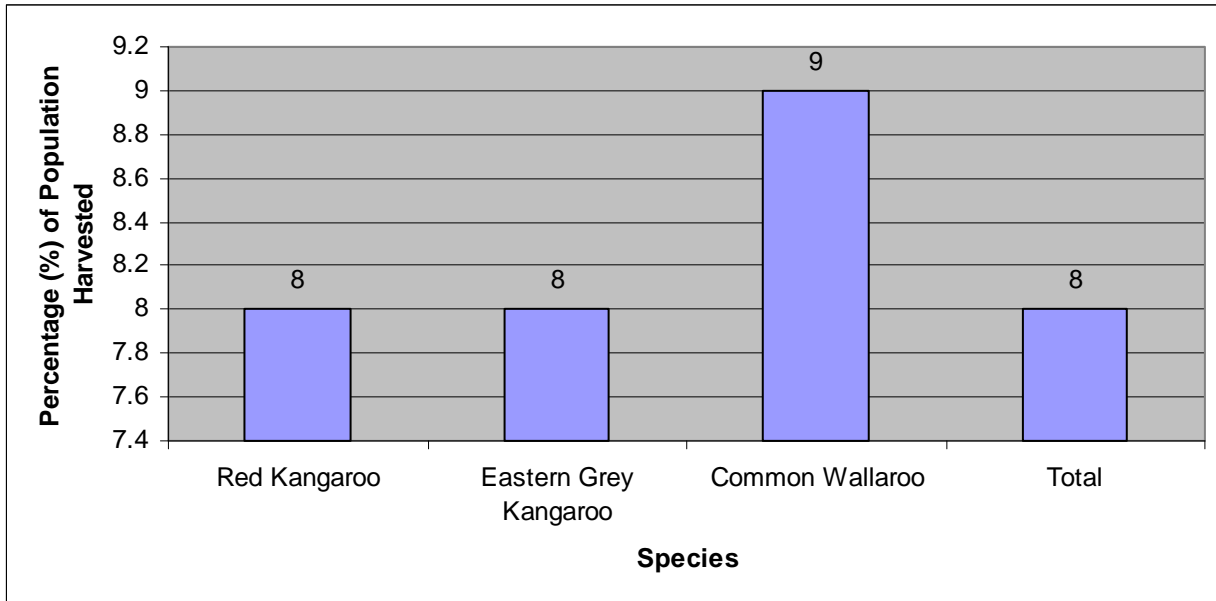
In 2009, the department issued 1 952 harvester’s licences and 206 dealer’s licences. Dealer returns entered up to 10 February 2010 indicate there were 1 206 346 macropods commercially harvested in Queensland in 2009, representing 55 per cent of the overall quota. Of the 1 206 346 animals harvested, there were 369 708 red kangaroos, 591 878 eastern grey kangaroos and 244 760 common wallaroos (Figure 2).

Figure 2. Total Number of macropods harvested in 2009



For all three commercially harvested species the percentage of the population harvested was under 10 per cent (Figure 3). For common wallaroos, nine per cent of the estimated population in the harvest area was harvested, while for red kangaroos and eastern grey kangaroos, eight per cent of the estimated populations in the harvest area were harvested.

Figure 3. Percentage of population harvested in 2009



Tables 1-4 contain a detailed summary of the commercial harvest in 2009. Quotas for each species in each zone were not exceeded in 2009. The highest percentage of quota utilised was for common wallaroos in the central zone at 69 per cent. In all harvest zones the percentage of the population harvested for each species was 10 or below.

Table 1. Actual total harvest in 2009

Species	Population estimate	Quota	Harvest take	Per cent quota utilised	Per cent population harvested
Red kangaroo	4 551 999	803 854	369 708	46	8
Eastern grey kangaroo	7 327 250	1 014 379	591 878	58	8
Common wallaroo	2 740 993	385 515	244 760	64	9
Total	14 620 242	2 203 748	1 206 346	55	8

Note: population estimates are based on aerial surveys conducted in 2008, which were used to set the 2009 quota. Figures are based on dealer returns as entered on 10 February 2010.

Table 2. Actual harvest of red kangaroos in 2009

Zone	Population estimate	Quota	Harvest take	Per cent quota utilised	Per cent population harvested
Central	4 119 488	760 603	354 754	47	9
Eastern	99 918	9 992	6 526	65	7
Western	332 593	33 259	8 428	25	3
Total	4 551 999	803 854	369 708	46	8

Note: population estimates are based on aerial surveys conducted in 2008, which were used to set the 2009 quota. Figures are based on dealer returns as entered on the 10th February 2010.

Table 3. Actual harvest of eastern grey kangaroos in 2009

Zone	Population estimate	Quota	Harvest take	Per cent quota utilised	Per cent population harvested
Central	5 694 505	851 669	517 738	61	9
Eastern	1 627 097	162 710	74 140	46	5
Western	5 647	n/a	n/a	n/a	n/a
Total	7 327 250	1 014 379	591 878	58	8

Note: population estimates are based on aerial surveys conducted in 2008, which were used to set the 2009 quota. Figures are based on dealer returns as entered on 10 February 2010.

Table 4. Actual harvest of common wallaroos in 2009

Zone	Population estimate	Quota	Harvest take	Per cent quota utilised	Per cent population harvested
Central	2 264 234	337 839	234 294	69	10
Eastern	315 985	31 598	9 699	31	3
Western	160 775	16 077	767	5	0.5
Total	2 740 993	385 515	244 760	64	9

Note: population estimates are based on aerial surveys conducted in 2008, which were used to set the 2009 quota. Figures are based on dealer returns as entered on 10 February 2010.

All macropod species are protected animals in Queensland under the Nature Conservation (Wildlife) Regulation 2006. The Nature Conservation (Administration) Regulation 2006 provides for the licensing of a range of activities in relation to the commercial harvesting of macropods in Queensland.

Macropods can only be taken in accordance with the Wildlife Trade Management Plan for Export – Commercially Harvested Macropods (2008-2012) and the Nature Conservation (Macropod) Conservation Plan 2005 under a licence issued by the department.

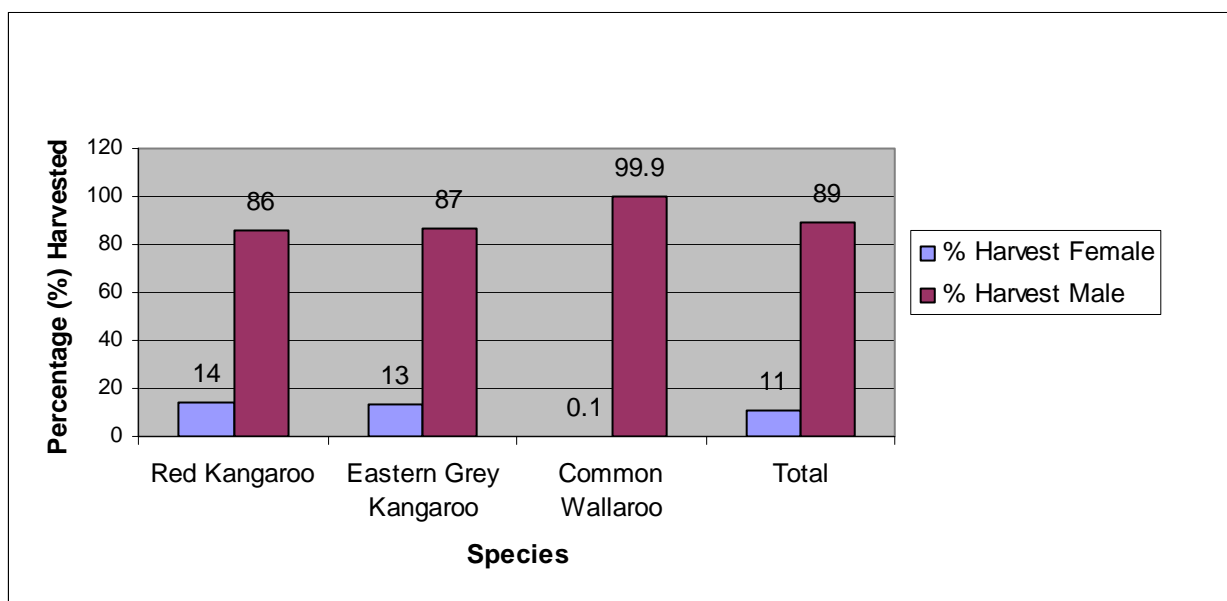
The harvest is controlled by self-locking numbered plastic tags with a unique colour code for each year. The following applies to the use of tags:

- A fee (fixed by regulation) must be paid to the department’s macropod program for the tags.
- The tags are individually numbered and of a different colour for each consecutive year.
- 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.

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

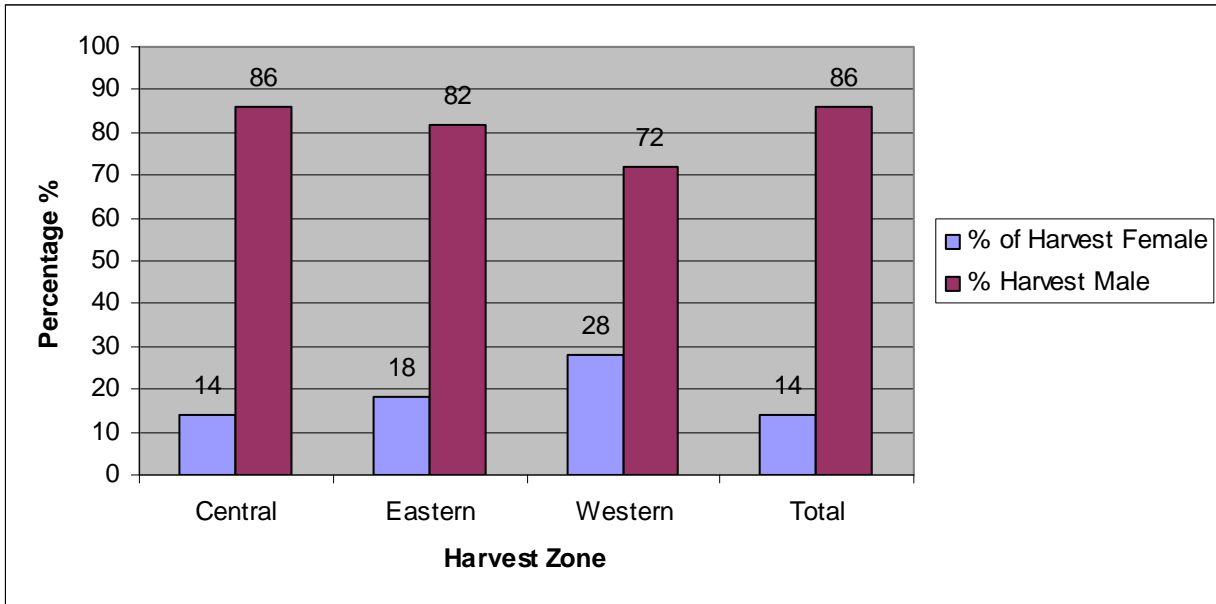
Commercial harvest is typically biased towards males due to their generally larger size and weight when compared to females. For 2009, the harvest for each species was biased towards males by 86 per cent or greater (Figure 4). Females composed less than 14 per cent of the harvest and common wallaroos were 0.1 per cent of the harvest.

Figure 4. Harvest sex bias 2009



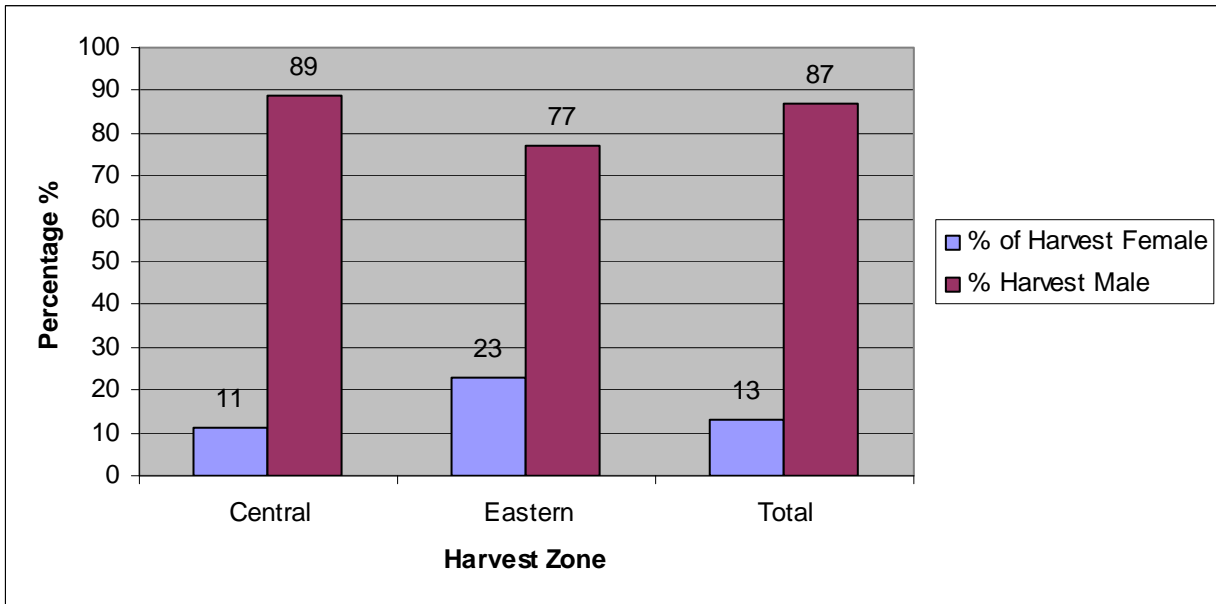
For red kangaroos, the highest percentage of females harvested was in the western zone at 28 per cent. However, the overall take of females for this species was 14 per cent of the harvest (Figure 5).

Figure 5. Harvest sex bias red kangaroos 2009



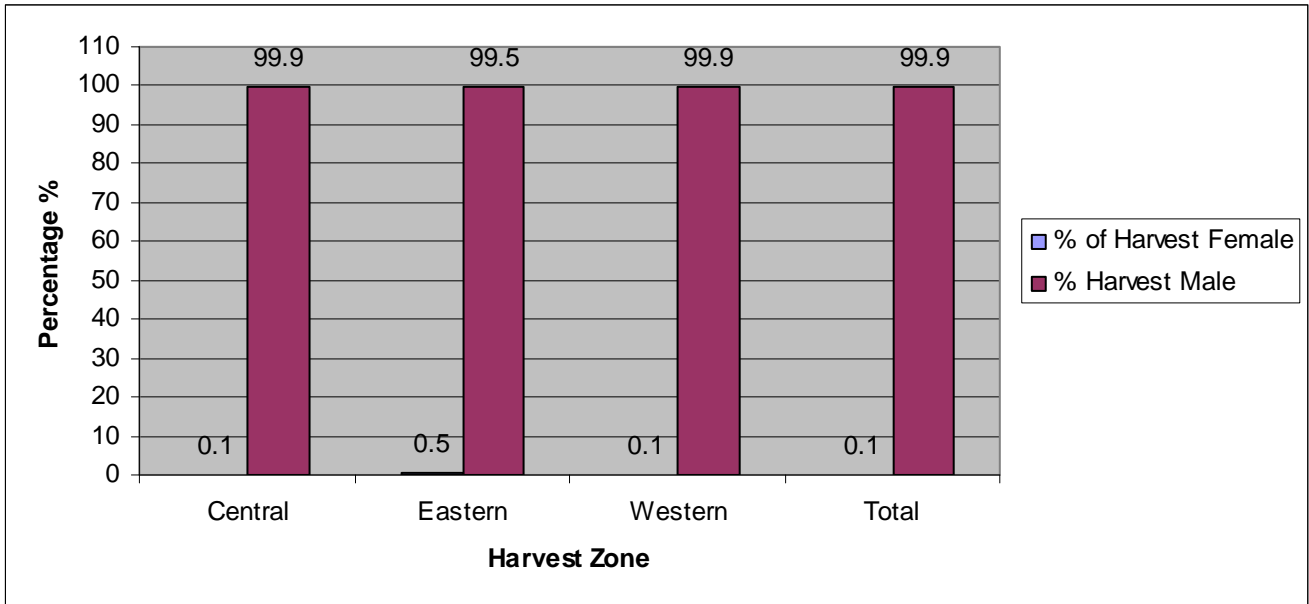
For eastern grey kangaroos the greatest percentage take of females was 23 per cent in the eastern zone. Overall for this species, females composed 13 per cent of the harvest (Figure 6).

Figure 6. Harvest sex bias eastern grey kangaroos 2009



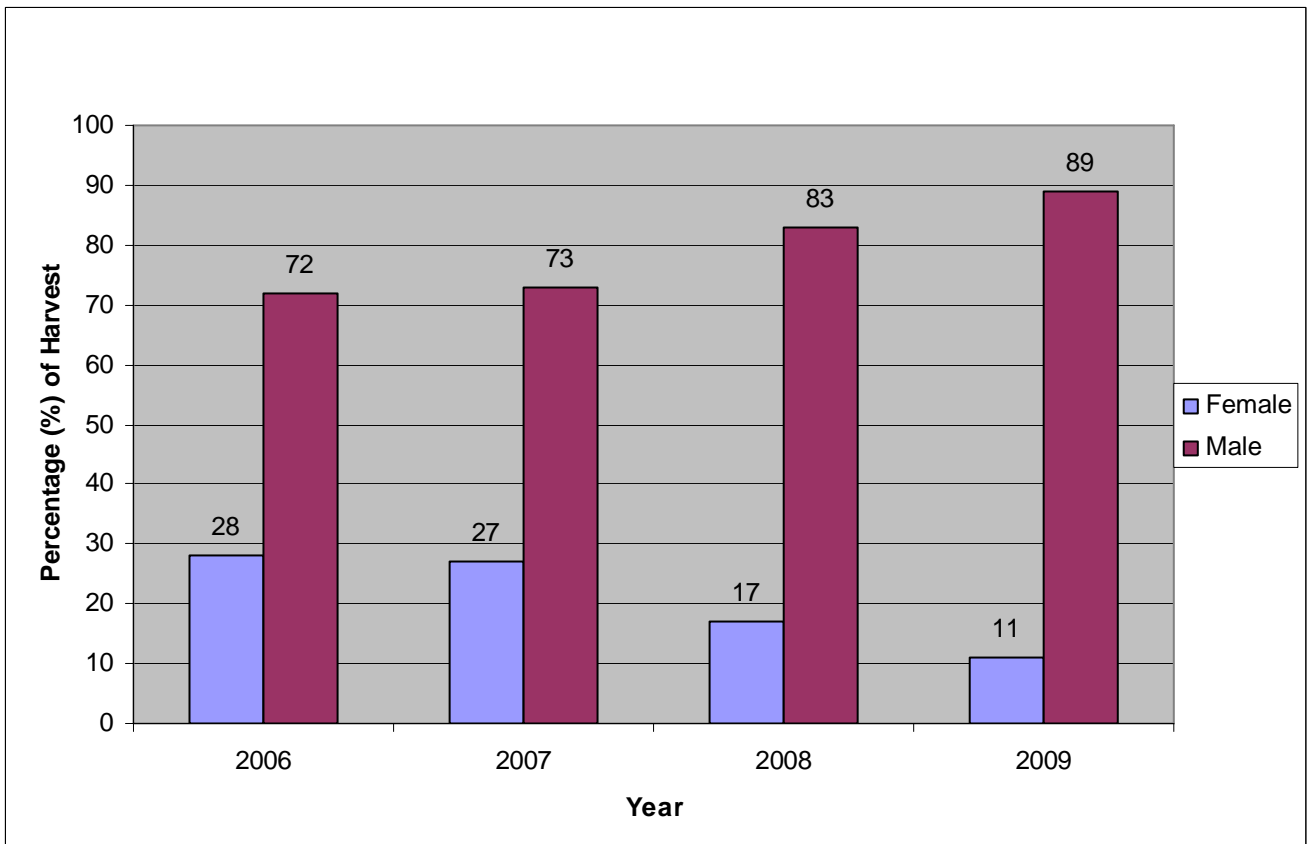
For common wallaroos the percentage of the harvest containing females was the lowest amongst the three commercially harvested species at an overall total of 0.1 per cent. The highest percentage was 0.5 per cent in the eastern zone (Figure 7).

Figure 7. Harvest sex bias common wallaroos 2009



Compared to harvests in the previous three years, the overall harvest take in 2009 contained the lowest percentage of females at 11 per cent of the harvest (Figure 8).

Figure 8. Harvest sex bias – trends



The commercial harvest of macropods in Queensland is for meat and skin products used for human and pet food and for leather. For each commercially harvested species in each zone the harvest take is composed predominantly of carcass take (Figures 9-11). The largest skin take in 2009 was for eastern grey kangaroos in the central zone at 22 678, followed by red kangaroos in the central zone at 20 424.

Figure 9. Skin and carcass take for red kangaroos 2009

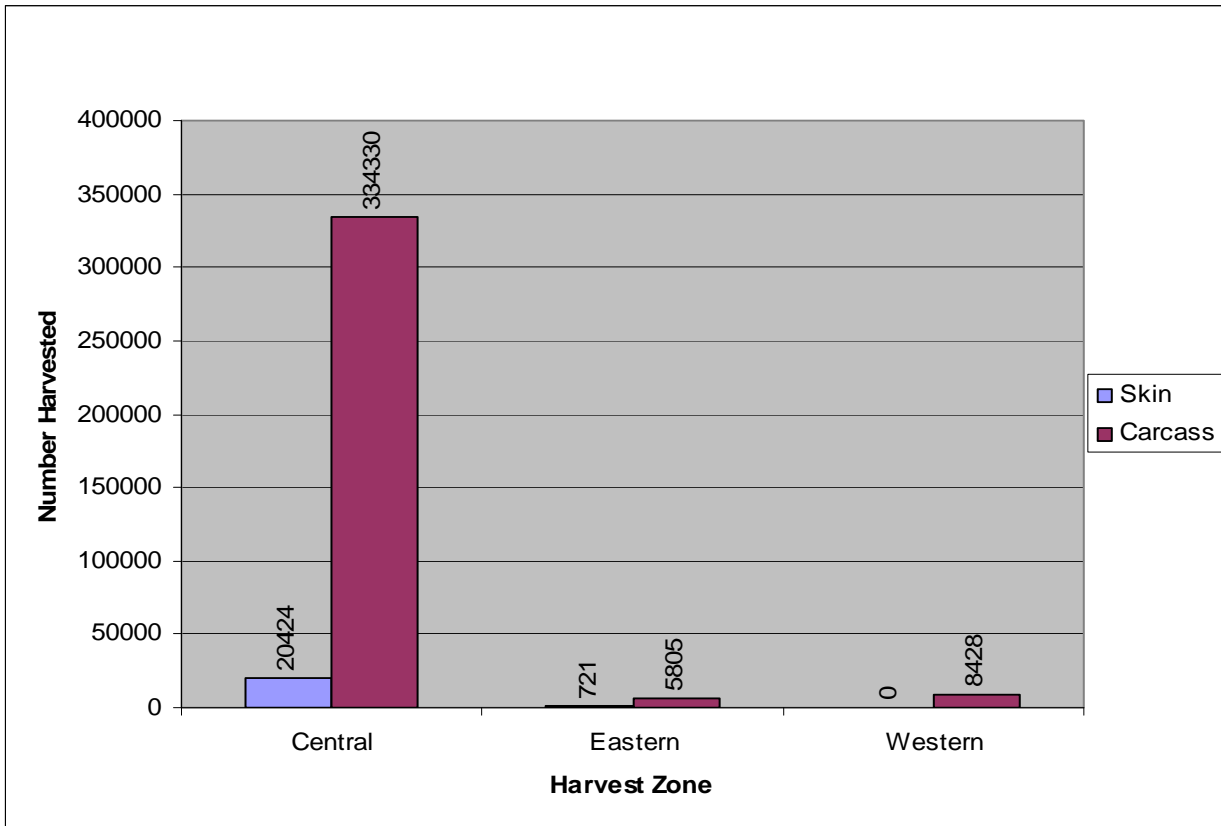


Figure 10. Skin and carcass take for eastern grey kangaroos 2009

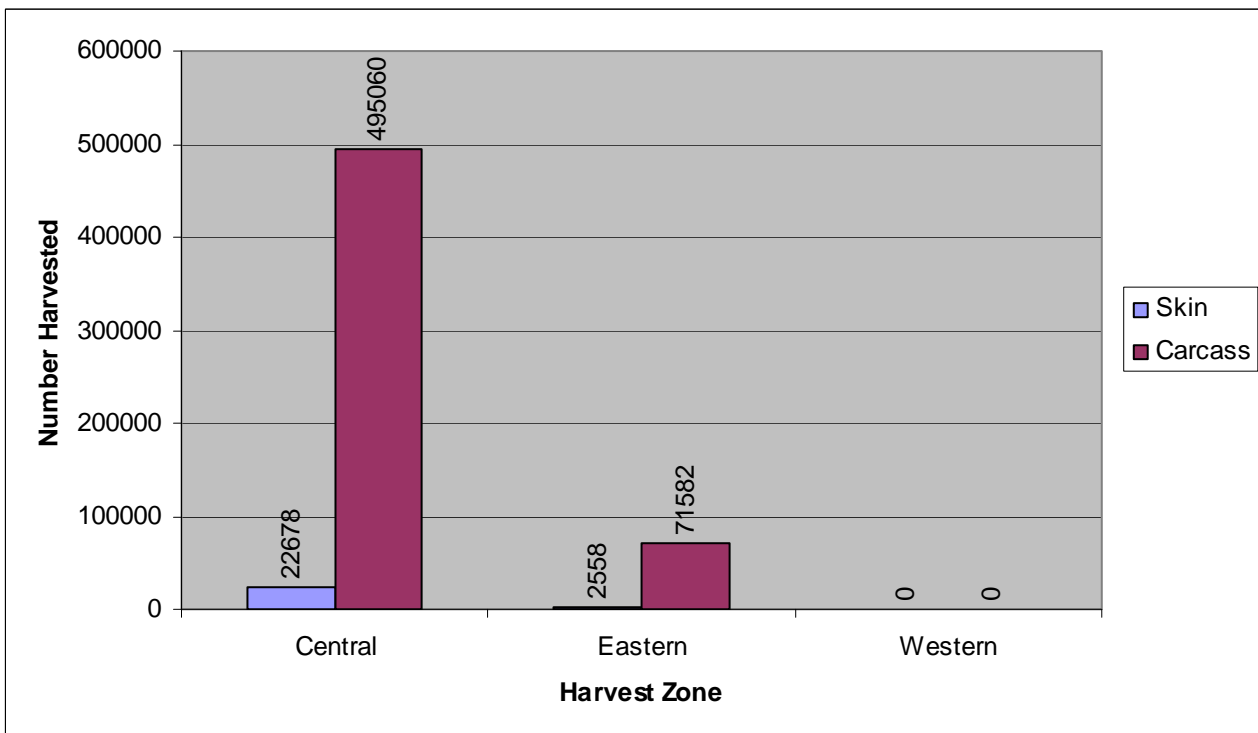
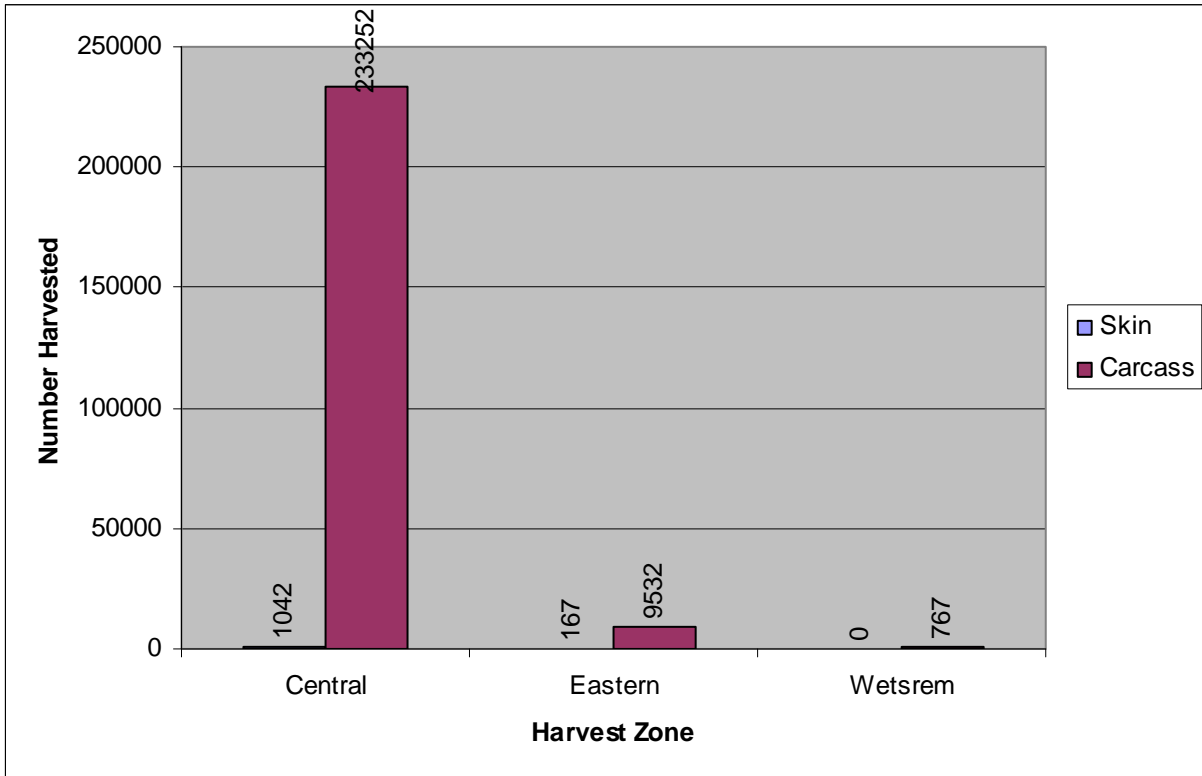
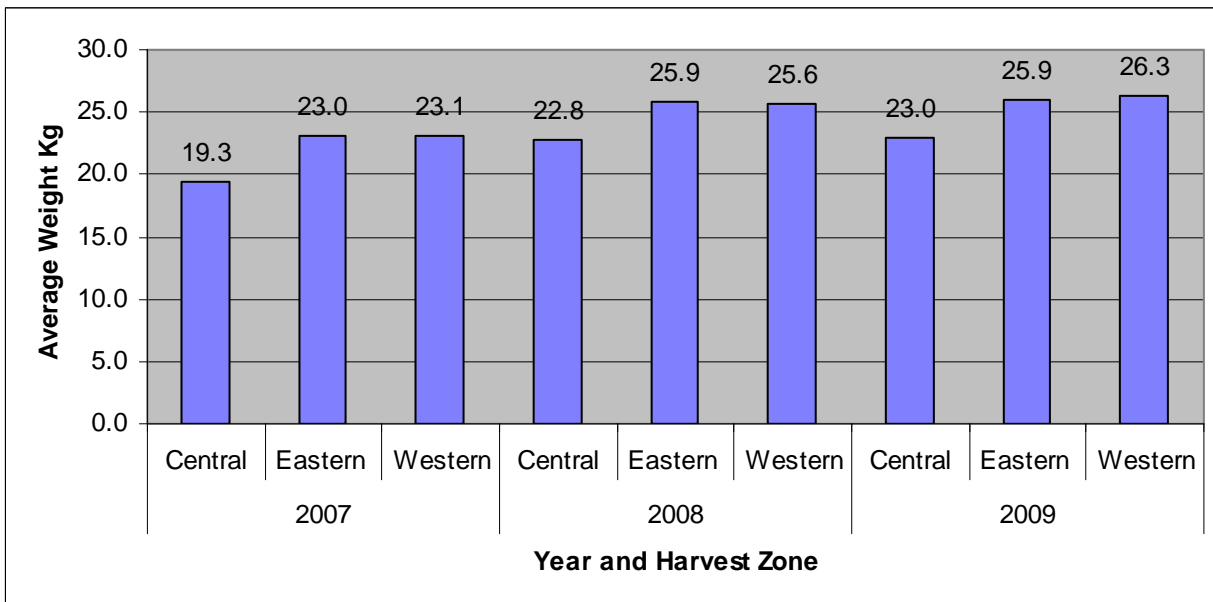


Figure 11. Skin and carcass take for common wallaroos 2009



The average carcass weight per harvest zone is shown in Figure 12. Carcass weights have increased slightly in the past three years in each harvest zone. Weights are consistently lowest in the central zone and highest in the western zone. No significant increases or decreases have occurred in the last three years.

Figure 12. Average carcass weight



Long-term population, quota and harvest trends

Figures 13 -15 below outline data on the three commercially harvested macropod species pertaining to population, quota and harvest for the years 1993-2010, as available in February 2010.

Please note: population estimates are based on aerial surveys conducted in the previous year to the quota and harvest. Combined population estimates, quota and harvest data have been used for the period post-regionalisation to enable comparison with data collated prior to this period

Figure 13. Long-term population, quota and harvest data for the red kangaroo

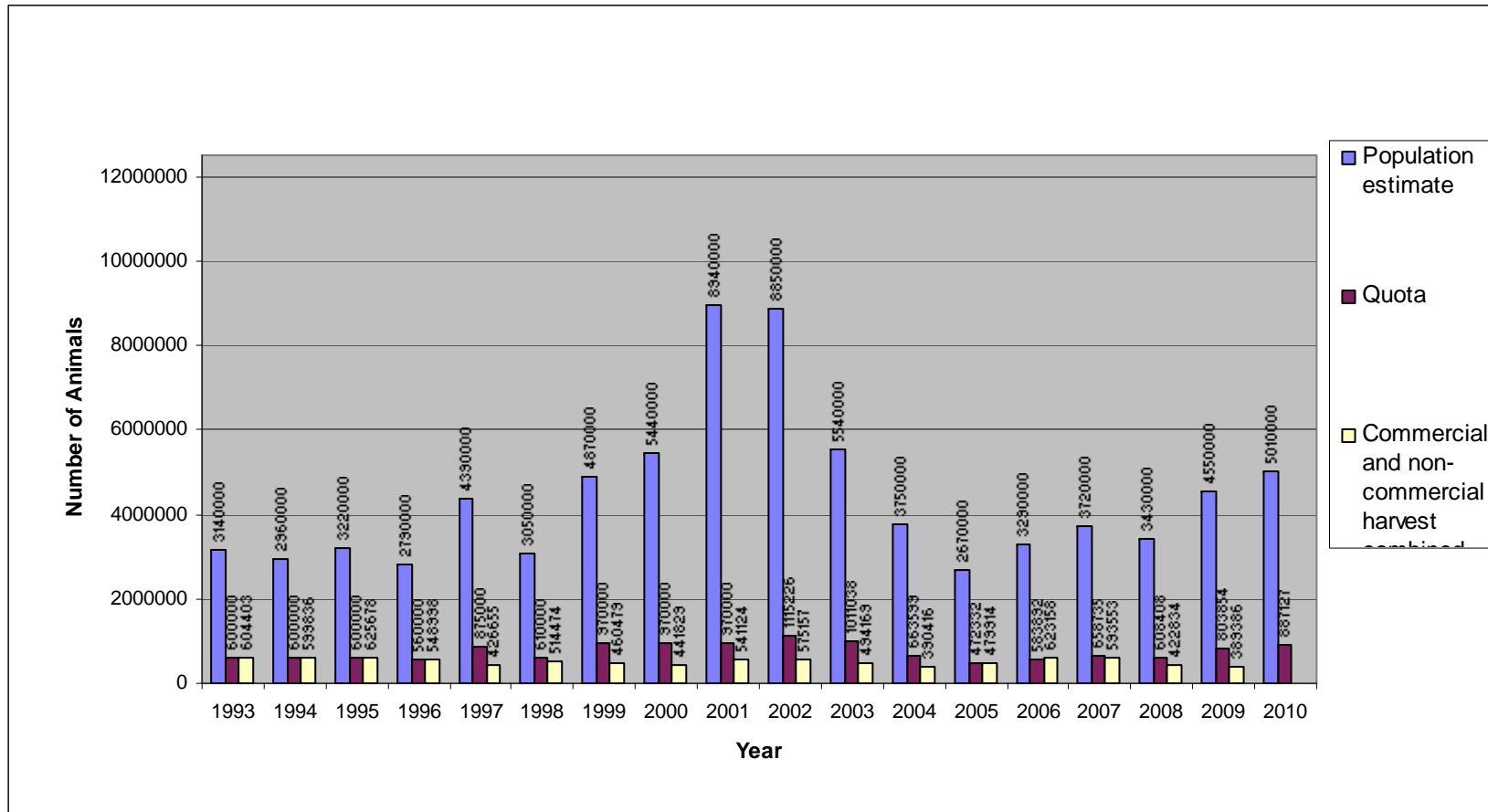


Figure 14. Long-term population, quota and harvest data for the eastern grey kangaroo

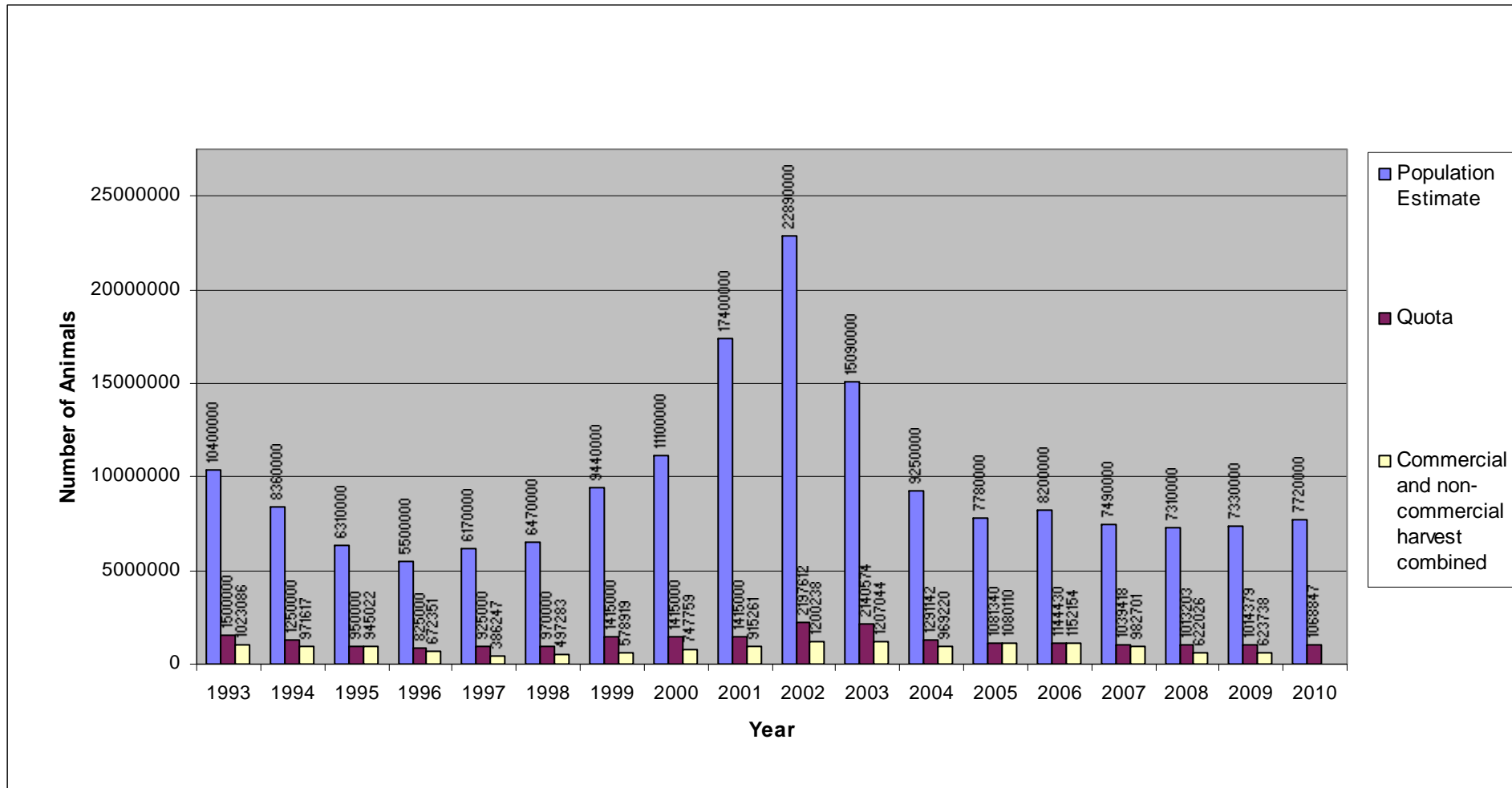
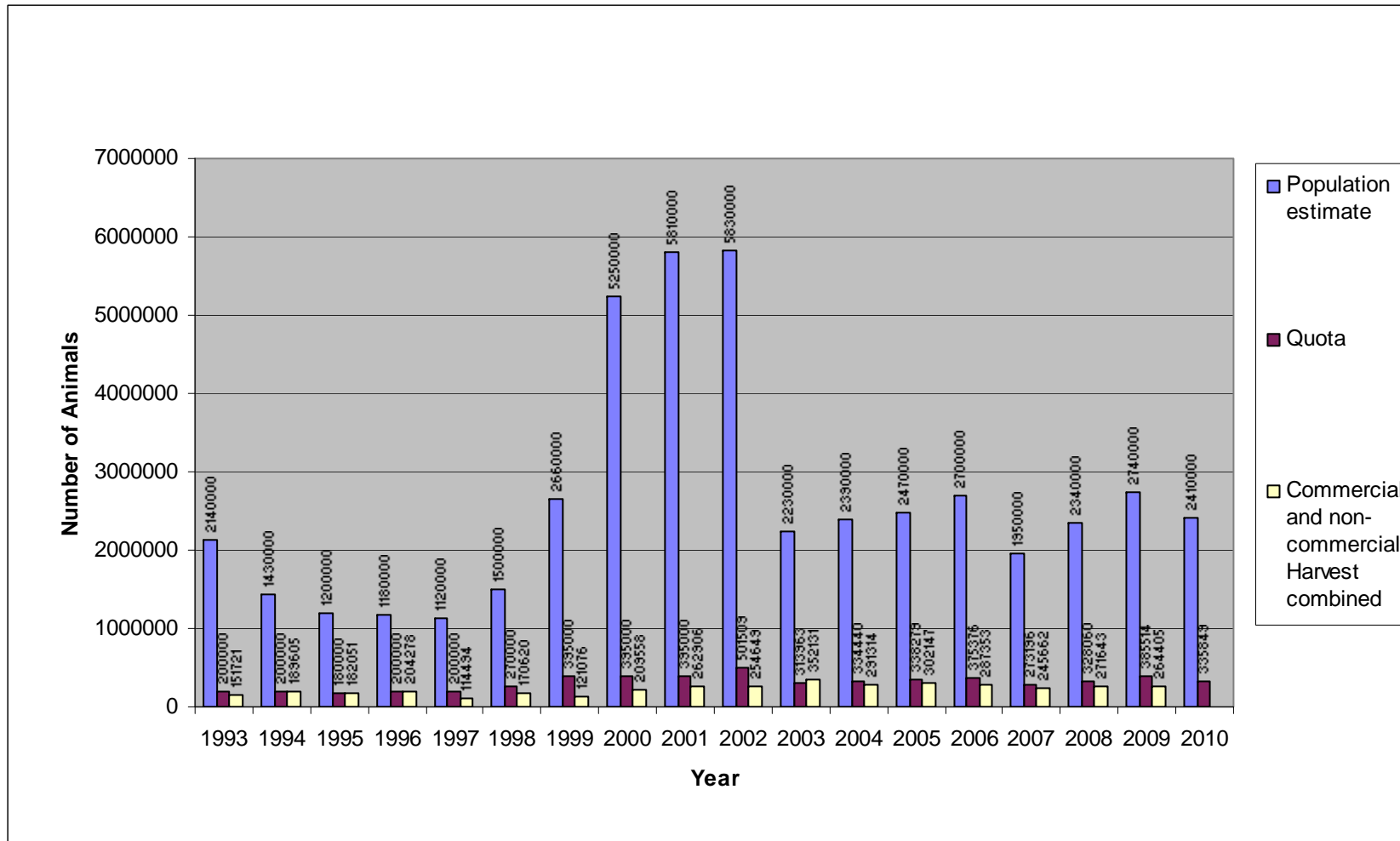


Figure 15. Long-term population, quota and harvest data for the common wallaroo



There has been no consistent decline in the populations of the three commercially harvested species since 1993 (Figures 13 - 15). Of these species, the eastern grey kangaroo is consistently most abundant across the harvest zones, followed by the red kangaroo. Common wallaroos are the lowest. All three species occur in numbers of over 1 000 000 across the harvest zones.

Quotas are set as a constant proportion of the population and will vary in accordance with fluctuations in the populations (Figures 13-15). However, numerous factors influence harvest rates for commercial macropods. These include population levels, market forces, environmental conditions and access by harvesters. As a consequence, there is no clear pattern or trend in the proportion of the quota harvested since 1993.

Since 1993, for red kangaroos, quotas have fluctuated between 472 332 and 1 115 226, while harvest take (commercial and non-commercial combined) has fluctuated between 390 416 and 625 678. For eastern grey kangaroos, quotas have fluctuated between 825 000 and 2 197 612 and harvests have varied between the range of 386 947 and 1 207 044. For common wallaroos, quotas have ranged between 180 000 and 501 509 and harvests have fluctuated between 114 494 and 352 131.

Special quotas

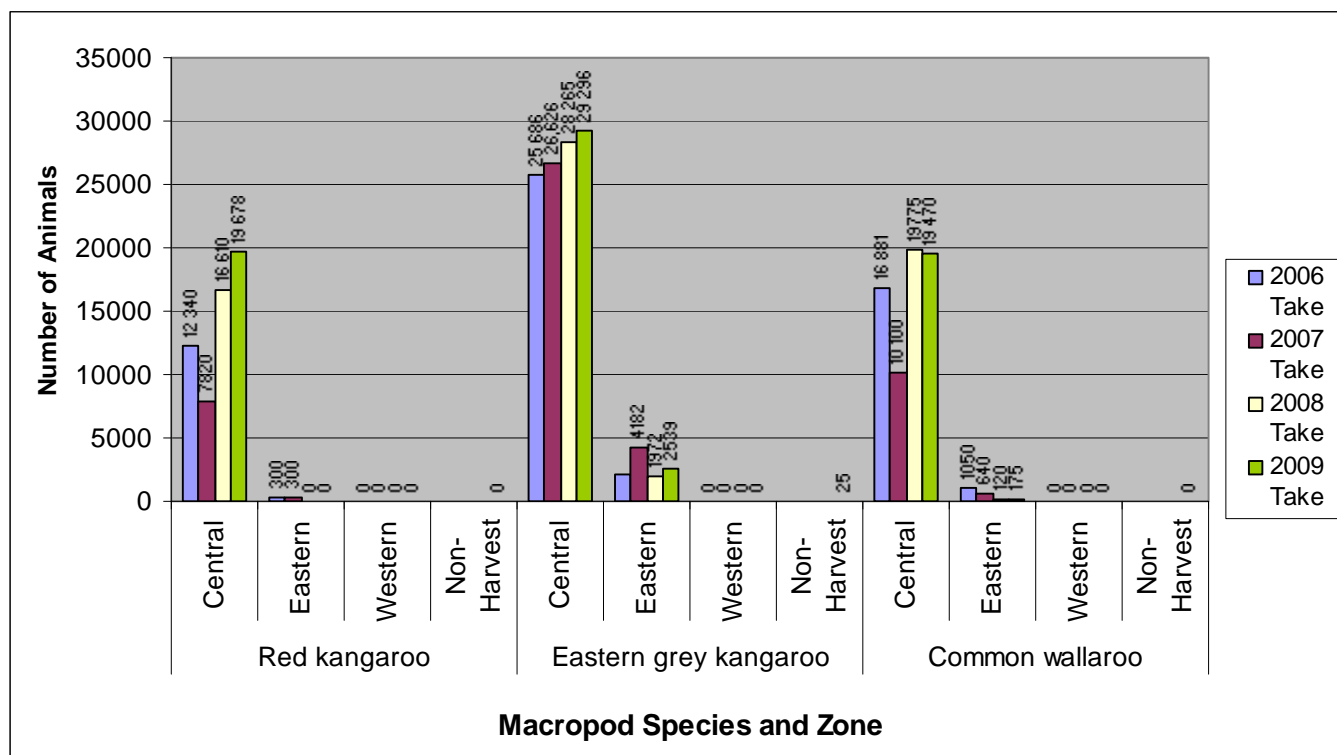
No special quotas were set in 2009. Under the Wildlife Trade Management Plan for Export – Commercially Harvested Macropods (2008-2012), a special quota can only be considered once a commercial harvest quota has been reached in a harvest zone. This quota is capped at 1.5 per cent of the population estimate for a species.

Damage mitigation permits

Damage mitigation permits (DMPs) are issued by the department where macropods are causing demonstrable damage to primary production. The issuing of these permits is limited to a maximum of one per cent of the population estimate for each species. It is a condition of the permit that macropods are taken in accordance with the requirements of the National Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Non-commercial Purposes.

For comparative purposes, a summary of the macropods taken under DMPs for each species for each zone for 2006-2009 is outlined in Figure 16. Since 2006, the greatest number of macropods taken under DMPs is from the central zone, with the lowest number of DMP take recorded in the western zone. The only consistent trend in take has occurred in the central zone, where numbers of eastern grey kangaroos taken under DMPs rose from 2006-2009. There were no consistent decreases or increases in DMP take for any of the commercially harvested species in any other zone.

Figure 16. Macropods taken under damage mitigation permits 2006-2009



A total of 125 DMPs were issued for macropods in Queensland in 2009, with a quota for 45 520 red kangaroos, 73 272 for eastern grey kangaroos and 27 410 common wallaroos. The number of animals taken for each harvest zone and species was below the quota (Figure 17 and Table 5). The highest percentage of quota used was for the common wallaroos in the central zone at 86 per cent

Figure 17. Macropod quota and take for damage mitigation permits 2008-2009

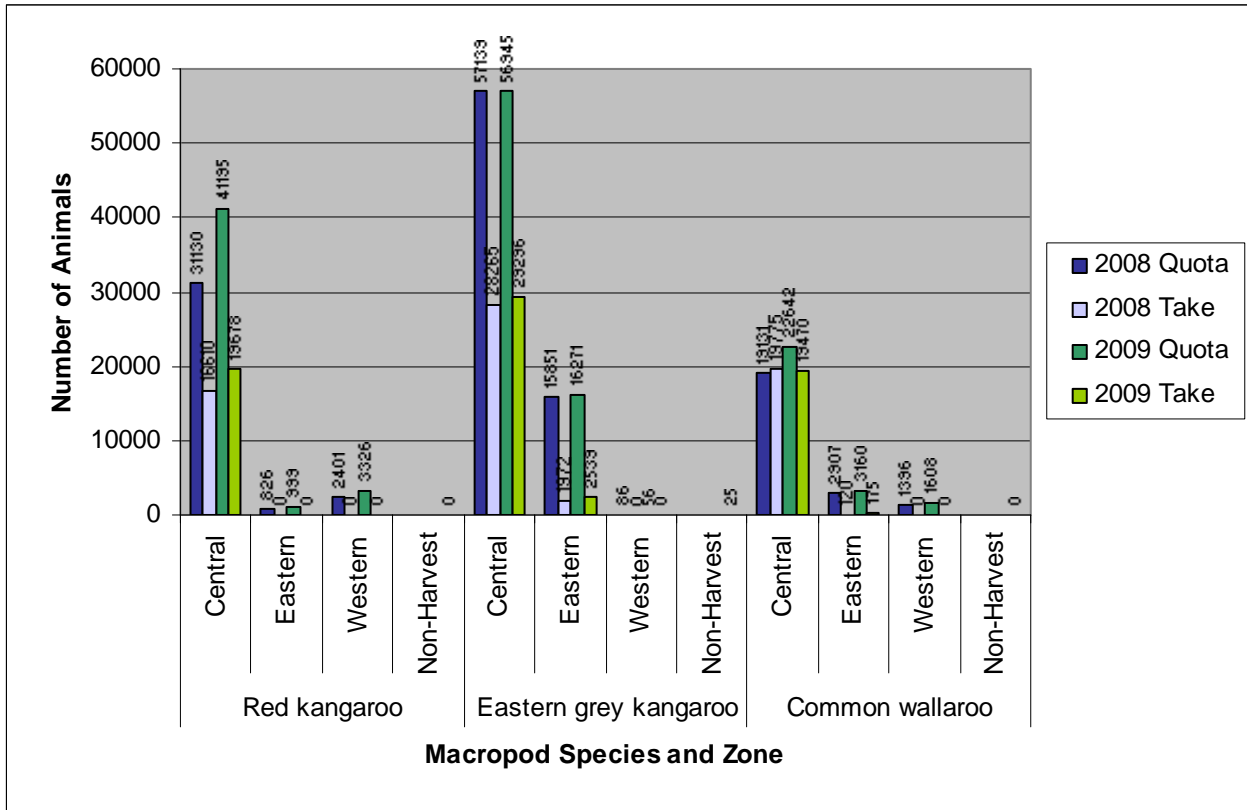


Table 5. Percentage of quota utilised for macropods for 2008-2009.

Year	Harvest zone	Eastern grey kangaroo per cent quota used	Red kangaroo per cent quota used	Common wallaroo per cent quota used
2008	central zone	50	53	103
	eastern zone	12	0	4
	western zone	35	0	0
	Total	41	53	85
2009	central zone	51	48	86
	eastern zone	16	0	6
	western zone	0	0	0
	Total	44	43	72

Compliance

The commercial harvest of macropods in Queensland is managed by DERM's Macropod Management Unit and also calls on the substantial compliance, investigation and enforcement resources of the department across the state. Departmental officers work closely with the Queensland Police Service Stock and Rural Crime Investigation Squad and the Queensland Primary Industries and Fisheries Animal Welfare Officers to ensure that licence and permit holders adhere to legal requirements.

Officers conduct both programmed and unannounced inspections of harvesters and dealers. Breaches of legislation are subject to enforcement action such as warning notices, fines and prosecution.

A breakdown of the compliance activity for 2009 is presented in Tables 6-7 below. For 2009, there were a total of 1 774 interventions, with penalties totalling approximately \$13 000. Records indicate these interventions were broadly composed of seven prosecutions, 22 infringement notices, 87 warning notices and at least 1 654 compliance letters.

The majority of interventions in 2009 related to failure to submit returns within prescribed period and failure to ensure information on returns is complete, accurate, and legible and completed in ink. Other interventions included taking, keeping and/or using lawfully taken wildlife without lawful authority, failure to comply with licence conditions, failure to show authority or identification without reasonable cause, failure to record relevant particulars within a prescribed period and obstruction of conservation officers in their duties.

Table 6. Compliance summary 2009

Compliance statistics Jan-Dec 2009	Compliance letters		Warning notices		Infringement notices		prosecutions		Total interventions	\$ penalties
	harvester	dealer	harvester	dealer	harvester	dealer	harvester	dealer		
Department of Environment and Resource Management	1 246	408	69	18	4	18	3	0	1 770	\$10 900
Queensland Police Service (Stock and Rural Crime Investigation Squad)	0	0	0	0	0	0	4	0	4	\$2 100

Table 7. Dealer site inspections 2009

Inspection type	Inspections recorded
Dealer site inspections Jan-Dec 2009	150
Processing plant inspections Jan-Dec 2009	10

Unusual circumstances

In 2009, the commercial macropod industry had access to its major meat export market in Russia temporarily suspended due to food verification and integrity issues. It is highly probable that the commercial harvest of macropods was depressed as a consequence.

Research and experiments

No research projects or experiments were funded by the department during 2009. The department continues to respond to requests for data from researchers and other stakeholders as they arise.

Program improvements

In the last quarter of 2009, the department undertook a review of the operational aspects of the Commercial Macropod Management Program. This resulted in a number of administrative revisions to the program that came into effect on 1 January 2010 for the 2010 harvest period.

Revisions have included:

- tag number limited to quota (specific to species and zone)
- differential availability of tags based on harvester history and demonstrated use to ensure an open market
- initial and secondary tag allocations
- no tag refunds
- landholder consent forms for harvesters (no properties listed on licences)
- weight statistics collected through dealer returns
- shire-level data entry
- licence conditions relating to adherence to the Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes
- introduction of provisions in the harvest period notice for 2010 that make it illegal to trade in body shot macropods, further enhancing compliance with the Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes.

Future amendments may include increased penalty infringement units for corporations and removal of tag price disparity between state jurisdictions.

The amendments will enhance the capacity of the program to meet key performance indicators in the wildlife trade management plan and improve animal welfare provisions.

References

- Anon, 2008, Wildlife Trade Management Plan for Export – *Commercially Harvested Macropods (2008-2012)*, Queensland Parks and Wildlife Service, Brisbane.
- Caughley, G, Shepard, N and G Short 1987 *Kangaroos, their ecology and management in the sheep rangelands of Australia*. Cambridge University Press, Cambridge.
- Hacker, R, McLeod, S, Druhan, J, Tenhumberg, B and U Pradhan, 2002, *Managing Kangaroos in the Murray-Darling Basin*, Technical Report to the Murray-Darling Basin Commission, Canberra

Appendix

Wildlife Trade Management Plan for Export – Commercially Harvested Macropods (2008-2012), performance indicators

Aim	Action	Performance indicator	Progress in 2009
Aim 1. Manage and administer commercial operators via licensing.	Action 1. All relevant activities are licensed in accordance with the applicable Queensland legislation and department policy.	1.1 All licences across Queensland are assessed, processed and issued in accordance with Queensland legislation and department policy.	Achieved.
Aim 2. Ensure humane treatment of kangaroos.	Action 2. The department will work with the Queensland Institute of TAFE or other accredited provider to ensure all harvesters are competent to achieve the standards set out in the Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes.	2.1 All successful applicants for harvester's licences have completed the approved accreditation and their accreditation is current.	Achieved.
	Action 3. Department staff will monitor compliance with the Code of Practice for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes by commercial macropod industry operators.	3.1 All licensees who are found to have breached licence conditions in relation to animal welfare are issued with warning notices, penalty infringement notices or are prosecuted as appropriate.	Achieved.
	Action 4. The department will contribute to nationally focused research in improving animal welfare outcomes.	Not applicable.	No relevant applications received in 2009.
Aim 3. Monitor industry compliance.	Action 5. The department and Safefood Queensland staff will undertake both regular and opportunistic monitoring of compliance by commercial kangaroo industry operators.	5.1 On receipt of harvesters' licence applications, the authorised departmental officer assessing the applications will ensure that applicants have both a valid and current Queensland accreditation and a current firearms licence.	Achieved.

Aim	Action	Performance indicator	Progress in 2009
		5.2 All chiller premises are inspected, on average, every three months during the life of this plan by department staff and/or staff of the Safefood Queensland to ensure compliance with Queensland legislation and licence conditions.	In progress.
		5.3 All macropod processing works in Queensland are inspected by department staff and/or staff of Safefood Queensland to ensure compliance with Queensland legislation and licence conditions. This will be contingent on the Memorandum of Understanding (MoU) being signed and agreed to by both parties.	An MoU has not yet been signed.
		5.4 During the life of this plan harvester's vehicles loaded with macropod carcasses are inspected opportunistically to ensure compliance with Queensland legislation and licence conditions and the results of these inspections are documented.	Achieved.
	Action 6. Activities not in accordance with the Queensland 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.
	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.	Achieved.	

Aim	Action	Performance indicator	Progress in 2009
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.
	Action 10. Commercial macropod harvest quotas will be set in accordance with the provisions of the management plan.	10.1 All commercial macropod harvest quotas are set in accordance with the provisions of the management plan throughout the life of the plan.	Achieved.
		10.2 The Commonwealth Government is advised of commercial harvest quotas for the following calendar year by 31 October.	Achieved by 30 November 2009.
		10.3 If Commonwealth approval is required for quotas and 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 department's web page.	Achieved.
	Action 11. Special kangaroo harvest quotas will be set in accordance with the provisions of the management plan.	11.1 Special macropod 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 than 40 per cent 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 macropod harvest in Queensland will be analysed during the life of the management plan to identify trends; this analysis will be considered in	13.1 Analysis of historical macropod harvest and management data is undertaken during the life of the management plan.	Achieved.

Aim	Action	Performance indicator	Progress in 2009
		13.2 The results of analysis and research using historical macropod harvest and management data are published in an appropriate forum.	Achieved.
	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 the department in accordance with the criteria outlined in this plan.	Not applicable.
		14.2 All necessary approvals are obtained prior to the start of experiments which test deliberate management interventions.	Not applicable.
		14.3 All adaptive management experiments are continuously monitored and conducted according to approval conditions.	Not applicable.
		14.4 Results of all experiments testing deliberate management interventions are published in an appropriate forum.	Not applicable.
	Action 15. The department will facilitate research into the ecology and harvest management of kangaroos and wallaroos.	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.	Achieved

Aim	Action	Performance indicator	Progress in 2009
		16.2 All annual reports prepared during the life of this plan are posted on the department's web page.	In progress.
	Action 17. The review of the management plan will commence no later than 12 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.	To commence.
		17.2 The success of the current plan in achieving its goal is assessed by measuring performance indicators.	To commence.
		17.3 The results of the plan review are presented to the Commonwealth and are placed on DERM's Macropod Management Program web page.	To commence.
Aim 7. Promote community awareness and participation.	Action 18. Relevant public documents will be made available on the department's web page	18.1 Throughout the life of the management plan the department's web page contains the required information.	In progress.
	Action 19. Publicly available information will be provided to interested parties on request.	19.1 Publicly available macropod management information is distributed to interested parties as soon as practicable after such a request.	Achieved.
	Action 20. Where appropriate relevant department Macropod Management Program staff will participate in media interviews and prepare media releases.	20.1 Department staff participate in interviews with the media where appropriate.	Achieved.
		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.	Achieved.

Aim	Action	Performance indicator	Progress in 2009
	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 and Wallabies for Commercial Purposes 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 code of practice are issued to all new licence holders and are available on the department's website.