Department of Environment
and Resource Management

Queensland Commercial Macropod Management Program

Annual Report 2010

Toward Q Tomorrow's Queensland

Queensland Government

Prepared by:

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Department of Environment and Resource Management

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Forward

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 as follows:

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 for the period 1 January 2010 to 31 December 2010. 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 2010, the department issued 1641 harvester's licences and 161 dealer's licences. Data from dealer returns, entered up to 18 February 2011, indicates that there were 830 618 macropods commercially harvested, representing 36.24 per cent of the overall quota. Of the 830 618 animals harvested, there were 255 191 red kangaroos, 402 421 eastern grey kangaroos and 173 006 common wallaroos.

Quotas for each species in each zone were not exceeded in 2010. The highest percentage of quota was for common wallaroos in the central zone at 51.51 per cent. In all harvest zones the percentage of the population utilised for each species was below ten.

The commercial harvest is typically biased towards males due to their generally larger size and weight when compared to females. For 2010, the harvest for each species was biased towards males by 87.96 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 2010 was for red kangaroos in the central zone at 7 778, followed by eastern grey kangaroos in the central zone at 7 638.

In relation to compliance for 2010, there was a total of two combined surveillance/enforcement operations with the Queensland Police Force, one at Cunnamulla and one at Charleville resulting in no prosecutions. Overall, there were 28 infringement notices, 21 warning notices and 231 compliance letters issued from the Macropod Management Unit.

In June 2010, the department conducted the Longreach Ground Surveys for Commercially Harvested Macropods. The aim of the project was to conduct ground surveys of eastern grey kangaroos, red kangaroos and common wallaroos for the purpose of comparing this survey technique with aerial surveys when used for estimating population sizes of commercially harvested macropods in the Longreach area.

The department also continues to respond to queries from researchers as they arise.

Contents

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:

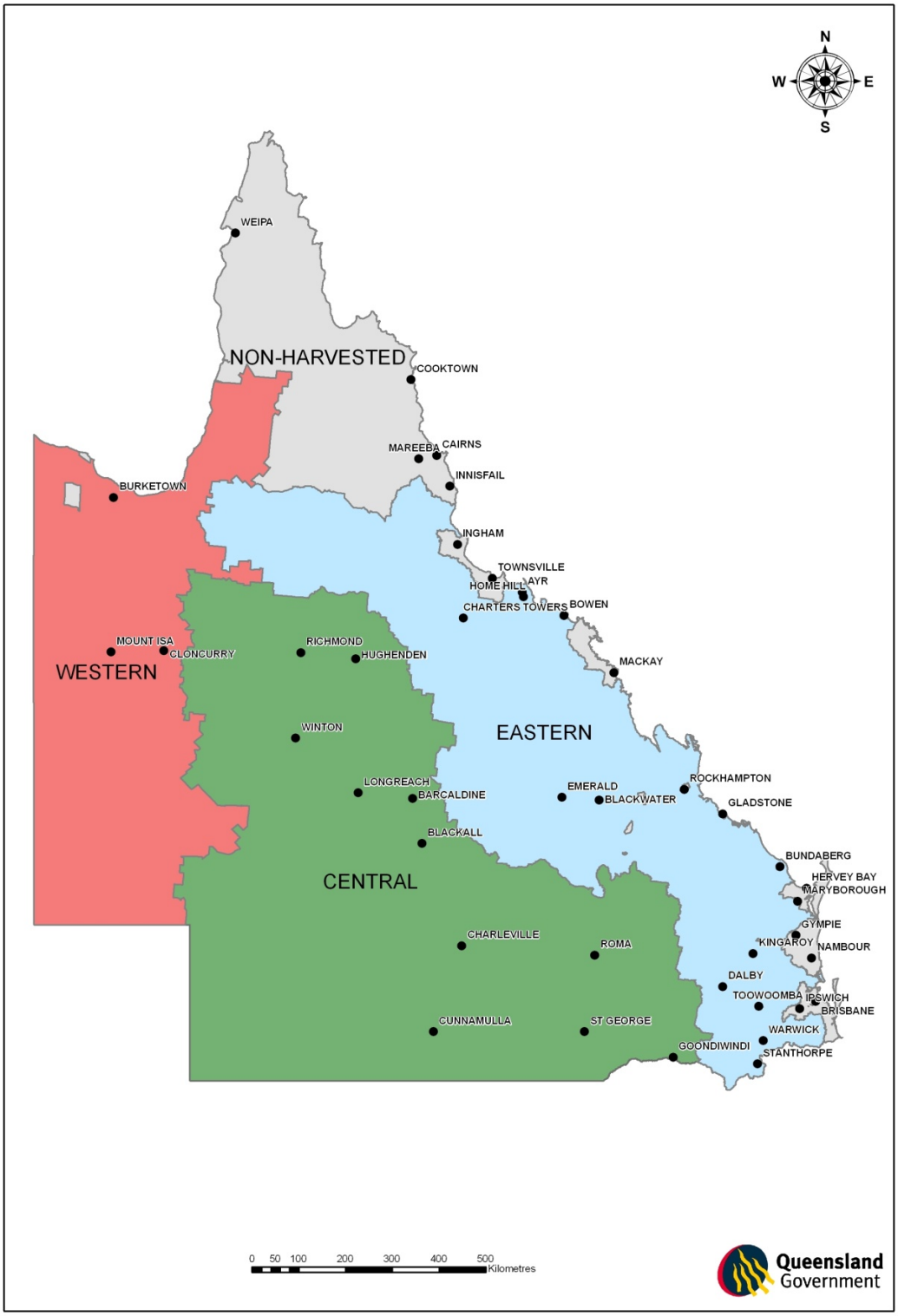
- *Environment Protection and Biodiversity Conservation Act 1999*
- *Queensland Wildlife Trade Management Plan for Export – Commercially Harvested Macropods – 2008-2012*
- *Nature Conservation Act 1992*
    - Nature Conservation (Administration) Regulation 2006
    - Nature Conservation (Wildlife Management) 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 that for the whole state 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. To address this issue, since 2003 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 Environment and Resource Management 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 for the period 1 January 2010 to 31 December 2010. 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.

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 species and year. The following applies to the use of tags:

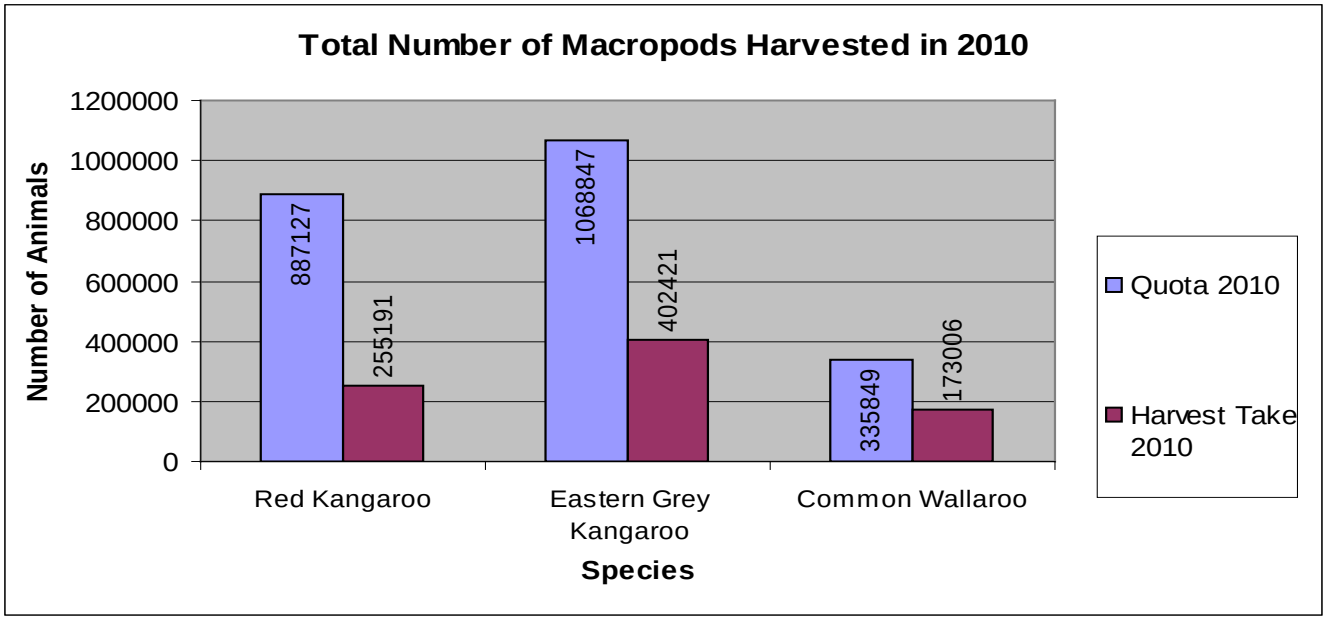
- A fee (fixed by regulation) must be paid to the department's macropod program for the tags.
- The tags are individually numbered and of a different colour for each consecutive year and species.
- Tags are issued to a specific harvester and are not transferable to another harvester.
- The tags must 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.

Actual Harvest

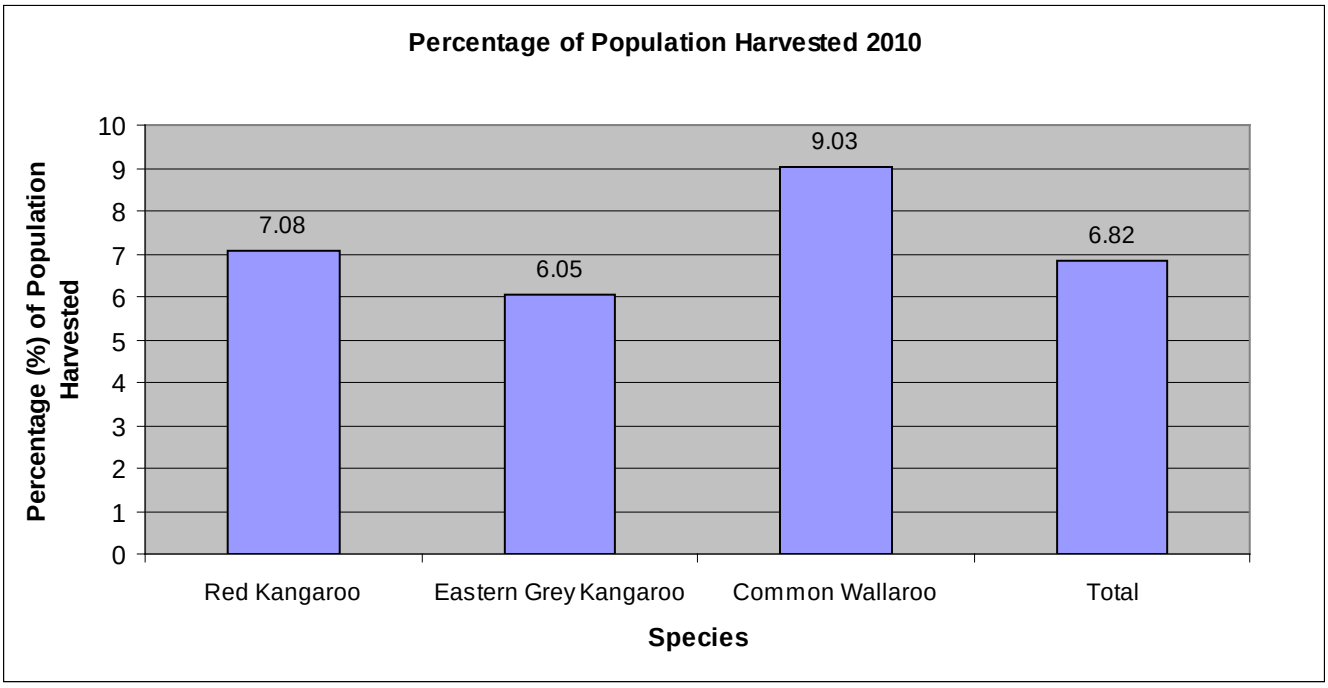
In 2010, the department issued 1 641 harvester's licences and 161 dealer's licences. The data from dealer returns, entered up to 18 February 2011, indicates that there were 830 618 macropods commercially harvested, representing 36.24 per cent of the overall quota. Of the 830 618 animals harvested, there were 255 191 red kangaroos, 402 421 eastern grey kangaroos and 173 006 common wallaroos (Figure 2).

Figure 2. Total Number of Macropods Harvested in 2010



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

Figure 3. Percentage of Population Harvested in 2010



Tables 1-4 contain a detailed summary of the commercial harvest in 2010. Quotas for each species in each zone were not exceeded in 2010. The highest percentage of quota utilised was for common wallaroos in the central zone at 51.51 per cent. In all harvest zones the percentage of the population harvested for each species was below ten.

Table 1. Actual total harvest in 2010

Species	Population Estimate 2010	Quota 2010	Harvest Take 2010	% Quota Utilised 2010	% Population Harvested 2010
Red Kangaroo	3 603 509	887 127	255 191	28.77	7.08
Eastern Grey Kangaroo	6 652 443	1 068 847	402 421	37.65	6.05
Common Wallaroo	1 916 855	335 849	173 006	51.51	9.03
Total	12 172 807	2 291 823	830 618	36.24	6.82

Note: population estimates are based on aerial surveys conducted in 2010, which were used to set the 2011 quota. Figures are based on dealer returns as entered on 18 February 2011.

Table 2. Actual harvest of red kangaroos in 2010

Zone	Population Estimate 2010	Quota 2010	Harvest Take 2010	% Quota Utilised 2010	% Population Harvested 2010
Central	3 352 823	839 869	236 471	28.16	7.05
Eastern	85 548	11 040	5 629	50.99	6.58
Western	165 138	36 218	13 091	36.15	7.93
Total	3 603 509	887 127	255 191	28.77	7.08

Note: population estimates are based on aerial surveys conducted in 2010, which were used to set the 2011 quota. Figures are based on dealer returns as entered on 18 February 2011.

Table 3. Actual harvest of eastern grey kangaroos in 2010

Zone	Population Estimate 2010	Quota 2010	Harvest Take 2010	% Quota Utilised 2010	% Population Harvested 2010
Central	5 160 736	899 444	348 171	38.71	6.75
Eastern	1 483 247	169 403	54 250	32.02	3.66
Western	8 460	nil	0	n/a	n/a
Total	6 652 443	1 068 847	402 421	37.65	6.05

Note: population estimates are based on aerial surveys conducted in 2010, which were used to set the 2011 quota. Figures are based on dealer returns as entered on 18 February 2011.

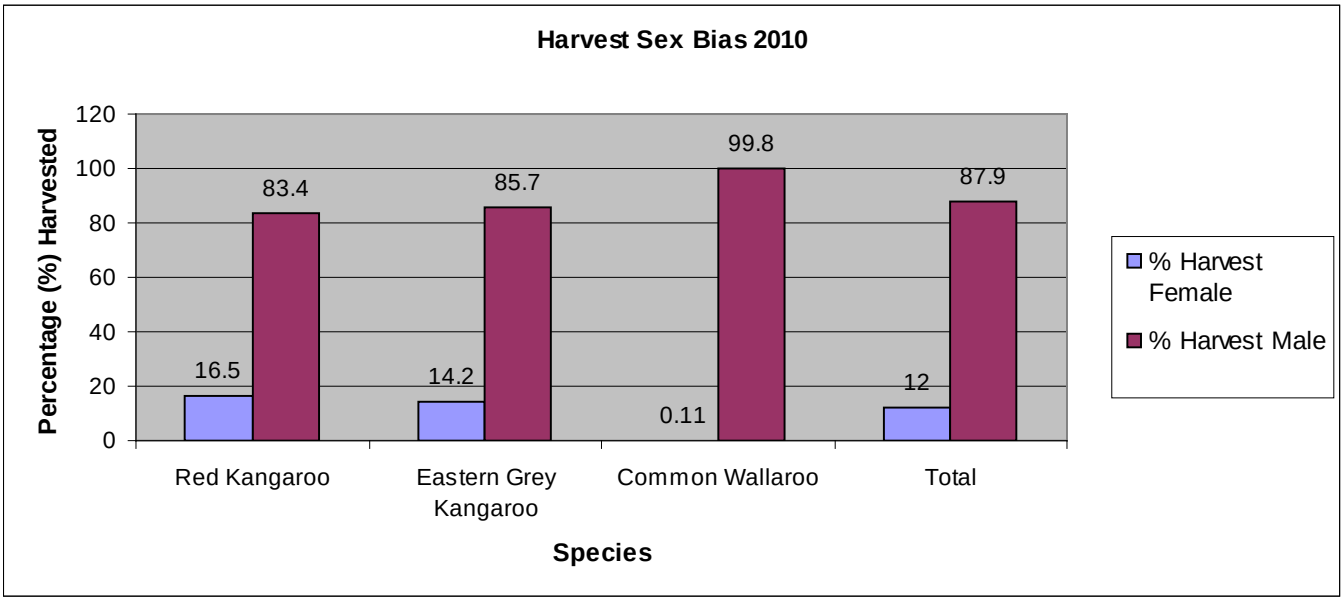
Table 4. Actual harvest of common wallaroos in 2010

Zone	Population Estimate 2010	Quota 2010	Harvest Take 2010	% Quota Utilised 2010	% Population Harvested 2010
Central	1 433 632	287 442	163 746	56.97	11.42
Eastern	358 640	32 122	8 205	25.54	2.29
Western	124 582	16 285	1 055	6.48	0.85
Total	1 916 854	335 849	173 006	51.51	9.03

Note: population estimates are based on aerial surveys conducted in 2010, which were used to set the 2011 quota. Figures are based on dealer returns as entered on 18 February 2011.

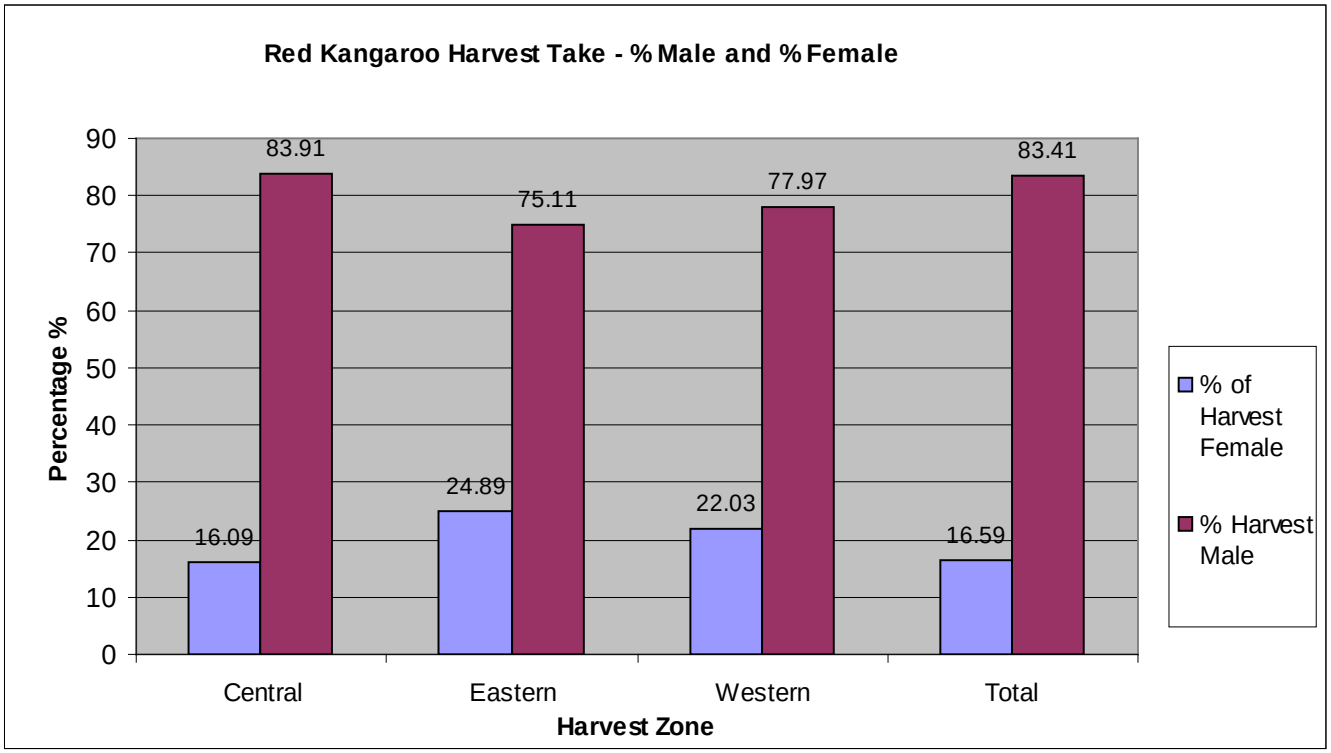
The commercial harvest is typically biased towards males due to their generally larger size and weight when compared to females. For 2010, the harvest for each species was biased towards males by 87.96 per cent or greater (Figure 4). Females composed less than 13 per cent of the overall harvest.

Figure 4. Harvest Sex Bias 2010



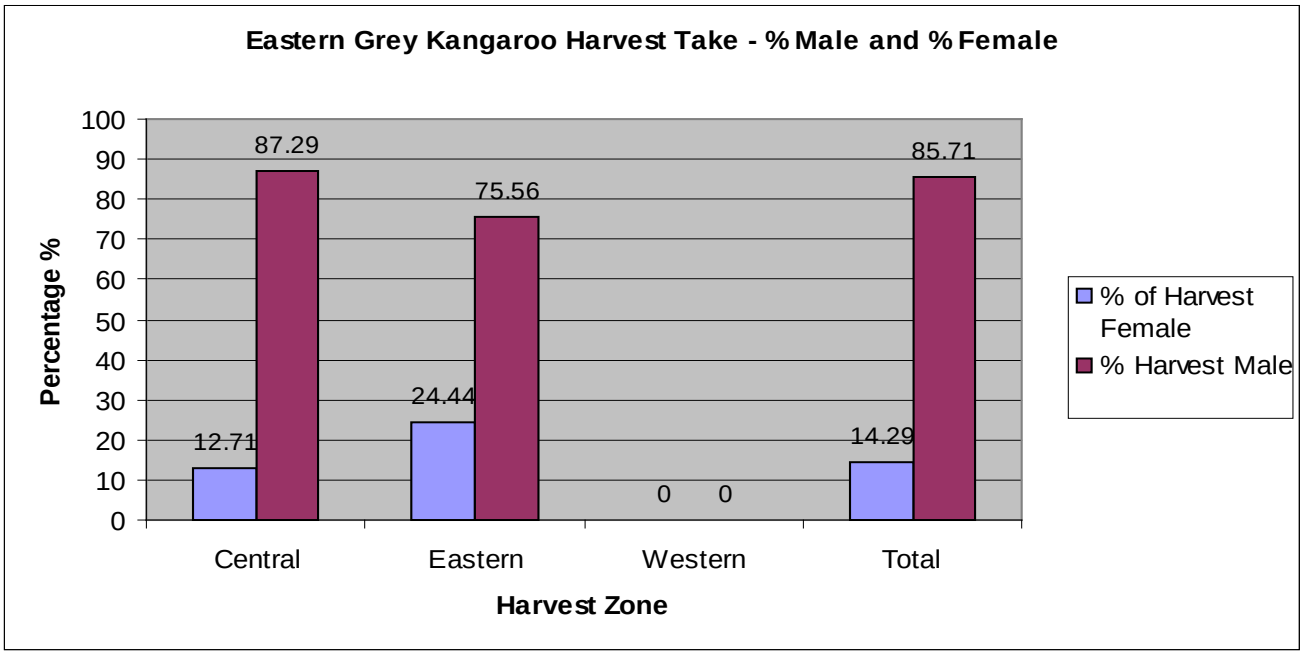
For red kangaroos, the highest percentage of females harvested was in the eastern zone at 24.89 per cent. However, the overall take of females for this species was 16.59 per cent of the harvest (Figure 5).

Figure 5. Harvest sex bias red kangaroos 2010



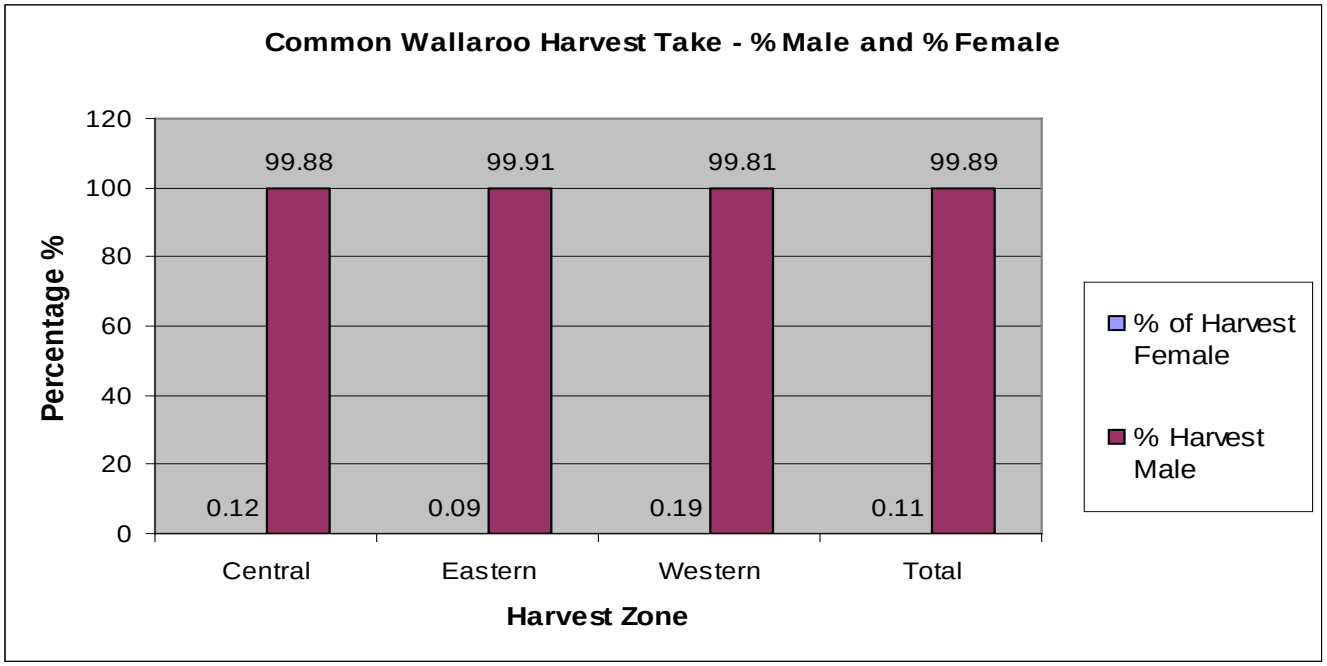
For eastern grey kangaroos the greatest percentage take of females was 24.44 per cent in the eastern zone. Overall for this species, females composed 14.29 per cent of the harvest (Figure 6).

Figure 6. Harvest sex bias Eastern Grey Kangaroos 2010



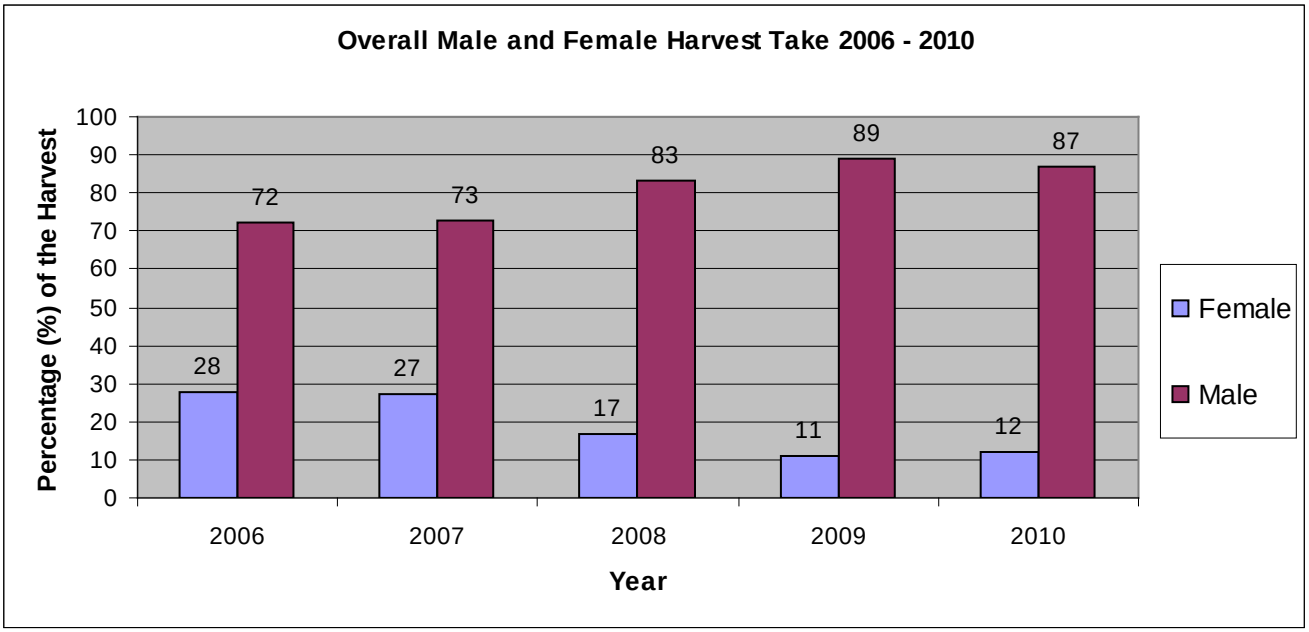
For common wallaroos the percentage of the harvest containing females was the lowest amongst the three commercially harvested species at an overall total of 0.11 per cent. The highest take for females were 189 in the central zone.

Figure 7. Harvest sex bias Common Wallaroos 2010



As with previous years, the overall harvest take in 2010 was predominantly male, with only 12 per cent of the harvest comprising females (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 2010 was for red kangaroos in the central zone at 7 778, followed by eastern greys in the central zone at 7 638.

Figure 9. Skin and carcass take for red kangaroos 2010

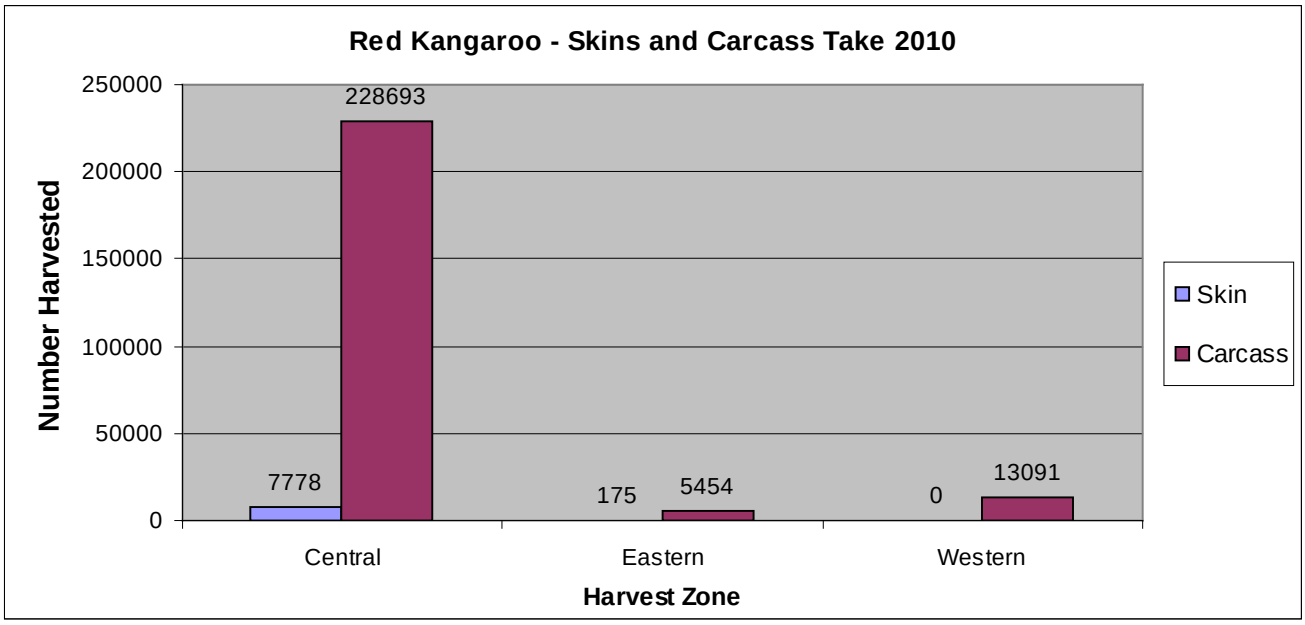


Table 5. Red Kangaroo – Skins and Carcass Take 2010

Zones	Skins	Carcasses
Central	7 778	228 693
Eastern	175	5 454
Western	0	13 091

Figure 10. Skin and Carcass take for Eastern Grey Kangaroos 2010

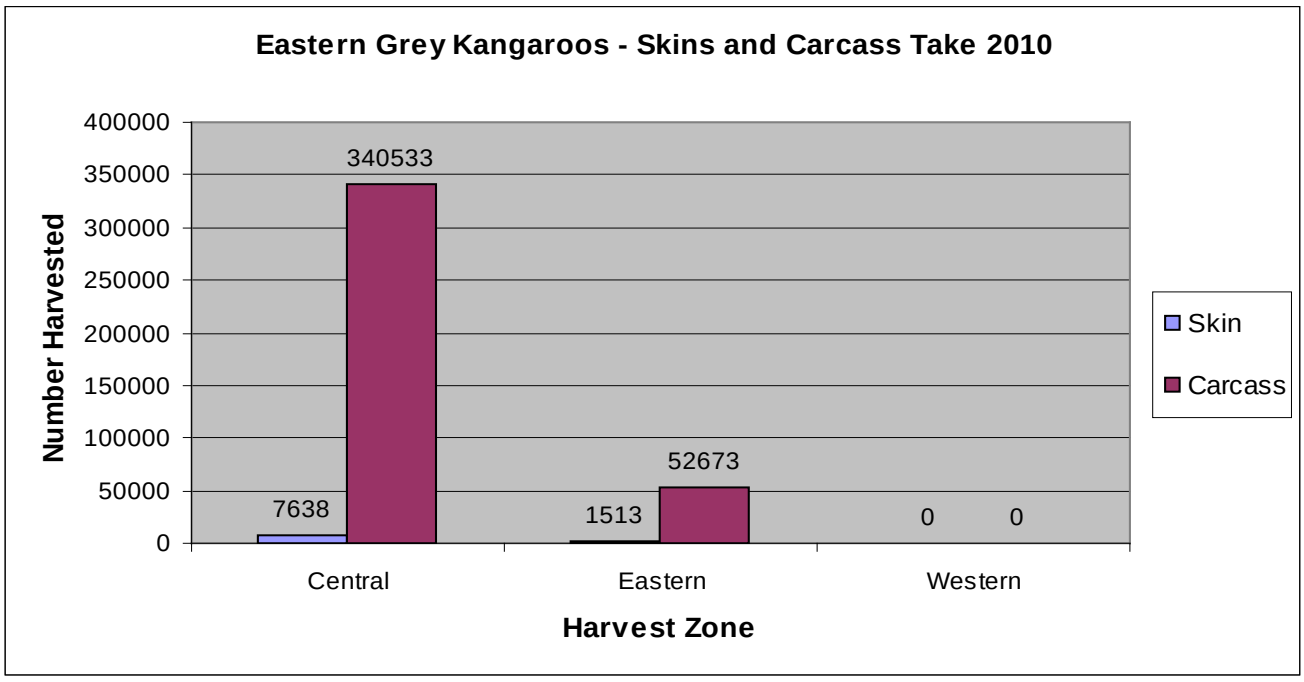


Table 6. Eastern Grey Kangaroos – Skins and Carcass Take 2010

Zones	Skin	Carcass
Central	7638	340 533
Eastern	1 513	52 673
Western	0	0

Figure 11. Skin and Carcass take for Common Wallaroos 2010

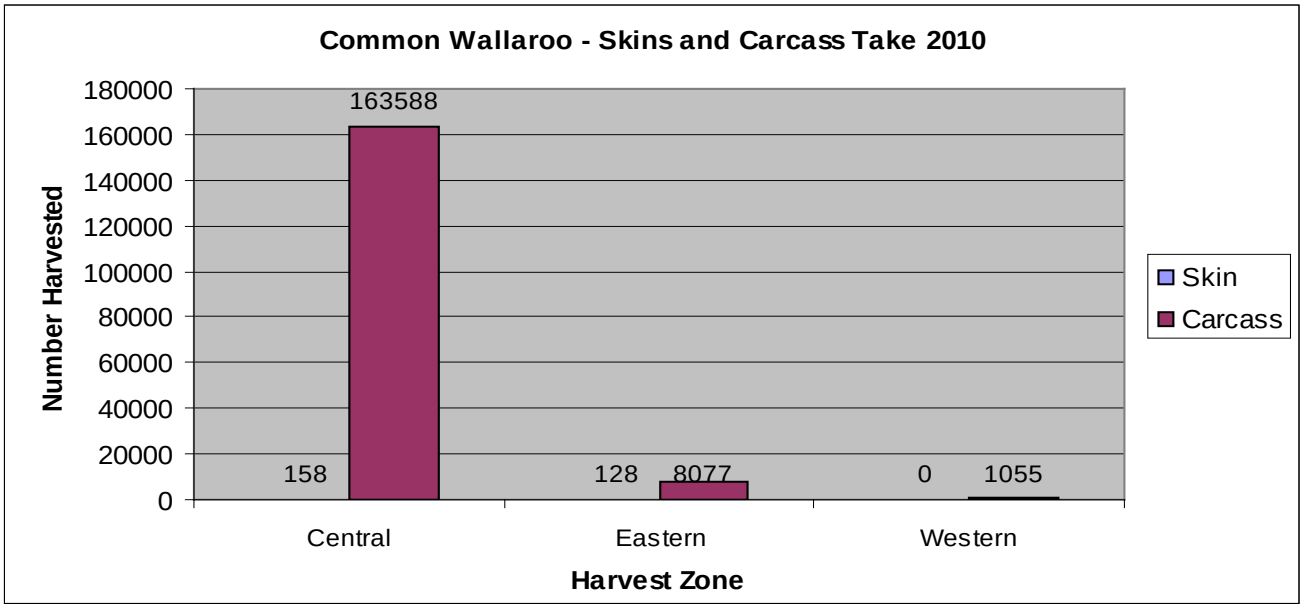


Table 7. Common Wallaroo – Skins and Carcass Take 2010

Zones	Skin	Carcass
Central	158	163 588
Eastern	128	8 077
Western	0	1055

The average carcass weight per harvest zone and species are shown in Figure 12 - 14. Carcass weights have increased slightly in the past three years in each harvest zone. Weights are consistently lowest in the central zone. No significant increases or decreases have occurred in the last three years.

Figure 12. Average carcass weight

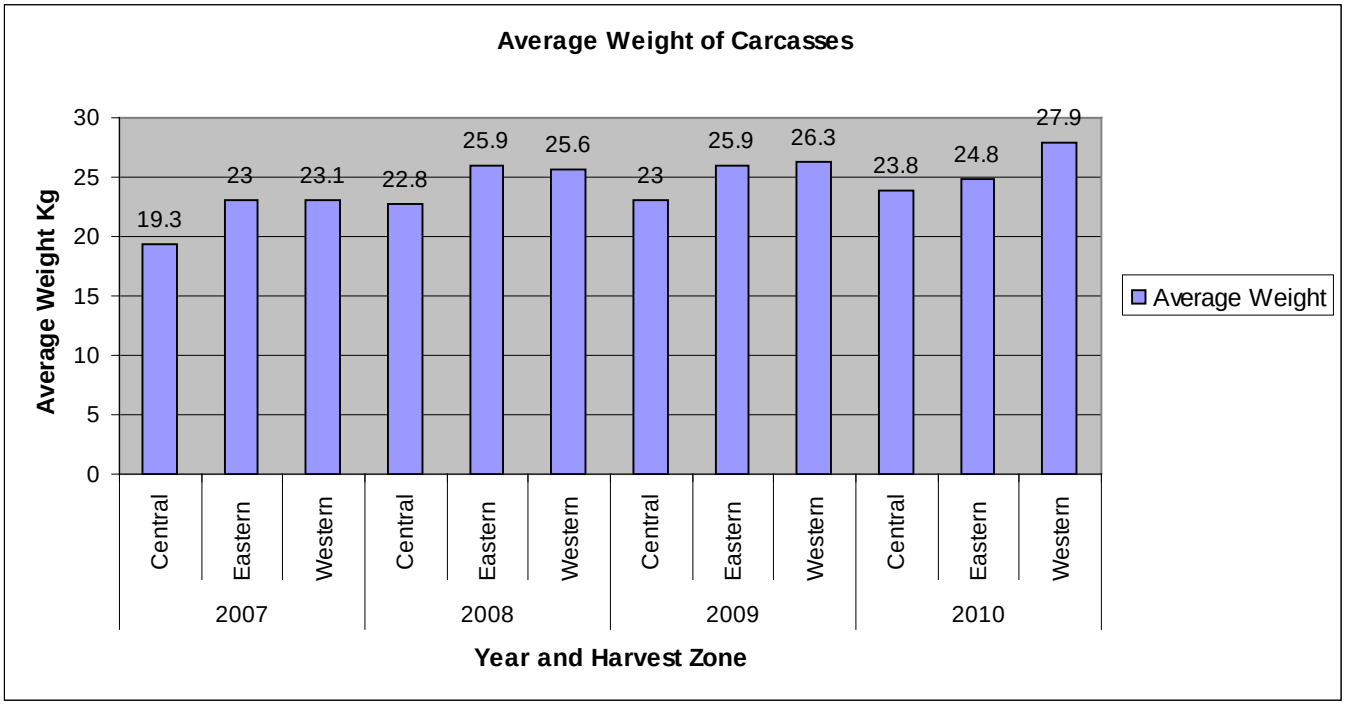


Figure 13. Average Carcass Weight – Male

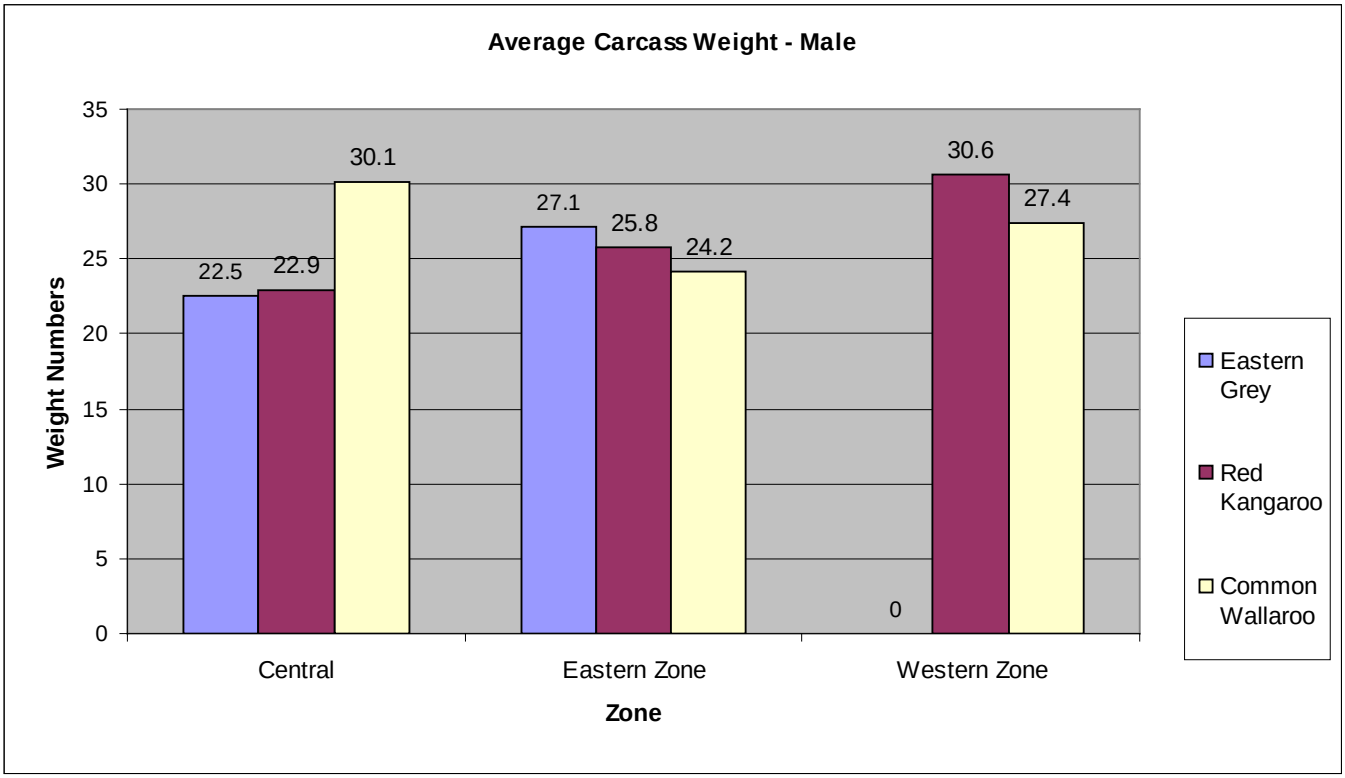
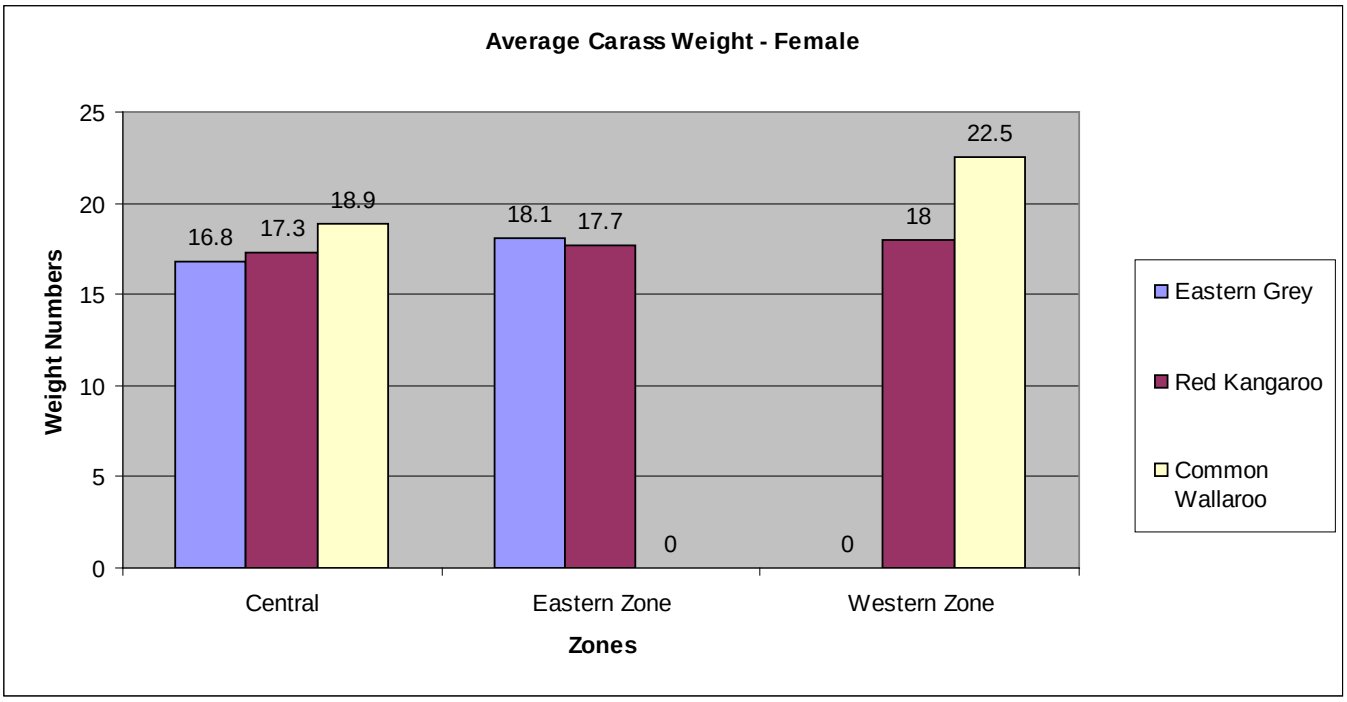


Figure 14. Average Carcass Weight – Female



Long-term population, quota and harvest trends

Figures 15 - 17 below outline data on the three commercially harvested macropod species pertaining to population, quota and harvest for the years 1993-2011, as available in February 2011.

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. Since 1991 the Queensland government have conducted an annual program of aerial surveys by helicopter to directly monitor populations of the three large macropod species covered by the *Wildlife Trade Management Plan for Export – Commercially Harvested Macropods – 2008-2012*.

This method employs line transect methodology (Buckland *et al.*1993), which is significantly more robust to variations in sightability than standard fixed-wing methods and provides more accurate and precise population estimates (Clancy *et al.* 1997). A detailed description of the methodology employed in these surveys is provided in Clancy *et al.* (1997). The placement of the original ten of the 22 survey blocks used in this monitoring program was designed to provide appropriate coverage of representative densities of macropods over the core harvest area of 630,000 km^2 (Pople *et al.* 1998). In response to the introduction of regional management to Queensland in 2003, a further 12 survey blocks were added to provide broader coverage of the entire harvest area and to ensure all bioregions were sampled. Placement of these new survey blocks was optimised using fixed-wing survey data collected across the harvest zone during 2001. These surveys provided data to reassess the representativeness of the existing helicopter monitor blocks and to investigate alternative scenarios for future survey design. Analysis of these data in combination with harvest data has lead to improved stratification of the survey area and hence increased the power to extrapolate data from survey monitor blocks to other regions in the harvest zone. These investigations were conducted in collaboration with the University of Queensland as part of the Australian Research Council (A.R.C.) funded ROOSPIRT Linkage project (Pople *et al.* 2006).

There has been no consistent decline in the populations of the three commercially harvested species since 1993 (Figures 15 -17). 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.

As quotas are set as a constant proportion of the populations, they fluctuate as populations fluctuate (Figures 15-17), 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.

Figure 15. Long-term population, quota and harvest data for the red kangaroo

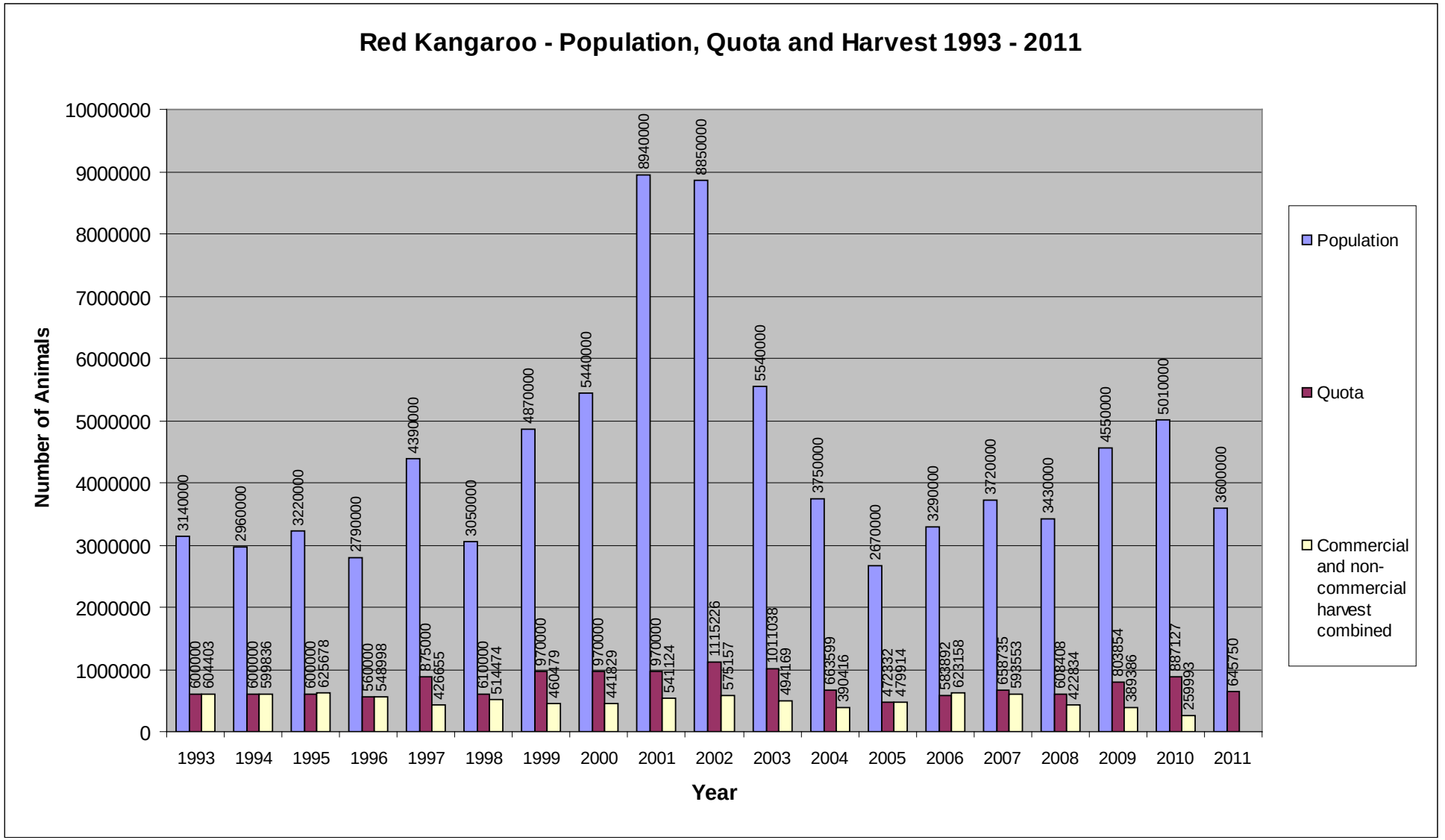


Figure 16. Long-term population, quota and harvest data for the eastern grey kangaroo

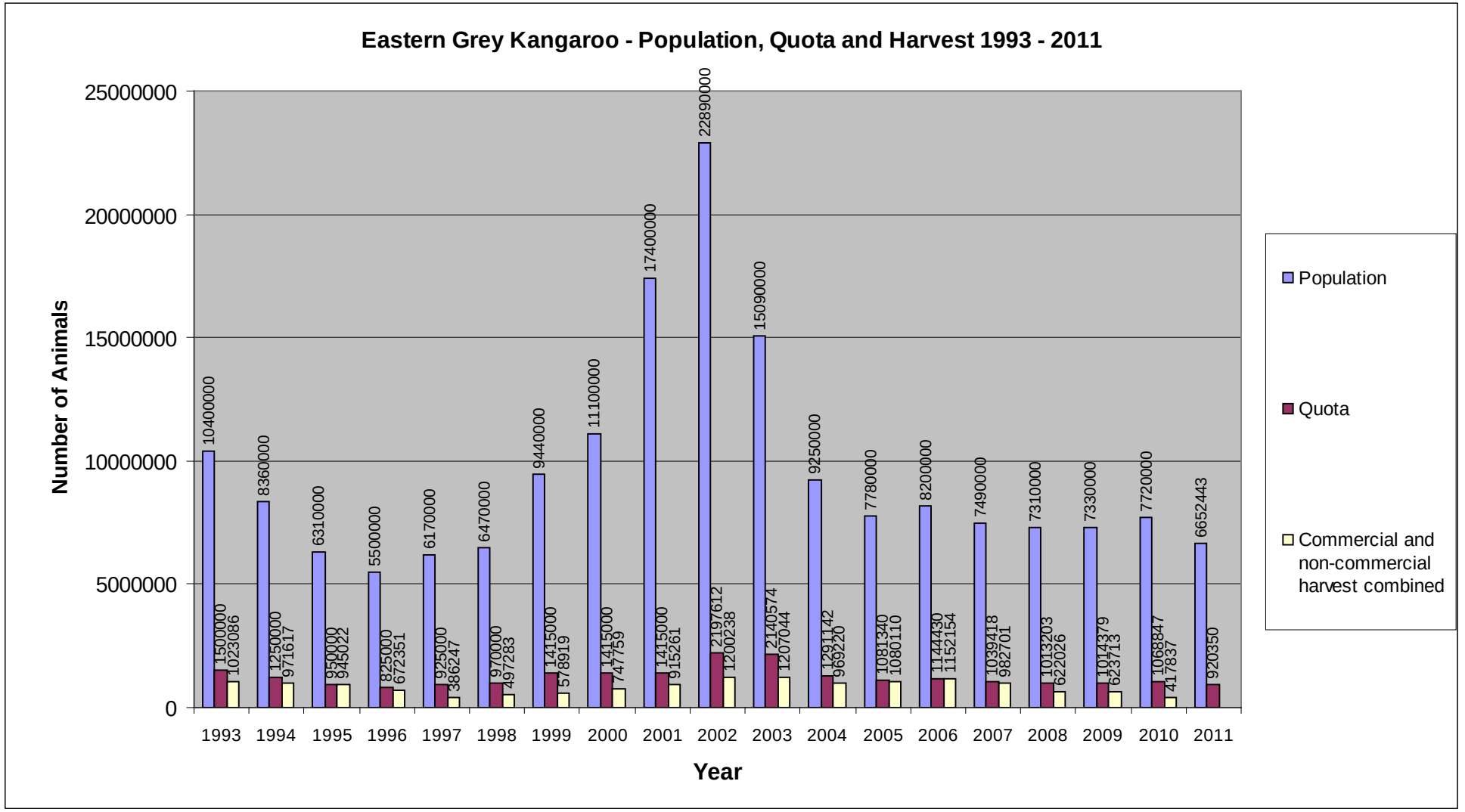
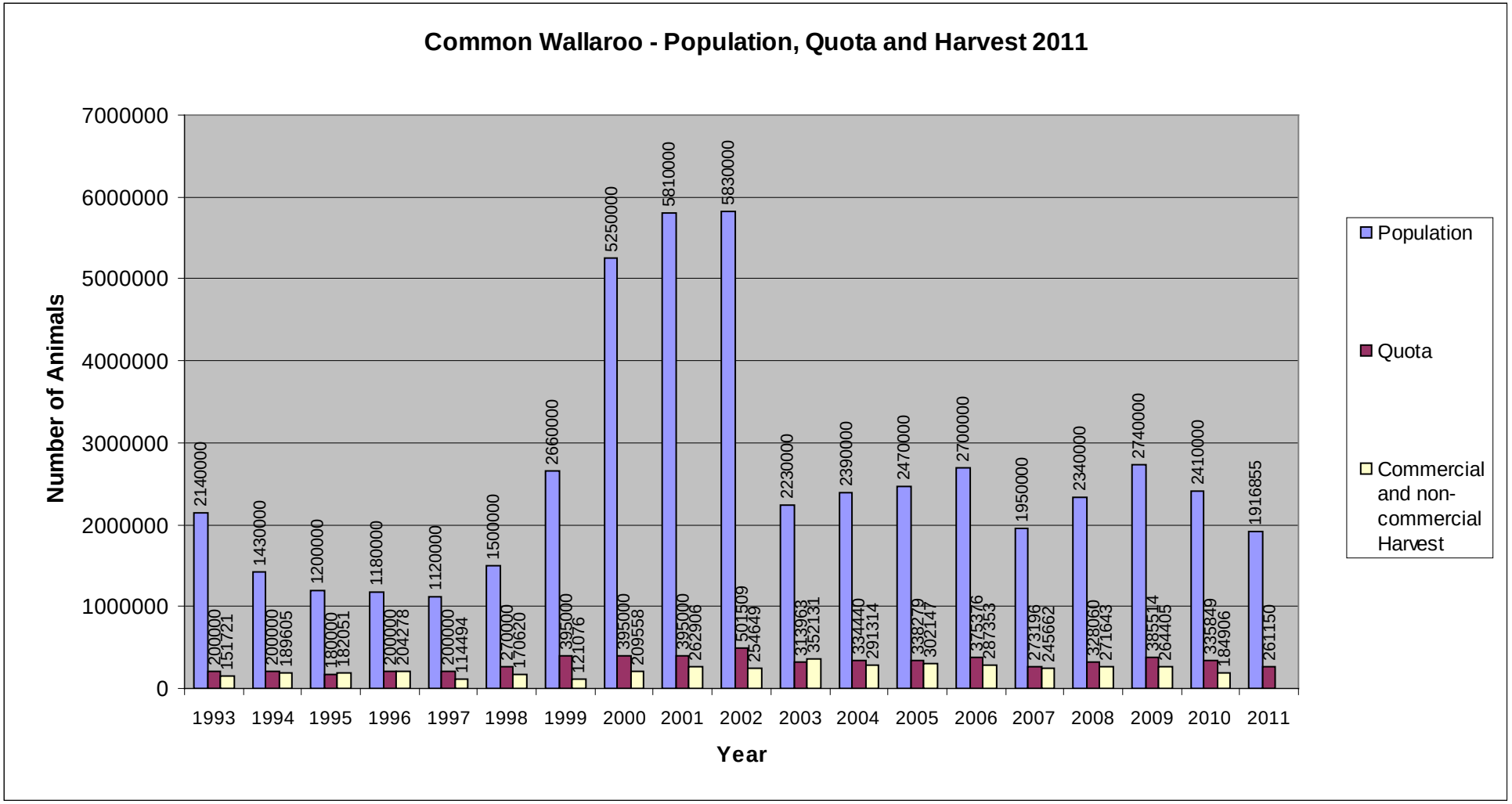


Figure 17. Long-term population, quota and harvest data for the common wallaroo



Special quotas

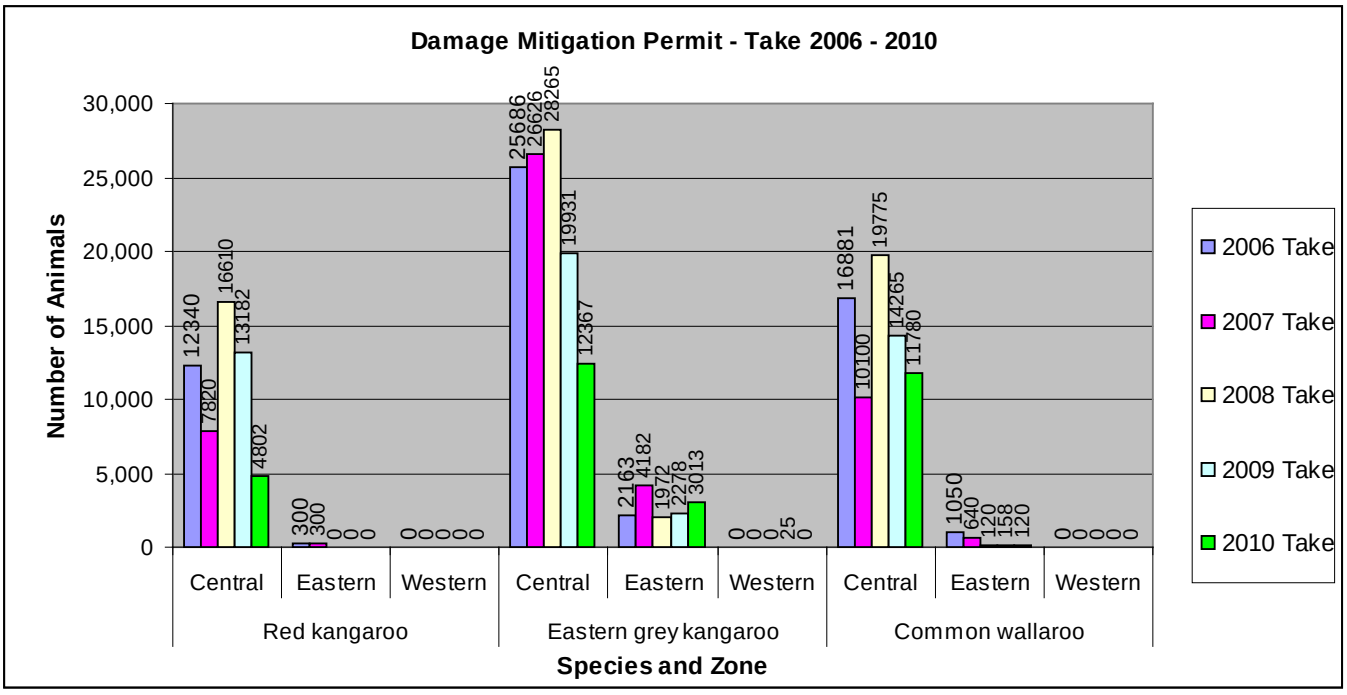
A special quota can only be considered once the commercial harvest quota for a particular species has been reached in a harvest zone. Situations where a special quota may be considered include where there is a high macropod population density in a particular area or where adverse weather conditions such as prolonged drought are having a detrimental affect on macropod health. No special quotas were set in 2010.

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 2006-2010 is outlined in Figure 18. 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 2006-2008. There were no consistent decreases or increases in DMP take for any of the commercially harvested species in any other zone.

Figure 18. Macropods taken under damage mitigation permits 2006-2010



A total of 82 DMPs were issued for macropods in Queensland in 2010, with a quota for 50 047 red kangaroos, 77 147 for eastern grey kangaroos and 24 057 common wallaroos. The number of animals taken for each harvest zone and species was below the quota (Figure 19 and Table 8). The highest percentage of quota used was for the common wallaroos in the central zone at 61 per cent

Figure 19. Macropod quota and take for damage mitigation permits 2008-2010

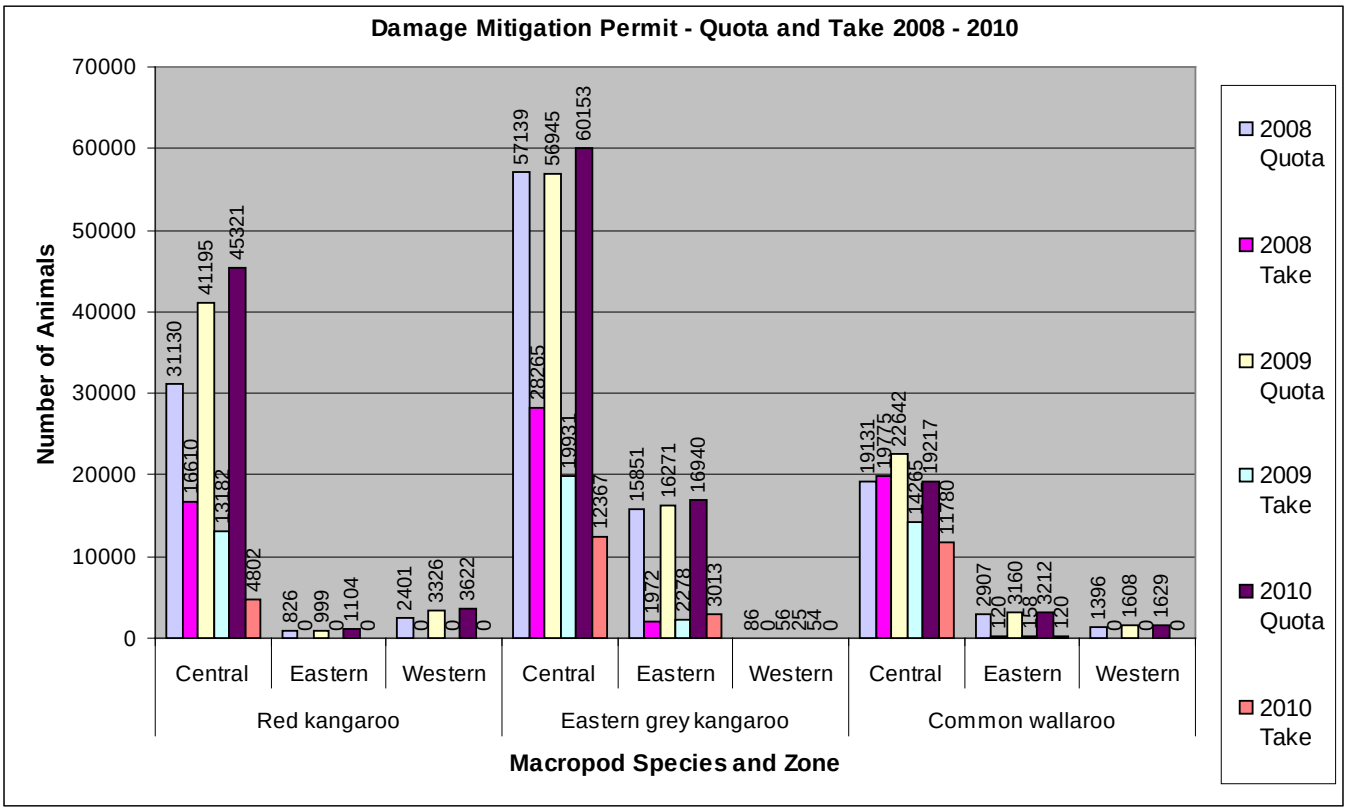


Table 8. Percentage of quota utilised for macropods for 2008-2010.

Year	Harvest zone	Eastern grey kangaroo % quota used	Red kangaroo % quota used	Common wallaroo % 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
2010	Central zone	21	11	61
	Eastern zone	18	0	0
	Western zone	0	0	0
	Total	20	10	49

Compliance

The commercial harvest of macropods in Queensland is managed by the 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 Stock and Rural Crime Investigation Squad and the Department of Employment, Economic Development and Innovation (DEEDI) 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 2010 is presented in Tables 9- 10 below. For 2010, there were a total of 28 infringement notices and 21 warning notices. The Infringement Notices were issued for:

Wrong Species Tag	Body Shot	Failing to properly attach tag	Failing to comply with Licence Conditions	Keep/Use without lawful authority	Possess/attach tag without authority
8	8	7	3	1	1

To achieve compliance with the administrative arrangements introduced for the 2010 harvest the following priorities had been identified:

- Macropods are correctly tagged with 2010 harvest period tag.
- Macropods are tagged with the correct species tag.
- Macropods are tagged with the correct zone tag.
- Ensure non-head-shot macropods are not traded.
- Compliance with the *National Code of Practise for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes 2008*.
- Harvesters produce/carry valid written landholder consent as per licence conditions.
- Ensure timely, complete and accurate harvest returns from dealers.

Table 9. Compliance summary 2010

Compliance statistics Jan-Dec 2010	Compliance letters		Warning notices		Infringement notices			prosecutions	
	harvester	dealer	harvester	dealer	harvester	dealer	corporation	harvester	dealer
DERM	2	229	10	11	27	0	1	0	0

Table 10. Dealer site inspections 2010

Inspection type	Inspections recorded
Dealer site inspections Jan-Dec 2010	74
Processing plant inspections Jan-Dec 2010	13

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 the 1st January 2010. These changes included the Macropod Management Unit inspecting one per cent of the total harvest and to perform detailed inspections of 10 per cent of those Macropods (Table 11). These inspections are in line with the Wildlife Trade Management Plan for Export - Commercially Harvested Macropods - 2008-2012, National Code of Practise for the Humane Shooting of Kangaroos and Wallabies for Commercial Purposes 2008.and the department's Commercial Macropod Management Program Strategic Compliance Plan 2010

The target for inspections was 8306 and 25781 inspections were conducted. The target for detailed inspections was 830 and 2290 inspections conducted.

Table 11. Inspections

2010 Commercial harvest Total – 830 618	Inspection target (1% of overall harvest)	Detailed inspection target (10% of sample)
Inspection target	8306	830
Inspections conducted	25781	2290

Unusual circumstances

In 2010, Queensland suffered serve flooding as a result of the La Niña effect[1]. A large number of harvesters were unable to harvest during the year due to the ongoing rain and flooding and have suffered loss of income as a consequence. The industry also had access to its major meat export market in Russia temporarily suspended due to food verification and integrity issues in 2009 and as a result the industry is still affected by this suspension and it is highly probable that the commercial harvest of macropods was depressed as a consequence.

Non-harvest mortality

There were initial reports of mass kangaroo deaths in the north-western New South Wales and south-western Queensland in March 2010. The initial kangaroo deaths reported were from within approximately 100km of Tibooburra, including areas in Sturt National Park, New South Wales extending to just north of Quilpie including the Paroo and Bulloo river systems, Queensland. A combined investigation was undertaken by field veterinarians and veterinary diagnostic laboratories in both New South Wales and Queensland. The investigation and surveillance established that the deaths were very limited and restricted to small areas only.

Research and experiments

Longreach Ground Surveys for Commercially Harvested Macropods June 2010

At the Community Cabinet meeting held in Barcaldine/Longreach 1-2 November 2009, concerns pertaining to increased numbers of kangaroos in the local area were raised. These related predominantly to large numbers of kangaroos exerting grazing pressure on the landscape.

Deputations at the meeting involved conducting a localised survey of kangaroo populations to determine numbers.

Since 1991 the Queensland government has coordinated an annual program of helicopter aerial surveys to directly monitor populations of the three commercially harvested macropod species. These surveys are utilised to obtain density and population estimates that inform the commercial harvest quotas.

None of the three commercially harvested species has shown consistent increases or decreases in abundance since 1992. Whilst no consistent trends have been observed, the macropod populations in Queensland have fluctuated over time.

It was considered that a local ground survey for Longreach would help to determine local numbers of kangaroos and could complement the existing aerial survey program. A workshop was held with key academics on 14 January 2010 to design an appropriate methodology for the ground surveys. The surveys were implemented based on these recommendations.

The aim of the project was to conduct ground surveys of eastern grey kangaroos, red kangaroos and common wallaroos for the purpose of comparing this survey technique with aerial surveys when used for estimating population sizes of commercially harvested macropods in the Longreach area.

The outcome of the ground surveys found that ground surveys are not necessary, given the comprehensive aerial survey program undertaken annually by the department and its aims, and pre-existing experience comparing

[1] Bureau of Meteorology *La Nina*: http://www.bom.gov.au/watl/about-weather-and-climate/australian-climate-influences.shtml?bookmark=lanina

ground and aerial survey. Ground surveys undertaken in isolation will not give an indication of whether macropod numbers have increased or decreased as there is no before or after survey using similar methodology to compare results with.

Further, although ground surveys are good for small areas, such as on a modestly sized property, they are not logistically feasible for large areas.

They are most commonly used for small population studies on factors such as habitat use, population dynamics and social organisation (Pople and Grigg 1999), and to assess the accuracy of aerial surveys (e.g. Clancy et al. 1997).

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 the 1st January 2010 for the 2010 harvest period. The 2011 program included a simplification of the tag issuing process and colour-coded tags for individual species.

Revisions included:

- Number of harvest tags manufactured and purchased does not exceed individual quotas for each species and zone.
- Amendment of harvest tags to show species and geographical zone in addition to year and identification number.
- 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 (i.e. no properties listed on licenses).
- 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, and colour coding of tags to easily identify species for which the tag relates.
- 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.
- The number of harvest tags manufactured and purchased, does not exceed individual quotas for each species and zone. This improvement ensures it is not possible for the commercial harvest quotas to be exceeded.
- Revision of harvest zones in accordance with Local Government amalgamations.
- Greater stakeholder consultation, including workshops being held in Longreach and Roma.

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Appendix

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

Aim	Action	Performance indicator	Progress in 2010
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 that 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 proposals received in 2010.
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	5.1 On receipt of harvesters licence applications, the authorised department officer assessing the applications will ensure that applicants have both a valid	Achieved.

Aim	Action	Performance indicator	Progress in 2010
	industry operators.	and current Queensland accreditation and a current firearms licence.	
		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.	Focus of the compliance strategy has changed to a volume of harvest performance indicator (1%). This was achieved.
		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.	13 processing plants were inspected in 2010.
		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.

Aim	Action	Performance indicator	Progress in 2010
	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 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 31st October.	Achieved by 30th November 2010.
		10.3 If Commonwealth approval is required for quotas, the rates specified in the plan as part of an adaptive management experiment, such approval is obtained before the additional quota is implemented.	Not required.
		10.4 The Quota Report is made available to the public via the department's web page.	Achieved.

Aim	Action	Performance indicator	Progress in 2010
	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 required.
	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 required.
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 future macropod management programs.	13.1 Analysis of historical macropod harvest and management data is undertaken during the life of the management plan.	Achieved.
		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.	None received.
		14.2 All necessary approvals are obtained prior to experiments testing deliberate management interventions commence.	Not required.
		14.3 All adaptive management experiments are continuously monitored and conducted according to approval	Not required.

Aim	Action	Performance indicator	Progress in 2010
		conditions.	
		14.4 Results of all experiments testing deliberate management interventions are published in an appropriate forum.	Not required.
	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
		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 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.	In progress
		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	To commence.

Aim	Action	Performance indicator	Progress in 2010
		presented to the Commonwealth and are placed on Macropod Management Program web page.	
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.
	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 available on the department's website, and the code of practice is issued to all new licence holders.