

# 2016 Annual Report on the Commercial Harvest of Kangaroos in Western Australia



This report is provided to the Australian Government as a requirement of the *Management Plan for the Commercial Harvest of Kangaroos in Western Australia 2014–2018* under Aim 6, Action 17, Performance Indicator 30.

March 2017



Department of  
Parks and Wildlife





## CONTENTS

1. HARVEST STATISTICS: State .....	1
2. INDUSTRY COMPLIANCE .....	3
3. UNUSUAL CIRCUMSTANCES .....	4
4. RESEARCH ACTIVITY .....	7
5. ASSESSMENT OF PLAN ACTIONS AGAINST PERFORMANCE INDICATORS.....	8
6. APPENDIX 1: Harvest Statistics for Management Zones.....	14

## 1. HARVEST STATISTICS

### 1.1. Red Kangaroos

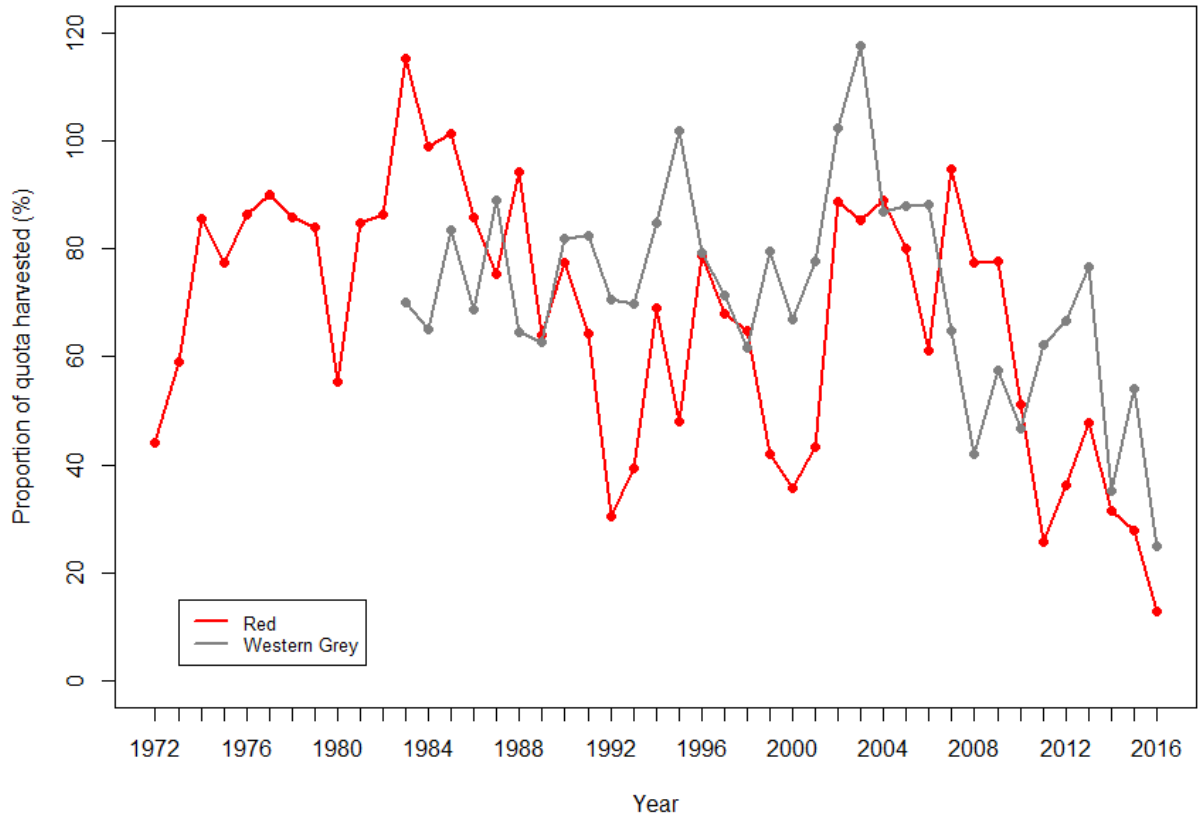
**Table 1.1. Commercial harvest figures for red kangaroos for the 2016 calendar year.**

Population Monitoring Zone	Number harvested	Sex ratio (% male)	Average male carcass weight (kg)	Average female carcass weight (kg)
Central	6,831	67.8	25.4	15.0
Northern	5,944	66.7	24.5	14.8
South East	9,461	81.9	27.6	15.2
<b>Totals (WA)</b>	<b>22,236</b>	<b>73.5</b>	<b>26.3</b>	<b>15.0</b>
State quota	131,500			
Proportion state quota harvested	16.9%			

### 1.2. Grey Kangaroos

**Table 1.2. Commercial harvest figures for western grey kangaroos for the 2016 calendar year.**

Population Monitoring Zone	Number harvested	Sex ratio (% male)	Average male carcass weight (kg)	Average female carcass weight (kg)
Central	5,868	65.1	25.3	16.1
South East	8,624	77.2	26.4	16.3
South West	54,493	65.5	29.4	17.4
<b>Totals (WA)</b>	<b>68,985</b>	<b>66.9</b>	<b>28.8</b>	<b>17.2</b>
State quota	216,400			
Proportion state quota harvested	31.9%			



**Figure 1.** Proportion of quota harvested in the State for red and western grey kangaroos.

## 2. INDUSTRY COMPLIANCE

**Table 2.1. Summary of compliance monitoring of the commercial kangaroo industry in Western Australia for the 2016 calendar year.**

Category	Commercial Activity			
	Regulation 6: Licence to Take Kangaroos for Sale	Regulation 7: Licence to Process	Regulation 8: Active Chiller Units*	Regulation 10: Licence to Deal in Skins
Licences issued	417	20 <sup>#</sup>	116	6
Licensees/premises inspected	26	13	42	5
Alleged offences	44	24	1	0
Type of alleged offence	WCA** 25(1)(g) – Failed to adhere to licence conditions (failure to submit monthly returns)  Unlawful possession of protected fauna (WGK).  Possessing and transporting fauna carcasses (WGK) without licence.	WCA 25(1)(g) – Failed to adhere to licence conditions (failure to have licence displayed in a prominent position)  Unlawful possession of protected fauna (WGK).  Possessing and transporting fauna carcasses (WGK) without licence.	WCR 8A(1)(b) – Failed to have Registered Chiller Number displayed on chiller unit	
Letters of warning issued	0	0	0	0
Caution notices issued	2	1	1	0
Prosecutions initiated	0	0	0	0
Convictions	0	0	0	0
Dismissals	0	0	0	0
Prosecutions pending	2	2	0	0

\* Active chiller units are those chillers identified on shooter returns where there is at least one shooting day of effort assigned to that chiller during the year.

<sup>#</sup> Two processors were inactive during 2016.

\*\* *Wildlife Conservation Act 1950*

### 3. UNUSUAL CIRCUMSTANCES

#### 3.1 Rainfall and Drought

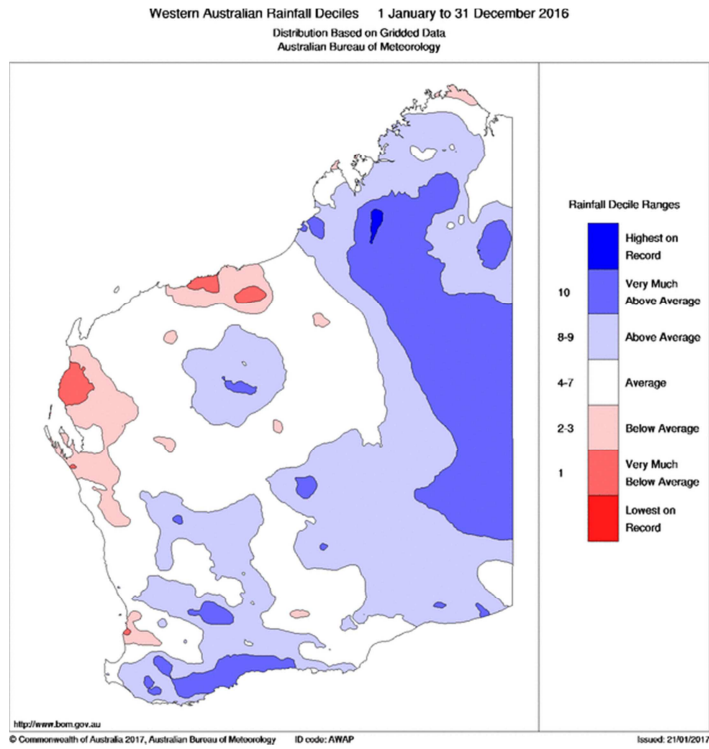
The following information is an excerpt taken from the annual climate summary for Western Australia published by the Bureau of Meteorology (product code IDCKGC51R0; accessed 13 February 2017). The full annual climate summary is available from <http://www.bom.gov.au/climate/current/annual/wa/summary.shtml>

2016 brought above average rainfall in the south and east of WA with dryer conditions near the west and northwest coast. 2016 was also a record warm year in the northern parts of WA, with near average temperatures in the south of the state. Notable climatic patterns and events included:

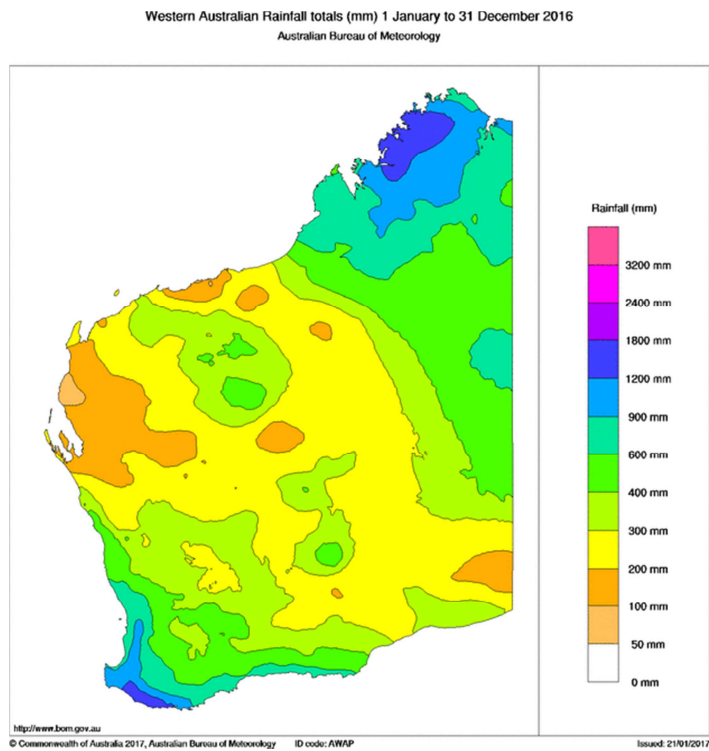
- Consistently warmer daytime temperatures in the Kimberley
- Cooler than normal autumn, winter and spring days in southwest WA
- Relatively dry in parts of the Kimberley and Pilbara during the 2015-16 wet season, with unusually high rainfall in the dry season and at the start of the 2016-17 wet season.
- Unusually wet January and March in the southern half of WA, winter rainfall generally below average in the South West Land Division (SWLD)
- Three tropical cyclones (Stan, Uriah, Yvette), in the WA region with a tropical low and ex-tropical cyclone Yvette bringing heavy rainfall to parts of the Kimberley in December.

Western Australia's annual mean maximum and minimum temperatures were both 0.56 °C above the average since comparable temperature records commenced in 1910, with the mean maximum temperature the coolest since 2011. For the SWLD as a whole, the annual mean minimum temperature in 2016 was about average, but the monthly mean minimum temperatures between May and October were consistently below average. Northern WA had its second-warmest annual mean maximum temperature on record and its warmest annual mean minimum temperature.

The average annual rainfall in 2016 for WA was 411 mm, which was above average and the wettest year since 2011. The same pattern was evident in the SWLD, with significant rainfall events in January, March and July bringing record daily rainfall to some sites within the region.

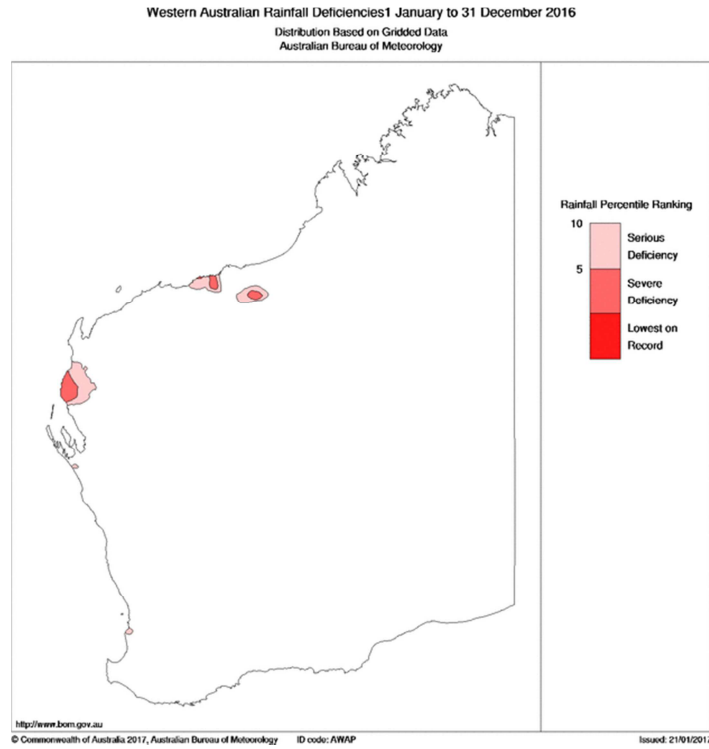


**Figure 3.1.A:** Rainfall deciles for Western Australia for the 2016 calendar year.

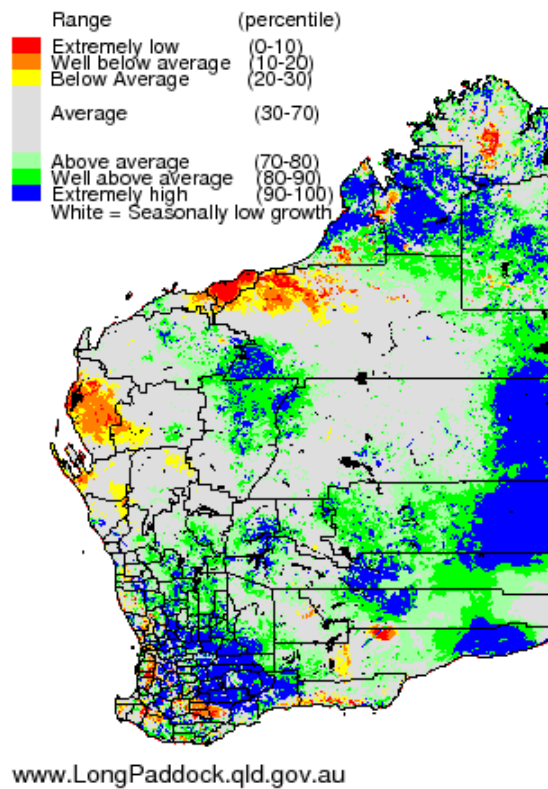


**Figure 3.1.B:** Rainfall totals for Western Australia for the 2016 calendar year.





**Figure 3.1.C:** Drought map for Western Australia for the 2016 calendar year.



**Figure 3.1.D:** Pasture growth in Western Australia from January 2016 to February 2017, relative to historical records from 1957.

### **3.2 Disease**

No significant disease outbreaks were detected or reported in populations of commercially harvested kangaroo species in Western Australia in 2016.

### **3.3 Market factors**

Limited demand for carcasses from processors, exacerbated by the closure of the most prominent processor of kangaroo carcasses (V.I.P Petfoods), resulted in a significant reduction in active shooting during 2016.

A new licensee entered the market in January 2016; licenced to process a small number of carcasses to produce dog treats.

## **4. RESEARCH ACTIVITY**

No research or adaptive management experiments related to the commercial harvesting of kangaroos were undertaken or sponsored by the Department in 2016.

## 5. ASSESSMENT OF PLAN ACTIONS AGAINST PERFORMANCE INDICATORS

Performance Indicator	Description	Year					Comments
		2013	2014	2015	2016	2017	
1	Random audits of licences issued for commercial activities are conducted annually to ensure licences are being issued in accordance with WA legislation and departmental policies.	✓	✓	✓	✓		
2	Databases are maintained to ensure licensee information is current and accurate.	✓	✓	✓	✓		
3	Licence conditions are reviewed annually and where necessary amended.	✓	✓	✓	✓		
4	Licensees are advised in writing of any changes to licence conditions within one month of such changes being approved by the Director of Science and Conservation or delegate.	✓	✓	✓	✓		
5	Licence conditions for professional shooters and processors will stipulate that kangaroos cannot be shot, sold or received unless they have been taken in accordance with the National COP.	✓	✓	✓	✓		
6	Copies of the National COP will be made available from the department's website.	✓	✓	✓	✓		
7	The Department will participate and support any revisions to the current, nationally-endorsed code of practice.	n/a	n/a	n/a	n/a		No revisions were made to the COP during 2016.
8	All prospective professional shooters must have completed an accredited test of marksmanship and completed NSW TAFE Course 5725 (Australian Game Meat, Hygiene and Handling) as a pre-requisite before being issued with a professional shooters' licence.	✓	✓	✓	✓		

Performance Indicator	Description	Year					Comments
		2013	2014	2015	2016	2017	
9	All kangaroo processing works are inspected by authorised departmental officers at least annually during the life of the Management Plan to ensure compliance with Western Australian legislation.	x	x	x	x		72 per cent of active processing establishments were inspected in 2016. Seven processing works were not inspected during the year. Two of the seven were not active in 2016.
10	Twenty percent of active chillers are inspected by authorised departmental officers annually during the life of the Management Plan to ensure compliance with Western Australian legislation.	✓	x	✓	✓		
11	The vehicles of licensed professional shooters loaded with kangaroo carcasses are inspected opportunistically during the life of the Management Plan to ensure compliance with Western Australian legislation.	✓	✓	✓	✓		
12	Develop and implement improved procedures for reporting on actions included under Performance Indicators 9 to 11.	✓	✓	✓	✓		
13	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 expiation notices or prosecuted as appropriate.	✓	✓	✓	✓		
14	During the life of this plan, all incoming industry returns are scrutinised and discrepancies are investigated and resolved.	✓	✓	✓	✓		
15	A compliance database is maintained.	✓	✓	✓	✓		
16	Aerial surveys are undertaken annually and population estimates are calculated in accordance with this management plan.	✓	✓	✓	✓		

Performance Indicator	Description	Year					Comments
		2013	2014	2015	2016	2017	
17	Commercial harvest quotas are set in accordance with the management plan.	✓	✓	✓	✓		
18	Regional quotas and the state-wide quotas are never exceeded.	✗	✓	✓	✓		
19	The Australian Government is advised of commercial harvest quotas for the following calendar year by 30 November.	✓	✓	✗	✓		
20	Following endorsement by the Australian government department responsible for administering the EPBC Act, the quota submission will be made available to the public via the department's website.	n/a	n/a	✓	✓		
21	Sudden or acute changes in the average carcass weights are investigated to identify possible causes of the change.	n/a	n/a	n/a	n/a		
22	Sudden or acute changes in the sex ratios of harvested kangaroos are investigated to identify possible causes of the change.	n/a	n/a	n/a	n/a		
23	Commercial harvest rates will be reduced or the commercial kangaroo harvest suspended if density estimates reach the thresholds identified in the management plan and suspensions or reductions will remain in place until surveys indicate that kangaroo densities have increased above the density threshold.	✓	✓	✓	✓		
24	As a minimum, trends in population estimates, harvest tallies, carcass weights and sex ratios will be analysed annually and published on the department's website in annual and quota reports.	✓	✓	✓	✓		

Performance Indicator	Description	Year					Comments
		2013	2014	2015	2016	2017	
25	All proposals to undertake active adaptive management experiments are reviewed and assessed by the Department in accordance with the criteria outlined in this management plan.	n/a	n/a	n/a	n/a		No active adaptive management experiments were undertaken in 2016.
26	All necessary approvals are obtained prior to the commencement of any experiments that test deliberate management interventions.	n/a	n/a	n/a	n/a		No experiments to test deliberate management interventions were undertaken in 2016.
27	All adaptive management experiments are continuously monitored and conducted according to approval conditions.	n/a	n/a	n/a	n/a		No adaptive management experiments were undertaken in 2016.
28	Results of all experiments testing deliberate management interventions are published in an appropriate forum.	n/a	n/a	n/a	n/a		No experiments to test deliberate management interventions were undertaken in 2016.
29	During the life of this plan, the Department will support research on the ecology of harvested species of kangaroos or commercial harvest management as appropriate.	n/a	n/a	n/a	n/a		No research into the ecology of harvested species of kangaroos was sponsored by the Department in 2016.
30	An annual report will be provided to the Commonwealth by 31 March of the following year.	✓	✓	✓	✓		
31	KMAC meets at least once per year to review the progress of the Management Plan for the Commercial Harvest of Kangaroos in Western Australia 2014–2018 in relation to the goal and aims of the plan.	✓	✓	✓	✓		KMAC met on 29 November 2016.
32	KMAC is provided with annual updates on commercial harvest and tag issue throughout the life of this plan.	✓	✓	✓	✓		
33	KMAC is provided with other relevant information as required or as necessary throughout the life of this plan.	✓	✓	✓	✓		

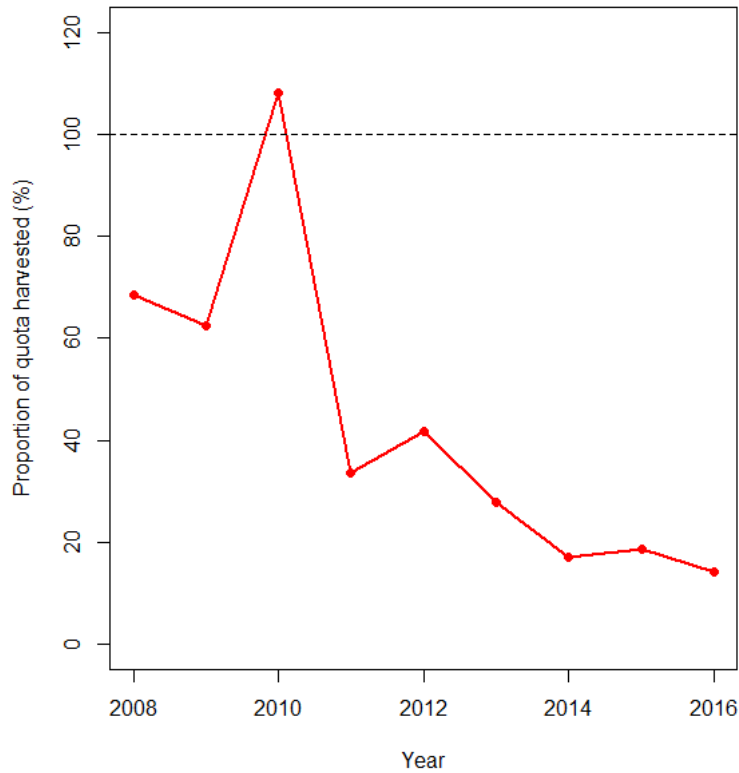
Performance Indicator	Description	Year					Comments
		2013	2014	2015	2016	2017	
34	<p>Throughout the life of this plan, the Department's website will contain the following information as a minimum standard:</p> <ul style="list-style-type: none"> <li>• the current management plan;</li> <li>• the current quota submission document;</li> <li>• the current annual report submitted to the Commonwealth;</li> <li>• information sheets on kangaroo biology and management; and</li> <li>• relevant contact information.</li> </ul>	✓	✓	✓	✓		See: <a href="http://www.dpaw.wa.gov.au/plants-and-animals/animals/kangaroo-management-in-western-australia">http://www.dpaw.wa.gov.au/plants-and-animals/animals/kangaroo-management-in-western-australia</a>
35	Publicly available information on kangaroo management is provided to interested parties as soon as practicable on request.	✓	✓	✓	✓		
36	Relevant departmental staff will participate in interviews with the media where appropriate.	✓	✓	✓	✓		
37	Media releases are prepared for issues of interest to the community when appropriate.	✓	✓	✓	✓		

Performance Indicator	Description	Year					Comments
		2013	2014	2015	2016	2017	
38	<p>As a minimum, all prospective kangaroo shooters who are issued with a Licence to Take Kangaroos for Sale for the first time, or who have not held a valid licence during the term of the current management plan, will be provided with written information on the following:</p> <ul style="list-style-type: none"> <li>• pre-requisites for obtaining a licence</li> <li>• licence conditions;</li> <li>• regulations for taking kangaroos for damage mitigation;</li> <li>• open and close season areas for red and western grey kangaroos;</li> <li>• a copy of the National Code Of Practice; and</li> <li>• Fauna Notes 29 (western grey kangaroo) and 31 (red kangaroo) and any revisions thereof that are available on the department's website.</li> </ul>	✓	✓	✓	✓		

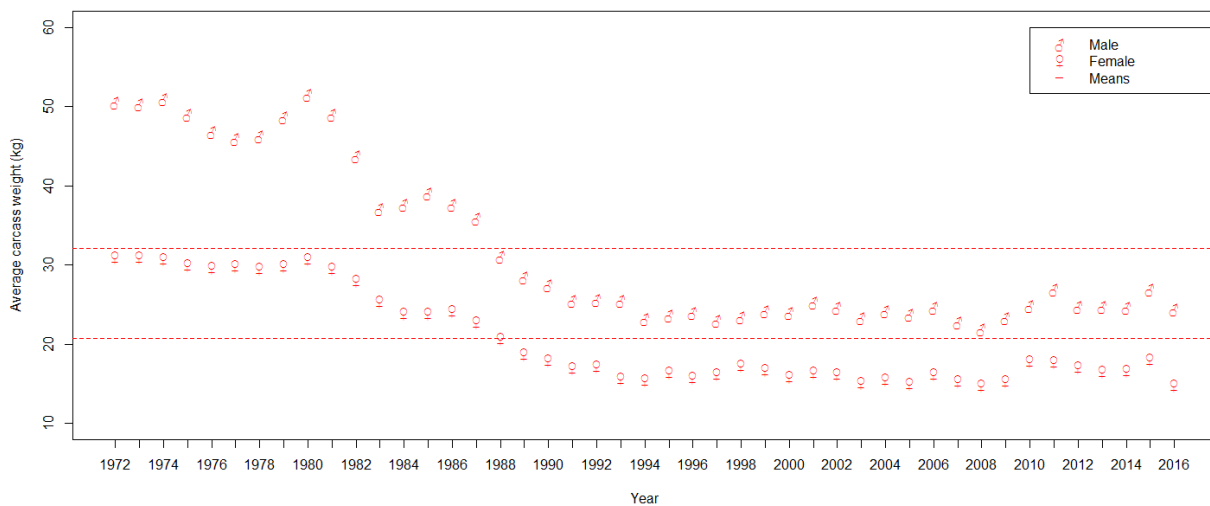


Appendix 1.

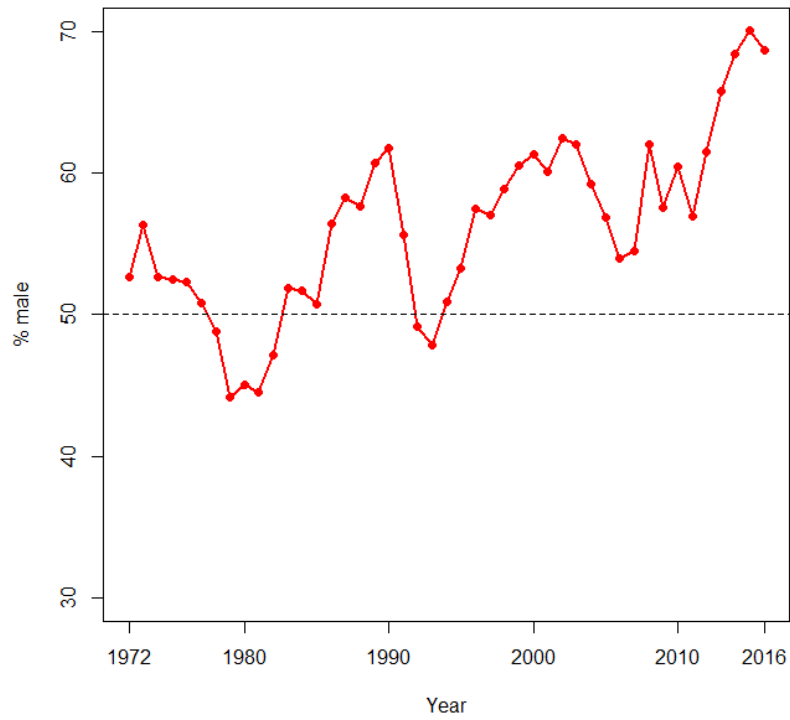
1. Northern Zone



**Figure A1.1.** Proportion of total quota harvested (%) for red kangaroos in the Northern Zone between 2008 and 2016.

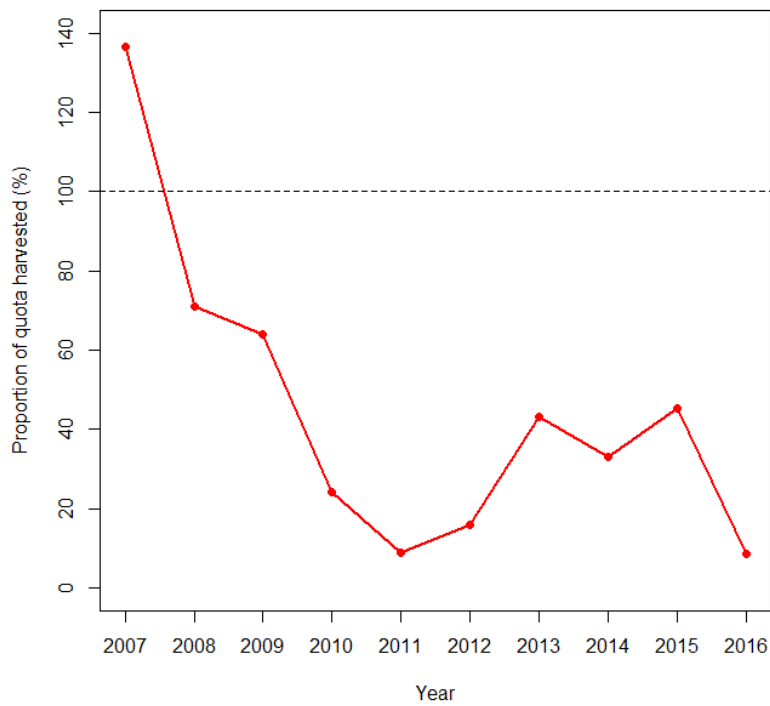


**Figure A1.2.** Average carcass weight of male and female red kangaroos harvested in the Northern Zone between 1972 and 2016. The upper red dashed line represents the average carcass weight for male kangaroos across all years and the lower red dashed line is the average carcass weight for females.

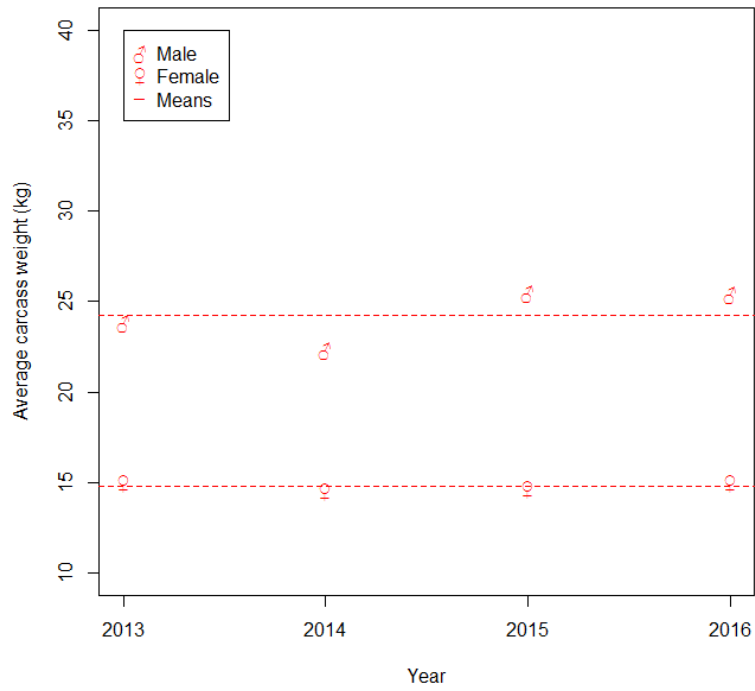


**Figure A1.3.** Sex ratio (expressed as a percentage) of male to female red kangaroos harvested in the Northern Zone between 1972 and 2016.

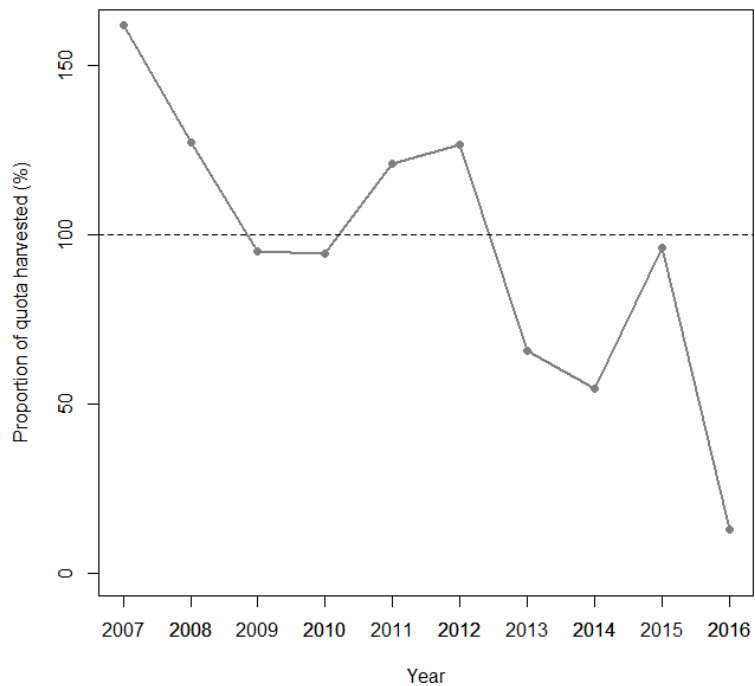
## 2. Central Zone



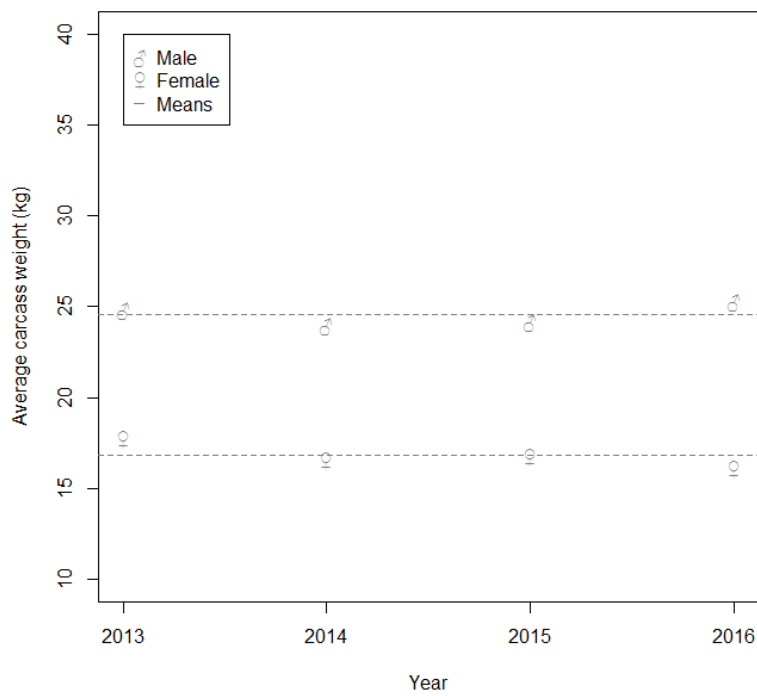
**Figure A2.1.** Proportion of total quota harvested (%) for red kangaroos in the Central Zone between 2007 and 2016.



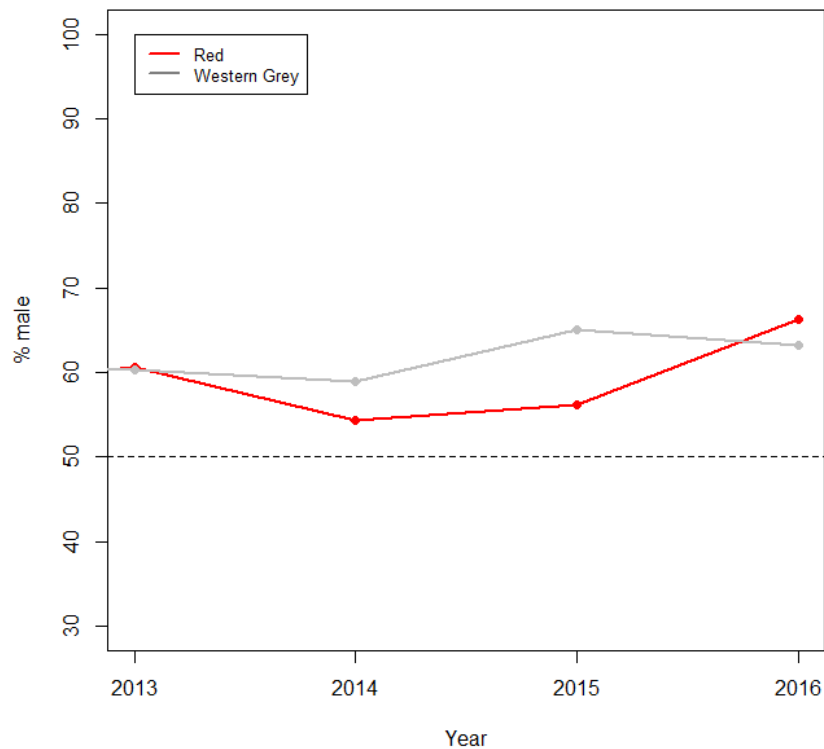
**Figure A2.2.** Average carcass weight of male and female red kangaroos harvested in the Central Zone between 2013 and 2016. The upper red dashed line represents the average carcass weight for male kangaroos across all years and the lower red dashed line is the average carcass weight for females.



**Figure A2.3.** Proportion of total quota harvested (%) for grey kangaroos in the Central Zone between 2007 and 2016.

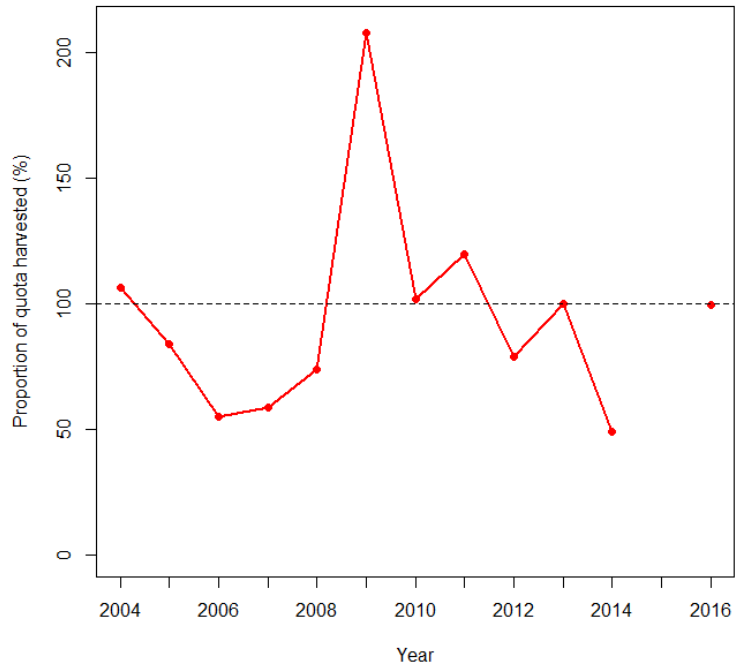


**Figure 2.4.** Average carcass weight of male and female grey kangaroos harvested in the Central Zone between 2013 and 2016. The upper grey dashed line represents the average carcass weight for male kangaroos across all years and the lower grey dashed line is the average carcass weight for females.

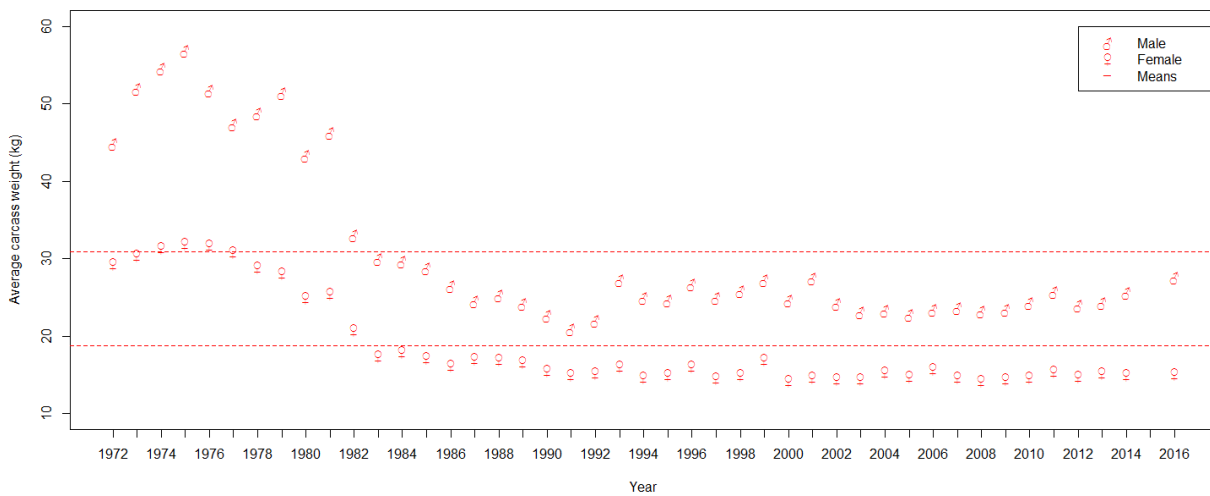


**Figure 2.5.** Sex ratio (expressed as a percentage) of male to female kangaroos harvested in the Central Zone between 2013 and 2016.

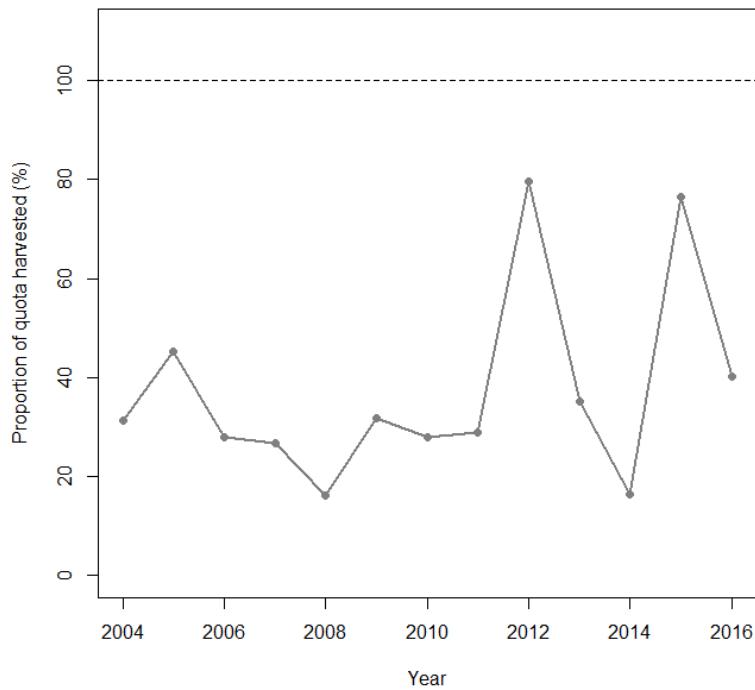
### 3. South East Zone



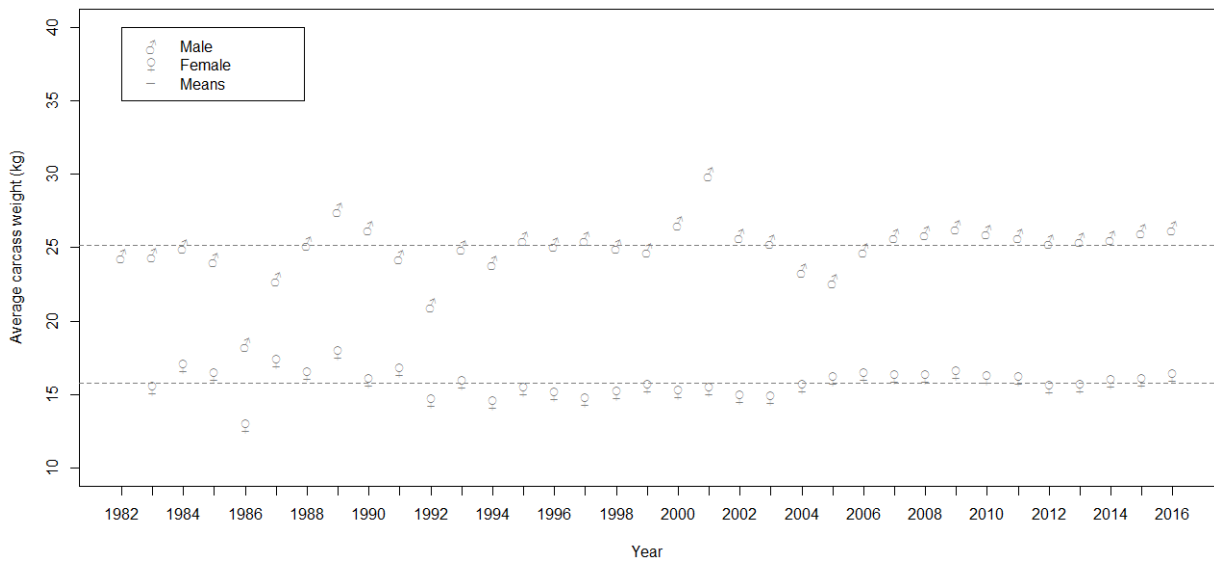
**Figure 3.1.** Proportion of total quota harvested (%) for red kangaroos in the South East Zone between 2004 and 2016. Note: No harvest was taken in 2015.



**Figure 3.2.** Average carcass weight of male and female red kangaroos harvested in the South East Zone between 1972 and 2016. The upper red dashed line represents the average carcass weight for male kangaroos across all years and the lower red dashed line is the average carcass weight for females.



**Figure 3.3.** Proportion of total quota harvested (%) for grey kangaroos in the South East Zone between 2004 and 2016.

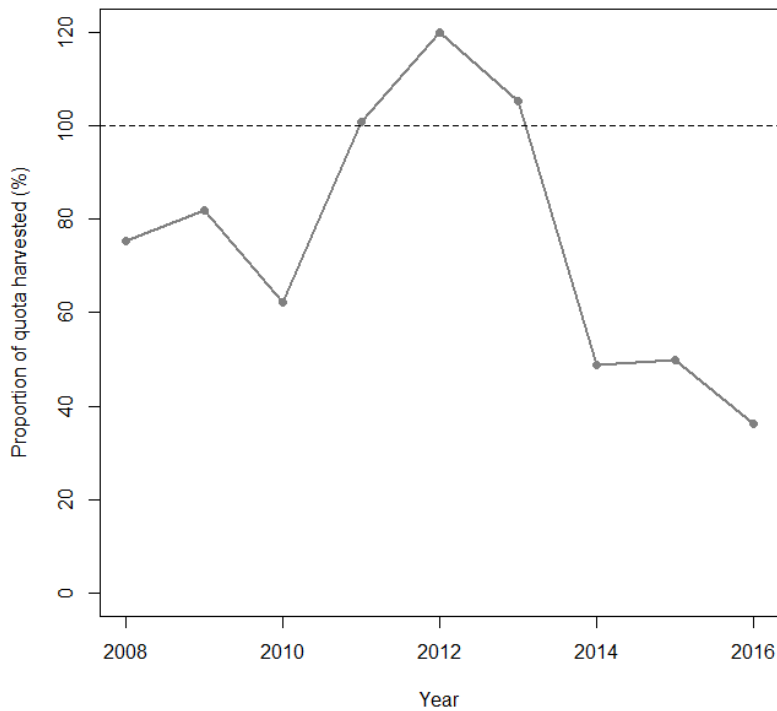


**Figure 3.4.** Average carcass weight of male and female grey kangaroos harvested in the South East Zone between 1982 and 2016. The upper grey dashed line represents the average carcass weight for male kangaroos across all years and the lower grey dashed line is the average carcass weight for females.

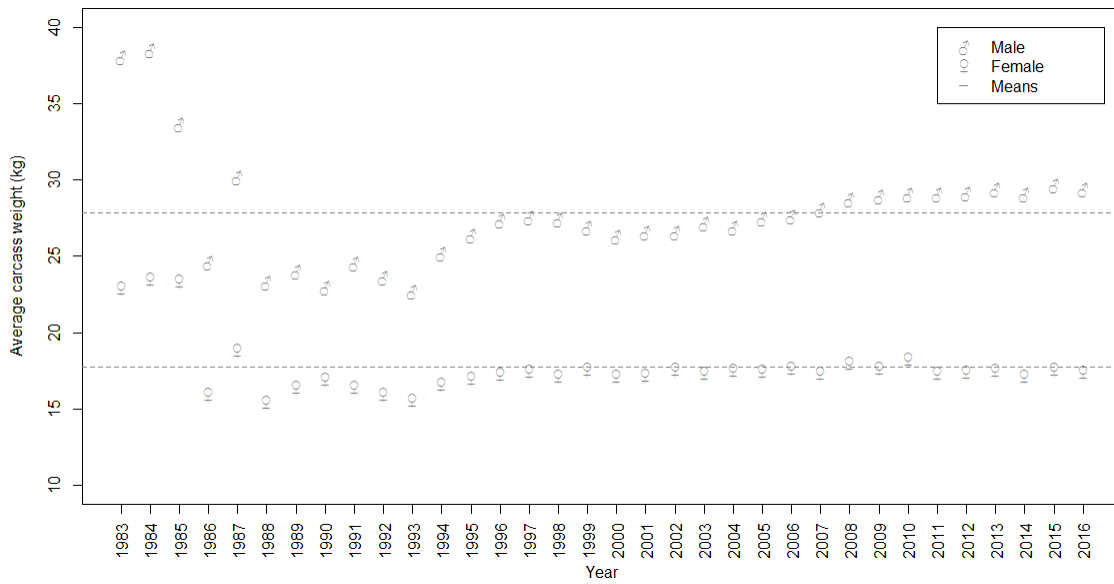


**Figure 3.5.** Sex ratio (expressed as a percentage) of male to female kangaroos harvested in the South East Zone between 1972 and 2016. Note: No red harvest was taken in 2015.

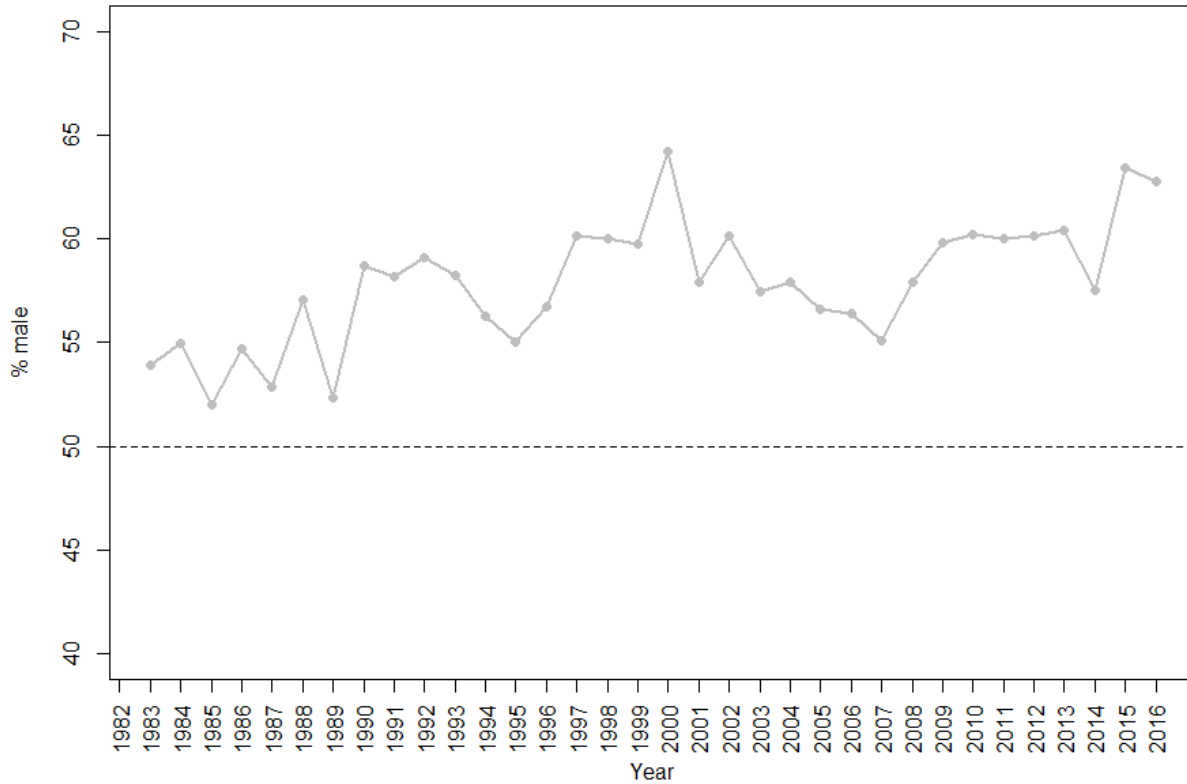
#### 4. South West Zone



**Figure 4.1.** Proportion of total quota harvested (%) for grey kangaroos in the South West Zone between 2008 and 2016.



**Figure 4.2.** Average carcass weight of male and female grey kangaroos harvested in the South West Zone between 1983 and 2016. The upper grey dashed line represents the average carcass weight for male kangaroos across all years and the lower grey dashed line is the average carcass weight for females.



**Figure 4.3.** Sex ratio (as a percentage) of male to female grey kangaroos harvested in the South West Zone between 1985 and 2016.