

Appendix C5 Central North Island Region Fire Returns 1991/92 to 2006/07

Number of Fires (Figure CE1):

- From 1991/92 to 2006/07 the Central North Island had on average around 270 fires (10% of the national total number of fires) annually.
- The total number of fires in Central North Island varied from 115 fires in 1992/93 (12% of that years national) to 495 fires in 1997/98 (14% of that years national).
- The total number of fires for Central North Island varied marginally ($R^2 = 0.237$) but increased significantly over time (regression: F-value = 6.31; P-value = 0.025).
- The total number of fires over time correlated well with the increasing national trend (correlation coefficient = 0.722 P-value = 0.002).

Area Burned (Figure CE2):

- The average annual total area burned was 136 ha (or 3% of the national).
- The total area burned varied greatly in the 1990s, but has since become less variable (linear regression $R^2 = 0.144$); annual total area burned varied from 20 ha in 1995/96 (or 0.4% of that year's national) to 499 ha (or 7% of national) in 1996/97.
- The total annual area burned decreased over time but was not statistically significant (regression: $R^2 = 0.144$; F-value = 2.35; P-value = 0.15).

Number of Fires by Cause (Figures CE3 and CE4):

- Miscellaneous fires accounted for about 31% (the actual annual average was 86 fires) of the average total number of fires in Central North Island; unknown accounted for 8% (or on average annually 22 fires); combined 'unspecified' about 40%.
- Land clearing (actual annual average of 45 fires) and vehicle fires (actual annual average of 47 fires) each made up approximately 17% of the average annual total number of fires.
- About 10% (or annually on average 26 fires) of the average annual total number of fires were attributed to incendiary causes.

Area Burned by Fuel type (Figures CE5 and CE6):

- Around 15% of the total area burned in the Central North Island was grass; average annual grass area burned was 21ha (or about 1% of the national average grass area burned).
- About 63% of the total area burned was scrub; average annual total scrub area burned was 86ha or 3.8% of the national scrub area burned.
- The remaining 21% was classed as forest (annual average total forest area burned was 29ha or around 6% of the national average). In comparison to other regions, the Central North Island has a relatively high proportion of its total area burned classed as forest.
- Over 200ha of forest area was recorded burned in 1996/07, and over 100ha of forest area was burned in 1997/98.

Area Burned by Cause (Figures CE7 and CE8):

- Whilst fires from miscellaneous causes made up 32% of the average total annual number of fires in the Central North Island (Figure CE3), miscellaneous causes (actual average of 27 ha) accounted for 20% of the average total reported area burned. Area burned attributed to unknown causes made up around 9% or 13 ha. Total combined 'unspecific' annual average area burned was around 28%.
- In contrast to most other regions where it barely featured, 16% (actual annual average around 22 ha) of the average total area burned was attributed to smokers.
- Land clearing (actual average around 19 ha) and incendiary (actual average about 18 ha) made up around 14% of the average annual total area burned.
- Industrial causes accounted for about 10% of the average annual total area burned (actual average about 13 ha).
- Average total area burned was greatly influenced by different causes in different fire years. For example, 1996/97 saw over 200 ha burned from both smokers and industrial cause classes.

Area Burned by Cause by Fuel type (Figures CE9, CE10, CE11, CE12, CE13 and CE14):

- Around a third (30%) of the average total grass area burned was due to industrial causes.
- About 20% (actual figure just 4 ha) of the average annual total grass area burned was due to miscellaneous causes, land clearing accounted for 16% of the average annual total grass area burned (actual average was 3 ha).
- About 20% of the average annual total scrub area burned was attributed miscellaneous causes (or on average about 17 ha); unknown accounted for about 11% (or 9 ha); combined about 30% of average annual scrub area burned was in the 'unspecified' classes.
- Incendiary made up about 14% (12 ha) of the average annual total scrub area burned, while land clearing accounted for 17% (or 15 ha).
- Few clear trends were evident for individual causes over time in the total annual scrub area burned.
- 43% of the average annual total forest area burned was attributed to smokers (per year average 12 ha). This was due to around 200 ha of forest recorded burned in 1996/97.
- About 17% of the average annual total forest area burned was attributed to incendiary causes (actual annual average about 5 ha), but again this was mostly due to around 70 ha of forest being burned in 1997/98.

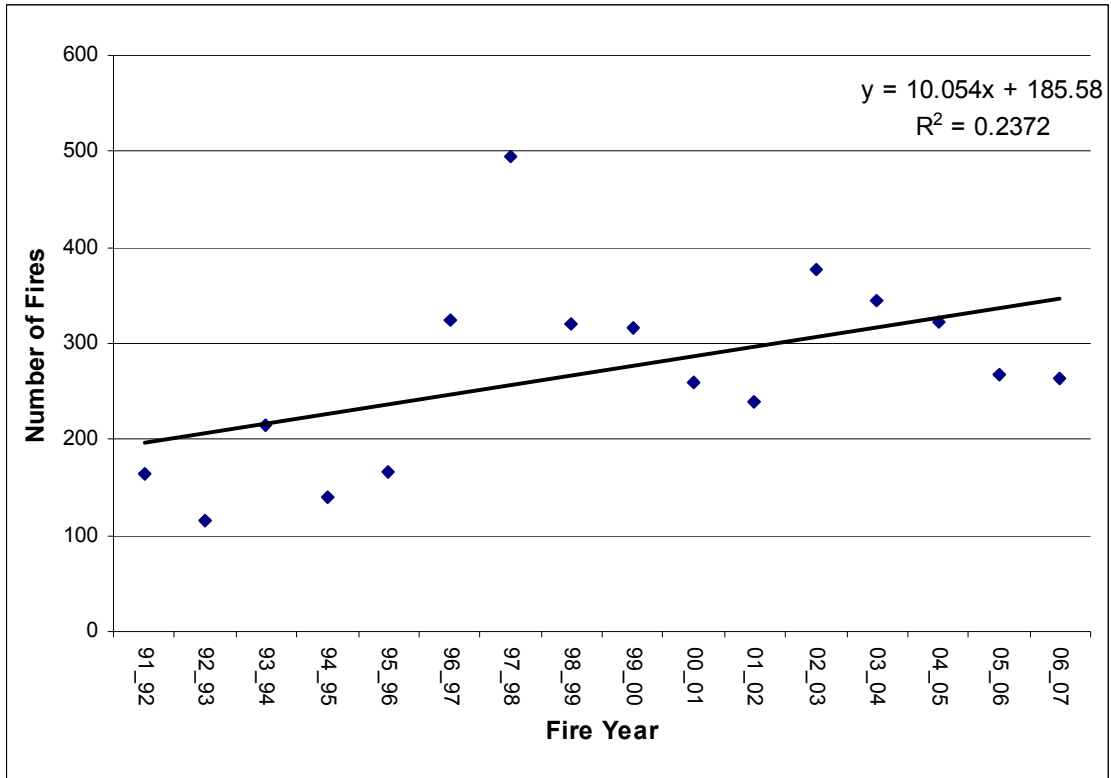


Figure CE1. Central North Island total annual number of fires from 1991/92 to 2006/07.

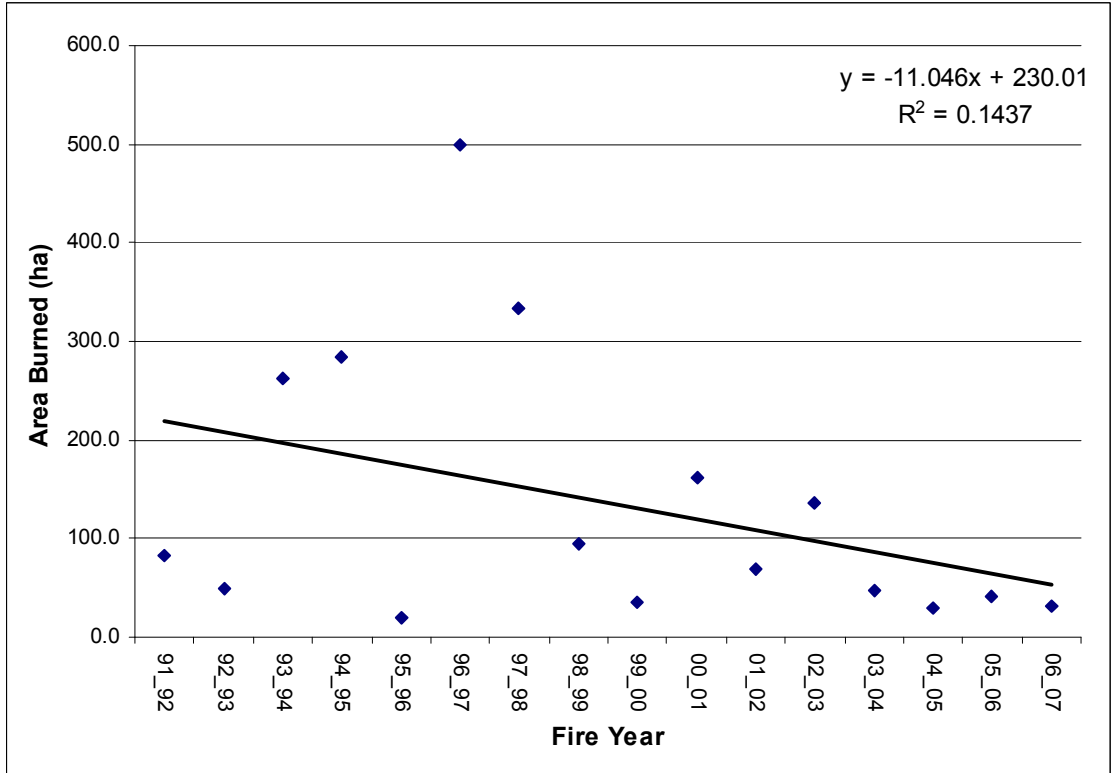


Figure CE2. Central North Island total annual area burned from 1991/92 to 2006/07.

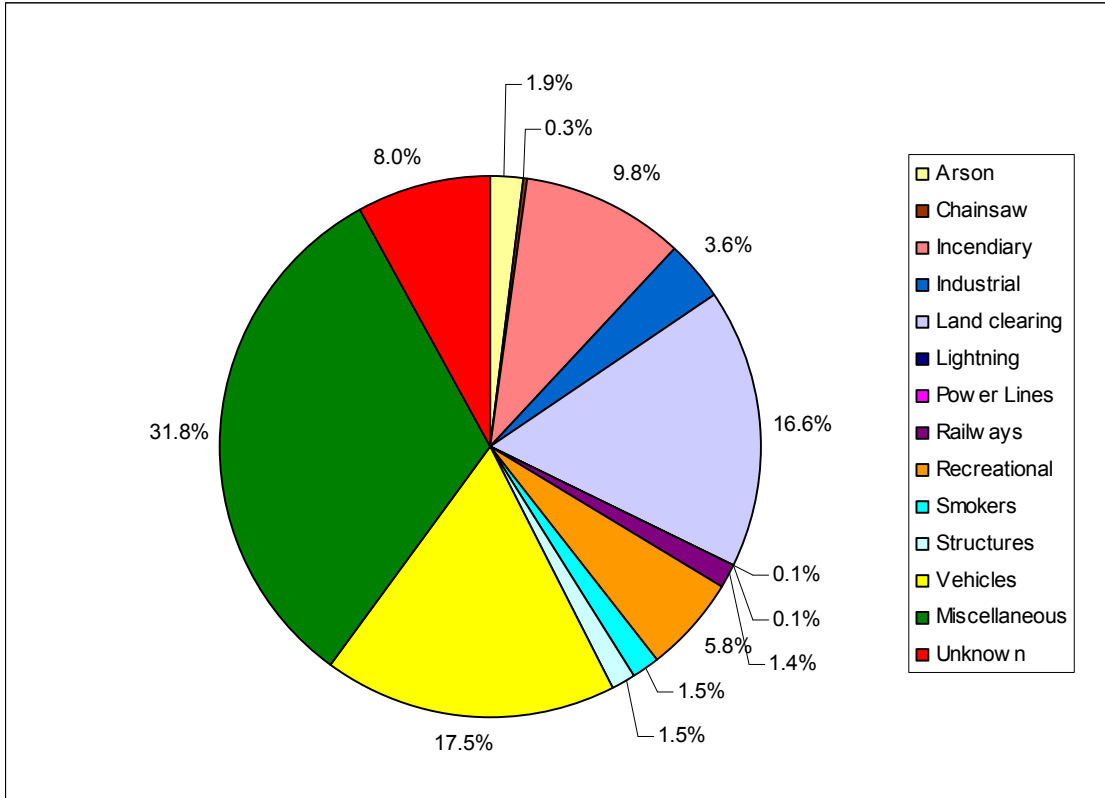


Figure CE3. Central North Island total number of fires by cause from 1991/92 to 2006/07.

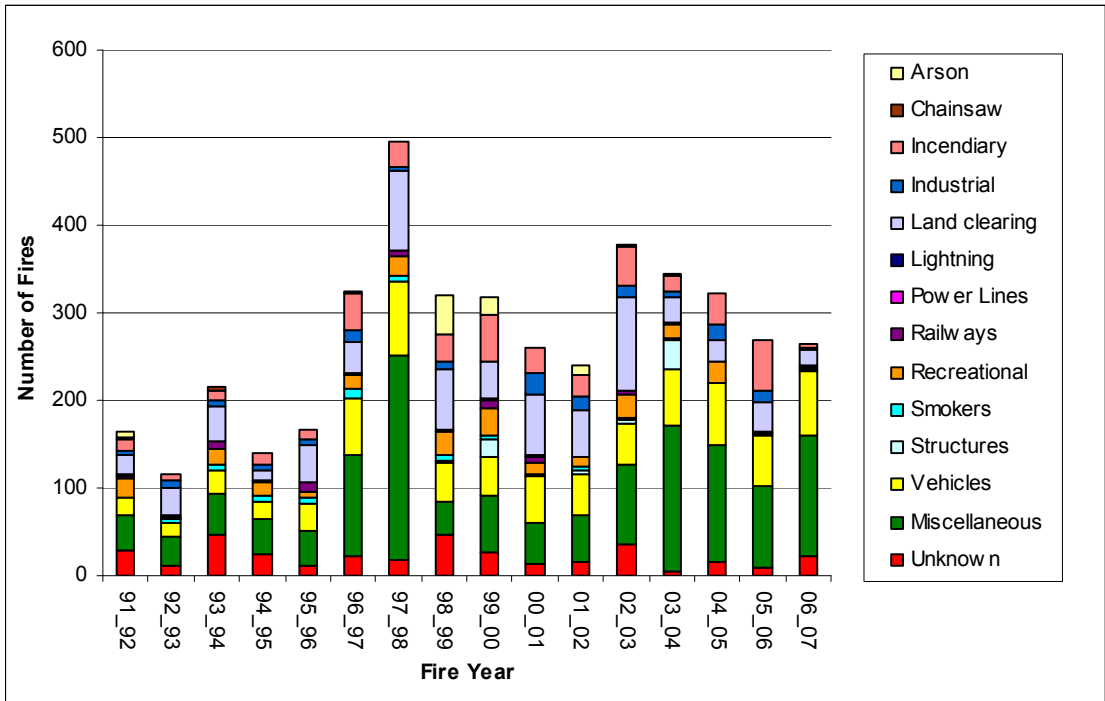


Figure CE4. Central North Island total number of fires by cause from 1991/92 to 2006/07.

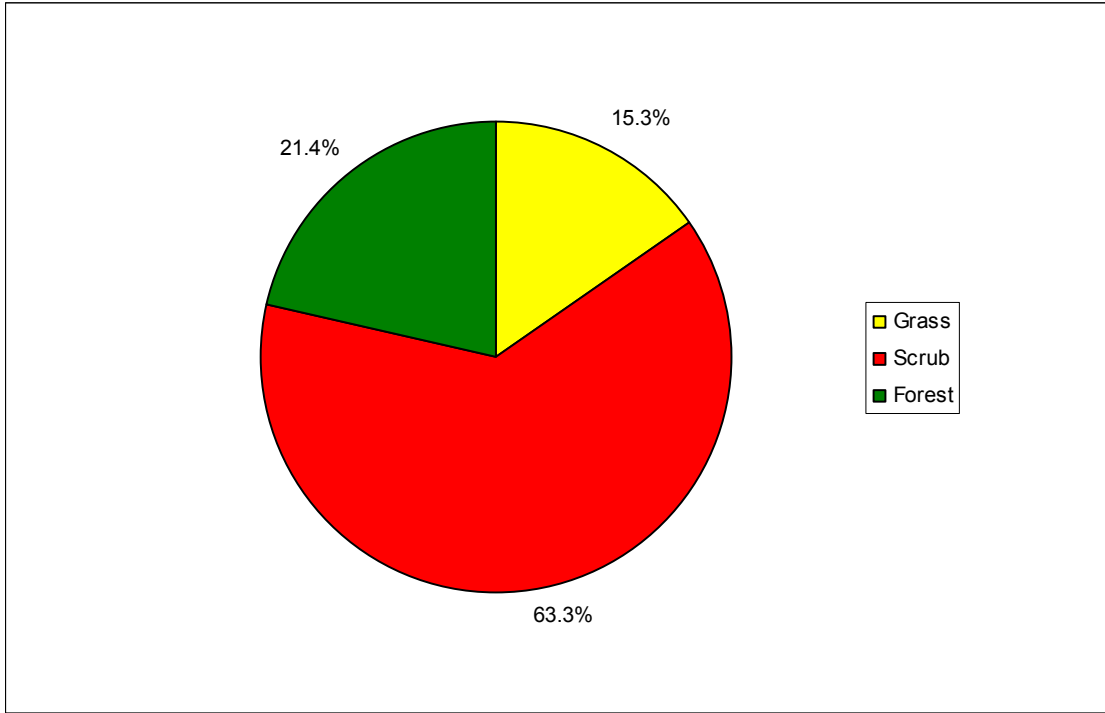


Figure CE5. Central North Island total area burned by fuel type from 1991/92 to 2006/07.

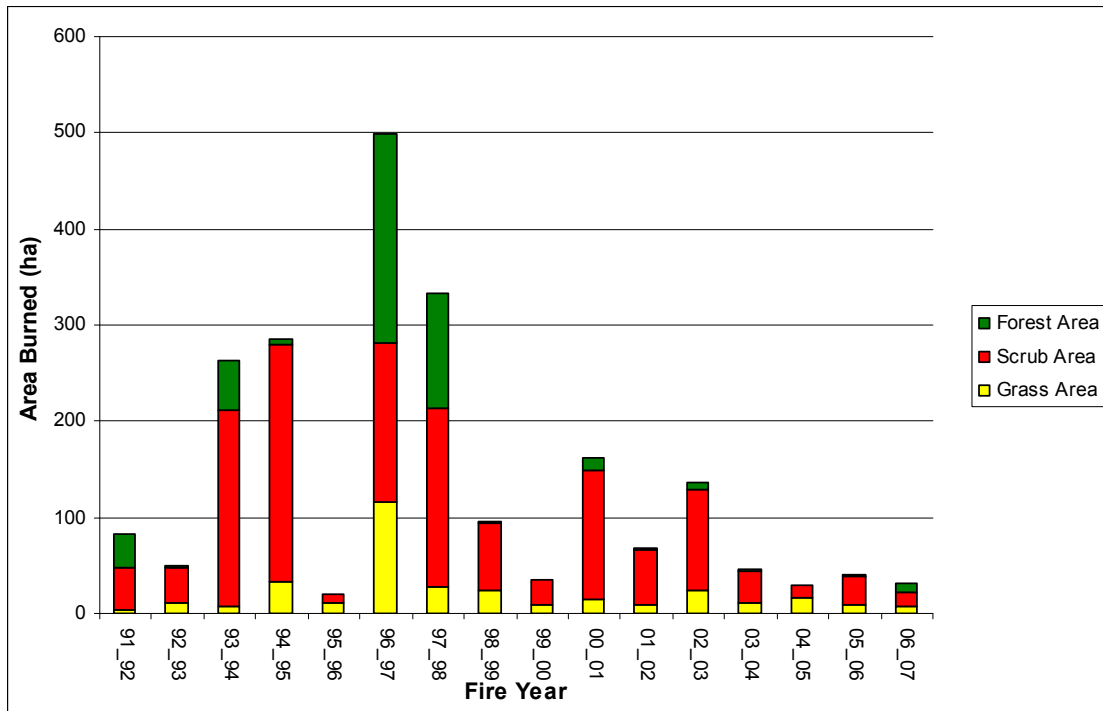


Figure CE6. Central North Island total area burned by fuel type from 1991/92 to 2006/07.

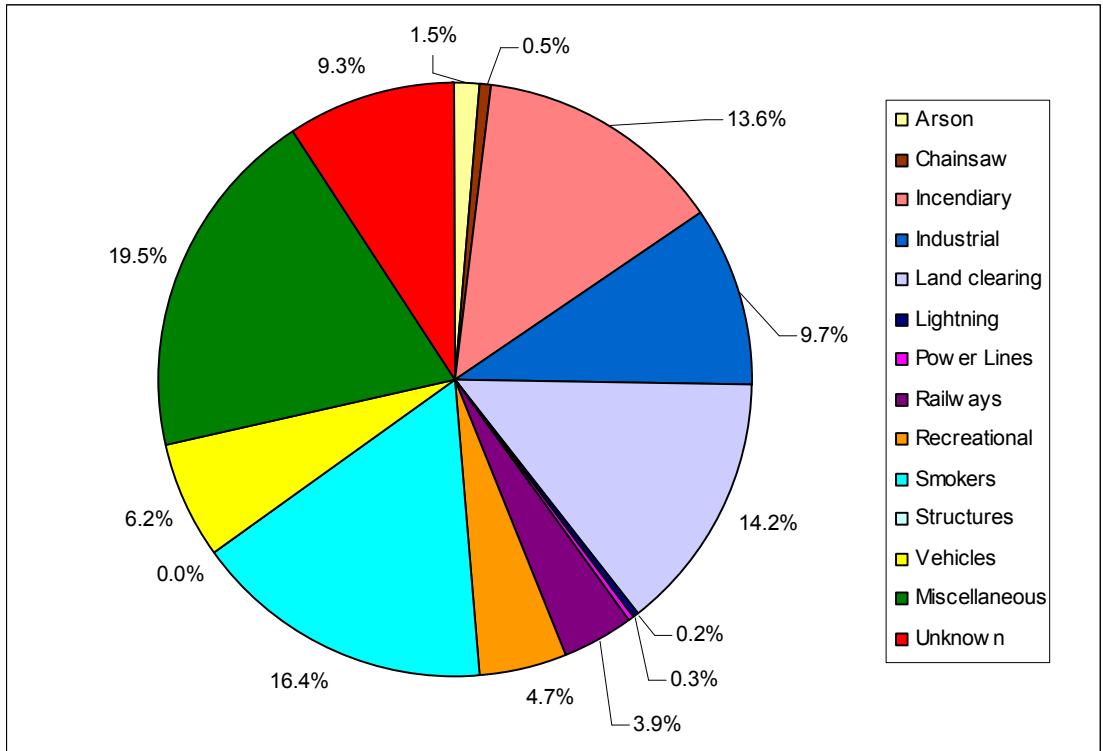


Figure CE7. Central North Island total area burned by cause from 1991/92 to 2006/07.

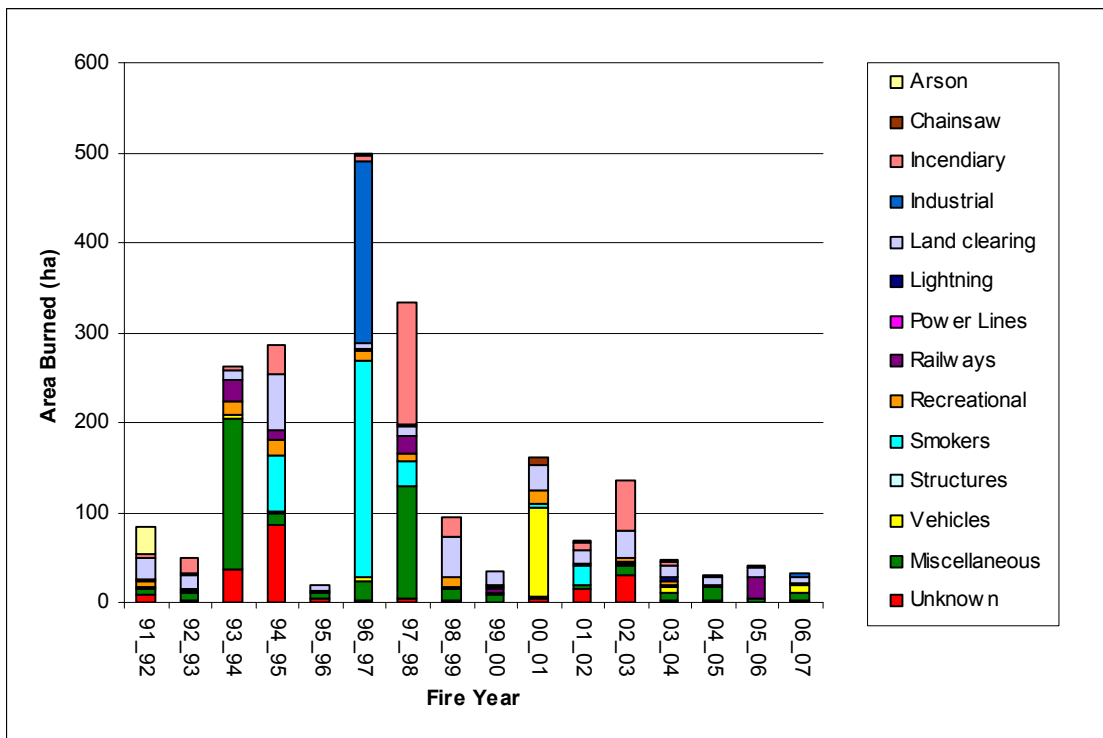


Figure CE8. Central North Island total area burned by cause from 1991/92 to 2006/07.

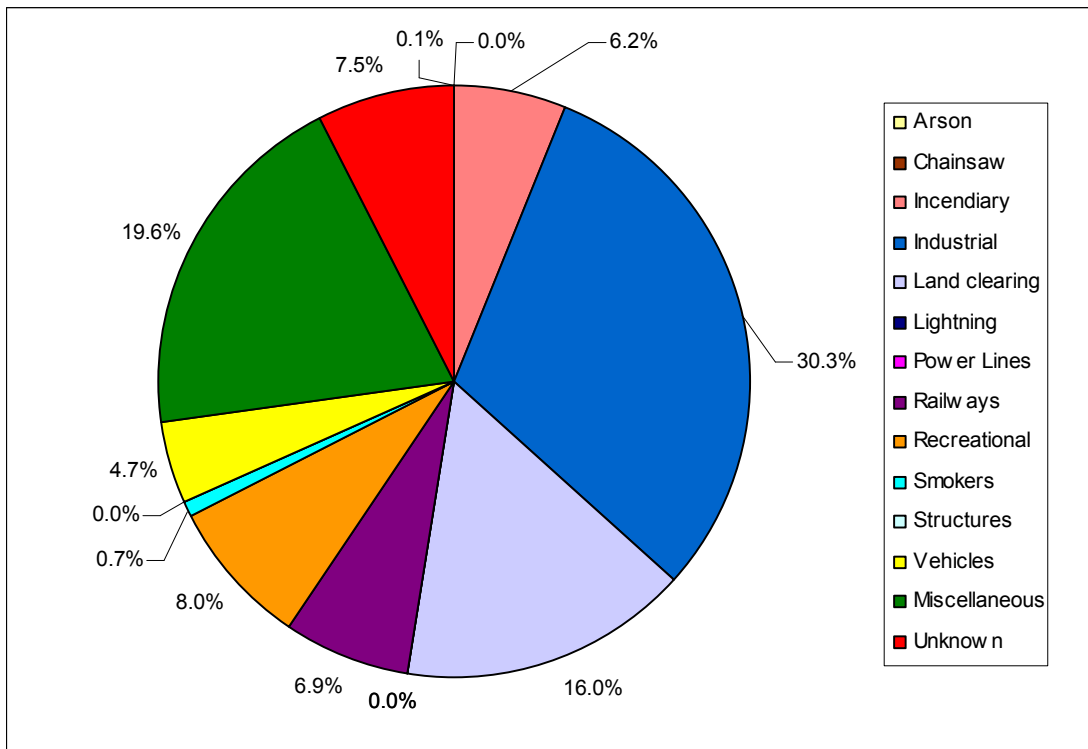


Figure CE9. Central North Island average total annual grass area burned from 1991/92 to 2006/07.

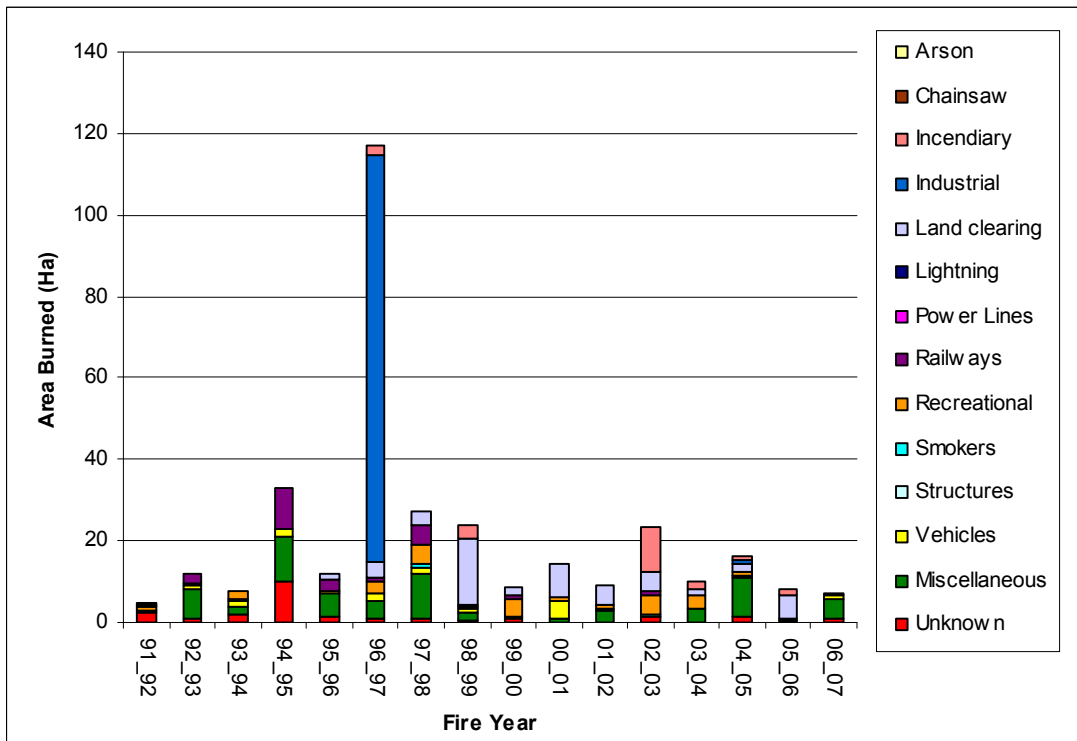


Figure CE10. Central North Island total grass area burned by cause from 1991/92 to 2006/07.

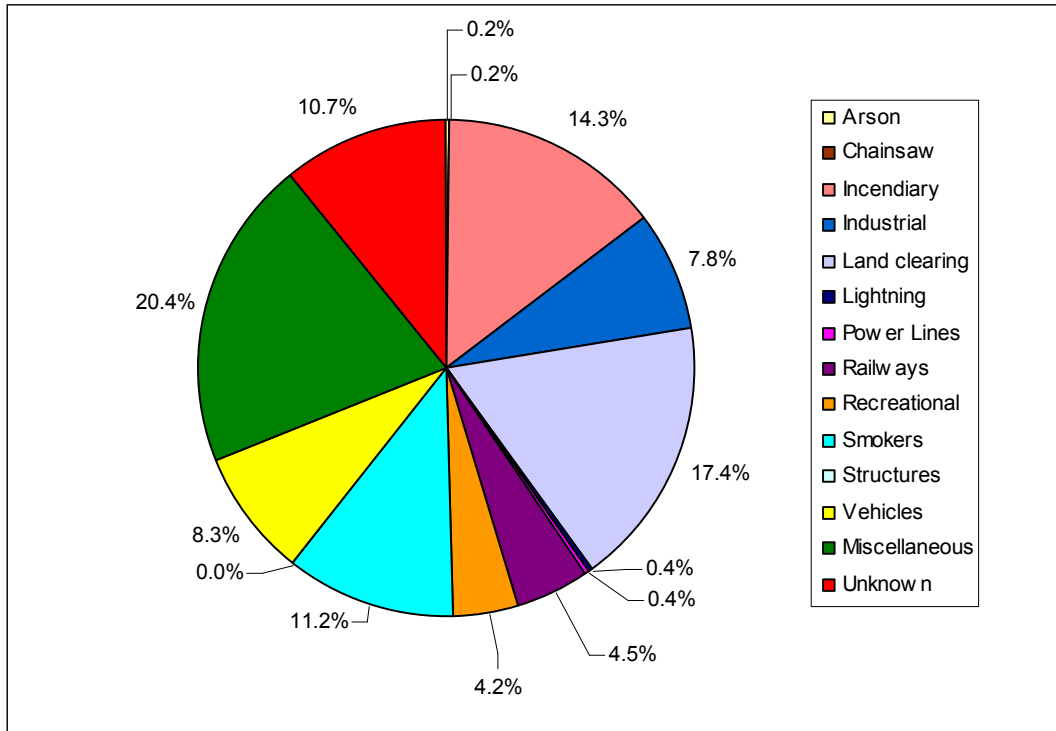


Figure CE11. Central North Island average total scrub area burned by cause from 1991/92 to 2006/07.

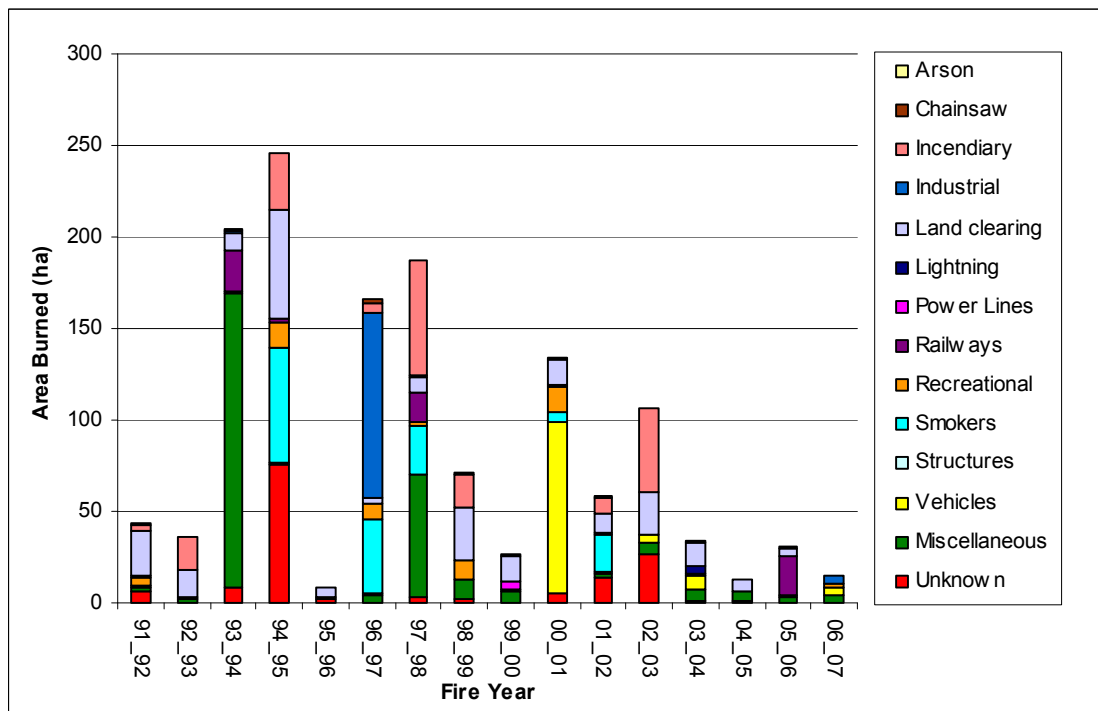


Figure CE12. Central North Island total scrub area burned by cause from 1991/92 to 2006/07.

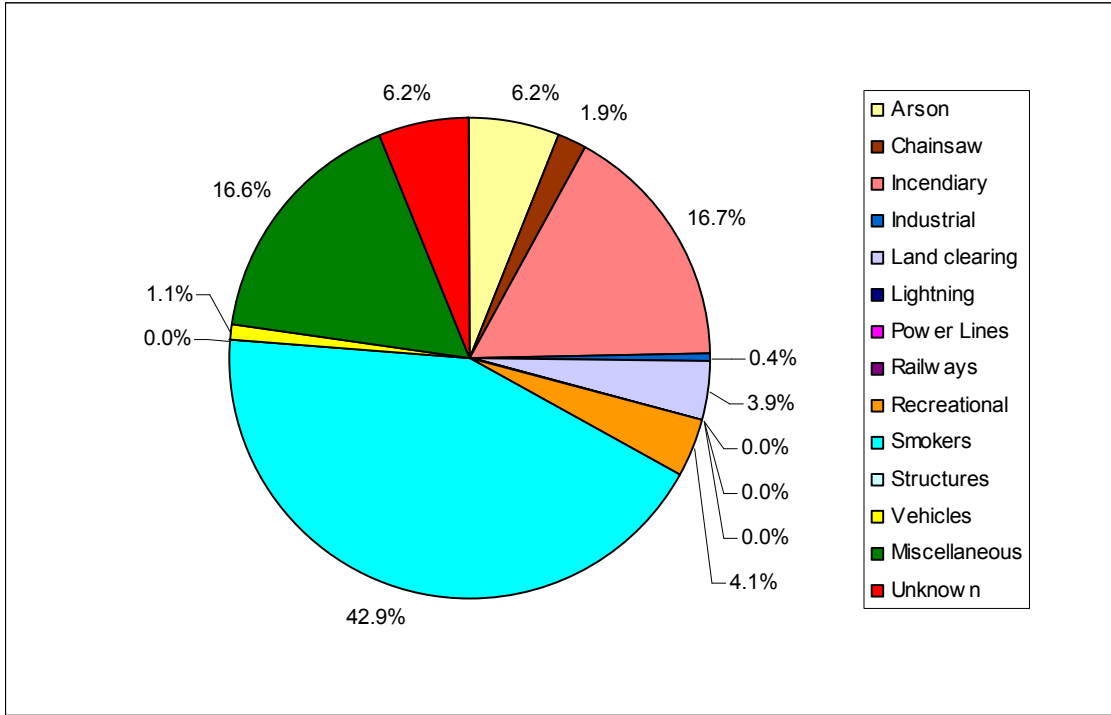


Figure CE13. Central North Island average total forest area burned by cause from 1991/92 to 2006/07.

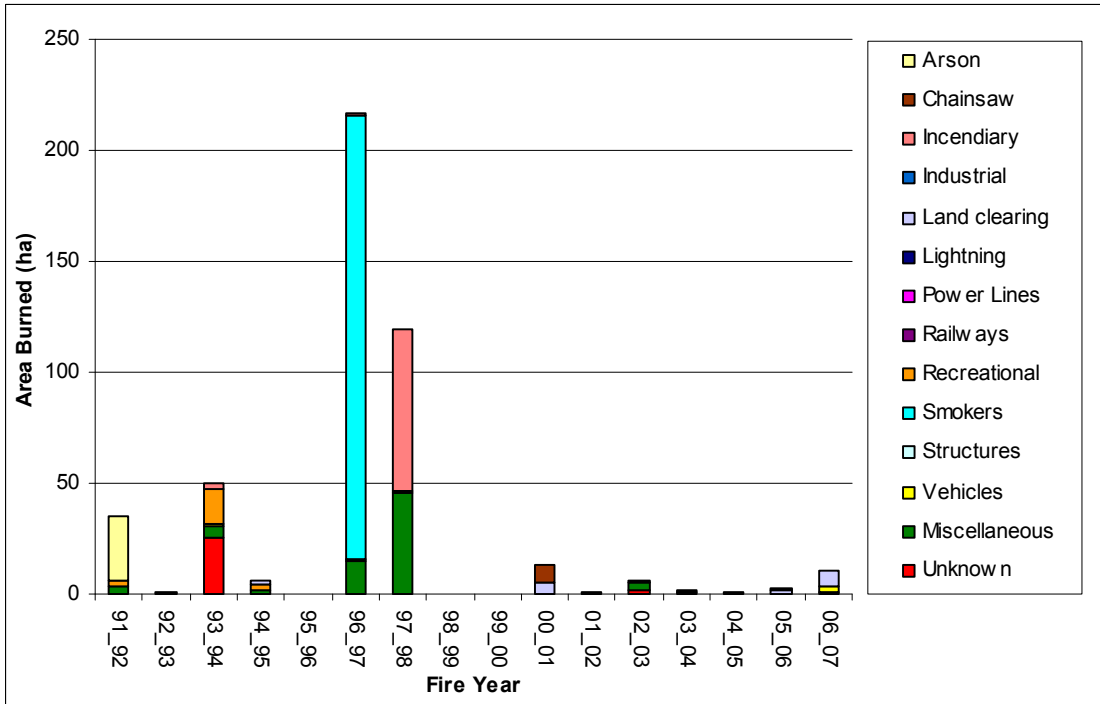


Figure CE14. Central North Island total forest area burned by cause from 1991/92 to 2006/07.