

Supplementary material for

The sum of small parts: changing landscape fire regimes across multiple small landholders in north-western Australia with collaborative fire management

Michael Wysong^{A,B,*}, Sarah Legge^{B,C,K*}, Alex Clark^D, Stefan Maier^{E,F}, Bardi Jawi Rangers^G, Nyul Nyul Rangers^H, Yawuru Country Managers^A, Stuart Cowell^I and Grey Mackay^J

^ANyamba Buru Yawuru, Environmental Services Unit, 55 Reid Road, Cable Beach, WA 6726, Australia.

^BResearch Institute of Environment and Livelihoods, Charles Darwin University, Casuarina, NT 0810, Australia.

^CFenner School of Environment and Society, The Australian National University, Canberra, ACT 2601, Australia.

^DKimberley Land Council, 11 Gregory Street, Broome, WA 6725, Australia.

^EMaitec, PO Box U19, Charles Darwin University, Darwin, NT 0815, Australia.

^FSchool of Science and Engineering, James Cook University, Qld 4811, Australia.

^GLot 19–20, First Street, Ardyaloon, PO Box 2145, Broome, WA 6725, Australia.

^HC/o Beagle Bay Community, PO Box 2145, Broome, WA 6725, Australia.

^IConservation Management, PO Box 4650, Bathurst Street, Hobart, Tas. 7000, Australia.

^JLand Alliance, PO Box 3223, Broome, WA 6725, Australia.

^KCorresponding author. Email: sarahmarialegge@gmail.com

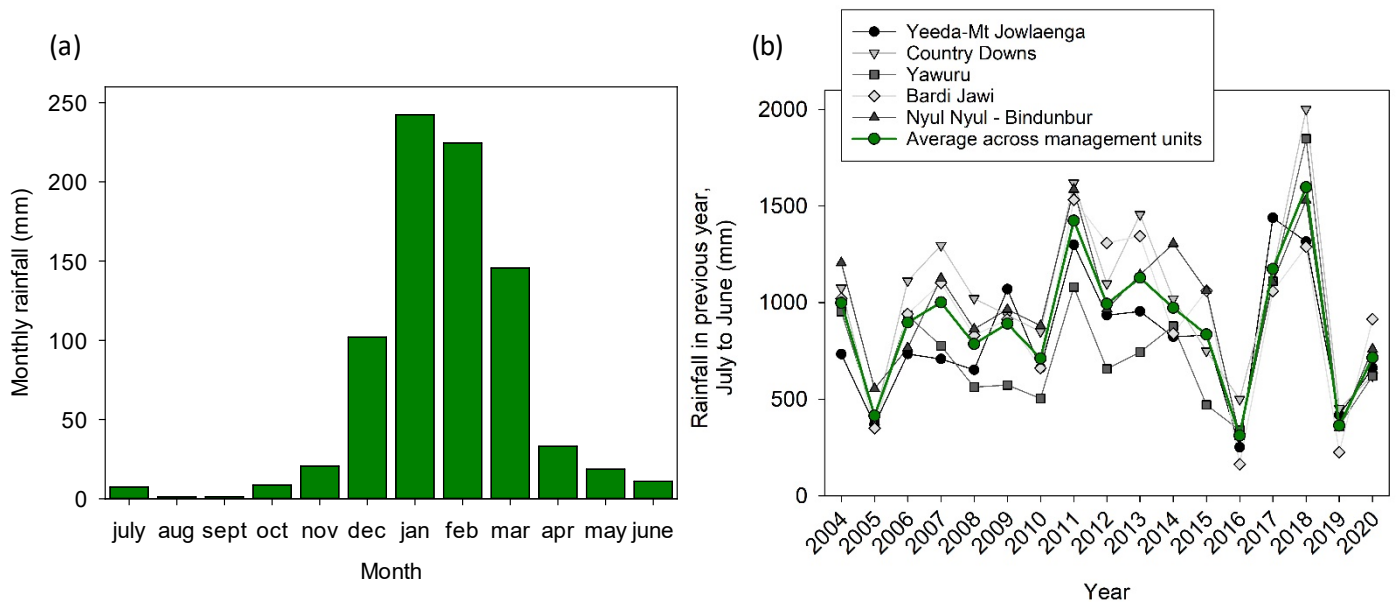
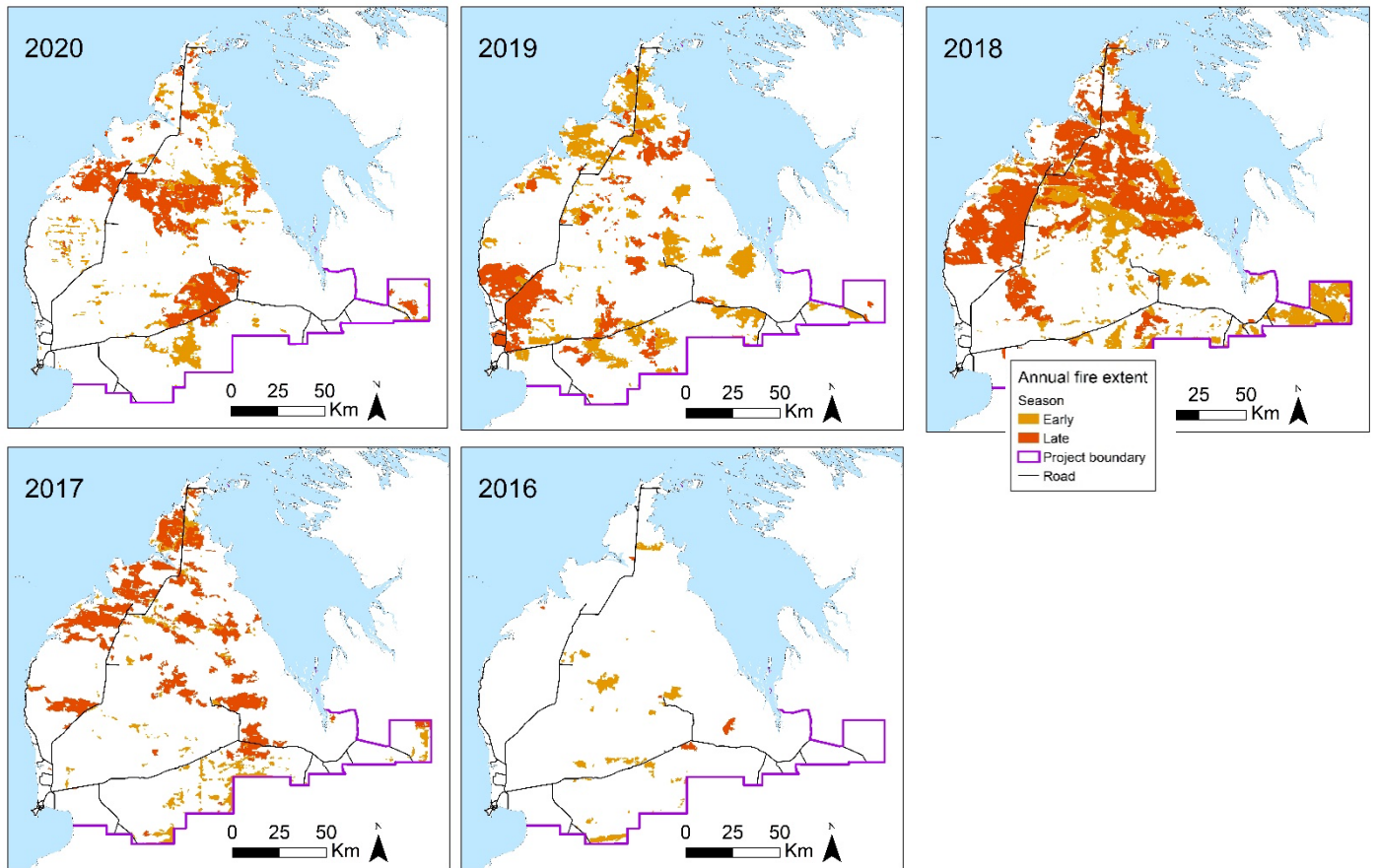


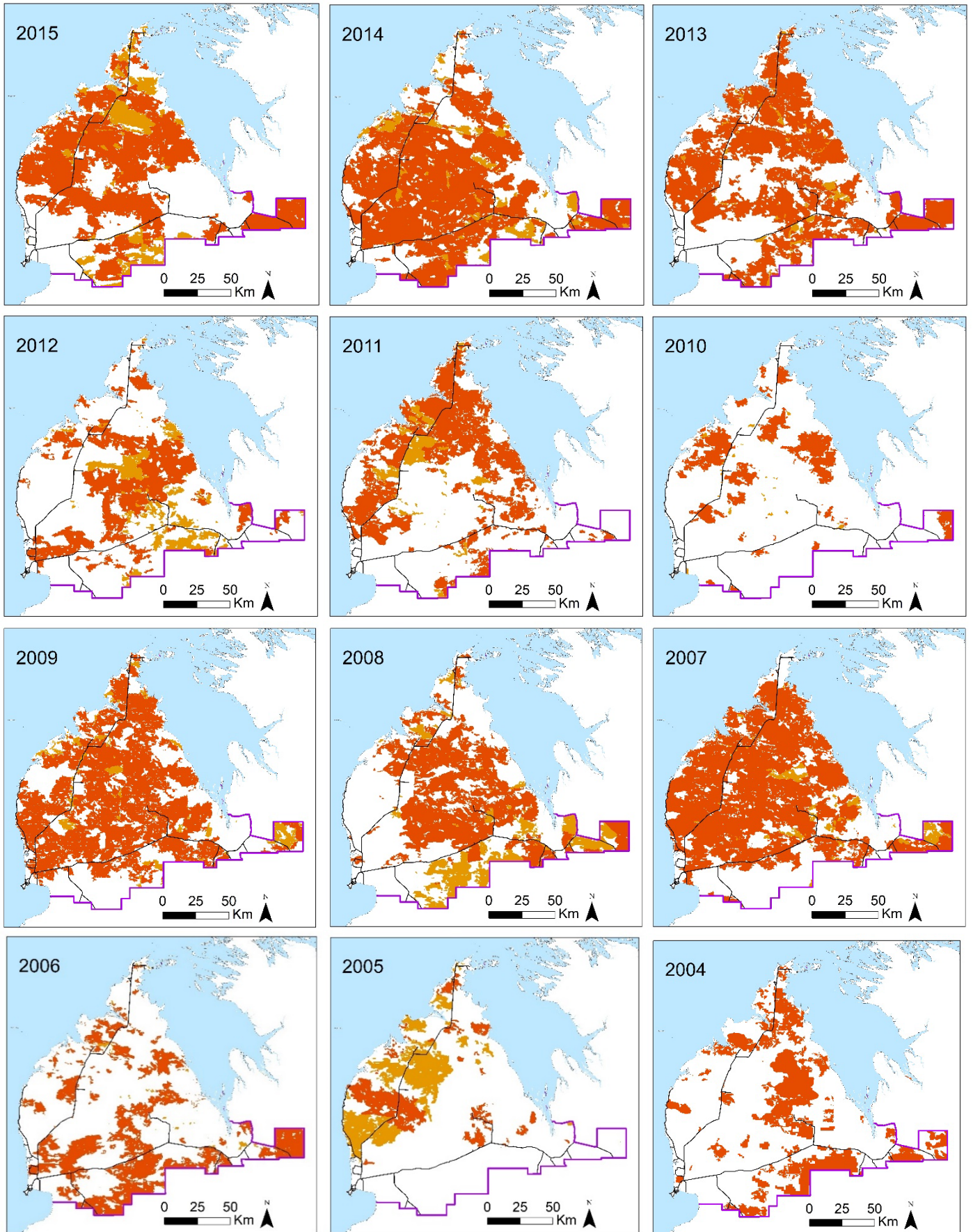
Fig. S1. Rainfall patterns on the Dampier Peninsula (a) Average rainfall per month, calculated from the average of five weather stations across the peninsula. (b) Rainfall in the year preceding each burning season (July to June), shown for each of the five management areas, and their average (green line), for the years included in the analysis (2004-2020).

Fig S2. Annual fire extents, 2004-2020. The fire return interval in our study area before the project began was 1-2 years; a baseline of 12 years (2004-15) was used to calculate average fire pattern metrics for comparing with those of the project years (2015-20).

Project years:



Baseline years (2004-2015)



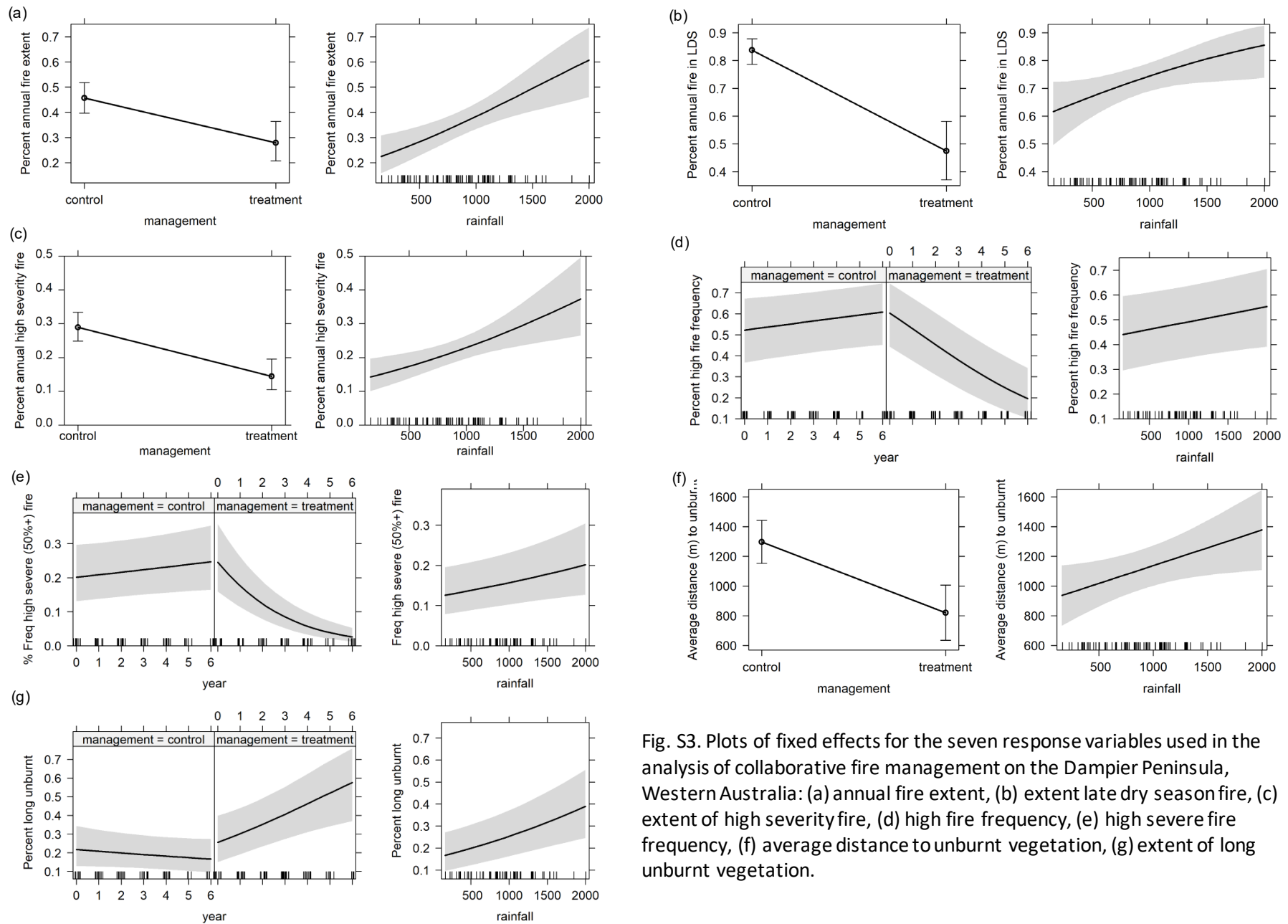


Fig. S3. Plots of fixed effects for the seven response variables used in the analysis of collaborative fire management on the Dampier Peninsula, Western Australia: (a) annual fire extent, (b) extent late dry season fire, (c) extent of high severity fire, (d) high fire frequency, (e) high severe fire frequency, (f) average distance to unburnt vegetation, (g) extent of long unburnt vegetation.