Interactions between climate, vegetation and fuel

Thomas J. Duff



Vegetation communities don't all burn the same way



Cawson JG, Duff TJ, Tolhurst KG, Baillie CC, Penman TD (2017) Fuel moisture in Mountain Ash forests with contrasting fire histories. For. Ecol. Manage. 400:568-577 Duff TJ, Cawson JG, Harris S (2018) Dryness thresholds for fire occurrence vary by forest type along an aridity gradient: evidence from Southern Australia. Landscape Ecol.

Shifting vegetation communities – shifting fuel



Prescribed burn windows – a function of climate



Proportion complete

Fire season

The short story

- Fire weather is not the only dynamic element - Vegetation interacts with climate and fire - Gradual change in fuel is occurring – however there can also be rapid transitions 'new flammability states' - Climatic change and variability also has implications for risk reduction activities