

Co-existing with fire: managing risk and amenity at the rural/urban interface

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The Issues

Project 1: Risk mitigation

- o Risk – “condition” of bushland surrounding property (WUI)?
- o Effectiveness of mitigation @ WUI (Δ consequential risk)?

Project 2: Amenity

- o “Amenity” (multi-faceted) @ WUI ?
- o Positive or negative perceptions of the environment surrounding property?

- What is the overlap between risk and amenity @ WUI?



Project 1 Update: Risk mitigation

- Data for 344 lost/damaged houses since 2001-02 (from NSW RFS database)
- Additional ~600 untouched houses
- Key attributes from aerial imagery:
 - o distance to vegetation >1ha
 - o characteristics of vegetation immediately around house
 - o distance to and number of adjacent structures
 - o distance to and number of waterbodies (pools, dams, etc)
 - o distance to public road



a lost house

an untouched house

Project 1 Update: Risk mitigation

Data:

- Measurements from aerial images
 - Slope, elevation, topographic position
 - Fuel age, vegetation type
 - Some information on house construction
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- Statistical modelling approach using GAMs
comparable to Gibbons *et al.* (2012), Price and Bradstock (in press)
 - Potential to include other datasets into analyses



Amenity Case Study Areas

Scoping trips in September 2012:

- **Wamboin – east of Canberra**

- o Canberra commuter area, largely primary residences (low proportion of unoccupied residences according to 2011 Census and information from local RFS brigade)
- o Grassland and woodland environment, contrasting tablelands topography to Blue Mountains
- o Possible woodland regeneration/ replanting by landowners offers a contrast to lifestyle/livelihoods in the Blue Mountains
- o RFS brigade willing to assist

- **Blue Mountains – Bilpin, Mt Wilson/Mt Irvine, Bowen Mountain**

- o Mix of median ages and proportions of primary/secondary residences (as per proportions of occupied/unoccupied residences according to 2011 Census and local RFS brigades)
- o Mix of production areas and 'amenity' residential areas
- o Blue Mountains: forested environment, rugged topography
- o Scope to identify contrasting social/environmental settings for focus within this area compared with Wamboin case study
- o RFS brigades willing to assist



Methods Development

- **‘Sub-areas’ within each study area to be selected, stratified by risk zoning/social factors**
 - o Aim for each of these to be a selection of contiguous properties to:
 - capture a continuous area for mapping
 - capture resident views on same ‘interface’ area
 - Still allow us to use properties/interviewees as a sub-unit of analysis.
- **Mapping/Interviews/Focus Groups**
 - o Pilot planned in Illawarra for November 2012
 - o Trialling iPad-based participant mapping of ‘amenity’ values using aerial photos/cadastral boundaries in Sketchbook Pro
 - o SPro theoretically has the capacity to export layers in Photoshop format and then into ArcGIS – testing this – for comparison with risk mapping
 - o Pilot interview schedule to accompany mapping is in development
 - o We will need photos of various vegetation types under different treatment regimes to use in interviews and gauge interviewees responses (any assistance appreciated).

