An Experimental Forest Landscape for Tasmania’s wet eucalypt forests

Simon Grove, Marie Yee and Ruiping Gao
1Division of Forest Research and Development, Forestry Tasmania; 2Division of Forest Management, Forestry Tasmania

The contemporary landscape of Tasmania’s southern forests comprises a mixture of fire-derived and harvesting-derived forest of various ages, from recently re-seeded eucalypt forest through to old-growth eucalypt and rainforest. As such, it offers many possibilities in applying landscape ecological principles to help inform forest management. With this in mind, we have recently formalised the concept of an Experimental Forest Landscape (EFL) in this region, covering 155 000 ha and extending from the World Heritage Area and Warra LTER site in the west to the long-settled Geeveston and Franklin region in the east.

Our efforts so far have focused on consolidating already-collected data-sets, and on developing appropriate GIS layers to help future researchers make the most of this landscape.

Available data could include:
•Warra LTER site research project data
•Landscape metrics
•LiDAR coverage (forest structure)
•Aerial photo interpreted stand structure
•Forest inventory plot data
•Wildfire chronosequence plot data
•Distributional data for threatened species
•Vegetation type
•Soils, geology and drainage
•Roading and other infrastructure
•Tenure and reservation status

Spatially explicit models of forest vegetation dynamics
Spatially explicit models of coarse woody debris dynamics
Landscape metrics

The Experimental Forest Landscape is ‘research-ready’!
The EFL has enormous future research potential. Here are some suggestions:

Spatially explicit models of forest vegetation dynamics

Wildfire has been a dominant driver of vegetation dynamics in Tasmanian forest landscapes for millennia. What will its future effects be? The history of fire- and vegetation-related research in the EFL makes it a good place to try and find out.

Alternative forestry scenarios at the landscape scale

These are coupe level simulations of alternatives to clearfelling for social assessment research. Landscape-level studies are now under way in the EFL and could spawn further research opportunities.

Biological responses to landscape structure

Wedge-tailed eagle and yellow-throated honeyeater - two birds which use the landscape in very different ways and at very different spatial scales. The network of forestry roads in the EFL allows for a range of studies, for instance ornithological work based on point counts.

Population viability analyses of threatened species

Larva and adult of the threatened Mount Mangana stag beetle Lissotes menalcas - subject of current autecological studies in the EFL with a view to future PVA modelling. Research on other threatened species could follow suit.