FIRE SCIENCE

by Lachie McCaw and Ben Miller

Fire is a natural part of the Western Australian landscape but its management is complex and multi-faceted. A new Fire Science Program is consolidating the department's research on the role and use of fire in community protection and biodiversity conservation, and looking at how to best manage areas to balance the risk of damage from bushfires with conservation outcomes.

The department's Fire Science Program aims to ensure that the best-possible science is available and used to inform fire management planning, implementation and monitoring and to achieve biodiversity outcomes during fire management operations. This includes data and decision support systems to help managers predict the spread and intensity of bushfires, and information on the effects of fire on biodiversity and other values in the natural environment.

Studies are being carried out to understand how native species have adapted and how they respond to varying fire intensity, frequency, season, extent and patchiness. This includes studies on the interaction of fire with threatening processes such as feral pests, weeds and climate change. These studies also inform bushfire behaviour guides that are developed, validated and regularly updated. Long-term trends in bushfire occurrence and ignition cause are also being studied to investigate the influence of land use, management activities and climatic factors on fire management regimes.

This work involves collaborations with universities, CSIRO, the Bureau of Meteorology and other scientific organisations, and partnerships with traditional owners, Department of Fire and Emergency Services, local government and other land managers.