REMOTE SENSING AND SPATIAL ANALYSIS

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Remote sensing technologies provide a range of derived products that can be highly informative for conservation and land management. One such product is a high-resolution fire history mapping that covers approximately 46.5 million hectares of WA and includes the Millstream Chichester, Karijini and Karlamilyi national parks, most of the Martu Native Title Determination and a large portion of Birriliburu Indigenous Protected Area. Remote sensing using Landsat satellite imagery and object-based image analysis is used to produce a highly accurate fire history suitable for detecting small Aboriginal hunting fires and patchy, cool season prescribed burns.

Accurate fire history and associated statistic reports are important for planning and evaluating prescribed burns to mitigate the damaging effects of large bushfires, and for predicting the occurrence of important fauna habitat, such as the threatened black-flanked rock wallaby. Findings have shown that the scale of wildfires is reduced in areas where traditional, mosaic/patch-burning is taking place. The information from this project is used by the department's Pilbara and Goldfields regions, Kanyirninpa Jukurrpa and Bush Heritage Australia.