

1. BACKGROUND

This report was prepared by the NSW National Parks and Wildlife Service (NPWS) for the joint NSW/Commonwealth CRA/RFA Steering Committee overseeing comprehensive regional assessments (CRAs) in New South Wales.

The Resource and Conservation Division (RACD) within the NSW Department of Urban Affairs and Planning supports the work of the Steering Committee. The Environment and Heritage Technical Committee (EHTC) review provided a technical endorsement of the project proposal and was also responsible for reviewing progress. The EHTC established an Aerial Photography Interpretation Expert Working Group (API-EWG) to assist with defining, interpreting and managing project specifications, and reviewing progress. NPWS undertook the work specified in the project proposal reporting to the API-EWG. State Forests of NSW (SFNSW), Eden and Pennant Hills offices and the NPWS Northern Zone office also provided technical support.

During the course of the project the RACD appointed a statewide API manager who provided management support and technical advice to the project.

1.1 SCOPE OF THE PROJECT

The aim of the Aerial Photography Interpretation (API) Mapping Project in Eden was to undertake API for the Eden CRA region (see Chapter 8, Map 1). The Eden API project was not directly linked to other CRA API projects due to time constraints. The Broad Old Growth Mapping Project (BOGMP, 1996) output map was considered satisfactory by stakeholders prior to starting the project. The project was required for the biodiversity and old growth assessments to produce digital layers and associated maps of:

- special vegetation classes; mainly rainforest, and non-eucalypt forest;
- broad and rare forest classes;
- validated and refined forest growth stages; and
- forest disturbance history.

In the limited time available, the project's scope and methods were to:

- use the existing BOGMP overlays, map rainforest, non-forest, and rare forest types. For rainforest and non-forest classes, the Keith,

Bedward, and Smith (1995) classification was used to categorise the API pathway.

- infill gaps in the coverage of aerial photo-interpreted broad and fine overstorey classes
- validate and refine the existing growth stage mapping and broad disturbance mapping;
- validate the broad disturbance mapping done as part of the Broad Old Growth Mapping Project;
- to provide API of any previous disturbance history; and
- to provide data for pre-1750 mapping/modeling.

1.2 OBJECTIVES

The objectives of the project were to undertake aerial photo-interpretation (API) for the Eden CRA region as required for old growth and biodiversity assessments to produce digital layers and associated maps of:

- special vegetation classes, rainforest and non-eucalypt forest;
- broad and rare forest classes;
- validated and refined forest growth stages; and
- broad forest disturbance history.

1.3 FINAL OUTPUTS

Final outputs of the project were:

- A digital map of broad forest classes for the Eden CRA area with metadata statement;
- An updated digital map of forest growth stage for all of the Eden CRA area with ground validated agreement assessment and metadata statement;
- A digital map of historical forest disturbances for the Eden CRA area; and
- A final report detailing project history, methods and validations.

Other projects that directly relied on the digital layers provided by this project were:

- Forest Ecosystem Classification and Mapping;
- Old Growth;
- Response of Forest Biota to Disturbance;
- Ecologically Sustainable Forest Management; and
- FRAMES, wood resources project.

Note that this API mapping is seen as providing geographic information system (GIS) layers for use in the Eden Forest Ecosystem Classification and Mapping Project, rather than as an alternative forest vegetation-mapping scheme.

1.4 PREVIOUS REGIONAL API MAPPING OF EDEN

Prior to the commencement of this project, approximately 270,000 hectares of suitable digital API mapping of eucalypt forest canopy floristics were considered available. This was to comprise 205,000 hectares of SFNSW Research Note 17 (RN17) forest typing and 65,000 hectares of NPWS broad forest classing. This left approximately 230,000 hectares still to be captured. (Research Note 17 is a forest species classification system, first developed in the 1950's by SFNSW, to map the location of commercially important forest species).

There was however a reduction in the amount of suitable digital API mapping of eucalypt forest canopy floristics. This reduced the available digital coverage by approximately 115,000 hectares to 155,000 hectares. As a result the area remaining to be digitally captured increased to between 315,000 and 356,000 hectares.

There were two reasons for this reduction. Firstly, two RN17 maps had not been digitised (Rockton/Nungatta section and the Cathcart/Coolangubra section). These two areas had to be digitised reducing the total digitally available layers by approximately 50,000 hectares. Secondly, NPWS broad forest class mapping of Wadbilliga National Park did not meet API accuracy specifications for this project thus reducing the amount of API information digitally available by a further 65,000 hectares.

At the commencement of this project it was expected that up to 284,000 hectares of detailed forest typing would be available. Previous API growth stage mapping was done as part of the statewide Broad Old Growth Mapping Project (BOGMP, 1996) in the Interim Forest Assessment (IFA). In that process API mapping was confined to mapping of growth stage attributes and rainforest and non-forest across all land tenures in the Eden Management Area. The minimum polygon size was 10-25 hectares for all mapped attributes.

The total area of growth stage and forest disturbance mapping completed for the Eden CRA Region was approximately 485,000 hectares. Previous work generally met the CRA API mapping standards though no post capture field validation of the final layer occurred. After careful field validation of the BOGMP growth stage layer it became apparent that more work

than anticipated was required to remove inaccuracies and bias from the layer.

1.5 PROJECT MANAGEMENT SUMMARY

The project started in March 1997 and was completed by the beginning of September 1997. This represented a three-month delay in the anticipated start and completion dates.

A total of five temporary staff at NPWS Southern Zone, ten interpreters (two of whom were employees of SFNSW), two digital capture companies (Victorian) and two NPWS staff plus NPWS administration, GIS and executive staff supported the project as required during the project.

SFNSW and NPWS Eden District, Southern Region and GIS Division also provided considerable support. Commonwealth and State Government agencies along with industry, union and conservation groups provided representatives to give expert advice and project direction through API-EWG, the EHTC and the joint NSW/ Commonwealth CRA/RFA Steering Committee. The personnel and operational hierarchy is outlined in Appendix 9.1.

The project was broken into eight phases:

- Phase 1. Data Audit
- Phase 2. API Mapping of Rainforest and Non-Forest
- Phase 3. API mapping of broad and rare Forest Vegetation Classes
- Phase 5. Validation of Growth Stage Mapping
- Phase 6. Broad Disturbance Mapping
- Phase 7. Desktop Assessment of Logged Areas
- Phase 7. Data Capture
- Phase 8. Draft Project Report.

