

## WILDFIRE ASSET IDENTIFICATION AND CONSEQUENCE EVALUATION PROJECT



### Project Overview

#### What is the Wildfire Project about?

The wildfire project has been funded as a result of recommendations arising from the Report of the Inquiry into the 2002–2003 Victorian Bushfires. The project will enable the consequences of wildfire<sup>i</sup> on assets<sup>ii</sup> to be mapped in a uniform way across the state of Victoria. This will meet the needs of a range of stakeholders and end-users responsible for wildfire management planning.

The products developed by the project will primarily be used as planning tools and service the prevention and preparedness components of wildfire management. The products should also provide useful strategic information for response and recovery phases of wildfire management and should be sufficiently flexible to be applicable for hazards other than wildfire.

The project will involve substantial consultation with key stakeholders to identify and describe the consequences of wildfire on assets in a consistent state-wide framework. The project will make an important contribution to the development of a more holistic approach to wildfire management by delivering consistent statewide products that support and enhance local community consultation and engagement in wildfire planning and decision-making on both public and private land.

A methodology will be developed to identify, describe, classify, quantify and map the consequence of wildfire on a range of environmental, physical, social and economic assets. The project will focus on static assets (e.g. utility infrastructure) since dynamic assets (e.g. forest plantation age) require local knowledge. Where dynamic assets can be reasonably predicted (e.g. seasonal population) and are supported by state-wide spatial datasets, they may be considered. The project will define a number of terms to ensure common understanding in relation to assets in the natural environment. A significant part of determining the consequence or impact of wildfire on assets will be to define their significance and the value that is ascribed to them. The project will deliver spatial products that support integrated wildfire planning and decision making across Victoria.

The Office of the Emergency Services Commissioner (OESC) has engaged Spatial Vision and its team (Beca, RMIT Centre for Risk & Community Safety and Ecology Australia) to undertake this project.

The project consists of three separate work packages as follows:

- Literature Review and Stakeholder and End-User Consultation Strategy
- Methodology Development
- Spatial Product Development

#### Project Objectives

The Wildfire Project will develop a:

- Methodology to identify, classify, quantify and evaluate the consequences of wildfire on assets in the natural environment (including life, property and the environment) throughout Victoria; and
- State-wide wildfire consequence map and dataset(s) consolidated from existing datasets, presented in a uniform and accessible format that supports integrated wildfire planning and decision making across DSE, CFA and Local Government.

#### Project Scope

The project will establish an evidence-based methodology, designed to inform and support integrated wildfire planning and decision making. It will develop approaches, principles and tools that will support shared understanding of the consequences of wildfire across Victoria in a consistent way.

This project will not produce a range of products across the full risk management spectrum. The project will focus exclusively on the consequence (as opposed to the likelihood) components of risk management.

The Emergency Management Manual of Victoria defines risk as a function of the interaction of hazards, both natural and technological, and the assets at risk: people, their structures and the environment. Risk management focuses attention on both the sources of risk and the assets at risk.

Figure 1 provides a diagrammatical representation of the interaction between the hazard, assets and vulnerability components of risk. The figure also differentiates between static and dynamic assets. This focus of this project will be on static assets.

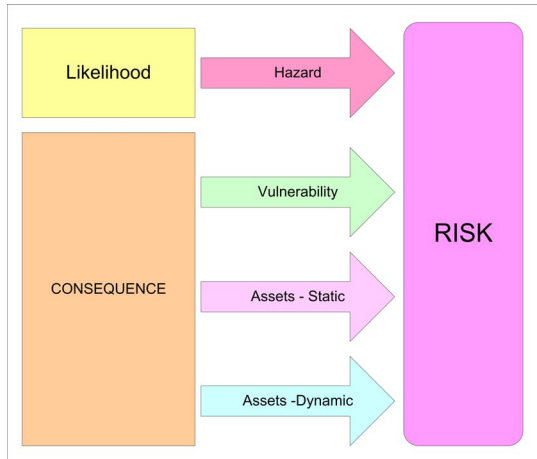


Figure 1. Diagrammatic representation of the components of the risk management framework and context in which this study, which is to focus on static assets, resides.

### Project Study Area

The Study Area for the Wildfire Project is the State of Victoria, including urban and rural interface areas. The outcomes from this project will be used on a state-wide basis for wildfire planning in addition to being meaningful at a local level for use by local municipalities and integration with local agency fire plans. There is a diverse range of stakeholders at both the State and Local jurisdictions who have particular levels of responsibility relating to wildfire planning and management.

### General Approach

In its simplest form the general process to be applied to an asset type may involve:

- Identify asset to be described;
- Identify suitable and available spatial datasets that delineate and describe asset;
- Obtain and incorporate into methodology primary (or source) spatial datasets and supporting classification schema from custodian;
- Determine and undertake process by which primary spatial dataset is to be translated into a corresponding asset quantity to be assigned a 'reporting unit' (where the spatial extent of the asset within the reporting unit is used to determine the quantity of the asset);
- Determine and undertake process by which the asset quantities are to be translated (based on threshold values) into an asset value assigned to a 'reporting unit';
- Determine and undertake process by which the asset value is to be translated (based on threshold values) into a consequence rating assigned to a 'reporting unit' for a full loss, partial and nil loss scenario.

A further stage of the process may be to amalgamate the consequence value assigned to a group of asset types and provide these in the form of an asset type group. A weighting may be introduced to support the integration process.

Figure 2 provides a diagrammatic representation of the key components of the general process to identify, classify and quantify assets at risk from wildfire, and the evaluation of the consequences of their loss or damage by wildfire.

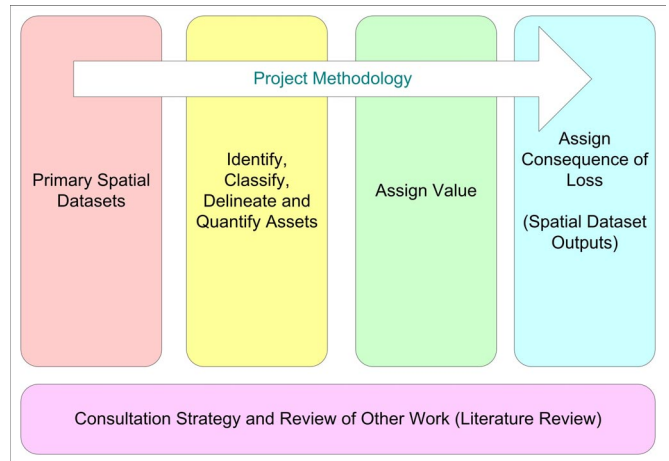


Figure 2. Diagrammatic representation of the key components of the general process to identify, classify and quantity assets at risk from wildfire, and the evaluation of the consequences of their loss or damage by wildfire.

### How long will the Wildfire Project take to complete?

Key project dates relating to the completion of each project stage are:

#### March 2006

Stage 1 – End-User/Stakeholder Consultation Strategy, and Literature & Data Review

#### June 2006

Stage 2 – Methodology Development

#### October 2006

Stage 3 – Spatial Product Development

### Relationship to IMFMP Project

The Integrated Municipal Fire Management Planning Project (IMFMP) is bringing together all agencies and organisations responsible for fire management planning in Victoria and is aimed at improving the management of fire events at a local level through improved planning and inter-agency cooperation. Deliverables from the Wildfire Project will provide practical tools to support the IMFMP process.

### Stakeholders

The stakeholder groups identified in relation to the Wildfire Project are as follows:

**Key Stakeholders:** are the direct participants in the project, which include:

- Office of Emergency Services Commissioner
- Country Fire Authority
- Department of Sustainability and Environment
- Municipal Association of Victoria

The Integrated Municipal Fire Management Planning Project is also included as a key stakeholder as the final products of this project will provide content in the form of standardised data and information to support the new integrated fire management planning process.

**End-Users:** predominantly but not exclusively drawn from key stakeholder agencies. They will include individuals, work groups and planning committees who will use the products in their day to day fire management activities at local, regional and state levels.

**Interested Parties:** includes all organisations other than key stakeholders and end-users, recognised as potentially having an interest in the project.

**End-Users**

End-Users include individuals, work groups and planning committees who will use the products in their day to day fire management activities at local, regional and state levels. These end-users include DSE Fire Management Planners and Local Government Municipal Fire Prevention Officers (MFPOs), and both Regional and Municipal Prevention Committee members. It also includes officers working under the new Integrated Municipal Fire Management Planning (IMFMP) Project.

Figure 3 provides a diagrammatical representation of the relevant strategic fire planning activities undertaken by these end-users on both public and private land. The area contained within the hatched line identifies the primary focus of the Wildfire Project in relation to end-users, while it is acknowledged that the project will have broader benefits beyond the fire management planning area.

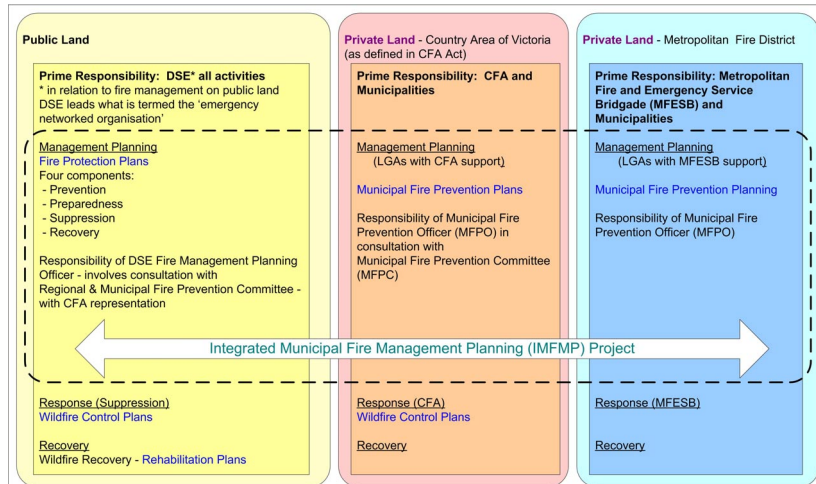


Figure 3. Diagrammatical representation of relevant strategic fire planning activities undertaken by these end-users on both public and private land.

**Further Information**

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Future Project Updates will also be available on the Spatial Vision website at:  
<http://www.spatialvision.com.au/html/wildfire-project.htm>

<sup>i</sup> Defined by the Australasian Fire Authorities Council as any unplanned grass, scrub or forest fire.

<sup>ii</sup> In this context the word “asset” is based on the definition used in the proposed Code of Practice for Fire Management on Public Land which identifies assets as “recognised features of the built, natural and cultural environments. Built assets may include buildings, roads and bridges or structures managed by utility and service providers as well as recognised features of private land such as houses, property stock and crops and associated buildings and equipment. Natural assets may include forest produce, forest regeneration, conservation values including vegetation types, fauna, air and water catchments. Cultural values may include recreational, indigenous, historical, archaeological, and landscape values”.