

Review of Fire Operations in Forest Regions

June-Sept 2001

Fire Review

- Internal Review
- 13 Terms of Reference
- 43 Recommendations

Fire Review

Key Areas

- A change in the primary focus for fire management planning
- More burning required to meet both biodiversity and protection objectives
- Broader involvement in fire management planning
- Transparency & accountability important
- Firefighter Safety critical

- Why change?
- Outline of key areas
- Areas relating to PVS

Fire – Legal Requirements

(Term of Reference 2)

- Obtain legal advice to identify the department's legal responsibility for fire management and wildfire protection.

Fire – Legal Responsibilities

- The Bushfires Act 1954
- Fire Brigades Act 1942
- Fire & Emergency Services Act 1998
- Conservation & Land Management Act 1984
- Wildlife Conservation Act 1950
- Environment Protection and Biodiversity Conservation Act 1999
- Forest Products Act 2000
- Common Law

Fire – Legal Responsibilities

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 - Obligations on landowners & occupiers

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 - Directions by Local Authority
 - Powers for certain officers
 - Special recognition for “forest land”

Fire – Legal Responsibilities

- Fire Brigades Act takes precedence in gazetted fire districts
 - Overrides forest officer powers
 - Landholders can be directed to abate hazards etc.

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Fire – Legal Responsibilities

- The Bushfires Act and Fire Brigades Act do not generally bind the Crown.

Fire – Legal Responsibilities

- Conservation & Land Management Act 1984
- Wildlife Conservation Act 1950
- Environment Protection and Biodiversity Conservation Act 1999
- Some powers under the CALM Act
- Statutory requirements relating to biodiversity protection

Fire – Legal Responsibilities

- The Department is not bound by the Bush Fires Act.
- Fire management is an implicit requirement under the CALM Act.

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- The Department is not bound by the Bush Fires Act.
- Fire management is an implicit requirement under the CALM Act.
- There is a duty of care under common law to take reasonable care to prevent loss or injury from fires.

New Focus for Fire Management

- Planning to be primarily based on achieving department's core outputs

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New Focus for Fire Management Application

- Adaptive management approach advocated, that is responsive to:
 - New knowledge
 - Monitoring results

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- Use of fire/structural models

New Focus for Fire Management

Application – Structural Models

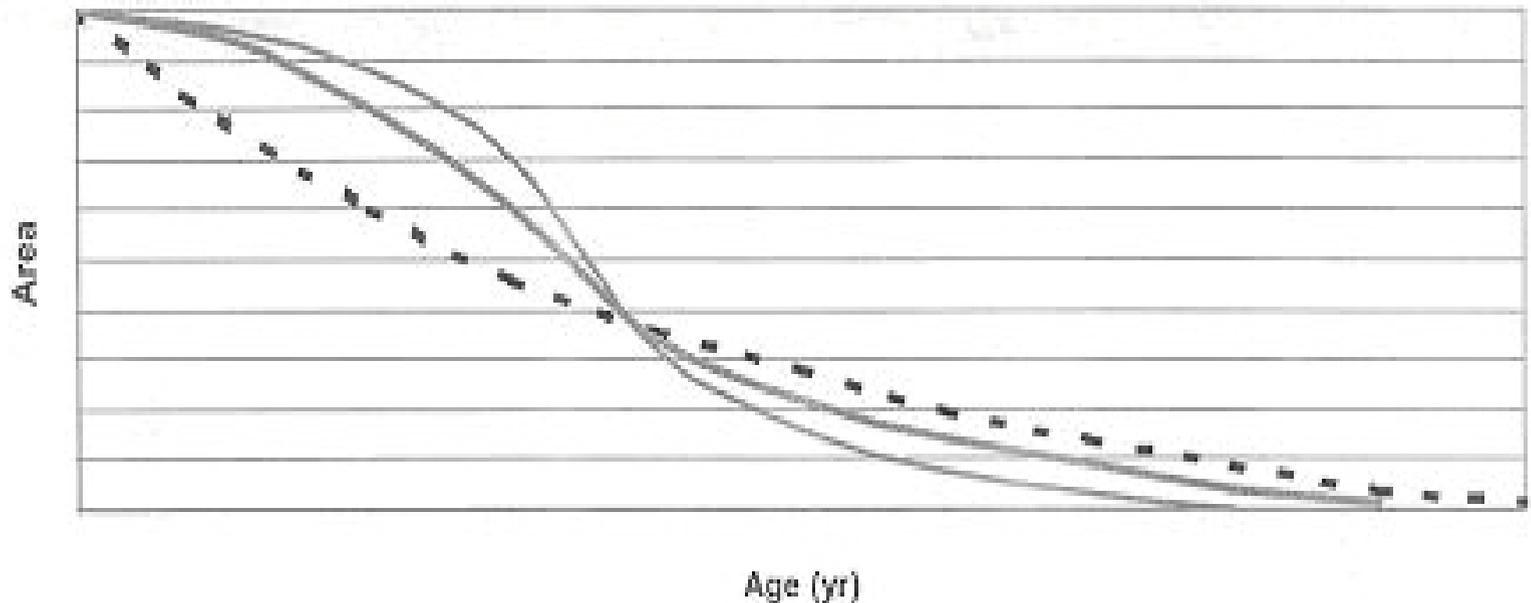


Figure 2. Area distribution with time since fire assuming different hazard functions. Dotted line represents a negative exponential distribution. (Adapted from Johnson & Van Wagner 1985)

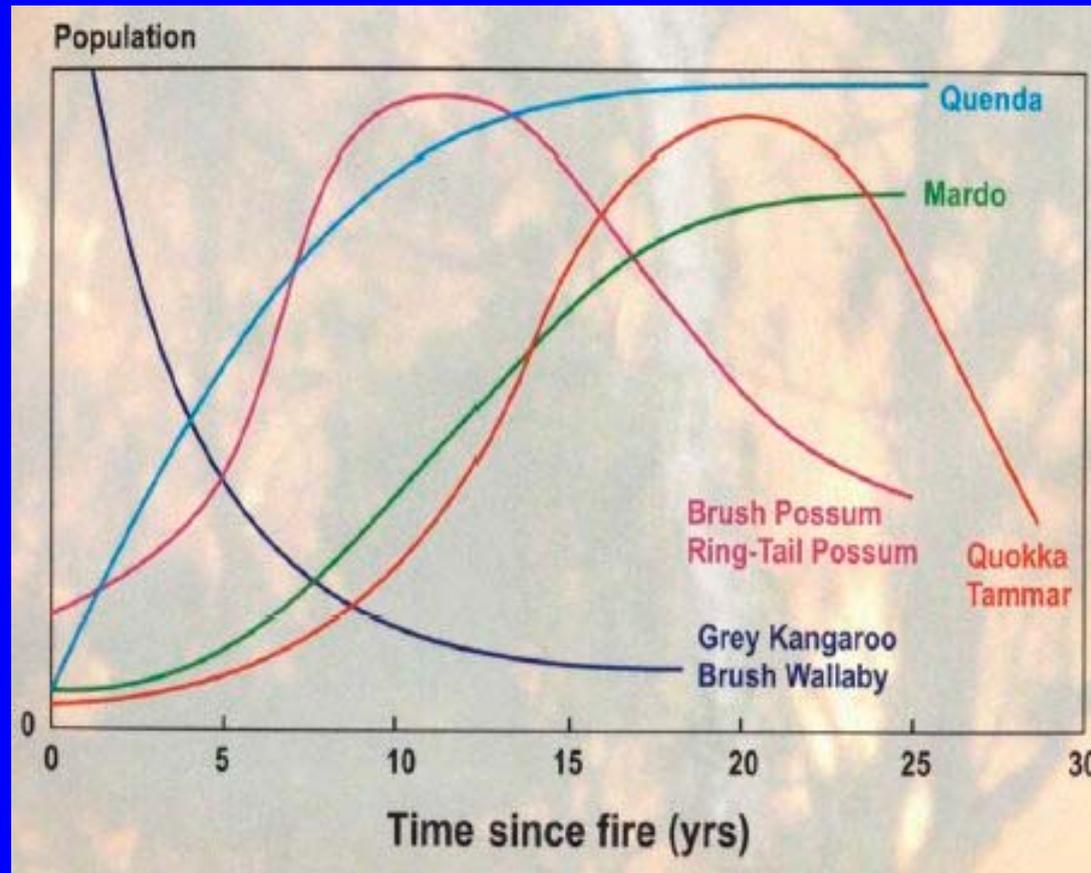
Reproduced from Tolhurst, 2001

New Focus for Fire Management Application

- Use of fire/structural models
- *Fire diversity promotes biodiversity* premise

New Focus for Fire Management

Application – Fire Diversity



New Focus for Fire Management Application

- Use of fire/structural models
- *Fire diversity promotes biodiversity* premise
- Long term research required to improve knowledge base

New Focus for Fire Management

- Planning to be primarily based on achieving department's core outputs
- A risk management approach should be taken to fire protection.

Risk Assessment

Term of Reference 3

- “Identify values of the south-west forest region land which CALM manages “

Risk Assessment

- Historical difficulty in comparing market and non market values
- Values classification approach
- Four types of values considered
 - Biodiversity conservation
 - Visitor values
 - Forest Production
 - Community protection
- 7 ranked groups

Risk Assessment

Values Classification

Group 1 Values

- Human life
 - Significant threat of multiple fatalities
eg high summer use, restricted egress
- Irreplaceable biological values
 - Sole vulnerable populations, extinction likely

Risk Assessment

Values Classification

Group 2 Values

- Very high biological values
 - TEC/spp, P1 spp – possible extinctions
- Very high property/community impact. Some risk to life.
 - High visitor volume tourist areas
 - Irreplaceable Aboriginal/Heritage sites
 - Essential utilities
 - Residential areas

Risk Assessment

Values Classification

Group 3 Values

- High biological, property values, low risk to life
 - Vulnerable P2 spp/communities
 - Underrepresented structural types
 - Pine >100ha 8-20yo
 - Karrir >1000ha 5-30yo

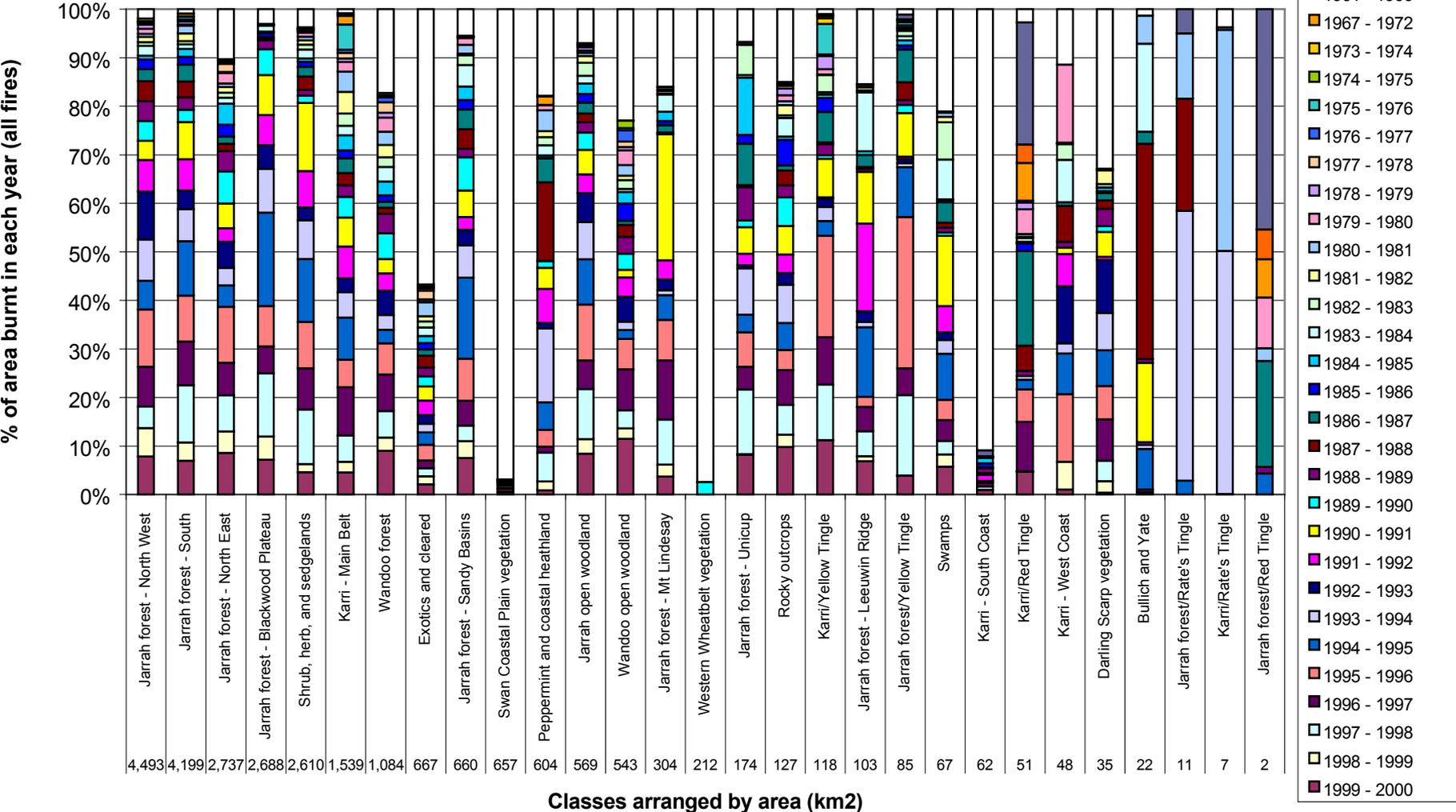
Fire Review- Second Key Point More Burning Required

- Protect biodiversity
- Life/Asset risk management

More Burning Required Background

- Past forest management practices have resulted in diversity of fire ages and structural diversity

Fig 10.1 Bradshaw and Matisse RFA Ecosystems - Year Last Burnt (All Forest Regions)



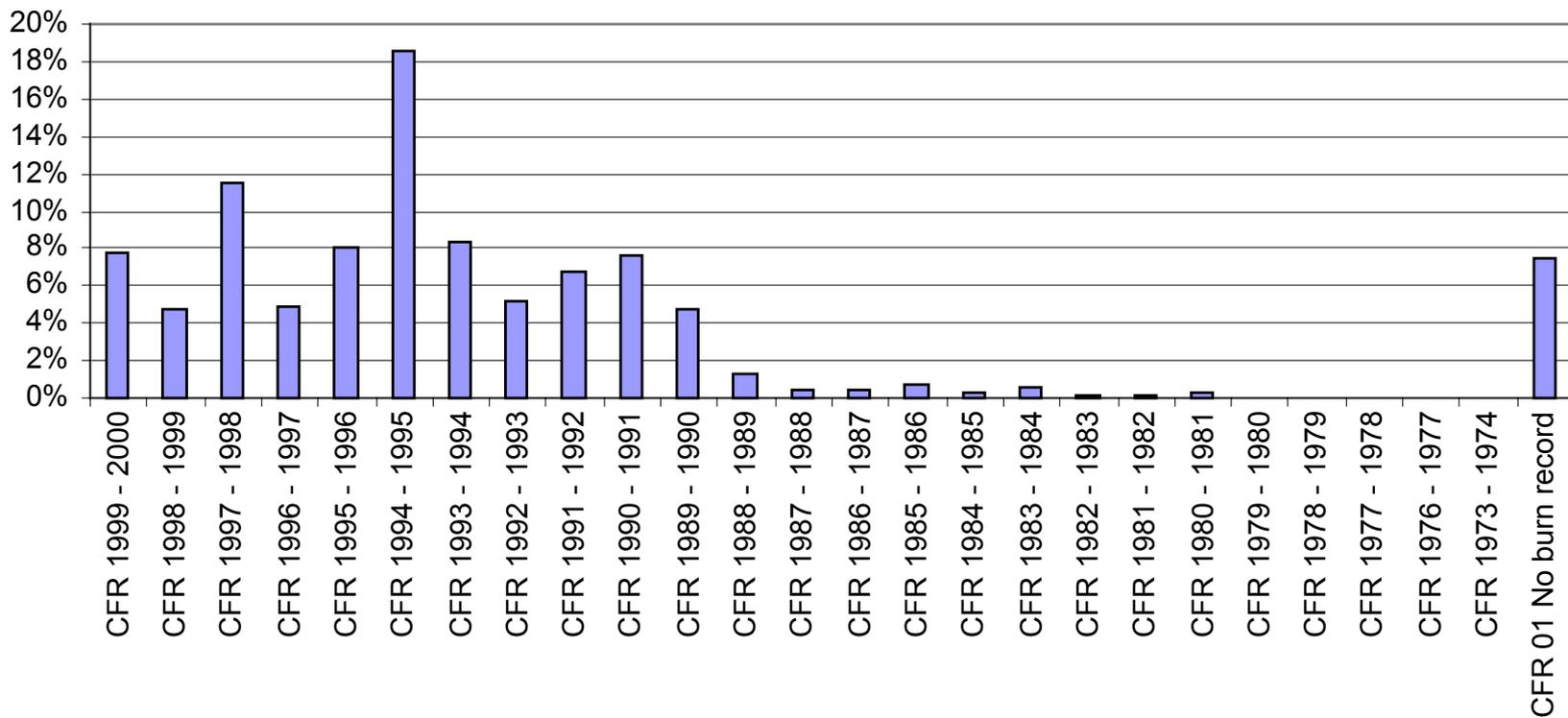
More Burning Required

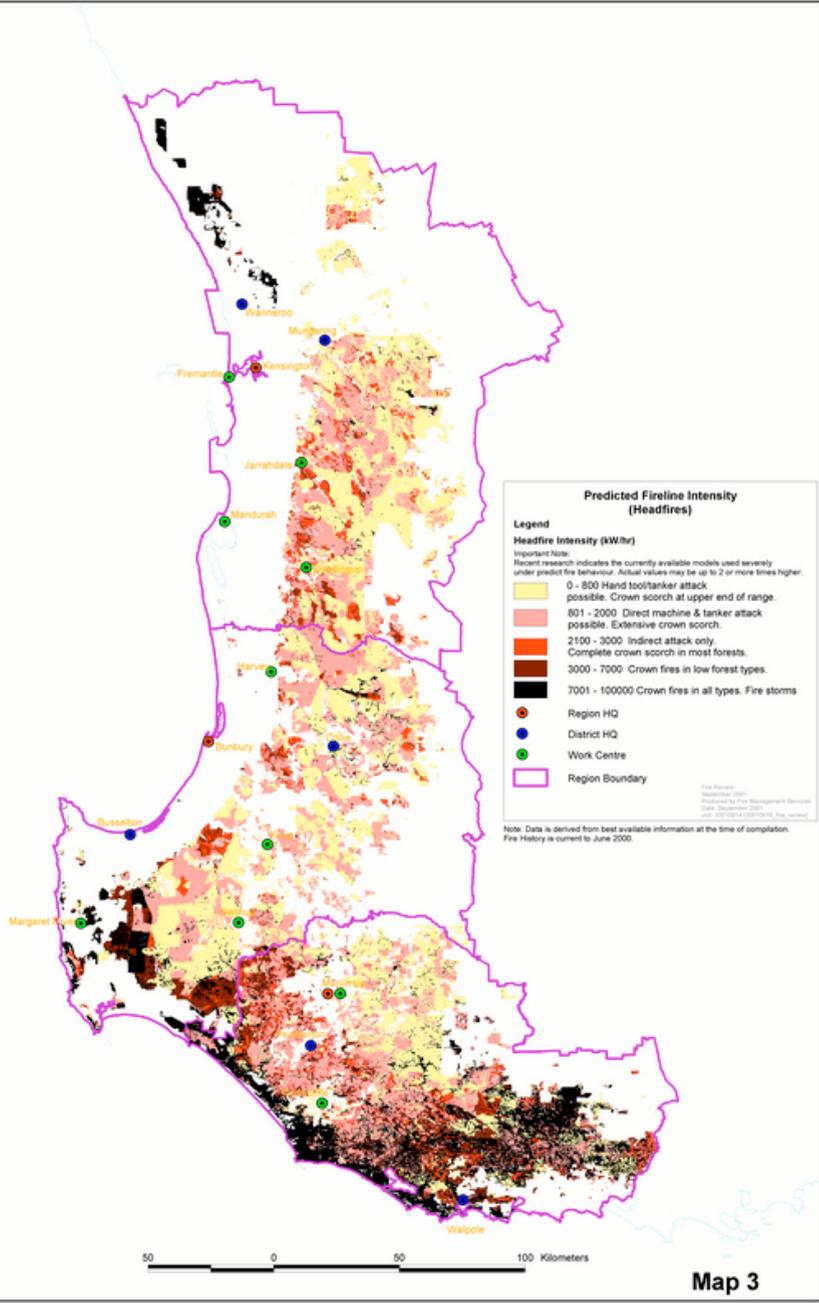
Background

- Marked decline in area burnt in recent years threatens fire diversity: more burning is needed (within a diverse regime).

Year Last Burnt Distribution - Central Forest Region Christensen Land System/Landscape Classification Units

Blackwood Plateau, Jarrah Uplands





Map 3

More Burning Required

Future

- Burn size should be maximised:
 - Balance of risk
 - Cost effective
 - Optimises use of limited “windows”
 - Diversity within burns
 - Improved boundaries
 - Reduced mechanical disturbance

Fire Review - Third Key Point

Broader Involvement in Fire Planning

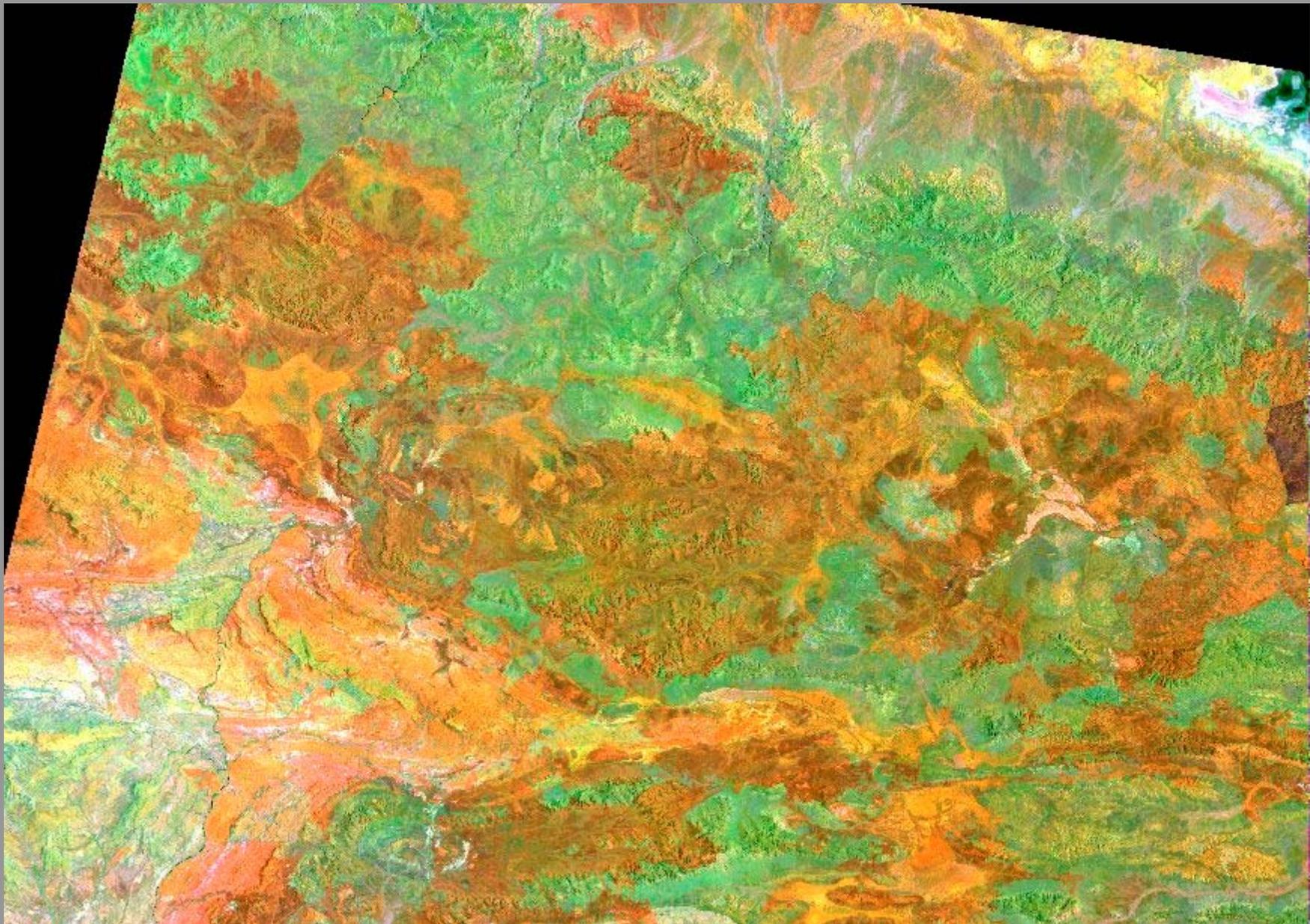
- Range of effects from fire management
 - On site effects
 - Off site effects
- Range of views/beliefs
- Need to increase mutual understanding
- Need to achieve best overall outcome

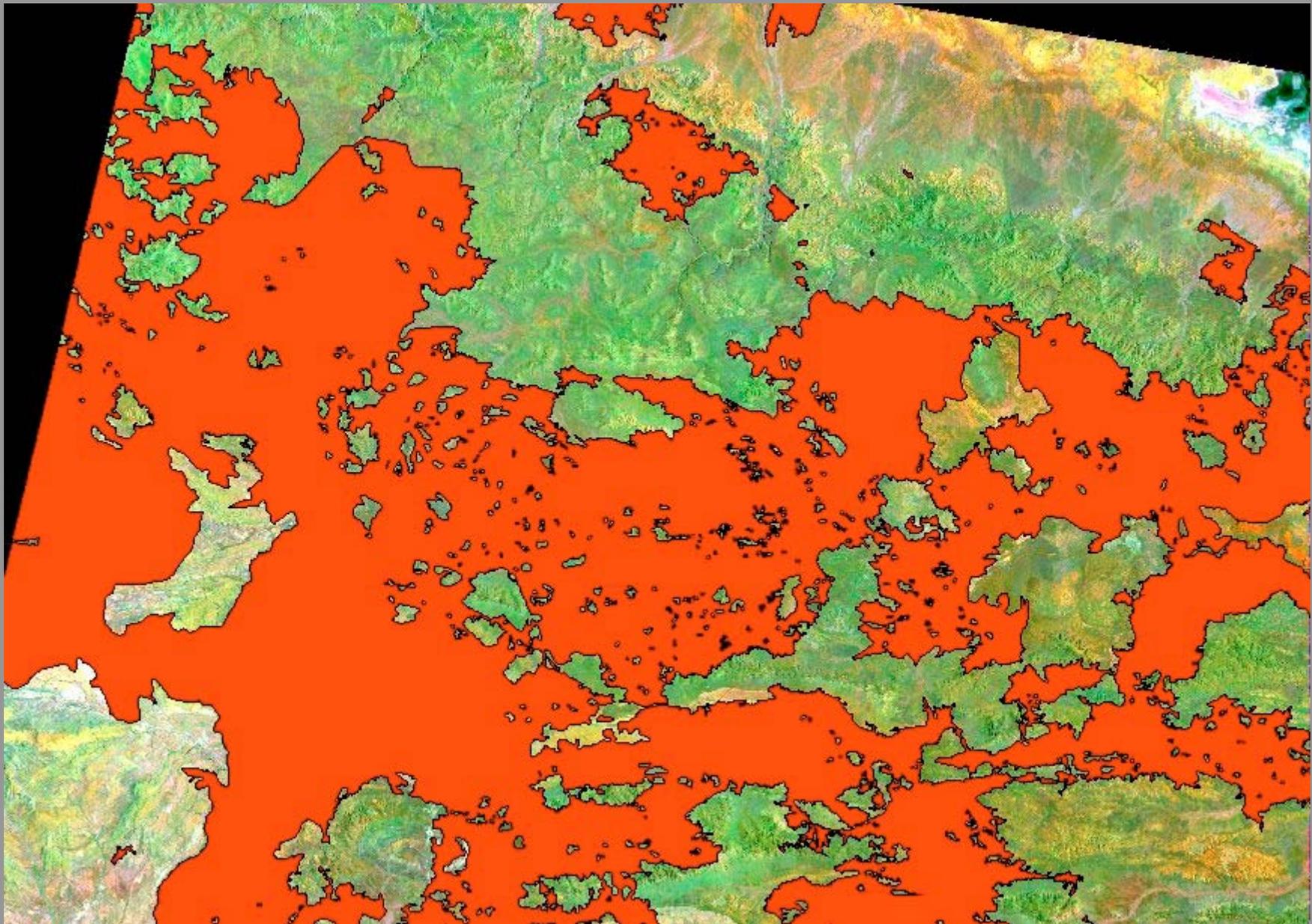
Broader involvement in fire planning

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- Provide analytical tools to support decision making
 - WTA and Fire Management analyses
 - Remote sensing and GIS technologies





Prescribed Burn
Spring 2000
MJ_10
Manjimup District

Post Burn
Assessment
Landsat TM 7

Classification

Purple – unburnt

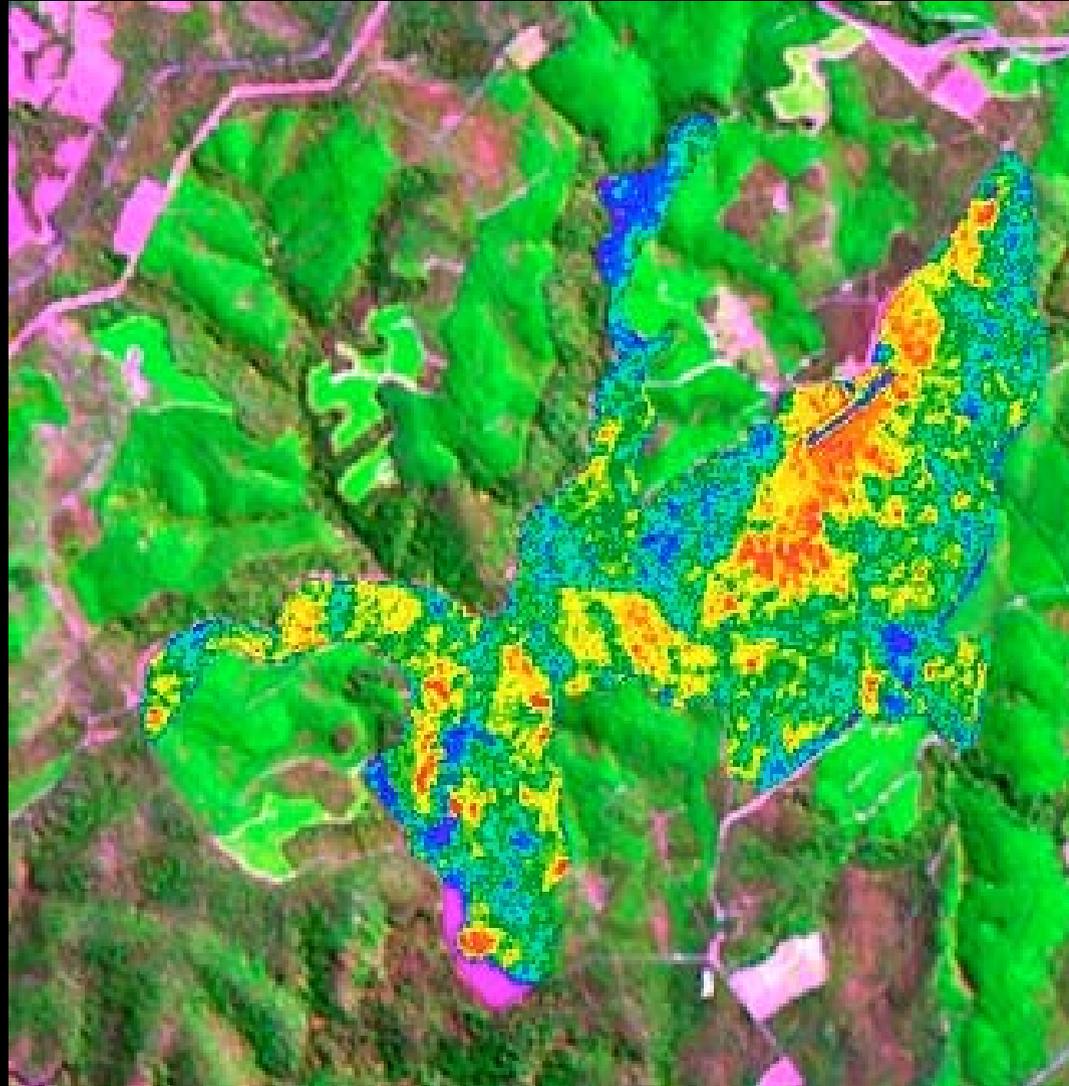
Dark Blue – low scorch

Light Blue - low scorch

Green - low scorch (80% canopy
cover)

Yellow – medium scorch (20% canopy
cover)

Red – full scorch



Transparency & Accountability

Term of Reference 8

- “Develop a means of separately identifying timber protection, community protection values, and nature conservation values”

Transparency & Accountability

- Changes in accounting procedures to facilitate accurate cost allocation

Transparency & Accountability

- Changes in accounting procedures to facilitate accurate cost allocation
- Clear definition of objectives fundamental for cost allocation

(Recommendation 8.1)

- Clear objectives for the protection/enhancement of values be agreed between representatives of the purchasers (Forest products Commission and Output Directors) and providers (Regional Services fire representatives) during the planning process, and these form the basis for cost allocation.

Transparency & Accountability

- Changes in accounting procedures to facilitate accurate cost allocation
- Clear definition of objectives fundamental for cost allocation
- Broader involvement in fire management planning

Firefighter Safety

Term of Reference 5

- Provide advice on fire fighter safety as a part of the risk analysis.

Firefighter Safety

- Recognition and avoidance of danger is critical for fire safety

Firefighter Safety

- Recognition and avoidance of danger is critical for fire safety
- Forest firefighter skills and experience base must be maintained
 - Employment strategies
 - Training
 - Formal mentoring program

Fire Review

Summary of Key Points

- Core outputs primary focus
- Risk management approach to fire protection.
- More burning required.
- The need for greater transparency and wider consultation/involvement in fire management
- Firefighter Safety of critical importance