Program Logic for Prescribed Burning

CHARTING THE RATIONALE UNPINNING PRESCRIBED BURNING

PRODUCED BY THE NATIONAL BURNING PROJECT

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An Australian Government Initiative

— Centre of Excellence —
PRESCRIBED BURNING

INTRODUCTION

Program logic graphically articulates relationships between inputs, activities, outputs and outcomes. It visually represents steps and processes required, and highlights underpinning assumptions and connections. As a result, program logic is a useful tool for evaluating program design, refining program design and to evaluate if objectives, strategies, programs, system or procedures are authentically aligned (http://evaluationtoolbox.net.au).

This *Program Logic for Prescribed Burning* contains the vision, strategic objectives, goals, inputs, activities, outputs and outcomes that underpin prescribed burning in Australia. It was developed as part of the *Prescribed Burning Performance Measurement Framework* (AFAC 2017) in order to support the development of nationally relevant performance measures for prescribed burning, however, it is presented here as a standalone document for use by prescribed burning practitioners and anyone designing prescribed burning policy, systems and procedures.

This program logic contains:

- **Strategic objective and goals** – which outlines typical strategic planning phase objectives for prescribed burning;
- **Inputs** – The resources that typical prescribed burning programs use;
- **Activities** – Processes and actions undertaken to achieve the program's objectives;
- **Outputs** – The services the program delivers;
- **Immediate outcomes** – The benefits derived at a site and individual burn scale;
- **Intermediate outcomes** – The benefits derived at a landscape scale;
- **Final outcomes** – The results at jurisdictional scale as a result of applying a fire regime in the long term;
- **Vision** – The benefits at national scale as a result of multiple stakeholders applying prescribed burning programs over many years.

For more detailed information see *Prescribed Burning Performance Measurement Framework*, AFAC 2017.

The logic design presented here is not mandated, and not all elements of the design will be relevant to all organisations or at all times. It is presented as a national model of the rationale behind prescribed burning, and therefore cannot reflect all of the local requirements of an organisation or jurisdiction.

The National Burning Project (NBP) has brought together inter-related aspects of prescribed burning across Australasia to design guiding frameworks and principles for a more holistic and consistent approach to prescribed burning. A number of detailed reports have been produced, each of which stands alone, yet with synergies across all reports that have been drawn together into a number of easy to use synopses:

- *Process Map of Prescribed Burning*
- *Best Practice Principles for Prescribed Burning*
- *Risk Management Framework for Prescribed Burning*
- *Objectives, Monitoring and Evaluation Framework for Prescribed Burning*
- ***Program Logic for Prescribed Burning (this document)***

The synopses are designed to facilitate greater utilisation of the prescribed burning principles by land and fire professionals, to improve consistency nationally, and provide orientation to users about the NBP products and how they fit together.

Department of Parks and Wildlife, Western Australia

NATIONAL BURNING PROJECT

The National Burning Project was jointly commissioned by the Australasian Fire and Emergency Service Authorities Council (AFAC) and the Forest Fire Management Group (FFMG) and has produced a range of products as shown below.

SYNOPSES

A great resource summarising the guidelines and frameworks developed by the National Burning Project as simple and ready-to-use brochures.

SYNOPSES

NATIONAL POSITION

The National Position articulates a nationally agreed position on prescribed burning and establishes principles for the development and implementation of prescribed burning policies and programs.

AN APPROACH TO OBJECTIVES SETTING

A tool for clearer identification of costs and benefits when analysing competing objectives in planning for prescribed burning.

FUNDAMENTAL

BEST PRACTICE GUIDELINES

Strategic | Operations

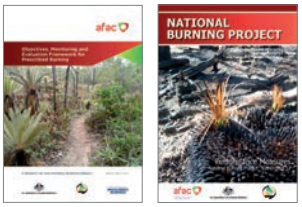
The frameworks and principles identified in these documents will be valuable to practitioners, planners and land managers with an interest in planning or undertaking prescribed burning in the best possible way.

RISK FRAMEWORKS

Operations and safety | Smoke and GHG | Fuel hazard | Ecological

These reports build and present frameworks that can be adopted by practitioners and agencies to facilitate improved approaches and greater appreciation of risks associated with undertaking prescribed burning.

MEASURING PERFORMANCE



Objectives & monitoring | Performance measures

A framework and set of performance measures for evaluating prescribed burning against desired objectives.

PROCEDURAL

BEST PRACTICE SYNOPSES

Process map

Step-by-step best practice guide for prescribed burning, from strategic planning through to burning implementation.

Best practice principles

Best practice principles for prescribed burning summarised into a ready-to-use synopsis for the benefit of prescribed burning professionals.

RISK MANAGEMENT SYNOPSIS

The risk management framework for prescribed burning summarised into a ready-to-use synopsis for the benefit of prescribed burning professionals.

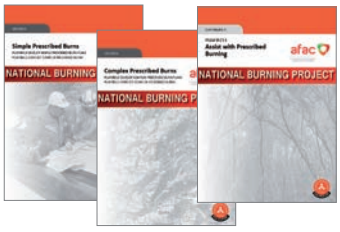
PROGRAM LOGIC

Diagrammatic summary of the rationale behind prescribed burning.

TRAINING MANUALS

These learner resources provide instruction and theory that can be used by students or by instructors for lesson planning.

- Assist with prescribed burning
- Simple prescribed burns
- Complex prescribed burns



TOOLBOX

The National Tool Box is a repository of existing decision support tools that can aid in prescribed burning.

TECHNICAL

OVERVIEW

This report is a very useful introduction and overview of prescribed burning in Australasia and the evidence base that underpins the use of planned fire.

BEST PRACTICE REVIEW

This report provides a detailed account of the prescribed burning practices that are considered to be examples of best practice.

SCIENCE REVIEW

Reviewing science, practical and Traditional Owner knowledge around the use of prescribed burning as a land management tool.

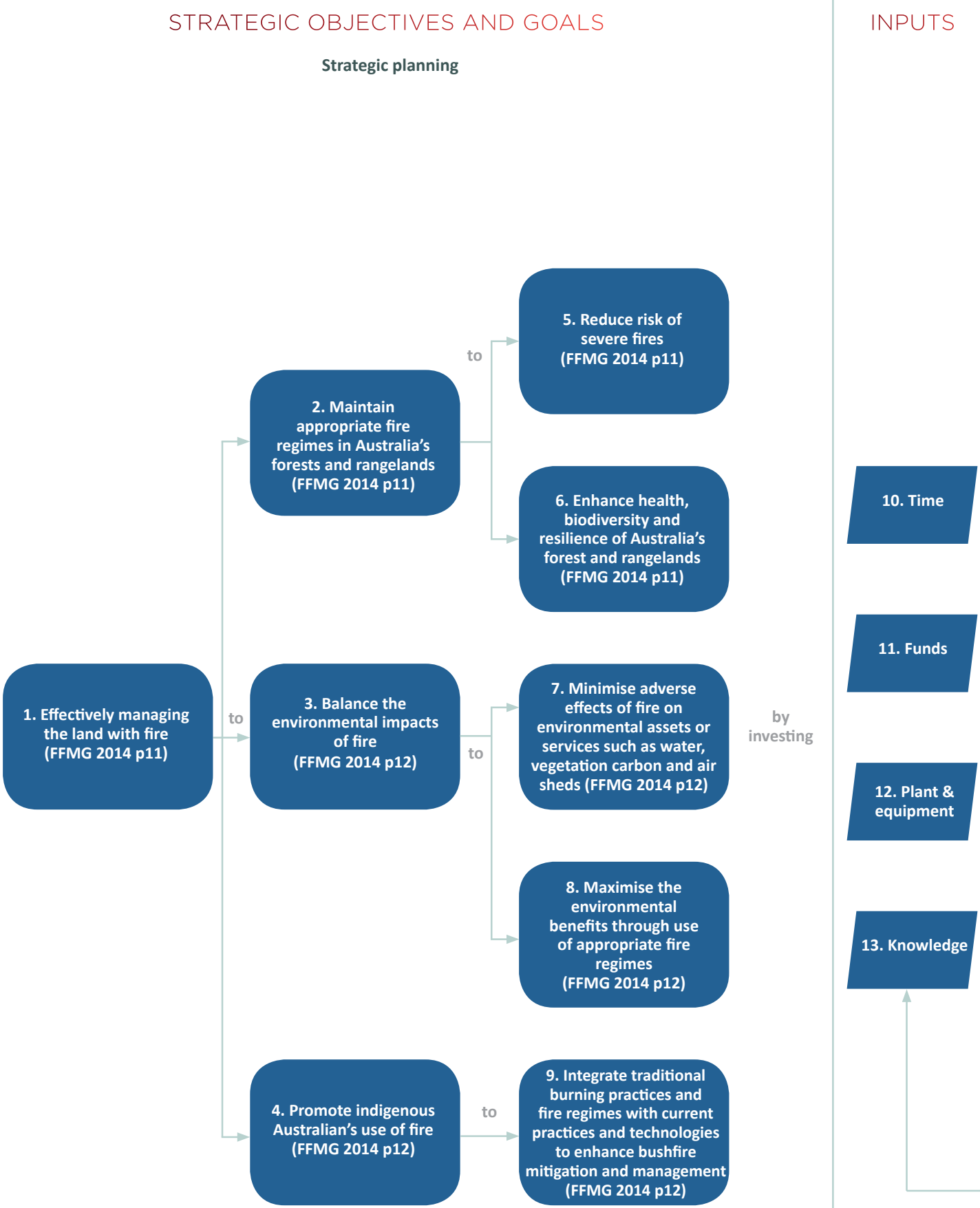
CAPABILITY REVIEWS

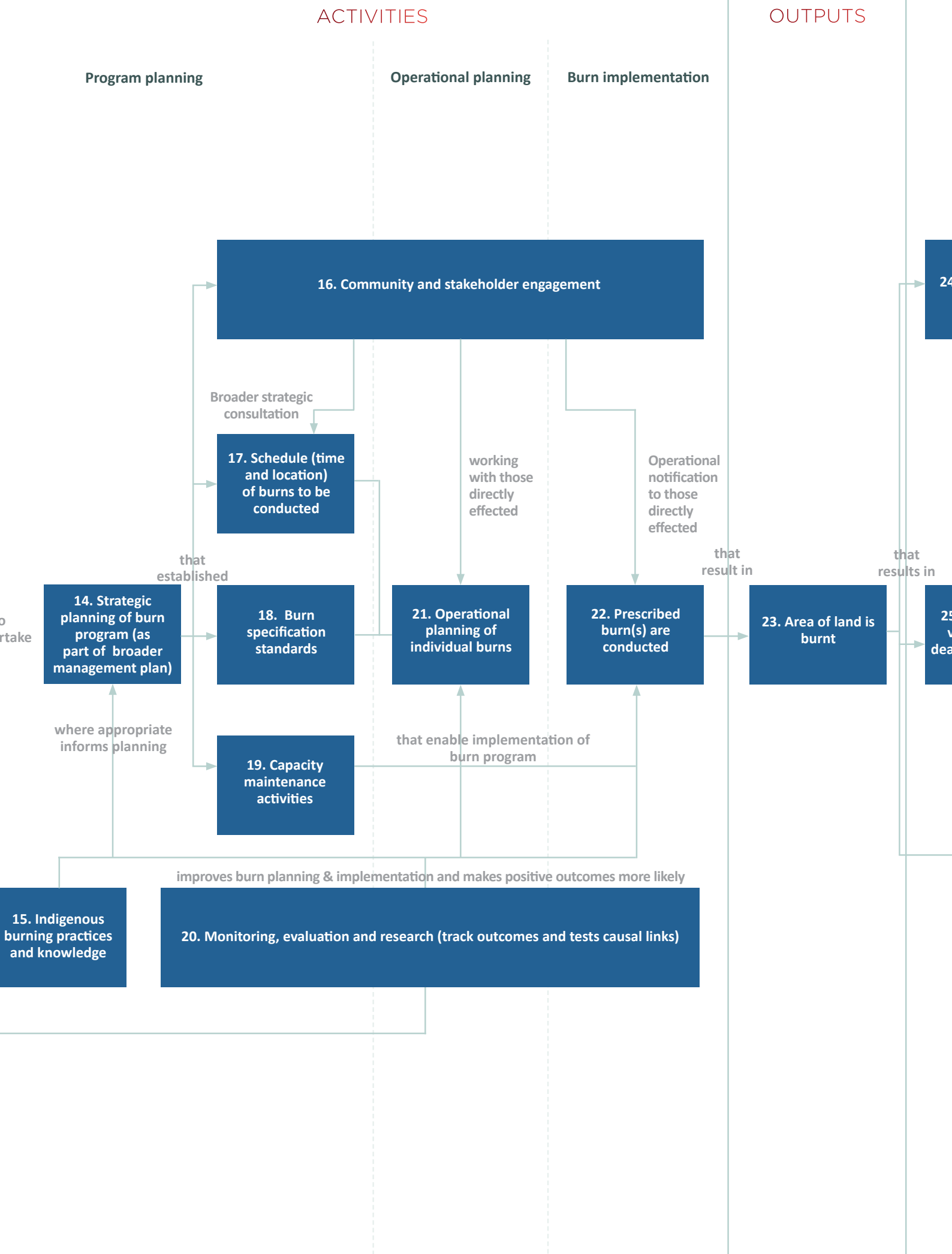
Training | Resources

A review of prescribed burn training and resource capability to aid in improving training and resource sharing outcomes.

SUPPORTING PUBLICATIONS

Figure 1: Prescribed burning program logic model



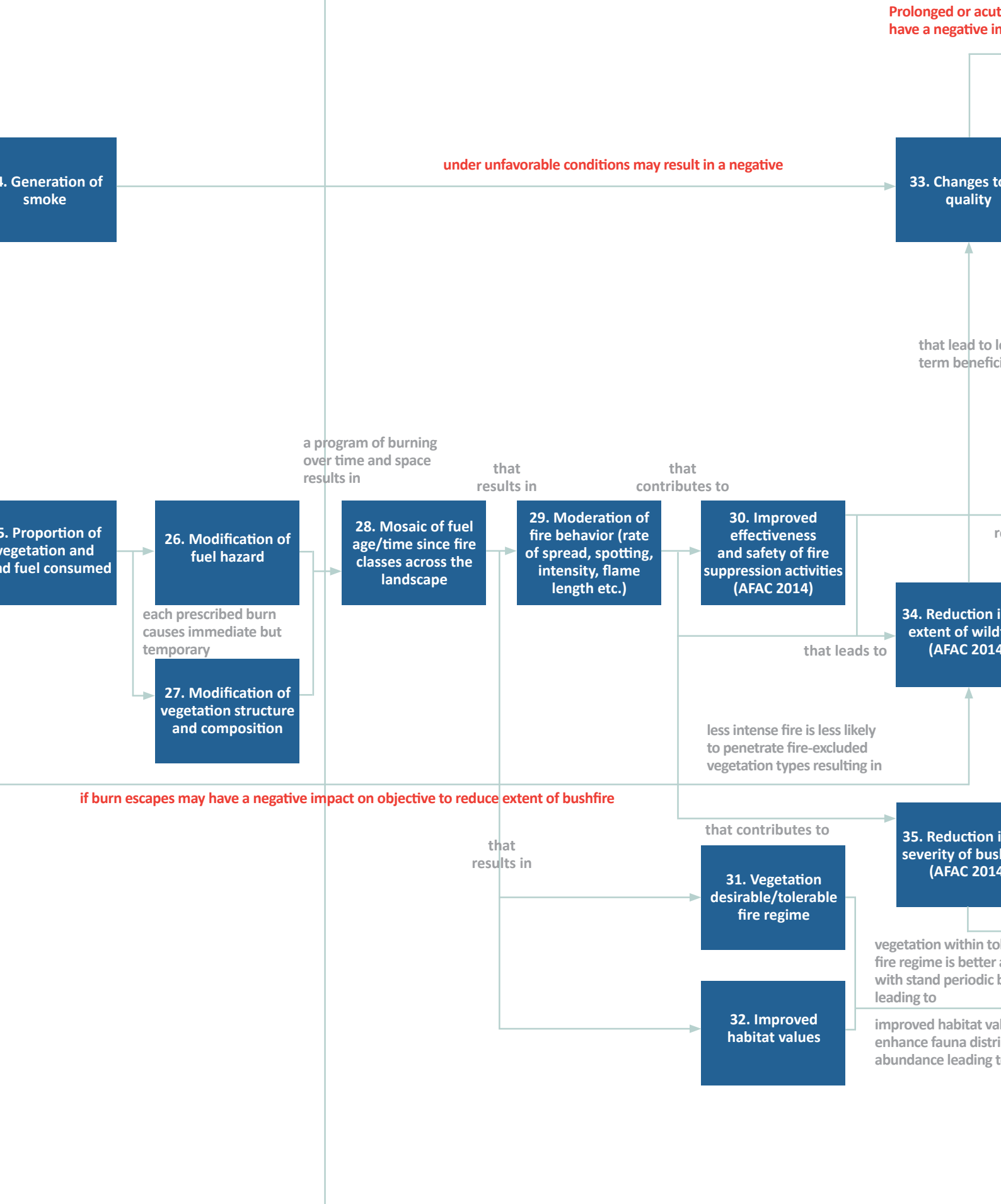

ACTIVITIES
OUTPUTS
Program planning
Operational planning
Burn implementation
16. Community and stakeholder engagement
Broader strategic consultation
17. Schedule (time and location) of burns to be conducted
working with those directly effected
Operational notification to those directly effected
that established
that result in
that results in
14. Strategic planning of burn program (as part of broader management plan)
18. Burn specification standards
21. Operational planning of individual burns
22. Prescribed burn(s) are conducted
23. Area of land is burnt
where appropriate informs planning
19. Capacity maintenance activities
that enable implementation of burn program
improves burn planning & implementation and makes positive outcomes more likely
15. Indigenous burning practices and knowledge
20. Monitoring, evaluation and research (track outcomes and tests causal links)

INTERMEDIATE OUTCOMES

Best considered at site and individual burn scale. Generally result of burn implementation.

INTERMEDIATE OUTCOMES

Best considered at landscape scale. Generally result of prescribed burn program over multipl by external factors such as fire weather and other environmental cha



FINAL OUTCOMES

Best considered at jurisdictional scale. Generally result of long term fire regime, and multiple forms of intervention by multiple stakeholders over many years.

VISION

Best considered at national scale. Generally result of long term fire regime and multiple forms of intervention by multiple stakeholders over many years

e years, but heavily influenced anges.

e exposure npact on

36. Impact on agriculture etc.

reduces loss to the rural economy

o air

prolonged or acute exposure may have a negative impact on

that leads to an overall improvement in public health

40. Public health

reduced impact on public health system reduces an indirect cost

fewer, smaller or less intense fires are more readily controlled leading to

ong ial

41. Reduction in suppression costs

37. Reduction in firefighter injury or loss of life (AFAC 2014)

esulting in

42. Reduction in loss of human life (AFAC 2014)

reduced losses decrease the direct cost

to realise a vision of

n the fires 4)

38. Reduction in risk for at risk values (AFAC 2014)

should result in

43. Reduction in property and economic loss (AFAC 2014)

47. Reduction in the cost of bushfire

48. Fire regimes are effectively managed to maintain and enhance the protection of human life and property and health, biodiversity, tourism, recreation and production benefits derived from Australia's forest and rangelands (FFMG 2014 p9)

reduced likelihood & severity of bushfire impact leads to

has longterm benefits on climate and reduces frequency of extreme weather

n the hfires 4)

replacement of severe late season bushfire by early season prescribed burning leads to

44. Reduction in GHG emissions

46. Enhancement of environmental health & ecosystem functioning/services

less intense fire does less damage to soil, mature trees etc.

makes ecosystem less vulnerable to periodic massive disturbance inc. severe bushfire

lerable able to bushfire

lues will bution and o

39. Improved ecosystem resilience (AFAC 2014)

45. Reduction in degradation of environmental values by fire (AFAC 2014)

that contributes more broadly to

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Figure 1: References

FFMG (2014) National Bushfire Management Policy Statement for Forests and Rangelands. Forest Fire Management Group for Council of Australian Governments. (Canberra, ACT)

AFAC (2014) Review of Best Practice for Prescribed Burning: Report for National Burning Project: Sub-Project 4. Australasian Fire and Emergency Service Authorities Council. (East Melbourne, Victoria)

Cover photo credit: Adrian Pyrke, EcoLogical Australia

BEST PRACTICE PRESCRIBED BURNING SYNOPSES:

- ***Process Map of Prescribed Burning***
- ***Best Practice Principles for Prescribed Burning***
- ***Risk Management Framework for Prescribed Burning***
- ***Objectives, Monitoring and Evaluation Framework For Prescribed Burning***
- ***Program Logic for Prescribed Burning (this document)***

www.afac.com.au/initiative/burning

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