# www.smerf.net.au

S M E R F

Savanna Monitoring & Evaluation Reporting Framework

What is SMERF ?

North Australian landscapes are extremely fire-prone with extensive areas of high natural and cultural value.

In this research, we have collated and distilled current reporting metrics and models deemed indicative of fire effects to fire management groups and habitats.

NAFI Mapping
- Nil
- Limited
- 2000-present

Reporting Regions
- Current areas
- Qld assessment areas

Nil	1,870,956 km²	24%
Limited	1,694,801 km²	22%
2000-present	4,123,718 km²	54%
Total	7,689,476 km²	

The extent of NAFI burnt area mapping since 2000. Red areas indicate Land management groups contributing to the fire metrics.

Many land management groups and government agencies have a requirement to report on the effects of their fire management efforts either to benefactors, land owners, government executives or politicians. SMERF is also a means of assessing and describing past fire effects to assist with fire management planning.

SMERF uses the North Australia Fire Information (NAFI – www.firenorth.org.au) fire mapping data with 250 m pixels to derive a suite of fire metrics, used by a range of groups, most suitable at describing fire effects across a suite of habitats. Covering all of the Tropical Savannas and the majority of the Rangelands, NAFI mapping extends over 76% of the Australian continent.

The SMERF web site (www.smerf.net.au) provides outputs for each metric for single properties or regions, utilising all of the NAFI fire history information, dating back to the year 2000.

SMERF reporting replaces the need to undertake complicated spatial analyses.

Fire Community Level Analysis

The Darwin Centre for Bushfire Research and the Parks & Wildlife Commission of the Northern Territory (PWCNT) have been working together to develop a sub-property level assessment of the fire metrics.

PWCNT have a process for Park Planning referred to as the Integrated Conservation Strategy (ICS). It is a wholistic process, bringing together Indigenous Traditional Owners, Scientists and Operational Staff. The team are asked to define 3 categories of fire community for operational purposes:

Existing vegetation/habitat mapping was reclassified by the expert group to fit the categories.

To standardise the outputs for inter-comparison, a suite of metrics was developed that most significantly indicate the effects of fire management for each Fire Community.

Thresholds for assessing the level of fire management success were derived for each park, providing an annual score, which is tabulated in a Scorecard.
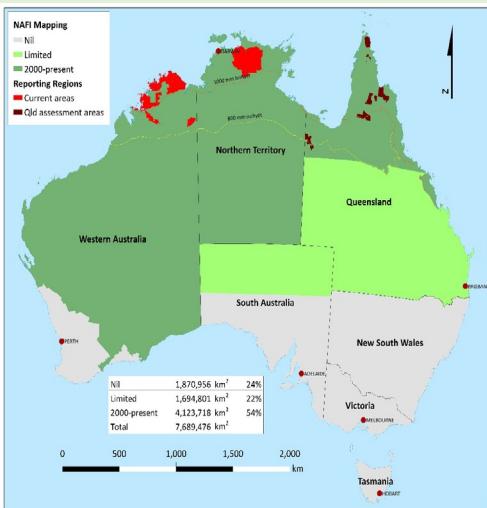
Fire Tolerant – vegetation communities usually where frequent low intensity fires will have a negligible effect on species richness and number, examples are Eucalypt Woodland/Open Woodland.

Fire Sensitive - vegetation communities where a moderate number of low intensity fires will have a negligible effect on species richness and number, examples are Sandstone Woodlands and Riparian Forests.

Fire Intolerant – vegetation communities where fire should be excluded, examples are Closed Forests, Monsoon Jungles and Threatened Species Habitats.

SMERF | bushfire&natural HAZARDS CRC | **DCBR** Darwin Centre for Bushfire Research | CHARLES DARWIN UNIVERSITY

Communities	NAFI Fire Metric	GOOD	FAIR	POOR	VERY POOR	2020 Score
PARK-WIDE INTEGRITY	% Burnt/Year by EDS Fires	>15%	>10%	>5%	<5%	VERY POOR
	% Burnt/Year by LDS Fires	<5%	<10%	<15%	>15%	GOOD
FIRE TOLERANT	% Burnt/Year by EDS Fires	>20%	>15%	>10%	<10%	VERY POOR
	% Burnt/Year by LDS Fires	<5%	<15%	<20%	>20%	GOOD
	% Unburnt > 2 Years	>30%	>20%	>10%	<10%	GOOD
FIRE SENSITIVE	% Burnt/Year by Any Fire	<10%	<15%	<20%	>20%	GOOD
	% Unburnt > 5 Years	>10%	>5%	>3%	<3%	GOOD
FIRE INTOLERANT	% Burnt/Year by Any Fire	<2%	<5%	<10%	>10%	FAIR
	% Unburnt > 10 Years	>25%	>20%	>15%	<15%	VERY POOR

Legend
- Fire Intolerant
- Fire Sensitive
- Fire Tolerant

Year 2020
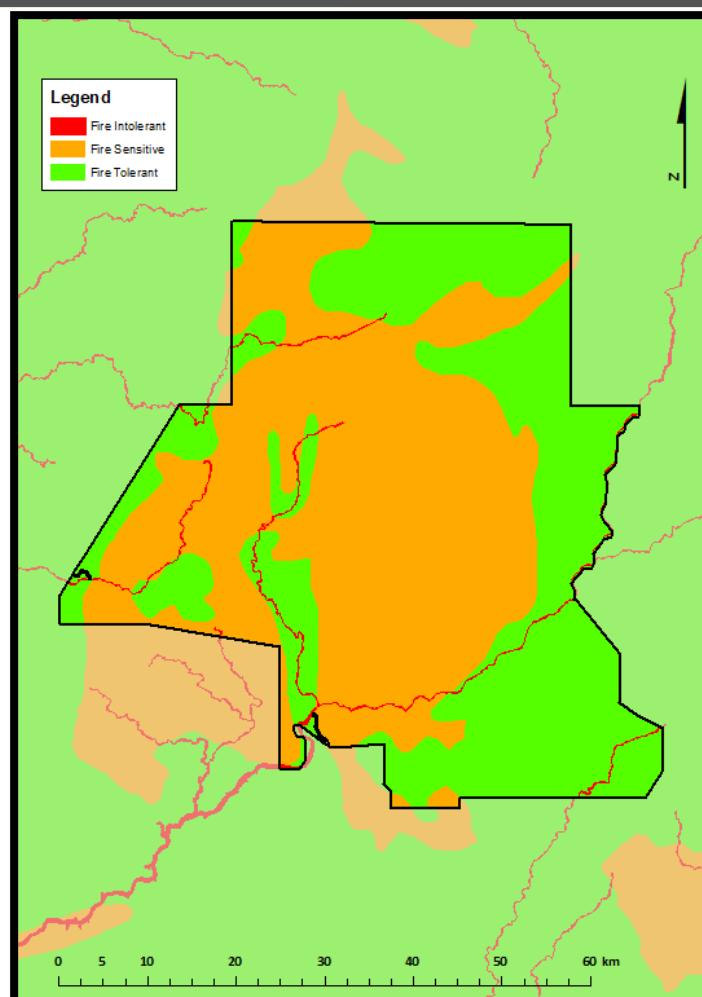
Filter Option

Select State:
Northern Territory

Select area type:
Parks and Reserves

Select property:
Nitmiluk National Park