

Title	Historical Fire Extent and Severity Mapping (FESM)
Alternative title(s)	FESM - Northern Forests
Abstract	<p>Fire severity is a metric of the loss of biomass caused by fire. In collaboration with the NSW Rural Fire Service, DCCEE Remote Sensing & Regulatory Mapping team has developed a semi-automated approach to mapping fire extent and severity through a machine learning framework based on satellite imagery.</p> <p>The method uses standardised classes to allow comparison of different fires across the landscape. The FESM severity classes include: unburnt, low severity (burnt understory, unburnt canopy), moderate severity (partial canopy scorch), high severity (complete canopy scorch, partial canopy consumption), extreme (full canopy consumption).</p> <p>Here we provide historical severity mapping for 8 priority regions on National Parks land tenure from 1989/90 to 2015/16, which is based on Landsat satellite imagery. This covers approximately 30% of the NPWS Managed Lands, across a wide range of vegetation types. From 2016/17 to the current fire year, these regions are covered in the statewide FESM data, which is based on Sentinel 2 satellite imagery. Ongoing FESM processing aims to achieve statewide coverage back to 1989/90, in staged released, as resources permit.</p>
Resource locator	
Data Quality Statement	<p>Name: Data Quality Statement</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Data quality statement for Historical Fire Extent and Severity Mapping (FESM) - Blue Mountains Region</p> <p>Function: download</p>
FESM method publication	<p>Name: FESM method publication</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Remote Sensing of Environment Journal Article titled 'A remote sensing approach to mapping fire severity in south-eastern Australia using sentinel 2 and random forest' published in April 2020.</p> <p>Function: download</p>
FESM method publication - comparison of satellites	<p>Name: FESM method publication - comparison of satellites</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Remote Sensing Journal Article title 'Comparing Fire Extent and Severity Mapping between Sentinel 2 and Landsat 8 Satellite Sensors'</p> <p>Function: download</p>
Fire Extent and Severity Mapping (FESM)	<p>Name: Fire Extent and Severity Mapping (FESM)</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Description:</p> <p>Link to Fire Extent and Severity Mapping (FESM) dataset on SEED. Statewide coverage from 2016/17 onwards based on Sentinel 2 satellite imagery.</p> <p>Function: download</p>
Disclaimer	<p>Name: Disclaimer</p> <p>Protocol: WWW:DOWNLOAD-1.0-http--download</p> <p>Function: download</p>

Unique resource identifier	
Code	b51f30d8-c840-4fc9-8eba-a9f2262d1f90
Presentation form	Image digital
Edition	FESMv3
Dataset language	English
Metadata standard	
Name	ISO 19115
Edition	2016
Dataset URI	https://datasets.seed.nsw.gov.au/dataset/b51f30d8-c840-4fc9-8eba-a9f2262d1f90
Purpose	fire management planning and reporting, landscape and fire ecology research
Status	Completed
Spatial representation type	grid
Spatial reference system	
Code identifying the spatial reference system	4283
Spatial resolution	30 m
Topic category	

Keyword set	
keyword value	HAZARDS-Fire ECOLOGY-Landscape ECOLOGY-Habitat VEGETATION
Originating controlled vocabulary	
Title	ANZLIC Search Words
Reference date	2008-05-16
Geographic location	
West bounding longitude	151.677246
East bounding longitude	152.644043
North bounding latitude	-31.267204
South bounding latitude	-30.541367
NSW Place Name	Macquarie Marshes Region
Vertical extent information	
Minimum value	-100
Maximum value	2228
Coordinate reference system	
Authority code	urn:ogc:def:cs:EPSG::
Code identifying the coordinate reference system	5711
Temporal extent	
Begin position	1989-01-07
End position	N/A
Dataset reference date	
Resource maintenance	
Maintenance and update frequency	Not planned
Contact info	
Contact position	Data Broker
Organisation name	NSW Department of Climate Change, Energy, the Environment and Water
Telephone number	131555
Email address	data.broker@environment.nsw.gov.au
Web address	https://www.nsw.gov.au/departments-and-agencies/dcceew
Responsible party role	pointOfContact

Lineage

Individual fire events are processed then mosaicked into a region wide layer for each fire year in the record.

Limitations on public access**Responsible party**

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Metadata language