Title Historical Fire Extent and Severity Mapping (FESM) - Macquarie Marshes Alternative FESM - Macquarie Marshes title(s) Fire severity is a metric of the loss of biomass caused by fire. In collaboration with **Abstract** the NSW Rural Fire Service, DPE 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. 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). Here we provide historical severity mapping for the Macquarie Marshes region from 1989/90 to 2015/16, which is based on Landsat satellite imagery. From 2016/17 to the current fire year, this region is covered in the statewide FESM data, which is based on Sentinel 2 satellite imagery. Resource locator Name: Data Quality Statement **Data Quality** Statement Protocol: WWW:DOWNLOAD-1.0-http--download Description: Data quality statement for Historical Fire Extent and Severity Mapping (FESM) - Blue **Mountains Region** Function: download Macquarie Name: Macquarie Marshes Area of Interest shapefile Marshes Area of Protocol: WWW:DOWNLOAD-1.0-http--download Interest shapefile Description: Shapefile for the Macquarie Marshes area of interest Function: download Name: Historical FESM - Macquarie Marshes - Wildfire - 1989-90 to 2015-16 <u>Historical FESM -</u> **Macquarie** Protocol: WWW:DOWNLOAD-1.0-http--download Marshes -Wildfire - 1989-90 Description: to 2015-16 Historical FESM mapping for the Macquarie Marshes region of wildfires from 1989-90 to 2015-16. See the FESM statewide dataset for coverage of this region from 2016-17 onwards. Function: download Name: Historical FESM - Macquarie Marshes - Hazard Reductions - 1989-90 to 2015-<u>Historical FESM -</u> Macquarie Marshes - Hazard Protocol: WWW:DOWNLOAD-1.0-http--download Reductions -1989-90 to 2015-Description: 16 Historical FESM mapping for the Blue Mountains region of hazard reduction burns from 1989-90 to 2015-16. Function: download FESM method Name: FESM method publication publication Protocol: WWW:DOWNLOAD-1.0-http--download Description:

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.

<u>publication -</u> Protocol: WWW:DOWNLOAD-1.0-http--download comparison of satellites Description: Remote Sensing Journal Article title 'Comparing Fire Extent and Severity Mapping between Sentinel 2 and Landsat 8 Satellite Sensors' Function: download Unique resource identifier Code 747e4d09-875c-4866-a516-fa0c53cb22fa Presentation Image digital form Edition FESMv3 Dataset English language Metadata standard ISO 19115 Name Edition 2016 **Dataset URI** https://datasets.seed.nsw.gov.au/dataset/747e4d09-875c-4866-a516-fa0c53cb22fa Purpose fire management planning and reporting, landscape and fire ecology research **Status** Completed **Spatial** representation grid type Spatial reference system Code identifying the spatial 4283 reference system **Spatial** 30 m resolution **Topic category** 

Name: FESM method publication - comparison of satellites

Function: download

**FESM** method

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	147.293701
East bounding longitude	147.875977
North bounding latitude	-31.254096
South bounding latitude	-30.428743
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

Contact position Data Broker

Organisation name NSW Department of Climate Change, Energy, the Environment and Water

Telephone number 131555

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Metadata date 2024-02-26T13:14:25.713311

### Metadata language