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|---|---|
| Title | NSW Heat Vulnerability Index to ABS Statistical Area Level 1 2016 |
| Abstract | The NSW Heat Vulnerability Index (HVI) dataset identifies areas to monitor where populations in the Sydney Greater Metropolitan Area are more vulnerable to the adverse effects of urban heat, as of Summer 2015-2016. HVI utilises indicators for exposure, sensitivity and adaptive capacity to calculate an overall heat vulnerability index. Expressed through the data, a vulnerability of 1 represents a combination of low exposure, low sensitivity and/or high adaptive capacity. A vulnerability of 5 represents high exposure, high sensitivity and/or low adaptive capacity. The calculation of HVI and the inputs to the exposure, sensitivity and adaptive capacity indicators are explained in the metadata. The HVI data is aggregated to the Australian Bureau of Statistics (ABS) Statistical Area Level 1 (SA1) polygon dataset to enable spatial analysis to support local policy and decision making. It can be used in conjunction with the NSW urban vegetation cover dataset for the same time period for broader analysis of the relationship of heat to green cover. |

## Resource locator

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|---|---|
| Show on SEED Web Map | Name: Show on SEED Web Map<br>Protocol: WWW:DOWNLOAD-1.0-http--download<br>Description:<br>Display dataset on SEED's map<br>Function: download |
| Data Quality Statement | Name: Data Quality Statement<br>Protocol: WWW:DOWNLOAD-1.0-http--download<br>Description:<br>Data quality statement for NSW Heat Vulnerability Index to the ABS Statistical Area Level 1 (SA1) 2016<br>Function: download |
| Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres (CSIRO EP173542) | Name: Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres (CSIRO EP173542)<br>Protocol: WWW:DOWNLOAD-1.0-http--download<br>Description:<br>The citation for this report is Devereux D and Caccetta PA (2017) Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres. Report CSIRO Data61, Australia. This report was used to derive this HVI dataset. The report was from work undertaken as part of Horticulture Innovation Australia (HIA) project NY16005 “Where Should All The Trees Go?”, in collaboration with RMIT, CSIRO Data61 and the University of Western Australia.<br>Function: download |
| User guide for OEH urban heat and green cover datasets | Name: User guide for OEH urban heat and green cover datasets<br>Protocol: WWW:DOWNLOAD-1.0-http--download<br>Description:<br>Guidance and data description for use by NSW Local Government Areas for local environmental planning. This document contains detailed guiding information on the use conditions and descriptions for the NSW Office of Environment and Heritage (OEH) urban heat and vegetation cover datasets, especially for use in support of multi-scale analysis (i.e., local government areas and regional).<br>Function: download |
| Download Package | Name: Download Package<br>Protocol: WWW:DOWNLOAD-1.0-http--download<br>Description:<br>Data (Shapefile & Geodatabase) |

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| | Function: download |
| ArcGIS Layer files for mapping Urban Heat Island and Heat Vulnerability Index | Name: ArcGIS Layer files for mapping Urban Heat Island and Heat Vulnerability Index<br><br>Protocol: WWW:DOWNLOAD-1.0-http--download<br><br>Description:<br><br>Layer files for symbology when using ArcGIS/ArcMap v. 10.x for displaying the dataset. The compressed file (zip) contains two layer files, one for each Urban Heat Island (manual classification of temperature ranges) and Heat Vulnerability Index (discrete attribute classes 0 to 5). Temperature ranges for UHI map degrees Celsius deviation from the reference, and include less than 0 (i.e., cooler than reference), 0 to 3 degrees warmer, 3 to 6 degrees warmer, 6 to 9 degrees warmer and warmer than 9 degrees from the reference. Two colour variations of the layer file are included.<br><br>Function: download |
| ArcGIS REST Service - Heat Vulnerability Index | Name: ArcGIS REST Service - Heat Vulnerability Index<br><br>Protocol: WWW:DOWNLOAD-1.0-http--download<br><br>Description:<br><br>An ArcGIS Server web service represents a GIS resource—such as a map, locator, or image—that is located on an ArcGIS Server site and is made available to client applications. Depending on the layers enabled, this web service allows a user to query its features and/or visualise the dataset. This service is aimed at advanced geographical information users, and will require access to geographical information system (GIS) software such as ArcGIS/ArcMap.<br><br>Function: download |
| WMS - Heat Vulnerability Index | Name: WMS - Heat Vulnerability Index<br><br>Protocol: WWW:DOWNLOAD-1.0-http--download<br><br>Description:<br><br>Web Map Service (WMS) is a standard protocol for serving georeferenced map images over the internet that are generated by a map server using data from a GIS Database (NSW Government - Spatial Web Services Register June 2015). WMS allows a user to spatially visualise the dataset, but not query its features. This service is aimed at advanced geographical information users, and will require access to geographical information system (GIS) software such as QGIS and ArcGIS/ArcMap<br><br>Function: download |
| Urban Heat Island and Heat Vulnerability in Sydney Greater Metropolitan Area, 2016 | Name: Urban Heat Island and Heat Vulnerability in Sydney Greater Metropolitan Area, 2016<br><br>Protocol: WWW:DOWNLOAD-1.0-http--download<br><br>Description:<br><br>Methodology Report for Heat Vulnerability Index in Sydney Greater Metropolitan Area, utilising 2016 Urban Heat Island data, 2016 Urban Vegetation (Tree Canopy) data, and ABS SA1 level socio-economic and demographic data |

## Unique resource identifier

| | |
|---|---|
| Code | 3b59f3c4-51e2-40c3-af35-e7a7a63fd207 |

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| Presentation form | Map digital |
| Edition | 1 |
| Dataset language | English |

## Metadata standard

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|---|---|
| Name | ISO 19115 |

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|---|---|
| Edition | 2016 |
| Dataset URI | https://datasets.seed.nsw.gov.au/dataset/3b59f3c4-51e2-40c3-af35-e7a7a63fd207 |
| Purpose | urban environmental planning, green infrastructure |
| Status | Completed |

## Spatial representation

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| Type | vector |
| Geometric Object Type | surface |

## Spatial reference system

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|---|---|
| Code identifying the spatial reference system | 4283 |

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|---|---|
| Spatial resolution | 1 m |
| Additional information source | The heat vulnerability index attribute value is modelled on three indices - exposure to heat (temperature classes), sensitivity to heat (vegetation area, road area, population density, elderly, very young, persons needing care) and adaptivity to heat (SEIFA-IRSD and SEIFA-IEO). Index data is provided at the SA Level.1. Each statistical area is rated for each index on a scale of 1 - 5. on a scale of 1 to 5 based on quintiles, 1 represents low exposure, low sensitivity or high adaptive capacity and 5 represents high exposure, high sensitivity or low adaptive capacity. A 0 (zero) indicates no population resides there (pop. density = 0). |

## Topic category

## Keyword set

| | |
|---|---|
| keyword value | HUMAN-ENVIRONMENT-Urban-Design |
| | HUMAN-ENVIRONMENT-Livability |
| | HUMAN-ENVIRONMENT-Planning |
| | CLIMATE-AND-WEATHER-Extreme-weather-events |
| | CLIMATE-AND-WEATHER-Temperature |
| | CLIMATE-AND-WEATHER-Climate-change |
| | HUMAN-ENVIRONMENT-Structures-and-Facilities |

Originating controlled vocabulary

| | |
|---|---|
| Title | ANZLIC Search Words |
| Reference date | 2008-05-16 |

## Geographic location

| | |
|---|---|
| West bounding longitude | 150.270996 |
| East bounding longitude | 152.006836 |
| North bounding latitude | -34.597042 |
| South bounding latitude | -32.87036 |

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|---|---|
| NSW Place Name | Sydney Greater Metropolitan Area, Greater Sydney Region |

## Vertical extent information

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|---|---|
| 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 | 2015-10-01 |
| End position | N/A |

## Dataset reference date

## Resource maintenance

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|---|---|
| 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

The dataset was developed through a contract with the Royal Melbourne Institute of Technology (RMIT). Data was developed following the methodology for "Estimation of Land Surface Temperature and Urban Heat Island effect for Australian urban centres", from Commonwealth Science and Research Organisation (CSIRO) (Report EP173542). The processed Landsat 8 imagery was integrated with the ABS Statistical Area Level 1 polygon dataset with the assistance of Western Australia University.

Limitations on public access

| | |
|---|---|
| Scope | dataset |

DQ Completeness Commission

| | |
|---|---|
| Effective date | 2019-03-12 |
| Explanation | The dataset has complete coverage for the Significant Urban Area of Sydney Greater Metropolitan Area. This includes the major urban, urban, peri-urban and other urban areas of the included Local Government Areas. The dataset has complete coverage for the Greater Sydney Region and the Local Government Areas within it. |

DQ Completeness Omission

| | |
|---|---|
| Effective date | 2019-03-12 |
| Explanation | Local Government Area users of the data will need to double check that their known boundaries are correctly identified. In the dataset, the LGA name that is given to a Statistical Area may be inaccurate. While the Statistical Area Level 1 has a name assigned to it, it may not match entirely with the 2017 LGA boundaries The knock on effect is that the Mesh Block may not correspond to the correct District. This issue most likely occurs with more rural SA Level 1 polygons at the boundaries, such as near Campbelltown, Wollondilly or Sutherland. As adequate data validation was performed, this issue is likely minor and not affecting every LGA. An explanation of potential omissions is explained in the attached CSIRO Report. |

DQ Conceptual Consistency

| | |
|---|---|
| Effective date | 2019-03-12 |
| Explanation | There are no obvious conceptual inconsistencies in the dataset. An explanation of potential inconsistencies is explained in the attached CSIRO Report. |

DQ Topological Consistency

| | |
|---|---|
| Effective date | 2019-03-12 |
| Explanation | There are no obvious topological inconsistencies in the dataset. An explanation of potential inconsistencies is explained in the attached CSIRO Report. |

DQ Absolute External Positional Accuracy

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|---|---|
| Effective date | 2019-03-12 |
| Explanation | Positional accuracy is described in the attached methodology report. |

DQ Non Quantitative Attribute Correctness

| | |
|---|---|
| Effective date | 2019-03-12 |
| Explanation | Attribute accuracy is described in the attached methodology report. For the purpose of confidentiality, this dataset only provides the index ratings, and does not include the model source demographic, census and SEIFA data. This data is however discoverable using the statistical area codes. |

## Responsible party

| | |
|---|---|
| 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 |

## Metadata point of contact

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| 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 |

## Metadata date

2024-02-26T13:17:11.228903

## Metadata language