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| **Title** | Flora Maxent modelling: NARCliM (climate) Projections 2000-2030-2070 |
| **File identifier** | The unique identifier for the metadata file |
| **Abstract** | Variation in flora species distribution due to climate change was modelled in Maxent using NARCliM variables (GCM MIROC3.2; RCM R1) provided by the Science, Economics and Insights Division of DPIE NSW, along with relevant topographic layers from the State Vegetation Type Map (SVTM) Modelling Grid Collection (<https://datasets.seed.nsw.gov.au/dataset/svtm-modelling-grid-collection>) as described in the NRC publication ‘NSW Forest Monitoring and Improvement Program: Final Report. Project 2: Baselines, drivers and trends for species occupancy and distribution.  Species data from systematic surveys (~1989-2000) and Atlas of Living Australia (~1991-1998) was used for presence-only occurrences, and a ‘baseline’ distribution model was constructed for year 2000. From there, climate projections were generated for 2030 and 2070 using the appropriate NARCliM bioclimatic surfaces.  Climate projection was undertaken using Maxent software (Steven Phillips <https://biodiversityinformatics.amnh.org/open_source/maxent/> and references therein), which has the capacity extend analysis either spatially or temporally, based on covariate (‘variable’) data for different locations (spatial) or different epochs (temporal). Temporal projection is typically used to model the effects of climate change.  Models do not predict actual occupancy, but rather habitat suitability: confounding factors such as inter-species competition, geographical barriers and disturbance events play a significant role on species occurrence, and are not considered in Maxent. |
| **Contact** | Emeritus Professor Nick Reid and Dr Ross Jenkins, University of New England Environment and Rural Science school. |
| **Purpose** | The dataset was created as part fulfillment for the NRC project ‘NSW Forest Monitoring and Improvement Program: Final Report. Project 2: Baselines, drivers and trends for species occupancy and distribution.’ |
| **Jurisdictions** | The University of New England |
| **Geographic Bounding Box** | North -28 degrees; South -37.5 degrees; West 147 degrees; East 153.5 degrees |
| **Lineage** | Species occurrence data was sourced from Bionet, based on systematic NPWS surveys conducted ~1989-2000 [cf. NPWS (1994). Fauna of north-east NSW forests. (NSW National Parks and Wildlife Service]. Additional occurrence data from 1991-1998 and equivalent spatial extent was extracted from the Atlas of Living Australia.  NARCliM variables (GCM MIROC3.1; RCM R1 provided by the Science, Economics and Insights Division of DPIE NSW) along with relevant topographic layers from the State Vegetation Type Map (SVTM) Modelling Grid Collection (<https://datasets.seed.nsw.gov.au/dataset/svtm-modelling-grid-collection>) as described in the NRC publication ‘NSW Forest Monitoring and Improvement Program: Final Report. Project 2: Baselines, drivers and trends for species occupancy and distribution.  Model outputs (statistical analyses and predictive surfaces) were generated using the software developed by Steven Phillips (<https://biodiversityinformatics.amnh.org/open_source/maxent/> |
| **Extent** | The temporal extent of the species occurrence was limited to 1989-2000 for systematic data, and 1991-1998 for ALA data |
| **Distribution Format** | Raster (ESRI Geodatabase) |
| **Keyword** | NARCliM, Flora, RFA, Maxent modelling |
| **Maintenance and Update Frequency** | Not planned |
| **Use Limitation** | Maxent generates probabilistic species predictive habitat surfaces, and does not imply species presence at any particular location. Modelling is restricted to the eastern NSW RFA areas. |
| **Resolution** | 250 m |
| **DQ Completeness** | Complete |
| **Reference System** | GDA94 |
| **Topic Category** | Biota |
| **Metadata Date** | 2021-12-16 |
| **Date Created** | 2021-06-24 |
| **Date Revised** | 2021-06-24 |
| **Date Published** | 2021-11-16 |