

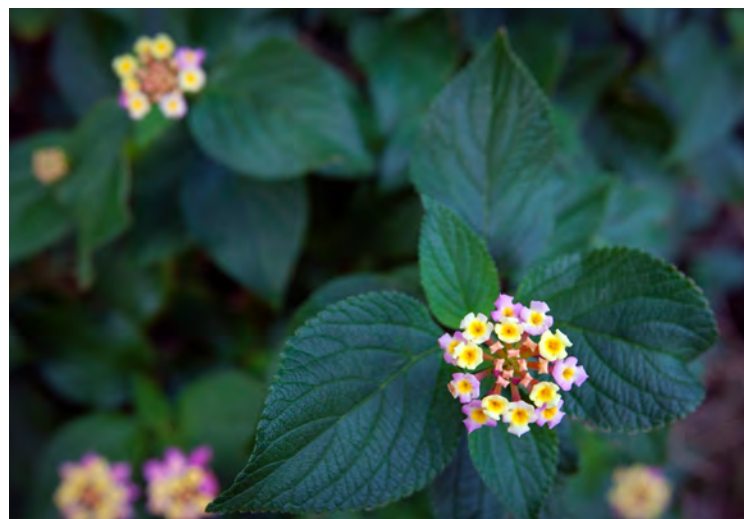


Climate change poses a major threat to the biodiversity of New South Wales. Increasing temperatures, shifts in rainfall patterns, rising sea levels and increases in the intensity and frequency of extreme events are affecting population sizes, species ranges, the timing of life cycles, the structure and composition of ecological communities and extinction risk. The exact nature of how climate change impacts will continue to affect individual species and ecological communities, however, is uncertain. These online climate tools are designed to provide users with evidence-based information into the impacts of climate change on biodiversity, and assist decision-makers with adaptation planning.

WEED FUTURES

Access maps on weed threats under climate change for over 700 invasive plant species via this interactive website:
www.weedfutures.net

This tool provides information on the extent of suitable habitat for weeds in NSW and assesses weed threats for regions of interest under current and future climate conditions, building capacity for natural resource managers in conducting weed risk assessments across landscapes and prioritising threat monitoring and management across species.



Lantana. Credit: Nick Cubbin / OEH



Orange-bellied Parrot © Chris Morecroft 2015 / birdlifephotography.org.au

THREATENED SPECIES

Explore information on the vulnerability of NSW threatened species and ecological communities to climate change via an online searchable database:

www.nswthreatenedspecies.net

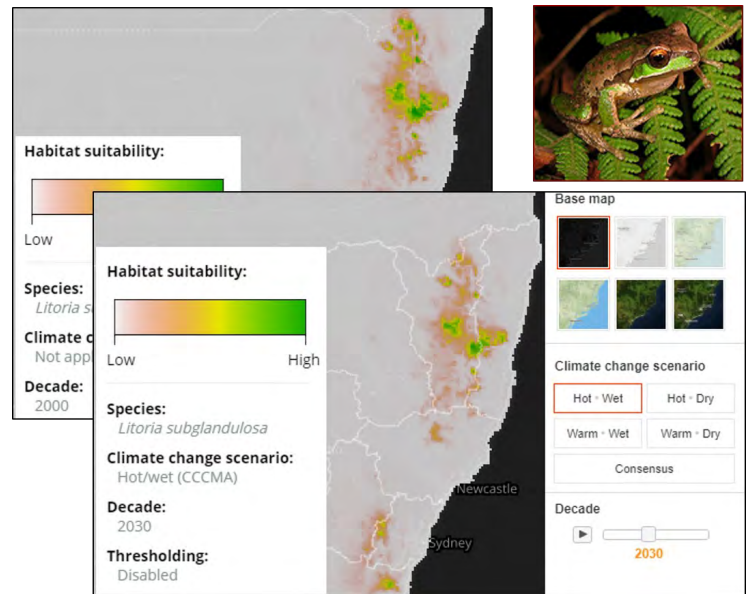
This tool provides a searchable database that allows users to explore profiles for all species and ecological communities listed as threatened under the *NSW Threatened Species Conservation Act 1995*, view maps of their distribution, and identify threats to their survival, including climate change.

CLIMATE REFUGIA

Access Habitat Suitability Models (HSM) to locate refugia for NSW threatened species via the website:

www.nswclimaterefugia.net

This website provides a decision support tool to identify and visualise potential refugia (places in the landscape where species may retreat to or persist in as the climate changes) for 110 dominant plant and 320 threatened NSW species. HSMs use hot/dry; hot/wet; warm/dry and warm/wet future climate scenarios to locate potential refugia (internal and external of current occurrences) for 2030 and 2070. Search by individual species or view maps of regions likely to be refugia for multiple species.



Old Man Banksia. Credit: Andy Burton / Flickr

NICHE FINDER

Generate baseline maps of ecological ranges and access climate niche metrics of NSW plants via this website:

www.nswnichefinder.net

Basic metrics of plant ecological range (such as geographic extent) are routinely used to assess the vulnerability of species to human-related impacts, particularly climate change. This tool provides detailed information on the geographic range, climate niche breadth, and soil types occupied by all native plant species in NSW.

CLIMATE-READY REVEGETATION

Follow step-by-step instructions on how to incorporate climate change into revegetation planning using this guide:

www.anpc.asn.au/resources/climate_ready_revegetation



About the Biodiversity Node

The **NSW Adaptation Research Hub** was established in 2013 to leverage the State's multidisciplinary science capacities to produce relevant and practical research to directly inform the decision making of NSW agencies and communities. It is comprised of three nodes to address key policy and operational priorities of the NSW Office of Environment and Heritage. The Biodiversity Node is hosted by Macquarie University, and focuses on increasing our knowledge about the capacity of species, ecosystems and landscapes to adapt to climate change. Sixteen research projects have been co-developed with 15 partner institutions, which build our understanding of climate change impacts on biodiversity and inform potential actions and responses. For more information on the Biodiversity Node and the projects it supports, visit mq.edu.au/about/biodiversity-node

These projects received funding from the NSW Office of Environment and Heritage as part of the NSW Adaptation Research Hub. The views expressed herein are not necessarily the views of the NSW Government, and the NSW Government does not accept responsibility for any information or advice contained herein.