OUTPUTS FOR CONSERVATION UNDER CLIMATE CHANGE

Climate Systems

National Environmental Science Program

Project Goal: Provide resources to support decision-making for conservation where outcomes are influenced by climate and weather.

Climate adaptation is increasingly important in conservation. Conservation activities that do not explicitly consider and integrate climate change information and best practice adaptation have an increased risk of short- or long-term failure. Sharing intervention approaches to climate change is important to speed progress in this challenging space.

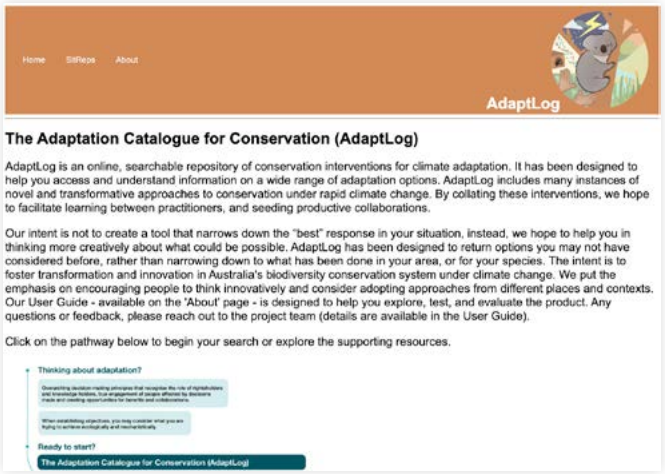
A climate adaptation intervention is an on-ground conservation activity that specifically addresses climate change vulnerability and/or incorporates climate information.

This project developed three information products to help those charged with conservation of Australia's species, habitats and protected places. These include a database of conservation options (AdaptLog), climate information at various scales (Situational Reports) and guidance for adaption decision-makers.

AdaptLog (Adaptation Catalogue for Conservation)

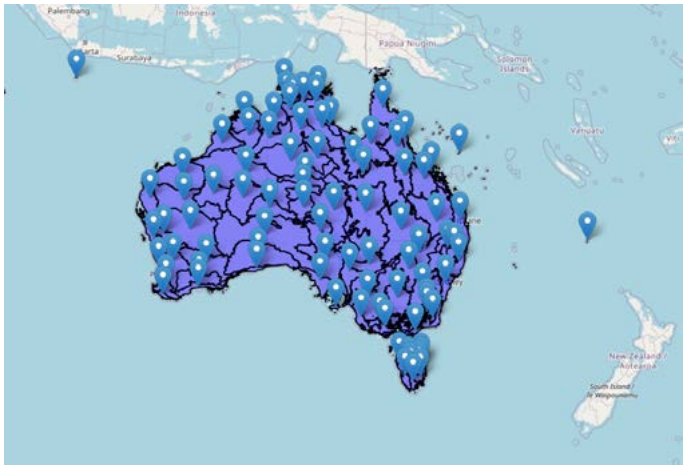
AdaptLog is an online, searchable repository of conservation interventions for climate adaptation. The project team co-developed AdaptLog by engaging with a broad range of stakeholders across Australia. The tool is designed to help conservation practitioners access and understand information on a wide range of adaptation options for biodiversity conservation.

AdaptLog includes over 400 conservation interventions that tackle the challenge of climate change, including many novel and transformative approaches. By collating these interventions in a searchable format, information is now readily available to facilitate learning among practitioners and support productive collaborations.



Situational Reports

A situational report (SitRep) contains information on the physical climate that can influence the outcome of conservation actions. SitReps are intended for use in combination with actions planned or underway. Reports are specific to one of four management areas (IBRA, NRM Regions, Bureau of Meteorology forecast districts, and for Victoria - state planning regions). Download reports here: https://adapt-log.csiro.au/mapselector



These reports are published every three months (as the seasonal data are updated) and can be downloaded at any time. They contain environmental data for historical periods, current environmental drivers, short-term (seasonal) forecasts, and long-term projections. Data are provided for six environmental variables that influence the success of conservation actions.

1. Precipitation
2. Maximum temperature
3. Minimum temperature
4. Runoff
5. Modelled potential evapotranspiration
6. Root zone soil moisture

Each SitRep provides guidance on projected changes for each region, which can be used by **landscape and conservation planners and managers** to develop plans, implement actions or adjust ongoing efforts.

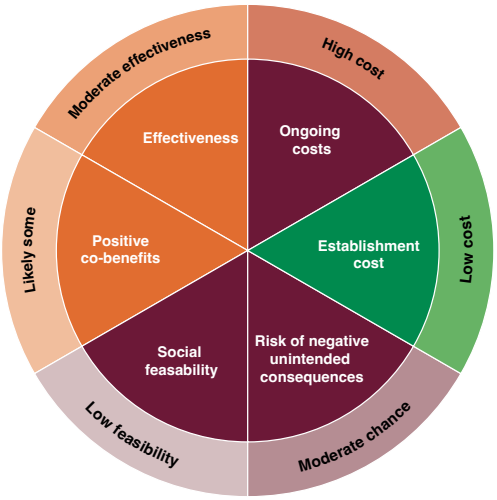
- **Historical climate data** can be used to assess long-term trends like decreased rainfall or increased temperatures, helping to identify vulnerable species and habitats.
- **Current climate drivers and data** help guide immediate actions, such as allocating resources for drought-stressed plants or adjusting water sources for wildlife.
- **Seasonal forecasts** could inform decisions like planting drought-resistant vegetation before expected rains or temporarily relocating species during extreme heat.
- **Climate projections** provide managers with data needed to inform tasks like designing protected corridors for species migration or planning firebreaks to mitigate future wildfire risks, ensuring ecosystem resilience in the face of anticipated climate changes.

Adaptation decision support

Consideration Wheels and **Points to Ponder** are tools to guide thinking around the various aspects associated with intervening in the face of climate change. We have classified a range of attributes for hundreds of interventions within AdaptLog; however, many important attributes were unknown or difficult to classify for all 400+ interventions. We have explored six considerations that underpin informed and successful implementation of adaptation. We provide guidance to score these six considerations for each Intervention Category, which can then be used to compare different approaches when brainstorming options for adaptation.

Further details are provided at adapt-log.csiro.au/about under the **Consideration Wheels** and **Points to Ponder** tabs.

Habitat Manipulation



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