

# Australian Access Federation (AAF) & Biodiversity Climate Change Virtual Lab (BCCVL)

Connecting virtual labs and researchers

**AAF login capability allows collaboration and data sharing irrespective of organisational boundaries between Australian university staff, students and researchers.**

## Benefits for researchers using BCCVL

- ▶ access a wide variety of data pertinent to modelling biodiversity and climate change including environmental, biological and climate data
- ▶ upload your own data and keep it private for modelling sensitive areas or species
- ▶ perform large scale, multi-modal data analysis
- ▶ create your own biodiversity-climate change modelling.

## BCCVL provides

- ▶ an innovative, efficient, robust portfolio of integrated tools
- ▶ data collections and access portals for modelling Australia's biodiversity and climate change data
- ▶ an easy-to-use web based platform with advanced visualisations.

The Biodiversity and Climate Change Virtual Laboratory (BCCVL) is a “one stop modelling shop” that simplifies the process of biodiversity-climate change modelling. BCCVL is a Nectar supported project led by Griffith University and James Cook University in collaboration with 20 developer and partner institutions.

To access BCCVL researchers sign up and access the virtual laboratory by using their existing institutional login which is enabled by the Australian Access Federation (AAF) technology. The AAF technology allows users to access multiple web-based tools and services for their research, by using their institutional login regardless of their physical location.

Access to this virtual lab is just one of many examples of how the AAF enables this connectivity for the national research community.

## How does AAF connectivity benefit BCCVL

This particular virtual lab connects the research community to Australia's national research cloud (hosted by Nectar), which provides a suite of online tools. Through the national research cloud this “one stop modelling shop”, allows users to undertake species distribution modelling and conduct experiments using biological, climate and environmental data for biodiversity-climate change research. The virtual laboratory for BCCVL delivers a unique research environment which:

- ▶ enables existing research questions to be investigated far more efficiently and effectively
- ▶ allows researchers to focus on the science questions and not ‘how’ to conduct complicated modelling
- ▶ provides the means for Australian researchers to address new important questions
- ▶ enables collaboration like never before, through secure access.



**AAF technology allows BCCVL to:**

- ▶ connect users from AAF subscriber organisations to BCCVL
- ▶ create access for multiple users from various locations to undertake species distribution modelling and conduct experiments using biological, climate and environmental data
- ▶ create access for multiple users to upload biological data and run experiments, or use the information already loaded within the system.

**Who benefits from AAF connectivity?**

Biodiversity, climate and environmental researchers	Researchers who need access to a standardised set of tools for analysis and requisite data sources at their desktop
Tertiary research institutes	Researchers who would have their work utilised in real world scenarios
State and local governments	Technical officers, strategic planners, policy makers, decision makers rationalising better decisions based on real-time data

**Why connect via the AAF?**

The Australian Access Federation provides organisations with the solution for connecting researchers with national and international eResearch capabilities. Looking towards the future, the AAF will be looking to enhance connectivity and access for users.

Larger uptake within local and state government authorities	- utilise the data and contribute to BCCVL to streamline collaboration - inform policy and enhance decision making at a local and regional level
Further uptake for Tertiary Research Institutes	- researchers who would have their work utilised in real world scenarios
Attract industry - domestic and international	- utilise unique research environments and capabilities - enrich research outcomes and future innovative project collaborations (e.g. to support Agri-tech)

**Information:**

For more information regarding the Biodiversity Climate Change Virtual Lab (BCCVL) visit:  
[www.bccvl.org.au](http://www.bccvl.org.au)

**Contact the Australian Access Federation:**

To discuss federated identity management contact:  
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