

Basin Futures: supporting a water secure world

Water scarcity affects every continent, and two-thirds of the world's population currently live in areas that lack water security. Water scarcity is manifested through physical shortages, failure of institutions or lack of infrastructure. Climate change is expected to amplify the complex relationship between development and water demands. Shortages in water impact on people's health, livelihoods, ecosystems and the ability to produce food. It also impacts a nation's ability to achieve Sustainable Development Goals.

How to combat water security challenges?

To alleviate water security challenges, basic information on water resources is needed. This includes knowing how much water is available, where it is distributed and how it will change under scenarios of development and climate change. Data and models are often used to address these questions. However, data is typically distributed, difficult to access and process and models require significant expense, time to develop, and advanced capability and capacity to use. As a result, it can be difficult and expensive to support the basic information needs to overcome water scarcity.

Our solution: Basin Futures

To answer some of the first-order questions needed to combat water security challenges, a new tool, Basin Futures has been developed. Basin Futures is a web application that is an entry-level modelling tool that aims to support rapid and exploratory basin planning globally. As a cloud-based tool, it brings together high-performance computing and large-scale global data sets to make data analysis accessible and efficient. The system is designed to bring together global and local datasets to empower decision-makers to understand their opportunities and constraints in managing their water resources. Basin Futures offers users results in an efficient and timely manner.



Basin Futures is helping to achieve



What are the key features?

- User-friendly system.
- Preloaded global data and defaults.
- Ability to integrate global and local data.
- Integrated hydrological and agricultural models.
- Links to population and industrial demands and environmental flows.
- Visualisation and reporting tools.
- Scenario development and exploration.
- Global climate scenarios.
- A rapid turnaround for initial water resource snapshots.
- Decision-focussed outputs

How does this support water planning?

Basin Futures can be used to explore and plan water-related development and climate scenarios. Scenarios to explore for water secure basins include:

- Planning for climate resilient basins: assessing the potential changes in the quantity and timing of runoff, precipitation and streamflow based on global climate change scenarios.
- Planning for changing population demands: assessing the demands for food, energy and water security based on a changing population scenario.
- Planning for reliable agriculture and infrastructure: assessing the temporal reliability and production values of various infrastructure and cropping scenarios.



BASIN FUTURES

[Home](#) [Basins](#) [Data](#) [Community](#) [About](#)

[Login](#)

[Lang \(en\)](#)

[Basinpedia](#) / [My Models](#)



Development Scenarios

Define scenarios to dynamically explore development options within basins.

[More »](#)



Global Data

Pre-loaded global data sets provide quick and easy setup of models with less data formatting hassles.

[More »](#)



Faster decisions

Get to assessing your development options faster by lowering the initial time for model setup

[More »](#)

CONTACT US

t 1300 363 400
+61 3 9545 2176
e csiroenquiries@csiro.au
w www.csiro.au

AT CSIRO, WE DO THE
EXTRAORDINARY EVERY DAY

We innovate for tomorrow and help improve today – for our customers, all Australians and the world.
We imagine. We collaborate. We innovate.

FOR FURTHER INFORMATION

Land and Water
Amit Parashar
t +61 416371071
e Amit.Parashar@csiro.au

