



Making SENSE of the water value chain in Australia

WaterSENSE summer school

Course relevance

Climate adaptation in water management is one of the focal points of governments globally and Australia is no exception. Droughts and floods have serious impacts on society and today's and tomorrow's generations are facing serious challenges related to this. In order to make climate smart decisions, information and tools are required to not only substantiate effects, e.g. with the use of big data and earth observation, but also to have access to a proper toolset to monitor if measures and operations have resulted in the desired effect.

In this course you will:

- Work with an application platform that can be used for climate smart water management: a) Introduction into the Hydronet platform for data management; b) Remote sensing information via different platforms, such as Digital Earth Australia, Google Earth Engine (GEE) and the Hydronet API; c) scripting and associated tools for version control and collaboration.
- Develop scripting in python to access the different highlighted interfaces.
- Collaborate with fellow summer school participants to address real world challenges in three water management case studies in the Namoi basin.

Format

The workshop will be delivered over 3 days in both “live” at the University of Sydney campus and “live on-line” modes. Sections of the program will be recorded.

A maximum of 20 students will be accepted in 2021

The workshop will be delivered by staff from the WaterSENSE consortium, Geoscience Australia and Australian National University



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In collaboration with



Australian Government
Geoscience Australia



Australian
National
University

Assumed knowledge

A basic experience with and knowledge of Python is required as all exercises will use Python. Alternative experience with other scripting languages such as R, Matlab or Java can be sufficient.

Dates and location

23 - 25 February 2021, 9:00 am - 5 pm

The University of Sydney, Biomedical Bldg, South Eveleigh:

<https://goo.gl/maps/FgBaK49UT4WPU9S17>

General program

Day	Activity	Who
1	Introduction into the summer school, available data sets and platforms, presentation of the partners	WaterSENSE consortium and partners for the workshop GeoScience Australia (GA), Australian National University (ANU)
2 morning	Hands-on activities in scripting and accessing data, example of the Hydronet API to access rainfall fields	The University of Sydney WaterTechnology Ltd/Hydrologic
2 afternoon	First case study: Water Occurrence	GA/ANU
3 morning	Second case study: Water depth and volume in reservoirs Third case study: Irrigation water use	The University of Sydney WaterTechnology/eLEAF
3 afternoon	Workshop applications and projects using the demonstrated tools Wrap-up	Consortium, GA/ANU

After the 3 day workshop there is the opportunity to develop one of the applications and projects in collaboration with the WaterSENSE consortium and partners

How to apply

Please fill in the below registration form to express your interest in attending the Summer school

<https://forms.gle/XLMn9ciWADUazQhg7>