Year 7 geography
Water supplies – now and the future

Australian Curriculum links:
Year 7 geography
The nature of water scarcity and ways of overcoming it, including studies drawn from Australia and West Asia and/or North Africa (ACHGK040)
Sustainability cross-curriculum priority

With the challenges of increasing climate variability and population increase in some regions, students investigate conventional and alternative water source options for Queensland to sustainably manage water supplies in the future.

Preparation

Students require internet access for this activity. Seek information about current and future water supply options from your local Council or water service provider.
Optional: Invite a guest speaker (see **Water journeys guest speaker activity)** to explain how water supplies are managed in your region and how to ensure future sustainable water management.

Activity steps

1. Ask students to share ideas about the current water sources in your region. Make a class list. Explain that these water sources can be classified as conventional or alternative water sources. To do this, visit Water sources in Queensland to devise a definition for each type of water source and examples for each. Explain that there are a number of water supply options that do not rely on rainfall. For instance, large-scale desalination plants such as the Gold Coast Desalination Plant can provide fresh water for coastal Australian cities that have a shortage of water.
2. Identify some locally relevant future water source options e.g. recycling water, desalination, building more dams, extracting more groundwater, rainwater tanks, stormwater harvesting, managing demand. Students draw a graphic organiser table to compare the future water source options using the headings ‘Advantages’, ‘Disadvantages’ and ‘Other considerations’. Working in groups, students research these options and complete the table. Different water source options could be allocated to groups to speed up the activity. Students can incorporate detailed local water supply information using their Regional water supply security assessment, if an assessment has been completed. Groups report their findings to the class and discuss the challenges of managing water resources and how they could be managed sustainably in the future.

Optional: Students could compare the regional water supply security assessment for two regions to evaluate how secure and sustainable the water supplies for that region are.