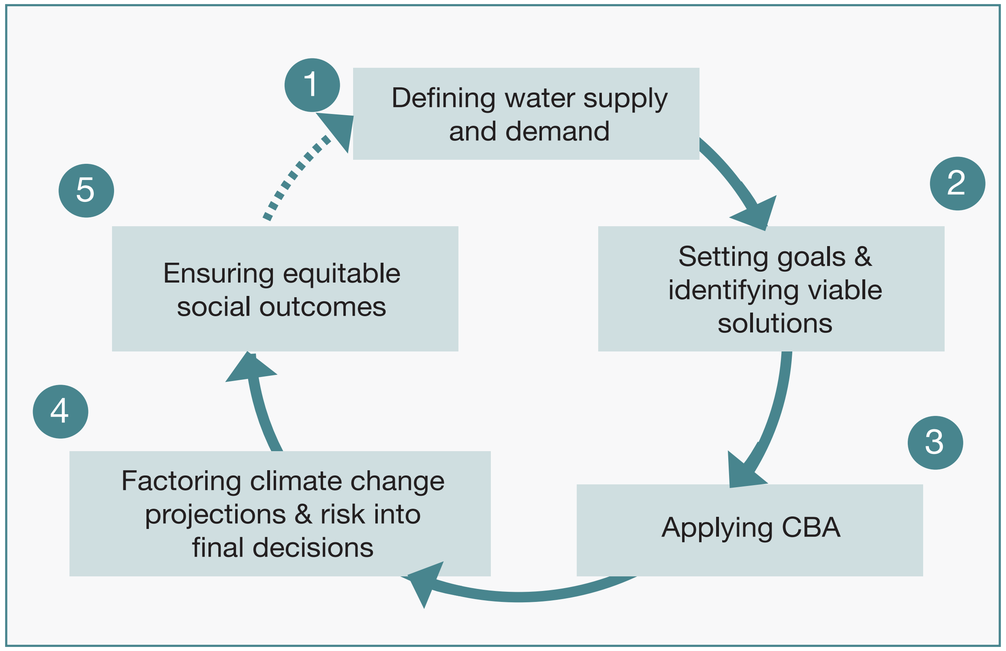
Water Security Decision-Making Framework

A five-step process to identify water security investments that deliver the greatest benefit at the lowest cost



1 Step 1 — Define water supply and demand

Supply

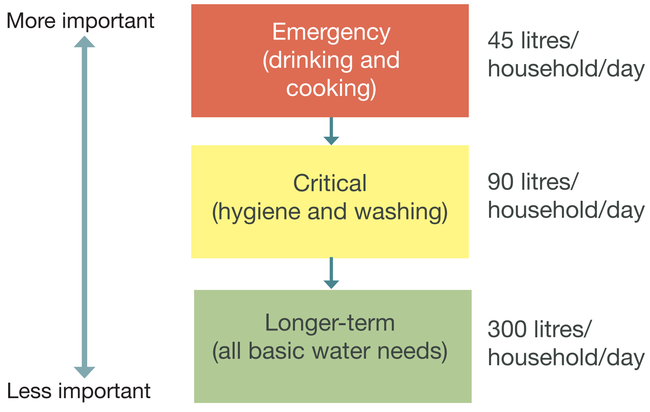
- Water supply options (e.g. rainwater, groundwater, desalination)
- Capacity of options

Demand

- Consumption of potable water (i.e. for drinking, cooking, personal hygiene)
- Consumption of non-potable water (for other purposes)

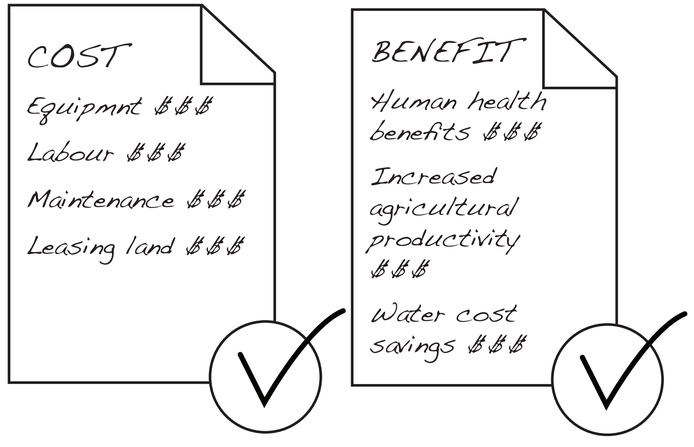
2 Step 2 — Set goals and identify water security solutions

Identify water security options and groups of options to meet water security goals.



3 Step 3 — Apply cost-benefit analysis

Assign monetary values to costs and benefits (market and non-market) and compare for each group of options. This can be done with a spreadsheet-based model.



4 Step 4 — Factor climate change projections and risk into final decisions

Test the robustness of CBA findings (water security options) against different climate change scenarios.

Standard drought scenario	for severe drought conditions based on the lowest 12-month rainfall in the historic record
Worst case drought scenario	set at -10 percent of the Standard Drought Scenario, with drought occurring in two consecutive years
Best case drought scenario	set at +10 percent of the Standard Drought Scenario

5 Step 5 — Ensure equitable social outcomes

Explore who will benefit or pay the costs of different water security options or groups of options. Ensure water security decisions are fair and equitable.

	Costs	Benefits
Families	$	$
Landowners	$	
Government	$	

Australian Aid
Australian Government
TUVALU-MO-TE-ATUA