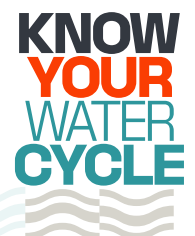


Always moving. Never stopping.

The water cycle in
the Northern Territory



1 What is the water cycle?

The water cycle — or hydrological cycle — is the continuous movement of water between the earth's surface and the atmosphere. It has no beginning and no end. Water evaporates, rises, condenses into clouds, falls as rain, flows across the surface, soaks into the ground, and eventually rises back to the atmosphere to start again.

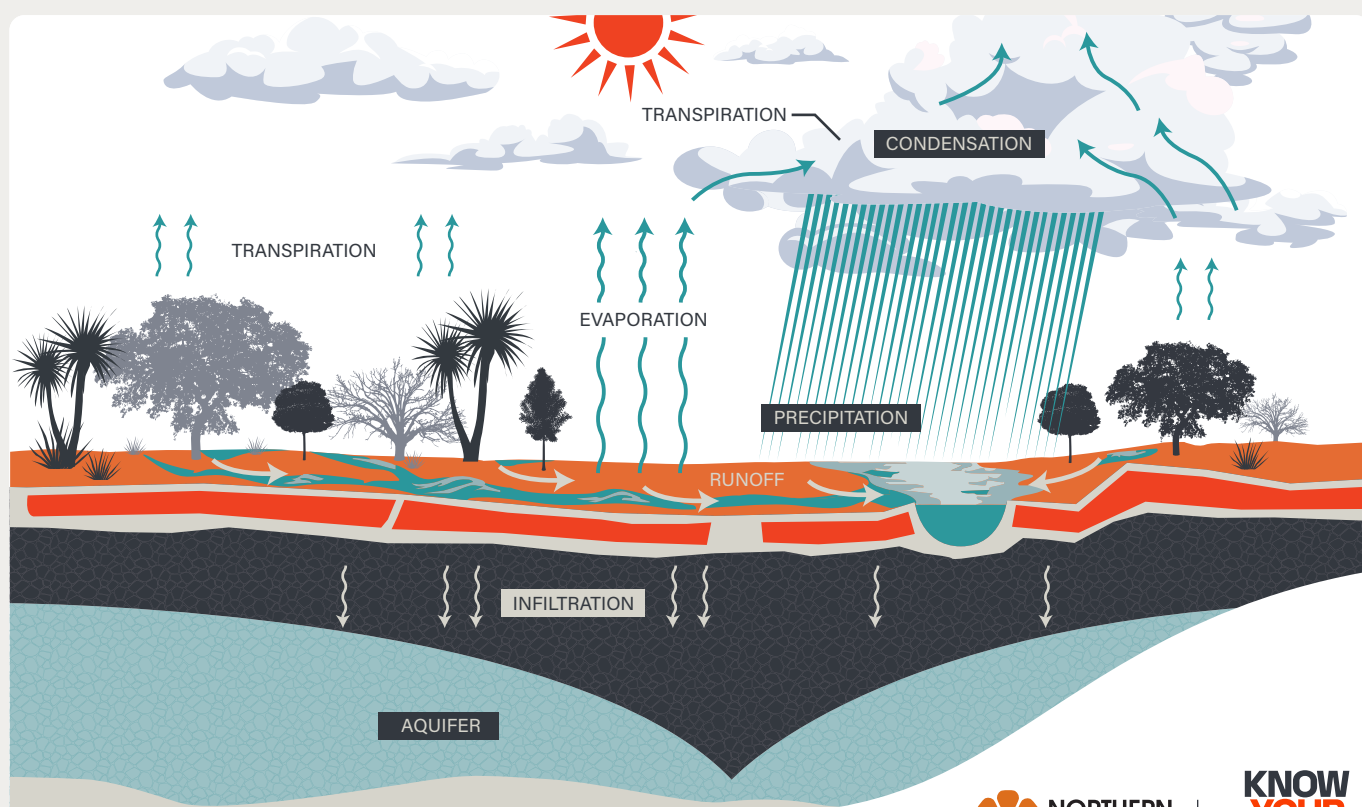
In the NT, this cycle is shaped by two very different climates: **the tropical monsoon of the Top End, and the harsh arid conditions of Central Australia.**



The water falling on the Territory today has been cycling through our planet for billions of years. Here's how it moves — and why it matters.

2 Key stages of the water cycle

- 1. Evaporation** — The sun heats water in rivers, billabongs and the ocean, turning it into vapour that rises into the air. In the NT's heat, evaporation rates are extremely high.
- 2. Condensation** — Water vapour rises, cools, and forms clouds. In the Top End, this happens rapidly as warm tropical air meets cooler upper atmosphere — producing the towering storm cells of the build-up season.
- 3. Precipitation** — Water falls back to earth as rain. The NT sees some of Australia's most intense rainfall events — up to 300mm in a single day during a monsoon low.
- 4. Runoff** — Water flows across the surface into rivers and creeks. In the Top End, this drives massive seasonal flooding across floodplains.
- 5. Infiltration** — Some water soaks through the soil to recharge groundwater aquifers. The rate depends on soil type, landscape and vegetation.
- 6. Transpiration** — Plants absorb groundwater and surface water, releasing it as vapour through their leaves — completing the cycle.



The NT difference

In the Top End, the water cycle is fast and intense. The monsoon delivers enormous water volumes in a short time, triggering rapid runoff, flooding, recharge — and then high evaporation rates as the Dry takes hold.

In the Arid Region, the water cycle operates at a different pace. Rainfall is infrequent but intense when it does arrive. Most water evaporates before infiltrating, making every recharge event significant for groundwater stores that communities depend on.



For more information:

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