

## Estimated sustainable yield

Water is managed by the Northern Territory Government for the benefit of all Territorians. Water resource management focuses on balancing productive use of water with long-term viability of the resource and the ecosystems that depend on it. It is underpinned by water science, monitoring and assessment.

Setting an estimated sustainable yield for a resource is a key part of water allocation planning. This statement clarifies how estimated sustainable yields are determined in the NT.

### What is an estimated sustainable yield

An estimated sustainable yield (ESY) is established under a water allocation plan for the water resources managed under the plan.

The ESY is the amount of water that can be allocated from the water resource to support declared beneficial uses that is sustainable. The total water use in a plan area must be less than the ESY.

Where there is variation in water resource characteristics across a plan area water can be managed within water management zones. In this case, an ESY can be set for each management zone.

Water under the ESY cannot automatically be extracted for commercial use, it is still subject to a water licensing process that considers the local impacts of taking water.

### What is taken into account in an ESY

To determine the ESY a range of factors are considered:

- the characteristics of the water resource including its natural variability over time
- the environmental values of the water resource (including cultural where described)
- the demand for water including domestic and economic drivers
- how the water resource responds or is predicted to respond to water extraction over time
- the Northern Territory's water sharing priorities.

The NT's water sharing priorities ensure the majority of water remains for ecological functions, as well as the cultural and social functions of the resource.

A comparatively low proportion of the water is allocated to the ESY for drinking and economic development. This approach is the reverse of most other jurisdictions, ensuring the Territory is precautionary as it develops water resources to support the growth of its communities and economy in regional and remote areas.

## What is the process for estimating the sustainable yield

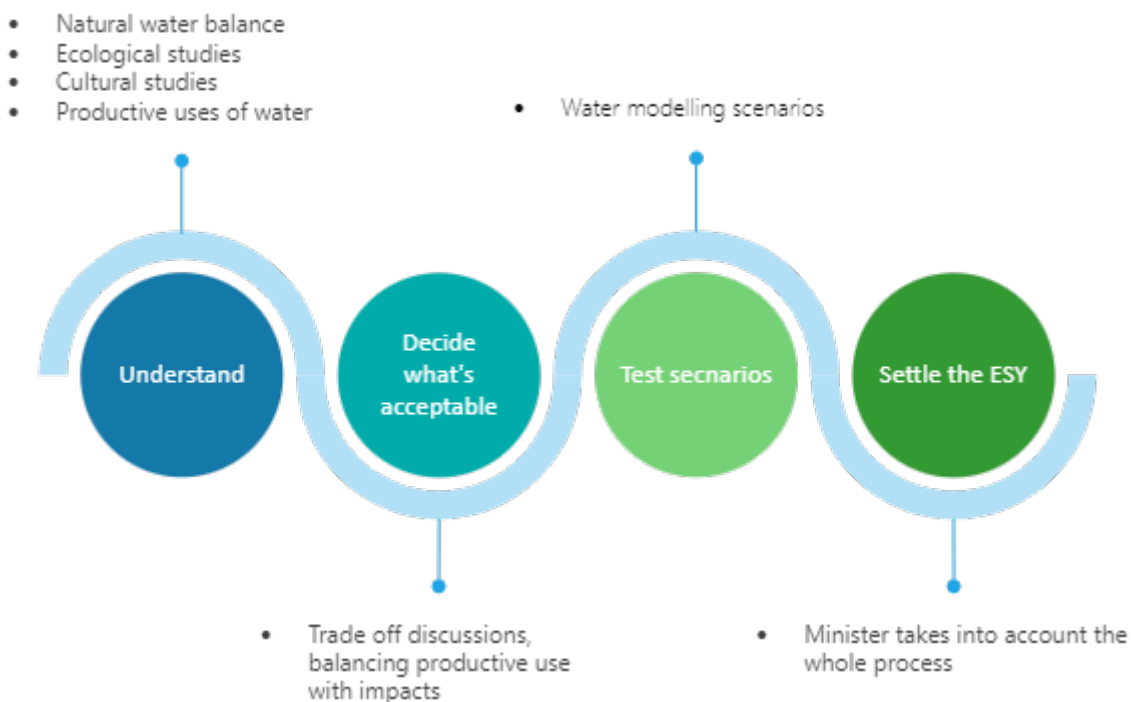
We use four steps to estimate the sustainable yield, each step builds on the last.

First we need to understand the characteristics of the water resource and the values that depend on it. We develop a natural water balance that shows how water moves through the system, and we try to understand water requirements for environmental and cultural values through studies. We also need to understand the demand for water for domestic and economic use.

Second we decide what kind of impacts would be acceptable from water take. We involve the community in trade off discussions, usually through a Water Advisory Committee.

Third we test what impact different extraction scenarios might have using water modelling. We compare extraction scenarios to what is acceptable for the resource.

Finally, the Minister for Water Resources takes all of this process into account and settles the ESY by declaring the water allocation plan.



## Outside of plan areas

Outside of plan areas ESYs do not apply. However, water licensing processes must take into account water availability in the area, and impacts of extraction.

The [NT Water Allocation Planning Framework](#) and the [Surface Water Take Wet Season Flows Policy](#) guide how much water can be taken, including that water for the environment should be set aside first, and that all scientific information about a resource should be considered.

## Verifying the estimated sustainable yield

Water allocation plans use an adaptive management approach, so aspects including the ESY are monitored and evaluated to make sure they are working as intended. This includes through mandatory five-year water allocation plan reviews, or reviews of plans triggered by plan specific criteria (e.g. licence entitlements are nearly equal to allocations).

Implementation actions also establish a program for water monitoring to make sure there are no unacceptable impacts on water users or the water resource.

## Find out more

You can find out more about water resource management in the NT online here: <https://nt.gov.au/environment/water/management-security/water-policies-and-guidelines>