

This country profile was compiled by the OECD Secretariat and reflects information available as of March 2015. Further information and analysis can be found in the publication: OECD (2015) [Water Resources Allocation: Sharing Risks and Opportunities](#), OECD Studies on Water, OECD Publishing. Country profiles for all of the 37 allocation regimes in 27 OECD and key partner countries surveyed for this project are available for download at: <http://www.oecd.org/fr/publications/water-resources-allocation-9789264229631-en.htm>.

## NEW ZEALAND

### Overview and highlights

Water is relatively abundant in New Zealand, although consent is required to take, dam, discharge and divert water. Ground and surface water are publicly owned. With reforms beginning in 2009, the government is currently reforming freshwater policy<sup>1</sup>, setting out a framework for the management of water resources and requiring limits to be set by Regional Councils. There will be further reforms relating to how water is allocated to individuals within limits set by Regional Councils.

Regional councils are responsible for making decisions on the allocation and use of water within their boundaries and for managing water quality. The Waikato Region provides an example of water resources allocation in New Zealand, with key characteristics of the prevailing allocation regime including:

- Significant non-consumptive use for hydro power;
- Defined limits on consumptive use linked to the Waikato Regional Plan. For groundwater, there are limits in terms of the volume of water that can be abstracted, while for surface water, limits are in terms of the proportion (e.g. percentage) of available water that can be abstracted;
- Water entitlements are unbundled from land ownership and granted to individuals;
- An entitlement not being used within a given period can be lost (e.g. "use it or lose it"). National legislation provides for 5 year lapse provision;
- Before a new entitlement can be granted, an assessment of third party impacts, an environmental impact assessment (EIA) and the existence of a user forging use are required;
- All abstractions are charged. The Council charges permit holders to cover costs associated with administration, information gathering and monitoring/ supervision. Charges do not reflect water scarcity;
- During episodes of scarcity, Regional Councils have the authority to determine how to respond to these conditions, following a Regional Plan.

<sup>1</sup> For further information, please access: <http://www.mfe.govt.nz/issues/water/freshwater/freshwater-reform-2013/index.html>; and <http://www.mfe.govt.nz/issues/water/freshwater/nps-freshwater-management-amendment-proposals.html>.

### Legal and institutional setting for water allocation

Institution	Scale	Main Responsibilities
Ministry for the Environment	National	Policy, monitoring, Māori rights and interests under the Treaty of Waitangi
Environmental Protection Authority	National	Planning (for nationally significant projects such as large storage dams)
Regional councils (16 in total nationwide)	Provincial/State/ Regional	Policy, planning, issuing entitlements (permits), monitoring, enforcement

**Legal context for water allocation:** Common Law and Roman/ Statutory Law<sup>2</sup>.  
**Legal definition of ownership of water resources:** ground and surface water are publicly owned.

### Tracking water scarcity

A mapping exercise has been done to identify areas where scarcity of surface water is becoming a problem across New Zealand: [Freshwater Reform: 2013 and Beyond](#) (see page 17). No mapping exercise has been done to identify areas where scarcity of groundwater is becoming a problem.

<sup>2</sup> For information on New Zealand's legal system, please refer to the Ministry of Justice: <http://www.justice.govt.nz/publications/global-publications/t/the-new-zealand-legal-system>.

### Allocation Regime Example: Waikato Region

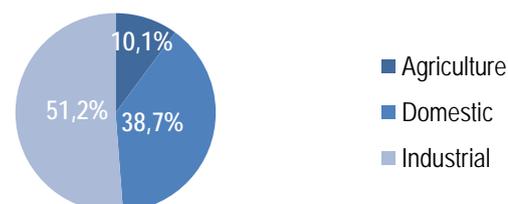
#### Physical features of the water resource

Waikato's water bodies are diverse, reflecting the large variety of water types. The region includes the Waikato River (the longest river in the country, with significant hydroelectricity assets), Lake Taupo (the biggest lake in the country), wild rivers, mountain streams, low-land streams, wetlands, drainage canals and groundwater.

The **flow rate managed or controlled** to some extent, as water systems are partially regulated.

There is **significant non-consumptive use** for hydropower.

Proportion of mean annual abstraction for consumptive takes, by use type:



3

#### Defining the available resource pool

**Are limits defined on consumptive use?** Yes.

- For groundwater, the limit on the volume of water that can be abstracted. For surface water, limits are defined as a percentage of instantaneous flow rate at point of take. The limits are linked to the [Waikato Regional Plan](#), a public planning document prepared by the Waikato Regional Council. The plan is a statutory instrument that must be followed.

**Are environmental-flows clearly defined?** Yes.

- Minimum flows are defined as a percentage of the one in five year 7-day low flow following detailed habitat and river studies. Freshwater biodiversity is taken into account via habitat studies and terrestrial biodiversity is addressed via habitat and river studies.

**What is the status of resource pool?** Some catchments in the region are over-allocated, some are not.

- **Measures to address over-allocation:** The Regional Council is seeking to phase out exceedances of allocable flows by 31 December 2030 by reviewing minimum and allocable flows and implementing methods set out in the Regional Plan. Some of the specific measures include: ceasing new allocations, encouraging voluntary reductions or promoting water augmentation/harvesting (taking water to be stored for future use), rostering users so they are not all taking at once or alternatively reducing the rate of permissible takes, temporarily restricting water abstraction, among a number of others.

**Are there arrangements to deal with impacts of climate change?** Yes.

- The Regional Council reviews minimum flows and allocable flows when investigations indicate that climate change is affecting surface water flows and sustainable yields in groundwater.

#### Factors taken into account in the definition of the available resource pool

Factor	Taken into account?	If taken into account, how?
Non-consumptive uses (e.g. navigation, hydroelectricity)	✓	While setting limits on water abstraction, other relevant aspects are considered, such as: existing uses, recreational water demand and cultural values.

<sup>3</sup> This does not include non-consumptive uses (such as hydro-electricity).

Base flow requirements	✓	Minimum flows are set as a percentage of the one in five year 7-day low flow following detailed habitat and river studies.
Return flows (how much water should be returned to the resource pool, after use)	✓	For non-consumptive uses and groundwater recharge (note: net take definition is a requirement of all permits).
Inter-annual and inter-seasonal variability	✓	Through summer and winter allocations. The Regional Plan also requires monthly allocation.
Connectivity with other water bodies	✓	When deciding on sustainable yield of groundwater, the connection to surface waters is considered. The Plan requires the hydraulic connection to be considered on a case by case basis when individuals apply to take water.
Climate change	✓	When deciding on limits for surface and groundwater. The Plan can also review these limits when revealed climate change is having an effect on water flows or groundwater yields.

### Entitlements to use water

Definition of entitlements	Characteristics of entitlements
<p><b>Are entitlements legally defined?</b> Yes.</p> <p><b>Are private entitlements defined?</b> Yes, as individual entitlements (to an individual person).</p> <p><b>Nature of entitlement:</b> Defined as maximum volume that may be taken in a given period. Water entitlements are unbundled from property titles.</p> <p><b>Period granted for:</b> a term of 15 years without expectation of renewal. However, under the Resource Management Act they can be issued for up to 35 years, and while they cannot be renewed, existing consent holders have the right to have an application for a new permit for the same activity to be considered before other applicants.</p> <p><b>Return flow obligations:</b> specified. Takes and return flows have different types of consent/ permit (water takes require a permit and return flows require discharge consents). If there is no directly linked discharge requiring authorisation (e.g. permitted activity water to water) the take permit always requires the definition of net instantaneous/ daily/ monthly/ annual take amount.</p>	<p>If the <b>entitlement is not used in a given period</b>, the entitlement can be lost (e.g. "use it or lose it"). National legislation (the Resource Management Act) has a five year lapse provision.</p> <p><b>Are entitlements differentiated based on the level of security of supply (or risk of shortage)?</b> No.</p> <p><b>Is there a possibility to trade, lease or transfer entitlements?</b> Yes, transfer of surface water permits is provided in the Regional Plan subject to conditions (within the same catchment and water management class, for a use that already has consent or is permitted by the plan). Trading an entitlement requires a new permit or change to the permit and an assessment of the effect of the change. Transfers of groundwater permits work in a similar way.</p> <p><b>Are allocations (the amount that can be taken at any point in time) managed separately from entitlements?</b> Yes.</p> <p><b>Is allocation trading allowed?</b> Yes, trading is determined by individual arrangements between permit (entitlement) holders. Trading allocation requires a new permit or change to the permit and an assessment of the effect of the change. The Regional Council determines administrative costs for new permits or changes to permits.</p> <p><b>Can entitlements function as a financial instrument?</b> No.</p>
<p><b>Type of users not required to hold a water entitlement to abstract water:</b> individuals taking water for reasonable domestic needs, or the reasonable needs of their animals for drinking water, and users taking water for firefighting purposes.<sup>4</sup> These uses are permitted so long they are not, or are not likely to, have an adverse effect on the environment. In addition, the Regional Plan also allows, <u>conditionally</u>, abstractions without a permit for supplementary surface and groundwater takes of a certain size (1.5 – 15 m<sup>3</sup>/day) and temporary takes of 150 m<sup>3</sup>/day for no more than five days per annum, and aquifer or well testing for 2500/d for no more than 3 days.</p>	

<sup>4</sup> According to national legislation (section s14(3)(b) of the Resource Management Act).

Modelling was recently undertaken to estimate the magnitude of unconsented water use in the Waitako Region<sup>5</sup>. Key findings from the study include:

- “Water use for dairy farming was found to have the most influence on model predictions. This was not surprising due to the high density of dairy cows in the region and the large volumes of drinking water required by lactating cows and the large volumes of water required for dairy shed operations;
- The relative water demand from permitted and s14(3)(b) activities in relation to the allocable flow was assessed in 202 catchments. In 35 of the catchments more than 50 percent of the allocable flow is taken for these activities alone, and in 16 of these the use exceeds the allocable flow. When consented authorised water takes are included with the permitted and s14(3)(b) takes, there are 77 catchments with more than 50 percent of the allocable taken and of these, in 41 catchments the use exceeds the allocable flow;
- If intensification of dairying continues, the amount of animal drinking water required will for the most part increase without restrictions due to the high priority it is afforded by s14(3)(b) of the RMA. In many catchments this may result in nearly all the allocable flow being utilised solely for s14(3)(b) animal drinking water purposes.”

Measures to **address adverse impacts** of an increase in these uses include: estimates of permitted takes inform limit setting when flows and allocations are reviewed, limits can be adjusted to mitigate adverse impacts.

**Requirements to obtain a new entitlement or to increase the size of an existing entitlement:** conditional on assessment of third party impacts, environmental impact assessment (EIA) and existing users forgoing use.

### Abstraction charges

User category	Abstraction charge?	Basis for charge	Reflects water scarcity?
Agriculture	✓	The Regional Council charges permit holders to recover costs associated with consent administration, information gathering and monitoring/ supervision	No.
Domestic	✓		
Industrial	✓		
Energy production (not including hydro power)	✓		
Hydro power	✓		
Other. Specify:	✓		

<sup>5</sup> See: [www.waikatoregion.govt.nz/Services/Publications/Technical-Reports/A-Model-for-Assessing-the-Magnitude-of-Unconsented-Surface-Water-Use-in-the-Waikato-Region/](http://www.waikatoregion.govt.nz/Services/Publications/Technical-Reports/A-Model-for-Assessing-the-Magnitude-of-Unconsented-Surface-Water-Use-in-the-Waikato-Region/).

## Dealing with exceptional circumstances

**Distinction between the allocation regimes used in “normal” and extreme/severe water shortage times?** Yes.

**How is the amount of water made available for allocation adjusted:** in case of shortages, the Regional Plan has the mandate to determine how to respond during these conditions.

**Definition of “exceptional” circumstances:** when flows fall below minimum flows or yields from groundwater are no longer sustainable.

**Legal bodies declaring the onset of “exceptional” circumstances:** The Waikato Regional Council. This council triggers rostering, rationing or cessation of takes, if required. Stakeholders are involved through the regional plan development and submission process.

### Pre-defined priority classes

Permits are assessed on a first in, first served basis in catchments that are not at full allocation. In over-allocated catchments the priority order is:



## Monitoring and enforcement

**Responsible authority:** The Waikato Regional Council.

**Types of withdrawals monitored:** agriculture, domestic, industrial, energy production and environment.

**Monitoring mechanisms:** metering for all these categories of users except for the environment, this is monitored through the State of the Environment reporting.

**Sanctions:** different types of sanctions exist, including non-statutory action (verbal warning, notice of alleged offence, letter of formal warning), statutory directive enforcement action, such as cease breach (abatement notice or enforcement order), and statutory punitive enforcement action, such as a fine (infringement notice or prosecution).

**Conflict resolution mechanisms?** Yes, mediation facilitated by the Environment Court.