

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>.

PERU

Overview and highlights

Water resources in Peru are abundant in the eastern part of the Andes (the Amazon region) and scarce in the coastal area, where more than half of the population live and the most significant economic activities take place. Since 2000, water reforms¹ have been carried out across the country. The main drivers of the reforms include concerns about water shortages or scarcity, deteriorating water quality, equity in access to water, climate change, economic development and environmental improvement or protection.

Key characteristics of the prevailing allocation regime in Parón River of Peru include:

- There is significant non-consumptive use for hydro power;
- The flow rate managed or controlled to some extent, as water systems are partially regulated;
- Ecological flows are clearly defined based on a variable percentage of the average monthly flow;
- Water entitlements are unbundled from land ownership. They are granted in perpetuity. However, if it is not being used during a given period, it will expire ("use it or lose it");
- Users have to pay for abstraction based on volumetric charges, although they do not reflect water scarcity.

Legal and institutional setting for water allocation

Institution	Scale	Main Responsibilities
Ministry of Environment	National	National environment policy
Ministry of Agriculture – National Water Authority (Autoridad Nacional del Agua - ANA)	National	National water resources policy and strategy National water resources management plan
<p>Legal context for water allocation: Roman/ Statutory Law.</p> <p>Legal definition of ownership of water resources: Surface and ground water are publicly owned.</p>		

Tracking water scarcity

A mapping exercise has been undertaken to identify areas where scarcity of surface and ground water are becoming a problem in the areas of Ica, Tacna and Lima.

¹ 2004: National Water Resources Management Strategy (Estrategia Nacional para la Gestión de los Recursos Hídricos Continentales del Perú). 2009: Water Resources Law (Ley de Recursos Hídricos).

*Allocation Regime Example: Parón River's Sub-Basin
(Upper Basin of the Santa River, Ancash Department)*

Physical features of the water resource

Water availability in this sub-basin is estimated with hydrological models. Flows from the upper basin vary in time from main stream flow 2.1 m³/s contrary to low water levels of 0.9 m³/s. Reported flows affected by discharges made by the Parón lagoon.

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

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

Defining the available resource pool

Are limits defined on consumptive use? Yes.

- There is a limit in the volume of water that can be abstracted; linked to a river basin management plan prepared by the Basin's Water Resources Council. The river basin management plan is considered a guiding document.

Are environmental flows clearly defined? Yes.

- Provisionally defined as ecological flow (instead of environmental flow), it is based on a variable percentage of the average monthly flow. Terrestrial biodiversity and freshwater biodiversity are taken into account in the definition of ecological flow.

What is the status of resource pool? Neither over-allocated nor over-used.

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

- Some assessments were developed to address the impact of climate change on hydrological regimes in some Peruvian rivers. Other assessments are currently being developed for the basins on the Pacific slope, using information from remote sensing, historical records on hydrological information and results of general models from ocean-atmosphere circulation. Ongoing efforts from the National Water Authority together with the National Service of Meteorology and Hydrology of Peru seek to coordinate a standardised evaluation methodology.

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)	✓	In water resources balances, mainly energy.
Base flow requirements		
Return flows (how much water should be returned to the resource pool, after use)	✓	In water resources balances, the volume of water that returns to the river especially in large irrigation activities.
Inter-annual and inter-seasonal variability	✓	In historical series for the simulation of operation of hydraulic systems and to determine how much water can be reliably provided during a given period of time.
Connectivity with other water bodies	✓	In some cases, an assessment of the interaction between surface water sources and aquifers are taken into account at general level for water balances.
Climate change		

Entitlements to use water

Definition of entitlements	Characteristics of entitlements
<p>Are entitlements legally defined? Yes.</p> <p>Are private entitlements defined? Yes, as an individual entitlement (to an individual person) and as collective entitlement to an institution representing water users (e.g. WUAs).</p> <p>Nature of entitlement: Defined as the purpose that water may be used for. Water entitlements are unbundled from property titles.</p> <p>Period granted for: In perpetuity, but conditional upon continuity of activity.</p> <p>Return flow obligations: not considered.</p>	<p>If the entitlement is not used in a given period, it will expire (e.g. "use it or lose it").</p> <p>Are entitlements differentiated based on the level of security of supply (or risk of shortage)? Yes. Water licenses are granted for activities of a permanent nature as well as water permits for any surplus of water that may occur temporarily.</p> <p>Is there a possibility to trade, lease or transfer entitlements? No.</p> <p>Are allocations (the amount that can be taken at any point in time) managed separately from entitlements? No.</p> <p>Can entitlements function as a financial instrument? Yes, water licenses guarantee the development of public and private investment projects.</p>

Type of users not required to hold a water entitlement to abstract water: All water use requires an entitlement, except for primary use, which is intended to satisfy basic human needs.

Measures to address adverse impacts of an increase in these uses include: Not addressed nor accounted for.

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 user(s) forgoing use.

Pre-defined priority classes



Abstraction charges

User category	Abstraction charge?	Basis for charge	Reflects water scarcity?
Agriculture	✓	Volumetric	n/a
Domestic	✓		n/a
Industrial	✓		n/a
Energy production (not including hydro power)	✓		n/a
Hydro power	✓		n/a
Other. Specify:	✓		n/a

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: Allocation is made in annual volumes, distributed in a monthly form.

Definition of “exceptional” circumstances: Considers droughts and climatological phenomena. Regimes may be affected in these cases by the reduction of water allocation according to some predefined priority uses.

Legal bodies declaring the onset of “exceptional” circumstances: In cases of water shortages, the National Water Authority. Stakeholders are not involved in definition of exceptional circumstances.

Monitoring and enforcement

Responsible authority: National Water Authority (ANA).

Types of withdrawals monitored: Agriculture, domestic, industrial and energy production.

Monitoring mechanisms: Aerial surveillance.

Sanctions: n/a.

Conflict resolution mechanisms? Yes, the National Resolution's Court of Water Disputes² acknowledges and ultimately resolves administrative claims and appeals against decisions issued related to water allocations.

However, if the issue relates to social conflicts arising from water resources it should be referred to the Guidelines and Strategies for Social Conflicts Management, approved by the Ministerial Resolution N°161-2011-PCM. This Resolution stipulates that the management of social conflicts in the sectors of the Executive Branch is oriented according to these guidelines and directives issued by the Presidency of the Council of Ministers.

² Created by the Water Resources Law No. 29338, the same started functions 24 February 2014.