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.

PORTUGAL

Overview and highlights

Portugal has several international river basins shared with other countries, including the Tejo River Basin. Portugal has formulated a new water law, which transposed the EU Water Framework Directive and also established the main rules for water uses. The economic financial regime applicable to water use was also approved.

Key characteristics of the prevailing allocation regime in the Tejo River Basin include:

- The ground water is mainly privately owned, while the surface water is mainly publicly owned;
- Water resources are considered neither over-allocated not over-used;
- Water entitlements are unbundled from property titles;
- If the entitlement is not used in a given period, it will be lost (e.g. "use it or lose it");
- Before a new entitlement can be granted, assessment of third parties impacts and environmental impact assessment are required;
- Water entitlements can be transferred, leased and traded;
- Abstraction charges apply to agriculture, domestic, industrial, energy production, hydro power, and all other uses. Charges are based on the volume of water used and reflect water scarcity by using a scarcity coefficient for the different river basins;
- During episodes of scarcity, the public water supply has first priority and then to the vital activities of livestock and agro-industrial sectors.

Legal and institutional setting for water allocation

Institution	Scale	Main Responsibilities
Portuguese Agency for the Environment (APA)	National	Policy, planning, issuing entitlements, monitoring and enforcement, public works
APA/ River Basin Administrations	Basin	Issuing entitlements and enforcement, monitoring, public works

Legal context for water allocation: Roman/ Statutory Law.
Legal definition of ownership of water resources: Groundwater is mainly privately owned, while it is publicly owned when located under public property. Surface water is mainly publicly owned, but it can be privately owned when it originates on private land, and until it crosses the boundaries of that property.

Tracking water scarcity

A mapping exercise has not been undertaken to identify areas where the scarcity of groundwater and surface water is becoming a problem.

Allocation Regime Example: Tejo River Basin, Portugal

Physical features of the water resource

The Tejo River Basin is an international basin, with an area of 81 310 Km^2. Of this, only one-third is located in Portugal. Flows are quite variable throughout the year and from year to year. In the basin, floods and droughts often occur. There are various dams constructed mainly for water supply and agriculture.

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

There is **significant non-consumptive use** for hydro power and recreation.

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, which is linked to a river basin management plan, prepared by the Portuguese Agency for the Environment. It is a statutory instrument that must be followed.

Are environmental flows clearly defined? Yes.

- Environmental flows are defined on a case by case basis, mainly in the environmental impact assessment process.
- Both freshwater and terrestrial biodiversity needs are taken into account in the environmental impact assessment study.

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

- There is a regular monitoring, and a strait connection with Spain (through the "Albufeira Convention"). Also the river basin plan addresses the impacts of climate change.

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

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 the planning process
Base flow requirements	✓	In the planning process
Return flows (how much water should be returned to the resource pool, after use)		
Inter-annual and inter-seasonal variability	✓	In the planning process
Connectivity with other water bodies		
Climate change	✓	In the planning process

Entitlements to use water

Definition of entitlements

Are entitlements legally defined? Yes.

Are private entitlements defined? Yes, as an individual entitlement to an individual person and as a collective entitlement to an institution representing water users (e.g. WUAs). In the case of collective entitlements, water is allocated among individual users through the bargaining process.

Nature of entitlement: Water entitlements are defined as the purpose that water may be used for and the maximum volume that may be taken in a given period. Water entitlements are unbundled from property titles.

Period granted for: A term of a given number of years with the expectation of periodic renewal.

Return flow obligations: Not specified. Return flow is evaluated on a case by case basis and established in the entitlement.

Characteristics of entitlements

If the entitlement is not used in a given period, it will be lost (e.g. "use it or lose it").

Are entitlements differentiated based on the level of security of supply (or risk of shortage)? No.

Is there a possibility to trade, lease or transfer entitlements? Yes. The user´s entitlement can be transferred through communication to the competent authority, with a minimum of 30 days in advance. They can also be traded or leased by notifying the competent authority, one month in advance. They can also be transferred to the heirs or legatees.
There is a provision about price at which water is traded in the law, but until now it has not been used.

Can entitlements function as a financial instrument? No.

Type of users not required to hold a water entitlement to abstract water: Livestock or cattle watering. This type of user consumes only small amount of water. The adverse impacts of any increase in this type of use are controlled by monitoring.

Requirements to obtain a new entitlement or to increase the size of an existing entitlement: Assessment of third party impacts and environmental impact assessment (EIA).

Abstraction charges

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

How pricing arrangements reflect scarcity: The legislation establishes a scarcity coefficient for the different river basins. In the case of Tejo, this coefficient is 1.1.

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: All rules are established in the entitlements. These conditions can be modified in certain conditions established in the Water Law.

Definition of "exceptional" circumstances: Drought, natural catastrophe, and another cases of *force majeure*. Stakeholders are represented on the boards of river basins and thus involved in the definition of exceptional circumstances.

Legal bodies declaring the onset of "exceptional" circumstances: The Minister for the Environment, under proposal of National Water Authority (Agência Portuguesa do Ambiente) (in case of drought). In case of exceptional circumstances, the priority goes to public water supply and then to the vital activities of livestock and agro-industrial sectors.

Pre-defined priority classes[1]

Monitoring and enforcement

Responsible authority: Portuguese Agency for the Environment.

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

Monitoring mechanisms: Metering. The user must install a system of self-control and report to the national water authority. The authority shall monitor compliance with this rule.

Sanctions: Severe environmental contravention or revocation of title.

Conflict resolution mechanisms? Yes. The national authority may set a deadline to correct the situation.

[1] Other priorities are established in the river basin management plan and this priority classes can be changed in the situation of water scarcity.