

ANNEX A

Questionnaire for the OECD project on water resources allocation

Overview

This questionnaire aims to gather an information base on *allocation regimes** in OECD and BRIICS countries, and in Argentina, Colombia and Costa Rica, to inform the OECD project on water resources allocation. The information collected will be used to draw out general trends and lessons associated with the design and functioning of water allocation regimes. It will also be used to develop “country profiles” to summarise the key elements of allocation regimes in a given country.

The questionnaire consists of two parts. Part 1 covers general contextual information at the national level and should only be completed once for each country. Part 2 covers specific elements of an example of an allocation regime. In many countries, there exist a number of different allocation regimes. For instance, allocation regimes may differ from one province/state/river basin to another. Allocation may also differ for surface water and groundwater systems.

If allocation of both surface and groundwater resources is dealt with in a uniform way across your country (there is only one allocation regime), Part 2 need only be completed once. Otherwise, please complete Part 2 two to three times, each time for a different example (groundwater system, surface water in a specific river basin, etc.). The choice of which water bodies to use as examples requires careful consideration. Please do not hesitate to discuss your selection of examples with the Secretariat.

Given the complexity of water resources allocation regimes, the questionnaire may require input from a number of experts with different types of expertise such as, legal, regulatory, planning and policy expertise. Please do not hesitate to circulate the questionnaire to the relevant experts in your country. For instance, an official of the national government would be well-placed to complete Part 1, whereas experts or government officials with detailed knowledge of specific examples of allocation regimes should respond to Part 2.

* Terms in bold and italics are defined in the appended glossary.

Questionnaire overview

Part 1. General contextual information

Section 1.1. Contextual information (institutional and legal setting; information on scarcity)

Section 1.2. Recent and current reforms of allocation regimes

Part 2. Specific information on an example of an allocation regime (2-3 examples from your country, would be welcome)

Section 2.1. Background information for the example of the allocation regime

Section 2.2. How the available resource pool is defined

Section 2.3. How users access water

Section 2.4. How access to water works in practice

Section 2.5. How exceptional circumstances (e.g. unplanned events or shocks negatively impacting the resource) are managed

Section 2.6. How access is monitored and enforced

Part 1. General contextual information

This part should be completed once per country in order to provide the institutional and legal context within which water allocation regimes operate and signal any recent or current reforms of allocation regimes. We recommend that this section be completed by an expert with a thorough knowledge of national policies and associated water allocation regimes.

Section 1.1. Contextual information (institutional and legal setting; information on scarcity)

1.1.1. Please list the institutions that are primarily responsible for water allocation (for example, Ministries, Water/River Basin Agencies, Water Users Association):

Institution	Scale of governance	Main responsibilities (i.e. policy, planning, issuing entitlements, monitoring and enforcement, etc.)
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	
	Choose an item.	

1.1.2. What is the basis for your country's legal system as it pertains to water resources allocation?

Common Law

Roman/Statutory Law

Other, specify: _____

1.1.3. How is the ownership of water resources legally defined (if at all)? (Note: "Ownership" here refers to ownership of the resource itself, not the entitlement or right to use the resource.)

a) **Groundwater:**

- Public ownership (e.g. **Public Trust Doctrine**)
- Private ownership
- Other, specify: _____

b) **Surface water:**

- Public ownership (e.g. Public Trust Doctrine)
- Private ownership
- Other, specify: _____

1.1.4. Has a mapping exercise been undertaken at the national level to identify areas where water scarcity is becoming a problem?

Groundwater: Yes No

Surface water: Yes No

a) If yes, please provide most recent reference(s): _____

Section 1.2. Recent and current reforms of allocation regimes

1.2.1. Have any significant reforms of allocation regimes taken place in the last ten years?

Yes No

a) If yes, please describe the process briefly and indicate the main driver(s) of the reform(s):

- Concerns about water shortages or scarcity
- Concerns about deteriorating water quality
- Concerns about equity in access to water
- Climate change
- Economic development
- Environmental improvement or protection
- Other, please indicate: _____

1.2.2. Is an allocation reform process underway or being considered in any part of your country?

Yes No

a) If yes, please describe the process briefly and indicate the main driver(s) of the reform(s):

Concerns about water shortages or scarcity

Concerns about deteriorating water quality

Concerns about equity in access to water

Climate change

Economic development

Environmental improvement or protection

Other, specify: _____

b) Please supply a link to or a copy of the most relevant documents outlining the nature of the reforms under consideration:

Part 2. Specific information on an example of an allocation regime (2-3 examples from your country, would be welcome)

This part seeks detailed information about a specific example of a water allocation regime. We recommend that it be completed by an expert familiar with allocation and governance arrangements for that particular allocation regime. In countries where there are a number of different water allocation regimes (for example, different allocation regimes for surface or groundwater, or variations in allocation regimes from one province/state/river basin to another), we recommend that Part 2 be completed 2-3 times for each example.

Section 2.1. Background information for the example of the allocation regime

2.1.1. Please indicate the name of the example of the allocation regime [for example, “The Incomati River Basin, South Africa”, “The Colorado River Basin, USA”, “The Province of Alberta, Canada”, “Surface water systems in Korea (referred to under the River Act)”]:

2.1.2. Please indicate the territory/scale (e.g. river basin or catchment; state or provincial level; multi-purpose infrastructure) to which the responses in Part 2 apply:

2.1.3. Provide a brief (2-3 line) description of the physical characteristics of the water resource covered in this section of this example (e.g. variability of flow, nature of infrastructure if any, links between surface water and groundwater systems, if any):

2.1.4. To what extent can the flow rate of the water systems be managed or controlled?

The water system is:

- Fully regulated (the flow rate can be controlled fully)
- Partially regulated (the flow rate can be controlled to some extent)
- Not regulated (the flow rate cannot be controlled)

2.1.5. Provide a *general* estimation of the % of mean annual inflow/recharge that is consumed (% agriculture, % urban, etc.), if available:

Water uses	Percentages
Agriculture	
Domestic	
Industrial	
Energy production (not including hydro power)	
Environment (evapotranspiration)	
Transfer to the sea or another system	
Other, specify:	
Total	100%

a) Please indicate any significant **non-consumptive uses** (e.g. hydro power, transport, etc.) in this water system, if any:

Section 2.2. How the available resource pool is defined

2.2.1. Is there a clear definition of the limit on **consumptive use**?

- There is a limit in the volume of water that can be abstracted
- There is a limit to the proportion (e.g. percentage) of water that can be abstracted
- There are restrictions on who can abstract the water (but no limit on how much water can be abstracted)
- There is no explicit limit on water abstraction

a) Is the amount of water available for consumptive use in the resource pool linked to a public planning document? (E.g. a river basin management plan.)

- Yes, the limit is linked to a river basin management plan
- Yes, the limit is linked to another planning document, please indicate: _____
- No, the limit is not linked to any planning document

If yes,

b) Who is the authority responsible for preparing the planning document?

c) What is the nature of the plan?

- Statutory instrument that must be followed
- Guiding document

2.2.2. Are minimum **environmental flows (e-flows)**/sustainable diversion limits defined?

Yes No

a) If yes, provide detail on how e-flows are defined: _____

b) Is freshwater biodiversity taken into account? Yes No

If so, how? _____

c) Is terrestrial biodiversity taken into account? Yes No

If so, how? _____

2.2.3. Are the following factors taken into account in the definition of the available resource pool?

Factor	Not taken into account	Taken into account	If taken into account, how?
Non-consumptive uses (e.g. navigation, hydroelectricity)			
Base flow requirements			
Return flows (how much water should be returned to the resource pool, after use)			
Inter-annual and inter-seasonal variability			
Connectivity with other water bodies			
Climate change			

2.2.4. Is the water system currently considered:

- Over-allocated** (e.g. current use is within sustainable limits but there would be a problem if all legally approved entitlements to abstract water were used)
- Over-used** (existing **abstractions** exceed the estimated proportion of the resource that can be taken on a sustainable basis)
- Neither over-allocated nor over-used

2.2.5. If the water system is currently over-allocated or over-used, please indicate which measures are being undertaken to address this issue (if any)?

2.2.6. What arrangements are in place, if any, to accommodate the potentially adverse impacts of climate change on the resource pool? (E.g. using best available science to plan for future changes in availability, undertaking periodic monitoring and updating of available pool.)

Section 2.3. How users access water

2.3.1. Are private entitlements to take water defined? Yes No

a) If yes, is it in the form of:

- An individual entitlement (to an individual person)
- A collective entitlement: (to a group of persons/organisation/city)
- Other, specify: _____

i) If there are collective entitlements they are assigned to:

- An institution representing water users (e.g. WUAs)
- Another (perhaps informal) community-based arrangement
- Other, specify: _____

ii) In the case of collective entitlements, please indicate the process for allocating water among individual users within a group of users:

- Bargaining process
- Informal trading
- Other, specify: _____

b) If private entitlements are not allowed, please describe the constraints (e.g. public management is seen to be needed for equity, social concerns, etc.):

2.3.2. Are water users' entitlements to abstract or divert water from the resource pool legally defined? (Note: Depending on the country context, "water users' entitlements" may also be referred to as "water users' rights" or "abstraction licenses or permits". Note that this section refers to entitlements to use the resource, not ownership of the resource itself.)

Yes No In process of development

a) If yes:

i) What is the nature of the water users' entitlements?

- Water entitlements** unbundled from property titles
- Riparian entitlements**
- Prior appropriation** where reliability is a function of the year when the entitlement was first issued
- Other, specify: _____

ii) How are entitlements defined?

- Purpose that water may be used for
- Maximum area that may be irrigated
- Maximum volume that may be taken in a nominated period
- Proportion of any water allocated to a defined resource pool
- Other, specify: _____

iii) Typically, how long are entitlements issued for?

- A term of years _____ without expectation of renewal
- A term of years _____ with expectation of periodic renewal
- In perpetuity but conditional upon beneficial use
- In perpetuity
- Other, specify: _____

iv) Are return flow obligations specified?

Yes No

If yes, how? (E.g. % of the entitlement.) _____

b) If these entitlements are not legally defined, please explain how abstraction and use works in practice:

2.3.3. What types of users are **not** required to hold a water entitlement but can still take water from the resource pool? (E.g. livestock, domestic users, urban water suppliers, farm dam owners, small scale users, people who plant trees?)

a) Please provide an estimate (if available) of the percentage of total water uses related to these groups of users?

b) How are the adverse impacts of any increase in these uses controlled?

2.3.4. Is there a pre-defined set of priority uses within the resource pool? Yes No

a) If yes, please indicate the sequence of priority uses below:

Categories	Sequence of priority (provide further details if necessary)
Agriculture	
Domestic	
Industrial	
Energy production	
Environment	
Transfer to the sea or another system	
National security (e.g. protection of infrastructure and critical dikes, nuclear plants)	
Other, specify:	

2.3.5. Do users pay abstraction charges?

Categories	Yes/no	Basis for charge [i.e. volumetric (metered), proxy (e.g. surface of irrigated land), other (specify)]	Does pricing instruments reflect water scarcity? (Yes/no)
Agriculture			
Domestic			
Industrial			
Energy production (not including hydro power)			
Hydro power			
Other, specify:			

a) If pricing arrangements reflect scarcity, briefly indicate how:

Section 2.4. How access to water works in practice

2.4.1. If there are new entrants and/if entitlement holders want to increase the volume of water they use in the resource pool, can new entitlements be issued or existing entitlements be augmented?

- Yes, without restriction
- No, catchment is closed
- Conditional on:
 - Assessment of third party impacts
 - Environmental impact assessment (EIA)
 - Existing user(s) forgoing use
 - Other, specify: _____

2.4.2. Characteristics of entitlements:

a) If the entitlement is not used in a given period, the entitlement:

- Will be lost (e.g. “use it or lose it”)
- Remain in place for the period it is issued for
- Other, specify: _____

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

If yes, how? _____

c) Can water users' entitlements be traded, leased, transferred in any way? Yes No

If users' entitlements can be traded, leased, transferred, how does this work in practice?

d) Are allocations (the amount that can be taken at any point in time) managed separately from entitlements? Yes No

e) Is allocation trading allowed? Yes No

i) If yes, how is the price at which water is traded determined?

ii) What administrative charges are associated with an allocation trade?

iii) Are there specific restrictions on trading of entitlements and/or allocations?

Yes No

If yes, what are the restrictions? (E.g. by certain user groups, in certain locations, etc.)

f) Can the entitlement function as a financial instrument? If so, how?

Section 2.5. How exceptional circumstances (e.g. unplanned events or shocks negatively impacting the resource) are managed

2.5.1. How is the amount of water made available for allocation varied from time to time? (E.g. from year to year, between seasons, etc.)

2.5.2. Is there a distinction between the allocation regimes used in “normal” times and in times of “extreme/severe” water shortage? Yes No

a) If yes, how are “exceptional” circumstances defined? (E.g. extended drought, etc.)

b) How does this affect the allocation regime? (E.g. triggers the water use restrictions, reduction in allocations according to a pre-defined priority uses, suspension of the regime plan, etc.)

c) Who is the responsible authority for declaring the onset of “exceptional” circumstances?

d) Are stakeholders involved in the definition of “exceptional” circumstances? Yes No

If yes, how? _____

Section 2.6. How access is monitored and enforced

2.6.1. Please indicate if withdrawals are monitored:

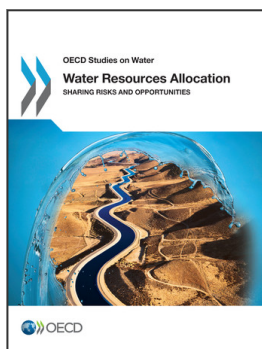
Categories	Monitored? (Yes/no) If yes, how? (i.e. metering, aerial surveillance, or other, please specify)	Who is the responsible authority?	Type of sanction(s) for non-compliance, if any
Agriculture			
Domestic			
Industrial			
Energy production			
Environment			
Transfer to the sea or another system			
National security (e.g. protection of infrastructure and critical dikes, nuclear plants)			
Other, specify:			

2.6.2. Are there any type of conflict resolution mechanisms in place? Yes No

a) If yes, briefly describe them and indicate which institutions are involved:

Conclusion: Other information

Is there any else that you consider that the Secretariat should be aware of as it interprets the information supplied in this response? We would be particularly grateful for copies of any documents that provide a short description or review of the regimes described in Part 2.



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