# CHARACTERISTICS OF ROBUST WATER ALLOCATION REGIMES

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Water allocation in transboundary basis: a global worksho
on the status and good practices
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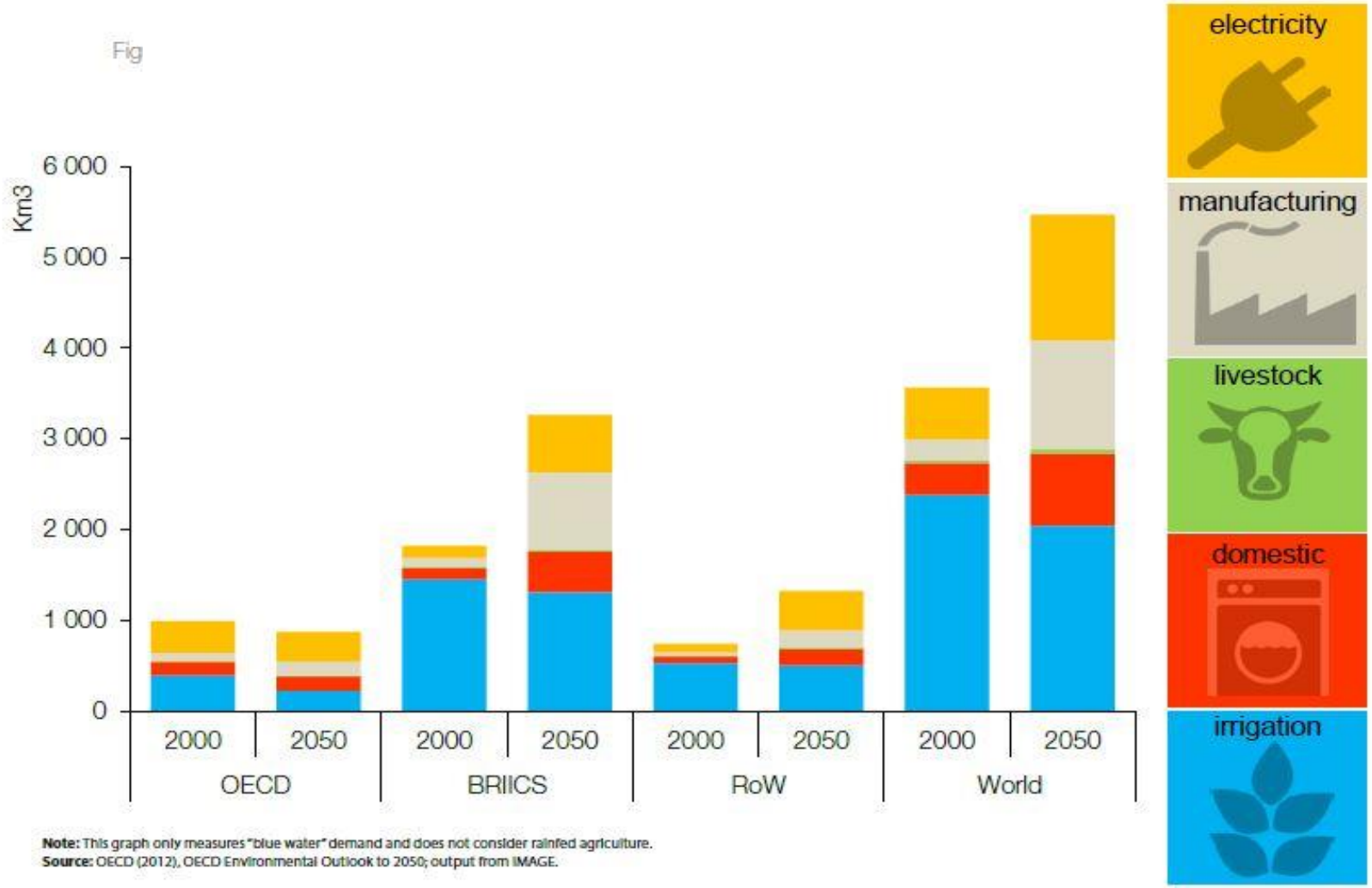
OECD
BETTER POLICIES FOR BETTER LIVES

# Increasing demand, shifting allocation

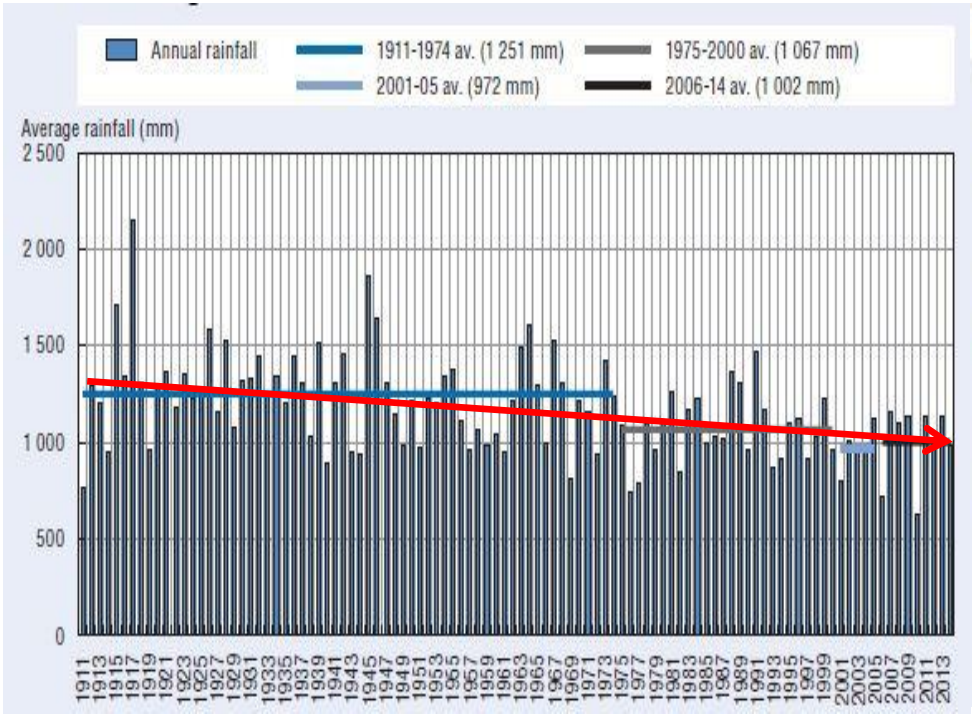
**Global water demand: baseline scenario, 2000 and 2050**



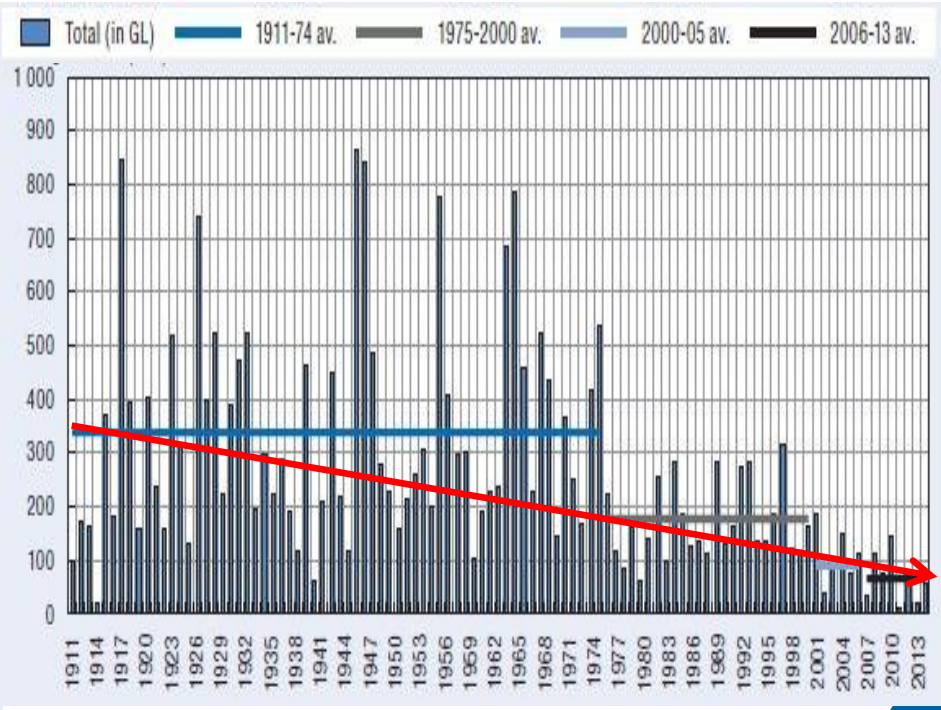

**Note:** This graph only measures "blue water" demand and does not consider rainfed agriculture.
**Source:** OECD (2012), OECD Environmental Outlook to 2050; output from IMAGE.

# Subtle climate shifts can produce pronounced impacts

**Historical trends in rainfall for Jarrahdale, Western Australia**



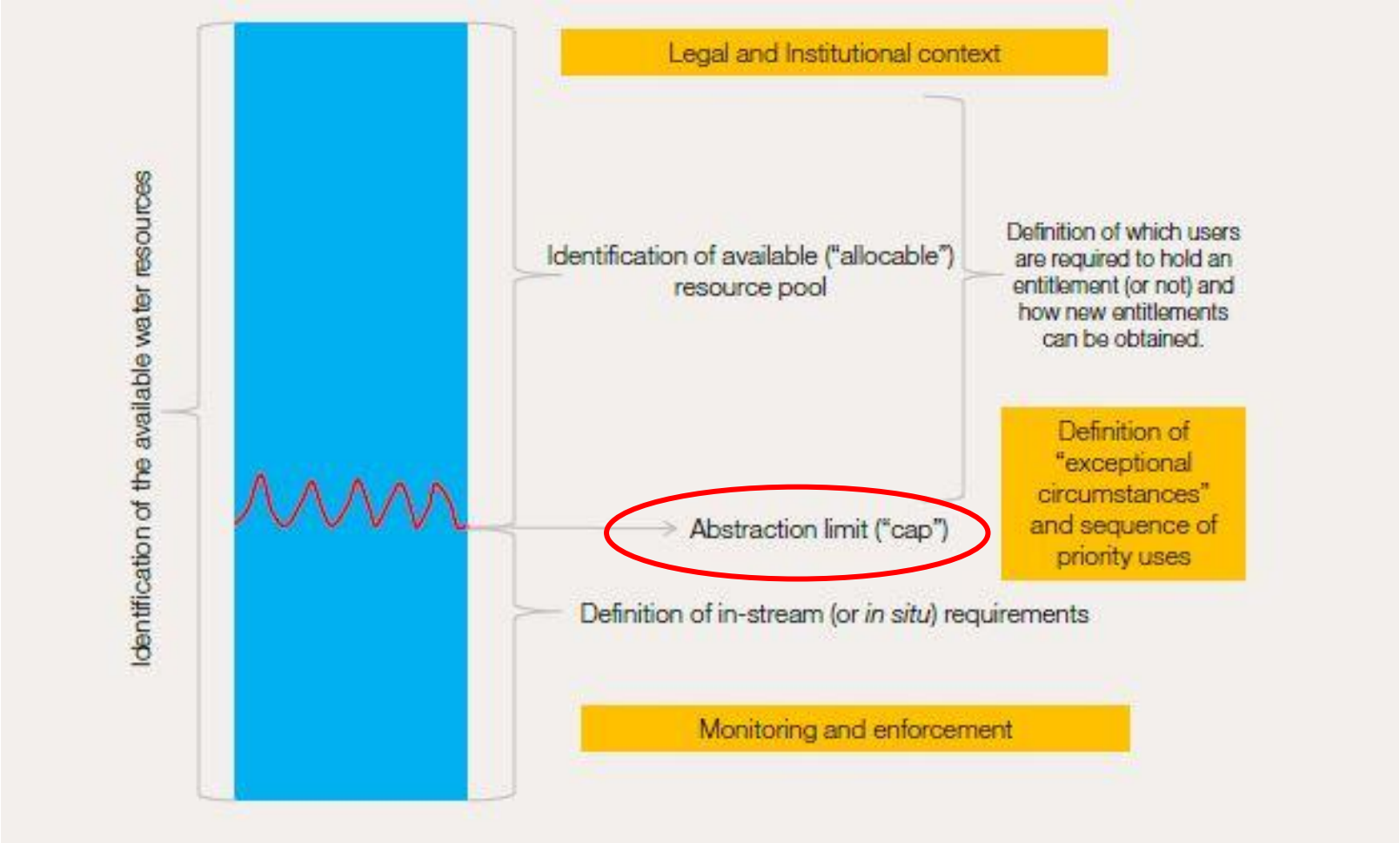

**Historical trends in streamflow into Stirling Dam**




Source: OECD (2015) *Water Resources Allocation: Sharing Risks and Opportunities*

# Key elements of a water allocation system

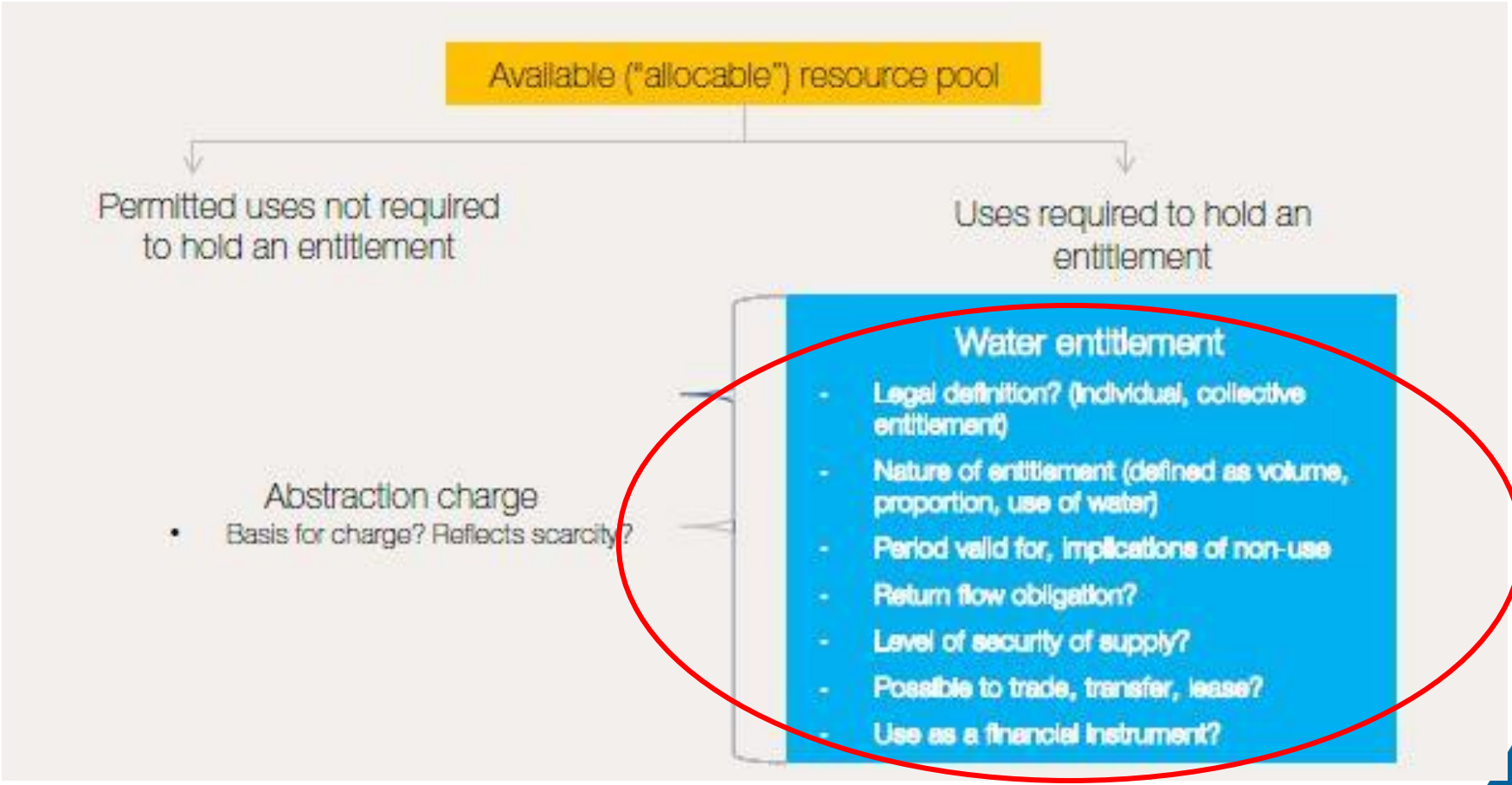
## System level elements




Source: OECD (2015) *Water Resources Allocation: Sharing Risks and Opportunities*

# Key elements of a water allocation system

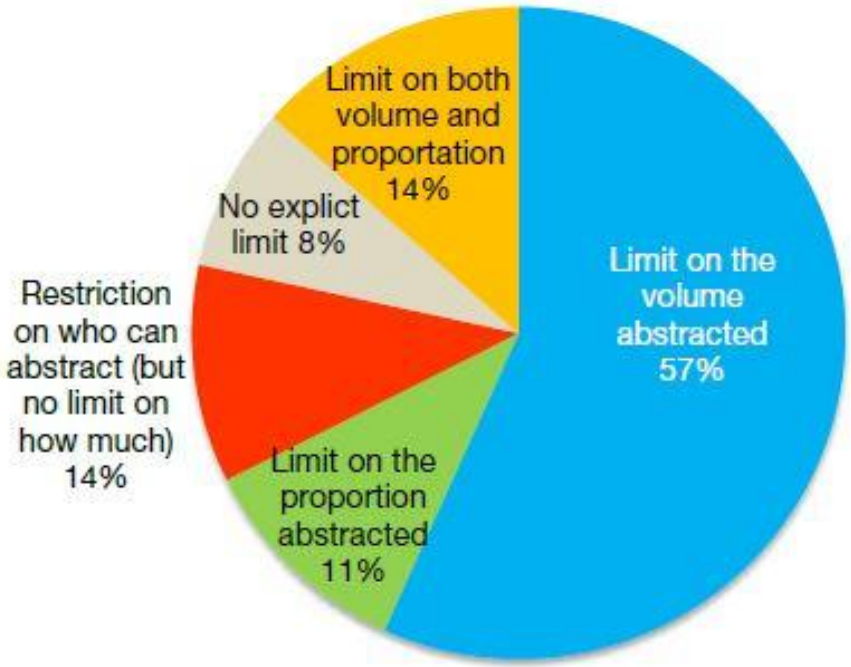
## User level elements



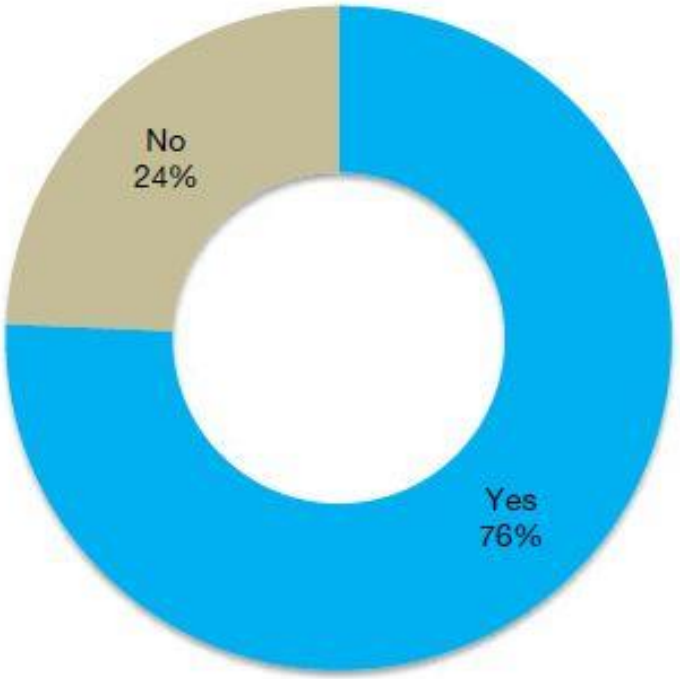

Source: OECD (2015) *Water Resources Allocation: Sharing Risks and Opportunities*

# Defining the « cap » and environmental flows

**Proportion of examples surveyed using different types of abstraction « cap »**




**Proportion of examples surveyed that define minimum environmental flows**




Source: OECD (2015) *Water Resources Allocation: Sharing Risks and Opportunities*

# Survey results: highlights

| Element | Main findings |
|---|---|
| **Legal definition of ownership** | The large majority of countries indicate that water resources are publicly owned (or designated as "ownerless property"). Nearly all instances of privately owned water resources relate to groundwater. |
| **Adapting to climate change** | Only 57% of allocation regimes report taking into account climate change, in the definition of the available resource pool. |
| **Mechanisms for monitoring and enforcement** | 2/3 of regimes report that sanctions are in place for non-compliance with the rules and regulations of allocation regimes. Monetary fines are the most common type. |
| **Abstraction charges** | A majority of regimes charge for water abstraction. Industrial use is the most common type of use to have an abstraction charge (nearly 70% of regimes). Charges generally low. |
| **Possibility to trade, lease or transfer water entitlements** | 2/3 of allocation regimes allow for some sort of trade, lease or transfer of water entitlements. Specific conditions to trade, lease or transfer usually apply and often require the review and approval of an authority. |
| **Duration of water entitlements** | In most cases, water entitlements are time bound, either with or without an expectation of renewal. In a few cases are water entitlements granted in perpetuity (Australia, Chile, Israel, and Peru), with or without requirements for beneficial use or continuity of use. |

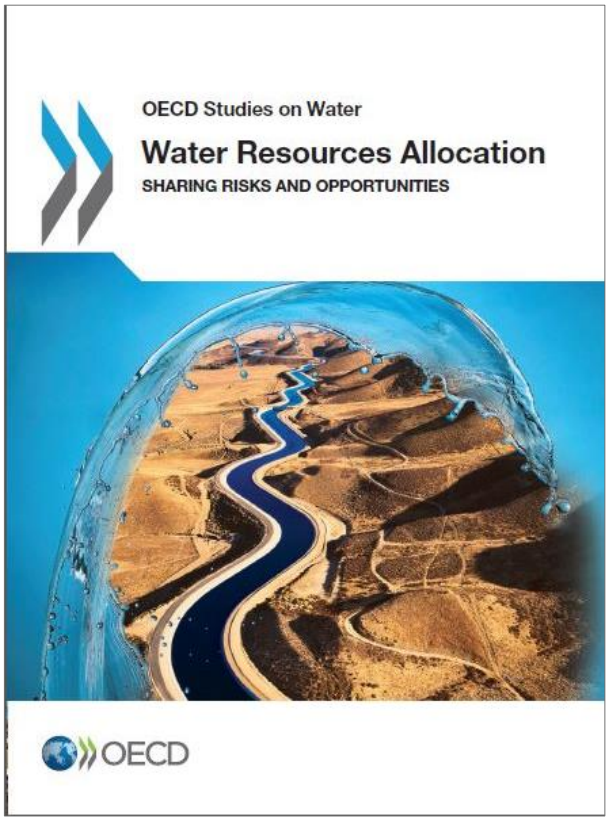
# Some distinctive considerations for groundwater

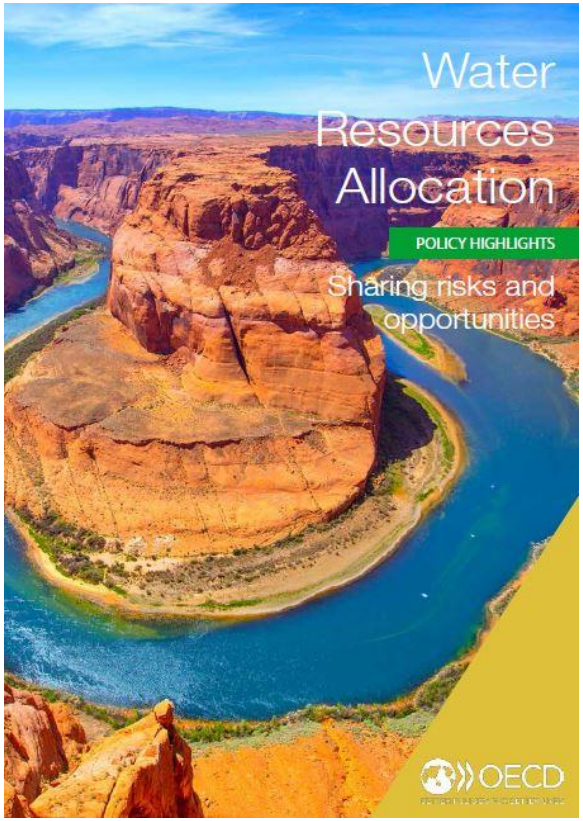
- ✓ Greater uncertainty about the state and use of the resource
- ✓ Allocating both stocks and flows
- ✓ Often a common pool resource, high exclusion costs
- ✓ Decentralised access by users on demand
- ✓ Fragmented legislation, lack of data

# Towards more robust allocation regimes…

- ✓ *Is there a clear **legal status** in place for all resources?*
- ✓ *Is **availability of resources** and possible scarcity well-understood?*
- ✓ *Is there an **abstraction limit** ("cap") in place that reflects in situ requirements and sustainable use?*
- ✓ *Are adequate arrangements in place for dealing with **exceptional circumstances** (drought, severe pollution)?*
- ✓ *Are there effective mechanisms for **monitoring and enforcement**, with clear and legally robust sanctions?*
- ✓ *Are appropriate **abstraction charges** in place for all users that reflect the impact of abstraction on resource availability and the environment?*
- ✓ *Are obligations related to **return flows** and discharges properly specified and enforced?*
- ✓ *Does the system allow water users to **reallocate water** among themselves to improve allocative efficiency?*
- ✓ *….*

# Thank you

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