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PRESENTATION OF THE GUIDE ON QUANTITATIVE WATER MANAGEMENT PLANNING AT THE LOCAL LEVEL WITH A FOCUS ON EAP COUNTRIES

OiEau, X. Goossens, France, 08/07/2024

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TARGET AUDIENCE OF THE GUIDE

- water system managers
- policy makers
- river basin administrations
- main water users

OBJECTIVE OF THE GUIDE

- Describe the key stages in setting up a quantitative management plan
- Establish responsibilities

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THE THREE OBJECTIVES OF QUANTITATIVE MANAGEMENT

- Understand, describe and model current and future imbalances between resources and needs
- Determine or adjust **water volume allocation rules** to restore or maintain quantitative balance
- Support users to mitigate the impact of dwindling resources and allocation rules on their activities (facilities, financing, technical support)

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CONTEXTS WHERE QMP IS ESSENTIAL

- Sub-basins identified as priorities by the RBMP
- More frequent and longer periods of water shortage
- Actors organize themselves for better management of existing resources

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THE 5 STEPS OF QUANTITATIVE WATER RESOURCE MANAGEMENT

- Initiate the process in priority sub-watersheds where there is a proven or anticipated recurring imbalance between available resources and water needs (SCOPING).
- Determine locations, periods and current and projected levels of imbalance (WATER STATUS)
- Drawing up, sharing and adjusting resource allocation rules (WATER ALLOCATION PLANS)
- Implement and adjust the action program to mitigate the impact of reduced water availability on users' activities (PROGRAMME OF ACTIONS)
- Ensure compliance with allocation rules, and monitor the effectiveness and efficiency of the action program (IMPLEMENTATION AND MONITORING)

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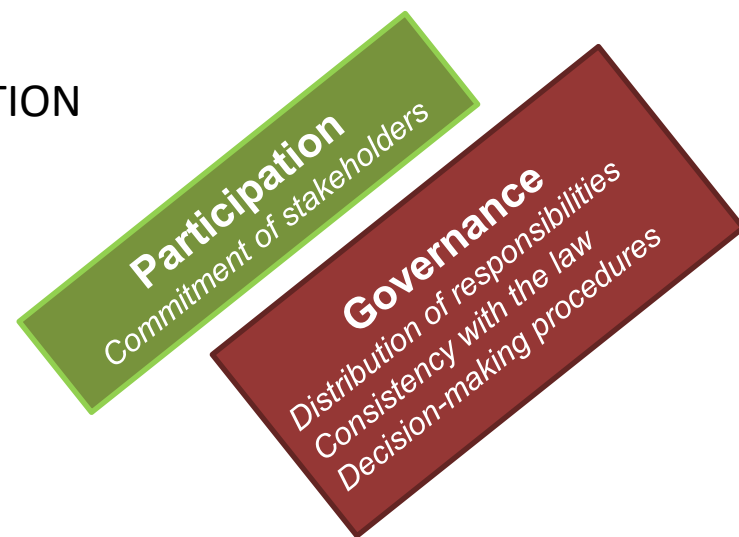
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SCOPING PHASE

- #1 DEFINE THE PROJECT ORGANIZATION, GOVERNANCE, FINANCING
- #2 ENGAGE STAKEHOLDER PARTICIPATION FROM THE START
- #3 OUTLINE THE TERRITORY AND TIMESCALE
- #4 CHARACTERISE THE LEGISLATIVE CONTEXT
- #5 ASSESS DATA NEEDS AND AVAILABLE INFORMATION



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FOCUS ON #1 DEFINE THE PROJECT ORGANIZATION, **GOVERNANCE**, FINANCING

12 OECD Principles on Water Governance

EFFECTIVENESS

Principle 1. **Clear roles and responsibilities**

Principle 2. Appropriate scales within basin systems

Principle 3. Policy coherence

Principle 4. Capacity building

EFFICIENCY

Principle 5. Data and information

Principle 6. Financing

Principle 7. **Regulatory frameworks**

Principle 8. Innovative governance

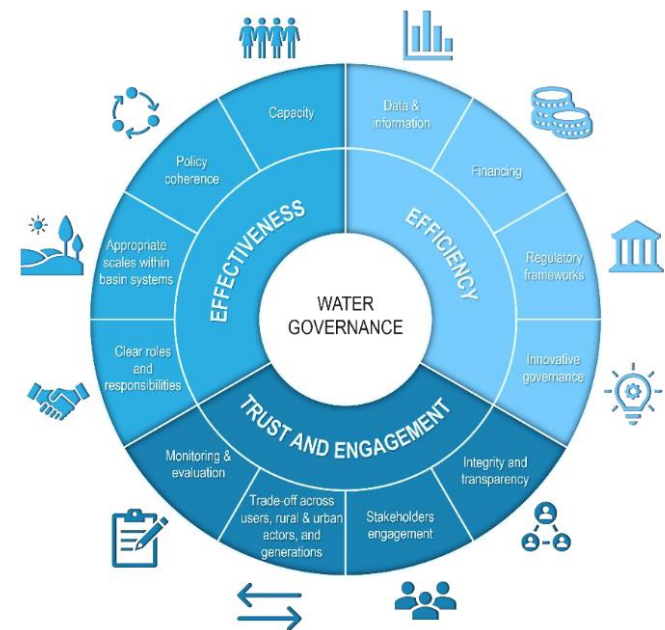
TRUST AND ENGAGEMENT

Principle 9. Integrity and transparency

Principle 10. Stakeholder engagement

Principle 11. Managing trade-offs

Principle 12. Monitoring and evaluation



Ref: A Handbook of What Works: Solutions for the Local Implementation of the OECD Principles on Water Governance

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WATER RESOURCES STATUS

#6 CHARACTERISE FRESHWATER RESOURCES IN THE CONTEXT OF CLIMATE CHANGE

#7 ASSESS MINIMUM ENVIRONMENTAL FLOW

#8 SHARE THE WATER RESOURCES STATUS WITH STAKEHOLDERS

Governance
Consistency with the law for
determining flow thresholds

Participation
Ownership of concepts and
issues by water users

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WATER RESOURCES STATUS

Focus on #7 ASSESS MINIMUM ENVIRONMENTAL FLOW

Three families of methods

- **Hyological** : Analysis of the natural hydrological cycle and characteristic values for low-water conditions
- **Hydraulic** : Study of variations in hydraulic parameters and water surface area as a function of flow rate
- **Habitat methods**: Cross-referencing a given flow rate with the preferences of one or more target species at different stages of development

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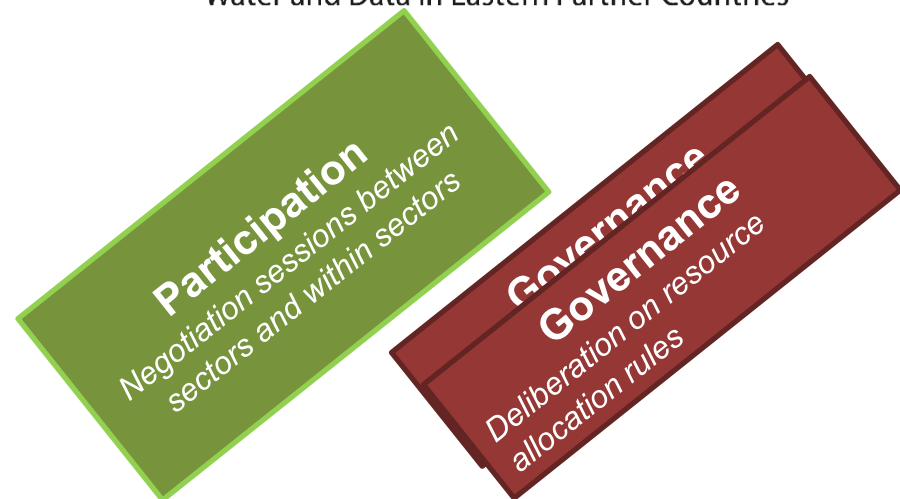
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WATER ALLOCATION PLANS

#9 ASSESS WATER DEMAND

#10 ASSESS ABSTRACTABLE VOLUMES

#11 SET WATER ALLOCATION TARGETS



| Volumes in m3 | | April | May | June | July | August | September | October | Low water period |
|--|-----------------------|---------------|----------------|----------------|----------------|---------------|---------------|---------------|------------------|
| TOTAL ABSTRACTABLE VOLUMES | | 93 633 | 100 947 | 106 690 | 151 664 | 94 141 | 87 555 | 82 354 | 716 982 |
| Scenario for allocating abstractable volumes | Drinking water | 66 003 | 70 261 | 74 519 | 83 036 | 83 036 | 74 519 | 70 261 | 521 634 |
| | Irrigation | 1 432 | 821 | 2 078 | 2 550 | 2 004 | 573 | 0 | 9 457 |
| | Industrie | 2 150 | 2 150 | 2 150 | 2 150 | 2 150 | 2 150 | 2 150 | 15 050 |
| Résidual abstractable volumes | | 24 049 | 27 715 | 27 943 | 63 928 | 6 951 | 10 313 | 9 943 | 170 842 |

Example of distribution of abstractable volume between regulated uses at monthly time resolution during the dry period

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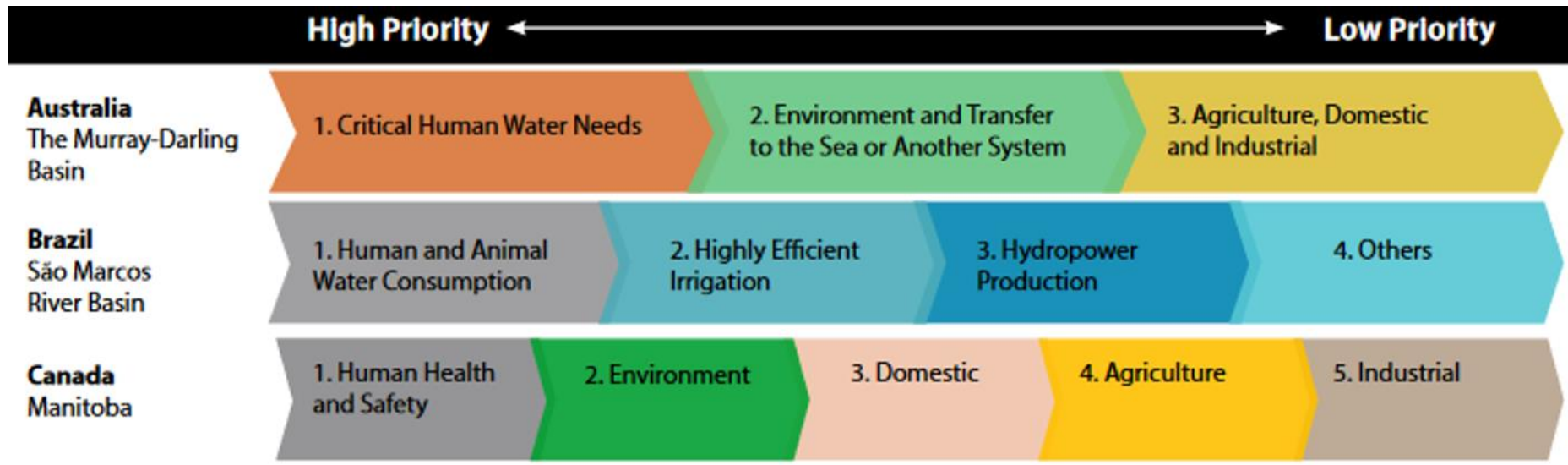




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FOCUS ON #11 SET WATER ALLOCATION TARGETS



Source: OECD, Policy highlights - Water Resources Allocation

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PROGRAMME OF ACTIONS

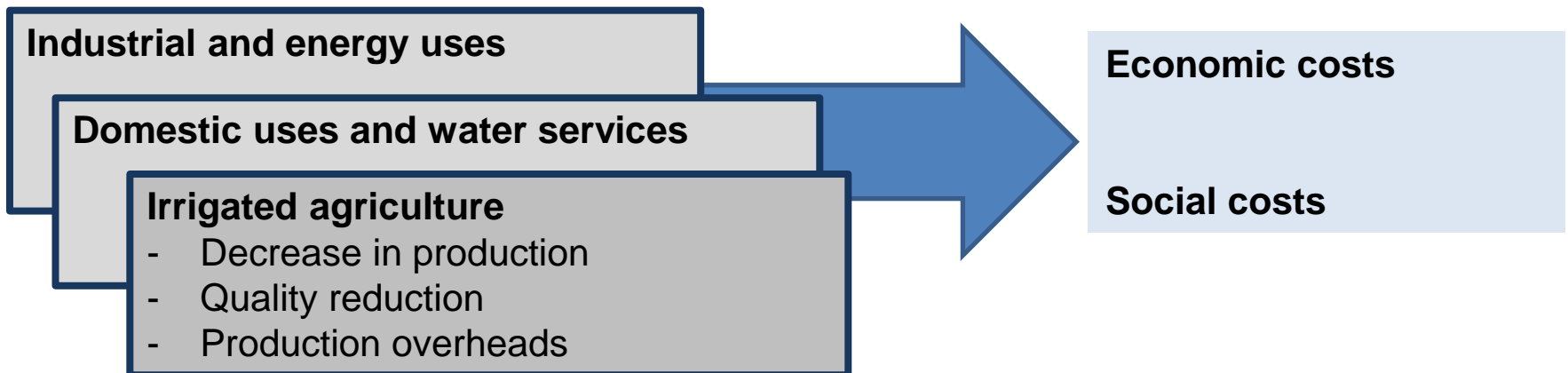
#12 SELECT ACTIONS

#13 DEVELOP A "NO-PROJECT" SCENARIO

#14 CO-CONSTRUCT A PROGRAMME OF ACTIONS



Assessing the impact of reducing available volumes



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FOCUS ON #14 CO-CONSTRUCT A PROGRAMME OF ACTIONS

List of adaptation measures

- Resource development (storage, transport)
- Improving practices and processes (reducing losses, etc.)
- Change in type of activity

Conditions for validating an action

- The majority of players concerned are ready to implement the action as part of their activity
- The share features a favorable cost-benefit ratio

Resources required to implement actions

- Proven, context-specific technical solutions
- Technical support for solution implementation and operation
- Financial support for the implementation of actions

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IMPLEMENTATION AND MONITORING

#15 SET UP HUMAN RESOURCES

#16 SET UP FINANCIAL RESOURCES

#17 SET UP A PERFORMANCE MONITORING SYSTEM

#18 VALIDATE THE PROGRAMME OF ACTIONS

#19 PERIODICALLY ADAPT THE PROGRAMME OF ACTIONS

Governance
Control
Feedback on implementation
and performance adjustment of
allocation rules

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