Data and Information

Required for informed groundwater management
Overview

Introduction

Data and information needs and sources
- Groundwater monitoring
- Groundwater assessment

Additional data and information needs

Challenges

Take home messages

https://groundwater-summit.org/background-documents/
Introduction

Societal and environmental problems which involve groundwater

Other factors than groundwater

Informed groundwater management

Solutions, mitigation remediation

Monitoring
Assessment
Additional sources

Data and information required to manage issues that involve groundwater

Associated challenges

DATA & INFO
Data and information needs and sources (1/2)

- **Groundwater monitoring**: the systematic measurement/observation and recording of the state of an aquifer.
Data and information needs and sources (2/2)

• Groundwater assessments use monitoring outcomes together with all other relevant information to evaluate the status of the groundwater resource.

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<thead>
<tr>
<th>Time-independent groundwater data/metrics</th>
<th>Non-groundwater data</th>
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<tr>
<td>• Hydrogeological characterisation</td>
<td>• Physiography and climate</td>
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<td>• Special data</td>
<td>• Environmental aspects</td>
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<td>• Socio-economic aspects</td>
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<td>• Legal and institutional aspects</td>
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### Additional data and information needs

<table>
<thead>
<tr>
<th>Measures, tools and instruments</th>
<th>Supply</th>
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<tr>
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<td>Demand</td>
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<td>Protection</td>
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<td>Regulations</td>
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<td>Stakeholders’ participation</td>
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Challenges

- Duplicated, contradictory and/or non-existent mandates to collect groundwater data
- Lack of resources (human and financial)
- General lack of sharing of data and information
- Poor data management without proper QA and QC
- Data collected is not transformed into useful information
Current scientific knowledge and methods and tools available are sufficient to address most groundwater management issues.

Groundwater assessments at field level are crucial to enable informed policies and management of groundwater resources.

No groundwater assessment is complete, and no reliable prediction can be made without an in-depth analysis of historical data.

Data that are findable, accessible, interoperable and reusable (FAIR) will support transforming data into useable information for decision making.
Specific data and information are needed to manage societal and environmental issues that involve groundwater.

Multiple challenges need to be addressed to ensure informed (ground)water management.

Raising awareness, increasing citizen participation and lobbying for appropriate monitoring and assessment is crucial for groundwater sustainability.
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