

# C1.4 Developing water management indicators

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## Characteristics

Water management indicators are an important tool in the development of water policies, the setting of targets and goals and monitoring management performance. The appropriate combination of indicators helps to show how well IWRM objectives are being met, and if necessary, can provide a tool to help reformulate policies and programmes. Indicators support transparency and enable civil society and governments to judge performance. They can also be used for benchmarking, to encourage better performance from, for instance, water service providers, and in the use of yardsticks, a parallel technique that uses the performance of a similar organisation as an indicator of performance.

Indicators can be used to examine and compare:

- The spatial and temporal variations in water cycle elements, such as water resources availability (m<sup>3</sup>/person/year), water use (litres/person/day).
- Efficiency of water use ('crop per drop' or ensuring the greatest value to society per m<sup>3</sup> of water used).
- The efficiency and effectiveness of service delivery (e.g. water costs (\$/m<sup>3</sup>), numbers of households served, area served by different types of irrigation system).
- Water quality and biodiversity/ecology (e.g. number of species/km<sup>2</sup> or stretch of river, quality of surface water).
- Performance of water service providers.

Other indicators can be developed to stimulate water resource management reforms. Such indicators might try to assess links between water provision and poverty, or the equity of allocation of water across sectors, by looking at the social and economic value in use.

Indicators have a role at several levels, including at river basin or catchment levels or across shared boundaries and internationally. However, a reliable data collection system that reflects government's priorities and societal needs is an important precondition.

## **Lessons learned**

Experience with developing indicators has shown that:

- Whilst devising representative indicators is relatively easy, it is often difficult to collect consistent, reliable and meaningful data to illustrate the performance in reaching the desired goal.
- Although simple indicators may fail to reflect important variations, they are powerful tools for creating awareness and political will.
- Indicators are best used in 'clusters', as a combination of indicators will better present the 'whole story' essential for IWRM. The appropriate combination will depend on local circumstances.
- Where indicators are used to compare different regions, countries or water utilities, it is essential that the data elements of the indicator are precisely defined.
- Values of indicators or indices should be reviewed critically, e.g. outlier values of an index need to be investigated and explained.