



United Nations
Educational, Scientific and
Cultural Organization

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Priority Area 3: Bridging the data-knowledge gap

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*By 2029, significant **advances** will have occurred **in transparency and accessibility of water data**, which allowed further **development of open-access science platforms** and generated **facilitating instruments for integrated watershed management**, particularly for **transboundary water resources**.”*



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Relationship between this priority area and Agenda 2030



All water-related SDGs: indirect support via facilitating IWRM and policymaking by making sufficient and credible data accessible.



SDG 6: all targets will be reached through monitoring various related indicators and will support decision making on actions to be taken to accelerate implementation.

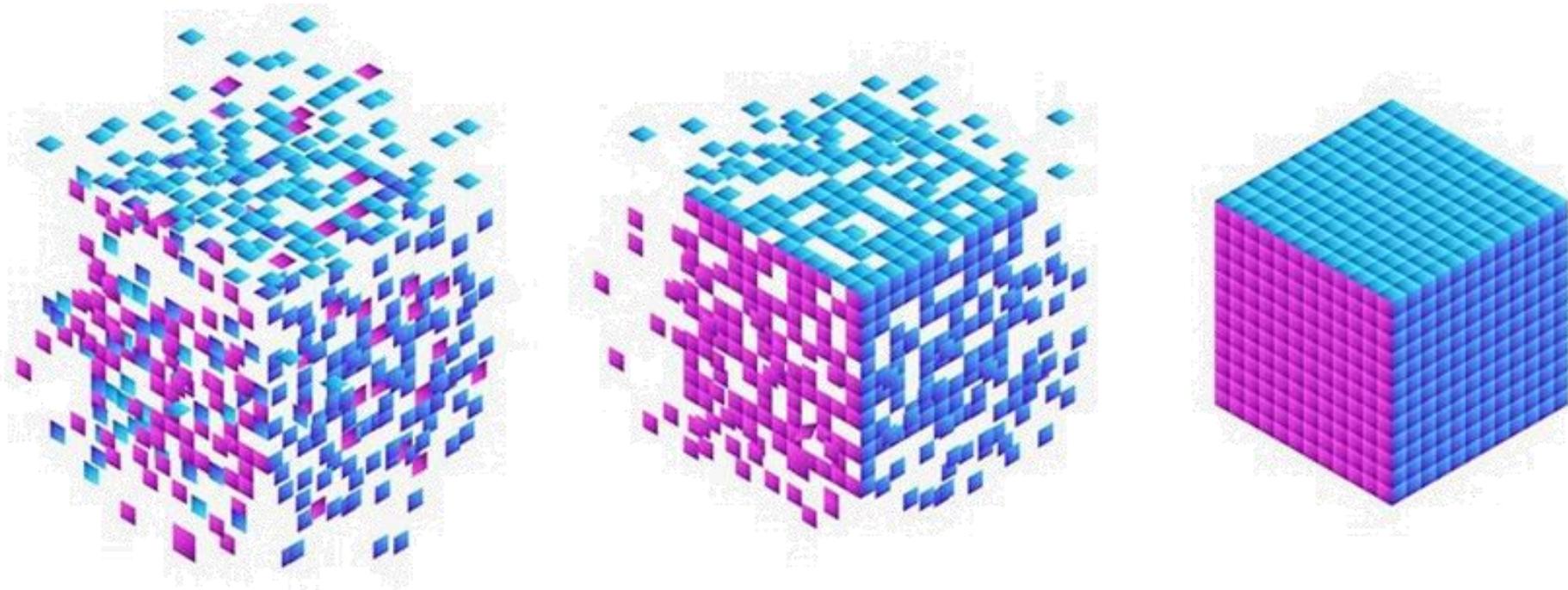


SDG 17: better availability and comprehensibility of scientific data can only be achieved through strengthening partnerships and especially through improved transboundary cooperation.



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Expected outputs



data ————— **analysis** —————> **knowledge**

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Expected outputs

Scientific methods on collecting, analysing & interpreting data

A network of experimental basins

Improving data accessibility

Scientific tools for data processing



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Expected outputs

- 1. Development and use of scientific research methods by the scientific community supported to correctly collect, analyse, and interpret the data.**
 - Improve quantity, quality and validation of water data by enhancing collaboration
 - Exchange experiences in data collection and analytical methods
 - Promote free access to data (esp. in transboundary contexts), the collection on human interactions with water, and publication of metadata
 - Strengthen existing capacities and collaboration at local, regional and global levels.



Expected outputs

- 2. Establishment of harmonized experimental basins by Member States, scientific and research communities, supported to collect scientific data and gain knowledge for hydrological research and holistic water management**
 - Assist the establishment of a network of experimental basins all over the world.
 - Support their management and research by UNESCO Water Family as hubs of knowledge creation.
 - Develop test methodologies, and gather scientific information on sustainable management.
 - Select basins based on existing initiatives like HELP and to the extent possible within UNESCO-designated sites.

Expected outputs

- 3. Comparing and validating open access data on water quantity, quality and use and their sharing by the scientific community supported, for its utilization by all users.**
 - Connect existing web databases, develop data access APIs and remove obstacles to connectivity, improve web-based platforms and quality assurance protocols.
 - Promote remote data collection, Internet of Things sensors and citizen science. Place data from these technologies on globally accessible portals.
 - Encourage the inclusion of multidisciplinary data from other UNESCO divisions and sectors to combine natural and social sciences related to IWRM with hydrology to highlight influences on water resources in the Anthropocene.
 - Promote open access data and the development of tools for data accessibility, visibility and connectivity, including platforms targeting citizens and NGOs.

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Expected outputs

- 4. Capacity of scientific community strengthened to develop, share and apply scientific tools for data processing (like data assimilation and visualization methods, quality assurance protocols to connect existing databases and outreach protocols).**
 - Catalyse the development and dissemination of data assimilation and visualization tools, quality assurance protocols, database links and outreach protocols within the scientific community.
 - Enhance scientific research methods to map data into better scientific information and widen the science-policy interface by sharing new methods and tools.



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ROLE OF UNESCO

Contributing to bridging the data-knowledge gap in cooperation with other UN Agencies and scientific partners

UNESCO water programs/initiatives connected under WINS keep making essential contributions to the data platforms of the UN Water Family like: GEMS / Water by UNEP, HWRP by WMO, GPCC/WMO, GRDC/WMO, ISMN, AQUASTAT/FAO, GWDC/UNEP, GCW/WMO, WGMS, via GT-N and ICWRGC.

UNESCO will closely cooperate with WMO in contributing to the Water and Climate coalition as contribution to the data and information component of the UN SDG6 global acceleration framework.

UNESCO will also continue to cooperate with UN agencies custodians of the different SDG6 indicators under the Integrated Monitoring Initiatives (IMI) for sharing data-related SDG6 monitoring.



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