



RESEARCH AND  
EDUCATION PROGRAM

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Federal Ministry  
of Education  
and Research

*Water Security  
in Africa (WASA)*

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# Water Security in Africa (WASA)

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Water security is the foundation of sustainable development in Africa. Water is instrumental for intact ecosystems, quality of life, and economic prosperity. Climate change and the projected dynamic growth of the economy and markets in Africa will result in a substantial increase in the demand for water. For example, Africa is projected to have the world's biggest labor force potential as early as 2035, requiring adequate resources. Resilience to climate change, water-related natural disasters, and disease will have to be improved in order to bring about better living conditions. The impacts of the Covid-19 pandemic, however, have resulted in huge development setbacks in many countries. Sub-Saharan Africa currently has by far the lowest level of access to clean, safely managed water services in the world. Significant investments are expected to flow in the water sector. There is an urgent need for innovative water technologies and predictive water management concepts, and critical infrastructures has to be adapted to changing conditions. If Africa is to rise to these challenges, international cooperation and networking will be instrumental – and this will require new, joint forms of collaboration.

*The federal government round-table session on “Creating Perspectives in Africa” thus led to the development of the interdisciplinary research and education program – “Water Security in Africa” (WASA).*

The WASA Program is consistent with the positions taken by African partners in the African Union Agenda 2063 as well as the key goals and strategies for international cooperation set by German government departments: the Federal Government Africa Policy, the Africa Strategy of the BMBF, the Marshall Plan with Africa of the Federal Ministry for Economic Cooperation and Development (BMZ), the BMZ Water Strategy, and the African Business Network of the Federal Ministry for Economic Affairs and Climate Action (BMWK). In addition to this, the WASA initiative supports the goals of the African Union's “Science, Technology and Innovation Strategy for Africa 2024” (STISA 2024), as well as the African Water Strategy 2025.



From the very start, the WASA initiative involves a transparent co-design process involving funding bodies, representatives of key research organizations, and water sector experts from Africa and Germany.

The WASA initiative was developed in a consultation process involving experts from research organizations and the water sector in Africa and Germany. On the German side, the following stakeholders were involved in the development of this project: the Federal Ministry of Education and Research (BMBF), the Federal Foreign Office (AA), the Federal Ministry for Economic Cooperation and

Development (BMZ), the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), the Federal Ministry of Food and Agriculture (BMBL), the Federal Ministry for Digital and Transport (BMDV), the Federal Ministry for Economic Affairs and Climate Action (BMWK) as well as the relevant subordinate organizations.

### Main principles behind WASA



Collaborative project development involving African and German partners from the very beginning.



Synergetic, integrated approach thanks to the involvement of different ministries and stakeholders.



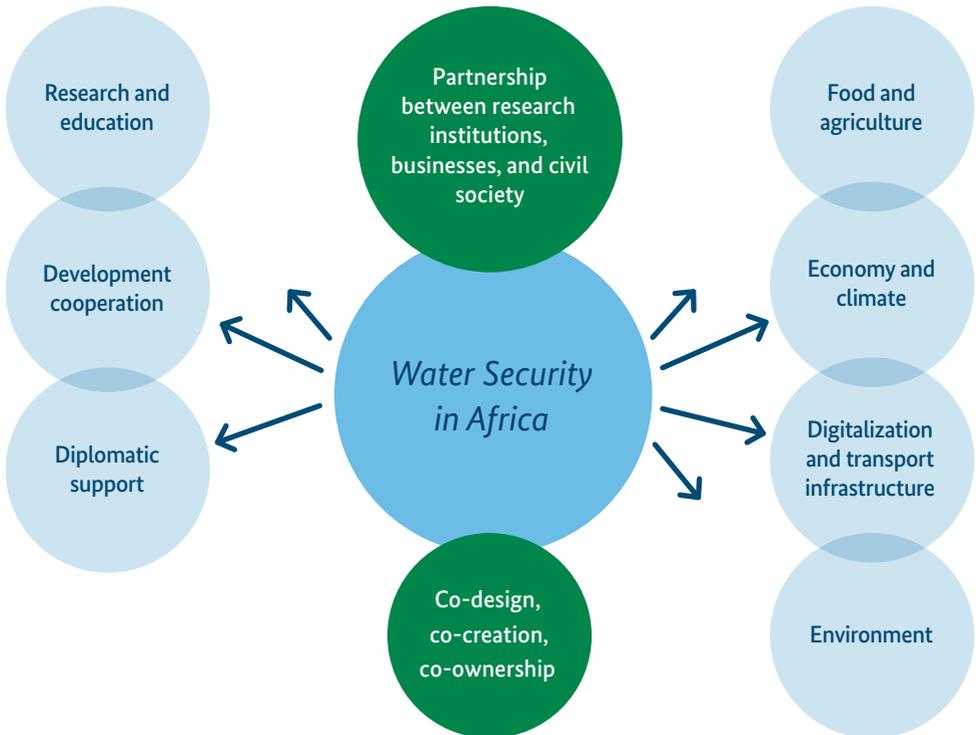
Long-term concept along an envisaged implementation path from knowledge generation to demonstration and implementation, transfer and consolidation.





WASA stands for innovative forms of collaborative partnership with Africa, with a view to strengthening the research landscape, the economy, and civil society. WASA centers on issues that make a crucial contribution to achieving the UN Sustainable Development Goals (SDGs). The initiative actively seeks to leverage the potential for synergy that can

be found in activities that are jointly conceived – and more effectively coordinated – in the context of research cooperation, development cooperation, and economic development. WASA will enable African stakeholders to make more effective use of the huge investments and funding previously channeled into the water sector, substantially increasing their impact.



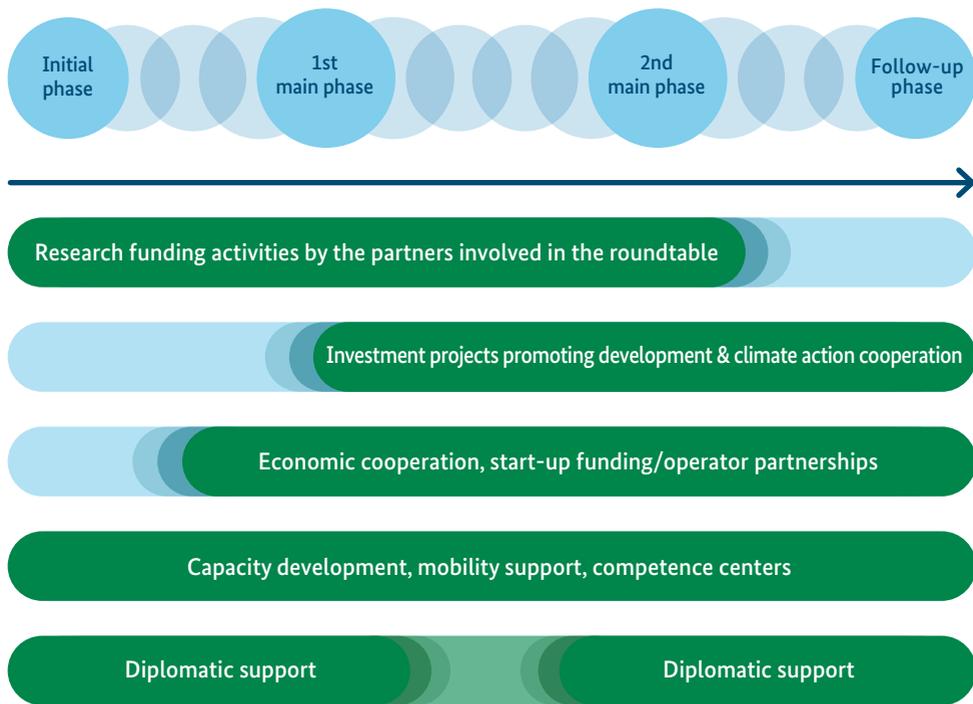
*Innovative cooperation formats facilitated through the joint involvement of different areas of activity, all of which are working to achieve the common goal of ensuring water security in Africa*

WASA has already developed relations with existing, established structures such as the Pan African University and the BMBF-backed competence centers for climate change and adaptive land management in Africa (SASSCAL and WASCAL). The WASA initiative

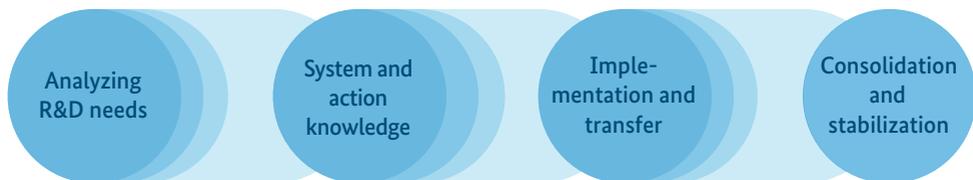
enables partners from African countries and Germany to engage with one another in an ever flourishing network. The partners' common goals are R&D and the targeted transfer of R&D results as well as capacity building on the ground in Africa.

The WASA initiative begins with an initial phase in southern Africa. Following a call for proposals that generated dozens of submissions, thirteen projects were selected and will receive funding from the BMBF. In the next step, various research consortia with African

and German partners will test out ideas in coordination with implementing partners on the ground. This results in concrete plans for measures that will be implemented in the second main phase.



### *Implementation pathway*



The implementation pathway of the WASA program is embedded into a 10-year multiphase concept.

The first main phase of the WASA initiative centers on research and development activities, the specific focus being system and application knowledge generation and sharing. The focus of the second main phase, on the other hand, is the implementation and transfer of those concepts and solutions that are a success in the previous phases. Important aspect of this phase will be the links to development cooperation and economic cooperation. The optional follow-up phase is a consolidation and stabilization process of the newly implemented solutions in Africa.

The WASA initiative is essentially a long-term program that is continually adapted to the given results from each phase, meaning the entire implementation pathway can be covered, from the analysis of the specific R&D needs and data collection to knowledge generation and project implementation and consolidation.

WASA is divided up into three thematic fields: sustainable water resource management, water infrastructure and water technology, and hydrological forecasting and projections.



*Within these three thematic fields, the following ideas proposed by research consortia were selected for the initial phase after review by African, German, and international experts:*



### *Sustainable water resource management*

- ↗ Transboundary hydro-economic modelling
- ↗ Open science for water security
- ↗ Climate resilience, safe management of water and sanitation systems
- ↗ Community-based water management
- ↗ Water management in mining and damage prevention for critical water resources
- ↗ Climate-adapted water management in mining



### *Water infrastructure and water technology*

- ↗ Water-sensitive urban development
- ↗ Frugal innovations and digitalization in the water sector
- ↗ Innovative water infrastructure management
- ↗ Multilevel water reuse
- ↗ Multifunctional strategies for resilience
- ↗ Water technology in mining with a view to improving water safety and mitigating environmental impacts



### *Hydrological forecasting and projections*

- ↗ Co-design of a hydrometeorological information system

*Institutions from Angola, Botswana, Namibia, Mozambique, Zambia, Zimbabwe, South Africa, and Tanzania were involved in the initial phase of the WASA program as were the Southern African Development Community (SADC) and the African Union (AU) who function as umbrella organizations.*

*The specific requirements for the main phase of the WASA initiative as well as the overall governance structures are defined by the ministries involved in the WASA program as well as the relevant stakeholders in Germany and Africa. Once this is complete, a funding announcement is published for the first main phase of WASA.*





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and contacts**

<https://www.fona.de/en/measures/funding-measures/water-security-in-africa-wasa.php>