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**giz** Deutsche Gesellschaft  
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Zusammenarbeit (GIZ) GmbH



# Regional Project

## Support to the Integrated Management of Water Resources of Lake Kivu and Ruzizi River



Presentation at Project Kick off meeting

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Kigali, Rwanda

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1) Regional Project:  
Support to the improvement of integrated  
(and nexus based) Management of Water  
Resources of Lake Kivu and Ruzizi River  
(Lake Kivu Project)



# Support to the improvement of integrated (and nexus based) management of Water Resources of Lake Kivu and Ruzizi River

## Project background

- Duration: 2 Years (01/2019 – 12/2020)
- Co-financing: European Union Delegation Rwanda and Germany (BMZ – Federal German Ministry for Economic Cooperation and Development)
- Financial Volume: 2.5 Mio Euro
- GIZ commissioned for the implementation of the project



# Support to the improvement of integrated (and nexus based) management of Water Resources of Lake Kivu and Ruzizi River

- The project aims at improving the hydrological and operational management of Lake Kivu and Ruzizi River.
- It pursues an integrated an Nexus based approach which builds on a sound understanding of the basins resources and their integrated management across sectors and countries.
- It therefore needs to be based on a broad collaboration with regional organizations and national institutions and needs a politically mandated regional organization as main partner.



# Relevance of water resources

- **Agriculture and Irrigation** (>70% global!)
- Food production
- Fisheries
- Industrial use (incl. Industrial waste water)
- Domestic water supply and waste water
- Energy production (e.g. water for cooling processes)
- **Hydropower**
- **Transport / Shipping**
- **Tourism / Recreation**
- Cultural use (e.g. religious use)
- Ecosystem services (Regulation & Cleaning)
- Habitat for Flora und Fauna (Biodiversity)
- **Methane extraction**

→ different uses can lead to competition and conflicts around water resources



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## Support to the improvement of integrated (and nexus based) management of Water Resources of Lake Kivu and Ruzizi River

The specific objectives for the project are:

- 1) Development of a strategic action plan, based on a baseline study for the Lake Kivu and Ruzizi River basin
- 2) Operationalization of an integrated water resource management mechanism for Lake Kivu and Ruzizi River



# Proposed key activities I

## 1) **Development of the strategic action plan**

- ✓ Inventory of the database and existing baseline studies linked to the basin management
- ✓ Proposal to rationalise and coordinate the database
- ✓ Proposal of an action plan for establishing a water resource monitoring system (on usage, quantities and qualities)
- ✓ Proposal for the creation of a “Water and Environment Observatory of the basin” and to strengthen the data acquisition
- ✓ Detailed baseline study on the basin, the water resources and usage

## Proposed key activities II

- ✓ Identification of data needs and supplementary/ complementary analysis
- ✓ Identification of consumer and polluter principals and database on the users and their activities
- ✓ Collection of the different demands and needs of the basin's users and players
- ✓ Strategic Plan for an integrated and long-term basin management
- ✓ Master development and management plan for the basin
- ✓ Identification, analysis and coordination of existing projects having an impact on the Action
- ✓ Identification of priority projects and activities (short/medium/long-term)
- ✓ Action Plan for the development of pilot projects

# Proposed key activities III

## 2) Operationalization of an integrated water resource management mechanism

- ✓ Analysis of national regulations regarding the use of water resources and rejects/pollution
- ✓ Proposal to standardise regulations on the management of water resources and rejects/pollution
- ✓ Proposal for texts regulating the rates and conditions of application of user charges and pollution charges
- ✓ Proposal to regulate abstractions and discharges in the basin
- ✓ Proposal for the development of legal and technical bases (in relation to integrated basin management)

## Proposed key activities IV

- ✓ Proposal for a participative management structure, including space for dialogue between all relevant stakeholders
- ✓ Definition of the integrated and long-term management mechanism of the water resources
- ✓ Descriptive documents on the functioning of the structure in charge of the basin's IWRM and on the necessary regulations for its effective operation
- ✓ Proposal for a legal, institutional and operational structure
- ✓ Business Plan, Roadmap and associated budget
- ✓ Communication Plan et awareness-raising of the basin's stakeholders and users

- As first step collection and analysis of existing technical, legal and institutional data will take place in order to draw up proposals for modification or improvement and as base for the development of plans and documents expected of the action.
- Details of the activities will be defined and planned – feeding into a detailed operational plan – at a kick-off workshop and in the context of a kick-off mission to the region, allowing for identifying the most urgent needs and requests of partner organizations.





# Expected Results

- A strategic action plan for the sustainable management of Lake Kivu and Ruzizi River Basin is developed.
- The Nexus Perspective is included in the regional IWRM planning,
- The sustainable and Nexus-oriented management of the Lake Kivu and Ruzizi River Basin relating to water quality and available quantity of water has improved.
- Availability of plans and inventory → essential bases for the operationalization of the structure in charge of integrated water resources management in the basin
- Availability of all corresponding documents as input for policy makers in the region (list from activities)
- Regional recognition of effective ownership of integrated water resources management by a structure with the essential managerial skills and tools

# Support to the improvement of integrated (and nexus based) management of Water Resources of Lake Kivu and Ruzizi River

- Project has a very ambitious work programme
- To reach its goals it needs to rely on good partners, using synergies with other initiatives and having access to existing information and data.
- Important not to duplicate activities, rather to build on what is done by others or to complement activities of others.
- **Collaboration is key !!!**



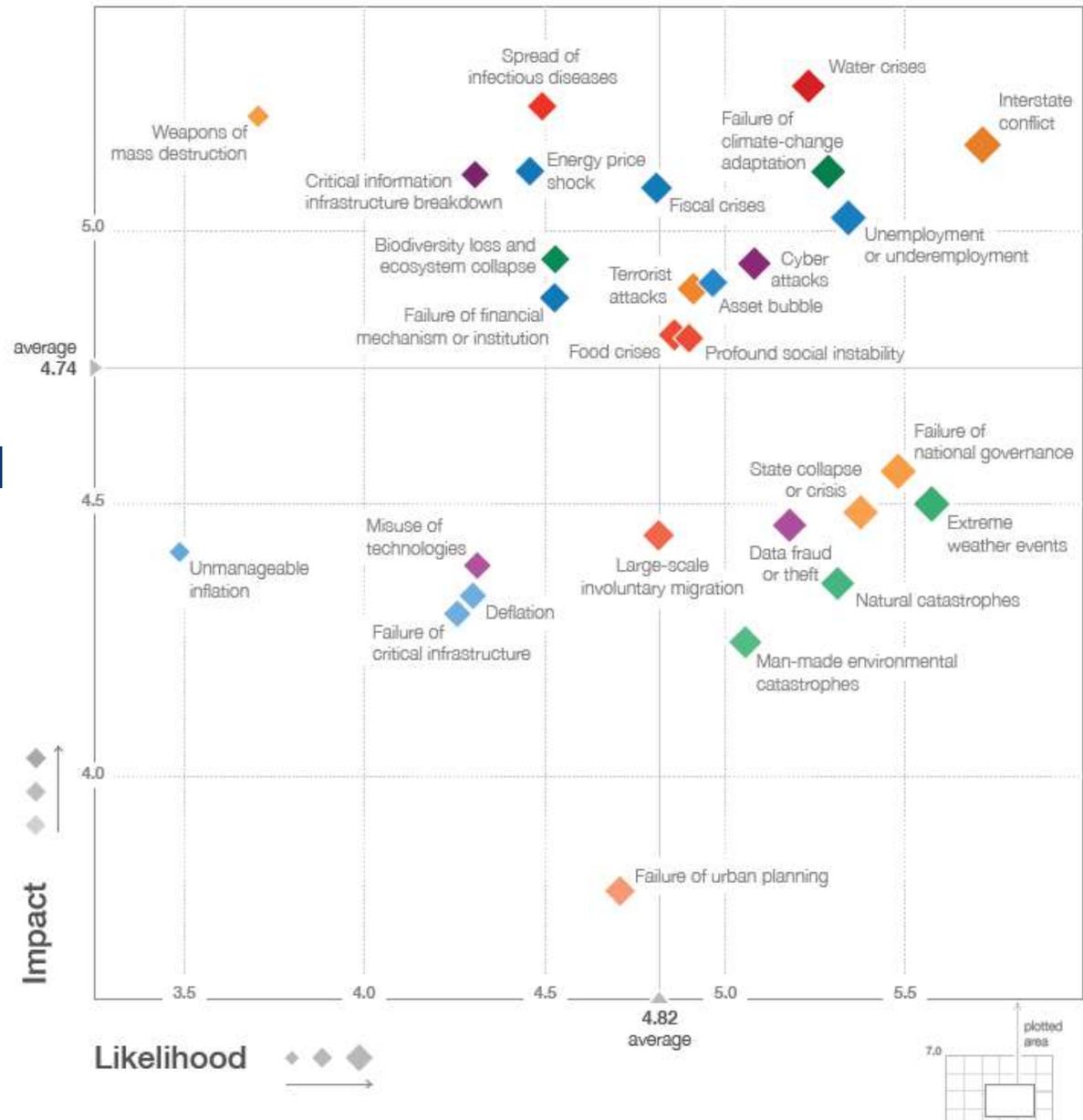
## 2) Importance of integrated and transboundary water management



# Water and Conflict

## World Economic Forum:

Water will be one of the three most critical causes of conflicts in future (10 year horizon)



# Water and Conflict Links and Influences

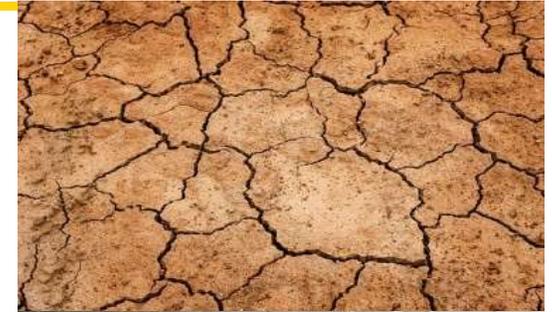
Water crises are mostly triggered by changes in the water resources (e.g. caused by climate change), for example:

- Droughts
- Floods
- Pollution

→ Determining for the conflict potential:

Capacity of an society to deal with the consequences

→ Link between water and conflict is not linear



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# Water and Conflict

## Links and Influences

Conflict potential depends mainly on three

### **1. Socio-economic context**

- Increase of population and economic development (increased demand)

### **2. Government structures/ general Governance**

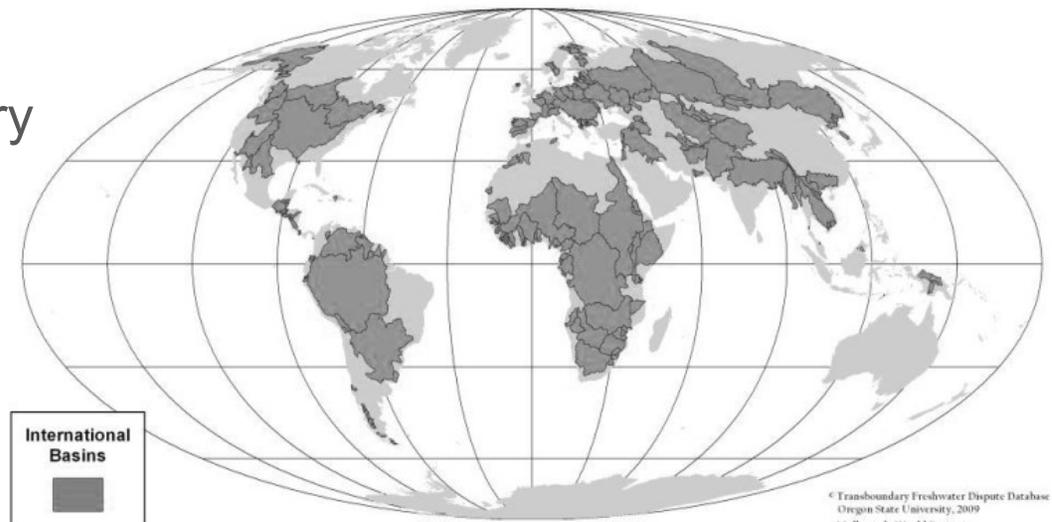
- Lack of Management Institutions and Cooperating mechanisms
- Bad management and/or inefficient use of resource

### **3. Water use structures**

- Strong interests of different user groups (e.g. sectors: Energy, Agriculture, Water supply....or countries)
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# Importance of transboundary water management

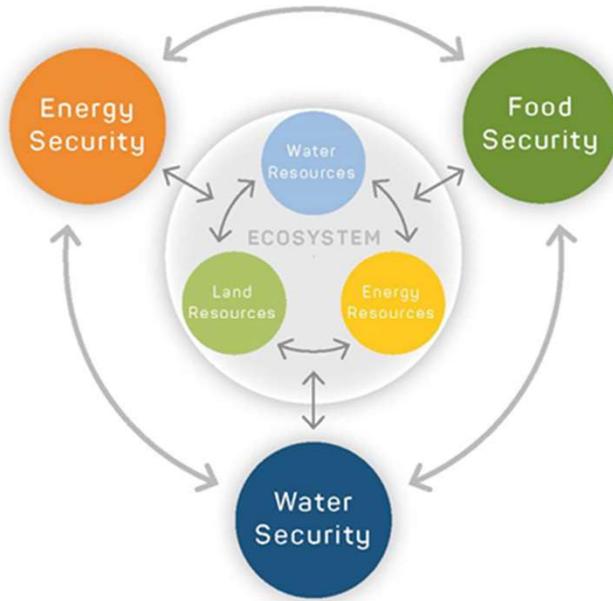
- 276 Rivers and Lakes; > 300 Aquifers are transboundary
- 45% of the earth's surface belongs to transboundary basins
- 148 countries are part of international basins
- 21 countries are completely part of transboundary basins
- 60 % of the world's available surface water resources are transboundary
- Nearly half of the world's population lives in transboundary basins
- 119 RBOs worldwide, in 116 of 276 Basins



### 3) Water-Energy and Food Security (WEF) Nexus



# The Water-Energy-Food Security Nexus Approach



- Highlights the **complex interdependencies** of the water, energy and food sectors in light of **global challenges** (climate change, consumption patterns, economic growth, rapid urbanization, etc.)
- Framework to **determine trade-offs and synergies** between the sectors and to **reconcile their interests**
- Supports a **holistic and sustainable resources management** and promotes the **preservation of ecosystems**
- Pathways of sustainability: tool for **meeting the SDGs**
- **Resolving conflicts of use** around land and water resources is encouraged by developing suitable conflict management capacities – contributes to **peace keeping**

## Contribution of the project to the implementation of Agenda 2030/ SDGs

- **Agenda 2030** recognizes the links between the SDGs and calls for inter-sectoral cooperation. The SDG-Goals for Food Security (**SDG 2**), Water (**SDG 6**) und Energy (**SDG 7**) can only be reached if the linkages between the sectors are sufficiently recognized and worked on.



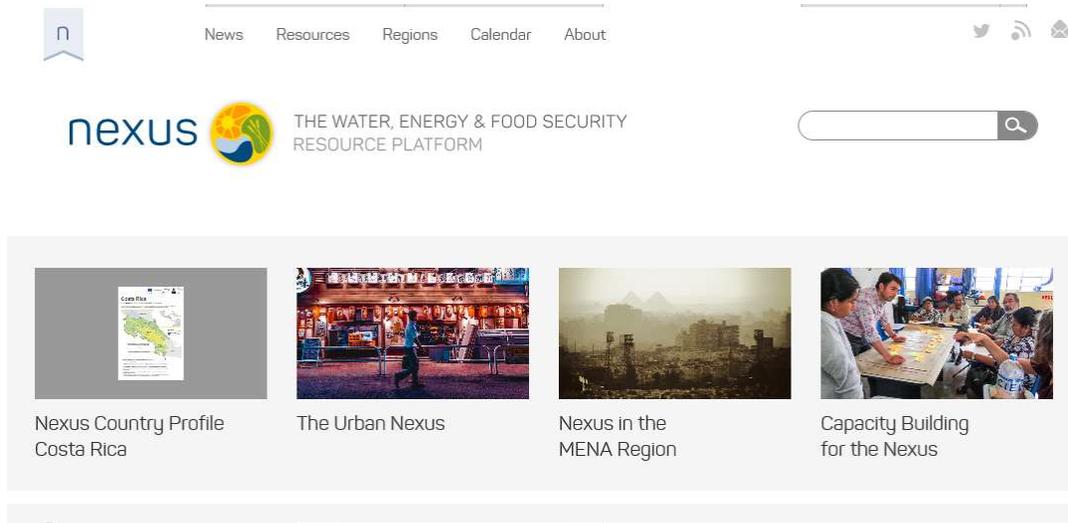
## A comparison between IWRM and the WEF Nexus Approach

	IWRM	WEF Nexus
Objective	Water use efficiency and sustainability	Overall resource use efficiency; address externalities across sectors
Entry point	Water use, water resources management	Management of natural resources; <b>Seeks to engage different sectors on a more equal footing</b>
Boundaries of a typical assessment	Basin or sub-basin	Depending on the focus; local, national, basin level, regional or global
Sectors and resources	Water resources are at the centre	Depending on the focus, water, energy or land use can be at the centre (no universal methodology)

UNECE, Reconciling resource uses in transboundary basins: assessment of the water-food-energy-ecosystems nexus, 2015

# The Nexus Resource Platform (NRP)

[www.water-energy-food.org](http://www.water-energy-food.org)



- **Central knowledge hub** on the Water-Energy-Food Security Nexus
- Reports, articles, news from research and practice, conferences, expert interviews, job postings

- 4380 data base entries
- Average 4400 visitors per month
- Core Topics (focus themes)
- Establishment of a WEF Nexus Newsletter; 3rd edition October 2018
- Social Media channels

 @NEXUSPlatform #Nexusplatform

 [www.facebook.com/nexusresourceplatform/](http://www.facebook.com/nexusresourceplatform/)

## 4) GIZ worldwide and in Transboundary Water Management (TWM)





- German Federal company, 100% owned by German Government
- Active in over 120 countries worldwide
- Business volume 2,6 Billion Euro (2017)
- 19,506 staff worldwide :13,448 national personnel; 2.305 seconded experts; 3.753 staff in Germany



# Examples for Results of GIZ in the water Sector

## Improved access to water and sanitation

- Access to safe drinking water for 25 Mio. people in Sub-sahara-Africa
- Access to sanitation for 5 Mio. people in Sub-sahara-Africa

## Improvements in water services

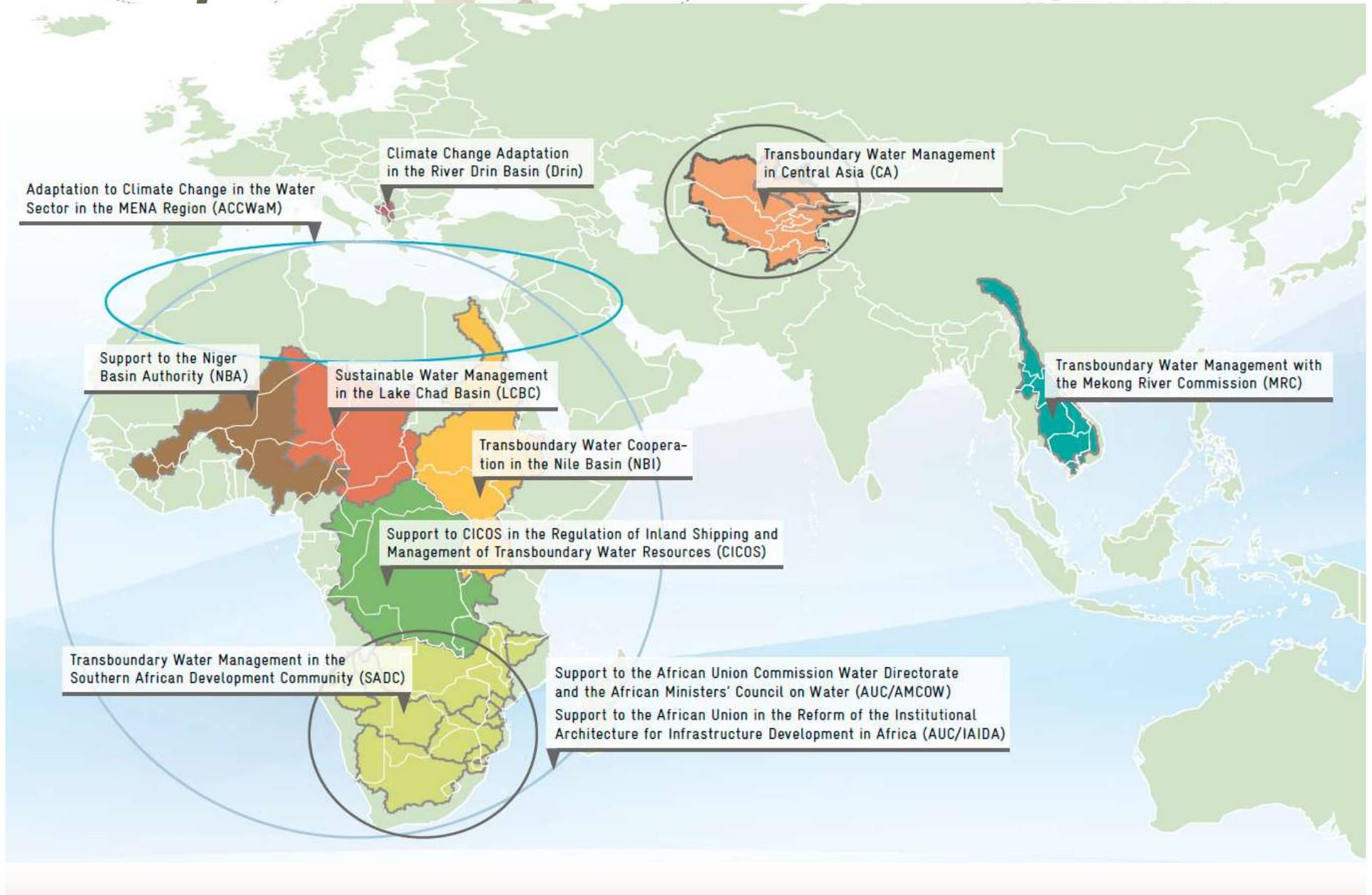
- Improvements in the service delivery of more than 400 water and waste water entities in 16 countries
- Introduction of socially acceptable water-and waste water tariffs
- Capacity building of more than 20,000 experts from the water sector

## Improvement of (transboundary) water resource management

- Support and advisory services to more than 40 authorities worldwide to improve water management.
- Development of cooperation mechanisms/ support to 17 River basin commissions and 5 regional organisations in 19 basins.



# GIZ Projects in TWM





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Thank you very much for your attention!!!

