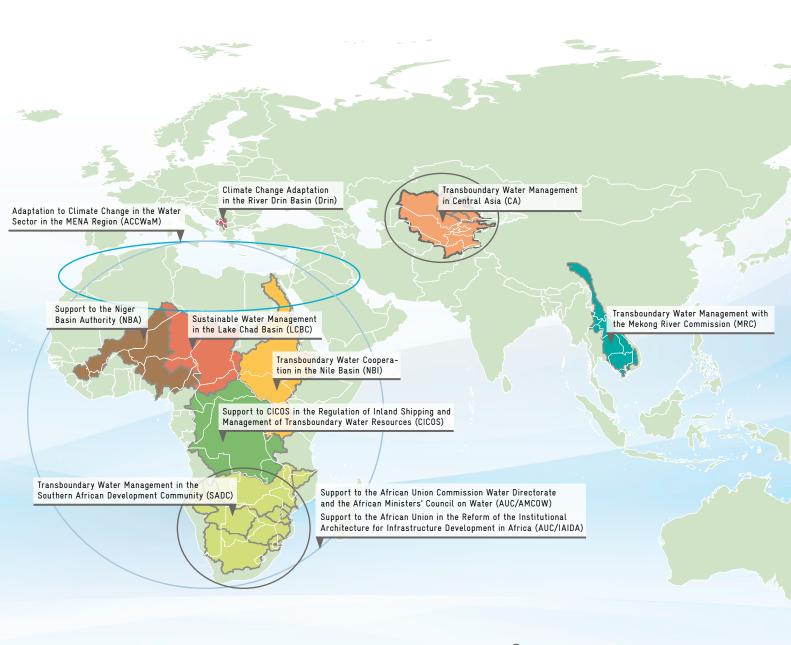






# Transboundary and regional water resources management projects





O Regional projects

SIZ supported transboundary lake/river basins

			((pa	ed)) trat o. EUR))			Fields of support					
	Project	Funded by*	Term (current phase (total planned))	Budget (current phase (total commissioned to date in Mio. EUR))	Partner Organisations	Countries	1. Transboundary dialogue	2. Institutional strengthening	3. Water policy	4. Water resources management	5. Infrastructure planning	6. Adaptation to climate change
					Africa							_
1	Transboundary Water Cooperation in the Nile Basin (NBI)	BMZ	01/2009 - 06/2013 (2002-2016)	5.8 (10.3)	Nile Basin Initiative (NBI)	Burundi, DR Congo, Egypt, Ethio- pia, Kenya, Rwanda, South Sudan, Sudan, Tanzania, Uganda	•	•	•	•		•
2	Transboundary Water Management in the Southern African Development Community (SADC)	BMZ DFID AusAID	04/2011 - 12/2015 (2005-2015)	38.5 (48.5)	SADC Secretariat - Water Division Limpopo Water Course Commission (LIMCOM) Orange-Senqu River Commission (ORASECOM) Zambezi Watercourse Commission (ZAMCOM) Ruvuma Joint Water Commission (Rovuma JWC) Joint Water Commission for Pungwe, Buzi and Save Kunene Permanent Joint Technical Commission (Kunene PJTC) Cuvelai (RBO in development)	Angola, Botswana, DR Congo, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe	•	•	•	•	•	
3	Sustainable Water Management in the Lake Chad Basin – Organisa- tional advisory services for the Lake Chad Basin Commission (LCBC)	ВМZ	07/2011- 06/2014 (2005-2017)	2 (6)	• Lake Chad Basin Commission (LCBC)	Central African Republic, Cameroon, Chad, Niger, Nigeria		•		•		
4	Support to CICOS in Reg- ulation of Inland Ship- ping and Management of Transboundary Water Resources (CICOS)	BMZ	1/2013- 12/2015 (2006-2016)	2.5 (7.5)	International Commission of the Congo-Oubangui-Sangha Basin (CICOS)	R Congo, DR Congo, Central African Republic, Cameroon	•	•		•		
5	Support to the Niger Basin Authority (NBA)	BMZ	04/2010 - 03/2013 (2007-2016)	2.6 (7.5)	Niger Basin Authority (NBA)	Benin , Burkina Faso, Cameroon, Chad, Guinea, Ivory Coast, Mali, Niger, Nigeria		•	•	•		
6	Support to the African Union Commission Water Directorate and the Afri- can Ministers' Council on Water (AUC/AMCOW)	BMZ EU	12/2009 - 6/2013 (2009-2015)	5.5	African Union Commission (AUC)-Water Division     African Ministers' Council on Water (AMCOW)	All member states of AMCOW and the African Union	•	•	•			
7	Support to the African Union in the Reform of the Institutional Archi- tecture for Infrastruc- ture Development in Africa (AUC/IAIDA)	BMZ	12/2011 – 11/2013 (2012–2017)	2	African Union Commission (AUC) — Directorate for Infrastructure and Energy     NEPAD Planning and Coordinating Agency (NPCA)	All member states of the African Union		•			•	
				A	sia, Europe, Middle East and North Africa							
8	Transboundary Water Management in Central Asia (CA)	AA EU	01/2012 - 12/2014 (2009-2014)	7 (17)	International Fund for Saving the Aral Sea     National ministries	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	•	•	•	•	•	•
9	Transboundary Water Management with the Mekong River Commis- sion (MRC)	BMZ BMU	06/2011 – 12/2014 (2011 – 2017)	11.95	Mekong River Commission (MRC)	Cambodia, Laos, Thailand, Vietnam	•	•	•		•	•
10	Climate Change Adaptation in the River Drin Basin (Drin)	BMZ	01/2012 - 12/2017 (2012-2017)	2.5	• National ministries	Albania, Kosovo, Macedonia, Montenegro				•		•
1	Adaptation to Climate Change in the Water Sector in the MENA Region (ACCWaM)	ВМZ	12/2010- 07/2014 (2010-2014)	3.5	Arab Ministerial Water Council (AMWC)     League of Arab States (LAS)	All member states of AMWC and the League of Arab States	•	•		•		•

<sup>\*</sup> BMZ: German Federal Ministry of Economic Cooperation and Development, BMU: German Federal Ministry for the Environment, Nature Conversation and Nuclear Safety, DFID: Department for International Development (UK), AA: German Federal Foreign Office, AusAID: Australian Agency for International Development, EU: EU-Commission

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# Transboundary Water Management: strengthening capacity for the management of shared waters

#### Context

Transboundary water basins cover almost half of the earth's land area. There are over 250 river and lake basins and more than 300 aquifer systems worldwide that are shared by two countries or more. Over 40% of the world's population currently lives within a transboundary basin. In many of these areas, water demand is rising on account of growing populations and economies. High climatic variability is being compounded by climate change, making water flows more irregular and increasing the incidence of extreme events like floods and droughts. Concurrently, the potential for productive use of water resources is still largely untapped: in Africa, less than 5% of cultivated land is irrigated, less than 10 % of hydropower potential has been developed, and water storage capacity is generally low. In many basins, the development of water resources is therefore high on the political agenda. The development of hydropower, water storage or irrigation can, however, have negative effects - e.g. reduced water availability for downstream riparians. This can be a source of conflict among states - one of the barriers to the development of water infrastructure. Riparian states, depending on their interests, base their caveats on one of the two key principles of emerging international water law: the right to an equitable share in basin water resources and on the right not to be harmed by the actions of other riparian states. One of the central approaches to transboundary water management is to induce a shift in focus of negotiations from the challenges of partitioning water resources to the benefits that can be gained and the risks that can be mitigated through cooperation. A basic premise for this is a stable relationship of trust between the riparian states. Efficient institutions, networks and organisations are required that can facilitate the cooperation process based on sound knowledge of a basin's water resources.

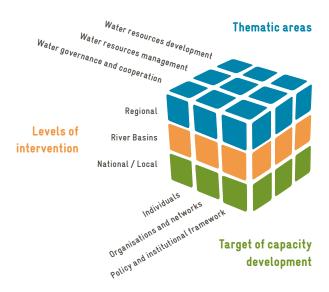
#### GIZ's capacity development approach

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), on behalf of the German Government and other co-funding partners, is currently implementing programmes that support cooperative water management in more than 15 transboundary river and lake basins across Africa, Asia and South-Eastern Europe. GIZ also supports several regional organisations and regional economic communities in developing and implementing transboundary water polices.

GIZ's basic approach is capacity development and is guided by the principles of Integrated Water Resources Management (IWRM). This approach focuses on developing enabling policy and institutional frameworks for transboundary water resource development and management as well as on strengthening organisations and the capacities of individuals required to put solutions into practice.

GIZ – guided by the subsidiarity principle – strengthens capacities for transboundary water management on various intervention levels: regional organisations and regional economic communities; river and lake basin organisations; and national riparian states and their local communities.

GIZ supports capacity development in three main strategic areas: (1) water cooperation and governance; (2) water resources management; and (3) water resource development. GIZ promotes a cross-sector policy approach that addresses linkages between water, energy and food security, and the environment.



GIZ provides capacity development support in the following core areas:

- Promoting international dialogue on transboundary waters (transboundary dialogue): GIZ supports the implementation of international water dialog processes and regional dialogue formats for developing shared understandings of transboundary water management.
- Strengthening transboundary institutional frameworks and basin organisations (institutional **strengthening**): GIZ supports the establishment of institutional frameworks for transboundary cooperation and river basin organisations. It advises regional and basin organisations in their organisational development, for example improving their planning and management capacities.
- Supporting the development and harmonisation of transboundary water policies (water policy): GIZ supports the development of regional and basin-wide policies and the harmonisation of national water policies with the requirements of transboundary cooperation.

- Building capacities for knowledge-based water resource planning and management (water resource knowledge and planning): GIZ supports the sharing of information and the development of the water resource knowledge base required for resources monitoring, basin planning and operational management.
- Building capacities for transboundary water infrastructure planning, preparation and operation (infrastructure planning and operation): GIZ supports the development and implementation of regional water infrastructure investment plans. GIZ strengthens framework conditions for water infrastructure planning and supports the operation of transboundary infrastructure.
- Strengthening capacities to adapt to climatic risks and climate change (adaptation to climate change): GIZ supports the development of regional and basin climate change adaptation strategies and the development of policies and capacities for the climate-proofing of plans and infrastructure. Furthermore, GIZ supports the development of adaptive water management to cope with climatic variability.

#### **Impact**

The direct outcomes of GIZ's support are in first line improved cooperation and strengthened capacity for transboundary water resources management and development. This contributes to increased water security in regards to acceptable level of water availability for people's livelihoods, ecosystems and production and acceptable levels of risks to people, environment and economies. It contributes to the development of water infrastructure and provision of water services. In the broader and long term perspective, GIZ's work contributes to realise positive impacts of in transboundary cooperation for growth and socio-economic development of the poor, reduction of water-related conflicts, increased regional integration, protection of water resources and water dependant ecosystems, adaptation to climate change and the reduction of water-related risks.

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## Climate Change Adaptation in Western Balkan

Project Partner:	Albania: Ministry of Environment, Forestry and Water Administration; Macedonia: Ministry of Environment and Physical Planning; Montenegro: Ministry of Sustainable Development and Tourism; Kosovo: Ministry of Environment and Spatial Planning; Serbia: Ministry of Energy, Development and Environmental Protection
Project Region:	Albania, Kosovo, Macedonia, Montenegro, Serbia
Project Term:	January 2012 to December 2018
Project Budget:	EUR 3.5 million

#### Context

The project on 'Climate Change Adaptation in Western Balkan' is a joint cooperation between the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and relevant government ministries in Albania, Kosovo, Macedonia, Montenegro, and Serbia. On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the GIZ advises the governments of the involved countries in the development and implementation of adaptation strategies in regards to climate change. Specifically, the project aims to reduce the risks of flood and drought as well as to strengthen regional cooperation in the field of integrated water resources management. A focus area of one of the project components is the Drin basin. The lower Drin forms in Albania at the confluence of the Black Drin, originating in Macedonia, and the White Drin, the longer headstream stemming from Kosovo. With a total length of 500 km and an average water flow of 680 m<sup>3</sup>/s, the hydrographic basin of the Drin provides livelihood for approximately 1.6 million people who use the waters for various purposes such as hydropower generation, irrigation, fisheries, transport and recreational activities.

Climate change is forecasted to increase both the frequency and intensity of flooding and droughts in the region. Neighbours like Macedonia expect decreases in precipitation of 5 % off the annual averages. Albania expects a temperature increase of up to 5.6 °C by the end of this century. Considering the fact that temperatures in cities can climb up to 10°C higher than in the surrounding green belts, Tirana could face heat waves of over 45 °C. Similar situations are expected in other large cities including Belgrade, Podgorica and Skopje. Shifting weather patterns will likely result in warmer and wetter winter seasons that could result in increased flood risks in the lower Drin river. The summer season is likely to change as well, with generally hotter temperatures as well as extended periods of hot and dry days. These outcomes of climate change, in turn, affect human health particularly that of infants, the elderly and ill people fauna, flora and even the economy. In summer, demand for air conditioning will rise sharply while, at the same time, hydropower stations will face a shortage of water. Life in dense city centres may become unbearable and extremely costly.

Although an overall decrease in total precipitation is expected, a higher frequency of extreme weather conditions, such as severe thunderstorms, is expected, causing floods and the pollution of waters on account of soil erosion. The area around Lake Shkoder is particularly prone to flood risks. The flood of December 2010 – during which 15,000 people were forced to flee – inundated a quarter of the city of Shkoder.

#### **Project**

The project supports the five countries of Albania, Macedonia, Montenegro, Kosovo and Serbia in five distinct areas by means of capacity development, advisory services













and the procurement of equipment. These include:

- establishment of a flood early warning system
- drafting of national climate change adaptation strategies
- ♦ formulation and implementation of flood or drought management plans on the communal level
- regional cooperation in integrated water resources management (IWRM)
- integrating climate change adaptation strategies in urban planning

In order to establish a flood early warning system with a geographical focus on the lower Drin, all four impacted countries (Albania, Kosovo, Macedonia and Montenegro) must engage in close cooperation. Hydro-meteorological institutes and national authorities in charge of emergencies act as the main players and close collaboration among the management of the three dams in the Drin cascade serve as a critical factor for success. In the creation of the early warning system itself, a Europe-wide programme coordinated by the EU Joint Research Centre would be of great additional benefit.

Drafting national adaptation strategies is a very complex task, requiring analysis, forecasting and detailed planning across various sectors. Due to the absence of sufficient and reliable weather and hydro-meteorological data from the past, adaptation strategies must demonstrate the ability to account for uncertainty. Rather than guiding the nations and the region with specific plans targeted at small geographical units, these strategies must serve as road maps that comprise the entire process of data generation, modelling and recommendation. Despite the needed requirements, it is not necessary to postpone the implementation of action plans, as the latter could focus on typical "no harm" activities from the start.

Through support in the formulation and implementation of flood or drought risk management plans, some 40 small towns and communes stand to gain from the project. In accordance with EU Water Framework Directive (WFD), river basins are obliged to create management plans based on IWRM principles. Riparian countries in the Drin river basin signed a Memorandum of Understanding in 2011, creating a way forward for establishing an international basin organisation. The project will, furthermore, support international dialogue and assist with the formulation and implementation of joint transboundary projects. In particular, the project supports activities at the nexus of forestry and water resources management.

Climate Change will have a marked impact on larger cities in the project area in the future. Therefore, the project aims to cooperate with at least 3 larger cities in the development of strategies related to climate change adaptation and its integration into city planning.

### **Impact**

The project seeks to mitigate negative social, economic and environmental effects by way of improved flood and drought risk management. Along with national and international cooperation partners, GIZ is committed to supporting the formulation of adaptation strategies and the implementation of feasible activities at the regional, national and local levels. In addition to the top priority of ensuring safe, sustainable and viable living conditions for inhabitants, ensuing impacts on flora, fauna and the environment must be audited in advanced as well, so that consequences may be avoided or mitigated. Moreover, there are very ambitious and critical standards regarding the quest for EU accession of these countries. The 'Climate Change Adaptation in Western Balkan' project is dedicated to supporting its partners in their accession efforts.

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Montenegro Ministry of Sustainable Development and Tourism I www.mrt.gov.me/en/ministry

Ministry of Environment and Physical Planning of Republic of Macedonia I www.moepp.gov.mk/default-en.asp

Ministry of Environment and Spatial Planning of Kosovo I mmph.rks-gov.net

Ministry of Energy, Development and Environmental Protection of Serbia I www.merz.gov.rs/en







# Adaptation to Climate Change in the Water Sector in the MENA Region

Project Partner:	Arab Ministerial Water Council (AMWC) of League of Arab States (LAS) Intermediary partners: Arab Centre for the Study of Arid Zones and Dry Lands (ACSAD), United Nations Economic and Social Com- mission for Western Asia (ESCWA)
Project Region:	Middle East and North Africa (MENA)
Project Term:	August 2011 - July 2017
Project Budget:	total: EUR 7.5 million current phase: EUR 3.5 million

#### Context

The MENA (Middle East and North Africa) region is regularly cited as being the most precarious region in the world in terms of water security. The majority of countries in the region have access to less than 1000 m³ of renewable water resources annually per capita and can thus be characterised as water scarce, some countries even facing absolute scarcity with less than 500 m³ per capita.

Most states in the MENA region depend on shared rivers and/or aquifers to secure their water supply. What is more, about two thirds of all renewable water resources in the Arab countries originate outside the region. Despite this situation, no formal agreement for joint water management of shared resources has been approved so far. This confirms the challenges caused by the region's geographical and political characteristics, these challenges differ from those in many other large international river basins. Generally, the region has access to only few rivers and lakes, and the large rivers have their sources outside the region (e.g. Nile, Euphrates, Tigris). Making matters difficult, negotiations at the trans-regional scale are po-

litically contentious. The management of transboundary groundwater aquifers shared between Arab states has, on the other hand, benefitted from greater efforts. This has been the case since the region's acute aridity causes heavy reliance on its groundwater resources.

Growing water demand stemming from population growth and economic development as well as climate change present additional pressures on the region's limited water resources. With declining water availability, the management of shared transboundary water plays a continuously crucial role for socio-economic development as well as political relations among the respective countries.

The strengthening of coordination and cooperation between Arab states sharing water basins is one of the Arab Ministerial Council for Water's (AMWC) objectives. The council was founded in 2009 under the League of Arab States (LAS) as a response to increasing challenges in the field of water, food security and climate change. Work done by the AMWC is carried out in accordance with the Arab Strategy for Water Security, which was drafted by the Arab Centre for the Studies of Arid Zones and Dry Lands (ACSAD). The strategy was adopted in 2010 and functions as a framework for joint action between 2010-2030. One of the strategy's objectives is to promote "cooperation among Arab states for the management of shared water resources". This target has been further defined in an "Arab Countries Cross Continental Process" at the 6th World Water Forum. Its aims are stated as follows:

1) "by 2020 the signing of permanent agreements on shared water resources in the Arab region according to the "Arab Convention on shared ground water resources in the Arab Region" and "International Water law" and



BMZ















2) "by 2025 reinforcing the establishment of permanent agreements between riparian Arab countries and neighbouring countries on ground and surface water resources on reasonable and equitable basis and according to International Water Law and historic agreements".

#### **Project**

The GIZ programme 'Adaptation to Climate Change in the Water Sector in the MENA Region' (ACCWaM) aims to improve the capacity of water management institutions in the MENA region in adapting to climate change. By supporting its three regional partner institutions - the Ministerial Water Council (AMWC) of the Arab League (LAS), the Arab Centre for the Study of Arid Zones and Dry Lands (ACSAD) and the Economic and Social Commission for Western Asia (ESCWA) -ACCWaM contributes to an overall strengthening of regional water governance in the Arab region. By supporting AMWC, the project enhances the targeted improvement of shared water resource management. In addition to its focus on regional governance, ACCWaM supports the national water institutions, the private sector and civil society. This work fosters the multi-level participatory decision making process and enables a coherent and coordinated approach.

ACCWaM's participation in the ESCWA's 'Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-economic vulnerability in the Arab Region' (RICCAR) is another significant contribution to regional cooperation. This initiative is the outcome of a collaborative effort between the United Nations and the League of Arab States (LAS), including its respective specialised organisations, that responds to a request of the Arab Ministerial Water Council (AMWC) and the Council of Arab Ministers Responsible for the

Environment (CAMRE). RICCAR seeks to deepen understanding regarding the impact of climate change on water resources and the associated implications for socioeconomic vulnerability in the Arab region. The development of vulnerability assessment capabilities as well as the implementation of an integrated mapping tool serve to stimulate cooperation among scientific institutions, knowledge exchange and data sharing. The outcomes of such assessments are meant to provide a common platform for addressing and responding to climate change impacts on freshwater resources in the Arab region. They do so by serving as the basis for dialogue, priority setting and policy formulation at the regional and national levels.

#### **Impact**

- ♦ Being ACCWaM's partners AMWC, ACSAD and ESCWA – are significant regional players in the water sector, their strengthening is beneficial for overall regional water governance.
- ▲ ACCWaM's support contributes to: improved water policy making at AMWC; enhancement in the creation and sharing of regional knowledge on water and climate change with ESCWA; and to the introduction and up-scaling of innovative climate change adaptation measures in the region with ACSAD and the water ministries.
- Support for multiple stakeholders representing various levels, including national authorities, the private sector, civil society and scientific institutions in the water sector enables improved coordination and exchange.
- ♦ The backing of common regional approaches such as the Arab Strategy for Water Security and RICCAR helps intensify cooperation between the Arab states.
- ▲ ACCWaM fosters climate change adaptation in the water sector, thereby reducing the pressure on the region's scarce water resources.

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Arab Centre for the Study of Arid Zones and Dry Lands (ACSAD) I www.acsad.org

United Nations Economic and Social Commission for Western Asia (ESCWA) I www.escwa.un.org







## Transboundary Water Management in Central Asia

Project Partner:	national ministries, related state agencies, water management organisations of Central Asian countries, Regional Environmental Centre for Central Asia (CAREC), UN Economic Commission for Europe, Executive Committee of the International Fund for Saving the Aral Sea (EC IFAS), Interstate Commission for Water Coordination (ICWC)
Project Region:	Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
Project Term:	overall: April 2009 – December 2014 current phase: January 2012 – December 2014
Project Budget:	total: EUR 17 million (EUR 15 million: German Federal Foreign Office; EUR 2 million: European Union) current phase: EUR 7 million

#### Context

Central Asia is a region with scarce water resources, many of which cut across national borders. The various parties make intensive use of these resources, in particular to generate hydroelectricity and for irrigation.

The economies of five Central Asian states rely heavily on the Amu Darya and Syr Darya rivers as well as other transboundary river basins to meet their water needs. Because of this, they are mutually dependent. Having scarcely any raw materials for power generation upstream states (Tajikistan and Kyrgyzstan) rely on hydropower for energy production in winter. At the same time, downstream countries (Kazakhstan, Turkmenistan, Tajikistan) mainly use water to irrigate cropland during the vegetation period.

Inappropriate management of water resources by users, such as waste of water and inefficient irrigation, exacerbates the situation. The environmental disaster of the Aral Sea, which is essentially an outcome of misguided irrigation policy, is emblematic of the precarious water situation in the region.

Scarce resources, inappropriate management and disparate interests – all these factors cause water distribution in Central Asia to harbour a major potential for tensions.

#### **Programme**

The German Federal Foreign Office has commissioned the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH to help to enable the relevant institutions in the region to create sustainable regional water management structures, which take account of issues relating to water use as well as climate change issues and capacity building aspects. Effective water management and cross-border cooperation can contribute to stability and security and thus to sustainable economic development in Central Asia.

Transboundary Water Management in Central Asia Programme implemented by GIZ is the most extensive part of the German Federal Foreign Office's Central Asia Water Initiative (the "Berlin Process"). The initiative supports Central Asian states in water management and aims at making water a subject of intensified transboundary cooperation. The Berlin Process is conceived of as a component of the EU strategy for a new partnership with Central Asia.

GIZ Transboundary Water Management in Central Asia Programme also implements measures in the framework of the EU Regional Environmental Programme for Central Asia (EURECA). These activities are realised by the GIZ programme in partnership with the Regional Environmental Centre for Central Asia (CAREC).

















#### **Objectives**

The primary goal of the programme is to set in train a process of political rapprochement in Central Asia that leads to closer cooperation in the use of the scarce water resources and may result in joint water management in the long- term.

The programme aims at fostering regional institutional cooperation. In particular institutions that regulate matters of water distribution in Central Asia, such as the Interstate Commission for Water Coordination (ICWC) or the International Fund for Saving the Aral Sea (IFAS) are enhanced and their position in the political system is strengthened.

Principles of river basin management are introduced and applied in selected transboundary river basins in Central Asia to strengthen the transboundary river basin management. To this end capacity of water management organisations is being improved both on institutional and individual levels.

#### Measures and implementation

The programme implements measures on capacity building and provides technical support.

Personnel of the water management organisations in the selected transboundary river basins have trainings on basin principles, basin plan development and technical aspects. Stakeholder dialogues and regular meetings of the policy makers in water sector of partner countries are regularly conducted to ensure involvement of all sides.

Information materials on basin planning are developed and disseminated in the region. For best practices exchange between European and Central Asian water management organisations the programme will conduct international conference to initiate a professional network between water sector specialists from both regions.

As part of efforts aimed at fostering regional institutional cooperation GIZ jointly with UNECE have analysed legal and institutional conditions that govern the

Executive Committee of IFAS (EC IFAS). In cooperation with representatives from all five Central Asian states, proposals for strengthening EC IFAS as an institution have been drawn up.

EC IFAS and the five states together with GIZ, UN-ECE and other representatives of the international donor community have developed a comprehensive programme to improve water management within the Aral Sea Basin. This Third Aral Sea Basin Programme has been approved by all five states. GIZ jointly with UNECE aims to continue fostering regional institutional cooperation and support EC IFAS in its tasks to implement and monitor the Third Aral Sea Basin Programme as well as coordinate the engagement by the international donor community.

To complement capacity building measures GIZ implements selected pilot projects ranging from rehabilitating smaller dam safety systems to introducing water saving technologies and reconstructing traditional water supply systems.

Close coordination with the donor community at large as well as with the other projects under way as a part of the Berlin Process – especially with the Regional Research Network "Central Asian Water" (CAWa) and the German-Kazakh University (DKU) – is pivotal to the programme.



Programme Focus Basins

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Regional Environmental Centre for Central Asia (CAREC) I www.carecnet.org

UN Economic Commission for Europe I www.unece.org

#### For further information:

I www.waterca.org









# Transboundary Water Management with the Mekong River Commission

Project Partner:	Mekong River Commission (MRC)
Project Region:	Cambodia, Laos, Thailand, Vietnam
Project Term:	overall: June 2011 – December 2017 current phase: June 2011 – December 2014
Project Budget:	total: EUR 22.6 million current phase: EUR 11.95 million

#### Context

The Mekong River and its tributaries are the lifelines of the lower Mekong riparian countries. The vast diversity of the river's ecosystem is the basis for a wide array of livelihoods and is the source of food security for the majority of the basin's 60 million inhabitants. However, increasing stress has recently been placed on the basin's water resources due to continued economic development, population growth, and the move towards highly dynamic development and use of the hydropower potential in the lower Mekong basin. Additionally, the impacts of climate change are likely to increase the threats faced by people in the basin.

The Mekong River Commission (MRC) is a regional river basin organisation that was founded in 1995 by the riparian countries of the lower Mekong – Cambodia, Lao PDR, Thailand and Vietnam. The MRC promotes alignment and integration of varying national interests regarding the sustainable utilisation of the Mekong's water and related resources, particularly in the areas of agricultural development, fisheries, hydropower and navigation. In creating the MRC, the four countries have committed themselves to carrying out joint planning in the basin. China and Myanmar, the two upstream riparian countries, are engaged in the MRC cooperation as dialogue partners.

#### **Project**

Development cooperation carried out by the German government through GIZ supports the MRC in its efforts to bolster regional cooperation and sustainable water resource management. The main areas of cooperation include organisational development, adaptation to climate change and sustainable hydropower development:

- ♦ The MRC is engaged in the process of decentralising functions hitherto assumed by the Secretariat of the MRC to institutions in the member countries. GIZ supports the MRC and its member countries in planning and structuring this transition process. Efforts are also being undertaken to improve the MRC's result-based monitoring.
- ♦ In order to successfully adapt to climate change, MRC member countries need to agree on a regional adaptation strategy. In order to be effective, this strategy should integrate current research findings. GIZ assists the MRC in developing the expertise necessary to turn the commission into a regional knowledge hub on climate change. Furthermore, the MRC's capacity to carry out flood forecasting in the face of a changing climate regime is being strengthened.
- ♦ In order to achieve sustainable hydropower development in the region, the MRC must engage in dialogue with line agencies in the respective member countries as well as with hydropower project developers on criteria for hydropower sustainability. The MRC's contributions to this goal consist of developing guidelines and sustainability assessment tools for hydropower projects, development of human capacity and fostering innovations (i.e. benefit sharing mechanisms) on both the transboundary and national levels.

BMZ



On behalf of













Processes, activities and time frame: In the project's current implementation phase (2011-2014), GIZ is assisting the MRC in the following ways:

First and foremost, direct advisory services to the MRC Secretariat are delivered in reference to three MRC programmes: sustainable hydropower, climate change adaptation and flood management. These services include: organisational management advice in the decentralisation of MRC functions to riparian states; the utilisation of internationally recognized, ecological, social assessment tools in the decision-making process for hydropower development that consider poverty and gender issues; networking support that strengthens the MRC in its goal of becoming a knowledge hub for climate change; and in the technical development of flood forecasting systems under climate change conditions. Human Capacity Development measures such as curricula development, training sessions and networking events are employed to integrate the hydropower sustainability agenda within the programmes of various regional academic and training institutions. Furthermore, financial contributions directly help the MRC programmes in executing their work plans.



Mekong River Commission Secretariat, Vientiane (Laos)

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### **Impacts**

The expected results of the MRC-GIZ cooperation programme are fourfold:

- ♦ During the decentralisation process, former MRC functions will be devolved to line agencies in member countries. These line agencies will be supported by the MRC to ensure they have the necessary capacities, processes and coordination.
- As the region is likely to witness a significant increase in hydropower development, it is vital that decision makers and technical staff in the member countries, as well as hydropower developers, take sustainability criteria into consideration. Cooperation between the MRC and GIZ seeks to develop the capacities of involved actors, ensuring that these factors are integrated into the planning, design and implementation of hydropower projects.
- ♦ The impacts of future climate change on flood generation in the Mekong basin will be a key challenge to the flood forecasting done by the MRC. The programme is expected to increase the abilities of the MRC and member countries in flood forecasting and particularly in the incorporation of climate change projections. Additionally, practical flood protection measures are being implemented in areas prone to future increases in flooding.
- ♦ Climate change is best tackled via regional, transboundary efforts. Though individual MRC member countries are already implementing adaptation projects, knowledge and expertise from a regional institution such as the MRC will be crucial in managing climate change impacts. For this reason, cooperation will increase MRC expert capacities in giving advice and assistance to Mekong countries in targeted adaptation.

On the whole, the cooperation effort will contribute to the MRC's increased capability in serving as an advisory body for its member countries, utilising a distinct regional perspective, and helping them overcome the key challenges posed by hydropower development and climate change.

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## Support to the African Union Commission Water Directorate and the African Ministers' Council on Water

Project Partner:	African Union Commission (AUC) and the African Ministers' Council on Water (AMCOW)
Project Region:	All member states of AMCOW and the African Union
Project Term:	overall: December 2009 - November 2015 current phase: December 2009 - November 2012
Project Budget:	total: EUR 9 million current phase: EUR 5.5 million

#### Context

Many parts of the African continent are lagging behind the quest to achieve the Millennium Development Goals related to water and sanitation, with millions remaining without access to clean drinking water and sanitation. Two thirds of the African population resides in the vicinity of 59 international water basins on the continent. For the sake of securing basic needs for this population, achieving the Millennium Development Goals, and preventing conflict, international coordination of water resource management and strategic direction at pan-African and regional levels are indispensable.

The African Heads of State demonstrated their interest in accelerating the achievement of the set goals in water and sanitation in Africa through a comprehensive list of commitments declared at the July 2008 African Union summit in Sharm El-Sheikh, Egypt. The main aspects of the commitments include national action plans on water and sanitation, transboundary water management as well as capacity development and the strengthening of the African Ministers' Council on Water (AMCOW). The AU Commission mandated AMCOW to develop an implementation strategy for the Sharm El-Sheikh commitments.

Additional efforts are needed in order to carry forward these commitments. The aim of this GIZ programme is to enhance the capacities of the African Union Commission (AUC) Water Directorate and the African Ministers' Council on Water (AMCOW) to implement these crucial commitments. Programme support will also target regional organisations – such as the Regional Economic Communities (RECs) – and River/Lake Basin Organisations (R/LBOs). For this, the AU Commission requested German support in the development of this strategy and, furthermore, to accompany its implementation.

#### **Project**

In order to enable the African Union Commission (AUC) Water Directorate and the African Ministers' Council on Water (AMCOW) to steer the process of implementation of the Sharm El-Sheikh commitments, German support aims to enhance capacities and performance of AUC, AMCOW and regional institutions (RECs, R/LBOs).

The project focuses on three core areas:

- Development of an implementation strategy and required processes
- Improvement of the internal organisation and the communication between pan-African and regional levels, institutions and civil society. This includes the clarification of roles and responsibilities.
- Providing advice and support for the AUC and AMCOW in the integration and implementation of IWRM principles on the regional and national levels

IWRM is a flexible, process-oriented and holistic approach aiming at the maximization of human and economic benefits while taking the ecosystem into consideration. The German government actively supports the AUC and AMCOW in donor coordination in this sub-sector.



















The objective of the first phase (2009–2012) is to ensure that AUC and AMCOW are able to fulfill their mandate regarding the implementation of the Sharm El-Sheikh commitments. This includes guiding the process of adopting an implementation strategy and reporting the current state of implementation to the heads of state at the AU summit. The project contributes to fostering a more strategic direction of the African water agenda and to its stronger integration in the AU.

This pan-African project includes all African states and works closely with other German projects in the water sector on both the regional and national levels. Furthermore, the project enjoys the support of the European Union. Upon request by AMCOW, the World Bank's Water and Sanitation Program (WSP) and the African Development Bank (AfDB) have taken on responsibilities in the sub-sectors of drinking water supply and sanitation, likewise assisting in the fulfilment of the Sharm El-Sheikh commitments.

#### **Impact**

Expected results of this project are related to an enhancement of AUC and AMCOW capacity in the planning, coordination and implementation of the Sharm El-Sheikh

commitments. The roles and responsibilities of actors in African water governance on all levels (pan-African, regional and national) will be clarified, thereby enhancing political participation and transparency. As a result of these outcomes, the AUC and AMCOW will be able to reinforce their position as leading pan-African institutions and deepen cooperation with African institutions as well as with donors.

The project contributes directly to the fulfilment of the commitments made by Heads of State in regards to AMCOW and the institutional architecture of the African water sector. Implementation of the strategy and increased capacity development will allow harmonisation among the regional and national levels. Furthermore, the project will help to ensure that donor contributions within the framework of the joint African strategy are more effectively applied. By spreading the principles of IWRM and benefit sharing, long-term sustainability in water resource management and conflict prevention will be achieved. The urban and the rural poor of Africa alike will benefit from the support through the realisation of the Millennium Development Goals related to water and sanitation, resulting from improved coordination and implementation according to plan of the Sharm El-Sheikh commitments.

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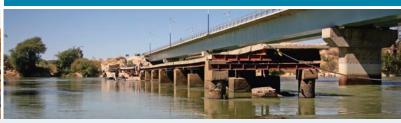
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## Support to the African Union Commission in the Reform of the Institutional Architecture of Infrastructure Development in Africa (IAIDA)

Project Partner:	African Union Commission (AUC)
Project Region:	All member states in the African Union
Project Term:	overall: May 2012 – June 2017 current phase: May 2012 – May 2014
Project Budget:	total: EUR 6 million current phase: EUR 2 million

#### Context

The African continent is falling behind the establishment of infrastructure required for further development, particularly regional and transboundary infrastructure. Reaching political agreement on regional projects and mobilising sufficient capacities to successively implement the steps leading to the development of finance-ready bankable projects are some of the essential problems. Regional governance structures in Africa only have very limited capacities to advance and accompany projects from the political decision through technical preparation and up to bankability. Africa's economic and social development and its political and physical integration are seriously hampered by the inadequacy of infrastructure (water, energy, transport and information and communication technologies (ICT)), which constitutes the essential foundation for the development process.

The need for strong coordination among the various institutions that deal with infrastructure (water, energy, transport and ICT) is indispensable. With this in mind, the Heads of State have agreed upon a general design for an Institutional Architecture for Infrastructure Development in Africa (IAIDA). With this, the aim is to establish an institutional structure that will support the implementation of the Programme for Infrastructure Development in Africa (PIDA).

This architecture redefines roles, mandates, and responsibilities, and likewise encourages more efficient cooperation and collaboration mechanisms with Regional Economic Communities (RECs) and the African Development Bank (AfDB). In addition, this new institutional architecture (IAIDA) is to serve as an implementation framework for the existent PIDA (Programme for Infrastructure Development in Africa). As such, it will take on the role as the African structure responsible for development and coordination of regional as well as pan-African infrastructure projects in all four related sectors.

IAIDA is expected to create an integrated and enabling management environment that will be capable of enhancing the capacity of the African Union Commission and its institutions to streamline all national, regional and continental efforts. IAIDA will function as a unique platform on which all business processes for infrastructure development can be undertaken and shared. Each governing body will be assigned a distinct role and clear responsibilities in order to avoid any duplication of tasks or events/forums, ultimately achieving tangible results in the development of infrastructure in Africa.

In order to carry forward the implementation of IAIDA, additional efforts and capacities are needed within the African Union Commission (AUC) as well as at the NEPAD (New Partnership for Africa's Development) Planning and Coordinating Agency (NPCA). Enhanced capacities will also be required in the involved regional institutions, such as the Regional Economic Communities (RECs), River/Lake Basin Organisations (R/LBOs) and Power Pools, better enabling them to fulfil their new roles and responsibilities. To achieve these aims, the African Union Commission requested support from Germany in the development of a strategy and its accompanying implementation.













#### **Project**

The project supports the operationalisation of institutional architecture for infrastructure development (IAIDA) at the pan-African level. The first phase seeks to enhance the capacities of the AUC and NPCA in coordinating and implementing the IAIDA processes.

In order to achieve this, the German government will offer support in three core areas:

- Financing mechanisms (identification of PPP options, development of strategies, mapping, development of accountability, audit mechanisms, contract enforcement frameworks, etc.)
- Information management (open access information portal, policy on information sharing, M&E system, consolidated report on the state of infrastructure by African institutions, etc.)
- Communication (external and internal communications, demonstrating added value, a core partners group, 'Roadshow', communication strategy, strategic outreach activities, improvement of materials and documents, etc.)

These three core areas are supplemented through capacity development measures including the following elements: advice on institutional change processes, human capacity development for the Directorate for Infrastructure and Energy personnel at the AUC/NPCA, and advice in the creation of new roles and mandates as well as in the planning and implementation of projects, their evaluation and auditing. The contribution from the German government includes technical and organisational advice by long-term and short-term regional experts, training sessions and procurement. Thematic workshops and networking events are also supported.

The pan-African project includes all AUC member states and contributes to the efforts of the current strategic and institutional reform processes in Africa's infrastructure sector. In connection to these processes, the project works in close collaboration with the African Development Bank and the World Bank. Also, the inclusion of the AUC's Specialised Technical Committees and RECs will be enhanced. Close collaboration with other projects by the German government (KfW) will also be carried out, including the project at the Infrastructure Consortium for Africa (ICA), the Infrastructure Project Preparation Facility (IPPF) and the geothermal project at the AUC.

### **Impact**

The expected results are defined by the enhancement of capacities and expertise of the AUC and NPCA in planning and coordinating the implementation process for the agreed-upon IAIDA. The AUC will be strengthened and better able to fulfil its mandate as the leading institution on the pan-African level, striving for faster and better coordinated development of infrastructure in Africa.

The objective of the first phase (2011–2013) is to improve coordination and implementation of IAIDA through the AUC and NPCA. Upon completion of the project, IAIDA shall be operational on a pan-African level. Operationalisation of IAIDA and the improved capacities will contribute towards more efficient and verifiable infrastructure governance (good governance). Available financial resources (private and public) will be utilised more effectively. Improvement of infrastructure services in Africa (water, transport, energy and ICT) will significantly support the realisation of various Millennium Development Goals and improve the living conditions of the poor on the continent.

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# Transboundary Water Management in the Southern African Development Community (SADC)

Project Partner:	SADC Secretariat
Project Region:	Angola, Botswana, Democratic Republic of the Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia
Project Term:	overall: 2005 - 2015 current phase: 2011 - 2015
Project Budget:	total: EUR 54.8 million current phase: EUR 38.5 million

#### Context

Given the fact that southern Africa's water resources are unevenly distributed over time and space, and that socio-economic development has varied markedly among SADC member states, it is no wonder that transboundary water management in the region presents a unique challenge.

Shared water resources in the region are under tremendous strain due to ever-rising demand and increasing water pollution. This is particularly true for transboundary water basins, especially considering that the management of water resources has not always been well coordinated. Infrastructural development meant to safeguard water supplies is skewed across the region. Situational factors include: South Africa approaching the limits of its storage capacity; the tremendous amount of still untapped hydropower potential in the DR Congo; Namibia's turn to recycling and desalination; and the steady expansion of agricultural lands in various head-waters in Angola – set to affect downstream water availability in the medium to long term. What's more, the quality of and capacity to deliver domestic, industrial and agricultural water varies greatly.

#### **Project**

## Programme Objective

The overall programme objective of technical assistance in the SADC water sector is the strengthening of human, institutional and organisational capacities. The programme is supported by the German government – in delegated cooperation with the Australian and the UK governments – and is being carried out by GIZ. Cooperation is focussed at developing basin-wide management (IWRM) plans, developing regional water infrastructures, tailor-made training programmes as well as information and knowledge management systems, including awareness-raising.

#### **Approach**

The tripartite partnership utilises a multi-dimensional support approach, operating on three levels of intervention: the whole SADC region; transboundary river basins and their organisations; and local municipalities and water utilities. GIZ advises and assists its partners on all three intervention levels in three strategic focus areas: water governance, water management and infrastructure development. Human, institutional and organisational capacity development is carried out in all three areas and on all three geographical levels. Furthermore, the German government has been entrusted with the role of assisting the SADC Secretariat in the coordination of support provided by other international cooperating partners involved in the SADC water sector.

All in all, this well-structured, multidimensional approach sets the interconnected and focused foundation for reliable and successful contributions to sustainable and equitable utilisation of shared water resources in the SADC region. Concurrently, conflicts are prevented and



















peace dividends achieved through the active promotion of transparency and trust within transboundary cooperation. This, in turn, establishes a basis for successfully dealing with the impacts of climate change and the looming challenges of water scarcity.

Human, institutional and organisational resources are being strengthened by way of tailor-made, joint training measures, the promotion of legislative processes and cross-border parliamentary dialogues. Additionally, GIZ advises the SADC Secretariat in regards to the development and application of knowledge and information-management systems as well as in awareness-raising measures. Promotion and implementation of development partnerships with the private sector and civil society round off this structured and holistic approach.

#### **Impact**

Assistance thus far provided by the Federal Republic of Germany has been pivotal in institutionally strengthening the SADC Water Division, part of the SADC Directorate of Infrastructure and Services (I&S). The German government has also put into practice requirements for an international harmonisation agenda through delegated cooperation with the British Department for International Development (DFID) and the Australian Agency for International Development (AusAID).

A great deal of progress has been made with regard to the establishment and reinforcement of river-basin organisations (RBO) in the SADC region. Support through GIZ has been essential in strengthening the Orange-Senqu River Commission (ORASECOM) and the Limpopo Watercourse Commission (LIMCOM). As an example, the Orange-Senqu River Commission (ORASECOM) has established a special committee that aims to streamline assistance from various international cooperating

partners. This achievement was initiated and continues to be supported by GIZ.

The approach championed by GIZ is crucial in ensuring coordinated and joint management of the entire basin. On the local intervention level, GIZ engages in development partnerships (DPP): one such partnership with SABMiller seeks to safeguard water supply chains and improve water quality, while another with Sasol New Energy deals with water conservation and water-demand management. Additional DPPs are currently in the pipeline.

The German government, by way of the KfW Entwicklungsbank and GIZ, is also assisting SADC in the implementation of its role-model infrastructure project between Angola and Namibia, titled the 'Kunene Transbounday Water Supply Project.' This pilot project aims at the implementation of a cross-border water-supply scheme. While paving the way for future developments, the project likewise tests bilateral and multilateral rules and guidelines for facilitating cooperation. The German government, in association with its Australian and the UK partners, also actively assists in the creation of independent river-basin organisations in the Kunene and Cuvelai river basins. These RBOs will also be in accordance with the provisions set out by the 'Revised SADC Protocol on Shared Waters' and will be agreed upon by the respective ministers in Angola and Namibia.

In 2011, GIZ assisted the SADC Secretariat and the SADC member states in identifying regional investment opportunities related to water infrastructure, with a number of implementation schemes planned for 2012. Furthermore, GIZ successfully advised the SADC Secretariat in the development of the third Regional Strategic Action Plan for Integrated Water Resources Management (RSAP-IWRM) as well as in the development of a regional strategy for adaption to climate change in the water sector in 2011.

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## Transboundary Water Management in the Congo Basin (Gestion Transfrontralière de l'Eau dans le Bassin du Congo)

Project Partner:	International Commission of the Congo-Oubangui-Sangha Basin (CICOS)
Project Region:	Republic of the Congo, Democratic Republic of the Congo, Central African Republic, Republic of Cameroon
Project Term:	overall: June 2006 - December 2016 current phase: January 2009 - December 2012
Project Budget:	total: EUR 7.5 million current phase: EUR 2.5 million

#### Context

With a catchment area of 3,700,000 km<sup>2</sup>, the Congo River has the second largest river basin in the world, with 62 per cent of the basin's drainage area lying within the territory of the Democratic Republic of the Congo. The basin's ecosystem is one of the world's richest in terms of biodiversity and is of utmost importance for global climate protection.

With its huge water resources and large, stable discharge, the Congo basin offers enormous opportunities for inland river transport, sustainable energy generation, fisheries and agriculture. The Congo River and its tributaries form an extensive network of 25,000 km of navigable waterways, traditionally the dominant trade link within the region. Following many years of war, political instability and under-investment in infrastructure, river transport has become nearly obsolete since the 1990s. Lack of maintenance of inland waterways and navigational aids as well as poor training for navigation staff are the major factors contributing to high rates of boat accidents. Furthermore, illicit levying has caused a sharp decline in trade in the region. Urgent challenges for revitalising inland water transportation include the restoration of dilapidated port

facilities, maintenance work on inland waterways – notably dredging –, the re-installation of navigational aids and, of course, training of navigation staff.

To capitalise on the enormous potential of the Congo basin, and to ensure the protection of water and other natural resources, organised and far-reaching transboundary cooperation among the riparian states is crucial. For this purpose, the International Commission of the Congo-Oubangui-Sangha Basin (CICOS) was established in 1999 by the Democratic Republic of the Congo, the Republic of the Congo, the Central African Republic and the Republic of Cameroon. CICOS's mandate includes all aspects of integrated water resource management, with special attention paid to inland navigation. The CICOS head-quarters and vocational training facilities have been based in Kinshasa since 2004.

#### **Project**

The project 'Gestion Transfrontalière de l'Eau dans le Bassin du Congo' (GETRACO) has been supporting CICOS's activities since 2006. The main project objective is to promote the organisational development of CICOS as the main river basin organisation in the region by: a) strengthening the technical capacities, both of CICOS staff members and national partner institution staff; b) promoting good governance of the basin's natural resources through the implementation of a basin-wide approach to integrated water resource management; and c) supporting the development of sustainable river transport through the establishment of a common legal framework (Navigational Code) and standardisation of regulations and policies.

To this end, several multi-stakeholder dialogue processes have been initiated. They address key aspects of water















security, climate-resilient development, socio-economic development and poverty reduction within the basin. As an example, the Malebo Pool Convention dialogue aims to improve working relationships between the administrations of the two Congos, leading to substantially reduced transfer time of goods and people between Brazzaville and Kinshasa. The two capitals have developed into Africa's third largest urban agglomeration in terms of population and size.

The project assists CICOS in establishing regional and national databases for the management of both water resources and river transport. It promotes regional cooperation in the collection, analysis, dissemination and exchange of hydrological transport management data.

Since 2009, the project has contributed to the establishment of a Regional Training Center for Inland Navigation (CRFNI). This training centre provides vocational education for shipping and port personnel in the region. It is unique in Central Africa and a best practice example for successful vocational training in the Democratic Republic of the Congo.

#### Impact

The sustainable exploitation of resources in the Congo basin, including energy production and improved transportation facilities, will have a direct impact on the region's development. The sustainable use of water for agricultural production and fisheries as well as economic development in the basin will raise living conditions and improve food security in riparian states.

Harmonisation and implementation of national policies and strategies in inland navigation and transport manage-

ment facilitate the circulation of goods and stimulate trade in the region. The population will directly benefit from a reduction in transport costs and associated risks. Good governance in transport management will also have a significant impact on the preservation of the basin's natural resources.

The promotion of basin-wide stakeholder dialogues facilitates the joint development and implementation of harmonised polices, norms and standards, as well as joint planning for water resource management.

#### The water heart of Africa: The Congo Basin



CICOS plays a major role in facilitating sustainable use and protection of the basin's resources and in promoting cooperation among member states in this post-conflict region. The project's impact will be crucial for the mutual economic development of Africa's largest river basin and will, in turn, help stabilise on-going peace processes.

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## Organisational advisory services for the Lake Chad Basin Commission

Project Partner:	Lake Chad Basin Commission
Project Region:	Central African Republic, Cameroon, Chad, Niger, Nigeria
Project Term:	overall: July 2011 – June 2017 current phase: July 2011 – June 2014
Project Budget:	total: EUR 4 million current phase: EUR 2 million

#### Context

The Lake Chad Basin Commission was founded in 1964 by the four countries bordering Lake Chad: Niger, Nigeria, Cameroon and Chad. The Central African Republic became a member of the Commission in 1985, and Libya joined in 2007. In addition to supervising and coordinating transboundary water projects, the Commission has been mandated by the member states with the task of protecting natural resources, regulating and monitoring water use and settling disputes. The commission was reorganised in 2009 and 2010 and currently finds itself in an implementation phase. During this phase, a clearly defined and integrated management strategy is to be developed, one which will enable the organisation to fulfil its tasks in the long term. The commission is the sole institution approved by the bordering countries in addressing current and future transboundary problems.

The Lake Chad basin encompasses 2,433,000 km<sup>2</sup> and extends across Chad, Sudan, the Central African Republic, Cameroon, Nigeria, Niger, Algeria and Libya. There are three climate zones in the basin: arid in the north, semi-arid and sub-tropical in the south. This results in considerable regional and seasonal differences in precipitation.

The Lake Chad basin is one of Africa's largest sedimentary groundwater basins without an outlet. Groundwater recharge mainly depends on inflow from the Chari, Logone and Komadugu-Yobe rivers, making for an aquifer system that is highly sensitive to changes in the amount of precipitation and inflow.

The surface of Lake Chad has decreased from 30,000 km<sup>2</sup> to approximately 2,500 km<sup>2</sup> since 1960. Climate fluctuations, enormous population growth in the region, the construction of dams, large irrigation projects in the basin's catchment area, and extensive extraction of groundwater have all contributed to the shrinking of the lake.



Fishers on the Lake Chad

Approximately 37 million people live in the Lake Chad basin, the majority of them agricultural and livestock farmers and fishers. The reduction of available water resources has led to a decline in the fishing industry and has also threatened biodiversity. Additional settlements in the dried-out areas of the lake increase stress on the aquifer system through increased agricultural use, while slash-and-burn practices accelerate desertification. These factors lead to reductions in food security, social tensions, increased poverty, and likewise encourage migration.













#### **Project**

The development cooperation programme 'Sustainable Water Resources Management in the Lake Chad Basin' is a cooperative project carried out in association with the German Federal Institute for Geosciences and Natural Resources (BGR). Following its reorganisation, the project is now divided into a technical component (BGR) and an organisational/institutional component (GIZ).

#### GIZ's tasks comprise of:

- **b** supporting the commission in institutional reform
- ♦ information and data management
- strengthening planning, communication and cooperation within the commission and its partner institutions in member states
- raising the status of the commission and its regional and international visibility

#### **Impact**

In order to strengthen the commission's capabilities and so enable it to fulfil its mandate and achieve long-lasting results, two overarching areas of responsibility have been defined:

- ▲ Increasing the performance and effectiveness of the organisation and its contact partners in the member states
  - providing organisational advisory services
  - implementing a communication system
  - developing a training plan (planning, communication, coordination, conflict management, training courses and exchange trips)
- Expanding and adapting the existing information system to meet the requirements contained in a biennial report (Ecological Condition of Lake Chad)
  - expanding the database, GIS, software

- structuring the biennial report
- developing a monitoring and evaluation system
- establishing an indicator system
- reactivating the data exchange protocol among the member states
- supporting data collection, processing and evaluation at the respective institutions in the member states
- designing and developing a website with a communication platform for the Lake Chad Basin Commission and institutions in the member states

### The programme also supports

- ♦ information exchange with other regional and international river basin and water catchment area commissions
- organisational development of transboundary management structures (including data, information and knowledge management)
- design and development of a website with a communication platform for the Lake Chad Basin Commission and institutions in the member states



Visit by the international Danube, Rhine and Lake Constance commissions as part of a capacity building, awareness raising and knowledge transfer measure (Feb. 2012)

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## Transboundary Water Cooperation in the Nile Basin

Project Partner:	Nile Basin Initiative (NBI)
Project Region:	NBI member states: Burundi, Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, Sudan, Tanzania and Uganda
Project Term:	total: January 2002 - June 2013 current phase: January 2009 - June 2013
Project Budget:	total: EUR 10.3 million current phase: EUR 5.8 million

#### Context

With a length of 6695km and a catchment area of more than 3 million km², the Nile is one of the world's major rivers and the most important freshwater reservoir in its region. The Nile basin is shared by 11 countries and covers around 10% of Africa's total landmass, home to an estimated 230 million people – almost 23% of the African population. Its water resources are essential for socio-economic development in all riparian states, where poverty, political instability and environmental degradation are widespread. Water demand across the Nile basin is steadily increasing (e.g. for irrigated agriculture, hydropower and a rapidly growing population) but water availability is both finite and variable due to climatic factors.

Realising that cooperation beyond national boundaries is crucial for the development of the region, nine riparian countries founded the Nile Basin Initiative (NBI) in 1999. The initiative's joint vision is "to achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources."

#### **Project**

GIZ supports the NBI on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). Currently, GIZ engages in the NBI 'Institutional Strengthening Project' in close cooperation with other partners that contribute to the Nile Basin Trust Fund. The objective of the project is to improve the planning and coordination of sustainable water resources management in the Nile basin on both national and regional levels.

With the aim of supporting the successful transformation of NBI into a fully mandated river basin organisation in the future, GIZ provides the NBI assistance in strengthening its institutional and technical capacities in the following areas:

#### **▲** Institutional and organisational development

GIZ supports the NBI in increasing its institutional and financial sustainability: Key factors here include the definition of roles, responsibilities and coordination procedures, as well as clear mandates for the NBI Secretariat and the two NBI investment programmes on the subbasin level. Furthermore, a significant share of financing by the NBI member states is essential to ensure financial sustainability of the organisation in the long term.

### **♦** Policy and strategy development

GIZ supports the NBI in the development of basin-wide principles and standards for the management of the shared water resources of the Nile basin:

With the *Nile Basin Sustainability Framework*, a common strategic approach is now in place, serving as a reference for policies, strategies and guidelines for the sustainable management and development of the Nile basin, such as the NBI Environmental and Social Policy.

















GIZ further assists the NBI in developing key thematic strategies within this framework (on climate change and wetlands management) and in providing support to member states to integrate transboundary principles into their respective national water policies.

GIZ supports the NBI in the establishment of a com-

#### Data and Information Management

prehensive knowledge system to foster data and information exchange and provide a reliable information base that assists in decision making processes:

The web-based *Nile Information System* gives NBI staff, decision makers and other stakeholders at the regional, national and local levels access to relevant information on the Nile basin and the NBI's activities, enabling information exchange among the different user groups. The *River Nile State of the Basin Report 2012* (and subsequent releases every three years) serves as a tool for monitoring the health of the river basin in the long term. It provides credible information and in-depth analysis of trends in various areas such as energy, food security and climate change. The report identifies key challenges in these fields and provides recommendations

#### **♦** Adaptation to climate change

for decision makers in the basin.

On the sub-basin level, GIZ supports the NBI's efforts to adapt to climate change:

In the Nile Equatorial Lakes Region, climate-proofing guidelines are developed and mainstreamed in cooperation with KfW Entwicklungsbank to ensure that infrastructure projects are identified, developed and implemented with future climatic changes in mind. In the Eastern Nile basin, a flood early warning system is set up to quickly alert affected stakeholders and local communities on upcoming flood events.

#### **Impact**

Despite the present political situation in the basin, significant progress has been achieved in terms of confidence building between riparian countries as well as conflict prevention. Within the NBI, numerous water professionals from all participating countries now regularly work together on solutions and opportunities for cooperation. This has led to a consensus on key elements of adequate water policies and common standards, which has had a marked influence on the water sector reform process in individual member countries.

Over the past years, NBI has strengthened its capacity to effectively perform its function as an international river



Topographic map of the Nile basin 0 NBI

basin organisation, and has demonstrated the benefits of cooperation to its member countries. On the subbasin level, the NBI is coordinating concrete investment projects for infrastructure development and resource conservation with a total value of around 1 billion USD, including hydropower generation and power transmission projects. The population of the Nile basin is the ultimate beneficiary of those investment projects on the ground.

#### Imprint

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## Support to the Niger Basin Authority

Project Partner:	Niger Basin Authority (NBA)
Project Region:	Benin , Burkina Faso, Cameroon, Chad, Guinea, Ivory Coast, Mali, Niger, Nigeria
Project Term:	launched in 2007 current phase: April 2010 – March 2013
Project Budget:	total: EUR 7.5 million current phase: EUR 2.6 million

#### Context

The Niger River runs a length of approximately 4,200 km (the third longest river in Africa and the ninth longest in the world) and creates a catchment area of about 1,500,000 km². The basin area boasts an estimated population of about 113 million (2000), includes sections of nine West and Central African countries (Benin, Burkina Faso, Cameroon, Chad, Guinea, Ivory Coast, Mali, Niger and Nigeria), and has become indispensable for food security, fishing, transport and power generation.

In recent years, the Niger River basin has suffered from serious degradation of its natural resources, occurring to varying degrees and across a number of agro-ecological zones. This situation is a result of both worsening climatic conditions as well as human activities carried out to exploit the basin's considerable natural resources. Though faced with very real challenges such as droughts and climate variability, the basin remains rich in natural resources – most of them renewable. The riparian states and their local populations are responsible for ensuring the best possible utilisation of the basin's resources, strengthening capacities at all levels in order to ensure sustainability.

The need to create a framework for optimal, integrated resource management in the Niger River basin became apparent back in the early 1950s, leading to the creation of the Niger River Research and Development Mission in Bamako. In November 1964, the Niger River Commission (NRC) was created, later replaced by the Niger Basin Authority (NBA) in 1980. The NBA is mandated with the task of assisting in cooperation efforts between member states in order to promote integrated, coordinated and harmonious development within the basin by supporting effective use of Niger River resources.

#### **Project**

The programme "integrated water resource management (IWRM) in the Niger basin" is financed by the German Federal Ministry for Economic Cooperation and Development and is being carried out in cooperation with the Federal Institute for Geosciences and Natural Resources (BGR) and the German KfW Entwicklungsbank. This GIZ project works in collaboration with other NBA partners. It targets capacity development on the Executive Secretariat level as well as within local national structures and civil society organisations in the respective states.

The overall term of the project is set at 10 years. Project activities will focus on strategic planning, PR work, internal communication, and organisational development during the second three year phase. Effective river basin management must be based on reliable and up-to-date information about the hydrologic balance and ecological changes as well as on the local population's socio-economic situation. On account of this, the goal of organisational development will be achieved by improving the flow of information among member states and the NBA. Adjustment to climate change is another key area of cooperation.

















The project also promotes the NBA's 'Shared Vision' initiative – adopted in 2002 – which seeks to enhance sustainable development through integrated management of water resources and related ecosystems. This will lead to an improvement of living conditions and income of the population living in the Niger River basin area. The project likewise supports the NBA in establishing necessary dialogue and cooperation structures.

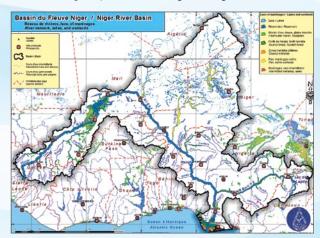
A framework for cooperation was signed in 2004 in order to coordinate the contributions of other NBA donors. It also puts forth that the contents of current and planned activities related to the various projects and programmes be agreed upon at meetings of the coordinators in order to avoid duplication. A technical consultant sent by GIZ heads the working group for "Capacity Building" at the regional level.

#### **Impact**

This GIZ project promotes the implementation of regional water policies into the national policies of the member states, taking transboundary realities into consideration. During the first phase of the project, the NBA drafted the Water Charter – with the approval of all member states – that covered water and environment policies. Moreover, an environmental annex was added at the last Ministers' Council meeting in 2011. Thanks to the Water Charter, various environmental policies and the investment plan, the NBA will be able to implement a sustainable integrated water resource management programme in its member

states and, by so doing, better fulfil its role as advisor and facilitator on regional water issues. Support for the NBA is characterised by a multi-layered approach and supports structuring, operation and collaboration with other projects and programmes by way of international technical and financial assistance.

Furthermore, an exchange platform for NBA's hydrological and environmental database provides an overview of the IWRM development scale in the Niger basin. The NBA also engages civil society for the sake of creating real impact in the socio-economic development of the basin. This involvement will guarantee that the basin's population benefits from natural resource protection in the long-term and that their living conditions steadily improve. A recent review attests to the positive impact of the NBA's communication policy and knowledge management.



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