



Managing Water for Sustainable Development

Modernisation of the Syrian Water Sector

gtz



Federal Ministry
for Economic Cooperation
and Development





THE CRADLE OF CIVILISATION

With its rich history that reaches back thousands of years, Syria is often described as the ‘Cradle of Civilisation’. This Eastern Mediterranean country in the heart of the Middle East is culturally, geographically and climatically extremely diverse with vast rocky deserts in the east, the fertile Euphrates River valley in the north and snowy mountains in the west.

Syria’s history goes back to ancient times. Known as the ‘Fertile Crescent’, the region was famed for its rich soils and abundant water supplies which attracted human settlements as early as 3000BC. The country’s two major cities, the capital Damascus in the south and the northern city of Aleppo, vie for the title of “oldest continuously inhabited city in the world”. From the ruins of Ugarit, where one of the first alphabets was developed, to the Roman city of Palmyra, an oasis town on the Silk Route, the history of Mediterranean civilisations can truly be traced through Syria’s diverse landscapes.

The map of Syria bears testimony to the importance of water in the country’s history: settlements lie to the fertile west of the country, line the coastline and scatter the length of the banks of the Euphrates River which flows from Turkey to Syria and into Iraq.

To sustain their populations, the early civilisations developed agricultural techniques and irrigation systems. At the same time, the inhabitants of ancient cities such as Damascus and Aleppo were among the first to develop sophisticated water distribution and sanitation networks, which brought water to people’s homes. In smaller towns and villages, public water fountains, known as *sabils*, traditionally provided locals with easy access to drinking water.

Today Syria is growing and changing rapidly. Modern, bustling and with a young population, it is now home to over 20 million people. The economy, formerly mainly reliant on incomes from agriculture and traditional manufacturing industries, is increasingly diversified with a growing private sector and a blossoming tourism industry. And crucial to all of these people, crops, industries and services, is water.

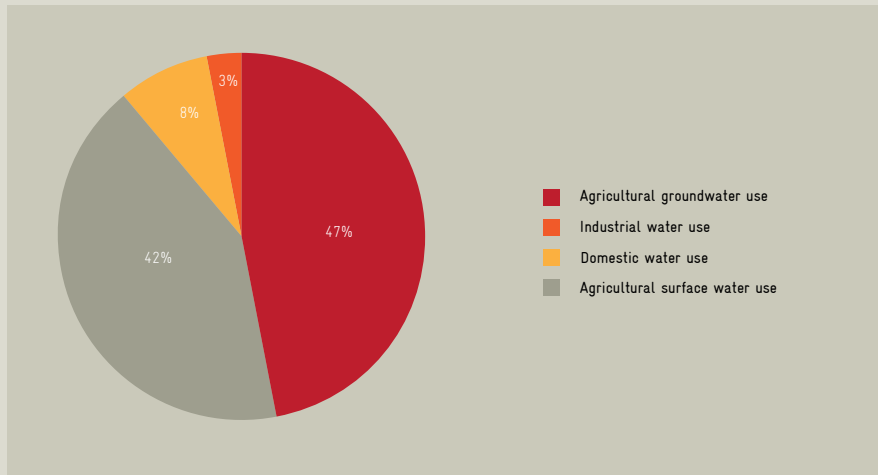
WATER IN SYRIA, A PRECIOUS RESOURCE

Situated in an arid to semi-arid climatic zone, Syria registers a wide variation in its rainfall levels, with more than 1,000 mm/yr in the mountainous coastal areas and less than 200 mm/yr in the south-eastern desert regions.

The country's water supply comes from three sources: rainfall, groundwater and surface water. The average internal renewable water resources are estimated at 8bn m³/yr, of which 5bn m³/yr comes from groundwater sources. In addition Syria receives around 6bn m³/yr from the Euphrates River in the north-east. Together with discharges from agricultural, domestic and industrial sources, this brings the actual total renewable water resources to about 16bn m³/yr.



WATER USE PER SECTOR



Syria's water resources are under growing pressure from massive population growth and high urbanisation rates. In addition, the prevailing policy of self-sufficiency in agricultural food production and the development of industry and tourism place ever-greater demands on the resource.

As in many other countries in the region, the agricultural sector is the main consumer of water, using 88.5 percent of Syria's water resources. Of the remaining resources just 3.3 percent goes to the industrial sector, while 8.2 percent goes to the domestic, commercial and tourism sectors.

Annual water use has exceeded the total renewable water resources by around 14 percent for the past 15 years and the reduction of groundwater resources is a serious problem in many areas. In addition, water supplies are unevenly distributed across the country, with major urban centres such as Damascus situated in low rainfall areas.

In addition to water shortage, pollution from untreated domestic wastewater and agricultural run-off is a growing problem. This not only affects the quality of drinking water in rural and urban areas, but also contaminates irrigation water, forming a major health hazard.

The objective of the GTZ water programme is to protect the country's water resources and improve the living conditions of the Syrian people.

Besides environmental issues facing the country's water resources, Syria's water institutions also face many challenges on a managerial level. The various stakeholders are, however, constantly working to improve and enhance the efficiency of work processes in the sector.

Looking to the future, the Syrian government is formulating policies that foster sustainable water resource management and ensure equitable access to safe drinking water. At the same time, it is seeking to increase the sector's ability to cope with the effects of climate change.

The goal of the GTZ Modernisation Programme for the Water Sector in Syria is to improve water supply and sanitation management and lay the foundation for integrated water resources management, with the objective of protecting the country's water resources and improving the living conditions of the Syrian people.

GTZ PROFILE

Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH is an international enterprise for sustainable development with worldwide operations. Owned by the Federal Republic of Germany, it supports the German government in achieving its development policy objectives. It provides viable, long-term solutions for political, economic, ecological and social development in a globalised world.

Working in both developing countries and transition economies, GTZ promotes complex reform and change processes. Its corporate objective is to improve people's living conditions on a sustainable basis.

Besides Syria, GTZ is active in more than 130 countries in Africa, Asia, Latin America, the Mediterranean and Middle Eastern regions, as well as in Europe, the Caucasus and Central Asia. It maintains offices in 87 countries and employs around 13,000 staff members, almost 10,000 of whom are national personnel. Fifty international experts and national staff work on different projects in Syria.

OUR CLIENTS

GTZ's major client is the German Federal Ministry for Economic Cooperation and Development (BMZ). GTZ also operates on behalf of other German ministries, the governments of other countries and international clients, such as the European Commission, the United Nations and the World Bank, as well as on behalf of private enterprises. GTZ works on a public-benefit basis. All surpluses generated are channelled back into its own international cooperation projects for sustainable development.

OUR CONCEPT

GTZ takes on tasks in the field of international cooperation and implements them in line with its concept of sustainable development. We help realise this concept with our holistic, value-based and process-oriented approach that secures the participation of all stakeholders. We take economic, social and environmental issues into account in our work and support our partners when it comes to negotiating solutions in the broader societal context. We operate at a local, regional, national and international level in order to achieve maximum impact.

With our wide spectrum of services, the most important of which is capacity development, we translate sustainable development into practice. We promote capacity development at an individual, organisational and societal level so that our partners are able to articulate, negotiate and implement their own concepts of sustainable development.

OUR MULTILEVEL APPROACH

In its work in Syria, as elsewhere, GTZ provides support on many levels, working with governmental institutions, local state-run establishments, the private sector and civil society.

GERMAN DEVELOPMENT COOPERATION IN THE SYRIAN WATER SECTOR

MACRO LEVEL

GOVERNMENTAL INSTITUTIONS

- Ministry of Housing and Construction
- State Planning Commission
- Ministry of Local Administration
- Ministry of Irrigation

MESO LEVEL

STATE-RUN INSTITUTIONS

- Water Establishments in Damascus and Aleppo
- Higher Institute for Water Management
- Vocational Training Centres

MICRO LEVEL

PRIVATE SECTOR AND CIVIL SOCIETY

- Consultants and contractors
- Order of Syrian Engineers and Architects
- Public and private universities

MODERNISATION WITH A VIEW TO SUSTAINABILITY

In 2003 Syria embarked on a wide-ranging economic reform programme designed to transform the centrally planned system into a social market economy. Under the previous economic system, the country's infrastructure and utilities were entirely in public hands and many institutions relied on outdated and inefficient work methods.

A generous system of social subsidies meant that many service providers, including water utilities, did not cover the costs of their operations. The resources available for staff training and the development of good management practices were also limited.

As the country makes the transition to a social market economy, the Syrian government has identified the water sector as one of the priority areas for modernisation, with the aim of making it both economically and ecologically sustainable. Under the Tenth Five-Year plan (2006-2010) the drinking water and sanitation utilities remain public institutions, but considerable work is being done to put them on a commercial footing, increase their efficiency and ensure cost recovery.

GTZ provides support to the Syrian government and its efforts to modernise the water sector. The German cooperation's Modernisation Programme for the Water Sector in Syria was formally launched in 2006 when the first phase (2006-2008) was initiated. The current second phase of the project covers the period 2009-2011.

The Syrian government has identified the water sector as one of the priority areas for modernisation.

Activities as part of GTZ's support to the Syrian water sector have included the introduction of modern working methods and effective workflows, as well as improved planning instruments to allow for the development of practical, long-term strategies. GTZ has also encouraged the introduction of integrated water resources management and supported efforts to advance administrative modernisation, decentralisation and good governance in the water sector.

The measures planned as part of the modernisation process foster gender equality, economic development and measures to combat poverty. At the same time, new policies aim to ensure that a high value is placed on protecting the country's environmental resources.





THE VALUE OF COOPERATION

GTZ believes that progress in the water sector requires strong and intensive cooperation among all stakeholders. To this end it works with a number of local and international partners in Syria to ensure its work in the water sector is relevant and effective. GTZ consults with the different stakeholders in the water sector, in the belief that participatory processes will lead to better outcomes and that regular communication among parties can improve results.

The primary partners for cooperation in the water sector are Syrian institutions: the Ministry of Housing and Construction, the water establishments in Damascus and Aleppo, and the State Planning Commission. GTZ works with these bodies to identify their needs and jointly develop project ideas to address the sector's shortfalls. The joint input of international and national long-term experts improves the quality of GTZ's services.

Secondly, GTZ cooperates with other international organisations and development agencies working in the Syrian water sector, including the Delegation of the European Union, the European Investment Bank, the United Nations Development Programme, the Food and Agriculture Organization, the Red Crescent, the Japanese International Cooperation Agency, the Agence Française de Développement and the Dutch government. Workshops and regular contact allows for the exchange of ideas and information, and ensures that projects by different actors do not overlap or interfere with each other. GTZ also relies on the expertise of national and international consultants to implement its projects.

The third level of cooperation is between GTZ and other German development agencies. The German Development Service, DED, sends development workers to assist Syrian partner institutions in the water sector. Inwent, the German training agency, runs courses for Syrian managers and decision makers in the water sector, both on a full-time basis in Germany and through on-the-job training in Syria. KfW, the German development bank, provides substantial financing to improve infrastructure in the Syrian water sector. Currently KfW has committed funds of over €140m which is matched by Syrian funds. BGR, the German Federal Institute for Geosciences and Natural Resources, provides scientific and technical support. A range of universities in Germany and Syria, both public and private, share academics and expertise, with the support of DAAD, the German academic exchange service. Finally, a long history of informal cooperation and friendship between the Syrian and German people also aids GTZ in its work with the Syrian water sector.

Progress in the water sector requires strong and intensive cooperation among all stakeholders.





EFFICIENCY PROMOTES CUSTOMER SATISFACTION

The new water billing centre in Al-Tal, a town 20 minutes outside of Damascus, has radically overhauled its work methods. Customers used to stand in long queues while billing clerks searched for their bills in piles of paperwork. Today, water bills can be paid in a matter of minutes: staff simply enter the customer's name into the computer and print the latest bill in order to process the payment.

Al-Tal's billing centre was digitalised with the support of GTZ as part of a project to introduce a more efficient billing system for water units across the country.

Previously, losses – calculated as the difference in the volume of water being supplied and that being paid for – were as high as 41 percent, owing to a combination of faulty meters, illegal use, bad readings and administrative mistakes. In Al-Tal this figure has now been reduced to 19 percent.

In the long run, the new system will be fully computerised: meters will be read using handheld devices which will register each customer's water use and transfer the data into a central computer system. Bills are already automatically calculated using specialised software which differentiates between the various tariffs. In addition bills are now issued every two months, instead of once a year.

“It is a big improvement compared to the previous system,” Hassan Surameejou, the director of the Al-Tal water unit, said. “Previously, everything was done on paper. Mistakes were easily made. The new system has made the process smoother for the customer and easier for the water unit staff.”

Rana Diab, a clerk at the Al-Tal billing centre who received special training on the new system, says her work is a lot more efficient now. “The new system is great: it is organised, fast and really user-friendly,” she said. “All my colleagues are happy because we can easily search for data to answer any query.”

As the system evolves, customers will also be able to pay their bills through their bank or even online.

“The new system is great:
it is organised, fast and
really user-friendly.”

Rana Diab,
clerk at the
Al-Tal billing centre



MAPPING THE WATER NETWORK

It is not easy to manage a water supply system and track down losses without a clear picture of the network. As part of a pilot scheme in the Sheikh Massoud and Achrafiye neighbourhoods of Aleppo, the municipal water establishment, with support from GTZ and funding from KfW, used new technology to produce a baseline geographic information system (GIS) map.

As there are no street addresses in Syria, customers were assigned a GIS address, allowing for the creation of a database of users and their location. Technicians would use this GIS address when registering meter readings. “It was the simplest way to reduce losses which mainly stemmed from people who weren’t registered at the water utility or had faulty meters,” Holger Laenge, GTZ project manager in Aleppo, said.

The software has now been further developed to create a maintenance management system. Customers can report leaks or water supply problems by phoning a call centre, where operators locate their house on the GIS map. This information is passed on to the technicians who can easily find the house. Afterwards, they report back to the centre with details of the repairs carried out. This method has allowed the water establishment to identify problem areas where frequent leakages occur and the network needs upgrading.

COST RECOVERY AND SOCIAL JUSTICE

One of the major challenges facing the Syrian water sector at the start of cooperation with GTZ was that it was not covering its costs. As part of the socialist economic policy which sought to provide cheap drinking water to all, citizens received water at highly subsidised rates.

The revenues therefore did not cover operational costs or generate funds for investment in the network. The system also gave a greater subsidy to large consumers and only limited support to small-scale users. It led to wasteful use of water and did not help the poorest people who, living in areas of intermittent water supply, still had to buy water from tanker trucks at a much higher price.

Over the past few years, the idea of charging for the collection and delivery of water has started to take hold as the water sector aims for sustainability. Cost recovery was identified as a government priority in the Tenth Five-Year Plan and the results are visible: while only 55 percent of costs were recovered in 2006, this figure had increased to 75 percent by 2009. The aim is to reach 90 percent by 2010.

To achieve this goal the Syrian government increased the average price of water in November 2007, adopting a progressive water tariff system which charges a low rate for basic consumption and higher rates to heavy consumers. The overall price increase is therefore borne by businesses and factories, who are able to pay, and lowered for small-scale water users in order to make water affordable for domestic use.

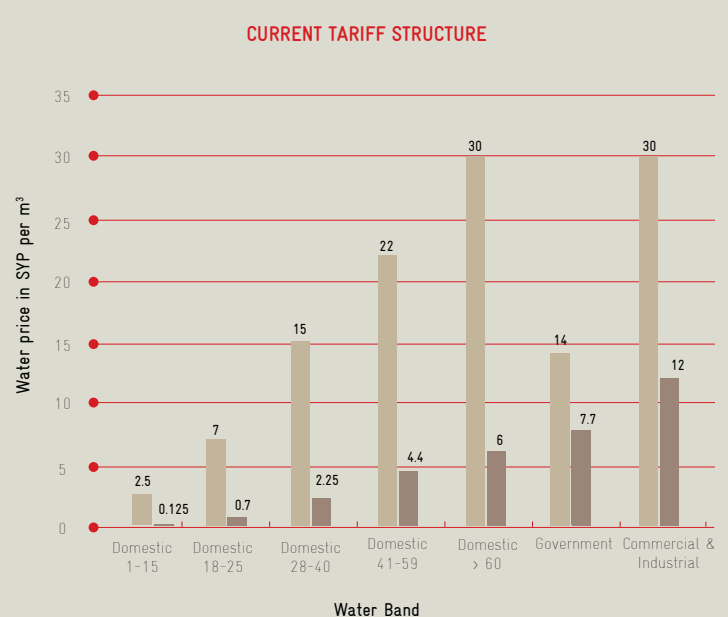
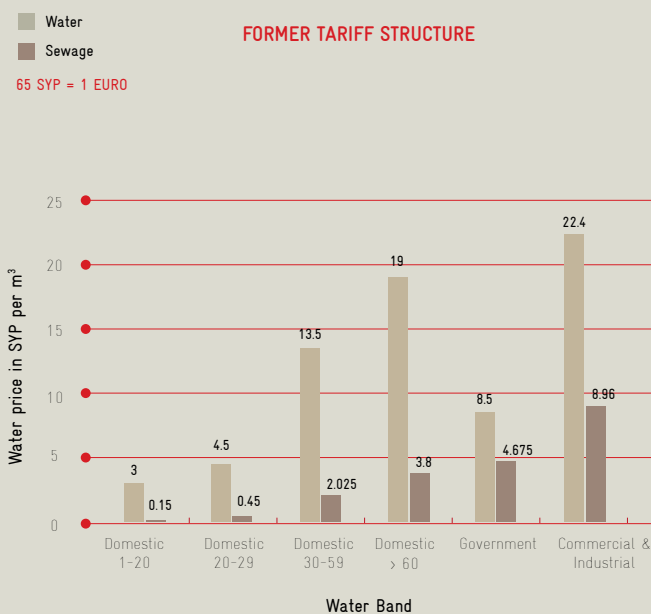
Thus costs are carried by those best placed to pay them, while the system also encourages careful consumption of water. Furthermore, the new tariff has allowed the Syrian government to uphold the concept of social justice, which is central to the public debate surrounding economic reforms.

“Although all costs are still not covered, this is a step towards making the system sustainable,” Jochen Rudolph, head of GTZ’s water programme in Syria, said.

As well as increasing the average price of water, efforts are being made to reduce operational costs through greater administrative and institutional efficiency. Rather than working exclusively with engineers, water institutions now employ economists and accountants, who ensure the financial sustainability of operations.

“Before we didn’t know how much each water unit spent or received,” Youssef al-Yathaki of the Damascus Water Supply and Sewerage Authority said. “But with GTZ we have trained people in cost accounting, which has helped reduce our expenditure.”

The policy shift is an important first step, but future challenges remain. Services must be continually improved so that people remain willing to pay for water and the poor need to be better targeted by government support.





IMPROVING PLANNING PROCESSES:

The Performance Indicator System

In order to improve the management culture in the Syrian water sector, GTZ has supported the introduction of performance indicators, a set of tools that allow institutions to monitor their efficiency in managing their services in various areas.

At the moment, one of the sector's main challenges is data and information management: data is often not consistently collected and figures are inaccurate and contradictory. In a bid to remedy this situation, the Ministry of Housing and Construction is working to improve data management and institutionalise the performance indicator system with GTZ support. This will allow water establishments to improve planning and services.

Initially some staff in the water sector were concerned that performance indicators would be used to identify individuals' weak performance instead of fostering better management and friendly competition among stakeholders in the sector.

The Performance Indicator (PI) Unit at the ministry is trying to persuade people otherwise. Muhammad al-Hajj, who leads the unit, said the indicators can provide information that will allow for better planning. "It is first of all a management tool for each establishment to enhance its performance," he said. "Secondly, it allows the ministry to enhance its regulatory role."

In 2009 GTZ piloted drinking water performance indicators in the water establishments of Damascus, Aleppo and Homs. The indicators monitored total expenditure, revenue from bills, number of customers, volume of water sold, number of staff, number of network repairs and the number of water quality tests. Gathering the data was not always straightforward however. "The issue is not the calculations but getting accurate data on a regular basis," Tamer Kuzma of the Water Establishment in Homs said. "Things improved once we trained staff at our financial department and at the water units in data collection."

As part of GTZ's multilevel approach, the lessons learnt on the ground at the water establishments were used to develop the system of performance indicators at a national level through the Ministry of Housing and Construction.

The wastewater sector is next in line for the introduction of performance indicators. During a workshop with representatives from the 14 national Water Establishments at the end of 2009 initial indicators were introduced and debated. As wastewater treatment is an area under development in Syria, it has proven to be more difficult to determine performance indicators in this domain.

However, initial suggestions include indicators of costs and revenues as well as the number of days of staff training and length of the sewerage network at the start and end of the year.

PPP projects contribute to the modernisation of the water sector by introducing new technologies, knowledge transfer and capital.



PUBLIC-PRIVATE PARTNERSHIP:

Creating Win-Win Situations

Public-Private Partnerships (PPP) have become an important instrument within the Syrian-German development cooperation. Jointly planned, financed and implemented by the Syrian government, a private company and GTZ, PPP projects contribute to the modernisation of the water sector by introducing new technologies, knowledge transfer and capital.

“Private companies can add value to the modernisation of the Syrian water sector through their expertise,” Jochen Rudolph, head of the GTZ water programme in Syria, said. “Until now this was not possible because stronger governance was needed. The public sector cannot just sell its problems to the private sector. A lot of preparatory work is needed, so that PPPs can deliver the expected results and be sustainable.”

Following work on the public side, collaboration with the private sector is now underway, with tenders launched for Build-Operate-Transfer contracts. At the end of 2009 one of the first public-private collaborations was completed in the village of Jdeidet Yabous where the German company IPP Consult has built a constructed wetland to treat wastewater.

Constructed wetlands are a modern, ecological way of treating water by using natural processes of soil and vegetation. They are self-regulating systems which use little energy and are also cheap to maintain. Material for the two 1,000-square-metre wetlands was provided by the Syrian Ministry of Housing and Construction, while design, execution and operation costs were shared by GTZ and IPP Consult, providing a model for private investment. Without the input of the private sector, such technology would not have been available in the country. “The project is a successful start to solving the lack of wastewater treatment plants in Syria,” Yousef Zahr, an engineer at IPP Consult, said.

The project will benefit both the local community and the Syrian government. “Citizens and local communities are happy with the project as it protects their drinking water supplies and provides an additional source of irrigation water,” Maria Schäfer, head of the GTZ Sector for the Mediterranean, Europe and Central Asia, said.

Wastewater treatment is currently the main focus for Public-Private Partnerships given the low levels of treatment in the country and the lack of expertise in wastewater management technology in Syria.

The Syrian government has recognised the advantages of private-sector participation. “We encourage future Public-Private Partnerships for the establishment of constructed wetlands because they are inexpensive to build and do not require very experienced staff to operate,” Deputy Minister of Housing Dr Kamal Sheikha said. As part of the Syrian-German cooperation programme, 23 additional treatment stations are due to be constructed across six governorates with KfW financing. Other projects include cooperation between IPP Consult and the Syrian authorities in Homs to draw up a wastewater master plan.

CAPACITY DEVELOPMENT

Ownership and Sustainability: the Key to Capacity Development

GTZ's work follows the principle that sustainable capacity development within Syrian institutions is only possible if modernisation and change processes are initiated by the Syrian partners.

The Damascus Water Supply and Sewerage Authority (DAWSSA) is one of the institutions where extensive reforms are being implemented to improve management, increase technical capabilities, rationalise the organisational structure and develop human resources.

In this framework, seven DAWSSA staff members participated in a one-year course in Germany, organised by the German training agency Inwent. The training drew on the German experience and explored ways of applying it in Syria. The Syrian staff also acquired work experience at German water companies during their stay.

“The mindset since the training has changed,” Youssef al-Yathaki, the director of training at DAWSSA, said. “Decisions used to be taken as reactions to events. Now we plan. We look at water in a holistic way rather than just trying to solve individual problems.”

In a bid to cut down on water losses and make the water establishment more efficient, GTZ and DAWSSA drafted a new organisational structure. Job descriptions were created so that each person's role was well defined. Staff were also trained on how to deal with co-workers and staff at other directorates.

In parallel, GTZ has been training upper and middle management at the water units to become better managers, as well as equipping engineers and IT workers with the skills needed to implement change in the network system and at the billing centres.

Following a training session on financial and planning skills at the DAWSSA headquarters and local water units, staff recognised a need for better administrative procedures and the introduction of office automation. This led to improved billing, faster collection of old debts and increased revenue to sustain operations.

“The training has given people ownership,” Mr. al-Yathaki said. “When the plan is yours and is not imposed on you, there is more incentive to follow it.”

MAKING TRAINING RELEVANT

Youssef al-Yathaki,
Director of Training and
Qualifications, Damascus
Water Supply and
Sewage Authority



“Before we started working with GTZ there was no focus on human resources – neither qualifications nor training. Many of our staff had no specialised training. For example, network engineers would open and shut a valve but not understand why they were doing it.

New systems are now being put into place. We continue to work with our current staff, but there is a committee which surveys all the water units and assesses staff qualifications. We can then relocate people where they are needed.

I have also drawn up a training plan based on an analysis of training needs. Instead of being predesigned as in the past, courses are now tailor-made for each water unit.

Staff are more interested in the training because it is relevant to them. Workers are becoming more specialised and skilled. They are starting to care about their job.”



The Syrian government is adopting the principle of IWRM with a view to promoting ecological sustainability, social justice and greater economic efficiency.

MANAGING WATER RESOURCES FOR THE FUTURE

Syria's water resources are under growing pressure from population growth, urbanisation, the impacts of climate change and an expanding agricultural sector. Per capita water availability is constantly decreasing and rainfall is becoming more irregular and scarce.

In this context, the Syrian government is starting to embrace the principle of integrated water resources management (IWRM) with a view to promoting ecological sustainability, social justice and greater economic efficiency. Integrated water resources management is an internationally recognised implementation tool for managing and developing water resources in a way that balances social and economic needs, and that ensures the protection of ecosystems for future generations.

As part of the German government's support of IWRM, GTZ is since 2006 encouraging the introduction of this concept into the Syrian water sector. To date, work has focused mainly on the institutional framework and the drafting of executive procedures for the implementation of IWRM principles. By adopting IWRM principles, the Syrian government aims to promote a better administration of the sector, increased protection of water resources with regards to water demand and water pollution, an increase in the availability of safe drinking water, and an improvement of the environmental situation. Another important aspect is the clarification of the roles and responsibilities of different stakeholders.



To this end, GTZ has – together with the other German development agencies – contributed to defining the term IWRM in the context of the Syrian water sector and outlined a number of guiding principles that will serve as a framework for the development of future projects in this domain.

In the current phase a pilot project will be implemented in one of the 14 governorates, during which all relevant stakeholders in the field of water will discuss the development of a local-level IWRM strategy and identify how this management tool can contribute to sustainable development.

On a governmental level, GTZ is assisting the Syrian State Planning Commission in the drafting of a Baseline Water Sector Report which aims to provide a comprehensive, quantitative and concise overview of water sector services and infrastructure. The report serves as a baseline for regular evaluation of water services and infrastructure, highlighting progress made and problem areas. It also introduces IWRM principles into its recommendations for improved management of the sector.

In addition, BGR, the German Federal Institute for Geosciences and Natural Resources, provides support and advice to the Ministry of Irrigation in the field of water resources management. The work focuses on water monitoring and supporting ministry staff in their efforts to improve planning and budgeting processes in the Aleppo basin.



Jochen Rudolph,
Programme Manager,
GTZ Modernisation Programme for the
Syrian Water Sector

“It will be increasingly important to improve and broaden the mix of skills that people in the public sector have.”

LOOKING AHEAD

Water is the focal area of German-Syrian development cooperation. Since guiding principles were jointly agreed upon in 2003, GTZ and the Syrian government have together brought about many positive changes in the water sector. The two parties work on the principle that all developments must be initiated within Syrian institutions and that GTZ provides technical support where needed.

The changes are evident. Today those working in the Syrian water sector generally accept that sustainability is a key issue, and that this requires both technical innovation and managerial improvement.

We have strengthened institutions in the water sector and increased managerial capacities through ongoing training. The water companies in Aleppo and Damascus have reduced water losses caused by leaks and administrative problems. The Syrian government has increased cost recovery in the water sector by raising the average price of water while keeping it low for small-scale consumers. The government also does its utmost to give the poorest groups of society access to clean, affordable drinking water. In addition, we have worked with our Syrian partners to make sure that environmental protection and conservation of the country's water resources are prioritised.

Many challenges lie ahead and GTZ and the Syrian government will continue their cooperation in the water sector. Our priorities for the future are fourfold. Firstly, decentralisation: decisions are best taken by people on the ground who have local expertise and are close to the customer. GTZ and the Ministry of Housing and Construction have agreed that the ministry's role needs to shift from implementation to regulation. At the same time, staff at the local water units needs to be trained so that the units can take on greater responsibility.

Secondly, we will work together to strengthen the ability to monitor performance and promote a culture of working on the basis of empirical data. Thirdly, we will continue to work on cross-sectoral cooperation and participation in regional initiatives such as the Arab Countries Water Utilities Association.

Finally, we aim to strengthen the role of the private sector in the area of water. From management and service contracts to Build-Operate-Transfer projects, there is much room for private businesses to play a role.

To achieve these ambitious goals we need to continue focusing on the main challenge: capacity development in the Syrian water sector that aims at strengthening institutions and procedures. It will be increasingly important to improve and broaden the mix of skills that people in the public sector have. This does not just mean academic credentials, but continuous, on-the-job learning.

There is much to do, but with Syrian-German cooperation we believe further important improvements to the water sector can be achieved.

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Photos: Adel Samara, Carole al-Farah
Printing: Salhani

April 2010

