



Extended Report

# WATER GOVERNANCE IN THE MENA REGION: THE CURRENT SITUATION

First Partner Forum, Sana'a, Yemen  
16-20 July, 2006

**inWent**  
Internationale Weiterbildung  
und Entwicklung gGmbH

  
Ministry of Water and Environment  
Yemen

المجلس العربي للمياه  
  
Arab Water Council

supported by **gtz** | Yemeni-German  
Technical Cooperation  
Water Sector Program

## Summary

In the MENA Region, improvement of the water sector performance has become highly imperative. The region is increasingly facing water stress due to limited availability and high population growth. Inappropriate technologies and inefficient management techniques often cannot supply urban and rural water users sufficiently. Access to water is anticipated to diminish unless significant processes of reform are made. Some countries in the MENA region lack basic water institutions; others display fragmented institutional structures, or overlapping decision-making structures, which often exclude users' demands and civil society. Moreover, water is a matter of regional cooperation - many MENA countries face similar challenges, and many share basins and rivers.

Thus, reform of the water sector requires not only the adoption of integrated approaches and of modern water policy guidelines, but the promotion of regional and international cooperation too. Participation of all stakeholders concerned is another core element for keeping the region's waters flowing. This includes capacity building and empowerment of the public and private sectors as well as community organizations to realize and fulfil their roles.

InWEnt has formulated a four-year Program on Capacity Building in the Water Sector for the MENA Region, focusing in 8 countries: Egypt, Morocco, Algeria, Tunisia, Jordan, Palestine, Syria and Yemen. About 40 activities are planned, many of them being already under way.

The objective is to support reform processes which make a significant contribution to a sustainable use of water resources and to combat poverty. In order to achieve this objective, InWEnt looks to strengthen technical and methodical competence and build platforms for regional cooperation. The target is to connect experts and decision-makers working on different levels and actors of civil society through the establishment of lively networks.

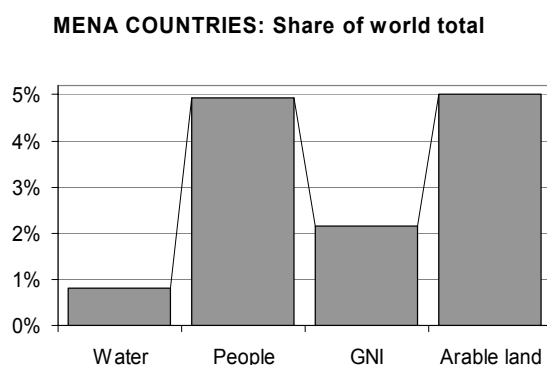
The outputs of the program will include the improvement of human and organizational performance of the water sectors concerned, the awareness of policy-makers of the priority issues involved, and a functional regional network within the region.

This report summarises the findings of the first one of the three International Partner Forums that are among the major undertakings of the program. The Forum was held in Sana'a, Yemen, on 16-20 July, 2006.

## The MENA Region

Middle East and North Africa (MENA) is defined variably by different organisations and sources. A very frequently used definition includes the states of Morocco, Algeria, Tunisia, Libya and Egypt from North Africa, and the following 14 Middle East states Lebanon, Syria, Palestine, Jordan, Saudi-Arabia, Djibouti, Yemen, Oman, United Arab Emirates, Bahrain, Qatar, Kuwait, Iraq and Iran. The total surface area of these 20 countries comprises of 11.1 million km<sup>3</sup>, making it 12 percent larger than Canada, 16 percent larger than China, or 22 times the size of Spain. These MENA countries cover 8.3 percent of the world's total surface area.

The population of the MENA countries was 306 millions in 2002, making the region relatively scarcely populated with the mere 28 inhabitants per km<sup>2</sup>. By 2005, the population was 348.3 millions. The most important reason to the low population density is the scarcity of water resources. In fact there are very heavy density areas due to concentration of population around water resources. The percentage of arable land of the total land area is only 4.9 percent. In China, this share is 15.4 percent and in Spain 26.1 percent. The MENA population accounts for 5 percent of the world's total, and so does the arable land area (Figure 1).



*Figure 1. The percentage of the MENA Region's water resources, population, GDP and arable land of the world total. Source: World Bank (2004).*

Altogether eight out of eleven oil-exporting OPEC countries are located in the MENA Region. They are Algeria, Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and United Arab Emirates. The MENA Region's share of total crude oil exports in the world was 30.3 percent in 2004 (IEA 2005).

## Water Governance: an Increasingly Critical Issue in the MENA Region

In the MENA Region, an area that often suffers from seasonal and annual aridity, some of the most important challenges that are to be faced during the 21st century are the rapid population growth, increasing urbanisation, and rising demand for food.

The demographic changes have put immense stresses on the water institutions of the region as water demands have increased exponentially. Consequently, many water institutions have effectively operated in a “crisis mode” for much of the second half of the 20th century. Their main objective has been to provide as much water to as many people as possible in the shortest possible time. This has inevitably meant that there has been a tendency to consider short-term solutions rather than pursuing a policy of nation-wide planning and management of the water resources which can ensure long-term efficient management. Under these conditions, the general performance of the water institutions has been consistently sub-optimal.

This means that in addition to water scarcity, the countries in the MENA Region are considered to face scarcity of organizational capacity for activities which do not focus solely on water allocation and infrastructure development. Governance in the water sector has also been identified as a main challenge. Institutional and legal frameworks are not enough to improve water resources management: institutional environments have to make an effort to be inclusive of overall management issues; of cooperation, information, communication and awareness strategies between different levels of formal and informal institutions; and of promotion of stakeholder involvement, among many other issues.

Regarding the agricultural sector, for most MENA countries, this sector is now contributing a low and declining percentage of the national GDP. Unfortunately, most water institutions have only recognised this fact in recent years and, as yet, few have done anything about it.

A worrying trend is that sometimes service and industrial sectors, which may account for 75 percent of the total GDP of these countries, often face water shortages, as the urban centres receive unreliable and interrupted water supplies. The impacts of these unreliable water supplies on the national economy and health are very significant, and yet very limited investigations have been undertaken by the water institutions to understand and appreciate the implications on the national economy and quality of life of the population.

The water sector incorporates activities from the small to the large scale, carried out by a range of different organisations and individuals. However, the growth of nation states in the MENA Region during the 20th cen-

ture has meant that the water sector is controlled and managed mainly by government organisations. In spite of this development, the range and performance of the public institutions within the water sector varies widely from one MENA country to another. In addition, coordination and interactions between different water-related institutions in anyone country leave much to be desired. Rivalries between different water institutions are common, especially as their responsibilities are not always clearly established. The net result is often inefficient delivery of water services.

Because of the above and other related factors, reform of the water sector institutions is urgently needed. Many MENA countries have already initiated reform processes, which require clearly enunciated and implementable guidelines, improved institutional performance, good governance practices, and ensuring national, regional and international cooperation. Participation of all concerned stakeholders is another essential requirement for efficient water management. This includes capacity building at all levels, and empowerment of the public and private sectors as well as community organizations so that they all contribute to the overall improvement of the water sector.

It is a fact that water availability is extremely scarce in the MENA Region. Thus, these resources must be managed efficiently on a long-term basis. Since it is the governmental institutions the ones responsible for water management, they have to improve very significantly their governance and management practices. A major constraint for this has been the availability of trained and experienced personnel at all levels in the water sector. Accordingly, education, capacity building, training and organisational developments constitute an essential cornerstone to pursue good management and governance-related practices for the water sector in the MENA Region.

International organisations, such as the World Bank and the OECD, have developed programmes to support the MENA countries in the design and implementation of governance-related programmes, including those on water resources. The OECD (2006) has established a MENA-OECD investment programme which seeks to mobilise investments from the private sector as a driving force for growth and stability on several areas, including the improvement of corporate governance. OECD recognises that the main challenges of the MENA Region consist of strengthening the process of changing, maintaining, supporting and tracking the progress of policy implementation, and providing capacity-building assistance. The project priorities within this MENA-OECD investment programme are in the fields of water management, environment, energy, transportation and telecommunications.

The present analysis focuses on eight specific MENA Region countries, namely Morocco, Algeria, Tunisia, Egypt, Syria, Palestine, Jordan and Yemen. These countries are thereafter called the Target Countries, being the focal nations of this Partner Forum. Their most important development indicators are given in Table 1.

Table 1. Selected indicators for the eight target countries. Source: World Bank (2004).

	Population 2002 (mil- lions)	% urban 2002	GNI per capita 2002 (PPP* US\$)	GDP per capita growth rate 2001-2002 (% per year)	Renewable freshwater per capita 2000 (1000 m <sup>3</sup> )	Surface area (1000 km <sup>2</sup> )
Morocco	30	57	3730	1.6	0.98	447
Algeria	31	58	5530	2.5	0.46	2382
Tunisia	10	67	6440	0.6	0.47	164
Egypt	66	43	3810	1.1	1.03	1001
Syria	17	52	3470	0.3	2.63	185
Palestine	3	..	..	..	..	..
Jordan	5	79	4180	2.0	0.14	89
Yemen	19	25	800	0.5	0.22	528
Total	181	..	..	..	..	4800
MENA Total	306	58	5670	1.0	1.38	11135

\* Purchase Power Parity adjusted US\$

## The InWEnt Capacity Building Programme for the Water Sector in the MENA Region

InWEnt-Capacity Building International, acting on behalf of the German Federal Ministry for Economic Cooperation and Development, has formulated a four-year Programme on Capacity Building in the Water Sector for the MENA Region, focusing on eight target countries: Egypt, Morocco, Algeria, Tunisia, Jordan, Palestine, Syria and Yemen. The regional partner for this programme has been the Arab Water Council.

The main objectives of the overall programme include strengthening regional cooperation; facilitate the development of management strategies for the water sector in selected countries within the MENA Region in order to formulate and implement appropriate water sector reforms; establish a functional partner network; and promote awareness of policy-makers and the general public on water-related issues.

The outputs of the programme include, but are not necessarily limited to, improving the institutional performance, increasing the awareness of policy-makers of the priority issues involved, and support the development of a functional network on water issues within the Region.

The InWEnt approach is focused on the implementation of a series of activities such as dissemination of regionally-relevant and up-to-date professional knowledge and methodical competence; capacity building needs assessment and how these needs can be met in a cost-effective and timely manner; and periodic monitoring and evaluation of progress made. It also includes public relations, public awareness, promotion of best practices in communities, and, overall, regional cooperation through internal funds, third-party funds, and partner projects.

The present four-year programme consists of a number of training events and seminars as well as three interrelated International Partner Fora on:

- I Water Governance in the MENA Region: The Current Situation. Sana'a, Yemen, 16-20 July 2006.*
- II Water Governance in the MENA Region: Critical Issues and the Way Forward. Cairo, 23-27 June 2007; and*
- III Water Future to 2025 for the MENA Region. Zaragoza, Spain, in 2008, in conjunction with Expo 2008, the focus of which will be on water.*

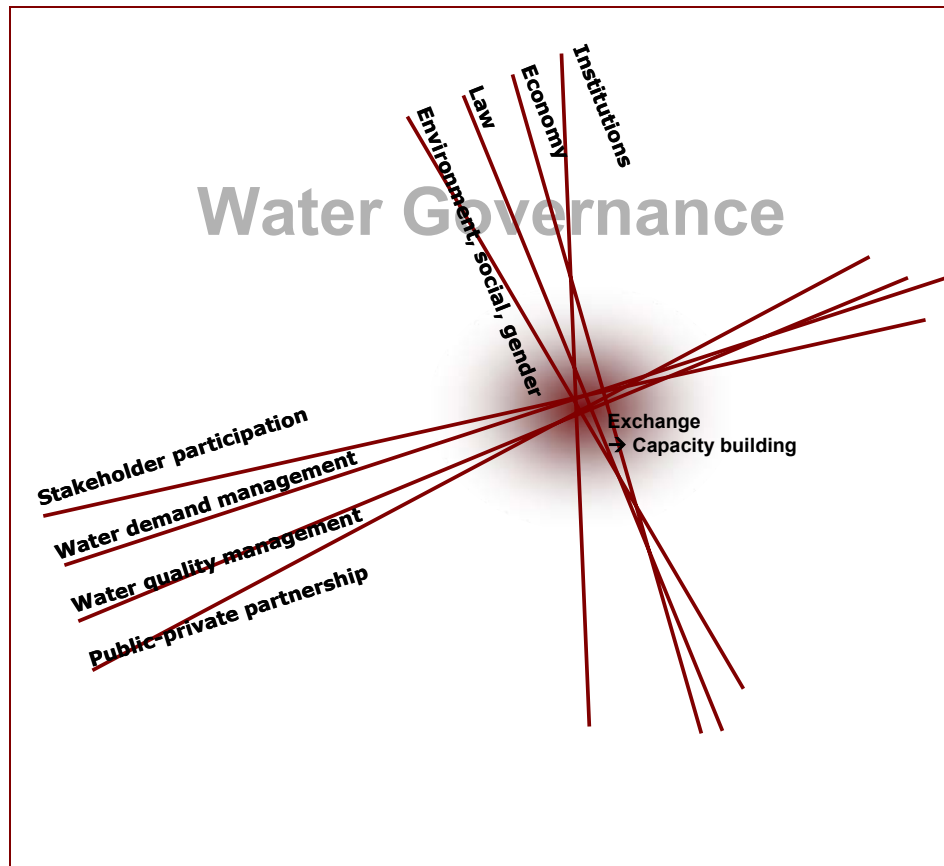
## **First International Conference in Sana'a, Yemen**

The first international Conference on Water Governance in the MENA Region: The Current Situation, took place at Sana'a, Republic of Yemen, 16 - 20 July 2006 and was hosted by the Yemen Ministry of Water and Environment. It was supported by the Yemeni-German Technical Cooperation Water Sector Programme.

The objectives of this Conference were the following:

- *carry out critical reviews of the water management situation in the MENA Region and analyses of trends and future outlooks;*
- *review experiences and identify key issues of water governance;*
- *assess and prioritize appropriate key elements for water governance;*
- *identify needs and future directions of capacity building strategies for improved water governance; and*
- *strengthen regional cooperation and networking processes.*

Some 65 leading experts from the water sector, mainly from the Region, attended the exercise. Participants also included a few leading experts from outside the region who analysed latest development on different aspects of water governance from a global framework and perspective and presented relevant experiences for consideration for the MENA Region.



*Figure 2. Cross-cutting scheme of issues analysed at the Sana'a Forum.*

Priority questions on the topics of institutions and legal frameworks, economics, and cross-cutting issues such as environmental, social and gender aspects, and their impacts and interrelation with water demand management, water quality management, public-private partnership and stakeholder participation, were proposed for discussion to the 16 working groups of the Conference. Having these topics as background, the groups included in their discussions trends, experiences and key-elements of water governance; similarities and differences of these issues within their countries and within the Region; the way on which each country is targeting their specific challenges in water management, alternative solutions and prerequisites to achieve those solutions, and the respective needs for capacity building; and the opportunities for exchange of knowledge, ex-

periences and information within the sectors, the countries and the region.

A common cross-cutting theme throughout the Conference was “prerequisites and respective needs for capacity building”. The participants also paid special attention to the possibilities to enhance regional cooperation.

## Water Governance: The Current Situation

The concept of governance appeared to be somewhat new for an appreciable number of the participants. Accordingly, the process used during the event to bring every participant to a common level of knowledge and understanding proved to be essential and productive.

An array of governance issues was identified to be common throughout the MENA Region. The most important issues identified were:

- *strong fragmentation of the sector;*
- *problems with institutional set-up, in particular unclear roles of the different actors as well as coordination problems;*
- *notable shortcomings in enforcement of laws and policies;*
- *shortage of funding and release of funds in a timely manner;*
- *need for alternative financing mechanisms;*
- *need for increasing use of economic instruments and involvement of the private sector;*
- *crisis management rather than long-term management;*
- *need to shift the focus from physically increasing water supply to water demand management;*
- *scarcity and non-sustainable use of water, including growing water quality problems;*
- *contrasts between traditional and modern water management practices which has led to abandonment of traditional methods;*
- *needs for further decentralization;*
- *need to increase reuse and water conservation;*
- *technological shortcomings;*
- *insufficient data and information, particularly in terms of reliability, accessibility and sharing;*
- *public awareness; and*
- *capacity building requirements at all levels.*

While the levels of relevance and importance of these identified factors vary throughout the region, they appear to be applicable to all the MENA countries. Groundwater-related issues were noted to be more challenging in terms of control and regulation, compared those related to surface water. A particular concern was shared aquifers, which for Palestine was considered critical. Also, efficient and equitable transboundary river basin management was considered to be important.

As the populations and economies have grown in the MENA Region, countries are slowly changing the focus of their water policies. From securing supply and expanding services mainly, countries are implementing broader water management practices which include water demand management practices, use of economic instruments for water allocation, participation of the private sector for the provision of services, etc. Even then, the water sector in the MENA Region is subjected to an exceptionally dynamic and rapidly changing external environment. The following interconnected trends pose major challenges to the water sector in the coming years:

- *rapid population growth, especially in urban areas;*
- *rural water stress and poverty;*
- *economy under structural pressures;*
- *regional integration still low;*
- *good quality education under massive pressure from an increasing population;*
- *growing problem of unemployment and underemployment;*
- *food security increasingly based on self-reliance rather than self-sufficiency;*
- *climate change may decrease reliability of water availability;*
- *changing political landscapes;*
- *strengthening the process of change, maintaining, supporting and tracking the progress of policy implementation;*
- *providing capacity building assistance.*

Unfortunately, the water sector has so far mostly ignored the consideration of the above factors and their potential roles in shaping future water strategies for the region.

It was also noted that the whole concept of development is evolving continually. The following schematic Table of key evolutionary changes in the concept of development was relevant in the process of identifying the major contemporary trends in the water sector.

Table 2. Shift in development thinking (modified after Maxwell 1996).

	<i>Modern sector 1980s</i>	<i>Modern sector 2000s</i>
<i>Underlying reality</i>	<i>Simple Uniform</i>	<i>Complex Diverse</i>
<i>Objectives</i>	<i>Growth Macro</i>	<i>Development Micro</i>
<i>Research approach</i>	<i>Measure Survey Reductionist Deduction Abstract models Aggregate</i>	<i>Listen Participate Holistic Induction Complex reality Disaggregate</i>
<i>Planning approach</i>	<i>Plan Model Top-down Centralize</i>	<i>Enable Interact Bottom-up Decentralize</i>
<i>Implementation</i>	<i>Blue-print Role culture Standardization</i>	<i>Process Task culture Flexibility, innovation</i>

These commonly used descriptors are generally valid for the formal sector. Now, a large proportion of the economic activities and labour force in the MENA Region are engaged in the informal, subsistence or traditional sectors, which operate under different concepts:

Table 3. Determinants of the two parallel economic systems in MENA countries.

<i>Subsistence (traditional) sector</i>	<i>Modern sector</i>
<i>Uses no or very little money</i>	<i>Driven by money</i>
<i>People supply themselves with basic commodities such as food, water, fuelwood, etc.</i>	<i>Nature is used as a resource of tradable goods that are primarily valued after their trade value</i>
<i>Institutions are primarily customary, religious, etc.</i>	<i>Institutions are primarily set up by government, etc.</i>
<i>People are living within the nature</i>	<i>People are using nature as a resource base and are living out of the nature</i>
<i>Example activities: family farms/fishery/forestry for village-level supply</i>	<i>Example activities: cash-crop farming, commercial fishery, fish farming, industry, hydropower generation, urban water supply plants</i>

This distinction is particularly important when dealing with the largest water user of the region, namely agriculture, wherein the smallholders form a specific group, but with limited contribution to the national economy, even though farming has an important social and economic function. If problems in the livelihoods of these smallholders may emerge, there may be a population exodus to the urban informal sector, which may further deteriorate the existing conditions. Thus, this dual economy is structurally an important concept which needs to be incorporated in the water sector policies.

The focus of development is shifting at present in many dimensions, such as:

*Table 4. Axes of transition of the water sectors of the MENA countries.*

<i>From</i>	<i>To</i>
<i>Rural</i>	<i>Urban</i>
<i>Centrally planned</i>	<i>Market-oriented</i>
<i>Low-value uses</i>	<i>High-value uses</i>
<i>Public sector</i>	<i>Private sector</i>
<i>Centralization</i>	<i>Decentralization</i>
<i>Supply provision</i>	<i>Demand management</i>
<i>Water quantity</i>	<i>Water quality</i>
<i>Sector specialization</i>	<i>Interdisciplinarity</i>
<i>Government</i>	<i>Civil society (participation)</i>
<i>Traditional</i>	<i>Modern</i>

The MENA water sector governance is under a many-dimensional pressure of paradigm and focal change. Under these conditions, capacity building has the potential to help policy-makers inside and outside the governments to understand how best to find a balance between public good and special interests; to assess long and short term impacts of water policies, programmes and activities; and then to get the best out of the strengths of players in water management processes.

## Capacity Building

In the Partner Forum, the participants from the region identified the needs and priorities of capacity building in the water sector. They concluded that there were important missing links at all different levels of decision-making: from end-users to technicians, engineers, managers and decision-makers. While this is to be expected to be the case in any coun-

try, it was noted that the shortcomings in terms of capacity building are hindering the water sector from improving and moving forward in general in all the countries of the MENA Region.

Within the topic of governance, since diversity and heterogeneity are a fact within the different sectors, disciplines and stakeholders, the optimal solution to reach a common starting point and achieve specific goals, would be to take into consideration that the understandings and dynamics of development differ between groups, but that these differences, well coordinated, can result into strengths instead of weaknesses. Identification of driving and pressure forces that affect water governance should also be pursued in order to understand the relation between the water sector and the political reform processes; the status of state building; the relation between the donors, and the donors and the countries; and the willingness to participate not only from the policy makers, but the interested national and international stakeholders.

The areas in which capacity building is needed include numerous technical, managerial and awareness-related issues. Main priorities included the identification of most pressuring issues inside and outside the water sector regarding capacity building and its intersection with water governance, both at the regional and country level; review of legal and institutional frameworks; centralization and decentralization aspects; economic actors, financing aspects and role of the public and private sectors in service provision; equity, commitment and sustainability issues; conflict-mediation procedures; formal and informal networks; transfer of knowledge; clear definition of the roles and responsibilities of stakeholders, etc.

The tools that were identified as to how to respond to these needs included, but were not limited to, sound professional training to personnel in public, private and local institutions; exchange of experiences between the different countries in order to learn from each other; team building; improvement of communication skills; information campaigns and report writing.

The needs for capacity building are thus so extensive in the MENA countries that there is a real danger that their identification may result in the preparation of “laundry lists”. While capacities need to be built in nearly all areas of the water sector, a “laundry list” type of approach is likely to be counterproductive. What is thus necessary is to prioritise the needs of capacity building in each specific country, and then carefully formulate and implement short-, medium-, and long-term programmes to meet the identified needs in a systematic and comprehensive manner.

Water professionals of the MENA Region agree broadly on capacity building needs in local, national but in particular in the regional dimension. Regional activities mushroom and the need for such programs is obvious. The sharing of experience and data, creating networks, etc., are issues that would bring the water sector forward and broaden the national focus to a regional one.

South-south co-operation could be enhanced by the development of regional financing instruments and institutions. The region includes several high-income countries and the finances for regional programs could come much more from the regional sources than the case is today. The MENA countries allocate exceptionally low share of national budgets to education and training.

There is a pungent need for the assessment and invention of regional activities and coordinating them in order to cut overlaps, increase efficiency and to allow more strategic operations. Donor harmonisation is necessary. Dialogues exist but the need to boost them is important.

Training programs respond to an array of capacity building needs. In many cases, the highly educated trainers are a bottleneck and therefore university links have been increasingly recognised. Long-term programs seem to be short in supply.

Many training activities are being linked to research, and the tendency seems to be to move from knowledge management to knowledge development. The MENA Region is still seen too much as a knowledge consumer but it should move towards being a producer of knowledge. At the same time, a caution is at place for keeping the applied research close enough to practical needs.

The organisations that develop their human capacity in both public and increasingly private sectors should recognise that capacity building is a part of their business. Ownership and commitment in human and financial terms calls for amplification.

Water sector is a sector in its own right, but at the same time water is an important aspect within many other sectors. Social sciences, economics and environmental sciences are among many fields that water experts must increasingly cope with throughout the MENA Region.

Distant learning, the use of internet and other modern communication means is in rapid development in the region. The possibilities are still not fully tapped but instead there exists an extensive growth potential.

## Conclusions

It should be recognised that whereas water resources are extremely scarce in the MENA Region, the water problems are dominantly related to governance and management shortcomings. Human resources deficiencies are a key part of the water scarcity problem. Therefore, education, ca-

capacity building, training and organisational development constitute a cornerstone for the development of the water sector in the MENA Region.

For the next Fora, the participants requested lectures with a focus on new policy concepts within the topics of water governance and capacity building and related case studies. Participants also committed, on behalf of their institutions, to provide support on capacity-building related activities.

Human resources deficiencies were identified as key parts of the water-related problems of the region. Therefore, education, capacity building, training and organisational development constitute a cornerstone for the optimal development of the water sector in the MENA Region. With its four-year programme, InWEnt plans to support national and regional institutions to develop their own strategies in terms of capacity building, including the necessary human, technical and financial assistance. In partnerships with the countries concerned, the next step will be how to make the best use of this development support.

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## Arab Water Council

*The Arab Water Council (AWC) was formally launched on 14 April 2004 in Cairo, Egypt following many years of planning, discussions, and consultations. The council is a civil society, not-for-profit, regional organisation dedicated to water issues in the Arab States. An interim General Secretariat has been established in Cairo.*

*The mission of the AWC is the following:*

- *promote better understanding and management of the water resources in the Arab States in a multi-disciplinary, non-political, professional and scientific manner; and*
- *disseminate knowledge, enhance sharing of experience and information for the rational and comprehensive water resources development of the region for the benefits of its inhabitants.*

*The Founding Assembly elected Dr Mahmoud Abu-Zeid as the President of the Council and requested him to chair the Founding Committee, which has the tasks of, inter alia, completing the organizational structure of the AWC, formalising its constitution, continuing the broadening of the membership, and preparation to hold the meeting of the First General Assembly. The Founding Assembly met in Cairo and included some 400 experts, scientists, professionals and individuals with interest in water issues from seventeen countries of the Arab States.*

## InWEnt

*InWEnt stands for human resource and organizational development within the framework for international cooperation. InWEnt's services cater to managers, skilled and executive personnel as well as to decision makers from business, politics, administrations and civil societies worldwide.*

*Programmes and activities at InWEnt aim to foster the capacity for change on three levels: strengthen the capacity of individuals to act, increase the performance of organizations, administrations and businesses, and improve the capacity for decision-making action at the political level. InWEnt methodological tools are in modular form, so that they can be used for customized programmes according to needs and demand. In addition to face-to-face training, exchange and policy dialogue, emphasis is also given to networking with the help of e-learning platform. InWEnt hosts approximately 55,000 participants from developing, transition and industrialized countries per year.*

*Activities are offered in eight business fields:*

- *Good governance and reform processes*
- *Crisis prevention and peace development*
- *Social development*
- *Environmental and natural resources*
- *Sustainable economics*
- *International trade and relations*
- *Regional development and urbanization*
- *Development education*

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