

CONCLUSION AND RECOMMENDATIONS

WSTA 9th Gulf Water Conference "WATER SUSTAINABILITY IN THE GCC COUNTRIES" The Need for a Socio-Economic and Environmental Definition 22-25 March, 2010-07-22 Muscat, Sultanate of Oman

The 9th Gulf Water conference was organized in Muscat, Sultanate of Oman, by The Water Science and Technology Association (WSTA) in cooperation with the Omani Ministry of Regional Municipalities and Water Resources and the General Secretariat for the Gulf Cooperation Council with support from a number of water-related international, regional, and local organizations. The conference was held under the patronage of His Highness Sayid Khalid Bin Hilal Bin Saud Al-Bousaidi, General Secretary of the Ministerial Council of the Sultanate of Oman, and attended by a number of Ministers, Under-Secretaries, and GCC, Arab and international water professionals from the public and private sectors, and representatives of international, regional and local organizations.

Water resources in the GCC countries are suffering from high water stresses due to the increasing pressures exerted on these resources to meet the requirements of the socio-economic activities, which exceed their capacity. The situation is aggravated by inefficient water use by the consuming sectors and the reduction of natural water supplies by increased pollution and quality deterioration. The imbalance between supply and demand is further exacerbated by the lack of policies and strategies for managing water resources that are based on integrated approaches and supported by appropriate institutional structures and effective legislative framework in most of these countries.

The current situation is highly critical, and its consequences will not be confined only to the future development in the GCC countries, but also on the sustainability of what have been accomplished in terms of socio-economic achievements in these countries. The increasing gravity of the situation lies in the continuous escalation of water demands, resulting mainly from the rapid population growth and inappropriate agricultural policies, in conjunction with the fact that the region is using all of its water resources, while its groundwater resources are being depleted.

It is clear that the present imbalance between available water resources and water demands in the GCC countries is chronic, and is expected to grow in the future. Furthermore, it has become clear that despite the strenuous and costly efforts made by the GCC countries in increasing their water supplies, the policies of supply management and augmentation will not be able to deliver a substantial degree of water sustainability to these countries, and that there is an urgent need to have a major shift towards demand management, conservation and protection.

Under these conditions, sustainable water resources management is looked at as a strategic alternative to enable the GCC countries to deal with the issues of water scarcity, and that integrated water resources management approach is essential to achieving sustainable development, and providing water for the various needs. The concept of sustainable water resources management in the GCC should include all sources of water as well as the water-dependent sectors, such as drinking, municipal, agriculture, industry, and the environment. In other words, there is a need to deal with water resources management in a new and comprehensive way in the region, with the main goal is to provide water supply requirements in the needed quality on the long term to the consuming sectors, under strict criteria for sustainable socio-economic, financial, environmental and public health requirements. There is also a need to develop scientific methodologies to translate the general definition of sustainable water resources management into a more operational definitions to be implemented on the ground, and to take into considerations the unique characteristics of the water sector in the region and the various dependent sectors, including political, economic, social, technical and environmental.

The Ninth Gulf Water Conference, was held under the theme "Water Sustainability in the GCC: the Need for a Socio-economic and Environmental Definition, was held to present the results of the research and studies, exchange of experiences and lessons learned in the various areas of water management in the GCC countries, the Arab countries and world, and to help the GCC countries efforts to achieve integrated water resources management, and to be the point of departure for moving towards sustainable water resources management in these countries.

The conference participants unanimously agreed on that the water problem in the GCC countries is more severe than in other countries of the world and carries with it more challenges due to the limited natural water resources in these countries on one side, and the escalating water demands due to rapid development of most of these States, on the other. The most important challenges facing the GCC countries can be summarized in the followings:

1. The continuous reduction in per capita availability of freshwater in the region, increased competition on the limited natural water resources by the consuming sectors, and the continuous deterioration of the quality of water resources;
2. The increasing water requirement for population and food production by rates far exceed the GCC countries capability in developing their water resources, represented currently by desalination, reuse of treated wastewater and water harvesting;
3. The inadequate and inefficient administrative and institutional system responsible for water in most of the GCC countries, including human resources, especially in the fields of water planning and management;
4. The inadequate water awareness in the GCC society, and the limited role of the civil society and low level of consumers participation in water management and conservation;
5. The total dependence on imported technologies of non-conventional water resources, and the low added value of desalination and water treatment projects to the economies of the GCC countries; and
6. The expected negative impacts of climate change on water resources in the region.

Through the conference sessions involving more than 250 water officials, academics, and professionals in the various areas of water resources, the conference urge the GCC countries to consider the following recommendations:

1. Continue the formulation and implementation of national water strategies that are based on the principles of integrated water resources management in terms of economic efficiency, social equity, and environmental sustainability, with a focus on demand management with its financial provisions and human capacity development particularly in the field of water resource planning and management.
2. Adopt a participatory approach in water resources management and involve water users in water rationalization and conservation programs with emphasis on the role of women, youth, and civil society organizations, and review and evaluate existing water awareness programs to include all sectors of society to raise its efficiency.
3. Setting agricultural policies and plans that are compatible and in line with the capacity of available traditional and non-conventional water resources.
4. Consider and implement economic instruments as one of the efficient water management tools, especially setting appropriate water use tariffs in the various sectors to increase water use efficiency and water sustainability, and change to less water-dependent economies, while taking into account health and social considerations.
5. Consider water as a shared responsibility between the public and private sector, and examine all available options for the involvement of the private sector in various water sectors to increase economic efficiency and improve the quality of water services, with the need to assess the current experiences in the GCC countries and benefit from the outcomes of such experiences for the future.
6. Design national plans and programs for the optimum utilization of different water resources, such as water harvesting projects and dams constructions to store rainwater and flood water, the utilization of treated wastewater, and the reduction of distribution network losses, and disseminate the results of existing experiences among the GCC countries.
7. Emphasis the importance of examining and studying the impacts of climate change on water resources in the GCC countries, and support such studies in the field of vulnerability and adaptation, as well as studies on rainwater/floods drainage and flood risk maps of urban areas.
8. Invest in research and development in the field of non-conventional water resources (desalination and treatment) in order to indigenize these technologies in the region, reduce its cost and environmental impacts, and increase the added value of desalination and treatment projects to the economies of the GCC countries.

9. Promote and expand the use of treated wastewater for appropriate purposes and irrigation to reduce the pressure on water resources, with the necessary specifications and standards to safeguard public health.
10. Develop appropriate mechanisms for linking research with planning and management of water resources, and encourage and support mutual cooperation between water authorities and research institutes in the field of sustainable water resources management, and establish an information center containing studies and research related to the various fields of water in the region.

The participants in the conference delegate the Water Science and Technology Association (WSTA) to convey these recommendations to the General Secretariat to be presented to the GCC Ministerial Water Committee. The WSTA is asked to form a representative recommendation committee to discuss, assist, and follow up with the Ministerial Water Committee on the mechanisms of implementation of these recommendations, and report back on any difficulties encountered in their implementation to the 10th Gulf Water Conference (to be presented to the participants of this coming conference in a special meeting). It is also requested from WSTA to disseminate the present conference conclusion and recommendations to the countries located in dry regions through the international and regional supporting organizations of the conference.

While the conference participants commend the above conference conclusion and recommendations, which are expected to enhance the international and regional efforts to meet the challenges of sustainable water management in the GCC countries, they express their greatest gratitude and appreciation to the Government of the Sultanate of Oman for hosting the conference, its hospitality for the conference participants, and its interest and eagerness to contribute to the international efforts to ensure development and prosperity for all people around the world, and are honored to send a word of appreciation and tribute to His Majesty Sultan Qaboos Bin Saeed.

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