

EAD warns against depletion of Abu Dhabi's water resources within next 50 years

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The Environment Agency - Abu Dhabi is warning against the depletion of both fresh and brackish reserves within 50 years.

EAD is calling on all its stakeholders to cooperate in implementing water policies to rationalize the use of this precious resource.

H.H Sheikh Hamdan bin Zayed Al Nahyan, UAE Deputy Prime Minister and Chairman of EAD said that the Emirate's groundwater supply has been reduced by 18% since 2003, according to EAD's Annual Abu Dhabi Emirate Water Resources Statistics Report. According to EAD, this reduction in groundwater supply means that the Emirate of Abu Dhabi has increasingly relied on unconventional water resources, such as desalination and re-use of treated wastewater.

Currently, 641 m³ groundwater resources are still available, but less than 3% of this is fresh water. EAD's report also reveals that groundwater contributes 71.2% to the total water demand, followed by desalinated water (24%) and treated wastewater (4.8%),

H.H Sheikh Hamdan noted that today, the total consumption of water resources in the Emirate exceeds 24 times its natural recharge capacity. He added that this has arisen from the rapid social and economic development that the Emirate has witnessed in the last four decades and that this has placed considerable stress on sectoral water use.

He said that the Emirate has one of the highest per capita water consumptions in the world, despite having an arid/hyper arid climate with less than 100mm/yr rainfall, a low groundwater recharge rate (c.10% of total annual water used) and no reliable, perennial surface water resources.

Sheikh Hamdan stressed that the future will be very challenging unless action is taken to reduce the rate of water consumption.

Sheikh Hamdan added that the UAE Government has already made tremendous efforts in water conservation, through large investments and building of desalination plants as well as infrastructure for water distribution networks. For example, Law No. 6 was passed in 2006 authorizing EAD to regulate the licensing and drilling of water wells and to monitor usage.

A Strategic Water Master Plan for the Emirate of Abu Dhabi has recently been developed by EAD and its partners. The Master Plan describes the current status and the environmental and technical issues related to projections of demand and supply, groundwater abstraction, desalination, water supply and sanitation, irrigation, wastewater treatment and Emirati governance and institutions.

HE Majid Al Mansouri, EAD's Secretary General said the continuous growth of population, which is expected to reach about 3.5m people in the Emirate of Abu Dhabi in 2030, in addition to the huge economic development projects is a major challenge in the next decade, particularly with regard to the provision of water sources required to meet the anticipated

needs in the context of environmental sustainability and economic and social development. He pointed out that previous studies of the Environment Agency - Abu Dhabi and Abu Dhabi Water and Electricity Authority has clearly shown a significant deficit in water supply in the coming years.

It was stated that in order to meet this challenge and as mandated by the Executive Council of Abu Dhabi Emirate, EAD has in collaboration with all stakeholders in the partnership developed the Strategic Plan for the Management of Water Resources in Abu Dhabi. The working group included representatives of the Abu Dhabi Water and Electricity Authority, Regulation and Supervision Bureau for the Water and Electricity Sector in the Emirate of Abu Dhabi, Abu Dhabi Water and Electricity Company, Abu Dhabi Sewerage Services Company, Al Ain and Abu Dhabi Distribution Companies, Abu Dhabi Department of Transport, Food Control Authority and the Department of Municipal Affairs. This group has been strengthened by a team of expert partners from international organizations, universities and scientific research institutions including the International Center for Biosaline Agriculture.

Al Mansouri has pointed out that the plan analyses the current status of water sources and demand, uses and future needs of water in all sectors of development in the Emirate of Abu Dhabi until 2030. The study has also dealt with the analysis concerned with the development of administration and management, institutional structure and legal frameworks for the water sector in the emirate.

He said the plan proposed a number of methods and alternatives and identified the requirements for each of them, given that there are several methods to achieve these goals. It has also stressed the need to plan prior to development and for institutional reform and capacity-building and awareness-raising among the population, where it has recommended that the Government of Abu Dhabi pays special attention to water, with a focus on improving policies, strategies and coordination between sectors and the development of administrative systems and the delegation of implementation functions to the direct stakeholders.

'The study recommended the need for the adoption of options and means that suit the environment for increasing water production, such as the Abu Dhabi Plan to increase the efficiency of the use of treated sewage effluent to irrigate forests and use of desalinated water in excess of need in the recharge of underground reservoirs for use in times of emergency. It is expected that the demand for treated sewage effluent will exceed its supply in the near future. The study also recommended the need to use appropriate local drought tolerant plants in landscape agriculture, parks and various places of entertainment to reduce water consumption'

he added.

Al Mansouri noted that the study shows a high per capita water consumption rate in the domestic sector and recommended the adoption by the Government of Abu Dhabi of initiatives to study possible alternatives such as the use of water-saving devices to be accompanied by awareness campaigns for the rationalization of water consumption and conservation.

The Secretary General said the study included a thorough description of the concepts of planning and development of water resources to ensure the achievement of strategic goals for the Emirate of Abu Dhabi, which aims to promote sustainable development in the emirate and the integrated and sustainable use of water resources. This requires the development of

systems and mechanisms for monitoring the environment and natural resources, develop environmental management systems and to assist in the implementation, develop crisis management systems and to respond to environmental emergencies, in addition to raising the level of environmental awareness in the society and biodiversity conservation in the Emirate of Abu Dhabi.

'We developed this Master Plan to help us achieve sustainable utilization of water resources in an economically and environmentally friendly way that would enhance the sustainable development of the Emirate of Abu Dhabi and the UAE,' said Al Mansouri.

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