



Transboundary Water Cooperation in the Arab Region

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Water is an increasingly scarce resource in the Arab region which will face a significant water deficit in the future

The Arab countries , members of the League of Arab States confront over consumption for agricultural , industrial and domestic use

This over consumption contributed to severe deterioration of water quality and quantity considering :

- demographic growth
- Impact of climate variability
- Economic and social changes
- Political and security instability

Water management especially of shared water resources poses and will continue to pose a major challenge



1 - Shared ground water resources

- ▶ Renewable water resources in the Arab region , no matter how they may be developed in the future , will not be able to fully meet the challenges of water security and food security.
- ▶ About 80% of which are originating from outside the region mainly conveyed through international rivers
- ▶ Groundwater on the other hand is limited to specific regions where vast reserves underlie some Arab countries, there are about twenty different aquifer systems, eight of these aquifers are shared between Arab countries .



- ▶ Groundwater systems are often the only source of fresh water in most of the Arab countries, where demand is rapidly increasing.
- ▶ Water resources contained in shared regional aquifers represent a secure supply for all uses and are thus critical for **national and regional water security** .
- ▶ Many riparian Arab countries, understanding the need of the integrated management of groundwater resources, especially shared aquifers, decided to cooperate toward mutually **beneficial and sustainable development and management of the shared ground water resources** .



Many agreements have been signed between riparian countries from the Arab region and from the neighbouring countries outside the region , some of the agreements are successful :

THE NUBIAN SANDSTONE AQUIFER SYSTEM

It is shared by four countries, Egypt, Libya, Sudan and Chad

A monitoring network was established

A regional information system was developed

A joint authority for study and development

Some Challenges:

Financial sustainability

Lack of binding legal agreement among the member states



THE NORTHWESTERN SAHARA AQUIFER SYSTEM

Three countries share the aquifer : Algeria –Libya –Tunisia.

A Consultation mechanism was established :to coordinate, promote and facilitate the rational management of the system



A steering committee by the 3 countries



A coordination unit directed by a coordinator designated by the (OSS) : the Sahara and Sahel Observatory

At present, The 3 countries notified an evolution and development of the aquifer resources from **0,6 billions CM in 1970 to 2,5 Billions CM in 2009.**



2- Shared surface water resources

Most of the large surface water resources in the Arab region are of transboundary nature either between Arab countries or with neighboring countries outside the region .

-A- Shared surface water between Arab countries

- ▶ This is of political nature and is usually resolved on a bilateral multilateral basis , at the basin level.
- ▶ Many agreements and conventions have been signed governing the shared surface water resources



The "Convention on Shared Water Resources between Arab countries"

the Arab Ministerial Water Council will adopt the Convention in January 2015

The Convention is based on :

the international water principles and laws

the principle of the European Union Water Framework Directives

the principles of the Arab League Charter and Arab countries characteristics

The Convention will be :

the basis for the development of cooperative and joint mechanisms on surface and groundwater resources such as :
permanent agreements , technical committees , basin organizations.....

Will lead to a unified legal position and willingness towards cooperation , allocation and management of shared water resources

Encourage regional stability through water



-B- Shared water resources with neighbouring countries

- ▶ **About 80% of the Arab annual renewable water come from major rivers namely the Nile , Tigris , Euphrates and Senegal , all of which originate outside the Arab region .**
- ▶ **Many Arab downstream countries are highly dependent on external water**
- ▶ **The utilization of these waters is a matter of politic dispute among the various countries involved . Most of these rivers remain without clear agreements governing the sharing of their waters**



The major rivers in the region

A- The Nile River

▶ The Nile River is shared between eleven countries Egypt and Sudan are the only 2 Arab countries - downstream countries .

▶ Ethiopia has begun to build
the Grand Renaissance Dam
a new hydropower project one of the most ambitious project in Africa .

▶ Egypt declared that this dam threatens its Water Security , and its National Security since Egypt relies totally on the Nile for its water

Without the Nile there is no Egypt



B - The Tigris and Euphrates Rivers

- ▶ The Tigris and Euphrates are two great rivers that flow from **the mountains of Turkey through Syria , Iraq** empty into the Persian Gulf – Shatt El-Arab .
- ▶ Turkey has begun its biggest development project by the construction of 22 dams and 19 power plants on the rivers .
- ▶ Since then and in addition to climate change , Tigris and Euphrates are drying up, strangled by the water policies of the upstream neighbor country Turkey.



- ▶ **The drought is widespread** especially in Iraq , it is a crisis that threatens **the rooting of Iraq`s Identity as a nation** was once the largest exporter of dates and Amber rice in the world .
- ▶ Turkey is taking advantage of the present unsecure situation in Syria and Iraq , reducing the amount of water flowing down to these 2 Arab countries.
- ▶ Until now , failure to reach a permanent , just and equitable agreement with source country ---

A problem threatening stability in the region



C- The Senegal River

The 2nd largest river in Western Africa , originates in the mountains of Guinea , travels across Mali , Mauritania and Senegal then flows to the Atlantic Ocean

The riparian countries decided to work cooperatively toward more effective basin management :

**Economic Growth Strategy for the 3 countries
(Mali , Mauritania , Senegal)**

The Organization for the development of the Senegal River

Many multilateral agreements , dams , projects and organizations have been established strengthening cooperation over the River basin

Guinea , now is party of the River Organization and will profit from the benefits of the other countries cooperation

The full cooperation on the Senegal River Basin has improved the political , economic and social development in the region



3- Water in the Arab Occupied Territories

Israel , the Occupying Authority , is dominating and exploiting all the surface and ground water in the Arab occupied territories in Palestine , Syria and Lebanon .

The Jordan River is dominated and used by Israel forbidding the riparian Arab countries from using its water

In violence of International Law and Human Laws .

The last Israeli assault on Gaza in July –August 2014 , has resulted in the murder of about 2000 civilians , the injury of about 11.000 , the destruction of houses , hospitals , schools ...



- ▶ The water and wastewater sectors were visibly damaged , not considering the environmental and public health damages

Gaza was considered an **"area of catastrophe"** by the United Nations humanitarian organizations

- ▶ The reconstruction of Gaza water infrastructure will take years ...
- ▶ **Negotiations meetings on water rights in the occupied territories of Palestine** have been held for years without any improvement or acknowledgement of the Palestinian water rights according to the signed Agreements , and not even the Human needs of the Palestinians .



Conclusion

Cooperation over shared water resources in the Arab region exists ,many differences , economic geopolitical , divide the region but the water and environmental challenges increasingly unite the people along the shared water resources in the search for sustainable future .

Building effective cooperation on shared water in the region is a lengthy and complex challenge .

The long-standing political instability and conflicts in addition to the new wars against terrorism and the lasting Israeli occupation , will hamper successful basin-wide and effective cooperation .



But permanent and strong legislative agreements are essential for reliable and stable cooperation with neighboring countries including Israel on surface and ground water resources based on reasonable and equitable principles and according to the International Water Law and Historic agreements .

Only then water will be a source of sustainable development , of peace and stability and not a source of conflicts and wars .

