

ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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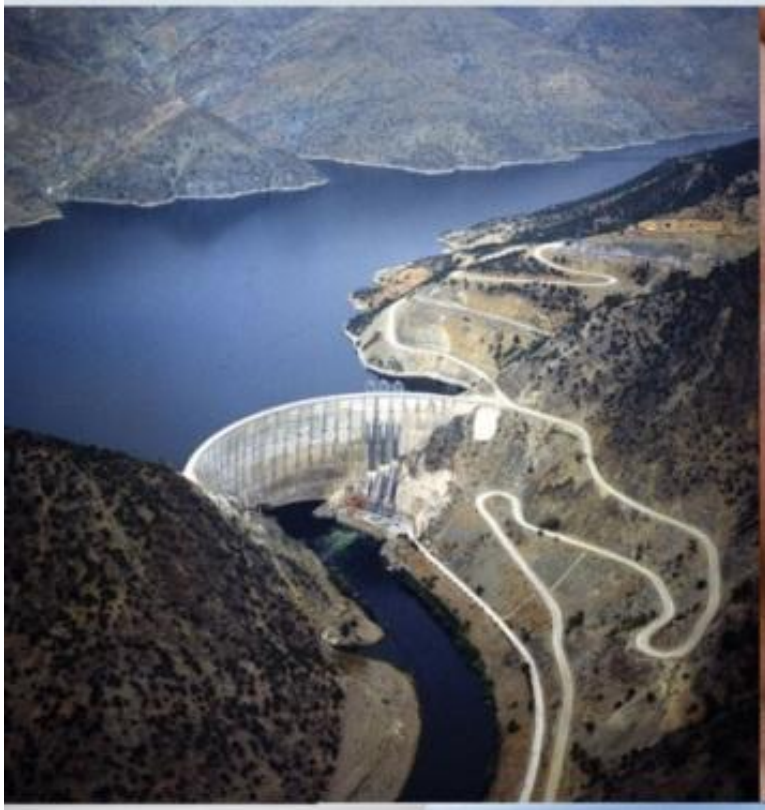



ORSAM WATER BULLETIN

22 August 2016 – 26 August 2016

- **Hope for Resolving the Water Conflict in the Middle East**

The availability of fresh water has direct impact on food and energy production, development of industry, and human survival. Fresh water resources are often unevenly divided and irregularly distributed throughout the regions of the world. As populations in the world continue to increase, particularly in water scarce regions, the potential increases for conflict to develop over competition for water. As such, concern over the dwindling water supplies in the Middle East has been labeled as the next source of conflict in the Middle East.

The severity of the water issue in the Middle East is a key strategic issue in understanding future security decisions within the region. Nations in the region have many ongoing disputes, but few are more basic and deep-rooted as the need for water. After all, the human body can survive without oil, but the soul requires the font of living waters for survival. An understanding of the magnitude and scope of the water issue will better prepare an analyst or decision-maker to anticipate events in the region.

Nations in the region share more political conflicts than just water, to include religious differences, ideological disputes, border disputes, and economic competition. These tend only to complicate the water problem further. Cooperation in the region is a very significant problem. Nations in the Middle East are constantly afraid of another gaining an advantage from an agreement of any type. As a result, Nations of the region are blinded by preoccupation with autonomy, power, and security.

THE BLUE PEACE INITIATIVE

To address the ongoing water crisis in the Middle East, SFG has developed the Blue Peace approach that transforms trans-boundary water into an instrument for cooperation, with collaborative and sustainable strategies shared by riparian countries. The Blue Peace concept was conceived by Strategic Foresight Group in a project supported by the Swiss Agency for Development and Cooperation (SDC), Political Directorate of the Swiss Federal Department of Foreign Affairs (FDFA), and Swedish International Development Cooperation Agency (Sida) and presented in the form of a report published in February 2011.

This initiative is supposed to create a complete framework for water cooperation covering the entire spectrum from cooperation at the political and diplomatic level to cooperation to address the plight of marginalized people in the Middle East. The exchange of experience takes place in various forms. An important component is “Learning Journeys” to successful river basin organizations. It is feasible to undertake such Learning Journeys only when important river basin organizations agree to host them.

Per se, the Rhine Hydrological Commission and Mekong River Commission have hosted in the past Learning Journeys for policy makers and media persons from the Middle East and the latest learning journey was hosted by the Nile River Basin in East Africa in August 2016, following the Learning Journey to Senegal River Basin, held in August 2015, this was a continuation of the ‘exchange of experience’ activities under the Blue Peace Initiative.

On August 8-10, 2016, members of the Blue Peace Middle East Community embarked on a learning journey to explore and understand cooperation in the Nile River Basin in East Africa. The delegation from the Middle East included senior policy makers, academic and technical experts and leading members of the Blue Peace Media Network.

Strategic Foresight Group organized the Learning Journey to Nile River Basin in coordination with the Nile Basin Initiative (NBI), headquartered in Entebbe in Uganda. The journey was conducted over a period of three days in Uganda during which the participants were able to appreciate the functioning of NBI and learn about its history and mandate. In addition, six other African River Basin representatives also participated in this learning journey which helped the Middle Eastern participants to get an overview of successful water cooperation across Africa. They included representatives of River Basin Organizations from Komati River, Gambia River, Congo River, Senegal River, Volta River, Orange-Senque Basin.

The most significant feature which the participants discovered in the case of NBI and also in the case of the other African River Basins was their emphasis on cooperation and the importance of a strong political will. The participants also noted that the riparian members of the Nile River were developing countries that were trying to find a common solution to water scarcity and economic development through cooperation over the common water resource they all shared.

NILE BASIN INITIATIVE

The Nile Basin Initiative (NBI) is an intergovernmental partnership of 10 Nile Basin countries, namely Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania and Uganda. Eritrea participates as an observer.

For the first time in the Basin's history, an all-inclusive basin-wide institution was established, on 22nd February, 1999, to provide a forum for consultation and coordination among the Basin States for the sustainable management and development of the shared Nile Basin water and related resources for win-win benefits.

The highest decision and policy-making body of NBI is the Nile Council of Ministers (Nile-COM), comprised of Ministers in charge of Water Affairs in each NBI Member State. The Nile-COM is supported by the Nile Technical Advisory Committee (Nile-TAC), comprised of 20 senior government officials, two from each of the Member States.

LEARNING JOURNEY TO UGANDA

The learning mission began with a presentation on the overview of Nile Basin Initiative (NBI), its structure and historical background by the Executive Director of the NBI, Dr. John Rao Nyaoro. The day was dedicated to understanding the socio-political background and the functioning of the NBI. A detailed historical background of the formation of NBI helped the participants better understand the context of cooperation.

Dr. Nyaoro also touched upon the Agreement on Declaration of Principles between the Arab Republic of Egypt, the Federal Democratic Republic of Ethiopia And The Republic of the Sudan on the Grand Ethiopian Renaissance Dam Project (GERDP) which was signed by the Heads of States on March 23, 2015. Later he emphasized the importance of cooperating and finding sustainable solutions together in order to fight the water scarcity in the basin. According to him, a balance can be struck once the

cooperative mechanisms are in place. The problems can be foreseen and the solutions can be found before the problems go out of hand, eventually leading to a basin-wide development and peace.

On the second day of the Learning Journey, in addition to NBI, six African River Basin Organizations shared their experiences with the Middle Eastern participants. As participants, we had the chance to interact with representatives of the seven major African River Basin Organizations at the same time. The representatives gave brief presentations on the history, functioning, achievements and challenges that their respective organizations face. The session was later followed by a detailed discussion on the Strategic Foresight Group's report on "Water Cooperation Quotient" where the participants gave their suggestions and remarks which will prove instrumental in upgrading the quotient.

FIELD VISIT

As a part of the field visit the participants visited the Bujagali Hydropower Project built on the Victoria Nile in the town of Jinja, about 140 km east of Entebbe. It is a 250-megawatt power generating facility sponsored by the Industrial Promotion Services (Kenya) Limited and SG Bujagali Holdings Ltd, an affiliate of Sithe Global Power, LLC (USA). The main purpose of the project is to provide electricity to Uganda which suffers from power deficit and in turn to promote the socio-economic development of local residents.

After the visit to the dam, the participants went on to see the source of the Nile River. It was an overwhelming experience for all the participants to be at the source of the world's longest river from where it travels through eleven countries before it finally drains into the Mediterranean.

BLUE PEACE IN THE MIDDLE EAST

It is when riparian countries face problems such as prolonged drought, depletion of water resources and other factors that can produce competition between them, that institutionalized cooperation for the sustainable management of water resources is most required. The African River Basin Organizations came into existence in order to address the problems of natural disasters or acute underdevelopment which would potentially lead to conflict over resources. This is the situation in the Middle East today, where natural disasters such as drought and underdevelopment in some parts pose a challenge. It is precisely at this time that institutionalized cooperation is required.

The Nile Basin Initiative for instance has a long history of disagreements which have been gradually narrowed down to the minimum and now have the prospect of the countries reaching an amicable agreement in the near future. This has been possible because the NBI is available as a forum where the state parties can meet, irrespective of the extent to which they may agree with each other.

In the case of the Middle East, currently the Blue Peace Community brings together various stakeholders including individuals associated with the institutions of state. However, this is not an official forum of the governments in the region. It is important for the Middle East to take the next step to progress from the Blue Peace Community to a Cooperation Council of state parties to address the issues related to water and environment in the region.

22/08/2016, online at:
http://moderndiplomacy.eu/index.php?option=com_k2&view=item&id=1687:hope-for-resolving-the-water-conflict-in-the-middle-east&Itemid=566

- **30% of Oman's potable water is lost and unaccounted for, says PAEW**

Muscat: More than 30 per cent of potable water is not accounted for in Oman, official statistics from the Public Authority for Electricity and Water (PAEW) showed.

"Some of this water is lost through leaks and overflows in reservoirs and the rest is not recorded properly, either due to fraud or theft, metering or billing errors, or because of a lack of metering," PAEW said in its annual report for 2015.

The PAEW report also stated that Sharqiyah South tops the chart, with 47 per cent if water being unaccounted for and is followed by Muscat which reported a 40 per cent loss.

Altogether, 103.34 million cubic metres of water was unaccounted for in 2015 up from 98.51 million cubic metres in 2014.

"Although, no water network can avoid losing some water as it passes from source to customer, it would not be economical to do so, it is vital that efficient management of the system is carried out so that these losses are known and controlled to ensure that they stay at an appropriate level that is both technically and operationally manageable, given the infrastructure that is in place," the PAEW explained.

"This is particularly so in Oman, where the cost of water production is high (due to the heavy reliance on desalination), there is a need to transport water over long distances and groundwater is a scarce resource. Reducing losses to an economic level will also save resources—including fuel for desalination—and money, reducing the need for new desalination capacity and subsidy in the long term," the it added.

The PAEW also said it will continue to focus on proper metering and invoicing for its customers, most of whom are served by their billing and collection agents, and will cooperate with the electricity distribution companies to introduce a new, modern billing system, which should help improve accuracy and control of all aspects of their business, as well as improve service to their customers. "We also continue to work on leak detection and repairs through our local operational teams," it said in a recently released report.

Earlier this month, PAEW had urged its consumers to save water.

The #ICommit campaign conducted by PAEW was aimed at encouraging residents and nationals to save water due to the fact that Oman's water resources are scarce and invaluable.

The campaign sought to reduce the consumption of water and give advice on how to efficiently use the resource.

22/08/2016, online at: http://timesofoman.com/article/90844/Oman/Environment/30-of-Oman

- **The Middle East is importing virtual water from countries who, in the future, are likely to have to import their own virtual water"**

The concept of "Virtual Water" has been used since the 1990s to refer to water embedded in imported food. It is a way for water scarce regions to secure their food availability, without putting

more strain on their domestic water resources. The concept was developed for the Middle East region, partly to help explain why water scarcity did not directly lead to conflicts over this fundamental resource. Water scarcity did not have the expected impacts on society because the main use for water, to grow food, was outsourced to other countries with plenty of available fresh water resources.

But is that last part true? Are there countries with such a surplus of water that they can export large amounts of virtual water to other countries without any major local impacts? Or is virtual water leading to the reallocation of water scarcity?

In order to investigate these questions, we will need to introduce some more concepts related to virtual water. We need to separate between blue water, which is the fresh water stored in lakes, rivers and underground reservoirs (aquifers), and green water, which is the rain water that gets stored in the soil as soil moisture. Simply put, if you import virtual blue water, you are importing food that has been grown using irrigation, while if you import virtual green water you are importing food from rainfed crops.

A recent research paper shows that between 1986 and 2010 most of the imported green water in the MENA region came from USA, Argentina, Australia and Brazil. Most of the imported blue water, however, came from USA, Pakistan, France and India. Looking at this map from the United Nations World Water Development report from 2012 we see that large parts of USA already were suffering from, or were approaching, physical water scarcity. All of Pakistan were suffering from physical water scarcity or approaching it, while India, in addition to having or approaching physical water scarcity, were also suffering from economic water scarcity. France is the only country that has little or no water scarcity. So what does these different types of water scarcity mean?

Physical water scarcity means that the water resource use has exceeded sustainable limits, and that more than 75% of the water from rivers are withdrawn for human purposes. Areas with between 60 and 75% withdrawal from rivers are defined as approaching water scarcity and are likely to become water scarce in the near future. Economic water scarcity means that less than 25% of the water from rivers are withdrawn for human purposes, but that local human needs cannot be met for socio-economic reasons. The Middle East is thus importing virtual water from countries who, in the future, are likely to have to import their own virtual water, due to a looming water crisis. What happens when the current exporters of virtual water need to start importing? What should we do when we have reallocated water scarcity to all countries?

In Pakistan, the looming water crisis has been described as a potentially greater threat than militancy. While water quality and access to safe drinking water is a major issue in Pakistan, the country's available water resources have decreased from 5000 cubic meters per capita in the 1950s, to 1500 cubic meters in 2009. More than 90% of the country's water resources are used for irrigation and other agricultural purposes, and unsustainable use of the water and land resources has caused land degradation, including salinity and water logging. Pakistan's economy is largely based on agriculture, which comprises 20% of Gross Domestic Production (GDP), and more than 50% of the country's exports.

While import of virtual water from already scarce countries is causing problems locally, as in the case of Pakistan, there is also a global food security perspective to consider. Being dependent on food imports may create vulnerability in the domestic food supply, as has been seen in Egypt during the

global food price spikes in 2008 and 2011, and in Iraq during the international sanctions period that prohibited the export of oil, and thus restricted food imports. The looming food crisis in the Middle East is not something new, but it is a problem that needs more attention in order to create resilient and sustainable societies across the Middle East, and the world in general. Because what happens when we no longer can reallocate our water problems?

22/08/2016, online at: http://www.yourmiddleeast.com/opinion/on-virtual-water-and-food-security-in-the-middle-east-and-beyond_42380

- **Egypt completes 31 water, sanitation projects in FY 2015/16**

A total of 31 drinking water and sanitation projects have been completed in Greater Cairo and Alexandria for 2015/2016 fiscal year, according to the Egyptian Minister of Housing Mustafa Madbouli.

The projects were implemented by the Executive Authority for Potable Water and Sewage, as part of the investment plan for the fiscal year that ended in June along with carrying out utilities projects in number of new cities.

A total of 18 projects were for waste water sanitation, with 13 drinking water projects, in addition to completing five drinking water projects in new cities, said Hassan Al Far, Head of the Executive Authority for Potable Water.

He added that one of the completed projects is the rehabilitation and expansion of drinking water plants in the Fustat District of Cairo to increase their capacity from 900,000 cubic meters to 1.1 million cubic.meters per day.

The project serves 1.2 million people in areas such as Dar El Salam, Maadi, North Helwan, Tora, Al Manial, Al Darassa, Downtown, Zahraa El Maadi, Saqr Quraish, Al Basateen, Nasr City, and Moqattam.

In Obour City, a water purification plant was expanded to a capacity of 400,000 cubic meters for 800,000 people. A sewage plant was also completed in 6th of October City, serving 500,000 people.

The Ain Shams region in Cairo also saw the expansion of a water sanitation plant to serve 1.2 million people in several districts, including Ain Shams and Mattareya.

10th of Ramadan City, a water sanitation plant was completed with a capacity of 600,000 cubic meters per day to serve 1.2 million people in the areas of 10th of Ramadan, Madinaty, Badr, Shorouk, and the New Administrative Capital City.

On the other hand, several projects were also implemented in Alexandria that include the rehabilitation of a water treatment plant in eastern Alexandria to a capacity of 600,000 cubic meters per day, to serve 2.5 million people in the eastern and central districts of the governorate.

In addition, another water treatment plant was built to serve 680,000 people in various districts including Nasreya, Morgham Al Kafoury, Alamerya, Zaweyet Abdel Qader.

22/08/2016, online at: http://amwalalghad.com/en/business/real-estate/49708-egypt-completes-31-water-sanitation-projects-in-fy-201516.html

- **Keeping water flowing in Aleppo**

Meet Maher. Maher is in Syria and for almost two years he has led UNICEF's water, sanitation and hygiene work in Aleppo. The lives of millions of people in Aleppo and beyond depend on him and his team.

This week, we sat down with Maher and asked him what it's like to work in Aleppo and to provide water and sanitation in a city under fire.

What is it like working in Aleppo?

The word I would use to describe Aleppo is "alive". Throughout history, it has always been crowded and full of life. For many in this city, the different sieges, battles or dangers of war have not kept them locked up at home. Even when there is no water or no electricity.

But over the last week, things have changed. You can tell that people have become even more frightened.

Even today, on my way to the office, I noticed how few cars were on the road. There is supposed to be a 48-hour ceasefire, it has been called for, but people are too scared to go out. There are no guarantees.

It is heart-wrenching for me to see the streets of our beloved city so empty, and to see images of our city in news headlines around the world. We all see the images of children who have been killed or wounded, of buildings left in ruins, and the places we know so well in our own city – destroyed. We hear it too. We hear the sounds of shells and we cannot forget the horrors that we have seen.

I am scared sometimes too. I am so tired of the situation we find ourselves in. I am worried about my family – about their safety and our future.

But then I think of the children in the streets who stand in line with their jerry cans to collect water. I remember the position that I am in, and the purpose of my role here. I will do whatever I can to support the children of Aleppo. Without water, they cannot survive. My job is clear.

What are some of the challenges you face in providing water and sanitation?

Most of the water in Aleppo comes from the Euphrates River and is pumped in through four pipelines from a plant that is now controlled by one of the armed groups. In Aleppo city, the water is re-pumped through three pumping stations. One is controlled by the Government, two by different armed groups. So already, different parts of the city's water system are controlled by different parties.

Since the war began in Syria, water has been used many times as a weapon in Aleppo. Sometimes the water is shut off at the source directly, sometimes attacks affect the infrastructure, and sometimes our staff and partners are prevented from staying and maintaining the water services. Last year alone around five million people's lives across Syria were put at risk.

When water is cut to the city, two million people are at risk of outbreaks of waterborne diseases. These diseases can be deadly, especially for children.

Our team works in a number of ways to manage water needs in Aleppo. We respond to emergencies like we have today by developing a full water system – we truck water into makeshift camps and vulnerable neighborhoods, and we have installed water tanks in more organized shelters for families displaced by the fighting. We have developed 70 wells so far, and plan for 30 more, and we installed 28 water treatment plants on the Queiq River to ensure alternative water sources when crisis hits. And we deliver fuel for generators to keep water pumping stations operating when the electricity system is down.

In the eastern part of the city, before access was cut in July, we were trucking emergency water daily for 20,000 people. With our partner the Syrian Arab Red Crescent, we also started a project to develop 25 new wells to build alternative water sources. We are ready to start emergency trucking again as soon as we can get access, and re-start the wells project so that people can have safe access to clean water. We also need to resume rehabilitation of the water infrastructure.

We urge all parties in the conflict to neutralize water – everybody needs safe drinking water to live.

I am Syrian, and for me, there are certain risks involved in providing these services. But we just want to keep the water flowing. There are real threats, and they are daily. But our UNICEF security team is excellent, which makes us feel safer – and we know the work we are doing is right.

Supporting people in need is the most important job – it is a mission I accepted when I took this job. I will continue to use all my efforts to make sure we can get the technicians, water trucks, and all the other humanitarian assistance we can to ensure the children and families of Aleppo can have access to clean water.

What has made you happy in your job?

In June 2015 when I was overseeing water trucking in a shelter for displaced families in the al-Hamdanya neighbourhood, I noticed a little boy around nine or ten years old watching me. I was talking to other people in the shelter at the time to figure best way to help them, as it was my role to monitor the water trucking. I could tell the boy wanted to talk to me, but he was very shy. I finally caught his eye and I waved him over to me.

He looked so happy to be noticed and told me his name was Amer. When I asked him why he was watching me, he said, “I know your name.” I was surprised, and then I was touched by what he said:

“I know you installed those tanks and that you are providing water for us. I see your vehicles every time you visit our shelter. Before you came here we had no water and I had to stand in line for hours and walk such a long distance under the sun to fetch water to my family. Now I have more time to play with my friends. I want to bring water to people when I get older.”

Maher continues to work with the team in Aleppo, providing water every day to those who need it. Two weeks ago, water from the city’s network was cut for two million people when fighting damaged the electrical system that powers water pumping stations.

Maher with the UNICEF team and partners scaled up their emergency water trucking in parts of Aleppo and began delivering emergency drinking water to around 325,000 people every day. UNICEF

is delivering fuel to over 70 UNICEF-equipped wells, providing clean water for 450,000 people. And we are delivering day-to-day emergency fuel supplies to power generators for city pumping stations, so water can reach 1.2 million people across the city through the main networks. But these are day-to-day emergency solutions. And they are not nearly enough. Getting the city's main water network up and running is the only way to provide sustained, safe drinking water to 2 million people across the city.

While urgent negotiations continue trying to secure safe access for electrical technicians to repair the damaged transmission station, Maher and the UNICEF team are working with partners to keep emergency water flowing for the children and families of Aleppo. In total, UNICEF and partners provide safe drinking water for 13 million Syrians, across the country.

22/08/2016, online at: http://reliefweb.int/report/syrian-arab-republic/keeping-water-flowing-aleppo

- **Water shortages hit West Bank Palestinians, provoking war of words**

At the peak of a searing summer, Palestinians living in parts of the Israeli-occupied West Bank are suffering from severe water shortages, prompting a war of words between Palestinian and Israeli officials over who is responsible.

The Palestinians say Israel is preventing them from accessing adequate water at an affordable price, and point out that nearby Israeli settlements have plentiful water supplies. Israel says the Palestinians have been allocated double the amount they were due under an interim 1995 agreement, and have refused to discuss solutions to the current problem.

For Palestinian Nidal Younis, the head of the Masafer Yatta village council near Hebron, in the south of the West Bank, getting hold of water has become prohibitively expensive.

"The cost of a cubic meter for residents is 12 times higher than the normal price," he said, shaking his head. "When water is available, it normally costs four shekels (about $1) per cubic meter, but now it costs 50 shekels."

Israeli settlements are scattered on hillsides all around Masafer Yatta, a low-stone village on dry, rocky land. The settlements, with gardens and greenery, receive water from the Israeli utility provider via dedicated pipelines.

Younis said there was water in the ground near his village, home to around 1,600 people and many animals. But he said Israeli authorities prevented villagers from accessing the water by denying them permits to dig. Israel says unregulated digging of wells would do severe damage to the water table.

The villagers have approached the Palestinian Water Authority, which said it had made appeals to the Israelis, but the requests were apparently unanswered.

Israel's Coordinator of Government Activities in the Territories, a branch of the military that administers Palestinian civil issues, said Israel provides 64 million cubic meters of water to the Palestinians annually, even though under the 1995 Oslo accords it is only obliged to provide 30 million.

Israeli Foreign Ministry spokesman Emmanuel Nahshon said the Palestinians had consistently refused to meet to discuss water issues or work to resolve the long-standing problem.

"The Palestinian allegations... are simply a lie," he said. "Under the Oslo accords we agreed to establish together a joint working committee on water. Unfortunately, the Palestinian side has refused systematically to participate."

He added that the water needs in the West Bank, which the Palestinians want for a state together with East Jerusalem and Gaza, are greater than the infrastructure can handle.

Mazen Ghuneim, head of the Palestinian Water Authority, said the Palestinians had halted water negotiations with Israel five years ago because Israel had not frozen settlement building.

RURAL SHORTAGES

The United Nations Children's Fund (UNICEF), which is working with the Palestinian Authority and Italian aid agency GVC to provide water to impoverished areas, has warned that up to 35,000 Palestinians are at risk because of the shortages.

Gregor von Medeazza, the head of UNICEF's water program, said Israel had prevented villagers from building water-retention facilities and that 33 such structures had been demolished this year because they were built without permits.

Palestinians living furthest from urban areas have been the hardest hit, he said, often having to pay large sums to get private companies to truck water to their villages.

Some Israeli settlers have grown concerned about the lack of water available for Palestinians.

"Israel has not... made an effort to plan a long-term program for the next 10, 20, 30 years that will take into consideration population growth," said Yochai Damari, head of the Mount Hebron Regional Council, a settlement body.

"Thank God Israel doesn't have a shortage of water -- there is desalinated water, there is water that is located elsewhere that needs to be drilled and extracted using pipelines and infrastructure that will provide water to the Arab community, and of course to the Jewish community."

23/08/2016, Online at: http://www.reuters.com/article/us-israel-palestinians-water-idUSKCN10Y1DS

- **Syrian Student's Invention to Provide Aleppo Residents with Pure Water**

Despite the war in Syria, science has not stood still. Young ambitious individuals continue to work for the benefit of their country and adapt to war time conditions. A Syrian student at the University of Aleppo designed a simple water purifier that can be easily dispersed to people.

The invention is necessary as residents of Aleppo suffer from a shortage of clean drinking water due to the current blockade.

"This purifier is a primitive but effective invention. I used an ordinary aquarium as the water tank, and attached a couple of plastic air valves to its sides," Muhammad al-Muhammad told Sputnik.

The process of water purification occurs by metal oxidation, which with nitrate forms a certain reaction. Harmful substances either rise to the top or convert into precipitation. As the result, the purifier gives clean drinking water.

“Ground water, which is necessary to extract in Aleppo, contains nitrate anions that threaten with cancer and anemia,” al-Muhammad explained to Sputnik.

The cost of one cubic meter of water amounts in 9 USD cents.

24/08/2016, with video online at:
http://sputniknews.com/middleeast/20160824/1044596878/syrian-student-pure-water.html

- **PAEW urges people to conserve water**

Efforts to encourage people to save water will continue as the Public Authority of Electricity and Water (PAEW) are pushing to make it happen via their I-Commit campaign. “One child dies every 15 seconds due to the lack of clean water,” said a PAEW Advertisement.

“Water will become scarce in two thirds of the world by 2025,” it continued saying. It goes on to say that the demand for water in the Sultanate increases by 20 per cent every year and will continue to encourage saving water and treating it as an invaluable source.

24/08/2016, online at: http://timesofoman.com/article/90961/Oman/Education/Public-Authority-of-Electricity-and-Water-urge-people-in-Oman-to-save-water

- **Iran interested in proposed Chinese-built canal in Nicaragua**

Iranian firms want to participate in the construction of a massive canal across Nicaragua that a Chinese company has vowed to build, Iranian Foreign Minister Mohammed Javad Zarif said Wednesday.

Representatives of private Iranian construction companies accompanying Zarif on a visit to Nicaragua's capital discussed the possibility of getting a slice of the $50 billion project, the minister told a news conference.

The ambitious plan calls for a waterway linking the Pacific and Atlantic oceans that would rival the century-old one in Panama, which has recently been expanded to take bigger ships.

Yet work on Nicaragua's canal, meant to have started two years ago, has not begun. HKND, the Chinese group tasked with the huge job, now says it should start at the end of this year.

Iran has enjoyed good relations with Nicaragua, one of the poorest states in the Americas, and particularly its leftwing president, former rebel Daniel Ortega, who returned to power in 2007.

Both countries share an antipathy towards the United States.

Zarif made Nicaragua the second stop of a Latin American tour that began Monday in Cuba and which was to include Ecuador, Venezuela, Bolivia and Chile.

Nicaragua's government spokeswoman and First Lady, Rosario Murillo, said officials discussed investment opportunities with the Iranian delegation in the canal and other areas.

Ortega is running for re-election in November and has named his wife as future vice-president if he wins.

His victory looks likely after courts in recent months ordered opposition lawmakers and a party chief be replaced with figures hewing to Ortega's positions.

24/08/2016, online at: https://www.yahoo.com/news/iran-interested-proposed-chinese-built-canal-nicaragua-234557411--finance.html

- **Tunisia - Record high shortage in drinking water reserves in Tunisia**

Tunisia primarily depends on rainfall as its water source, for the past two years the country has been experiencing a periodic drought, since rainfall has significantly decreases. The Tunisian Ministry of Agriculture announced the entire country is suffering from water scarcity, civilians have been given priority over farming lands, such that every citizen has drinking water, however an in-equilibrium in the water-irrigation ratio occurred.

24/08/2016, with video online at:
http://arab24.com/portal/index.php/en/%D9%82%D8%B5%D8%B5-%D9%88%D9%85%D9%88%D8%A7%D8%B6%D9%8A%D8%B9-%D9%85%D9%82%D8%AA%D8%B1%D8%AD%D8%A9-2/tunis/item/3197-tunisia-record-high-shortage-in-drinking-water-reserves-in-tunisia

- **Egypt considers utilising rainmaking technology**

Egypt says it is considering introducing rainmaking technology known as cloud seeding in hopes of providing a new source of water in the desert country.

Cloud seeding, invented in 1946, can enhance the ability of clouds to produce precipitation. It involves infusing clouds with chemicals to increase water condensation, thus increasing rainfall.

Egypt signed a protocol with Germany in April where the European country is to train Egyptian staff to use weather modification technology, according to the head of Egypt's Meteorological Authority Ahmed Abdel-Al.

Earlier this week, a German team conducted an orientation session in Cairo on methods employed to use the technology, which is currently applied in many parts of the world including Germany, China, the UAE and France.

The Egyptian government is set to conduct feasibility studies on the application of the rain-maximising technology, Abdel-Al told Ahram Online on Tuesday

Cairo has sustained fears that a $4.2 billion hydro-electric dam Ethiopia is building would diminish its share of the Nile, which meets virtually all of the country's water needs.

Provided that it proves a success, the technique will be used in irrigation, producing potable water and a project of reclamation and development of one-and-a-half million acres sponsored by President Abdel-Fattah El-Sisi.

A team of several Egyptian ministries and institutions will work on the studies, including the ministries of agriculture, water, environment, as well as the armed forces, Abdel-Al added.

24/08/2016, online at: http://english.ahram.org.eg/NewsContent/1/64/241576/Egypt/Politics-/Egypt-considers-utilising-rainmaking-technology.aspx

- **Drought: The Sousse Village Without Water for Four Months**

Hmaydeya, a small settlement within the Sousse Govenorate, sits around 10 kilometers away from the airport that shuttles tourists from Enfidha to the green resorts of the coast. The nearest road lies around two kilometers away, accessible to the villagers by either foot or donkey. Around 50 people live here, most in half-completed houses, some barely habitable. Many stand incomplete, either unpainted, lacking gas fittings or unfurnished. Children, most under the age of ten, play in the dirt with the small stones that litter Hmaydeya's dirt tracks.

A three year old girl plays with them, her hair matted and her clothes clotted with dust. One of her eyes shows the clear signs of infection after being rubbed by hands that have not seen running water for days, if not weeks.

The residents of Hmaydeya have not had access to local running water for four months. What water they have must be carried by donkey from the nearest village of Sidi Saiden, whose own dam now sits bone dry in the day's 40 degree heat.

Though not as badly affected as Hmaydeya, within Sousse water rationing and extended periods where no water is available at all have become the norm. Environmental engineer, Morched Garbouj, President of the association SOS BIAA, explained the "drought we are going through started in February in the South and it continued North from there, until it reached Sousse." Lack of rainfall, already down 28 percent on last year's total has had a devastating effect on the region's water infrastructure. However, a disregard for maintaining its dams and barrages has had even more. "If not taken care of, the barrages will absorb the water" Garbouj said, diminishing the already shrinking amount available for consumption and agriculture.

According to a report by the World Resources Institute, Tunisia was ranked the 33rd most water-stressed country in the world. Based upon current figures, the entire country risks running dry by 2040.

In Hmaydeya, the women talk about how it has affected their hygiene, especially when menstruating."Imagine wearing the same bloody clothes, because you have no choice but to use the water given to you for survival." One told Tunisia Live, "Hygiene has become a luxury."

Of the little water makes it to the Governorate, most finds its way overseas by way of water intensive agricultural exports. Faten Jarraya Horriche, president of the environmental association, Eau Et Development said that, further to the excessive irrigation of crops, the government had missed the chance to invest its limited water resources elsewhere. Now the residents of Sousse and the

country's south are bearing the cost, as the water shortages that dominate their lives creep their way relentlessly north.

For most of the residents of nearby Sousse, the problems that first impacted upon the south towards the end of the winter didn't become apparent till March. Rim Jeaiem, a housewife from Khzama near Sousse was "going crazier by the day" as the unavailability of water extended from two hours a day, to entire 48 hour periods, "We would have no water from 6 or 7 pm in the winter until 9 in the morning the following day," she said. "My kids had to go to school without washing their faces or brushing their teeth. They couldn't even shower." Jeaiem told about how on some occasions she would leave the dry faucet open, so she would be woken by the first sounds of running water, before climbing from her bed and filling every container she could find.

However, though there were some days when water was available, it remained undrinkable, "it smelt like sewage" Jeaiem said, "and when it was left for a long time, the color would change.The family had little choice but to invest in mineral water to shower, or cook.

However, according to Garbouj and others, though water for those that live in Sousse and the country's heartlands may be rationed, in remains in plentiful supply in the hotels and resorts that line the country's coast. Similarly, in Gafsa where the residents' access to water is at its most limited, factories are extended unlimited access to water supplies.

According to the Minister of Agriculture, if no rain comes between now and October, all of Tunisia may lose access to drinkable water by October. Moreover, even in the case of healthy rainfall, the dams and barrages currently in place need to be maintained if that water is going to be retained.

Despite informing governmental officials from the city council, the police and SONEDE, Sousse residents have had no official comments or proposed solutions on the issue. They were simply all told to "be patient and bear with it".

According to the Tunisian Constitution, drinkable water, free from risks to health, is a right of every citizen. Campaigners say the current crisis, already a defining factor in the lives of thousands of people from Sousse to the Sahara, now threatens the rest of the country.

24/08/2016, online at: http://www.tunisia-live.net/2016/08/24/drought-the-sousse-village-with-no-water-for-four-months/

- **6 offers under evaluation for water pumping, storage station in Ataka**

The Egyptian Electricity Holding Co. has begun to evaluate the technical and financial offers to select a building consultant for a water pumping and storage station in Ataka in collaboration with the Armed Forces, which oversees the project.

A source from the Ministry of Electricity said that they started the evaluation of technical offers presented by six foreign and local companies to take over the building consultancy of the new water station under the supervision of the Armed Forces.

He added that the chosen consultant will evaluate the technical and financial feasibility studies of the project and will cooperate with the ministry in its negotiations with the Chinese company Sinohydro

over the implementation period of the project. It will also negotiate over the price of KW, the loan, the grace period, the annual installment and interest on the project.

Mohamed Osama, head of the Hydro Power Plants Executive Authority (HPPEA), said previously that the Armed Forces will supervise the selection of the project's consultant, but he did not speak about the companies applying for the tender.

HPPEA has been negotiating with German, Chinese, and Canadian firms to conduct economic and technical feasibility studies of the project, but Osama refused to talk about the project's consultant.

Osama said that the Cabinet approved the project and has allocated the required land for building the project as well as the license of the activity. The authority also received the security and environmental approvals.

The government signed a memorandum of understanding with Sinohydro during the Egypt Economic Development Conference held in March 2014 in Sharm El-Sheikh to build a power plant in Ataka with a capacity of 2,100 MW.

Osama added that the water pumping and storage technology is the best method for storing electricity in the world. The new technology will decrease the costs of operating networks and provide more security and stability to the electricity grid.

25/08/2016, Online at: http://www.dailynewsegypt.com/2016/08/25/electricity-ministry-evaluates-6-offers-select-consultant-water-pumping-storage-station-ataka/

- **Egyptian official: Israel stifling Egypt's hydraulic energy production**

Israel is urging Ethiopia to complete the Renaissance Dam project in order to get control of the water supply and stifle Egypt's hydraulic energy production, the chairman of the National Committee for Disasters Reduction said.

In his interview with the Egyptian daily newspaper Al-Mesryoon, Maghawry Shehata added that Israeli Prime Minister Benjamin Netanyahu spoke about the management of the water source during his visit to Ethiopia.

He pointed out that there will be experts from Israel among the technical committees that will determine the Nile waters' quotas.

25/08/2016, online at: https://www.middleeastmonitor.com/20160825-egyptian-official-israel-stifling-egypts-hydraulic-energy-production/

- **Water terrorism by India**

IN case of India and Pakistan water issue is partition old and India often manipulated tactics to deprive Pakistan from its due share. Pakistan, in initial years after independence faced lot of problems particularly in agriculture because of stoppage of water by India. As the major rivers flowing towards Pakistan originate from India, dispute and sharing over water always came up as an issue for Pakistan because of Indian stubbornness. To overcome problems an Indus Water Treaty was signed between India and Pakistan with the help of World Bank in 1960. Apparently it seemed that

this agreement will put an end to water issue between two neighbours but with passage of time it is observed that this treaty is often violated by India.

Before independence British constructed canal system to irrigate the area which is now modern day Pakistan. Partition left that system dependent on India for supply of water to Pakistan. According to Indus Water Treaty, water that flows into river Indus will be shared between the two countries but as the tributaries of Indus River originate in India, it is always playing politics on distribution of water to Pakistan. Before Indus Water Treaty, distribution of water was made on an ad hoc basis. Following the treaty usage of three eastern offshoots of rivers Sutlej, Beas and Ravi were given to India while three western rivers tributaries Chenab, Jhelum and the Indus were approved for Pakistan.

All of these six rivers flow through Kashmir which is bone of contention between two South Asian neighbours. Pakistan therefore depends on India for its water security. It is pertinent to mention that Pakistan is one of the world's most arid countries, with an average rainfall of under 240 mm a year. The population and the economy are heavily dependent on yearly inflow into the Indus river system which includes the Indus, Jhelum, Chenab, Ravi, Beas and Sutlej rivers and receive about 180 billion cubic meters of water that generally come from the neighbouring countries and mostly from snow-melt in the Himalayas. The balance between population and available water already makes Pakistan one of most water stressed countries of world and with rapid population growth it will soon enter a condition of absolute water scarcity.

Pakistan definitely is concerned by Indian plans of making hydro power projects in Indian occupied Kashmir. According to Pakistan, India violated the terms and conditions of Indus Water Treaty many times by constructing dams and planning of more construction of hydro power projects thereby gaining full control on the waters of western rivers. India in order to sabotage Pakistan economically often generates water projects despite settlements through Indus Water Treaty. In 1984 India started building Wullar Barrage on River Jhelum in IHK. In mid 90s India again violated IWT by construction of Baghliar Dam on River Chenab. In 2005, Pakistan pursued the World Bank's help to stop construction of the Baglihar dam.

Although WB allowed India to go ahead with venture after a few adjustments, yet it did not license the interruption of the agreed quota of water flow to Pakistan. Indian decision to construct two hydropower projects called Kishanganga on River Neelum are again violation of Indus Water Treaty. India is taking undue advantage in construction of Ksihanganga and Ratle hydro power projects on western tributaries. Indus Water Commission has also raised concerns on construction of dams by India in occupied territory of Kashmir. Somehow it is observed that Pakistani authorities and officials are not showing seriousness on Indian designs of Water terrorism against Pakistan. Rather those who speak in favour of Pakistan and stress on construction of dams they are often disregarded and removed from their duties. One of Chairman WAPDA was forced to resign for advocating Kalabagh dam in his series of columns which is a sad situation for a country which needs water reservoirs as many as possible. There is a dire need that Pakistan should take stand on its water resources as soon as possible so that India be stopped from constructing dams with malfunctioning designs on Pakistan's share of water.

Pakistan must also work on steady basis to construct more dams to overcome problems related to water scarcity and power generation. If Pakistan will not take this matter seriously, it will definitely encourage India for its moves against Pakistan and will effect Pakistan's stance on water resources badly. The delay in making approach to World Bank to resolve dispute between two countries and

asking for appointment of neutral party is favouring Pak-India losing its position. Awareness through print and electronic media can help in highlighting water scarcity and effective management of available water reservoirs.

— The writer works for Pakistan Institute for Conflict and Security Studies, a think tank based in Islamabad.

25/08/2016, online at: http://pakobserver.net/water-terrorism-by-india/

- **Egyptian researchers discover a way to grow forests in the desert with sewage**

Desertification is a major issue throughout Africa, but there's a simple way to stop the spread of deserts into fertile land: planting forests. The problem is that in the regions hardest hit by the phenomenon, there simply isn't enough clean water to properly nurture the trees and keep them healthy. But an innovative project in Egypt proves that it can be done using repurposed wastewater instead of tapping into the sparse fresh water supply. The trees grown in the forest are thriving, and in fact, the eucalyptus trees have been found to produce wood at four times the rate of pine plantations in Germany.

Located about two hours from Cairo, the Serapium forest is part of a program initiated by the Egyptian government in the 90s. The 200-hectare plantation is home to a variety of native and non-native trees, including commercially valuable species like eucalyptus and mahogany. Though the soil in this area would normally be too devoid of nutrients to support new tree growth, researchers have found that by watering the trees with sewage effluent, the plants are able to flourish. The wastewater provides so many nutrients that additional fertilizer isn't even necessary.

The sewage used to water these trees is at stage two in the treatment process. In the first stage, mechanical filters are used to remove dirt and garbage from the water. In the second stage, oxygen and microbes are added to decompose the organic material in the water. This leaves a fluid rich in phosphates and nitrogen, a mixture similar to that found in commercial fertilizers.

Normally, this wouldn't be used to water crops – the amount of fertilizers in the water would be excessive for some plants, and the bacteria in the water could potentially contaminate fruits and vegetables. However, in areas where nothing is grown for human consumption, it's perfectly safe to use.

In as few as 15 years, the trees in the plantation are ready to harvest with a production of 350 cubic meters of wood per hectare. By contrast, German pines would take around 60 years to reach the same level of production. So not only are the plantations helping Egypt retain its fertile land, but they're also producing a valuable natural resource which would otherwise need to be imported from other nations.

It's estimated that a whopping 650,000 hectares of the Egyptian desert could be converted to wood production if the country were to use 80% of its effluent for the cause. Right now, however, Egypt isn't even close – and that's primarily due to a lack of funding. However, it's possible the nation might be able to use money from the UN's Green Climate Fund or through private forestry companies.

25/08/2016, online at: http://inhabitat.com/egyptian-researchers-discover-a-way-to-grow-forests-in-the-desert-with-sewage/

- **Egypt and Ethiopia: Fears of Drought and Dreams of Development**

The sign above a modest, one-story shop features a photo of the Grand Ethiopian Renaissance Dam next to an image of gold and dollars: revenue expected from the dam, the great dream in Ethiopia's imagination. For Egyptians, that same dream stirs fears of drought. Tsegaab Getachew, a 29-year old Ethiopian tour organizer, hopes that the energy generated by the Grand Ethiopian Renaissance Dam will help expand the tourism industry in which he works. Amir Mikhail, a farmer in his sixties from Upper Egypt, fears his land will become fallow after the completion of the dam.

Ethiopia continues construction on the Renaissance Dam, which aims to generate 6,000 MW of electricity. It would enable the country to achieve sustainable development goals and combat poverty, which GERD Project Manager Simegnew Bekele says is Ethiopia's primary enemy. Ethiopian officials say it would enable the country to sell electricity to neighboring countries, including Sudan, Djibouti, Kenya, South Sudan, and Egypt, they describe as an economic achievement for the country. At present, Ethiopia's electricity generating capacity is about 2,060 MW—sufficient only for about 30 percent of its citizens' needs, as over 70 percent of the country's population is not adequately connected to the grid.

The Ethiopian Perspective

Sitting on the ground to charge his cell phone in the western region's Asosa Airport, about 300 km from the dam, Getachew says, "Ethiopia needs the dam to generate electricity, so we can achieve real development. This region can become an excellent tourist destination, but without electricity that won't be possible."

During a brief visit to Ethiopia, it appeared that the majority of Ethiopia's roads do not have streetlights. The country of 100 million suffers from frequent blackouts, with power outages described in local Ethiopian media as business as usual.

Getachew, the father of a 9-month old child, manages a tourism company in Addis Ababa, where his income is about 20,000 Ethiopian Birr (about US $1,000). He hopes to double this amount soon—and places much of that hope on the Renaissance Dam. "Having energy will enable us to develop infrastructure and utilities, build resorts, and attract first-rate tourists," he says.

Most Ethiopians—government employees in particular—contribute a percentage of their income to the dam, which they consider "a national project." This percentage varies per person, and is paid either monthly or yearly. The national pride is not unlike that of Egyptians who raised $8.5 billion in eight days, with 82 percent of the money raised through individual purchases of investment certificates.

"The dam will generate wealth and good salaries for us," Getachew adds enthusiastically. He contributed a yearly percentage he did not specify. "It's a dream for me, and for my child's future."

Getachew explains that most hotels in Ethiopia lack warm water, laundry services, fast food, and most importantly, reliable Wi-Fi service due to insufficient electricity. This dark reality was clear

during a visit to Ethiopia: during just one night at the Blendana Hotel in Asosa, the hotel suffered from several power outages.

The Egyptian Perspective

These rose-colored dreams in Ethiopia of a better future in which high rates of development are achieved, contrast with real fears in Egypt of the specter of a possible drought that could afflict the country if Ethiopia completes construction of the dam. Egypt fears that the 55.5 billion cubic meters of water it is entitled to yearly will be affected by the completion of the dam when its reservoir starts to fill with water.

The country depends nearly entirely on the Nile River for its agriculture, industry, and drinking water.

Egypt, in fact, needs about 120 billion cubic meters of water annually. In addition to the 55.5 billion cubic meters of water from its share of the Nile, another 20.5 billion cubic meters comes from recycled treated wastewater and agricultural drainage water, and groundwater, according to a report published by the Center for Environment and Development for the Arab Region and Europe (CEDARE) in March 2015.These figures reveal a significant water shortage in Egypt, confirmed by statements by Ministry of Water Resources and Irrigation officials.

Consequently, the construction of the Renaissance Dam raises serious fears of water scarcity and drought. Egyptian media coverage of the construction of the dam has been wrought with fear, mistrust, and doubt about its impact on Egypt's share of the Nile's water. Fear mongering headlines were common in both state-run and independent media under former president Mohamed Morsi, and the media and experts continue to warn against the consequences the dam will have on Egypt. It was described in 2013 as catastrophic for Egypt, and following a recent visit by an Egyptian media delegation to the site of the dam, state-run Al-Ahram published an article saying that the visit was not enough to allay Egyptian people's fears. This is in turn reflected in citizens' attitudes about the dam.

In a lavish house in central Cairo's suburb, Zamalek, just a few meters' walk from the Nile, Salma Salem expresses her concerns about her children and grandchildren's futures if Egypt suffers from drought. "Damming the Nile means stopping the regular flow of water to Egypt, or at least that control of the water is no longer in our hands," Salem says.

"It's clear that the government has failed to deal with this crisis," she adds. "It looks like we and our children will pay the price."

After several years of disputes and stalled negotiations, Egyptian President Abdel Fattah al-Sisi signed a preliminary agreement with Ethiopia and Sudan in March 2015. The agreement allowed for the construction of the dam, but did not resolve several points of contention, nor does it outline how disputes would be resolved. In a recent interview, Sisi again broached the issue. He said that negotiations between Ethiopia and Egypt were continuing in a reassuring manner, and called on people to respond with calm and confidence, adding that the Nile waters will continue to flow. Foreign Affairs Minister Sameh Shoukry has also sought to downplay fears. Acknowledging that risks to Egypt do exist, Shoukry said in June, "We are discussing them with our Ethiopian and Sudanese partners," in order to reach an agreement.

Some are reassured by statements by Sisi, who enjoys great popularity in Egypt, that he would not easily abandon Egypt's rights. Al-Ahram even published an interview with Ethiopian Water Minister Ato Motuma Mekassa who sought to reassure the Egyptian public. Others are afraid that Egypt has given in to the inevitable, among them members of parliament, including Sisi supporter Mostafa Bakry, who just recently described the dam as one of the many conspiracies against Egypt.

Mohamed Nasr Allam, who served as Minister of Water Resources and Irrigation from 2009 to 2011, has been openly critical of the agreement with Ethiopia, and expresses concern over future "negative effects" of the dam. Allam tells MENASource that Egypt fears that filling the Renaissance Dam's reservoir will cause the lake behind Egypt's Aswan High Dam, and Egypt's water reserves, to shrink. Allam says this will cause millions of feddans of agricultural land to go fallow, reduce the amount of electricity produced by the Aswan Dam, cause drinking water stations to go dry, and cause Egypt's water table to drop.

"The High Dam can only be filled if there are no dams before it, and if it empties, it will only be able to be refilled at half the capacity," Allam adds.

In the Minya Governorate about 300 km south of Cairo, Amir Mikhail, a farmer in his sixties, speaks of his fears that "his land will become fallow" as a result of how the Renaissance Dam will affect the flow of water to Egypt. "We barely have enough water to farm now," Mikhail complains. "We share water, and take turns watering our land." He adds, "Constructing the Renaissance Dam will be a disaster for sure. I'm afraid of the day I won't be able to water my crops. God help us."

25/08/2016, online at: http://www.atlanticcouncil.org/blogs/menasource/egypt-and-ethiopia-fears-of-drought-and-dreams-of-development

- The Quintuple Helix Approach to Targeted Open Innovation in Energy, Water, and Agriculture in the South Mediterranean Neighborhood - 5TOI_4EWAS

The objectives of this ambitious project will be to enhance the water, energy, and agriculture NEXUS approach (energy, water, agriculture/food) in the Southern Mediterranean Neighborhood, increase research capacity, the effective mobility of young innovators and researchers, and contribute to the Southern Mediterranean researchers' access to scientific excellence and Large Research Infrastructures

On July 11 and 12, 2016 in Barcelona (Spain), 24 innovation actors, such as ministries, universities/research centers and service companies, from 15 different countries (Italy, Belgium, Germany, the UK, France, Austria, Lebanon, Palestine, Tunisia, Algeria, Morocco, Egypt, Turkey, Jordan and Libya) gathered together.

These stakeholders are partners of the "Quintuple Helix Approach to Targeted Open Innovation in Energy, Water and Agriculture in the South Mediterranean Neighborhood" - 5TOI_4EWAS - project coordinated by the Department of Chemistry of the University Autonomy of Barcelona (UAB). 5TOI_4EWAS has been funded under the Horizon2020 programme promoted by the European Commission.

The aims of the 5TOI_4EWAS project are to:

• build a bridge between innovation and policies to open new markets in energy, agriculture and water management;

• support the key players in the innovative sectors through a common political action plan;

• facilitate access to the use of infrastructures, scientific facilities, and laboratories in the MPC and EU areas targeting academic researchers and not only;

• promote the development of RTD and entrepreneurship in the agriculture, water and energy sector throughout the Southern Mediterranean area and the European Union, increasing the participation of Mediterranean partners in the European Research Area.

The goal of this ambitious project is to improve the relationships between public and private institutions by setting up an innovation ecosystem, engaging Mediterranean countries and EU Member States.

26/08/2016, online at: http://cordis.europa.eu/news/rcn/134735_en.html?WT.mc_id=RSS-Feed?WT.rss_f=news&WT.rss_a=134735&WT.rss_ev=a

DCO to install 'high-tech' water filtration plants

Hundred new water filtration plants to be installed in Multan (Pakistan) to provide clean drinking water to people.

District Coordinating Officer (DCO) Nadir Chatha told a delegation on Friday that water filtration plants – having modern technology – would be installed and a sum of Rs 40 million had been earmarked for the purpose.

One plant would be installed at a high school and 100 such institutions have been identified in union councils. Chatha said the 80 'old' water filtration plants had been handed over to philanthropists and would become functional within next few days.

"The scheme's completion would bring the total number of filtration plants to 300," he said.

The DCO said a survey to check the ground water quality was in progress for the plants' installation – which would operate under the supervision of the school's council and the union council's chairman.

26/08/2016, online at: http://dailytimes.com.pk/pakistan/26-Aug-16/dco-to-install-high-tech-water-filtration-plants