



ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

Events-News-Politics-Projects-Environment-ClimateChange-Neighbourhoods-Cooperation-Disputes-Scarcity and more



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07 November 2017 - 13 November 2017

Israeli settlers steal water pipe used by Palestinians in Jordan Valley

Israeli settlers stole a 400-metre water pipe used by Palestinians in the village of Ein el-Sakout in the Jordan Valley on Tuesday, official Palestinian Authority owned Wafa news agency reported, highlighting the growing tension in the region as illegal settlements grow.

Muataz Besharat, who monitors settlement activities in the area, told Wafa that settlers stole the water pipe that was recently installed by the Palestinian Agricultural Relief for irrigation of crops.

The village is located in Area C of the West Bank, which is under full Israeli military control and where the Palestinian government has no jurisdiction.

Palestinian residents in these areas are often harassed and attacked by Israeli settlers who often carry out their acts in the presence of Israeli military forces.

Israel wants to push the Palestinians out of the Jordan Valley using all means and replace them by Jewish settlers.

Settlers also attacked a Palestinian farmer in the Sakout area of the Jordan Valley last week while he was tending his land. They beat the farmer as he worked, leaving him with bruises throughout his body, the agency reported.

The water pipe theft comes just days after Israeli Prime Minister Binyamin Netanyahu pledged 200 million shekels (\$57 million) to improve settler-only bypass roads in the occupied West Bank.

Netanyahu made the pledge after facing bereaved families of settlers killed in the West Bank at Israel's parliament.

"I come now from a meeting with the finance minister and we decided together to immediately allocate 200 million shekels to paving roads... We're not just talking, we're doing. Our actions are consistent, systematic and determined," Netanyahu said.

He said the government planned to budget another 600 million shekels (\$170 million) for further improvements.

Palestinians view bypass roads connecting Israeli settlements as another way to seize land and entrench a system of segregation which favours Jewish settlers over Palestinians.

In October, Israel advanced plans for nearly 4,000 settler homes in the occupied West Bank as part of a push to boost settlement growth.

08/11/2017 online at: <https://www.alaraby.co.uk/english/news/2017/11/8/israeli-settlers-steal-palestinian-water-pipe-in-jordan-valley>

Water sensitive cities conference held in Tel Aviv

The need for a sustainable and unified environmental policy to deal with the escalating problem of urban water contamination was the message that came from this year's Water Sensitive Cities Conference, which was held at the Kfar Maccabiah hotel on October 29, 2017.

The Conference was hosted by The Center for Water Sensitive Cities in Israel and KKL-JNF. Amongst the participants were city planners, heads of local and regional councils, water authority officials, landscape architects and drainage engineers.

Head of the Center for Water Sensitive Cities in Israel Dr. Yaron Zinger, who was the driving force behind the conference, said that the main idea behind the event was to showcase the achievements in the field of water sensitive cities, and to talk about the way forward.

“The problem has become acute. Our weather has become extreme, with short fierce rainfall after long dry periods. Today some 90% of the residents of the country live in cities which are expanding fast. As a result there is more runoff which means more pollution and our ecology is suffering. We regard the city water basin as a water supplier, and the challenge is to deal with flooding in the basin and to make that water usable. We want to promote awareness amongst the relevant parties of the problem resulting from untended water runoff, especially the government and local authorities, because they ultimately have to deal with the problem. They are the planners and the developers.”

The conference was opened by Tel Aviv Mayor Ron Huldai, who said that Israel's current expertise in water technology was born out of a need, however with all the expertise there is still a serious need to deal with the issue of storm water and runoff pollution.

“We have begun, but what we have achieved is not sufficient. Every year when the rains start we see how the runoff gathers up the dirt that had built up during the summer and delivers this contamination to the Yarkon River and to the sea. Due to its geographical location, Tel Aviv is on the receiving end of pollution that comes from cities further east. During rainfall, pollution from Petach Tikva streams into to the Big City. We want to put an end to that, and we will cooperate with everybody that can deal with it.”

12/11/2017 online at: <http://www.jpost.com/GreenIsrael/Water-Sensitive-Cities-Conference-Held-in-Tel-Aviv-514024>

Israel reportedly threatens to shelve Jordan water deal until embassy reopened

Israel has reportedly told Jordan that a joint agreement for the construction of a pipeline transferring water from the Red Sea to the Dead Sea will not go ahead until Israel is allowed to reopen its embassy in Amman.

In an escalating war of words and threats, senior officials in Jerusalem told Channel 10 that Israel notified Jordan that the water project will not move forward until Ambassador Einat Schlein and her staff are permitted to return to their posts.

Two weeks ago Jordan said it would not allow the embassy to reopen until an embassy guard who shot dead two Jordanian nationals was brought to trial.

Jordan refused to allow Schlein to return as Jerusalem's envoy after she was photographed along with the guard, named as Ziv Moyal, during a meeting with Prime Minister Benjamin Netanyahu after the deadly incident occurred on July 23.

The incident has put a damper on the so-called Red-Dead project. Several weeks ago Israel and Jordan were to have finalized the details before calling for tenders from international companies to do the work.

Without an embassy, the Jordanians reportedly wanted to continue the discussions by phone, but Israel has insisted on face to face meetings, which won't happen until the embassy is reopened, the TV report said.

"The position of the Foreign Ministry and the Prime Minister's Office is that we cannot have a situation where on the one hand the Jordanians do not allow us to reopen the embassy and on the other hand we continue to advance projects that are important to them as if nothing had happened," an anonymous Israeli official told Channel 10.

That message was reportedly conveyed to Jordan several weeks ago. In response, Jordan has reportedly threatened to continue with the project alone. Several articles in Jordanian media have cited officials saying that they do not need Israel for the pipeline, and even raising the possibility of bringing in Saudi Arabia to partner with them instead.

The \$10 billion project, which some see as an early stage in a regional peace deal, would see the construction of a 220-kilometer (137-mile) pipeline transferring water from the Red Sea to the Dead Sea — the lowest body of water on earth — to benefit Israelis, Jordanians and Palestinians, and replenish the dwindling Dead Sea.

According to the plan, a water desalination plant in the Jordanian city of Aqaba, located next to Eilat, will pump its brine (very salty water leftover from the desalination process) north to the Dead Sea. This will solve another problem: As desalination provides much-needed water to both southern Israel and Jordan for agriculture and consumption, the brine needs to go somewhere other than the Red Sea, which is home to sensitive corals.

Besides providing a yearly total of 100 million cubic meters of drinking water to Palestinians, Jordanians and Israelis, the Red-Dead project will produce "green energy" and replenish the Dead Sea, which is currently shrinking at a drastic pace.

Hadashot News (formerly Channel 2) reported last week that the Shin Bet had completed its investigation into the embassy incident and concluded that the security guard was justified in shooting Mohammed Jawawdeh, who stabbed him with a screwdriver after learning that he was Israeli. Moyal's landlord was also shot and killed by Moyal by accident during the incident. According to the report, there was no doubt Moyal acted in self-defense and there were no grounds for prosecuting him.

13/11/2017 online at: <https://www.timesofisrael.com/israel-reportedly-threatens-to-shelve-jordan-water-deal-until-embassy-reopened/>

Climate change: Jordan water crisis 'to get worse'

Water shortages in Jordan are likely to get far worse over the coming years, according to a recent study by Stanford University.

The researchers said that, in the absence of international climate policy action, the country could receive 30 percent less rainfall by 2100 and annual temperatures could increase by 4.5 Celsius.

This would double the number and duration of droughts when compared with the 1981-2010 period, raising concerns in a country already dealing with water shortages.

The study reinforces a warning issued by the World Bank in August when it named Jordan, Iraq, Lebanon, Morocco and Syria as the countries in the Middle East and North Africa that will experience significantly increased water stress driven by climate change.

In its report, the World Bank described the region as the global hotspot of unsustainable water use.

Currently, the reservoirs in Jordan are at a record low - only one-fifth full - and the vital winter rains are becoming increasingly erratic.

There seems little respite for the country, which draws 160 percent more water from the ground than is replenished by nature.

But despite its importance, there is little incentive to conserve the precious resource. The use of water irrigation remains heavily subsidised, and wastage is a major issue.

More than half of Jordan's water is used for agriculture, which produces only a small share of the local food supply. It is estimated that almost 50 percent of the water supply is lost due to misuse or theft.

The subsidy also means that some farmers grow water-intensive crops such as bananas and tomatoes.

The government is cracking down on illegal water use and has announced a slight increase in price, but Ali Subah, assistant secretary-general in the Ministry of Water and Irrigation, says the country views desalination as the answer to its water issues.

The trouble is that solutions often depend on cross-border cooperation. Jordan's flagship Red Sea desalination project, for example, has faced repeated delays, most recently because of a regional diplomatic crisis that led to a scaling back of cross-border contacts since the summer.

Until a solution is found, the fear is that the water crisis in Jordan will only get worse.

07/11/2017 online at: <http://www.aljazeera.com/news/2017/11/climate-change-jordan-water-crisis-worse-171107093731580.html>

Water data used ‘as a negotiating chip’

Data hoarding and inefficient coordination is hampering efforts to solve the increasingly acute problem of access to fresh water in the Middle East, a conference on science for peace has heard.

The Jordan River played a central part in the Arab Israeli conflict as a critical source of water for the region, and water is one of the central issues of the UN-organised World Science Forum, held on the banks of the Dead Sea in Jordan from 7 to 11 November.

The problem is that the yearly amount of drinkable fresh water available to people in the region has dropped to 80 cubic metres per person, way below the water scarcity limit of 1,000 cubic meters per person set by the UN.

One issue that holds back efforts to safeguard supplies is a lack of sharing of vital data on rainfall and water usage between regions vying for water resources, such as Israel and Palestine or India and Bangladesh.

“Sometimes it happens today, in this part of the region, that upstream countries are withholding data and they are using it as a negotiating chip,” Andras Szollosi-Nagy, from the National University of Public Service in Hungary, told the conference.

The WSF was hosted by the Jordanian Princess Sumaya bint Hassan, and included presentations from physicist Michio Kaku and a message from astronauts aboard the International Space Station.

Organizations need to develop water information systems, according to Dr Jauad El Kharraz, head of research at MEDRC Water Research in Oman, adding that this is an important part of the solution.

“A lot of initiatives have been pushing to help countries develop national water energy information systems so we can have at the level of the decision-maker a common indicator so [as] to assess ... if we are on the right track,” El Kharraz explained.

He said data sharing needs to be done between countries but also between energy companies, farming groups and water sectors within countries. “There is a lack of coordination between different actors at national level.”

Another part of the solution to better data sharing rests on the shoulders of civil society and international organisations, according to Marcia Barbosa from the Universidade Federal do Rio Grande do Sul in Brazil. They need to create better networks, she said, to find ways in which different sectors could benefit each other.

This is particularly true between the energy and water sectors, which are inextricably linked with water often an integral part of energy production, and energy needed to supply drinking water to homes.

“Maybe the region that is thinking about energy, they have water so they didn’t link immediately their renewable energy sources with the idea of using water,” Barbosa told the meeting. “We have to link the people [who are] thinking about the individual problems.”

09/11/2017 online at: <http://www.scidev.net/global/climate-change/news/water-data-used-as-a-negotiating-chip.html>

The Dead Sea is dying: Thousands of sinkholes shrinking water level at rate of 1.4 metres a year

On a bright November day in Jordan, the Dead Sea appears tranquil, with barely a ripple on its surface as it stretches out into a distant haze.

But there are indications that all is not well here at the lowest point on Earth: by the cluster of hotels that lines the seafront, mechanical diggers appear to be shoring up the land, and the walk down to the sun loungers beside the water is lengthening.

It all hints at a problem that has vexed multiple governments and sparked concerns among researchers, environmentalists and anyone else with an interest in this iconic salt lake, which is woven into the history of Islam, Christianity and Judaism.

In short, the Dead Sea is dying.

It faces a threat that embodies many of the modern-day challenges in the Middle East over hard-pressed water resources.

Turn the clock back about half a century, and the Dead Sea's surface area was almost 1,000 square kilometres, a figure that had remained roughly constant in records going back to the beginning of the 18th century.

Since the 1960s, though, it has shrunk at what few would deny is an alarming rate. It now covers about 667 square kilometres and its water level is dropping by a remarkable 1.4 metres per year.

The consequences are far reaching.

The Dead Sea's retreat has exposed new areas of land and caused freshwater to move into underground salt deposits, dissolving them and creating enormous voids into which the terrain above simply collapses. In just a few decades, as many as 6,000 sinkholes have appeared, about 1,000 of them are in Jordan. Some are vertiginous openings tens of metres deep.

No one understands these effects better than Professor Najib Karaki, a geophysicist from the University of Jordan who has been researching events here since 1991.

“Nothing will reverse the damage,” he says, while adding that concerted efforts can, however, limit the consequences of the Dead Sea's continued shrinkage.

Prof Karaki has countless photographs showing the consequences of building on land that subsequently becomes unstable: buildings perched precipitously on the edge of widening openings, bridges that have collapsed, roads that have been diverted.

The reason why the Dead Sea is shrinking is simple, even if the politics behind it are complex and a source of controversy that dates back many decades: much less water is flowing in from the River Jordan. In the 1960s, says Karaki, about 1.3 billion cubic metres spilled into the Dead Sea each year. Now the figure is “not more than 200 million, 300 million” cubic metres.

Much of the decline is because of heavy extraction by Jordan and Israel, with the latter using the water to irrigate the Negev desert, which lies in the south and covers more than half the total area of the country. Jordan is one of the most water-stressed countries in the world, and renewable sources can only provide about half of what the population needs, according to USAID.

While the Dead Sea problem is on a grand scale, so is the proposed remedy, the Red Sea-Dead Sea Water Conveyance Project, often abbreviated to the Red-Dead project. This aims to provide drinking water and to produce electricity as well as dealing with the fall in the Dead Sea's water level.

Jordan hopes that this scheme will, to start with, pump 300 million cubic metres of water from the Red Sea to the Dead Sea. Local press reports quoting the Jordanian authorities suggest that if the project is fully realised, 2 billion cubic metres could be transferred each year.

A memorandum of understanding over the project was signed between Jordan, Palestine and Israel four years ago.

The Jordanian authorities have said that \$400 million out of an initial cost of \$1.1 billion has already been pledged by donors, with major contributions, as grants, loans and equipment, coming from the United States, Japan, the European Union, Italy, Spain and others. Construction could start next year, although recent reports have highlighted tensions between Israel and Jordan over the scheme.

Prof Karaki does not think it likely that the project will ever be able to provide enough water to stem the continued decline in the level of the Red Sea. He says the initial stage would only provide “a very tiny percentage” of what is needed and even long-term he sees it as something that will only “limit” the problems rather than solve them.

His approach, instead, is one of mitigation, of trying to ensure that building projects around the Dead Sea do not fall victim to the area's now notorious physical instability.

He hopes to complete a complex survey of the land surrounding the Dead Sea using new satellite data and going back through recent historical records to group blocks of land into three categories: completely safe for development, safe as long as significant engineering

work is carried out to ensure stability, and best left undeveloped because of the risk of damage. It would offer, he says, an “early-warning system”.

“If you want to make an investment in an area, we can show you how it performed in the last 20 years,” he says.

As for the future of the Dead Sea itself, which has a maximum depth of about 300 metres, Prof Karaki says its level will, eventually, settle, albeit significantly below where it is now.

“It's not going to disappear completely ... There will always be some water coming [into it] and it will stabilise,” he said.

“When it reaches a new equilibrium it will be very much less than nowadays.”

10/11/2017 online at: <https://www.thenational.ae/uae/environment/the-dead-sea-is-dying-thousands-of-sinkholes-shrinking-water-level-at-rate-of-1-4-metres-a-year-1.674553>

Saudi Arabia detains main foreign investor in Renaissance Dam

Saudi authorities detained the largest investor in the Renaissance Dam project in Ethiopia, Mohammed al-Amoudi, as part of the sweeping crackdown on princes and former government ministers on Saturday, according to The Russian International Television Network, RT, formerly Russia Today.

The Ethiopian-born Saudi businessman, whose wealth is over \$9 billion, is contributing with \$88 million to construct the Renaissance Dam, which will reduce Egypt's share of Nile water and accordingly affect water security of Egypt.

According to Ethiopian newspapers, Amoudi is the largest foreign investor in Ethiopia and the first donator in the financing campaign by the late Meles Zenawi's for the Renaissance Dam.

In Ethiopia, Amoudi has invested in agriculture, cement production and gold mining. His firm Saudi Star Agricultural Development has cultivated thousands of acres of land for fruits, vegetables, cereals, coffee, tea, flowers and rice fields for customers in Ethiopia and abroad.

Saudi Arabia arrested dozens of Saudi princes, former government ministers and businessmen such as Prince Waleed bin Talal and businessman Saleh Kamel, as part of a sweeping anti-corruption probe, further cementing King Salman and his crown prince son's control of the kingdom.

The Saudi anti-corruption committee, formed by Crown Prince Mohammed bin Salman, may take further measures on the detained princes and ministers, including travel-bans and bank accounts freezes, Saudi newspaper Okaz reported on Sunday.

07/11/2017 online at: <http://www.egyptindependent.com/saudi-arabia-detains-main-foreign-investor-in-renaissance-dam/>

Water is Scarce in Egypt; so are Research Funds

Egyptian researchers are exploring innovative solutions to some aspects of the country's water-scarcity problem, including projects that seek to make the use of water in agriculture more efficient, to devise affordable ways of desalinating brackish water, and to recycle the "gray water" produced by laundries. But weak public funding for these projects makes it difficult to carry them out.

One promising new project aims to cut in half the amount of water needed to cultivate rice—a significant issue as rice crops now consume more than 10 billion cubic meters of water a year, or one-fifth of the 55.5 billion cubic meters of water that Egypt claims as its annual share of the Nile River's flow. But that claim is coming under pressure as disputes intensify between Egypt and other nations that share the Nile and its headwaters.

Egypt's economy, especially agriculture, depends almost entirely on water from the Nile. Even with its current allotment, Egypt faces a deficit between available water resources and current uses. Its per-capita water resources—about 660 cubic meters per person per year, according to a 2014 report—are already below the global "water poverty" line and approaching the threshold the United Nations defines as "absolute scarcity."

The water politics of the region and the heavy use of water in growing rice underscore the importance of projects like one led by Mohamed El-Sayed El-Hagarey. El-Hagarey, a researcher at the Desert Research Center of Egypt's Ministry of Agriculture, was honored last year by the International Commission on Irrigation and Drainage, an international organization based in New Delhi, for devising a plow and planting technique that can save about half the amount of irrigation water needed to grow rice.

"Rice needs to be continuously immersed with water until it reaches 10 to 15 centimeters above the soil surface," said el-Hagarey. "This causes significant loss of water and fertilizers."

El-Hagarey's new plow forms V-shaped trenches in the soil, and a seeding tray that follows the plow deposits rice seedlings into the furrows. The trenches are then filled with the water necessary for the plants' growth. This amount is much less than the irrigation water used in traditional rice cultivation, in which the entire field is flooded.

The new technique was tested in a field in Kafr El-Sheikh, a governorate famous for rice cultivation in Egypt. "The results were satisfactory, with the crop increasing by 4.6 percent and the use of water decreased by 50 percent," said el-Hagarey.

Egypt's concerns over its water resources have increased since 2011, when Ethiopia began building its Grand Ethiopian Renaissance Dam on the Blue Nile River, a major tributary of the Nile. The new dam, now nearing completion, will create a reservoir that ultimately is expected to hold more than 60 billion cubic meters of water. It will take years to fill the reservoir, and that process threatens to reduce the flow of fresh water downstream to Sudan and Egypt.

"This will cause the desertification of three million acres of land in Egypt," said Nader Nouredine, a professor of water resources and land reclamation at Cairo University. That's

an area equivalent to 51 percent of the country's agricultural land, he said, and its loss would worsen the nation's food gap.

Other Sources of Fresh Water

Another option for providing fresh water is desalination, but that technology typically has been considered too slow and expensive for widespread adoption.

At Alexandria University, researchers are testing a technique that they believe can filter and desalinate highly saline water in a short time and at a reasonable cost. The new technique relies on "membrane evaporation," a process in which water is filtered through a membrane to remove large particles and then heated. The evaporating steam is condensed to remove small impurities before collecting the clean water.

"The membrane can be easily made using cheap components, which makes it an excellent choice in Egypt," said Ahmed El-Shafe'i, an assistant professor of agricultural engineering and bio-systems at the University of Alexandria and one of the researchers involved in testing the technique.

"This method can be applied in remote areas because it only requires providing membranes for the filtration process and then the heat to evaporate the filtered water," said el-Shafe'i.

Other scientists are working on projects for treating and reusing "gray water," which includes the wastewater from commercial laundries as well as from domestic bathtubs and washing machines, and even the runoff from washing cars.

Egypt produces about 10 billion cubic meters of gray water per year, says Wael Abdel Mo'ez, a professor of chemical engineering at Minia University who has developed a device for cleansing it of chemicals that can damage sewage networks.

The device separates oil and grease from the water, then uses a chemical treatment to remove any industrial detergents, heavy materials and other residues. Finally it performs a sterilization process to eliminate bacteria and other biological contaminants, so the water can be recycled for industrial or agricultural use.

"In this way, 80 percent of the water can be restored to be used in washing, provided there are underground tanks in the laundries to collect the outgoing water after cleaning," Abdel Mo'ez said.

The new Assiut Barrage on the Nile, which provides irrigation water for 1.6 million acres in Upper Egypt.

Financial and Logistical Hurdles

Despite the diversity of projects seeking solutions to the water-scarcity problem in Egypt, putting them into practice has been hampered lack of funding and other problems.

El-Hagarey, the researcher whose plow project won an international award, financed his research at his own expense, but needs more money to develop the machine. "The cost of the

machine is 100,000 Egyptian pounds — about 5,000 U.S. dollars,” he said. “But I am seeking greater funding from the government to develop it and make it suitable for commercial use.”

Abdel Mo’ez needs more than money to see his gray-water purification project succeed on a large scale. “Besides funding, the government must pass legislation that forces building owners to allocate separate gray-water drainage,” he said.

Hossam Abu El-Nasr, a professor of agriculture at Assiut University, says he believes that researchers have developed models that can reduce waste, reuse water, and manage water resources better. But research alone is useless, he said.

“There is no real encouragement from government institutions, which invariably argue that there is no funding budget, even though the water crisis is worsening one day after another,” he said.

The problem has worsened in recent years as the government has cut its investment in research and adopted austerity measures in response to an economic crisis that now grips the country.

The ministry of agriculture’s budget amounts to 545 million Egyptian pounds (\$30.8 million) for the 2016-17 fiscal year. But the Agricultural Research Center’s budget was reduced sharply this year, to 3 million Egyptian pounds (\$170,000), compared to 70 million pounds (about \$4 million) the previous year. The Desert Research Center’s budget was reduced from 32 million Egyptian pounds (\$1.8 million) to 4 million pounds (\$226,000).

The reduction in research funds “is very large and unjustified, especially with our urgent need to increase agricultural production amid droughts, climate change and the shortage and pollution of Egyptian water resources,” said Nouredine, the professor of water resources and land reclamation at Cairo University.

Others called for more cooperation between government and academic research centers. “Every ministry has research centers that work separately from other centers, and there is no coordination with university research centers,” said Ali el-Bahrawi, a professor at the department of irrigation and hydraulics at Ain Shams University’s college of engineering. “Efforts to carry out research and cooperate in their implementation must be consolidated.”

Hani el-Nazir, the former head of the Academy of Scientific Research and Technology, a nonprofit organization affiliated with Egypt’s ministry of higher education, agrees with el-Bahrawi that research successes in Egypt are mostly individual and lack governmental support and institutional cooperation. “Government spending is very weak on research,” he said. “The efforts of institutions to conduct real research at a large level must be combined.”

10/11/2017 online at: <https://www.al-fanarmedia.org/2017/11/water-scarce-egypt-research-funds/>

UAE youth help supply water to underprivileged in Egypt

Some 500 underprivileged people in Egypt will now receive clean water supply thanks to the help of the Dubai Electricity and Water Authority's (Dewa) Youth Council.

The council installed water meters in 500 homes in Upper Egypt that is expected to benefit around 5,000 people.

The project is part of Dewa's commitment to its Corporate Social Responsibility (CSR), in cooperation with the UAE Water Aid Foundation (Suqia), and under the umbrella of the Mohammad Bin Rashid Al Maktoum Global Initiatives (MBRGI), as part of the Year of Giving 2017 and the Year of Zayed 2018.

Saeed Mohammad Al Tayer, Managing Director and CEO of Dewa, said Dewa is keen on motivating youth to follow the path of the UAE's wise leadership.

"We are pleased that the Youth Council has taken this initiative, and are proud of its contribution to the implementation of this important sustainable project in our second country, Egypt. Many underprivileged families had to travel long distances daily to get clean water. With the completion of the water supply project, we have provided a sustainable solution to this problem, and put an end to the daily suffering of our people in the villages of Upper Egypt," Al Tayer said.

Mohammad Abdul Karim Al Shamsi, Acting Executive Director of Suqia, said the initiative is in line with Suqia's efforts to spread the culture of volunteering and CSR among the youth.

"Our cooperation with the Dewa Youth Council is part of our efforts to serve the community, through providing clean drinking water, especially as Suqia works to expand its policy in charitable and humanitarian endeavours, to establish community partnerships with various government sectors," Al Shamsi said.

Fatima Mohammad Al Joker, Chairperson of Dewa's Youth Council, noted that this CSR initiative aims to establish the principle of volunteerism among UAE youth, since the role played by the youth in the community is an essential one. Accordingly, the Youth Council has included a full focus in its work plan on sustainability, and the promotion of the values of giving, in line with the objectives of the Year of Giving, to serve all members of society.

12/11/2017 online at: <http://gulfnews.com/news/uae/year-giving/uae-youth-help-supply-water-to-underprivileged-in-egypt-1.2123344>

Egypt concerned about Nile water share after fruitless meeting with Ethiopia, Sudan

Egypt on Sunday expressed concern about its share of the Nile River water after its meeting with Ethiopia and Sudan failed to approve an initial study on the effects of Ethiopia's new dam on the downstream states.

The two-day ministerial meeting of the tripartite technical committee of Egypt, Ethiopia and Sudan on the Grand Ethiopian Renaissance Dam (GERD), which kicked off on Saturday, failed to approve an introductory report by a consultant company on the dam's effects on the two downstream countries, namely Egypt and Sudan.

"Egypt is concerned about this development that could obstruct technical studies despite Egypt's efforts and flexibility over the past months to make sure the studies will be completed as soon as possible," said Egypt's Minister of Water Resources and Irrigation Mohamed Abdel-Aati.

The irrigation ministers of Ethiopia and Sudan did not approve the consultant company's introductory report of the studies despite Egypt's initial approval, while asking for amendments that would affect the studies and make the report contentless.

Egypt is worried about its annual share of 55.5 billion cubic meters of the Nile River water amid the GERD's rapid construction.

Egypt's ties with Ethiopia have seen ups and downs since the latter started the dam project since April 2011 as Egypt has been suffering from turmoil following an uprising that toppled former president Hosni Mubarak.

When President Abdel-Fattah al-Sisi took office in 2014, he showed understanding of Ethiopia's aspiration for development through the GERD that would produce around 6,000 megawatts of electricity to the country.

In March 2015, the leaders of Egypt, Ethiopia and Sudan signed an initial cooperation deal on the principles of sharing the Nile River water and the construction of the GERD, which will be Africa's largest dam upon completion.

Earlier in 2010, an agreement was signed among some Nile Basin states in Uganda's Entebbe about the sharing of the Nile River water, but it was rejected by Egypt and its downstream partner Sudan, citing the deal affects their usual annual share of the Nile water.

On the other hand, relations between Egypt and Sudan have been tense over the past years on various issues.

In May, Sudanese President Omar al-Bashir accused Egypt of providing military support to armed rebels in his country. The two countries also have a territorial dispute over the border region of Halayeb and Shalateen.

13/11/2017 online at: http://news.xinhuanet.com/english/2017-11/13/c_136747070.htm

Heavy rainfall adds nearly 6 million cubic meters to Mjenin water dam

A heavy downpour of rainfall yesterday in the Greater Tripolitania region has added nearly 6 million cubic meters to the Wadi Mjenin water dam, the General Authority for Water Resources (GAWR) has reported.

The deluge added to the 1,143 million cubic meters of rainwater already held by the dam giving a total water content of 6,900 million cubic meters GAWR said. The dam can hold a maximum of 10 million cubic meters annually and had been designed to hold as much as 58 million cubic meters of rain water.

Four main seasonal streams feed the Mjenin Wadi which in turn are fed by a number of other tributaries. Mjenin passes through Tripoli by Suk Il Thlat and into the Mediterranean at the beginning of the Gergarish road.

Water from the heavy rainfall has already made its way to Tripoli blocking the road in the Salah Al-Deen area where there is no bridge over the Wadi.

The Wadi Mjenin Dam is described technically as an embankment dam and is located on the Wadi Mejenin itself. It is located 64 km (40 miles) south of Tripoli in the Jabal al Gharbi / Nefua Mountain district of Libya.

The dam was completed in 1972 during the Qaddafi era and the primary purpose of the dam is water supply for irrigation and flood control. It is also believed to replenish the underground water aquifers that supply the region's borehole wells used widely by farms and household for their main water supply.

The lack of waterfall in recent decades and increased use (some would say misuse) of water has led to the water table dropping by a hundred to two hundred meters in some Greater Tripolitania areas. This vacuum had led to the water table being filled by salty sea water and turning many borehole wells saline.

The average rainfall in Libya is 251 mm (9.9 inches) per year or 20.9 mm / month, with a variation between the Jabal Al-Akhdar (Green Mountains) of northern Cyrenaica and the Fezzan region and the Sahara Desert in the south. This compares to an average of 885 mm or 33.7 inches of rainfall per year in the UK.

13/11/2017 online at: <https://www.libyaherald.com/2017/11/13/heavy-rainfall-adds-nearly-6-million-cubic-meters-to-mjenin-water-dam/>

Arab world's water scarcity alarms experts as region's population soars

With a twentieth of the world's population but little more than one per cent of its renewable water resources, the Arab world faces major challenges when it comes to water scarcity.

And with the region set to see its population double by 2050, these difficulties are only going to intensify.

Yet the World Science Forum in Jordan was told that longstanding efforts to forge intergovernmental agreements on how the region's water is used have made little progress.

“After 50 years of science diplomacy are we better off or worse off? Water issues persist.

"All evidence points to us being far away from being where we would like to be," Dr Ghaith Fariz, director of the Unesco Regional Bureau for Science in the Arab States, said during a session at the forum entitled, 'Lessons learnt and future prospects for management of shared/transboundary resources in the Arab region'.

Dr Fariz described water as “the most pressing issue in the Arab region” and “a crisis of government”.

“Appropriate cost-effective science is needed to provide a platform to implement effective water governance,” he said.

According to a 2013 United Nations Development Programme report, 14 of the 20 most water-stressed countries in the world are in the Arab world.

Dr Fariz suggested that ensuring that water issues in the region had a stronger grounding in science and technology could help to prevent them from becoming politicised. Echoing this point, another UNESCO official, Professor Andras Szollosi-Nagy, said scientific tools “enable the creation of a joint perspective” instead of countries looking at shared water assets from the point of view of only their own interests.

The need for transnational agreements is particularly acute because the majority of the region's water resources cross borders.

In the Gulf nations, which lack major river basins, concern centres on the extraction of water from underground aquifer water reservoirs, rather than from rivers.

In the UAE, for example, 51 per cent of the water supply comes from groundwater, a resource that is predicted to become depleted in the decades to come.

“Most of the groundwater systems are not renewable,” said Professor Waleed Zubari, professor of water resources management at the Arabian Gulf University in Bahrain, adding that much “best practice” when it came to water resources originated from scientists.

Dr Hassan Al Janabi, Iraq's minister of water resources, indicated that despite the challenges, there was cause for optimism, saying that his own country's relations with its neighbours when it came to water resources were improving.

“At least we're talking to each other. I visited Turkey in March. For the first time I felt we could talk about this issue,” he said.

“We are hopeful, with the current conditions between the two countries, we can reach an agreement so we can minimise the damage to our country and region.”

08/11/2017 online at: <https://www.thenational.ae/uae/arab-world-s-water-scarcity-alarms-experts-as-region-s-population-soars-1.673941>

MRRD signs 151 contracts for potable water supply projects

The Ministry of Rural Rehabilitation and Development (MRRD) on Sunday signed 151 contracts for potable water supply projects, costing 361 million afghanis, with local community development councils across the country.

Mujiburrahman Karimi, MRRD acting minister, at the contracts signing ceremony here said the projects included digging water wells, setting up water supply networks and building reservoirs for storing healthy water in the countryside.

He said about 237 surficial and deep water wells would be dug up in Kapisa, Khost, Sar-i-Pul, Jawzjan, Baghlan, Maidan Wardak, Faryab, Kabul, Parwan, Panjshir, Balkh and Takhar provinces at a total cost of 61.8 million afghanis.

He said another 72 water supply networks would also be established in Jawzjan, Uruzgan, Badghis, Ghor, Nuristan, Takhar, Kunduz, Nangarhar, Daikundi, Faryab, Samangan, Balkh, Sar-i-Pul, Kunar, Paktia, Badakshan, Kabul, Kandahar, Herat, Paktia, Laghman and Baghlan provinces under the contracts.

He said future networks would cost 30 million afs. Karimi said the projects were funded jointly by the USAID, UNICEF, SAARC and the Afghanistan government.

He said with implementation of the projects, about 336,000 individuals would benefit from drinkable hygienic water.

Rolf Luyendijk, chief for UNICEF's Water, Sanitation and Hygiene (WASH) program, who attended the ceremony, said: "We will further authorize a fund of \$10 million to the MoRRD next year so water is available at schools and hospitals for people by next year."

Meanwhile, Community Development Councils welcomed the inking of the contracts, saying they would resolve problems of rural people to a great extent.

Fateh Khan, head of the development council for Malakha village in the capital of Paktika province, who signed a contract with MRRD, said the council would establish a water supply network in relevant areas under the contract: "Based on our contract with MRRD, we will provide potable water facility for Paktika University."

12/11/2017 online at: <https://www.pajhwok.com/en/2017/11/12/mrrd-signs-151-contracts-potable-water-supply-projects>

How climate change is aggravating Pakistan's water crisis

The Germanwatch think tank says in its latest climate risk report that Pakistan is the world's seventh most vulnerable country to climate change. In a DW interview, expert Tariq Banuri explains the reasons behind this.

DW: Experts link Pakistan's water shortage to mismanagement, but is there also a connection between the country's water crisis and climate change?

Tariq Banuri: Pakistan has witnessed a number of floods in the past several years, and long spells of drought which, experts believe, are a result of climate change. Pakistan's rain pattern is already that of high magnitude and low frequency, which means we have more rain but for a shorter time, which does not help percolation and raise the ground water level. So, climate change is causing longer spells of drought, which is complicating our water scarcity problem.

But climate change is not the sole cause of water scarcity; exponential population growth is also contributing to this crisis. For instance, at the time of Pakistan's independence in 1947, the population was low, and therefore the per capita water availability was more than 5,000

cubic meters per person per day, which made Pakistan a water-abundant country at the time. But today, it has fallen below 1,000 cubic meters per person, which is why we say that Pakistan is a water-scarce country.

In future, though, climate change will make matters worse in a number of ways. First, as mentioned above, the total quantity of water is likely to decline, thus increasing the scarcity level. Second, the water availability will become more erratic, thus increasing uncertainty and seasonal stresses and strains. Third, the increased temperatures will reduce water availability further because of higher evaporation rates while increasing crop water requirements and other water demands.

Does that mean that climate change is triggering droughts in some parts of the country?

Pakistan has already experienced severe droughts in its southern region (especially Tharparkar in Sindh province) in 1998-2002 and 2014-17. It will most likely intensify because of the climate change, which threatens the situation in a number of ways.

First, if glaciers continue to decline, the contribution of snow and glacier melt will ultimately decrease. Second, climate change will also affect the monsoon patterns (although current projections do not show systematic changes in this regard). Third, the higher temperatures throughout the country will increase water demand as well as evaporation. All three factors are likely to contribute to an increased frequency of droughts.

But there are contradictory reports about the melting of glaciers in Pakistan. What is your take on this?

The Indus Basin System is fed by glaciers from three interconnected mountain ranges, namely the Himalayas, the Karakorum and the Hindukush. Of the three (also known as the HKH region), the glaciers in the Himalayas and the Hindukush are melting, similar to those in the rest of the world. The Karakorum, however, appears to be behaving in an anomalous manner; for example, some glaciers are stable, others are melting, and some even appear to be increasing. This has puzzled scientists because no one expects glaciers to remain stable when temperatures rise.

Experts say that climate change is also changing the rain pattern in Pakistan. How will it impact the water crisis in Pakistan in the coming years?

This is a rather complex question. There will be lower rainfall in some areas and higher in others. Also, rainfall may become more concentrated, more intense for a short period.

Some experts say that Pakistan is likely to "dry up" by 2025. Do you agree with this assessment?

"Dry up" is a sensational phrase that scientists prefer not to use. As I said earlier, the recent trends suggest that aggregate water flows may have declined a little bit, but we are not sure whether this is temporary or permanent. In future, most projections show a declining trend and an increased variability of the flows. Most projections look at the next 50 or 75 years,

rather than the next 10 years. The most urgent problem in Pakistan in this regard is population growth, which reduces the average water availability every day.

Climate change will make it much worse. So, we advise that the authorities control population growth, carry out forestation and vegetation that helps percolation and in-filling of natural aquifer that serves as our water storage facility.

Does Pakistan's development policy take climate change into account?

Pakistan needs to have a development strategy that draws benefits from the direction in which the world economy is moving, so that we are not left behind while everyone else makes a successful transition to a low carbon economy.

09/11/2017 online at: <http://www.dw.com/en/how-climate-change-is-aggravating-pakistans-water-crisis/a-41315151>

Time to get serious about water

Disagreements over how to best solve Pakistan's water scarcity issues came to a head on Thursday when federal minister for Water Resources, Javed Shah, called the opponents of the Kalabagh dam "Indian agents". The Sindh Assembly responded by expressing its outrage over the accusation and demanded that the federal minister apologize for his "mischievous move" which hurt the sentiments of the people of Sindh and other provinces that have reservations about the dam.

Debates about Kalabagh Dam have always been mired in politics and distrust between Punjab and smaller provinces. Whenever Kalabagh Dam is proposed as the solution to Pakistan's water and energy problems, smaller provinces especially Sindh and KP project the dam as a Punjabi conspiracy to steal their water.

Punjab and Sindh's water disputes go back all the way to the 1870s when Punjab started constructing irrigation infrastructure on the Indus river. This was followed by a series of accords and agreements regarding water distribution between Punjab and Sindh, the first of which was the 1901-1903 India Irrigation Commission which gave Sindh priority to access to the Indus river's water. The final agreement under the colonial government was reached in 1945, which also held Sindh's right to the Indus river superior to Punjab's.

Today Sindh is losing water even if it manages to keep Punjab's hands off the Indus. Desertification is a major issue in Sindh. Additionally, a report submitted before the Sindh High Court in July 2017 revealed that 77 percent of the water in 14 Sindh districts was unfit for human consumption.

The situation is the same all over Pakistan. In December 2013, the World Resources Institute ranked Pakistan among the 36 most water stressed countries in the world. Earlier this month, the Indus River System Authority (which supports Kalabagh dam) told the Senate Forum for Policy Research that Pakistan dumps water worth \$21 billion into the sea every year due to a lack of water conservation systems. The country's agriculture remains dependant on an

outdated irrigation system, as well as over reliant on water intensive crops like rice and sugar cane. It is predicted that by 2050, there will only be 482 cubic meters of potable water for every person in the country.

The time to fix Pakistan's water issues is now. It will be too late if serious action is delayed any longer. The first step in this regard would be to form a coherent national water policy, which is still lacking. Furthermore, Punjab must find a way to play fairly with other provinces and vice versa so that there can be an end to petty squabbling and serious progress can be made.

12/11/2017 online at: <https://dailytimes.com.pk/137620/time-get-serious-water/>

Water terrorism: India blocks three rivers flowing into Pakistan

In bid to expedite water war, India has completely blocked flows of water from river Sutlej, Beas and Ravi into Pakistan while another 50000 cusec water of river Chenab has been cut short, reported Roznama Dunya on Monday.

As result of blockage, zero water discharge has been reported in all 90 canals erupting from the aforementioned rivers. At times when Pakistan's political elite is busy in annihilating rivals, India is inaudibly violating 1960 Indus Waters Treaty (IWT).

According to details, India was compelled to allow flow of 50000 cusec water of river Chenab into Pakistan—and the quantity at present is merely 5461 cusec.

India has built several dams on rivers Sutlej, Beas and Ravi, consequently eliminating thousands of species of sea animals. 4182 cusec of water is being released in Upper Chenab Canal whereas the same needs at least 18000 cusec. Analysts have warned of alarming rise in price of agriculture products as farmers are using tube wells to acquire water for their fields.

According to the Indus Waters Treaty, Pakistan has unrestricted access to the three rivers, i.e. Jhelum, Chenab and the Indus. For its part, India was allocated unrestricted access to the three eastern rivers, i.e. Ravi, Sutlej and Beas. India's Modi has threatened on multiple occasions to scrap Indus Waters Treaty.

13/11/2017 online at: <http://dunyanews.tv/en/Pakistan/414168-Water-terrorism:-India-blocks-three-rivers-flowing-into-Pakistan>