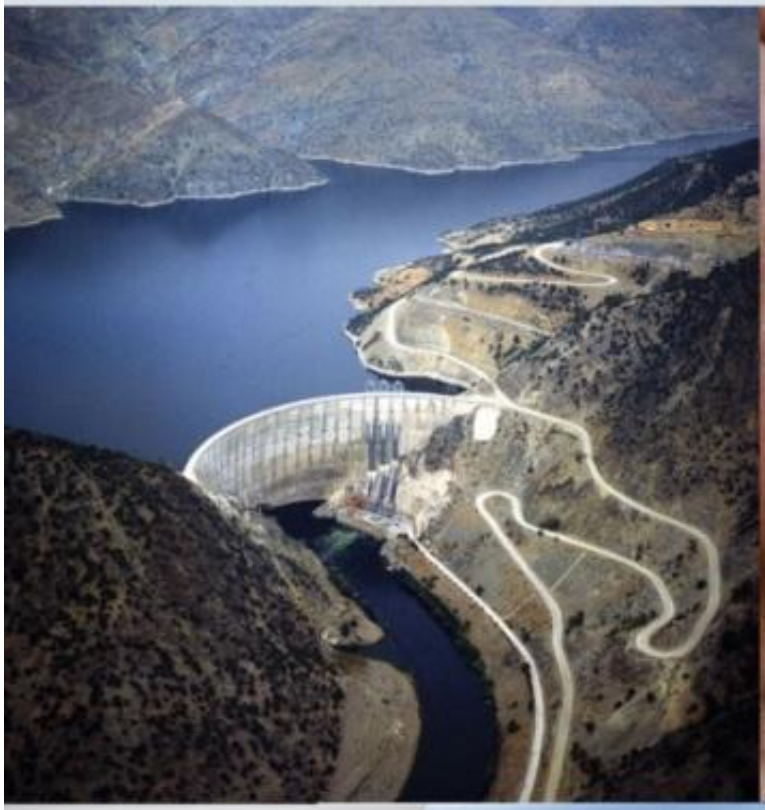


ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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





ORSAM WATER BULLETIN

01 August 2017 - 07 August 2017

One man's mission to protect Iraq's Rivers for future generations

"I really wanted to do something about the river we lost when I was a child."

For the past seven years, Nabil Musa has been traveling — oftentimes on a paddleboard or in a raft — around the Kurdistan region of Iraq on a one-man mission to promote the importance of clean waterways for current and future generations.

Experts throughout the country fear that decades of war, pollution, uncharted development and damming mean a water crisis is imminent.

Musa is part of Water keepers Iraq, an NGO that advocates and works "to protect the rivers, streams and waterways of Iraq and support local communities in the sustainable use of these natural resources." (Water keepers Iraq is affiliated with the international Water keeper Alliance.)

Toward the end of the video, Musa sums up the urgency at the heart of his work, asking, "If we don't have this water how can we survive?"

04/08/2017 online at: https://ensia.com/videos/watch-one-mans-mission-protect-iraqs-rivers-future-generations/

Iranian MP says water shortage poses no security threats

While many inside Iran and abroad have expressed concerns over water crisis in the country, an Iranian lawmaker has rejected the opinions that suggest the issue may turn into a security threat.

"It is a wrong interpretation to describe the water shortage issue as a security threat. However, this is a significant problem and requires a serious follow-up," Kazem Jalali, a member of the Iranian parliament's national security and foreign policy committee, told Trend.

Alaeddin Boroujerdi, head of the national security and foreign policy committee, had earlier warned that water crisis has escalated into a national security predicament, adding that the parliament had to launch a special committee to tackle the problem.

Boroujerdi had also criticized the country's officials over their failure to consider the problem as a serious issue over the past decades, saying Iran has very limited water resources.

"Water shortage has become a national security threat," he was quoted as saying by Iranian media in late June.

Iranian experts have already criticized agricultural sector for wasting water resources as the sector accounts for about 90 percent of water consumption in the country, blamed on irrigation methods that are highly inefficient.

Low cost of water, excessive construction of dams, substandard irrigating methods and systems as well as drought and climate change are among the main reasons escalating the water issue in the Middle Eastern state.

01/08/2017 online at: https://en.trend.az/iran/society/2783203.html

Caspian Water Transfer under Consideration

The plan to transfer water from Caspian Sea in the north to the drought-ridden Semnan Province is undergoing final reviews and waiting for the approval of the Department of Environment.

Emphasizing on the critical water scarcity in Semnan, Energy Minister Hamid Chitchian said the use of water from the northern Caspian Sea would help tackle the growing drought in the region, Tasnim News Agency reported.

Interbasin transfer or transbasin diversion refers to manmade conveyance schemes that move water from one river basin to another basin where water is less available, usually for development purposes.

However, since its presentation, the project has raised environmental concerns. Mohammad Darvish, who heads the Public Participation Office at DOE, believes the project will result in large-scale deforestation in Hyrcanian Forest that borders the southern shores of Caspian Sea.

The Caspian Sea's disputed legal status further complicates the water transfer project. There is still no international agreement about whether to define the Caspian as a sea or a lake, and that makes the extent of territorial waters and sharing formula rather vague.

The sea is bordered by five countries: Iran, Russia, Azerbaijan, Kazakhstan and Turkmenistan.

Darvish claims that by going ahead with the project, Iran will set a bad precedent.

"Imagine what would happen if each of those countries decided to pump water from the Caspian Sea, desalinate it and transfer the salt and wastewater back to the sea. It'll eradicate all marine life," he said.

Additionally, the destruction of the sea's biodiversity will take a toll on local communities that rely on fishing to make a living.

"We're supposed to address the Caspian Sea's pollution plight to improve the quality of life of locals and not destroy the sea's biodiversity," the official earlier said.

Darvish, who is also a researcher at the Research Institute for Forests and Range, said the 150-kilometer pipeline to divert water to Semnan in north-central Iran would run through the Hyrcanian Forest, necessitating the felling of trees in the ecologically-rich woodlands.

“The forests in northern Iran covered 3.6 million hectares 50 years ago. Today, they barely cover 1.6 million, so we really shouldn’t even be debating this. We can’t afford to lose more forests,” he said.

Darvish warned against the fallouts of the project in Semnan, citing similar schemes in other provinces that have had adverse environmental impacts.

Likening the Caspian Sea water transfer project to a high-interest loan for Semnan residents, Darvish said the people will end up paying the prohibitive costs for “an unsustainable” water supply.

Critics say there are more feasible, better and lasting solutions to the province’s water woes.

Rainwater harvesting, judicious water use (especially in the agricultural sector), promoting modern irrigation techniques, recycling wastewater, separating potable water from wastewater and implementing watershed plans are among measures suggested by experts to help conserve water.

For years, environmentalists, social scientists and the cross-section of academia and media have appealed to the masses to cut water consumption and called on officials to undertake meaningful reforms, to no avail.

There is a strong consensus that if water consumption patterns do not change in the near future, many parts of the country will turn into barren desert while entire towns and villages will become totally empty of residents.

03/08/2017 online at: https://financialtribune.com/articles/people-environment/69542/caspian-water-transfer-under-consideration

Ultra-Deep Water Extraction Approved in Sistan-Baluchestan

Long debates on water drilling from a depth of 500-1,000 meters have finally ended with the government’s approval of the project in the southeastern water-stressed province of Sistan-Baluchestan.

According to the latest report by Persian-language newspaper Khorasan, the government has allocated 250 billion rials ($6.5 million) for the project.

Before the plan enters the operational phase, zoning studies and geophysical studies for digging wells should be undertaken. If the studies show positive results, experts will be employed to extract water from renewable water sources.

In September 2015, Energy Minister Hamid Chitchian said the ministry is studying plans to supply water from the Persian Gulf to three eastern Iranian provinces, which will help address the nationwide drought and water shortage that have affected the eastern regions.

Chitchian believes such water supply plans would quench the thirst of the country’s water-stressed regions, though they are considered costly and harmful to the environment.

“These strategic groundwater resources take thousands of years to replenish, thus they should only be exploited in special cases and with great care,” he said.

According to the official, drilling each deepwater well requires $7.5 million annually.

Perpetual drought has been accompanied by a significant decline in rainfall that has resulted in a 6-billion-cubic-meter drop in the average water level of reservoirs.

Iran uses 90% of its renewable water resources, while the global average is 40%.

Officials say the amount of water drawn from groundwater sources needs to drop from 55 billion cubic meters to 26.5 billion cubic meters per year to avoid a crisis.

03/08/2017 online at: https://financialtribune.com/articles/people-environment/69545/ultra-deep-water-extraction-approved-in-sistan-baluchestan

Iran Industry Spotlight: Water Management

Like other countries in the region, Iran faces a severe water crisis due to climate change and poor water management. One of the most visible reminders of this ongoing problem is Lake Urmia. Located in the northwestern corner of Iran, Lake Urmia's watershed serves an agricultural regionwith a population of 6.4 million people. Previously one of the largest salt lakes in the world, Lake Urmia was also once a popular tourist destination. However, the last 20 years of environmental conditions and damming of tributary rivers for irrigation have shrunk Lake Urmia's surface area by 70% and its water volume by 95%.

Water stress has had a serious effect on the Iranian economy. According to the World Bank, the annual cost of Iran's environmental degradation amounts to 5%-10% of GDP. Despite calls for change from Iran's leadership (e.g., President Hassan Rouhani said Iran is seeking "modern methods and solutions" to mitigate the detrimental effects of consumption in a recent 2016 interview), government agencies in charge of the water supply are themselves partially to blame for the depletion of groundwater stores, through the subsidization of utilities. Government subsidies allow free groundwater for well owners, and users pay far less than the actual energy costs of pumping water. While the ancient system of qanats still provides water in Iran, the government's preference for digging wells, diverting water and creating dams has overextended the demand on underground aquifers and rivers for water.

Public overuse threatens to exhaust the reserves of underground aquifers in twelve of Iran's thirty-one provinces. The average Iranian uses 66 gallons of water each day, twice the world standard. Reasons for this include infrastructural failures, with cities reporting losses of nearly one-third of their water supplies from leaky pipes. Further, agricultural consumption (which dwarfs public usage and accounts for more than 92% of the country's water use) is inefficient in Iran. Many farmers grow water-demanding crops, and given the low productivity of water (ratio of yield per unit of water) on irrigated lands, it is difficult to implement water-restrictive policies when agriculture is a major component of the Iranian economy. The Ministry of Power announced that the previously provided 85 to 90 billion cubic meters of water would

be downgraded to 50 billion cubic meters as inefficiency had driven agricultural water usage to unjustifiable levels.

In part as a result of the water crisis, Iran is now the world's third leading country in dam construction. Investment in dam construction only follows that of gas and oil. Dams provide much needed drinking water and irrigation, and power hydroelectric plants in Iran. Approximately 20 dams were built per year in the last three decades. And, while dam construction has slowed slightly under President Rouhani, dam deals are now increasingly being signed with foreign companies. One example is a recent agreement between South Korea and Iran for cooperation on the Karoun-2 dam on the Karoun River. Starting in the Bakhtiari Mountains and winding southwest for 515 miles, the Karoun River (also spelled Karun) is a tributary of the Shatt al-Arab and is home to 5 hydroelectric dams.

Other water-related areas in which Iran has sought to garner investment are desalination and water transfer projects. In 2012, Iran designed a $1.5 billion project to desalinate and transfer water from the Caspian Sea to Iran. Though shelved in 2013, the Caspian Sea Project was reportedly back on track again in 2016, along with a $400 million budget for a project to transfer desalinated water from the Persian Gulf and the Sea of Oman. Last year, Doosan Heavy Industries and Construction Company signed a deal with Iran-based Sazeh Sazan Co. to build a plant to desalinate around 200,000 tons of water a day, the market for which is expected to reach $2 billion by 2018.

Despite the problematic nature of dwindling water resources in Iran, the industry for technological improvement in addressing the water crisis in Iran is growing. Contracts with foreign firms, notably water consumption management agreements with Swedish and French firms, bodes well for the vitality of the industry. Deputy Energy Minister Alireza Daemi announced that companies from Austria, Germany, France and Italy have also shown an interest in electricity, water and water management projects in Iran.

Below is information about an upcoming conference in Tehran, Iran that showcases aspects of Iran's water industry, including water management, treatment and environmental protection.

04/08/2017 online at: http://www.payvand.com/news/17/aug/1021.html

KRG has sufficient water but outdated system leaves many high and dry

Living on the edge of a desert with neighbors diverting entire rivers and building dams, Kurds understand the importance of water and consider wasting it a sin.

Knocking on doors in the Kurdistan capital, person after person said it was important to conserve water, even at homes where water was cascading down the front steps and down the drain.

But what people think of water is not translated into action. At Bafrin Hussein’s house a pipe stretching from the roof to the sidewalk gushed a steady stream of clean water. The rooftop tank was full and overflowing, she explained.

She said she was concerned about wasting water, but shrugged that there was nothing she could do. “I’ve asked my husband to do something to fix it, but he is ignoring it.”

Asked if they would fix it if they had to pay for the water, she said, “Yes. If the government takes money from us for this water, then for sure we would stop it.”

At the moment, people pay a set monthly fee for water based on the square footage of their property instead of actual consumption. Masood Karrash, head of Erbil Water and Sewage department describes this as a big problem.

“The problem is that the people don’t care about not using the water. Maybe sometimes they are washing the street, the cars, they make a big garden, because you can say… it is free of charge.” Karrash told Rudaw.

Dr. Mohamed Amin Barzinji, dean of the Natural Resources Engineering and Management department at the University of Kurdistan-Hawler (UKH) seemed more concerned with water waste than most.

“When you don’t have a control over your water flow, people just waste it. We have to stop. We have to at least take some measure to reduce waste. I’m sure it’s not going to be totally eliminated, but we have to start some measure to do something to stop this huge waste that we are having,” he said.

Municipal authorities have begun introducing water meters in a bid to cut down on waste, but the program is fraught with problems.

In Qaladze, which had its water supply cut off by Iran in June, 95 percent of homes have been fitted with water meters, “but they do not work,” said Mohamed Hassan, water manager in the border town.

In Erbil, the process of installing water meters began more than a year ago and officials hope to be finished within a month or so. Once all houses are outfitted with water meters they will begin billing on the basis of water usage.

Karrash’s department wants the private sector to collect revenues once the program is up and running, part of a general desire to bring the private sector on board. 40 percent of th revenues will be spent on maintenance and the rest will end up in the coffers of the Ministry of Finance.

In houses with working water meters individual consumption habits have not been affected. The meters themselves are often coated in a thick layer of dust and unchecked since installment.

To create a culture of conservation the Ministry of Education has arranged tours to water treatment plants for thousands of students so that the children will learn about the importance of water and take that knowledge home to their families, Karrash explained.

Since the majority of Kurds are Muslims, his department also works with imams and seminars to advise people against wasting water.

Quoting the Quran imams tell people that anyone who wastes anything, including water, is a brother of the devil. They say that a person must only use what they need - no more, no less.

Midya Raqeeb and her mother live in a large home in Erbil. She disagrees with the current billing system, arguing that fees should be set based on the number of people living in a home rather than the size of the house.

“Where can I find the money to pay water and electricity bills?” she asked.

Like many of their neighbours their water has been frequently cut off lately. This happens more often in summer than winter, Raqeeb said. Recently, too, the water coming out of their taps has been cloudy. They don’t know why.

The Kurdistan Region produces about 2 million cubic metres of water per day and the cost to produce potable water is 400 IQD per cubic metre, about 35 cents.

“Mathematically there is enough water for everyone,” said Masood Karrash, noting that they meet or exceed recommended global standards. But unreliable electricity and a poorly designed distribution system means not everyone gets their share of the water.

Erbil gets its water from two sources: 55 percent from the Great Zab River and 45 percent from around 900 deep wells.

According to Karrash, the wells need at least 20 hours of electricity per day, but are only getting about 10 non-continuous hours. So the wells are only operating at half capacity.

UKH’s Barzinji suggests that one solution lies in all government ministries working together to “create the ethos, culture of conservation, awareness.”

02/08/2017 online at: http://www.rudaw.net/english/kurdistan/02082017

Water deal tightens Israel's control over Palestinians

It was hailed as a breakthrough, a rare display of regional cooperation, and a positive step that may pave the way for resuscitating talks between Palestinians and Israelis, which have been on hold since 2014.

But a recent water agreement, signed under the auspices of US President Donald Trump's Middle East envoy in mid-July, may actually cement Israel's control over water resources in the West Bank, experts say.

"The mindset with many US administrations has been that it's a victory getting a Palestinian and an Israeli in a room. It sells newspapers," said Diana Buttu, a former adviser to the Palestinian negotiating team. "What doesn't sell is someone looking at this with a critical eye and saying it's a terrible idea."

The water agreement, which effectively increases the amount of water that the Palestinian Authority (PA) can buy from Israel, was inked in the context of the "Red-Dead" project, as it

is commonly known - a plan to link the Red Sea, Dead Sea and a desalination plant in the Jordanian port of Aqaba through a 200km pipeline.

That $900m Red-Dead plan, sponsored by the World Bank and agreed upon in 2013, aims to boost water supplies for Israel, the Palestinians and Jordan, by diverting water from the Red Sea, turning some of it into fresh water, and pumping the excess from the desalination process into the Dead Sea, thereby replenishing its dwindling levels.

The recent bilateral water agreement would see Israel sell 32 million cubic metres of water to the PA - 22 of which would go to the West Bank for 3.3 shekels ($0.9) per cubic metre, while the rest is allocated to the Gaza Strip for 3.2 shekels per cubic metre.

"We hope that this deal will contribute to the healing of the Dead Sea and that it will help not only Palestinians and Israelis, but Jordanians as well," US envoy Jason Greenblatt said, speaking at a news conference in Jerusalem with Israeli Regional Cooperation Minister Tzachi Hanegbi and the head of the Palestinian Water Authority, Mazen Ghoneim.

The same day, the White House released a statement hailing the new agreement as "another indication that the parties are capable of working together to achieve mutually beneficial results".

Meanwhile, the PA contends that water is a final-status issue, to be negotiated in a final peace agreement between Israel and the Palestinians, and that signing this agreement would not have any effect on any future political negotiations with Israel.

Speaking to reporters in Ramallah on July 18, Ghoneim acknowledged that the deal is only a band-aid. "The crisis won't end until Israel's occupation ends and we secure our water rights in the three underground basins under Israel's control," he said.

"The water being given to us as part of the agreement is our right because we have a share in the coast of the Dead Sea. This has nothing to do with negotiations on a final [settlement] with Israel."

Under the Oslo Accords, signed between Palestinians and Israel more than two decades ago, Israel retained control of most water resources in the West Bank (80 percent), with the remaining 20 percent going to Palestinians. But the accords, which were meant to be temporary, have left Israelis consuming four times more water per person than Palestinians.

Having left out this larger issue of Palestinian rights to water resources, the plan is being downplayed by some experts as merely a basic agreement to outline how much water the PA can buy.

"It is a simple commercial deal between Israel and the PA," said Jad Isaac, the director of the Applied Research Institute - Jerusalem, which promotes sustainable development through the management of natural resources.

"This is Trump's way: saying it's a breakthrough, and trying to make a PR campaign out of it and saying that he made progress. This is the Trump approach. But actually there is nothing substantial about it."

Critics have also warned that the plan does not address Israeli restrictions on Palestinian access to water and the development of infrastructure needed to address the water crisis in the occupied West Bank.

Palestinians in the West Bank consume only 70 litres of water per capita per day, well below what the World Health Organization recommends as a minimum (100).

In the most vulnerable communities in Area C - those not connected to the water network - that number further drops to 20, according to EWASH, a coalition of Palestinian and international organisations working on water and sanitation in the Palestinian territories.

EWASH adds that "Palestinians in the West Bank extract not more than 10 percent of the shared water resources due to Israeli restrictions on the development of Palestinian water infrastructure and its exploitation of the shared Mountain Aquifer."

Palestinians maintain that their rights to the water on the banks of the River Jordan and Dead Sea shores are being violated.

When the Red-Dead deal was signed in 2013, Palestinian environmental and human rights groups said that it did not address the damage to the West Bank Eastern Aquifer, one of the only water sources for West Bank Palestinians, which is rapidly depleting because of the shrinking Dead Sea.

The Dead Sea's water levels have been falling by about one metre per year - with a devastating environmental and economic impact - mainly because most of the water of the Jordan River is being diverted, and industries mine the Dead Sea for minerals.

The recent bilateral agreement, which does not increase the Palestinians' quota of water in the Jordan River, makes an untenable situation permanent and guarantees Israel a lion's share of its water, thus reinforcing the status quo, Buttu said.

"They have moved away from the idea that water is a shared resource and instead adopted the approach that Israel controls and allocates water to Palestinians," she added. "Israel has been selling water to Palestinians for a long time, but this is enshrining it even further by saying that this is the way to alleviate the water problem."

In 2012, Palestinian human rights organisation al-Haq accused Israeli settlements and companies of "pillaging" the natural resources of the Dead Sea. "The presence of settlers who directly utilise and profit from the Dead Sea wealth has severely exacerbated this situation and contributed to the overexploitation of the area, resulting in severe environmental damage," the group said in a report at the time.

Israel counters criticism by pointing out that, under the Oslo Accords, it has full control over Area C, a vast area that represents more than 60 percent of the West Bank, and that includes the Dead Sea shore.

Authorities also say that the Israeli-Palestinian Joint Water Committee - which, until May, had not convened in seven years - will now address some of the thorny water issues.

"Recently, the Joint Water Committee was renewed, during which the two sides will discuss, together in cooperation, all the needed solutions, including water drilling and more," COGAT, the Israeli military's civil body that administers the West Bank, said in a statement.

Israeli officials say that water problems in the territories could have been addressed had the Palestinians attended the meetings of the joint committee. Palestinians attribute their refusal to conditions set by their counterparts, namely that they must support Israeli settlement water projects for any Palestinian water improvements to be approved.

According to Israeli foreign ministry spokesman Emmanuel Nahshon, "There are many things to be done together to upgrade the water infrastructure in the PA. We are talking about old, leaking pipes, and a more rational use of water." He also pointed to the illegal tapping into pipes, which he maintained Palestinians did because they did not want to pay for water. "This is something we've been wanting to do over the years, and the new water agreement is one of the ways to deal with that. The new agreement ... is not only about water quotas; it's also about more coherent and better use of water, in order to address the needs of the Palestinians."

But water specialists say that the root cause of the problem is not illegal activity, but the unavailability of water resources to Palestinians and the mismanagement and diversion of the Jordan River.

Muna Dajani, a water researcher based in Jerusalem, said that this month's agreement depoliticises the issue of water, turning it into a commodity that is only dealt with under technical or commercial auspices. "It puts Palestinians in a corner. The PA is also so weak that it can't ask for its water rights."

01/08/2017 online at: http://www.aljazeera.com/indepth/features/2017/07/water-deal-tightens-israel-control-palestinians-170730144424989.html

India, Israel to boost cooperation in water resources management

India and Israel will soon form a joint group of officials to explore areas of cooperation between the two countries in water resources management, Union minister Uma Bharti said here today.

Bharti made the statement when Israel's Ambassador to India Daniel Cameron called on her earlier in the day, according to an official statement.

During the meeting, Cameron told Bharti that a pilot project of waste water management can be taken up along the Ganga River in Varanasi in Uttar Pradesh, the statement added.

Bharti suggested that the use of treated water, Pradhan Mantri Krishi Sinchayee Yojana and mutual cooperation in the field of research-development and training of personnel could be some other areas which can be explored by the two countries.

The minister also described Israel as a "pioneer" in the field of water management and said that India can learn a lot from it, the statement said.

India and Israel had signed an MoU in November 2016 to strengthen cooperation at national, regional and international levels in the field of water resources management and development by collaborating and sharing experience and expertise.

02/08/2017 online at: http://www.newindianexpress.com/nation/2017/aug/02/india-israel-to-boost-cooperation-in-water-resources-management-1637443.html

Israel Cuts off Water Thieves in Binyamin

In a wide-ranging operation, the Civil Administration has disconnected illegal water connections in numerous villages in Yehudah and Shomron. The officials targeted villages in the area of Migdalim, east of Ariel in Samaria, which had been experiencing severe water shortages due to theft of water by Arabs in the area.

The thefts involved Arabs in Area B – under Palestinian Authority civilian control and Israeli military control – hijacking a water pipe belonging to Mekorot, the Israeli water company. In recent days, officials shut off 14 connections in two separate raids on the villages.

In recent weeks, many towns in Yehudah and Shomron have complained about limited water supplies, and at least some were due to theft by Arabs. In a statement, the Civil Administration said that it was “constantly working to ensure a supply of water to all towns and to prevent water theft. We are also instituting new programs to increase the supply of water, to take into account growing needs.” One such project is underway in the Shiloh Bloc region, near Migdalim, which “will increase the supply of water by thousands of cubic meters.”

04/08/2017 online at: http://hamodia.com/2017/08/04/israel-cuts-off-water-thieves-binyamin/

Jordan River drying up amid finance impasse

The Ministry of Finance and Water Authority refuse to foot the bill for a desalination project that could save the river but has swelled to NIS 100 million over budget; southern part of the Jordan already in dire straits‹ as Ynet said.

While the Jordan River north of the Kinneret is in danger of drying up‹ a financial dispute between the government and residents of the Jordan Valley is delaying conservation and rehabilitation efforts in the southern part of the river.

The regional council is supposed to construct a desalination facility that would allow officials to stop pumping irrigation water from the Kinneret and allow clean‹ treated water to be introduced into the Jordan River.

However‹ according to the regional council head‹ the project will cost an estimated NIS 100 million more than planned and the Ministry of Finance and the Water Authority both refuse to supply the missing funds.

The Jordan River‹ which today hardly deserves the title of "river" in certain places‹ was once the largest‹ longest and most significant river in Israel. However‹ the construction of the Degania Dam in the 1930s led to the drying of the southern portion of the river almost entirely‹ leading to its ecological destruction.

After years of negotiations‹ a solution was finally agreed upon to release of 15 million cubic meters of water from the Kinneret and release it downstream into the Jordan.

However‹ the contractor who won the tender for the project has been waiting for years for the go-ahead to begin work‹ but in the meantime the cost of the project has jumped and‹ as mentioned‹ the Treasury refuses to pay the difference.

The Ministry of Finance issued a statement in response‹ saying‹ "After several parts of the plant were built‹ the Israel Water Association submitted a funding request that deviated from previously agreed budgets by tens of millions of shekels…Financing the continued construction of the plant is currently being discussed."

The Jordan Valley Council issued a statement saying‹ "We call upon the minister of finance to release the funds that have already been allocated‹ but not yet been transferred as required."

07/08/2017 online at: http://www.standardrepublic.com/2017/08/jordan-river-drying-up-amid-finance-impasse/16220.htm

How long can Gaza survive with no water?

The water crisis caused by ongoing power outages of more than 20 hours a day has pushed Gaza Strip residents to dig unlicensed wells, disregarding the ensuing serious threats to the already scarce aquifer water stock.

At the request of Palestinian Authority President Mahmoud Abbas, Israel reduced its power supply to Gaza on June 19 from 120 megawatts to 48 megawatts, causing the current water crises.

Omar Hamid, the head of a family of nine, told Al-Monitor, "The municipality is delivering water to the citizens' homes for only two hours every two or three days. This is not sufficient to meet a household's minimum basic water needs."

He said, "There's no electricity to operate the water pumps and fill our water tanks. Gaza has been living with barely four hours of power supply a day. This scarce supply of electricity often does not coincide with the supply hours of water pumped from the various municipality wells to the citizens' homes."

Like other citizens, Hamid is forced to buy water at a very high price from private local stations to fill his house tank. "Filling a 1,000-liter water tank from private local stations costs

25 shekels (about $7), while the municipality offers the same quantity at 1 shekel ($0.28)," he said.

To secure her water needs without having to pay this high price, Hayat al-Najar, a housewife and mother of six, stores municipal water during supply hours, using everything suitable for this purpose such as bathtubs, empty bottles of juice and other utensils. She uses her stored water to carry out household tasks such as cleaning, washing clothes and doing the dishes.

She told Al-Monitor, "Our water supply barely covers our basic needs. My children need to take daily showers in this hot summer, but I can only afford to give them one shower per week to save water."

In order to have access to water, citizens, especially owners of residential buildings, started digging unlicensed wells to pump out water from the already stressed aquifer, Mazen al-Banna, the vice president of the Palestinian Water Authority in the Gaza Strip, told Al-Monitor.

"Gaza's aquifer is overpumped by about 150 million cubic meters [122,000 acre feet] a year, Banna said. Around 220 million cubic meters are drawn each year, but the annual replenishment from rainwater is only 70 million cubic meters, he said.

Banna said there are around 10,000 wells across the Gaza Strip, including 300 municipal wells, 2,700 agricultural wells and 7,000 unlicensed wells.

It costs about $2,000 to dig a private well. Maher Abu Juba, a construction worker who digs wells for citizens, told Al-Monitor, "Despite this high cost, citizens are increasingly relying on private wells by sharing their costs among neighbors as the only means to overcome the chronic water crisis."

He said that three years ago, the water authority prevented citizens from drilling unlicensed wells in a bid to preserve underground reserves.

The water authority "would fill wells dug by the citizens, but today it is turning a blind eye to the drilling of wells and even licensing some of them in return for 5,000 shekels [about $1,400] in light of the continued electricity crisis," Banna said.

Ahmed Hillis, the director of the Environmental Awareness Department at the Palestinian Environment Quality Authority, told Al-Monitor, "Unlicensed private wells have disastrous consequences on Gaza's aquifer. Most of these wells are not supervised or controlled by specialized authorities. Groundwater stored in the aquifer is being drained uncontrollably."

He said that "over-extraction of water from the aquifer through wells has led to seawater intrusion, which in turn led to a high salinity of Gaza's underground water, 97% of which is not suitable for drinking."

Hillis blamed the local authorities in Gaza for granting licenses to dig water wells since 2014 without taking into consideration their negative impact on the underground water stock.

According to Banna, the best solution to the water crisis is to on the one hand solve the electricity crisis and on the other to set up more projects to desalinate seawater for human use such as the European Union-funded seawater desalination plant inaugurated in January in the southern Gaza Strip. The plant provides water to 75,000 people.

However, he said most seawater desalination projects are frozen in light of the political situation in the besieged Gaza Strip and the political division between the Gaza Strip and the West Bank since 2007.

06/08/2017 online at: http://www.al-monitor.com/pulse/originals/2017/08/palestine-gaza-strip-water-crisis-unlicensed-wells-shortage.html

PM inaugurates water project in Ajloun

Prime Minister, Hani al-Mulki, Wednesday inaugurated a project to improve water supply at the District of Kufranjah, in the northern governorate of Ajloun to provide it with 1 million cubic meters of additional drinking water.

The prime minister said the government was able to come up with solutions that have significantly improved the water sector, despite major challenges arising from the Syrian refugee crisis.

Al Mulki added that the project demonstrates the government's seriousness and responsiveness in terms of providing citizens with their water needs.

He lauded the water sector officials' efforts in securing new sources of water and protecting existing resources, especially in the northern areas of Jerash, Ajloun and Kufranjah, where they recently have been suffering from critical water conditions caused by limited water resources and increased demand.

Minister of Water and Irrigation, Hazem Nasser, said that the government has kept its promises to MPs and citizens to implement this project, in a specified timeframe that didn't exceed a 4-month period.

This project is one of the most important projects within the strategic projects to supply water to the Kingdom's northern regions, the minister added.

He spoke about the Water and Irrigation Ministry's strategic plan to provide the northern governorates with water up to 2028 at a cost of $305 million, which will supply 50 million cubic meters of needed water until that year.

The project is funded by the United Nations Relief and Works Agency (UNICEF), the U.S. Mercy Corps and the Water Authority, as well as assistance from the U.S. and UK governments, at a total cost of about JD2 million.

02/08/2017 online at:

http://petra.gov.jo/Public_News/Nws_NewsDetails.aspx?lang=2&site_id=1&NewsID=312435&Type=P

Diversion of water, not climate change, cause of dropping Dead Sea levels — Jordanian geologist

The drop in the level of the Dead Sea is causing grave concerns among environmentalists and planners in the region, with most of the drop caused by diversion in the headwaters feeding the sea, a geologist has said.

Geology Professor Nizar Abu Jaber from German Jordanian University explained that the diversion of water from the Dead Sea was necessary to provide water resources for different uses in Israel, Jordan, Syria and Palestine as populations grew and economies developed.

Abu Jaber dismisses, however, the claim that climate change should share the blame.

“It is unrealistic to say that climate change played a significant role in this decline, and if it did, it would be a small and difficult contribution to estimate,” he said in an e-mail interview with The Jordan Times.

Closed water bodies in arid regions typically fluctuate widely over time, and these fluctuations reflect changes in climatic conditions which lead to changes in precipitation and evaporation rates, the professor underlined, saying that the Dead Sea is no exception

The famous mosaic map of the Jordan River basin in Madaba was produced in 560 AD, showing the absence of the southern basin, Abu Jaber continued, arguing that it indicates that the water level at the time was below 405 meters below sea level.

“More recently, measurements in 1865 indicated levels of 394 meters below sea level and in 1929 levels were recorded at 389 meters below sea level,” the scholar underscored, adding that it is true that the past water level changes are attributed to climatic fluctuations, while the current drop is “distinctly more severe” and “directly correlated” with headwater diversions.

Today, the water level is 46 meters lower — 435 meters below sea level, Abu Jaber noted.

The decline in the level of the Dead Sea has led to concern about the long-term sustainability of the lake, he continued.

The scholar said that the “ideal situation” is to return to the natural hydrological system, which he concedes is not a feasible approach. In order to stop the current decrease of the water level in the Dead Sea and return to the previous state of the hydrological system, the scholar stated that “alternative sources of water” will be needed to allow the natural hydrological system to return.

One alternative source of water is desalination. While the Dead Sea-Red Sea Canal scheme is frequently cited as a solution, significant economic hurdles, both in the initial building and in the projected running costs, would need to be bridged, Abu Jaber stressed.

He expressed concerns about the financial and technical feasibility of this project: “From a purely environmental perspective, issues such as aquifer pollution in Wadi Araba and the

changing chemical nature of the Dead Sea would cause significant environmental damage, although that damage is probably less than that resulting from doing nothing."

The canal project is to connect the Red Sea to the Dead Sea through a pipeline, he noted, underlining that the elevation difference between the two locations is over 435 meters, which means that hydroelectricity will be generated through it.

"This part is the least problematic," the professor explained. "The scheme is to use the electricity to desalinate part of the water and send the reject water to the Dead Sea in order to mitigate some of the water level drop."

According to him, while desalination is a laudable goal, there are two problems: the first is that the energy generated by the elevation difference would not be enough to desalinate the 65-85 million cubic meters that are planned for the first phase of the project. This means that additional energy from the grid would be needed to achieve the desalination goals that are stated; the second is that, if the desalination occurs near the Dead Sea, then the water would probably be pumped to other areas at higher elevations, he said.

"This would be an additional burden on the electricity supply that would need to be addressed," Abu Jaber argued.

That said, the scholar listed five reasons in favor of the project: "saving" the Dead Sea, protecting the ground water in the adjacent aquifers, stopping the development of sinkholes, generating electricity and desalination.

On the other hand the scholar emphasized the potential risks of the project: salination of the Dead Sea, pollution of aquifers in Wadi Araba and damage of cultural heritage.

"The fluctuation of the level of the Dead Sea cannot be considered an environmental disaster, since this is a natural process which has gone on throughout the Holocene — the last 12,000 years.

"The idea that the Dead Sea will dry up is not true, although it would shrink significantly before stabilizing at a new level," Abu Jaber explained, adding that the economic damage from the drop of the Dead Sea level can be quantified, as it is tied to the chemical and tourism industries in the area.

Furthermore, the drop in the water level provides opportunities to increase extraction of fresh water from adjacent aquifers with no dire environmental consequences, he underscored.

"Moreover, expanded extraction of ground water might lead to the reduction of sinkhole development in the southern Dead Sea area," the expert suggested, noting that the amount of energy expected from the project is modest compared to the high cost of the canal.

"Thus, a critical analysis of the benefits and costs of this project needs to be conducted before moving forward with it," Abu Jaber concluded.

03/08/2017 online at: http://www.jordantimes.com/news/local/diversion-water-not-climate-change-cause-dropping-dead-sea-levels-%E2%80%94-jordanian-geologist

UNICEF provides five Madaba settlements with water, sanitation facilities

After years of struggling to access clean and safe drinking water, residents of several settlements in Madaba can now open taps to clean and running water right next to their door step.

UNICEF has recently installed water tap points and sanitation facilities in five vulnerable settlements in Madaba, 30km southwest of Amman, increasing the number of the settlements provided with water and sanitation facilities across the Kingdom to 57 sites.

“We have been living here for two years and we used to drink water brought in for irrigation in a nearby farm, which posed health risks,” said Mahmoud, a resident of one of the settlements that hosts more than 200 people.

“We had no other choice, as we cannot afford buying water with the limited source of income we have,” added Mahmoud.

For women and children living in the settlements, having a continuous source of clean water nearby has relieved an enormous burden.

Khaldieh, a 55 year old woman, said “Finally! It’s such a big relief. We used to make several trips every day, with water containers on our heads.”

“The water point is about one kilometer away. Making several trips under the sun is very hard and tiring," she explained.

She added that, whether it is winter or summer time, women and children are usually the ones who bear the burden of carrying water.

Fouzeh, 11, said she is relieved now, as she was the one in the family responsible for fetching water for drinking and cleaning.

“I am so happy that everyone here has water now, and I also have time to have fun with my friends,” said Fouzeh with a big smile, as she is playing with her friends.

Women and children in these settlements also feel comfortable after installing portable latrine units.

Before the installment of toilet units by UNICEF, Malak, a 26-year-old mother, said that they just had a makeshift shack with a hole in the ground.

The young mother added that women and girls walking in the open space at night was a concern. “We used to walk in pairs, especially at night. It was not easy for us.”

“I used to wait until dawn to go to what we used to call 'toilet',” said Mayada, another mother, adding “It is much safer now.”

Access to safe drinking water and sanitation was recognized by world leaders as a key component of the 2030 Sustainable Development Agenda, with a specific goal on access to safe water and sanitation for all.

“Access to clean drinking water and safe sanitation is critical for the health of every child in Jordan,” said Robert Jenkins, UNICEF representative to Jordan.

“UNICEF, in close collaboration with the government, is focused on providing clean water and safe sanitation facilities to all vulnerable children and their families in Jordan,” Jenkins added.

Jordan is one of the most water scarce countries in the world. Compared to many other countries in the region, water is not continuously available in the network, ranging from once a week to once a month.

The limited availability of water is further compounded by high levels of leakage, illegal connections and non-payment, estimated by Ministry of Water and Irrigation to reach almost 50 per cent.

UNICEF, in collaboration with the ministry and civil society partners, is providing access to improved water facilities and services to nearly half-a-million people in Jordan.

UNICEF’s water and sanitation programme in Syrian refugee camps, public schools, vulnerable settlements, and in villages and urban centres in Ajloun, Balqa, Irbid, Madaba and Mafraq are supported by Belgium, the European Union, Germany, Italy, Japan, the UK and the US.

05/08/2017 online at: http://jordantimes.com/news/local/unicef-provides-five-madaba-settlements-water-sanitation-facilities

Enhancing a traditional water-harvesting technique

Jordan’s ‘Badia’ is a vast arid area stretching across 80% of the country. It is a severely degraded ecosystem caused by mono-cropping and overgrazing over the past few decades. The ICARDA-managed Middle East Water and Livelihoods Initiative (WLI) worked with local communities and partners to promote the adoption of sustainable water and land management practices – helping farmers to optimize opportunities, raise their productivity, and reduce pressure on fragile resources.

Among the interventions being implemented is a ‘Marab’ water harvesting technology, which allows local farmers to grow crops in the desert. ‘Marab’ is an Arabic term used for relatively flat land in the ‘Badia’, where water runoff slows down and spreads across larger areas, causing sediment to deposit and enrich the soil.

“Marab is an ancient concept, based on the indigenous knowledge of the community,” said Dr. Stefan Strohmeier, Associate Scientist, Soil and Water Conservation, ICARDA. “ICARDA has provided science-based feedback on the hydrological watershed conditions for site selection and establishment.”

Recently, WLI scientists and partners from the Sustainable Environment and Economic Development (SEED) project visited Al Majedeah village to collect feedback from local farmers harvesting barley in their 'Marab,' on recent impacts during the last rainy season. Despite the late sowing and low levels of rainfall in the Badia during the last cropping season, the farmers are expecting to harvest 6 t/ha of yield, which will be used for fodder production, said Mrs. Mira Haddad, ICARDA Research Assistant.

Supported by the United States Agency for International Development (USAID) and the U.S. Forest Service, WLI works in seven countries including Egypt, Iraq, Jordan, Lebanon, Palestine, Tunisia and Yemen, responding to serious challenges resulting from water scarcity, land degradation, water quality deterioration, food insecurity and related health problems.

06/08/2017 online at: http://reliefweb.int/report/jordan/enhancing-traditional-water-harvesting-technique

Rabigh water project ushers in new wave of private finance in Saudi Arabia

Saudi Arabia plans to build a major new desalination plant north of Jeddah using private finance, as the Kingdom seeks to draw investment into big water projects.

Saudi utility company Water & Electricity is inviting expressions of interest to build and operate the Rabigh 3 desalination plant under a 25- year concession, according to a circular.

The return to using public-private partnerships (PPP) to procure major water projects comes as the government seeks to diversify the economy away from oil while at the same time attract greater participation from private sector companies.

"There is a big push toward PPP in Saudi Arabia now and there is a reasonable pipeline of projects going forward," said one Dubai-based construction lawyer. "The oil price is not what it was so there is now more of a case to use private finance."

With one of the world's fastest growing populations, the water sector in Saudi Arabia is under pressure to constantly add new capacity to cope with demand.

The plant is expected to have a capacity of about 600,000 cubic meters of potable water per day which would be expandable to 1.2 million cubic meters — which would make it one of the biggest in the world.

The use of private finance in the desalination sector in Saudi Arabia got off to a faltering start with the 2005 award of a €1.8 billion contract to Siemens to build the Shuaibah power and water plant.

It was the largest single order that Siemens had won in the region up until that point, however the use of public-private partnerships to fund more projects in the ensuing decade failed to live up to expectations. But now the procurement method is once again back in favor as the government turns to the private sector to help deliver major infrastructure projects.

Potential bidding consortia have until Aug. 21 to submit an expression of interest. Pre-qualification documents are then expected to be issued by the following month. Banque Saudi Fransi is the financial adviser on the project while DLA Piper is legal adviser.

04/08/2017 online at: http://www.arabnews.com/node/1139181/business-economy

Egypt cuts cultivation of water-intensive crops

Egypt's Cabinet completed July 5 the drafting of the new water resources and irrigation bill, which calls for penalizing farmers who grow water-intensive crops, especially rice, outside the land plots authorized by the government on an annual basis.

The sanctions come amid a water crisis in Egypt, which is expected to exacerbate with the opening of the Ethiopian Renaissance Dam.

Article 32 of the bill states, "The Ministry of Water Resources and Irrigation specifies the surface areas and regions allocated for rice cultivation yearly by virtue of a decision issued by the minister. The decision will also determine the areas and regions allocated for growing water-intensive crops yearly. The growing of rice and crops that require high water levels in places other than those determined by the ministerial decision will be prohibited."

Article 126 of the bill says that any person who violates the provisions of Article 32 will be sanctioned by imprisonment for a period of not more than six months and a fine not less than 2,000 Egyptian pounds ($112), and not more than 10,000 pounds ($560) for each acre or fraction of an acre or with any of those two sanctions. "The sanction will be doubled in case the violation is repeated," the article adds.

The Ministry of Water Resources and Irrigation, in coordination with the Ministry of Agriculture, determines each year before the rice season the surface area to be cultivated with rice annually, according to the allocated water quantities to be pumped for agricultural use from Egypt's estimated Nile water quota of 55.5 billion cubic meters.

The Ministry of Irrigation issued a decision Jan. 23 for the 2017 rice planting season to allocate 1.76 million acres to plant rice in specific places in only eight provinces, and said sanctions would be imposed on violators.

The Ministry of Agriculture issued a report that was circulated in media outlets July 26 indicating that 227,000 acres have been planted in violation of the Irrigation Ministry's decision; violation reports were being drafted for 192,000 farmers. Both ministries have shared responsibility to determine rice planting, detect violations and set fines.

Egypt's government is seeking to shrink the rice cultivation area. Mohamed Abdel Ati, the minister of water resources and irrigation, decided on Oct. 26, 2016, to decrease by 34.6% the area allocated to rice production in the 2017 season.

Although the annually cultivated area in 2016 exceeded 2 million acres and given that many farmers are inclined to oppose the government decision and grow rice outside the allocated

lands, the Egyptian parliament has always intervened in previous years with the presidency and the government to obtain a decision exempting farmers from fines.

The Ministry of Water Resources and Irrigation has raised its voice against this exemption in the last two years, insisting on removing the unauthorized rice crops by burning them and fining violators about 3,600 Egyptian pounds ($202) per acre for squandering irrigation water.

The former head of the Egyptian Farmers Union, Mohamed Barghash, told Al-Monitor, “The law is an ultimatum for farmers — they either go to jail or face hunger."

Barghash called on President Abdel Fattah al-Sisi to intervene, especially since the government imposes stringent sanctions that prevent farmers from growing rice crops annually without providing any alternative, knowing that some Egyptian farmers are forced to grow rice to counter the salinization of the soil, especially in areas near the Mediterranean Sea.

He said, “Egyptian farmers are never against the protection and rationalization of Egypt's limited water resources, but the government is not looking at the whole picture.” Barghash called on the government to assess the role of agricultural research centers whose staff members are working in offices and not making any field visits to agricultural land and fields to promote the farmers’ attachment to their land and guide them to alternatives crops that may fill the food gap in Egypt, as well as achieve a balance whereby the kinds of crops grown due to the salinity of their agricultural land do not drain water resources.

The referral of the bill from the government to Egypt’s parliament is expected to stir a wave of controversy among parliamentarians in light of the opposition of many lawmakers to the sanctions imposed in the bill, which include an imprisonment penalty.

In 2016-17, the total fines collected by the Ministry of Irrigation and imposed on farmers cultivating rice in violation of the 1984 Irrigation and Drainage Law No. 12 amounted to 3.6 billion pounds.

The undersecretary of the Egyptian parliament's Agriculture Committee, legislator Raef Tamraz, told Al-Monitor that he intends to mobilize the members of the committee to keep the new government bill from being approved by parliament.

“The government must first provide alternative solutions for rice production. The law will turn more than 1 million acres of Egyptian land into fallow lands, especially in the regions near the Mediterranean Sea in the Delta, which are only suitable for rice cultivation in summer as a result of salinization of the soil,” he said.

Parliamentarian Magdy Malak, also a member of the Agriculture Committee, has a different opinion. He told Al-Monitor, “Members of parliament must support any steps that would regulate and maintain Egyptian water rationing — especially as Egypt is expected to face an imminent water crisis if no agreement is reached with Ethiopia on the filling period of the Renaissance Dam in such a way that does not harm the flow of Egypt's Nile water quota.”

Hossam El-Imam, the director of the Regional Center for Water Ethics in the Ministry of Water Resources and Irrigation and official spokesman for the ministry, told Al-Monitor, "The new sanctions are not meant to imprison and fine farmers but to prevent them from committing a crime by violating the water rights of other farmers."

He noted, "Egypt no longer has the luxury of growing crops with high water needs, given the scarcity of our water resources. It is not just about rice; other crops will soon be cut also."

In the meantime, Cairo keeps deploying continuous efforts to face its water scarcity and to resolve its disputes with the Nile upstream countries over their demands to re-divide Nile water quotas on the one hand, and with Ethiopia to ease the anticipated impact from the filling of the Renaissance Dam on the other hand.

03/08/2017 online at: http://www.al-monitor.com/pulse/originals/2017/08/egypt-bill-sanction-cultivation-rice-crops-water-crisis.html

Ministry of Irrigation reaffirms Ethiopia has not begun filling GERD

Egypt's Ministry of Irrigation and Water Resources said on Sunday that the Ethiopian government will not fill the reservoir of the Grand Ethiopian Renaissance Dam (GERD) until the end of this year, state-owned media reported.

According to the ministry, filling the reservoir during this year's flood is not possible depending on the technical data, due to constructive standards in the body of the dam. The notable decrease in water amount in some Egyptian governorates is normal in this time of the year due to the rise of demand on water for agriculture, the ministry said.

Minister of Water Resources and Irrigation Mohamed Abdel Aty told state-owned Al-Ahram that Ethiopia did not start filling the reservoir of the dam yet, pointing out that about 60% of the construction of the dam has been finished. He also stressed that the declaration of principles which was signed between Egypt, Sudan, and Ethiopia organises the first filling of the dam, storing, and management, and the process depends on coordination between the three countries.

This is the second time the ministry denies that Ethiopia started filling the dam. The controversy took place on 10 July following local media reports publishing satellite images showing water around the dam.

Construction of the GERD started in April 2011. However, Egypt has expressed concerns that the dam could negatively affect Egypt's share of the Nile.

Egypt fears the dam will affect its historic Nile water share of 55 billion square metres, which it has had access to since the historic 1959 agreement with Sudan.

07/08/2017 online at: https://dailynewsegypt.com/2017/08/07/ministry-irrigation-reaffirms-ethiopia-not-begun-filling-gerd/

Pakistan, India conclude water talks in Washington

Pakistan and India concluded the much-delayed water talks in the US capital on Tuesday, raising hopes that they would avoid further tensions over an issue that has far-reaching consequences for both.

Secretary Water and Power Yousaf Naseem Khokhar led the Pakistani delegation, which included technical experts from his ministry.

Ambassador Aizaz Ahmed Chaudhary also attended the two-day talks held at the World Bank headquarters in Washington.

Secretary Ministry of Water Resources Dr Amarjit Singh headed the Indian delegation, which also included representatives of the Ministry for Foreign Affairs.

The Washington meeting was part of the World Bank's efforts to resolve a dispute over Kishanganga and Ratle hydroelectricity projects that India is building in the occupied Kashmir. Pakistan opposes the two projects, saying that the plans violate the 1960 Indus Water Treaty that distributes waters of the river Indus and its tributaries between India and Pakistan.

The negotiations are part of World Bank's efforts to resolve a dispute between the two countries over India's hydroelectricity projects in Kashmir

The two countries last held talks over the two projects in March this year during the meeting of Permanent Indus Commission in Pakistan.

The last round of the World Bank-supervised talks was held in November 2016, and the World Bank intended to hold another round in April this year but could not do so, as India refused to accept its arbitration.

Since 2013, India had been refusing to hold direct talks with Pakistan and also rejected Islamabad's efforts to restart the dialogue.

Earlier this week, an Indian official in New Delhi told journalists that the Indian position had not changed and "talks under the Indus Water Treaty do not amount to bilateral talks".

Indian Prime Minister Narendra Modi said last year that India would not share the Indus water with Pakistan until Islamabad prevented militants from launching attacks inside India.

Pakistan rejected the Indian charge, saying that it never allowed any group to carry out cross-border attacks and the uprising in Kashmir was indigenous and independent.

Pakistan approached the World Bank last year, raising concerns over the designs of the two projects after India indicated that it wanted to review the Indus Water Treaty, linking it to the situation in Kashmir.

The projects will allow India to use water of three Indus tributaries to irrigate 912,000 acres of land, up from 800,000 acres, and to produce 18,600MW of electricity.

Pakistan argues that the two projects would lessen its share granted in the treaty and urges the World Bank to play a mediatory role between the two countries, as laid out in the 57-year-old water distribution pact.

While the Pakistani side has so far not held any briefing for the media, the Indian Embassy in Washington shared with the Indian media a statement from a senior World Bank official, assuring New Delhi that it will continue to "be a neutral and impartial" player in helping the two countries find an "amicable way forward".

In a letter to India's Ambassador to the US, Navtej Sarna, senior World Bank official Annette Dixon said: "We are pleased both parties have confirmed their participation in the meeting hosted by the World Bank in Washington, DC".

"The World Bank welcomes the spirit of goodwill and cooperation," she said, and assured Ambassador Sarna of its "continued neutrality and impartiality in helping the parties find an amicable way forward".

02/08/2017 online at: https://www.dawn.com/news/1349072

Pakistan's unique desert wetlands under threat

The desert wetlands of Achro Thar – or the White Desert – in the east of Pakistan's Sindh province are struggling against the twin threats of climate change and the mismanagement of water by government authorities.

Around 300 kilometers from the port city of Karachi and spread over 4,805 square kilometers along the Indian border in Sanghar and Khairpur districts, Achro Thar's unique topography means that it has around a hundred lakes of different sizes, found between sand dunes. Some of these are fairly large. Botaar Lake is seven kms in length, and others are spread over a few hectares. Kalankar, Palaaro, Mathoon, Gujari, Akro, Kalar Wari, Sanhari and Botaar are considered to be the biggest desert lakes in this region.

These lakes are divided into three categories. The first are freshwater lakes that are fed by the Indus River through channels from the Nara Canal, the second are rain-dependent brackish water lakes, and the third are salt lakes. All of them have been shrinking rapidly for the past few years due to erratic rainfall in the region, and by authorities releasing river water through the Nara Canal during floods.

"The White Desert wetland complex is shrinking; either because of climate change which causes erratic weather patterns such as a lack of rain, or modification in water regimes such as change in irrigation management or practices," said Rab Nawaz, senior director of programmes at the World Wildlife Fund for Nature Pakistan.

The irregularity of the water regime, either of declining water levels or sudden bursts of excess water, degrades the habitat. "The first animals to suffer are usually the aquatic ones such as fish. Flora is also badly affected, especially by flooding. Ultimately, people's

livelihoods are affected by a loss of natural resource such as fish, or habitats such as rangeland," said Rab Nawaz.

The wetlands have helped desert flora survive in times of drought and water scarcity, resulting in unique species endemic to these areas. These ecosystems are fragile though as deserts are porous, and therefore they are vulnerable to both flooding and drought. Many of these desert wetlands are a mix of brackish and freshwater bodies that if they receive too much water or not enough, they can change, bringing deadly effects to the biodiversity, especially the fish that reside in them.

The desert wetland complex is home to numerous species, such as the marbled teal, marsh crocodile, darter, white-eyed pochard, Houbara bustard, long-tailed grass warbler, black ibis, glossy ibis, lesser whistling teal, and others.

"These species are not only protected under provincial wildlife act but a few of them are also notified as Cites (the Convention on International Trade in Endangered Species of Wild Fauna and Flora); their trade and hunting is strictly banned under international obligations," Hammad Naqi Khan, the director general of WWF Pakistan told thethirdpole.net.

Due to the presence of various fish species in the wetlands,a large number of migratory birds from Siberia find refuge at these lakes during the winter as Pakistan lies at a crossroads of an international bird migration route known as the Indus Flyway.

"In the past, a large number of migratory birds came to these lakes, but due to vanishing fish, reducing water and illegal hunting, rarely do any bird lands on these lakes in winter," said Atta Muhammad Chaniho, a researcher and resident of Achro Thar.

Other than these international visitors, local inhabitants are also suffering. The shrinking wetlands have meant that the fish, lotus roots and fruits they once had from the wetlands are slowly disappearing. They are also losing the water their livestock drank, which is the principal source of livelihood for the locals. But since the habitat of these wetlands is disturbed, the pasture lands the livestock uses are becoming dry, bringing difficulties for the residents of this barren desert.

The recent monsoon rains have transformed the drought-hit Thar Desert, painting it a lush green, but it has brought nothing to Achro Thar. According to Chaniho the grass that used to grow after the monsoons is gone because indigenous seeds have been wiped out after a prolonged drought.

Many of the lakes are fed by water from the Nara Canal that was connected to the Indus river during British colonial rule. The Sindh irrigation department connected small canals and channels from Nara Canal and started releasing water to these lakes.

"In the recent past, influential feudal lords have started stealing the water from the channels flowing towards these desert lakes and started using that water for agriculture, due to which these lakes are not getting required water and these wetlands are shrinking," said Faqeer Dad Rajar, a resident of a small village in Achro Thar.

Due to their rich biodiversity, some of the lakes in the Achro Thar desert complex could be declared protected sites, or Ramsar sites, due to their global significance, said Hammad Naqi Khan.

This has happened before. North of Achro Thar lies the Deh Akro-II Desert Wetlands Complex in district Shaheed Benazirabad, where Pakistan's largest population of marsh crocodiles are found. It was declared a wildlife sanctuary of international importance, and in 2002 it was declared a Ramsar site for having four major habitats types, namely desert, wetland, marsh and agricultural lands.

"As long as the wetlands fall under one of the criteria then they can easily be incorporated into Ramsar – however Ramsar is based on wetlands, not deserts, so the habitat has to be predominately wetlands based," added Rab Nawaz.

Another way to protect the desert wetlands is the revival of desert forests. As other forms of revenue dry up, cutting trees in the region makes economic sense for locals, but it further degrades the environment, making the impact of climate change associated weather fluctuations and uneven water availability that much harder to manage.

"This year monsoon rain has been recorded highest in the desert region compared to the rest of Pakistan and now it is time for forest department and other authorities to plant deep-rooted indigenous plant in this region, which will grow fast due to heavy rains. This is the only way to protect this region from harsh weather," Ghulam Rasul, the Director General of the Pakistan Meteorological Department (PMD) told thethirdpole.net.

Hammad Naqi Khan suggests that community-based wetlands management and the promotion of ecological tourism could help preserve these wetlands. A "no hunting" zone must also be declared, and an effective management plan involving the local communities urgently needs to be put in place.

The desert lakes of Achro Thar are not dry yet, and there is still time to save them, and all those – humans, animals, birds, fish and trees – that rely on them.

02/08/2017 online at: https://www.thethirdpole.net/2017/08/02/pakistans-unique-desert-wetlands-under-threat/

Water crisis may soon hit major Pakistan cities

Rapid depletion of ground water may soon create worsening water crisis in Pakistan's major cities, causing a drought-like situation, said chief of the Pakistan Council of Research in Water Resources (PCRWR) Muhammad Ashraf on Thursday.

Stressing the need for urgent steps to avert such a crisis, he said: "Such measures need to be taken on a war footing … otherwise, a large section of Pakistan's population, especially those living in Karachi, Quetta, Lahore and Islamabad, will face severe water shortages," Ashraf told The Express Tribune after the concluding session of a sub-regional meeting of experts on groundwater management here.

The meeting was organized by PCRWR in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and ECO Science Foundation (ECOSF) to discuss the alarming water situation not only in Pakistan but elsewhere in the region and its potential impacts.

The meeting focused on the UNESCO Tehran Cluster, mainly covering Afghanistan, Iran, Pakistan and Turkmenistan.

Experts attending the meeting will try to outline strategies for sustainable groundwater management in the region, particularly in Pakistan.

“In Pakistan, the water quality as well as its quantity are major issues, especially in major cities such as Karachi, Quetta, Lahore and even in Islamabad,” said Ashraf, adding that rapid population growth, urbanization, deforestation and lack of awareness about the importance of water are major causes for the emergence of this crisis.

Experts expressed concern over the alarming water situation in the region and agreed that if even a single town in any of these countries was facing an acute water shortage, it was a major threat to the entire region.

Dr Shahbaz Khan, the Regional Director of UNESCO’s Jakarta office, stressed the need for a plan for development, devising new policies and regulations for net recharge management, for enhancing water productivity by doubling crop yields and halving input of groundwater, making Pakistan a regional agricultural power.

CCI nod to national water policy on the cards

Vibeke Jensen, the Director of UNESCO Islamabad, said that an effective groundwater management in the regional context was crucial for Agenda 2030.

Fazal Abbas Maken, Secretary of the Ministry of Science and Technology, said that availability, accessibility and affordability of clean water on sustainable basis were essential for the region.

“Water management is a trans-disciplinary issue and can be solved by involving all stakeholders and also by educating the end users,” he added.

04/08/2017 online at: https://tribune.com.pk/story/1473558/water-crisis-may-soon-hit-major-pakistan-cities/