



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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10 January 2017 – 16 January 2017

Afghan President Calls for Fulfillment of Hirmand River Agreement

Afghan President Mohammad Ashraf Ghani called for his government's fulfillment of its agreements with Iran on Hirmand River's water sharing.

"The signing of agreement with Iran on Hirman River's water benefits Iran and the Afghan government is entitled to implement this agreement," President Ghani said on Tuesday, addressing a ceremony in Kabul.

Iran and Afghanistan signed an agreement on sharing water of Hirmand River in 1972.

The Article 5 of Hirmand River agreement stipulates that Afghanistan agrees not to do anything to deprive Iran of its right to Hirmand River water.

Iran is one of the most important donors to Afghanistan, which has kept its promises to help to the reconstruction of the war-ravaged country.

Iran has built several roads, power transmission lines, border stations and many other infrastructure projects to better link the two nations.

Iran has also contributed more than \$50mln annually to Afghan anti-narcotics efforts during the last five years.

There are too many commonalities between the two friendly nations, including language, religion, culture and history.

10/01/2017 online at: <http://en.farsnews.com/newstext.aspx?nn=13951021000669>

ISIL cuts water supply to residents in liberated Mosul

ISIL militants have cut off the water supply to thousands of residents in liberated areas of Mosul, as Iraqi troops continue to make gains against the weakened fighters. The jihadists, who maintain control of the city's water stations, turned off the supply to more than 30 neighborhoods yesterday. "There are 10 other districts where the water supply continues, but intermittently," Hossam al-Abbar, a municipal official from the Nineveh province, confirmed. He said Islamic State of Iraq and the Levant (ISIL) fighters had been given specific orders to attack areas recaptured by the army.

11/01/2017 online at: http://www.shafaaq.com/en/En_NewsReader/83c9319a-c4c2-4f28-b311-fb66ba8b1c40/Isil-cuts-water-supply-to-residents-in-liberated-Mosul

Syria governor says deal reached to restore Damascus water

Syria's government has reached a deal for the army to enter a rebel-held area near Damascus and restore the capital's water supply, the provincial governor said on Wednesday.

Opposition sources denied there was any such deal, but a source inside the Wadi Barada region reported several hundred civilians were leaving under an agreement.

State news agency SANA also reported people were leaving the region, among them several dozen fighters.

The reported deal comes after weeks of fighting in the region, 15 kilometers northwest of Damascus, which has threatened a fragile truce in place since December 30.

The fighting has damaged water infrastructure and left some 5.5 million people in the capital and its suburbs facing water shortages, according to the UN.

Damascus Provincial Governor Alaa Ibrahim told SANA there was now a deal to allow the government to retake control of the region.

"The agreement that was reached in principle requires the militants to give up their heavy weapons and for non-local militants to leave the area of Wadi Barada," he said.

"[Then] the Syrian Arab Army will enter the area to clear it of mines and bombs to prepare for the entry of maintenance teams... to fix the damage caused to the water pumps and pipes by the terrorists' attacks."

But Ahmed Ramadan, an official with the opposition National Coalition, denied any such deal had been reached.

"This information is untrue and is a part of the [regime and its allies'] psychological warfare," he told AFP.

Civilians leave Wadi Barada

The Syrian Observatory for Human Rights, a Britain-based monitor of the war, also said the government had not reached a comprehensive deal with rebels.

But it reported that residents wishing to leave were being offered safe passage on an individual basis.

And a source on the ground in Wadi Barada said Wednesday that some 600 civilians had left, passing through a makeshift tent where government officials were checking documents.

SANA reported that some 500 people had left the area, among them some 60 rebels.

Syria's government accuses rebels in Wadi Barada, including former Al Qaeda affiliate Fateh Al Sham Front, of deliberately cutting water supplies to the capital.

But the rebels say regime strikes damaged pumping facilities and deny that Fateh Al Sham, previously known as Al Nusra Front, has forces in the area.

The government has concluded dozens of so-called "reconciliation deals" with rebel-held areas in Syria in recent months, particularly around the capital.

The deals usually offer civilians and rebels safe passage to opposition-held territory elsewhere in exchange for surrendering the area to the army.

The opposition says it is forced into such deals by government sieges and assault, and terms them a “starve or surrender” tactic.

January 23 peace talks

Fighting has continued in Wadi Barada despite the start of a truce brokered by regime ally Russia and rebel backer Turkey in late December.

The ceasefire is intended to pave the way for new peace talks in the Kazakh capital Astana, which Russia confirmed Wednesday were scheduled for January 23.

“At this time there is no indication that the meeting will be postponed. The date of January 23 is set,” a source in the foreign ministry said.

He added that work was underway to compile a list of participants.

A Russian diplomatic source said Wednesday the talks would be held between the regime and rebels only, with the political opposition excluded for the first time.

Regime ally Iran is also helping to organize the talks, which are the latest bid to find a political solution to the nearly six-year-old civil war that has killed more than 310,000 people.

But Turkey and the rebels have warned the ongoing fighting in Wadi Barada could jeopardize the talks in Astana.

And while the truce has brought quiet to large parts of Syria, sporadic violence has continued elsewhere.

On Wednesday, the observatory reported government air strikes in several parts of the Eastern Ghouta region outside Damascus that killed one person and wounded nine.

And overnight it said air strikes hit rebel-held parts of Aleppo and Idlib province in the north and northwest of the country, killing at least three rebels.

12/01/2017 online at: <http://jordantimes.com/news/region/syria-governor-says-deal-reached-restore-damascus-water>

Syria's war has affected water in the region so much; you can see the damage from space

The Syrian civil war has left more than an estimated 400,000 people dead and displaced more than 10 million residents. But the impact hasn't just been devastating on the people of Syria and their archaeological sites - it's also left the environment barren and altered.

Researchers have now shown that both agricultural irrigation - the amount of land being watered by farmers - and reservoir storage has decreased by nearly 50 percent in the region, compared with the start of the war. And the impact is so huge, they can even see it from space.

Using satellite imagery processed in the Google Earth Engine, a team from Stanford University in California was able to show how the country's reservoirs looked in 2012, just a few months after the war started, compared to 2015.

The researchers estimate that the amount of irrigated land has shrunk by 47 percent, and the water reservoirs have diminished by 49 percent.

"The water management practices in Syria have changed and that's visible from space," said one of the researchers, Steven Gorelick.

"The Syrian crisis has resulted in a reduction in agricultural land in southern Syria, a decline in Syrian demand for irrigation water and a dramatic change in the way the Syrians manage their reservoirs."

The team specifically looked at the 11 reservoirs in the Syrian-controlled Yarmouk-Jordan River basin, which provides crucial water supply for Syria, Israel and Jordan.

Many of these reservoirs have been intensely fought over during the conflict, and the water supplies that ended up under rebel control have often been badly managed, meaning they're being unsustainably drained of water.

To figure out what effect this has had, the team decided to use satellite images to get a bird's eye view.

"The big challenge for us was that it was going to be next to impossible to get on-the-ground data in Syria," said one of the research team, Jim Yoon.

They used images of land use on the Jordanian side of the Yarmouk basin as a control, to compare what the region looked like when not at war. And they were able to show that reservoirs in Syria had been drained by 49 percent.

Before this, a lot of research had been conducted into how climate change can lead to conflict, but this is one of the first studies to reliably show how conflict can cause environmental damage.

"It's the first time that we could do large-scale remote sensing analysis in a war zone to actually prove a causal relation between conflict and water resources," said lead researcher Marc Muller.

An interesting side effect of the reduced water usage and irrigation in Syria is that more than three times as much water is now flowing into Jordan from the Yarmouk basin compared to before the war.

That sounds like good news for the water-poor country, until you consider that more than 1.3 million Syrian refugees have fled to Jordan since the conflict, putting extra stress on the region.

"It's slightly good news for Jordan, but it's not a big bonus compared to what Jordan has had to give up and sacrifice for the refugees," said Gorelick.

"Even in terms of providing water for the refugees, this trans-boundary flow is not compensation."

In September, humanitarian groups expressed concern over Syria's deteriorating water security, and warned that it could trigger disease and further migration.

12/01/2017 online at: <http://www.sciencealert.com/the-syrian-war-has-affected-water-in-the-region-so-much-you-can-see-the-damage-from-space>

Russia Working with Iran, Turkey, UN to Restore Water Supply to Damascus

Russia is working closely with Iran, Turkey and the United Nations to urgently restore the vital water supply to Damascus after it was cut off last month, a Russian diplomatic source told Sputnik on Friday. "Russian diplomats raised the issue with the UN on Thursday, saying some 5.5 million of people in Damascus were on the verge of humanitarian crisis due to what radicals did in the Damascus suburb of Wadi Barada," the source in the know said. The Syrian capital gets most of the water from springs in the Wadi Barada valley. Water supplies were drastically reduced in late December. The UN fears the water network could have been damaged by fighting or sabotage by armed opposition groups. "This problem needs to be urgently resolved to restore water supply to Damascus. Russia is closely working with Turkey, Iran and the UN," the Russian source said. UN's humanitarian coordinator Jan Egeland said last week they did not know who caused the disruption. UN's Special Envoy for Syria Staffan de Mistura warned the issue could be crucial for the upcoming intra-Syrian peace talks in Astana, Kazakhstan.

13/01/2017 online at: <https://sputniknews.com/russia/201701131049556681-russia-iran-turkey-damascus-water/>

Syria fighting threatens water source

The Syrian army and allied militia clashed with rebels in Wadi Barada near Damascus on Sunday, threatening to disrupt planned repair works to a pumping station that supplies most of the capital's water, a war monitor said.

The Syrian Observatory for Human Rights said the army and the allied Lebanese Hezbollah had made some gains against rebels in the Wadi Barada area.

Heavy fighting reached the outskirts of the Ain al-Fija town, where the water springs are located, the British-based war monitor reported.

Artillery shelling by government forces killed seven people and wounded several others in the nearby Deir Qanoun village, it said.

At least 20 other people were wounded in the attack, some critically.

Wadi Barada, a mountainous valley northwest of Damascus, has become a major battlefield in the Syrian war, and the damage to the pumping station has caused severe water shortages in the capital since the beginning of the year.

The governor of the Damascus Countryside province said on Friday that engineers had entered Ain Al-Fija to repair the pumping station, as part of a wider agreement that included the departure of some rebels from Wadi Barada and a settlement with others who would remain there.

But the plan was derailed on Saturday evening, after armed men killed the head of a negotiation team who was overseeing the agreement and repairs, the Observatory said.

A military media unit run by Hezbollah said the army captured some positions overlooking Ain Al-Fija on Saturday, after taking two nearby villages in recent days and edging closer towards the water facility.

The water spring was knocked out of service in late December.

The United Nations has said it was damaged because “infrastructure was deliberately targeted”, without saying who was responsible, leaving four million people in Damascus without safe drinking water supplies.

The UN warned the shortages could lead to waterborne disease outbreaks.

Rebels and activists have said government bombardment damaged the spring.

16/01/2017 online at:

<http://gulftoday.ae/portal/7d89ce28-0eb3-4790-99c9-1529e4654965.aspx>

Frustrations rise in Damascus as water pipes run dry

The guns have fallen silent near Syria’s capital, but war still shapes the rhythm of life. First it was the price of food, which has risen steadily over the years as the fighting spread to nearby farmlands. Then came daily blackouts, affecting poor areas disproportionately and leaving most reliant on generators. But for many in Damascus, the loss of drinking water last month was hardest to take, underscoring as it did the government’s fragile hold on its most important resources as the more than five-year-old war turns in its favor.

Three weeks into the crisis, officials said this weekend that repairs have begun on the facility that provided most of the capital’s water before it was damaged in heavy fighting in late December. But activists reported renewed government shelling on the area yesterday that left 12 people dead and is threatening the progress of repairs.

According to the United Nations, at least 4 million people in and around Damascus are now cut off from the water grid after “deliberate targeting resulting in the damaged infrastructure. “ Photographs shared on social media from the Damascus suburbs show residents crowding around water trucks. Many have gone from near-daily showers to weekly baths — sometimes in public parks — and doctors say gastric illnesses are on the rise among children and the elderly sickened by unclean food and dishes. For Terez, 40, whose accessories business closed after the economy plunged, it means worrying, about “everything.”

“The stresses are accelerating,” she said, speaking by phone from Damascus. She spoke on the condition that her family name not be used, to avoid government repercussions. “I have to worry about how to manage our water supply. I have to worry about charging my phone when we have electricity. I even have to worry about doing all the housework in the few hours before the power goes out.” Most people still living in Syria are in areas held by the Assad government and its allies. Although two recent suicide attacks have revived fears that insurgent bombings will resume in Damascus, the area is largely free of rebel shelling for the first time in years. Forces loyal to Syrian President Bashar al-Assad have crushed most of the province’s armed opposition.

All sides in Syria’s war have fought hard to control resources that will help them govern. An informal agreement with rebel groups in the valley of Wadi Barada left a key spring there functioning for years, but it was badly damaged last month when pro-government forces attempted to wrest back control of the facility.

Syrian officials accused the rebels of causing the damage. Local residents said it was the government, claiming Syrian army helicopters had dropped barrel bombs on the main Ain al-Fijah water facility, leaving its pumping system out of service. The progress of repairs was unclear yesterday, as activists in Wadi Barada and with the Syrian Observatory for Human Rights monitoring group said government shelling had killed at least 12 displaced people taking shelter in a nearby banquet hall. As the crisis builds, Damascus authorities have issued strict regulations on remaining water stocks, mostly from boreholes or distributed by private trucks - leaving families with only a few hours of access every two or three days. Those with money have turned to private distributors, a system in which neither price nor quality is regulated.

Others have turned to DIY. Rain is collected in pots, pans and even satellite dishes. In a video posted to Facebook last week, a woman is seen washing dishes with a faucet fashioned from a bottle. “We Syrians, we always have a way,” she said. “You switch off the tap, we create a tap. You take away water, we find water.”

The International Committee of the Red Cross said it is supporting distribution of water to hospitals, schools and bakeries across the capital. “Everyone is being very cautious about their consumption now. You never know if what you have left will be the last,” said Ingy Sedky, a spokeswoman.

On WhatsApp and Facebook, residents shared cartoons to express their annoyance: pictures of men saving water by showering stacked on each others’ shoulders, or of bathroom signs encouraging men and women to shower together. And though many blame rebel forces for the damage, frustration with the government’s inability to secure basic services appears to be rising.

“Now there is indignation against the state because they’re delaying a military solution,” said Ammar Ismaiel, a 43-year-old systems engineer who said a lack of washing water had left him wearing the same clothes all week.

After more than five years of conflict, opposition groups have been bombed to capitulation across much of the country, leveling neighborhoods in once-densely populated urban areas and spurring the worst refugee crisis since World War II.

Control of Syria's natural resources, particularly in the energy and agricultural sectors, will be vital if the government is to rebuild the territory it ends up controlling. Oil output has dwindled throughout Syria's war, first as a result of international sanctions and then as oil fields fell into the hands of the Islamic State or Kurdish groups.

In a research note published last week, Fabrice Balance, a visiting fellow at the Washington Institute, said recapturing that region would be "indispensable" if Assad wants to refill state coffers and win economic independence from his Russian and Iranian backers.

In Damascus on Friday, one teacher was newly arrived from the shattered former opposition stronghold of eastern Aleppo. She said her parents had begged her for months to join them in the capital, reuniting the family in a middle-class neighborhood where she had played during childhood vacations.

Reached on WhatsApp and speaking on the condition of anonymity out of fear for her safety, the woman said the area was "unrecognizable" from family photographs.

"We came here for stability when our homes became unlivable, but what is this? There are people out on the streets hunting water. There is nothing in our taps," she said. "We opposed the government because we thought we could win, and we lost. We're here because finally, after all these years, we need a state to look after us."

16/01/2017 online at: <http://thepeninsulaqatar.com/article/16/01/2017/Frustrations-rise-in-Damascus-as-water-pipes-run-dry>

The importance of water as a force for peace

The changing of the guard on the 38th floor of the U.N. building, with Antonio Guterres taking over for Ban Ki-moon as U.N. secretary-general, came as notions about peace and conflict are undergoing a subtle change. In particular, the role of resources — and especially water — is getting the recognition it deserves.

This has been a long time coming. Both Ban and his predecessor, Kofi Annan, argued for some two decades that protecting and sharing natural resources, particularly water, is critical to peace and security. But it was not until last November that the issue gained widespread acknowledgement, with Senegal — that month's U.N. Security Council president — holding the U.N.'s first-ever official debate on water, peace and security.

Open to all U.N. member states, the debate brought together representatives of 69 governments, which together called for water to be transformed from a potential source of crisis into an instrument of peace and cooperation. A few weeks later, Guterres appointed Amina Mohammed, a former Nigerian environment minister, as his deputy secretary-general.

The growing recognition of water's strategic relevance reflects global developments. In the last three years, the Islamic State extremist group captured the Tabqa, Tishrin, Mosul, and Fallujah dams on the Tigris and Euphrates rivers. IS subsequently lost control of all of them, but not before using them to flood or starve downstream populations, to pressure them to surrender.

Many analysts hope IS will finally be eliminated from Iraq and Syria in the next few months. But that does not mean the group will disband; on the contrary, it may well relocate to the border areas between Libya and Chad, putting West African cities and water installations at risk.

This tactic is not exclusive to IS. Extremist groups in South Asia have also threatened to attack water infrastructure. And of course state actors, too, can use water resources for strategic advantage.

The importance of water in the 21st century — comparable to that of oil in the 20th — can hardly be overstated. Yet some strategic experts continue to underestimate it. The reality is that oil has alternatives like natural gas, wind, solar and nuclear energy. By contrast, for industry and agriculture as much as for drinking and sanitation, the only alternative to water, as former Slovenian President Danilo Turk once put it, is water.

The same is true for trade. Consider the Rio Chagres. While it may not be widely known, it is vitally important, as it feeds the Panama Canal, through which 50 percent of trade between Asia and the Americas flows. There is no risk of the natural depletion of the river flow for the next 100 years, but, in the event of a security crisis in Central America, it could be taken over by rogue forces. The impact on the global economy would be enormous.

The consensus on the need to protect water resources and installations in conflict zones is clear. What is less clear is how to do it. The International Committee of the Red Cross does negotiate safe passage for technicians to inspect and repair damage to water pipes and storage systems in Iraq, Syria and Ukraine; but each passage needs to be negotiated with governments in conflict and rebel commanders — a long and cumbersome process. A better approach would be for great powers, with their considerable influence, to negotiate short-term cease-fires in areas experiencing protracted conflict, specifically to repair and restore water systems.

To pave the way for such an approach, however, the U.N. Security Council will have to declare water a “strategic resource of humanity” and adopt a resolution to protect water resources and installations, similar to Resolution 2286, adopted last May to protect medical facilities in armed conflicts.

In the longer term, countries that share riparian systems will need to establish regional security arrangements to preserve and protect their resources.

Denis Sassou-Nguesso, president of the Republic of the Congo, is at the forefront of this movement, by leading a group of eight governments toward the establishment of the Blue Fund for the Congo Basin. If successful, the fund will mitigate climate change, create new avenues of river-based employment and promote collective security in an unstable region. The

Africa Action Summit two months ago described the fund as one of the four key ideas that can transform the continent.

Last March, on World Water Day, Jordan's Prince Hassan bin Talal and I called for the establishment of a Marshall Fund for the world's shared river basins. The Blue Fund for the Congo Basin is a step in that direction. Now, we need similar funds to emerge to protect all of the world's 263 shared river basins and lakes. It is a huge challenge, but we must confront it head-on.

14/01/2017 online at: <http://www.japantimes.co.jp/opinion/2017/01/14/commentary/world-commentary/importance-water-force-peace/#.WHy5NVOLTcs>

IOF damage water line which provides to 36 families in Jordan valley

Israeli bulldozers on Tuesday morning have demolished an 11 kilometer water line that provides water to 36 Palestinian families in the Bedouin communities of Al-Ras Al-Ahmad and Al-Hadidiya, Jordan Valley.

Head of the projects in the Al-Maleh and Al-Madareb areas, Aaref Daraghmeh told PNN that Israeli bulldozers damaged a plastic water provider which passes by Atoof village, and provides 22 families in Al-Ras Al-Ahmad community, and 14 in Al-Hadidiyya.

Daraghmeh added that this water system was supported by donors to provide water for the families.

10/01/2017 online at: <http://english.pnn.ps/2017/01/10/iof-damage-water-line-which-provides-to-36-families-in-jordan-valley/>

Water deal reached between Israel and Palestinians

Israel's Coordinator of Government Activity in the Territories (COGAT) signed an agreement with the Palestinian Authority's Minister of Civil Affairs on Sunday to renew the activity of the Joint Water Committee.

The Israeli, Maj. Gen. Yoav Mordechai, and the Palestinian, Hussein al-Sheikh, brought to the signing the heads of their respective water authorities. The agreement seeks to establish a framework for the convening of the JWC under the 1995 Interim Agreement, part of the Oslo Accords. One of the goals is to improve and modernize the West Bank water infrastructure, which is essential to the fabric of normal life for those who live there.

According to the agreement, the JWC will reconvene after not having met regularly for six years. It will discuss the allocation of additional water to the West Bank and Gaza Strip, increasing water sources with new drilling, environmental issues, water tariffs, agricultural water use and promoting hydrological matters. The agreement will allow the laying of new pipes for water, sewage and effluent quickly and efficiently.

Another result is that new projects should be able to advance quickly, including planning new water lines to increase the capacity existing ones which have reached their limit. The

committee will work on coordinating joint water-reservoir usage in preparation for the coming summer months.

Meanwhile, Israel and the Palestinians are working to formulate a long-term strategic plan for up to 2040, planning for the expected population growth in the region. The JWC should streamline dozens of other new projects, which include laying water lines throughout the West Bank.

The COGAT said, "The signing of this water agreement proves that it's possible to reach understandings and agreements when we discuss issues substantively, bilaterally, clean of extraneous issues of natural resources and additional infrastructures that affect the entire population. Over the past year and half, we've signed four agreements: electricity, water, mail and 3G cellular infrastructure, which is intended to improve the quality of life for all the populations in the region."

15/01/2017 online at: <http://www.ynetnews.com/articles/0,7340,L-4907905,00.html>

Pakistan asked World Bank to restart arbitration in water dispute with India

Pakistan has asked the World Bank to once again arbitrate in its water dispute with India despite New Delhi's objections, reported the Dawn on Monday.

The current dispute stems from Islamabad's concerns about the construction of the 300-megawatt Kishanganga and 850-megawatt Ratle hydroelectric power plants by India on the Indus rivers system. According to Islamabad, the design of the projects violates the Indus Waters Treaty, a water distribution agreement signed between India and Pakistan in 1960 and brokered by the World Bank.

The report said Pakistan in its communications with the bank, believed that only arbitration by the bank could save the Indus Waters Treaty (IWT) since it has successfully resolved water disputes between India and Pakistan for more than half a century.

"That's why Pakistan wants the bank to restart arbitration, even if India disagrees with the suggestion, as much precious time has already been lost," it said.

Pakistan had asked for arbitration last year in August. The World Bank had halted the arbitration process last month, asking India and Pakistan to decide by the end of this month how they wanted the dispute to be resolved. The bank said it was doing so to protect the treaty.

Ian H. Solomon, a World Bank representative, visited India last Thursday and held discussion on the dispute. Indian officials reportedly told him that Pakistan's request for setting up a court of arbitration was not acceptable to New Delhi. Instead, they urged the bank to appoint a neutral expert.

10/01/2017 online at: <http://timesofindia.indiatimes.com/world/pakistan/pakistan-asked-world-bank-to-restart-arbitration-in-water-dispute-with-india/articleshow/56443407.cms>

Pakistan PM inaugurates water treatment plant at Hindu's holy site

Pakistan Prime Minister Nawaz Sharif inaugurated a water treatment plant installed at Amar Kund (sacred pond) in Katasraj cluster of Hindu temples in Chakwal district of Pakistan.

While talking to TOI on Thursday, Pakistan's Evacuee Trust Property Board (ETPB) Chairman Farooq ul Saddiq informed that Sharif not only came all the way to inaugurate the water treatment plant but also brought peacocks from his house 'Jatti Umra' which will be kept in temple garden.

ETPB is entrusted with the task of management of Hindu and Sikh religious properties in Pakistan after Indo Pak partition in 1947. ETPB has installed the water treatment plant at Amar Kund for Hindu devotees who visit cluster of temples during various religious occasions especially during Shivaratri.

He informed that the water treatment plant inauguration was done amidst chanting of Hindu mantra's and Muslim prayers adding that Sharif also paid obeisance at Shiva Temple and interacted with Hindu priest.

ETPB was still carrying out the project of installation of gold plated Shikhar Kalash (peak urn) after repairing the domes of temples at Katasraj, he informed.

Farooq informed that they would also give contract for the bottling of holy water on the lines of Abe Zamsam (holy water from the well of Zamzam located within mosque Al Harm in Mecca) which would be made available to devotee coming to Katasraj from far flung places.

Prominent Hindu and Sikh leaders, including Pakistan Sikh Gurdwara Parbandhak Committee president Tara Singh, Ramesh Singh, Pak provincial assembly members etc., were present on the occasion.

ETPB chairman informed that Sharif had shown keen interest in the project of Baba Nanak University coming up at Nankana Sahib, birth place of Sikh's first master Guru Nanak Dev and Gandhara International University, a revival project of three thousand year old Buddhist University at ancient Taxila.

12/01/2017 online at: <http://timesofindia.indiatimes.com/world/pakistan/pakistan-pm-inaugurates-water-treatment-plant-at-hindus-holy-site/articleshow/56505702.cms>

GCC water challenges are an opportunity to lead the world

For much of 2016, the GCC has been pre-occupied by the economic impact of a liquid that comes out of the ground. Oil has long been the bedrock of regional economies. The revenues generated have built impressive cities, driven investment and modernization, and supported development across the region. However, if the GCC is to continue to grow and progress, there is another liquid to worry about – one far more important to the future of the region: water.

Water is fundamental to life, but it remains a considerable challenge for the Middle East. World Bank data shows more than half of people in the MENA region live under conditions of ‘water stress’ – when water demand outstrips supply. Compounding this issue is the expectation that water availability per capita will halve by 2050, due to rising populations, a trend likely to be exacerbated by climate change. This has a direct economic impact: the same World Bank report found water scarcity “could cost some regions up to 6 percent of their GDP” over the next 30 years.

Producing enough water to support the Middle East’s growing population needs huge investment in production facilities and infrastructure, as well as the energy these processes demand. For more than 50 years, many regional markets have relied on desalination. Saudi Arabia has earmarked US\$ 24.3 billion of investment by 2020 to expand its desalination capacity, and 70 percent of the world’s desalination capacity is in the Middle East.

Nonetheless, the current desalination approach to water generation is simply not sustainable. It is energy intensive, relies on abundant oil, and comes at enormous environmental cost. Desalination plants worldwide emit an estimated 76 million tons of carbon dioxide per annum - the equivalent of a country the size of Romania - and without substantial changes, this is expected to treble by 2040.

Finding a more sustainable approach to clean water production is therefore essential. This is not only a considerable challenge, but also a huge opportunity. Research from the International Renewable Energy Agency (IRENA), suggests that only 1 per cent of the world’s desalinated water is currently based on energy from renewable sources – an indication of the massive commercial potential for the GCC to become a world leader in this innovative technology.

The UAE has already recognized this. Last year, during Abu Dhabi Sustainability Week, an agency of the Abu Dhabi government was instrumental in launching an initiative to explore ways to reduce the carbon footprint of desalination. It was also a key player in the launch of the Global Clean Water Desalination Alliance (GCWDA).

Even with desalination based on renewable energy as a clear route forward, this transformation cannot be done in isolation. There remains a need to continuously develop new and innovative approaches to confront the world’s water challenge, with governments, industry, science and society all playing their part.

Efficiency must be one pillar in this strategy. The heavily-subsidized water rates across the GCC have created a culture where water is recklessly wasted. As a result, the Middle East has some of the highest rates of water consumption anywhere in the world. In 2014, research from King Saud University put Saudi Arabia’s daily average per capita consumption at 265 liters.

Fostering partnerships between industry and academia is crucial to help translate pioneering research into practical solutions for communities around the world.

Governments, too, must be active in confronting a shared and pressing problem. The Middle East is already making good progress in this area. At a regional level, the GCC is exploring the possibility of a cross-border water grid to enable water to be moved from areas of relative oversupply to those facing shortages. Sustainable ‘smart’ cities, at the heart of development strategies across the region, will also help communities understand and manage water consumption like never before.

It is imperative that further rapid progress is made. By meeting the water challenge head on, and encouraging investment, innovation and partnerships across society, the GCC can put itself at the forefront of a fast-growing, innovative industry that will become increasingly vital to global development in the coming years.

10/01/2017 online at: <http://gulfnews.com/opinion/thinkers/gcc-water-challenges-are-an-opportunity-to-lead-the-world-1.1959369>

ASU and partners to bring clean water to Middle East communities

An Arizona State University-led global consortium of technology and in-country partners will implement a two-year, \$1.95 million USAID project to develop and test affordable, portable clean water solutions in the Middle East.

Communities across the Middle East are facing severe water shortages. Some communities rely on limited and variable water supplies without the infrastructure to adequately treat and transport the water. Energy sources needed to purify water can be inaccessible, expensive, or unreliable.

Population needs and challenges associated with the growing influx of refugees from neighboring countries, such as Syria, have exacerbated the problem, frequently making water a source of dispute between communities. In some instances, the relationship between local customs and constitutional governance, including different interpretations of the laws that govern water rights and water pricing, affect how water resources are developed and managed.

The USAID project, "A Holistic Water Solution for Underserved and Refugee Host Communities in Lebanon and Jordan," will be implemented in 18 communities throughout Jordan and Lebanon, benefitting more than 36,000 people. The scalable model will be established in accordance with community-specific legal and cultural frameworks.

An interdisciplinary team from ASU, ranked by US News as the No. 1 school in the nation for innovation, is spearheading this project by providing expertise in sustainability, law and engineering. The team comprises Richard Rushforth, a project manager for the Walton Sustainability Solutions Initiatives; Rhett Larson, a professor with the Sandra Day O’Connor College of Law and an expert in Middle East water policy; and Nathan Johnson, an assistant professor at the ASU Polytechnic School, one of the six Ira A. Fulton Schools of Engineering. They are joined in the consortium by public and private partners from across the globe focused on water security and development: H2O for Humanity (Illinois), GreenCo Water

(Australia), Mercy Corps (a global development organization), the René Moawad Foundation (Lebanon), and Zero Mass Water (Arizona).

“Having strong implementation partners is integral to the success of this project,” Rushforth said. “USAID demonstrated solutions-oriented global leadership with its new co-creation project development model, which allowed us to build relationships with world-class partners, providing greater, more immediate impact to communities and people in need throughout Lebanon and Jordan.”

The consortium took shape through preliminary meetings led by ASU. Larson was familiar with H2O for Humanity’s success with groundwater-treatment kiosks in India as well as the René Moawad Foundation’s renowned reputation serving rural populations in Lebanon. Rushforth, along with Joshua Fine, a project development associate at the René Moawad Foundation, participated in the co-creation workshop where Zero Mass Water, led by ASU’s Cody Friesen, and GreenCo Water were brought into the fold. Mercy Corps joined the consortium as its implementing partner in Jordan in February 2016.

“Water is inherently interdisciplinary. You cannot develop water without considering environmental, technical, economic, cultural and legal issues,” Larson said. “Our team is made up of experts in all areas of water policy and management, which makes this project especially exciting. We have a chance to truly help thousands of people in need.”

The consortium has developed a holistic water system that operates at the household and community levels by making use of nontraditional water resources in order to avoid further depleting the region’s scarce groundwater supply. Each system includes H2O for Humanity’s water purification kiosk (AquaSafi) to purify water through reverse osmosis that eliminates salts and contaminants. Two systems will be equipped with an enhanced power supply system.

“In order to provide clean water, we must first ensure there is reliable power,” said Johnson, whose primary goal is to design, integrate and deliver an optimized power system. “Since the kiosks are currently connected to the grid — which is unreliable for up to several hours a day — we need to provide sustainable, reliable power to run the water treatment system.”

At the household level, Zero Mass Water’s technology (SOURCE) will allow families in Lebanon and Jordan the opportunity to own their own water source for the first time. These household solar panels convert atmospheric water vapor into clean drinking water, even in the semi-arid and arid climates of the Middle East. Combining these two technologies with GreenCo Water’s Pak-Flat Tank — a 1,000-liter tank that ships flat-packed in a box and can be assembled in less than 10 minutes — will increase available potable water in the selected communities by 20 percent.

The René Moawad Foundation and Mercy Corps — the project’s implementing partners in Lebanon and Jordan, respectively — will conduct trainings for women (in collaboration with women’s cooperatives in the selected communities) to manage the water kiosks and generate income. The implementing partners will also conduct awareness-raising campaigns on water-

demand management. The holistic water systems will be operational in Lebanon and Jordan in the spring of 2017.

12/01/2017 online at: <https://asunow.asu.edu/20170111-arizona-state-university-and-partners-bring-clean-water-middle-east-communities>

Water Supply to Return to Tripoli AT Dawn Monday

Tripoli, 15 January 2017(Lana) Water supply is expected to gradually return to Tripoli on Monday morning, an official at the Man-made River Services said. Water supply will start to gradually return to the network in the capital starting from dawn on Monday, and to other region from Tuesday a source at the MMR Services told the Libyan news agency. Water flow started yesterday after maintenance work on the eastern track of the MMR pipeline was completed, the source said. It appealed to agricultural projects to refrain from opening the valves feeding these projects until the pipeline is filled with water and to adhere to instructions of the control room. It also extended thanks to the maintenance teams for their hard work and commitment.

15/01/2017 online at:

http://www.lana-news.ly/eng/news/view/109232/Water_Supply_to_Return_to_Tripoli_AT_Dawn_Monday

Health Risks of Iran's Lake Urmia Desiccation under Study

The universities of medical sciences in Tabriz (East Azerbaijan) and Urmia (West Azerbaijan) have been tasked to conduct a comprehensive long-term study of the effects on health of the people residing in the lake's region, following reports that respiratory and other illnesses have increased due to its desiccation.

The directive came from Isa Kalantari, who heads the Urmia Lake Restoration Program (ULRP) and is advisor to first Vice President Es'haq Jahangiri on environmental issues.

Set up in 2013 shortly after President Hassan Rouhani took office, the ULRP is mandated to stabilize the lake's water level (Phase 1) before embarking on the more challenging task of restoring its water level to what it was more than a decade ago (Phase 2).

"Tests on 88 people in regions adjacent to the lake revealed that many were living with respiratory diseases," said Massoud Tajrishi, director of the program's Planning and Integration Office.

The medical universities are obliged to conduct a study over five consecutive years on 2,500 people and assess the effects of the drying of Lake Urmia on their health.

The debate over the potential health hazards of Lake Urmia has become a regular feature of the local media during the past couple of years, with those involved in the restoration program pointing to cancer, high blood pressure and respiratory problems as the main negative health

effects of the lake drying up, which according to experts can affect life in a 100-kilometer radius.

Residents of surrounding villages and even as far as Tabriz have been breathing salt-laden air, leading to a rise in blood pressure among the people in general. The increased volume of particles in the air is posing a grave danger to public health, ISNA reported.

“Based on satellite images of the lake, its decreasing surface area has caused expansion of salt planes with high albedo (the proportion of the incident light or radiation that is reflected by a surface) affecting the thermal balance of the atmosphere above the lake,” Tajrishi said.

Freshly exposed salt planes become new point-sources of toxic salt aerosols into the atmosphere, and can cause serious agricultural and health complications across the region, he added.

Not Doing Enough

Mehdi Ahmadi, an official at the restoration program had earlier castigated the Health Ministry for “not doing enough” to assess the health effects of the lake’s desiccation and not taking appropriate measures to ensure minimal damage, ILNA reported. He warned that dry salt particles are easily scattered by winds, which end up affecting air quality.

In June 2015, the head of the program’s social committee Armin Noorbakhsh had indicated that there have not been any conclusive studies on the effects of the drying of the lake on the health of the people.

“But there is no doubt that the increase in eye problems and blood pressure is related to the rapid disappearance of Lake Urmia,” he was quoted as saying by ISNA.

He also reported a 30% increase in the incidence of skin cancer among people and wildlife in the region.

Tajrishi underlined that the effects of the process of the lake drying will not be manifested on health right away.

“Cancer cells begin to grow in the body after a certain age, and if people are exposed to specific rays that impact the growth rate of those cells, the rate of cancer will increase in later years,” he warned.

He also referred to the drying of the Salton Sea, a shallow, saline, endorheic rift lake located directly on the San Andreas Fault, predominantly in California’s Imperial and Coachella Valleys, as well as the Aral Sea, which was an endorheic lake lying between Kazakhstan in the north and Uzbekistan in the south.

“The disappearance of Salton Sea caused \$20 billion harm to health in the region, and Aral barely contained 1 gram per liter salt. Urmia Lake has 350 grams per liter.”

A multitude of factors, namely climate change, mismanagement of resources, excessive damming and construction of a massive causeway to shorten the travel time between Urmia and Tabriz, has led to considerable damage to the lake in the past two decades.

The ULRP's budget for the current fiscal year is 6.75 trillion rials (\$169 million), but the revival of Iran's largest inland body of water has slowed in recent months due to intermittent cash injections, which has led to the suspension of several projects.

16/01/2017 online at: <https://financialtribune.com/articles/people/57489/health-risks-of-irans-lake-urmia-desiccation-under-study>

International Water Summit to Put Focus On Clean Energy Desalination

A review of recent research into water security, conducted ahead of this month's International Water Summit (IWS) in Abu Dhabi, has demonstrated significant potential for innovative desalination technology to improve sustainability in the UAE's water supply.

The UAE and other GCC states are global leaders in desalination, and have proved the value of the technology in underpinning water security worldwide. Historically, the region has used thermal processes using waste heat from electricity generation. The IWS 2017 Market Report, compiled by Frost and Sullivan, found the UAE uses thermal processes for around 88 per cent of its desalination needs, based on figures from Global Water Intelligence.

Now Masdar is leading efforts to link desalination to renewable energy, investigating the latest advances in technologies such as reverse and forward osmosis, which use a high-tech membrane to filter seawater, and integrating this with solar power generation. The aim is to find the best, most advanced solution, tailored to the region's environment.

"Innovative desalination technologies have the potential to make a significant contribution to the energy goals of the UAE and MENA region," said Mr. Mohamed Al Ramahi, CEO of Masdar. "This region has led the way in proving desalination as a viable and secure source of fresh water, and we are now at the forefront of researching new solutions which are both sustainable and commercially viable."

Hosted by Masdar from 16 to 19 January as part of Abu Dhabi Sustainability Week, and held in strategic partnership with Abu Dhabi Water and Electricity Authority (ADWEA), IWS is dedicated to closing the sustainability gap in the region's water supply.

Clean energy desalination will be a key topic on the IWS conference agenda, including discussion of progress from Masdar's Renewable Energy Desalination Pilot Programme. As part of the pilot programme, Masdar has been operating four small-scale desalination plants since 2015, with each plant testing a different desalination process. Three are based on reverse osmosis, while one uses forward osmosis.

With more than a year's worth of data now to be studied, the results will help identify the most efficient technologies to be coupled with solar energy, offering policy makers and industry a path forward to achieve environmentally sustainable water security.

“The region is seeing heavy investment in solar energy, and there will be less use of fossil fuels in future expansion of the electricity supply across the region,” said Mr. Abdullah Musleh Al Ahabbi, Chairman of ADWEA. “That will make new desalination technology absolutely essential to maintaining future water supplies, and we need to make decisions based on information that is reliable and which is based on local conditions.”

The world uses almost 87 million cubic meters of desalinated water every day, and the MENA region accounts for 44% of that figure, according to the International Desalination Association. In the GCC alone, Saudi Arabia, the UAE, Kuwait and Qatar are all among the world’s 10 largest users of desalination.

Now in its fifth edition, IWS is the Middle East’s leading exhibition and conference for water security, located alongside the World Future Energy Summit (WFES). IWS 2017 will host high-level decision makers from water utilities across the MENA region, creating an essential market for innovations in both water production and water conservation, including infrastructure improvements and wastewater treatment and recycling.

16/01/2017 online at: <http://www.abudhabicityguide.com/news/news-details.asp?newsid=22069&newstype=Local%20News>