

ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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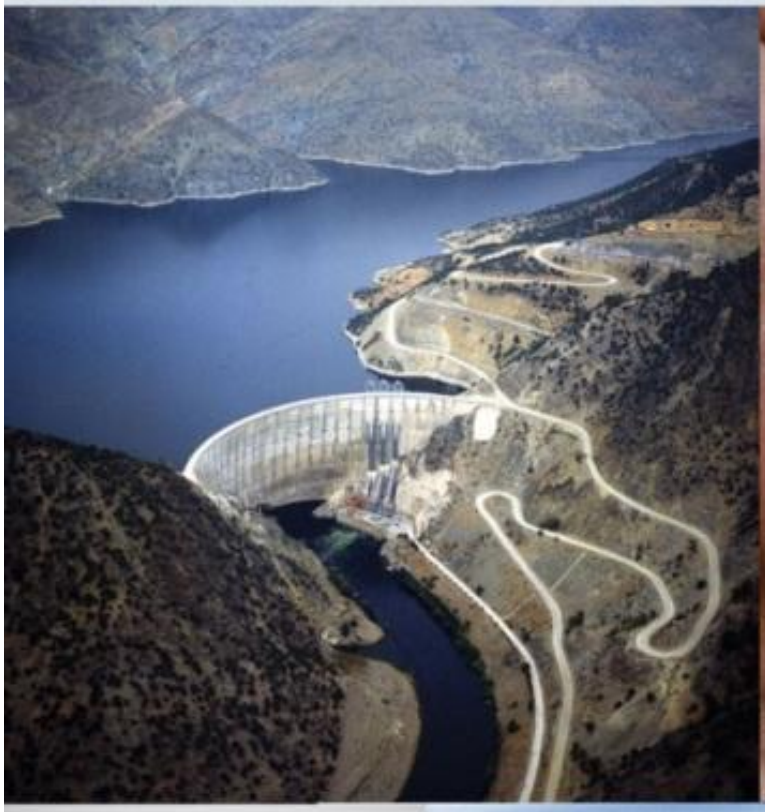



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30 May 2017 – 05 June 2017

Iconic Hama waterwheels stop turning as Orontes River runs dry

The centuries-old waterwheels in regime-held Hama city are at a standstill because the Orontes River is running far below its usual level, possibly due to the alleged closure of a dam upstream; sources in the province tell Syria Direct.

“The Orontes River is nearly dry,” Baraa, a Hama city resident and correspondent for local, pro-opposition news page Bilhamawe that first reported the story told Syria Direct last week. “The norias have been still for about a month.”

The norias along the Orontes in central Hama city are traditional water-raising mechanisms. The wooden waterwheels are lined with buckets that, when turned by the flow of the river lift and deposit water in aqueducts and channels for irrigation or other uses.

The oldest of the 19 surviving wheels in Hama city date back to the Ayyubid dynasty in the 12th and 13th centuries, while the existence of the waterwheels is thought to date back to hundreds of years before.

No longer used for agriculture, today the norias, with their unique creaking and groaning sounds, are primarily a symbol of Hama city, a tourist attraction and reminder of its heritage. Walkways, restaurants and squares line the banks of the Orontes near the wheels.

But one month ago, the water in the Orontes River, known as al-Assi in Arabic, dipped below the level needed to power the norias, and they stopped turning.

While the wheels are occasionally stopped intentionally for maintenance, or when a particularly harsh summer lowers the river, “this time has been longer,” said Hama resident Baraa.

Baraa asked to be identified only by his first name because he and other Bilhamawe correspondents work secretly inside the regime-held city.

Pictures taken by Bilhamawe correspondents on May 15 and provided to Syria Direct appear to show a dramatic reduction in the level of the river at the site of the largest waterwheel near Hama’s central Orontes Square. Images from Sunday show water at the same level, while weeds and grasses have begun to grow in previously submerged parts of the riverbank.

Why is the water so low? Sources on the ground in Hama province who spoke to Syria Direct this week speculate that the drop in the Orontes River is connected to the use of water as a weapon in recent battles between rebels and regime forces.

Earlier this month, Syria Direct reported the sudden and dramatic draining of a lake in a regime-blockaded pocket of territory in northern Homs province, 20km south of Hama city. The lake, formed by the Rastan Dam, provided a source of fish and irrigation for residents of the north Homs town of Rastan.

The draining of the lake came after pro-opposition news outlet Tomoddon reported in March that “regime forces” opened the Rastan Dam’s turbines to raise the water level downstream and “limit the movements of rebel fighters in Hama province.”

The Orontes River flows northwards from Rastan into Hama province, where the Syrian regime was battling back rebels who launched an offensive there earlier this year. While this claim was repeated to Syria Direct by multiple sources this month, Syrian state media has not reported the opening of the turbines.

Hama resident Baraa described a noticeable rise in the Orontes River coinciding with recent battles.

“At the beginning of the Hama battles,” with rebels several kilometers north of the provincial capital, “the Orontes River flooded significantly,” he said. Then the water level dropped, and had not returned to its usual level.

The local theory, as told to Syria Direct this month, is that after the water from the Rastan dam and lake flowed downstream, which hindered rebel movements and supply lines, a second dam dozens of kilometers further upstream in Homs has remained closed.

The second dam in question is on the Qateenah Lake, 12km from Homs city, from which the Orontes River flows. The closure of the regime-held dam could feasibly cause a drop in the Orontes River's water level further downstream.

The Orontes River originates in northeastern Lebanon's Hermel region. From there, it passes through Syria's Qusayr, just across the border in Homs province, before continuing on to the Qateenah lake, then Homs city and its northern countryside, before passing through Hama city on its winding route to empty into the Mediterranean.

Syria Direct could not independently confirm what caused the drop in the river's level. What is clear, however, is that something has dramatically altered the flow of the Orontes in northern Homs and Hama.

After the Rastan lake dried up, the structure of an electrical factory built during the French Mandate period in Syria, that was covered when the lake was first formed, appeared again, “for the first time in 100 years,” Yaarub a-Dali, an activist in the area told Syria Direct.

“The regime controls the body of the Rastan dam, and it is fortified with soldiers and tanks,” a-Dali said. “Only the lake is in the opposition area.”

In Rastan, the loss of the area’s lake is devastating farmers and fishermen. In Hama, the lowering water levels and the subsequent halting of the norias threaten to damage the structures, Ahmad Sabah, the former director of the Hama Artifacts Office who currently lives in opposition-held territories in the province told Syria Direct.

"With the water drying up and the wood of the norias being exposed to the burning summer sun for long periods, they could be damaged,” Sabah said.

With the river low, not only have the wheels stopped, but the water that remains is sluggish, and wastewater and trash usually carried away by the current is lingering, giving off a "loathsome smell," local correspondent Baraa said.

Pictures provided to Syria Direct show extremely low water levels and trash floating in still, scummy water.

The waterwheels, symbols of the city and once a site for picnics and restaurants, family outings and groups of tourists, are still, their wooden voices silent. Below, the river smells of rot and waste.

"The history of Hama is filled with massacres," Sabah told Syria Direct. "There may be beautiful memories on the banks of the Orontes, but it's drying up, the norias no longer turning; none of it matters much to those who have lost much more precious things."

30/05/2017 online at: http://syriadirect.org/news/iconic-hama-waterwheels-stop-turning-as-orontes-river-runs-dry/

Syria: Safe drinking water at last, after four years

Imagine how difficult your life would be if, for the next four years, you had very limited access to safe and clean water. If you lived in rural Homs, you wouldn't need to imagine it. That's what they have been dealing with since 2013.

"We have not received a drop of water through the water network since 2013," said a teacher in Al-Aliyat, a small village south of Homs. "Our only choice is to buy from the trucks that carry water from unknown sources."

In March 2017, I was part of a Medair team from Damascus on a field visit to southern and western Homs. We wanted to learn more about their enormous water needs and see how we could help.

Our two-day visit was eye-opening. We met with local water authorities in Homs to get an overview of the situation, and then visited three villages near Homs: Al-Aliyat, Al-Nezha, and Swairi. In each of these villages we connected with people who shared their stories and concerns over their lack of access to safe drinking water.

The only way that families can receive safe water is from trucks that arrive and sell the water at a high price. Even then, the source of water is unknown. Is it really safe to drink or could it be contaminated? "I do not know where the water we buy from the trucks comes from," said a father from Swairi. "I am worried about the health of my children, but we have to drink water to stay alive."

Sadly, the high cost of trucked-in water makes it unaffordable for many families. ''We are poor and my husband is blind. I do not have the money to buy enough water," said a resident of Al-Nezha. "Even if I could afford it, I'd have to wait for at least two days without water to find a free truck. The demand is too high here!''

After consulting with residents and authorities, Medair made a plan to respond to this crisis. Thanks to your monthly support, we have been able to rapidly provide safe drinking water to these three villages through two projects. For the villages of Al-Aliyat and Al-Nezha, we have put in place three kilometers of pipe work and pumps that link to the nearest functioning safe well. This intervention has provided 6,000 people with safe running water, which no longer costs them anything. In the village of Swairi we have provided the necessary equipment to operate a newly drilled well that has brought safe water to 15,000 more people.

As we travelled back to Damascus after the March assessment, I reflected on the suffering that my family and I had endured recently—suffering felt by all the people of Damascus when the fighting affected our water supply. Yet the water shortage in Damascus had lasted just a few weeks. Our suffering seemed very minor compared to the people we met on this field trip. That made us more determined than ever to take prompt action and bring safe water to rural Homs.

Thankfully, by the end of April, we had achieved our objectives in rural Homs. In the village of Al-Aliyat, everyone was very happy: “Safe water and from the taps! Thank you, Medair!”

Your monthly gift to Medair makes these kinds of critical projects possible. If you haven’t already joined our monthly team, please sign up today. Thank you!

Medair’s work in Syria is made possible with support from the European Union, Swiss Agency for Development and Cooperation, Swiss Solidarity, and generous private donors.

31/05/2017 online at: http://reliefweb.int/report/syrian-arab-republic/syria-safe-drinking-water-last-after-four-years

Shiraz Losing Water Due to Dilapidated Network

Over 25% of drinking water are wasted in Shiraz, Fars Province, due to its dilapidated and inefficient water network, the chief executive of the provincial Water and Sewage Company said.

"Rusty water pipes and illegal tapping of the water network drain the city of the precious resource, affecting both residents and the local economy," Allahbakhsh Nazarpour was also quoted as saying by IRIB News.

"It is imperative that we upgrade the water network and bring it up to standard."

Nazarpour said Shiraz has the highest quality of potable water in the country.

"About 77% of our water are supplied from 182 water wells and the rest is sourced from Doroudzan Dam (located 85 km north of Shiraz)," he said.

Located in Iran's arid southern region, Fars Province has been grappling with drought for years. Declining precipitation, inefficient farming practices and excessive industrial and household water consumption have only served to exacerbate the problem.

In Shiraz, a metropolis of about 2 million people, per capita daily water consumption is around 130 liters.

"This is while the average per capita water use in times of crisis is between 50 and 70 liters," Nazarpour said.

He said 100 kilometers of the water network in Shiraz will be repaired or upgraded by the end of the current Iranian year (March 20, 2018).

The project will cost at least 400 billion rials (over $10 million) in the first phase.

Shiraz's predicament reflects the entire country's struggle with water shortage. Experts say 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 uninhabitable.

Iran has been struggling with water shortage for so long that those in their early twenties do not recall a time when the country did not suffer from the scarcity of this precious resource.

Water officials are pinning hopes on watershed management schemes in the province to help store water. The schemes so far cover 1.7 million hectares, but lack of funding has suspended plans to cover 3.8 million hectares.

01/06/2017 online at: https://financialtribune.com/articles/people-environment/65688/shiraz-losing-water-due-to-dilapidated-network

Drought brings Lake Kinneret to a record low for May

As drought continues in the Galilee since 2014, the Water Authority ceases pumping water from the Kinneret.

Rachel the poetess sang paeans to the beauty of Lake Kinneret, otherwise known as the Sea of Galilee or Lake Ginosaret. But today there’s little to sing about.

Semi-arid Israel has been experiencing a drought for the last four years, and the country’s only fresh water lake is dropping precipitously. Even with pumping now stopped, it may take a miracle of several rainier than average winters to restore the lake to its normal level. A more prosaic solution will involve the pumping of desalinated sea water into the lake, in effect reversing the original function of the National Water Carrier. Today Israel is the world’s leader in desalinization, using reverse osmosis technology.

The Water Authority’s Hydrological Services announced Sunday that Lake Kinneret broke an all-time record low for the month of May. With the torrid summer season only just beginning, the level of the harp-shaped lake is likely to continue dropping to a level which affects water quality.

As of June 5, the lake stood at –213.135 meters below sea level, marginally above the lower Red Line of –213.18. With the water level dropping one centimeter daily during the summer because of the imbalance of evaporation and the flow of water from the Jordan River and local springs, the lake level is expected to drop below the Black Line of -214.4 by August.

The basin today holds less than 9 million cubic meters of water – the worst situation since 1920 when British Mandate authorities began recording the lake level.

Politics Plays a Role in the Water Crisis

Politics is also playing a role in the water crisis. An agreement signed in 2010 between Israel and Jordan committed the Jewish State to transfer an additional 50 million cubic meters to the Hashemite Kingdom on top of a similar amount already flowing from the Sea of Galilee under the 1994 peace agreement, in return for Jordan sending water to Israel from a new desalination plant to be built in Aqaba.

The low level of the lake causes increased salinity, thus reducing the water quality. Lake Kinneret's natural salinity was once about 350 milligrams of chloride per liter, which made it difficult to use the water for irrigation. A special water channel was built in 1967 to divert the saline springs away from the lake. By 1969, the salinity had dropped to 300 milligrams per liter. Due to the four-year drought extending into 2017 which has caused the lake level to drop precipitously, the salinity has again risen to 320 milligrams per liter. Today the lake is facing severe ecological and environmental stress.

"During the month of May, more water evaporated from the Kinneret than entered into it from the [Upper] Jordan River and the springs around it," a statement from the Water Authority said. "This caused a 15-cm. drop in the Kinneret's level."

Looking at multi-year averages, even accounting for the pumping that normally occurs from the basin, the Kinneret's water level typically does not decline in May and remains stable, according to the Water Authority.

"The summer has not yet begun – and at the height of the summer, the Kinneret evaporates at a rate of 1 cm. per day," the statement warned.

While the four-year drought has taken a heavy toll on Lake Kinneret, the dearth of rain has also severely impacted on the Dead Sea. In May, the water level of the hyper saline lake dropped by 16 cm, leaving the basin at 431.54 meters below sea level as of June 1, the Water Authority reported. The Dead Sea dropped 87 cm during the 2016-2017 hydrological season, the authority added. Today the Dead Sea's south basin at Ein Bokek is entirely artificial, and only exists because salt saturated water is pumped from the deeper north basin via a canal to the reach the area of the hotels and the Dead Sea Potash Works.

The dwindling of the Dead Sea, caused by the diversion of Jordan River water for irrigation, has created an ecological disaster along the lake's western shore. Due to the threat of sinkholes, beaches including the Mineral Beach Spa have been closed, and Route 90 diverted to the west at Ein Gedi to avoid unstable ground.

05/06/2017 online at: https://worldisraelnews.com/drought-brings-lake-kinneret-record-low-may/

Three projects to improve water supply started in Balqa — officials

Construction on three projects to improve water supply and reduce water loss has begun in Balqa Governorate, where water loss is estimated at 60 per cent, according to the Ministry of Water and Irrigation.

The three projects target the water network in Balqa, located 35km northwest of the capital, according to ministry's officials, who noted that main and tertiary pipes are in a deteriorated state as they were installed years ago and pressure on the network has surged.

The projects, worth JD350,000, will be implemented by local contractors, Minister of Water and Irrigation Hazem Nasser said in a statement e-mailed to The Jordan Times.

Supply disruptions will be addressed once the projects are completed, while water supply and distribution efficiency will improve, Nasser said in the statement.

"The projects will serve thousands of people in Balqa… Several other water projects are being implemented across the country to address the rising demand for water, particularly in light of the influx of Syrian refugees," the minister noted.

Meanwhile, ministry spokesperson Omar Salameh noted that the projects will be completed before the end of this year.

"The projects are funded by the state treasury. They are scheduled to be completed within four months," Salameh told The Jordan Times over the phone.

Water supply to Balqa Governorate stood at 35.2 million cubic metres (mcm) of water in 2015 and was increased to 47.2mcm in 2016.

The Balqa water directorate provides water to over 74,000 subscribers and wastewater services to 39,000 subscribers, according to official figures.

Officials say that the governorate's water deficit has been increasing due to population growth and the presence of Syrian refugees.

The country hosts 1.4 million Syrian refugees in camps and among host communities in different parts of the Kingdom.

05/06/2017 online at: http://www.jordantimes.com/news/local/three-projects-improve-water-supply-started-balqa-%E2%80%94-officials

"Kuwait by your side" campaign kicks off water project in Yemen's Dhale'

Kuwait by your side, a Kuwaiti humanitarian campaign, launched on Sunday first phase of projects to enhance water system in Dhale' province in Yemen, with a total cost of USD 500,000.

In a speech during the opening of the projects, Al-Dhale' Governor Fadhel Al-Ja'dai expressed gratitude to the Kuwaiti government and people, also praised Kuwait's stands throughout half a century in support of the Yemeni people, through development projects that were provided in various fields.

Al-Ja'dai thanked as well organizers of this campaign for their efforts and aid to Yemeni people in various areas, including food aid, housing, water projects, education and health.

For his part, the head of the Yemeni-Kuwaiti relief organization, Ibrahim Issa Al-Qurashi, said the water project includes the construction of two water reservoirs with a capacity of 450 cubic meters, as well as maintenance and operation of wells and pumping water to Sanah Directorate.

Al-Qurashi pointed out that after the completion of supply of pipes to the tanks, water will be pumped to the reservoir and tank, to distribute water to all parts of the city of Dhale' for the benefit of more than 50,000 people.

Earlier, the Kuwaiti campaign distributed 4,900 food baskets in the same province, including 900 aid kits, in addition to more than 4,000 school bags and the reconstruction of various schools and houses in the city.

04/06/2017 online at: http://www.kuna.net.kw/ArticleDetails.aspx?id=2615141&language=en

LE572 million allocated to improve water quality, drainage: Planning Ministry

The Ministry of Planning, Follow-up and Administrative Reform approved additional allocations of LE572.5 million to improve the quality of drinking water and sanitation services across Egypt.

Minister Hala el-Saeed said in statement on Monday that these allocations will help the development of the water and sanitation sector infrastructure, which will positively improve the lives of citizens.

LE272.5 million has been approved within the plan for the current fiscal year 2016/17 to start the sewage treatment and purification plant in Abo Rawash, as a down payment to start work on the project, at the request of the Ministry of Housing.

LE300 million has been approved to support the sector of drinking water and sanitation at the Ministry of Housing as an additional allocation under the 2016/17 plan. Of this, LE200 million is allocated to replace and renovate potable water and sewage plants in Egypt’s governorates, and LE100 million to supply cars and necessary equipment.

“These allocations come within the framework of meeting the urgent needs of the ministries to improve the quality of life and services provided to citizens, address development gaps and create balanced spatial development to ensure justice in achieving sustainable development and benefiting disadvantaged areas in accordance with the priority approach adopted by the government,” the Minister said.

30/05/2017 online at: http://www.egyptindependent.com/water-infrastructure-planning-ministry/

African Development Bank Invests Euro 300 Million in Morocco’s Water Industry

The African Development Bank (AfDB) is the main donor in Morocco's water industry, having invested EUR 300 million.

Programmes paid for by the AfDB have improved both water supply and distribution in more than 30 Moroccan cities, benefitting over two thirds of the Moroccan population.

A report published in May showed a massive increase in access to drinking water in rural areas from 14 percent in 1990 to 94 percent in 2017. In urban regions, the AfDB has helped stabilize access to clean drinking water at around 100 percent.

About five million people have had the quality and quantity of their water improved in the Rabat-Casablanca region, and new infrastructure has also secured the supply of drinking water for approximately two million Moroccans in Marrakech, Al Haouz and Al Kelaa.

Mohamed El Ouahabi, a water and sanitation specialist for AfDB said the investment was important since Morocco is "an arid country where water is hardly plentified

05/06/2017 online at: https://www.moroccoworldnews.com/2017/06/218820/african-development-bank-invests-euro-300-million-in-moroccos-water-industry/

Rs 25b being allocated for clean drinking water: Shahbaz

Punjab Chief Minister Muhammad Shahbaz Sharif on Sunday said that clean drinking water was the basic right of every citizen and the Punjab government had allocated a hefty amount of Rs 25 billion in the budget.

Punjab Chief Minister expressed these remarks while chairing a two hours long meeting which reviewed progress on various matters of Punjab Water Roadmap here.

Addressing the meeting, Shahbaz Sharif said that clean drinking water was basic right of every citizen and Punjab government had initiated this mega project to ensure provision of potable water, for which, a huge amount of 25 billion rupees has been allocated in the budget of upcoming fiscal year.

He said that the programme would furnish natives with their fundamental right of clean drinking water which would prove to be a revolutionary project with regard to human health.

He said that initially this programme was being started from south Punjab while 116 water filtration plants were providing clean drinking water to the citizens in Bahawalpur region and now this program will be advanced and completed soon at Tehsils of South Punjab.

The Punjab government has established two companies for implementation of this program which are supposed to deliver by taking decisions independently so there is no need to forward any summary to him, the Chief Minister directed the concerned authorities.

He said that professional dishonesty and criminal negligence by some officers have caused pointless deferral in this public welfare project but in time interference of Punjab government has figured it out and brought the culprits to book. Now working as a team, things are moving forward in the right direction, he added.

Shahbaz Sharif directed to launch an effective awareness campaign regarding provision of clean drinking water as participation of community is necessary for its success. Disable rural water supply schemes should be made functional soon and effective monitoring system be introduced as this scheme will be beneficial for millions of people, he added.

The Chief Minister directed to restore 800 inactive water schemes till April 2018 and added that all-out resources will be provided in this regard. The meeting expressed dissatisfaction over the performance of WASA and decision of reforms and reorganization in it was taken.

Shahbaz Sharif directed the concerned authorities to make an effective viable plan and hire capable human resource at merit in order to equip WASA with latest trends while external and internal audit system should also be introduced. He also directed to expedite the process of up-gradation of four water testing labs at Multan, DG khan, Lahore and Rawalpindi.

The CM said that Punjab government has decided to acquire mobile water testing labs and initially water samples will be checked by five mobile water testing labs. While directing to procure mobile water testing labs for 36 districts the Chief Minister said that their framework ought to be autonomous like Drug Testing Lab. He commended Chairman Planning & Development and Secretary Housing on splendid step regarding mobile water testing labs.

He said that chlorination process in tube wells will be the responsibility of Deputy Commissioner of concerned district and survey be conducted to assess the condition of the pipelines.

Shahbaz Sharif said that clean water is a blessing of Allah Almighty and let us all join hands and put our all energies to expedite this program for providing clean drinking water for every citizen of the province.

Managing Partner Delivery Associates Sir Michael Barber, other partners of Roadmap Team, Provincial Ministers Mansha Ullah Butt, Syed Haroon Sultan Bukhari, Special Assistant Malik Ahmad Khan, Advisor Dr. Umer Saif, Chief Secretary, Additional Chief Secretary, Chairman Planning & Development, Chairman Saaf Pani Company North MNA Major (Retd) Tahir Iqbal, Chairman Saaf Pani Company South Chaudhry Arif Saeed, high officials, concerned secretaries and experts attended the meeting.

04/06/2017 online at: http://pakobserver.net/rs-25b-allocated-clean-drinking-water-shahbaz/