

# ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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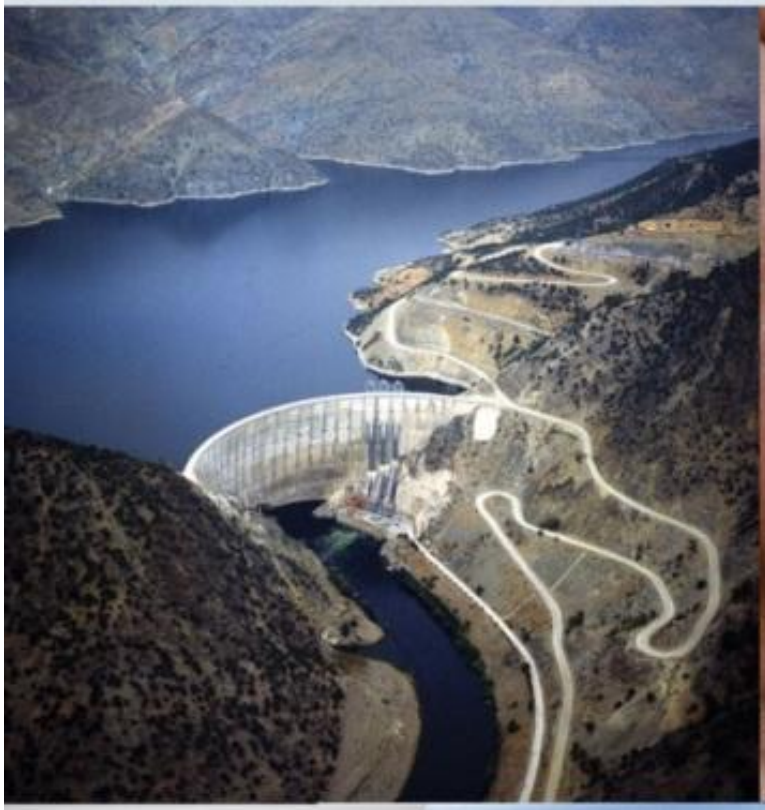



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*04 April 2017 – 10 April 2017*

## Clean water for conflict-affected Iraqis near Mosul

In March 2017, as Iraqi Security Forces (ISF) advanced west from the outskirts of Mosul towards the Quba Pump Station on the bank of the Tigris River, IS fighters in the area attempted to destroy critical parts of the water project as they retreated in order to deny civilians in recently-retaken East Mosul their access to clean, safe water.

Located on the edge of East Mosul in Northern Iraq, the Quba Pump Station covers an area of over 100,000 m2 and is one of the largest water treatment and pumping projects in the area. Before the outbreak of conflict, the network treated water drawn from the nearby Tigris River and pumped it into 39 of Mosul's eastern neighborhoods, bringing safe, clean water to over 800,000 people there and a further 50,000 people in the town of Telkaif and surrounding villages to the north of Mosul. Quba's residents began fleeing the village when fighting reached the area in late 2016 and early 2017, but some are now beginning to return, and many say the absence of basic services and sporadic fighting are of serious concern.

The Danish Refugee Council (DRC) was the first humanitarian agency to reach Quba on 3 April 2017, travelling there as soon as it was possible to safely access the area. Surveyors found generators, electrical transformers and circuit rooms bringing power to the pump station covered in gasoline and set alight, as well as evidence that explosives were set off in the filtration unit that makes the water clean to drink. Furthermore, the pump room that sends the filtered water to Telkaif town and the neighborhoods of East Mosul was deliberately flooded, in order to damage electrical pump sets crucial to the pump station's functioning.

Since the destruction in the Quba station, over 800,000 IDPs and other conflict-affected people in wider Telkaif District and East Mosul have been denied access to clean water mains, instead having to rely on poor quality and unfiltered water from shallow wells and expensive commercial water trucks. In an effort to fill the widening gap as needs increase, humanitarian organizations are delivering as much as 2,300 m3 of water by trucks each day into East Mosul.

"Access to safe drinking water is a fundamental right for all individuals, but in an area like East Mosul that is currently hosting tens of thousands of IDPs from West Mosul and other areas, a lack of access to clean water is also a question of dignity and a potential public health risk that must be addressed with the utmost urgency," said Ed Hughes, DRC Duhok Head of Office.

Together with engineers from the Directorate of Water for Ninewa, DRC's staff conducted an assessment to determine what emergency work is needed now to re-start the pumping of chlorinated water as soon as possible, while plans for long-term, durable solutions by other agencies are put in place.

"We asked the directorate to send any agency able to support us; there is a lot of work to do," said Ahmed Ali Mohammed, Operations Manager at Quba for the Directorate of Water in Ninewa Governorate. "We are pleased to see DRC here."

DRC initially plans to install emergency pumps and filtration equipment to restore up to 50 percent capacity back to the pump lines into East Mosul and conduct further works thereafter as needed to ensure IDPs and host community populations in East Mosul are able to access reliable and safe sources of water once again.

05/04/2017 online at: http://reliefweb.int/report/iraq/clean-water-conflict-affected-iraqis-near-mosul

**Iraq Ministry Says It Needs US$180 Billion to Redevelop Water Resources**

Iraqi Water Resources Minister Hassan al-Janabi disclosed that Iraq needs 180 billion dollars to develop its water resources and systems, calling to stop the waste in the irrigation system.

"Iraq need 60 billion dollars for the infrastructures, 80 billion dollars for drinking water, 10 billion dollars to rehabilitate dams and 10-12 billion for supporting projects", he elaborated during a conference held here.

Earlier, Iraqi President Fouad Ma'soum announced Iraqi intention to have new accords with neighboring countries on its water shares.

05/04/2017 online at: http://www.rebuildingiraq.net/news/view/37851-Iraq-Ministry-Says-It-Needs-US$180-Billion-to-Redevelop-Water-Resources

**Islamic State fighters 'fully encircled' in Tabqa city, Euphrates Dam**

The American-backed Syrian Democratic Forces completed their encirclement of Islamic State fighters inside Tabqa city and the nearby Euphrates Dam in Raqqa province on Thursday after capturing a key village, an SDF spokesman told Syria Direct.

"Our forces have encircled the IS terrorists inside Tabqa city and the Euphrates Dam from all four directions," Mehiar Muhammad, a spokesman for the SDF's Manbij Military Council told Syria Direct. The SDF fully encircled the area in Syria's northern Raqqa province on Thursday after capturing the village of a-Safsafah, six kilometers east of Tabqa city, after more than 36 hours of fighting.

"A-Safsafah was the last position that IS was using to reinforce itself inside Tabqa," said Muhammad. Forces within the Manbij Military Council are currently participating in the battles.

The SDF, a multi-ethnic coalition of Syrian forces, of which the Kurdish YPG militia is a main component, has been battling Islamic State forces near Tabqa, 40km up the Euphrates River from Raqqa city, since late March with support from US airstrikes and artillery.

The Tabqa battles are part of the Euphrates Wrath operation to isolate and capture Raqqa city, the capital of the self-styled IS caliphate in Syria.

Until Thursday, the last IS-held road leading out of the Tabqa pocket ran through a-Safsafah, though the route was in firing range of SDF forces in recent days.

Civilians inside Tabqa city told Syria Direct earlier this week that they could not get out, and that food and fuel are in short supply.

'Danger has passed'

As military operations continue near Tabqa, the neighboring Euphrates Dam, the largest such structure in Syria, appears to be holding up despite earlier rumors of its collapse.

The SDF released a video on Wednesday showing water flowing through the main floodgates of the Euphrates Dam, in the portion of it that IS fighters control. The Islamic State controls the southern section of the dam, including its eight main floodgates and hydroelectric station. The SDF controls the northern part of the dam and a spillway channel, al-Baleekh.

If the Euphrates Dam's main floodgates are in fact operational, as they appear to be in the video, "this means that the danger of the rising water level in the lake has passed," a group of engineers who previously worked at the Euphrates Dam said in an online statement on Wednesday.

In late March, Islamic State-linked media reported the Euphrates Dam was in danger of collapsing due to material destruction and increased water levels. At the time, the floodgate was closed, and IS images appeared to show extensive damage to the dam's control room.

One week ago, SDF forces north of the dam opened a different set of floodgates to reduce water pressure on the main structure. As a result, water entered the al-Baleekh channel north of the dam, and flooding was subsequently reported in nearby agricultural land and as far downstream as Raqqa city.

06/04/2017 online at: http://syriadirect.org/news/islamic-state-fighters-%E2%80%98fully-encircled%E2%80%99-in-tabqa-city-euphrates-dam/

**The Visible Effects of Climate Change in Iran**

So much of the debate over climate change takes place in the realm of language—the dry language of scientists, the passionate language of environmentalists, the obfuscating language of skeptical politicians. But to feel climate change you have to see it, and there's no better place to do that then Lake Urmia in southwest Iran. Once the sixth-largest saline lake in the world, Urmia has lost more than 90 percent of the water it contained as recently as the 1970s. Farmers have tapped much of the lake for irrigation, but the effect of warming temperatures has played a major role, as it has through the Middle East, a dry region made drier by the accumulating effects of climate change. It may not be long before Urmia, like the nearby Aral Sea in Kazhakstan and Uzbekistan, has vanished altogether.

In a work by the photographer Ako Salemi, that day already seems to have come.

Salemi captures the crumbling remains of a small ship, marooned when the lake itself fled. Where once was water is now desiccated land, stretching to the far horizon. What is left seems more desolate than any desert, because the exposed lakebed contains the memory of the

water it once supported. It is an image that seems to be from a far future, but was only taken last July. “In Iran you can see climate change in action,” says Salemi.

The image from Lake Urmia is part of a series that Salemi has done on the effects of global warming on Iran, his home country. The work is supported by the Pulitzer Center on Crisis Reporting, and what Salemi captures is a crisis, albeit a slow-motion one unfolding in a country that is still a mystery for many Westerners. He shows a land wracked by repeated droughts, compounded by the effects of often unregulated agricultural and industrial growth, draining what little water an already arid Iran has to draw from. In another striking image, Salemi shows the Khara desert, near what was once the Gavkhouni wetland in central Iran. But the wetland has dried up, giving dominion over to the desert. “This is a big problem we are going to face in the future,” says Salemi.

Salemi also shows us the faces of the people being hurt by climate change right now, the farmers and the fisherman who have seen the land they depended on for generations change beneath their feet. In one picture he captures a fisherman who once plied the waters of Lake Hamoon in western Iran, but now is reduced to collecting wood from the Tamarisk trees that grow in the dried out lakebed. In another, a tableau straight from Diane Arbus, a pair of twin girls regard Salemi’s camera as the hot waters of the Persian Gulf lap behind him. Salemi notes that recent research estimates that as early as the 2070s—when these girls will be elderly women—heat waves from climate change could be so intense that parts of the Persian Gulf region will be too hot for human habitation. For these girls, there will be no escape.

But we don’t have to wait decades to see the effects of climate change. Researchers have connected the upheavals of the Arab Spring and the Syrian civil war to lingering droughts that drove up food prices and contributed to social unrest, effectively adding gasoline to the region’s simmering social discontent. Add in the impact of rising populations—Iran’s population has doubled since 1980, while Syria’s population has grown by even more—and you have more people trying to make a living on a declining land. That’s a recipe for the chaos hidden behind Salemi’s carefully composed black-and-white images.

Saddest of all is the fact that the people Salemi shows have done almost nothing to contribute to global warming. Iran’s per-capita carbon emissions are less than half of America’s, and while President Donald Trump this week signed executive orders designed to tun the clock back on U.S. climate action, Iran is going forward with its responsibilities under the Paris climate change agreement. The rural villagers that Salemi photographs are the victims of climate change, not its cause. “It’s a big problem, a big issue for people,” says Salemi.

Salemi intends to continue photographing the effects of climate change in Iran and throughout the region, moving to Afghanistan, India and China in the future. “I want to raise awareness of the subject,” he says. That he will do. But years later, we may look back on these photographs as historical artifacts of a time when we still had the power to change our future—but did nothing.

05/04/2017 online at: http://time.com/4713291/iran-climate-change/

**Dutch Discuss Water Cooperation with Iran**

Avenues for cooperation in water industry were discussed in a meeting in Tehran between officials of the Energy Ministry and Netherland's Ministry of Infrastructure and Environment on Sunday.

Bahram Taheri, an advisor to the ministry, and Henk Snoeken, deputy director of international affairs at the Dutch ministry, discussed water management and governance, research and development as well as risk reduction in water projects, IRNA reported.

Water governance is a set of rules, practices, and processes through which decisions for the management of water resources and services are taken and implemented, and decision-makers are held accountable.

Last October, a memorandum of understanding was signed between the Dutch Minister of Infrastructure and Environment Melanie Schultz van Haegen, and Energy Minister Hamid Chitchian. The visiting minister had expressed willingness to cooperate with Iran in desalination and agricultural wastewater treatment.

Issues such as river management, water shortage as well as training Iranians in Dutch companies could pave the way for expanding two-way ties.

"Faced with major water-related challenges, Iran is finding it increasingly difficult to provide the population with potable water and have sufficient water available for industry and agriculture," Schultz van Haegen said at the time.

According to the Dutch Ambassador Susanna Terstal, the Netherlands has taken practical steps to expand economic ties with Iran as is evident in the regular visits to Tehran by high-ranking Dutch officials. A joint economic commission has been formed and cooperation in key energy and water sectors is underway.

10/04/2017 online at: https://financialtribune.com/articles/energy/62120/dutch-discuss-water-cooperation-with-iran

**Israeli start-up extracting water from air, around the world**

From the remote corners of India to the palm-lined streets of Miami-Dade County, one Israeli company is aiming to do the unthinkable – extract safe, inexpensive potable water from the air we breathe.

“We created a product that can really be the next source of drinking water,” Maxim Pasik, executive chairman of Rishon Lezion-based Water Gen, told The Jerusalem Post on Thursday.

Water Gen made headlines at the AIPA C Policy Conference in Washington two weeks ago, when Prof. Alan Dershowitz presented the company’s GENius device, generating water out of thin air on stage.

Just days earlier, the company had signed a memorandum of understanding to install its technology in Vietnam's capital city, while days later, the firm inked another memorandum with India's Vikram Solar Pvt. Ltd., to deploy solar powered Water Gen units in remote parts of the subcontinent.

"All these countries that have the water shortages have a humid and hot climate," Pasik told the Post. "We take all the humidity from the air and extract the water."

The memorandum of understanding signed with the Hanoi Department of Construction calls for the construction of a Water Gen factory, to produce industrial-scale water generators for the municipality, with a total capacity of up to 10,000 liters of water per day, Vietnamese news sites reported.

"Our solution is 20 times cheaper than the solution for drinking water that they have," Pasik said. "[And] what they drink is not healthy."

In India, the memorandum inked between Water Gen and Vikram Solar enables the latter to manufacture and distribute the Israeli company's products, incorporating solar power to fuel the water generation process in remote locations.

Yet Water Gen's reach is by no means limited to the developing world. The products have recently generated interested in several Gulf countries, in Egypt, in Mexico and across the United States, Pasik said. In the US, Water Gen is operating a pilot study in Miami-Dade County and is in talks with various entities in California, Chicago and Michigan, he added.

While most of these places do have access to clean water, many are beginning to experience strain on their aging pipes, requiring shipments of bottled water to residential neighborhoods, Pasik explained.

"We can solve this problem," he said. "They can put our home devices inside people's houses and they will have water."

Water Gen's technology aims to provide clean, drinkable water to consumers regardless of the infrastructure leading to their homes, according to Pasik.

"This is really the next source of water," he said. "Desalination plants are good when you have good pipes. If you have bad pipes it doesn't matter how much good water you put in the pipes."

The GENius technology works on-demand by trapping the humid air inside the device, then cleaning and drying the air and extracting the now clean water, Pasik said.

Because the heat exchanger is made from plastic rather than aluminum, as has been typical in other such mechanisms to extract water from air, the system is much more affordable, he said. Generating 1 gallon (3.785 liters) of water requires only 1 kilowatt of energy, he added.

The system is available as a large-scale industrial water generator, a medium-scale model and the "GENNY" home appliance for household use.

Pasik said seeing his company's technology generate a potable resource around the globe is critical, as "water is the next oil for the world." About 1.7 million children under the age of five die every year due to water scarcity issues, he said.

"There's nothing more important in the world than water," he said. "People cannot live without water."

Pasik said that in the future, technologies like Water Gen's devices will have the capacity to prevent wars and foster peace, in regions where people are fighting for access to clean water.

"It's very important that this kind of solution comes from Israel," he said. "This is kiddush Hashem [sanctification of God's name] and tikkun olam [repairing the world]."

As an investor in sustainable technology solutions, Pasik also serves as executive chairman at a variety of other Israeli and international companies, including the Ramot Hashavim-based Vertical Field and partner Green Wall Israel, which focus on building natural gardens on vertical surfaces.

"The biggest problem in the world is drinking water and the second is pollution," he said, "We don't have a place in the city to put trees."

A 1,000-meter vertical field is equivalent to 50 trees, each 15 meters tall, which would take many years to grow, Pasik explained. Today, Green Wall is carry out several municipal pilots around the world, in Israel, India, China, the US, Mexico and Europe, he said.

While Vertical Field and Green Wall can provide critical solutions to dense urban communities plagued by air pollution, Pasik stressed that solving the world's water scarcity problem is still his top priority.

"Two-thirds of the world has drinking-water problems," Pasik said. "This is a humanitarian issue. We would like to maintain peace between people and save people's lives. The project itself is priceless and is huge."

08/04/2017 online at: http://www.jpost.com/Business-and-Innovation/Environment/Israeli-start-up-extracting-water-from-air-around-the-world-486500

**Israel estimates 96% of water in Gaza undrinkable, warns of worsening crisis**

Israel has warned of a rapidly worsening water crisis in the Gaza Strip and is calling on the international community to take urgent action to avoid deteriorating humanitarian conditions in the Palestinian enclave.

In a letter to international aid organizations, representatives of the international community in Israel, and Israel's foreign ministry, the defense ministry's Coordinator of Government Activities in the Territories (COGAT) estimated that some 96 percent of water in the Gaza Strip is now undrinkable after the collapse of the enclave's main aquifer, Israel's Army Radio reported Sunday.

It was the second such warning issued by COGAT head Maj. Gen. Yoav Mordechai over the past six months.

Mordechai asked that international aid organizations advance projects to alleviate the crisis, such as the establishment of desalination plants in the Strip.

A desalination plant constructed by UNICEF in Khan Younis earlier this year -- with the capacity to pump 6,000 cubic meters of water and serve 75,000 people per day -- remains un-operational, Mordechai said, as the Hamas militant group which rules the Strip has prevented it from being connected to Gaza's power grid.

A second desalination plant is still in the planning stages, while the international community has yet to raise the funds required for a third plant planned for Deir al-Balah.

Mordechai told Army Radio that Israel has offered to double the amount of water it supplies to Gaza from 10 million to 20 million cubic meters per year.

The water crisis in Gaza has been worsened by ongoing electricity shortages, which make it difficult to pump water into homes, operate desalination facilities, or to plan future ones.

The Strip's sole electricity plant has seen fuel shortages in a dispute over unpaid bills and taxes with the Palestinian Authority, based in the West Bank and dominated by Palestinian president Mahmud Abbas's Fatah party.

The power plant, which has also been hit by Israeli strikes during past conflicts, already functioned below capacity even before the recent crisis.

Besides their one power plant, Gaza's two million people also rely on electricity imports from Israel and Egypt.

09/04/2017 online at: https://www.i24news.tv/en/news/israel/142275-170409-israel-estimates-96-of-water-in-gaza-undrinkable-warns-of-worsening-crisis

**UNICEF seawater desalination plant helps head off Gaza water crisis**

For 13-year-old Ahmad, the idea of drinking water from the tap did not make sense.

“I have never drunk tap water because it is not clean, and it could make me sick,” he says. “My parents told me that they used to drink tap water at home, but it must have been many years ago, before I was born.”

In January, UNICEF and partners completed the construction of a €10 million seawater desalination plant funded by the European Union. It will initially produce 6,000 cubic metres of safe drinking water a day, providing it to 75,000 people living in the southern Gaza Strip – about 35,000 people in Khan Younis and 40,000 people in Rafah.

Ahmad is among those who will receive safe drinking water at home.

Responding to the Gaza water crisis

Water resources have long been critically scarce in the Gaza Strip, and the situation is getting beyond dire. Ninety five percent of the water extracted from the coastal aquifer is now considered unfit for human consumption. There is over-extraction of water from the aquifer, allowing seawater from the Mediterranean to seep into it, along with sewage and chemicals. To drink, most families depend on water they buy from private vendors at a high cost and without quality control, or on imported water. A 2012 United Nations study warned that the aquifer of the Gaza Strip could become unusable by 2017, with the damage irreversible by 2020.

Seawater desalination is one of the strategic options chosen by the Palestinian Water Authority to help provide 2 million Palestinians in the coastal enclave – including one million children – with safe drinking water. The desalination of seawater from the Mediterranean is essential to curb over-extraction of groundwater from the coastal aquifer, to prevent an environmental disaster and to start the slow process of aquifer restoration.

In addition to limited safe water, the Gaza Strip has long been hit by a chronic energy crisis that results in daily blackouts in family homes. To help conserve energy resources, about 12 per cent of the plant's peak energy requirement is currently met by solar panels. There are plans to harness the renewable energy potential to further increase this percentage.

"The water was so sweet, I could not believe it came from the sea!"

Last summer, Ahmad and his classmates participated in a school trip to the new seawater desalination plant.

"I tried a glass of water at the plant, it tasted good. It was so sweet, I could not believe it came from the sea!" he says.

Ahmad and his friends were amazed when they visited the huge building with all the equipment and technology treating water from the sea and turning it into water people can safely drink.

"We had studied the process of desalination at school but I could not visualize what it would look like," Ahmad tells. "After visiting the plant, I saw how it worked and I felt very proud that this new technology was being used in Gaza."

Together with Gaza's Coastal Municipalities Water Utility (CMWU) and the Palestinian Water Authority (PWA), UNICEF has led a public information and 'communication for development' (C4D) campaign to inform the beneficiaries that they can trust desalinated water, and explaining how they can safely handle the water and keep it clean in water tanks at home. UNICEF also provided tips on how to avoid wasting water, and explained why paying the water bill is important, as it will help ensure the sustainability of the plant, to the benefit of all.

Social workers visited families at home in Khan Younis and Rafah, while radio spots and billboards reminded everyone of the plant. Children and adolescents studying in public

schools served by the plant also participated in the campaign. After visiting the plant, they informed their families and neighbors about the project.

“I learned a lot and I used my creativity,” says 12-year-old Shahd. “I launched a Facebook page called ‘Parliamentarians for Environment’ to talk about the plant. One of my friends made short videos on the plant which she uploads on her YouTube channel. We all like this project and we will continue to talk about it.”

Plans for expansion

June Kunugi, UNICEF State of Palestine Special Representative, still remembers the day she arrived at the site of construction of the plant in April 2013. “All I saw was just an empty stretch of land,” she says.

“Today the plant has been completed, and is a testimony to what can be achieved in Gaza. I deeply thank all who were involved in making this possible, especially the European Union for their generous support and for playing a lead role every step of the way. Nothing can be more fitting to celebrate the 70th anniversary of UNICEF than the opening of this plant which enable 75,000 people, half of them children, to realize their right to safe drinking water.”

The completion of the plant, which started a little over two years ago in partnership with the Palestinian Water Authority (PWA) and CMWU, is not an end but a beginning. The European Union has granted an additional funding of €10 million to double its capacity. The works of this second phase, which have just started, will enable the plant to produce a total of 12,000 m3 of safe drinkable water daily, serving around 150,000 Palestinians.

06/04/2017 online at: http://reliefweb.int/report/occupied-palestinian-territory/unicef-seawater-desalination-plant-helps-head-gaza-water

**Lebanon looks to save water in agriculture**

USAID’s Lebanon Water Project will disburse LL300 million ($200,000) in grants to farmers, helping them to switch to water-saving irrigation technologies, a statement issued by USAID said Friday. “LWP will disburse a total of LL300 million to fund grants for on-farm schemes that promote water conservation, such as drip irrigation and water collection,” according to the statement.

LWP announced its initiative Friday during the second of a series of “Farmers’ Field Days,” which are intended to acquaint local farmers with water-saving technologies available on the Lebanese market while offering incentives to adopt them.

The statement said that more than 40 farmers participated in the second field day, which took place in collaboration with Robinson Agri at its trial station in Batroun, north Lebanon.

Farmers learned about LWP’s Incentive Rebate Program, which connects farmers with its agribusiness partners that supply water-saving technologies, namely Robinson Agri, Debbane Agri and Unifert.

It emphasized the importance of the initiative by saying that the agricultural sector is responsible for more than 70 percent of all water consumption in Lebanon.

The statement added that the proposed techniques will also encourage best agriculture management practices that enhance water efficiency and introduce drought-resistant and high-market-value crops. “Selected projects under this incentive model are reimbursed up to 50 percent of eligible expenses with a maximum ceiling of LL22.5 million ($15,000) per applicant,” it said.

Nadine El-Khoury Kadi, chief operations officer at Robinson Agri, said that the company’s ultimate goal was to transform Lebanese agriculture into a profitable economic sector.

08/04/2017 online at:

https://www.zawya.com/mena/en/story/Lebanon_looks_to_save_water_in_agriculture-DS08042017_dsart-401096/

**PM launches $930m water strategy for Amman and Zarqa**

Prime Minister Hani Mulki on Saturday launched a $930-million strategy to increase households’ connectivity to the wastewater network in Amman and Zarqa, raising it from the current 80 per cent to 90 per cent by the year 2025.

The strategy entails the implementation of 21 projects including the construction of new wastewater treatment plants, the expansion and refurbishment of existing plants, and the installation of new sewage networks.

The Amman and Zarqa wastewater strategy, set to be fully executed in eight years, seeks to increase linkage to the wastewater network, while utilising wastewater as one of the Kingdom’s strategic water resources for constrained cultivations and industry. Mulki stressed Jordan’s long experience and success in managing water resources due to its water scarcity, noting that the Kingdom now ranks among the world’s best countries in the water management sector.

Mulki commended the sector’s achievements in handling the major water challenges the country faces in light of the increasing demand for water and of the great influx of refugees into the Kingdom. He noted that Jordan has been categorised among the poorest nations in terms of water availability across the globe.

At the launching ceremony, Minister of Water and Irrigation Hazem Nasser said that the goal of reaching a 90-per cent household connectivity to wastewater services is a high rate in global terms.

The minister noted that, with the implementation of the projects, the Kingdom will increase the amount of treated wastewater from the current 115 million cubic metres per year to 250 million cubic metres by the year 2025.

“The treated wastewater will increasingly substitute the use of fresh water for industrial purposes, as well as the irrigation of certain cultivations in the Jordan Valley and south of Amman,” Nasser said.

The strategy, he said, will also help protect surface and underground water resources from pollution, improving the population‘s health and environmental conditions in the two governorates.

A variety of funding mechanisms will help finance the strategy’s 21 projects, according to the ministry, for which funding will come from the Treasury, as well as easy loans and grants from the US, South Korea, Saudi Arabia, the European Bank for Reconstruction and Development, Germany and Britain.

Nasser noted that some projects were already under way, expressing the government’s appreciation for donor countries’ and agencies’ financial and technical support.

The Jordan Water Company (Miyahuna) provides water services to 150,000 subscribers in Zarqa and 600,000 subscribers in Amman.

08/04/2017 online at: http://www.jordantimes.com/news/local/pm-launches-930m-water-strategy-amman-and-zarqa

**DHA, Clifton residents in Karachi protest for water**

Fed up of faucets throwing air instead of water every now and then without using tankers, the residents of DHA and Clifton protested outside the office of Cantonment Board Clifton (CBC) on Thursday.

"We pay the largest amount in taxes, still do not get line water," said Pakistan Tehreek-e-Insaf's Dr Seema Zia.

If tankers are functioning, it means water is available, said PTI MPA Samar Ali Khan, who was leading the protest.

When the residents of DHA and Clifton, including PTI MPAs of the Sindh Assembly reached near the office, CBC officials closed the office gate.

The protesters put forward three demands – they should get line water instead of having to depend on tankers, the additional charges on Rs500 and that the chief executive officer of CBC apologise for misbehaving with them and resigning.

While talking to Geo.tv, Samar Ali said they went to meet the chief executive officer, three days back, on Sunday, but he only went out for 30 seconds and during that too he told him and 10 others, accompanying Samar Ali, to leave.

He added they wanted to meet the corps commander now, under whose authority comes the chief executive officer of CBC. "I'm talking here as a resident and not a representative of PTI."

He said CBC had their own tankers in which water is supplied. "They have levied an additional Rs500 in taxes on each tanker without consulting the councillors."

As a real estate agent, DHA is supposed to provide water lines instead of making households depend on tankers.

The water problem is not only persistent in DHA, because besides all the phases, from I till VIII, 13 colonies also fall under CBC.

When asked, Additional CEO Arfeen Zubair said they have levied the tax of Rs500 to discourage the VIP culture.

"People would demand extra tankers without the tax," he told Geo.tv. "The imposition of tax has discouraged many from ordering extra tankers. If a person was asking for six tankers, they now call for only two.

He maintained they have a supply of six million gallons of water every day, out of which one million is sent to areas such as Phase VII and VIII where there are no proper water lines. "The remaining five million is sent to water lines."

Some of these areas where tankers are called do have water lines but they have not been handed over to CBC, he said.

06/04/2017 online at: https://www.geo.tv/latest/137020-DHA-Clifton-residents-in-Karachi-protest-for-water

**India can't stop Pakistan's water: Zardari**

Former president of Pakistan and leader of Pakistan People's Party (PPP) Asif Ali Zardari said on Friday India could not stop Pakistan's water as Islamabad had already found other channels to fulfill its requirements.

Addressing a ceremony in connection with Zulfiqar Ali Bhutto's death anniversary, the former president spoke of water woes of the country and said : "People ask me where will water come from, and I tell them the water will come from Central Asia, and I will bring it".

He said there would be wars over water in the coming days. We have already found others channels for water and Inshallah Balochistan would be the first to benefit from those channels.

Zardari said Pakistan People's party (PPP) had the responsibility to protect people of Balochistan under its umbrella.

He said Balochistan has bright future and "I love Balochistan as much as I love Pakistan itself" while advising Baloch people to keep themselves from being misused.

Talking about the China Pakistan Economic Corridor (CPEC), he said the project would benefit Pakistan wholly and would strengthen entire nation instead of certain parts and departments. He said China is a friendly neighbor and has been supportive.

07/04/2017 online at: https://www.thenews.com.pk/latest/197149-India-cant-stop-Pakistans-water-Zardari

**SC Dismisses Plea to Declare Indus Waters Treaty between India, Pak Illegal**

The Supreme Court on Monday dismissed a PIL seeking declaration of the Indus Waters Treaty between India and Pakistan as illegal and unconstitutional.

"This treaty is of 1960 and this treaty has held good for more than half a century," a bench headed by Chief Justice JS Khehar said while dismissing the PIL filed by lawyer ML Sharma in his personal capacity.

The bench, also comprising Justices DY Chandrachud and SK Kaul, however, made clear that the order dismissing the PIL "does not put any impairment on anybody".

The clarification came when Sharma said that the dismissal of the PIL should not put any restriction in the way of the government if it wants to review the Indo-Pak water pact.

During the brief hearing, it was argued that the Indus water pact was not a treaty at all as the same was not signed in the name of the President of India.

"It was a tripartite agreement between three leaders and void ab initio (illegal at the outset) and hence cannot be acted upon," the lawyer said.

The court said that it has perused the entire petition and does not wish to agree with it.

The Indus water agreement was executed on September 19, 1960 between India, Pakistan and the International Bank for Reconstruction and Development or the World Bank. Besides Nehru, the then Pakistan President Mohammad Ayub Khan and W A B Iliff for the World Bank were its signatories.

The apex court had last year refused to grant an urgent hearing on the PIL, saying there was no urgency in the matter while Sharma, who filed the PIL in his personal capacity on the issue, to "keep politics aside".

Sharma, in his PIL, had referred to Article 77 of the Constitution and said it mandates that all executive action of the government shall be expressed to be taken in the name of the President.

However in the case of the 1960 Indus waters treaty, it has been signed by then Prime Minister Jawaharlal Nehru and "nowhere it is declared that the said agreement/treaty has been signed in the name of the President of India", the plea had said.

"According to the ministry of external affairs documents, nowhere disclosed further that the said agreement has been signed by the Jawaharlal Nehru for the President of India...," it had said.

Sharma had said, "According to the impugned agreement 80 per cent water goes to Pakistan which is a serious injury to the fundamental right of the citizens of India coupled with further financial and natural injuries to national interest."

The treaty was "against the national interest and violated fundamental right of the citizen of India effecting their life and livelihood", it had said.

10/04/2017 online at: http://www.news18.com/news/india/sc-dismisses-plea-to-declare-indus-waters-treaty-between-india-pak-illegal-1370422.html