



# ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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



### **Shoura calls for a hold on new water bills**

The Shoura Council on Tuesday called on the Ministry of Environment, Water and Agriculture to carry out a field study to get the exact picture about the real consumption of water by the citizens and make changes in the consumption slabs in accordance with the study.

It also urged the ministry to postpone implementation of issuing invoices based on the new water tariffs until after addressing the negativities in its application. The session was chaired by Muhammad Al-Jafri, deputy president of the Council.

Yahya Al-Samaan, assistant president of the Council, said that the Council demanded the ministry to conduct studies on how to rein in excessive water consumption in the Kingdom and prevent leakage on the household water network.

“The ministry must implement quickly the Saudi Building Code pertaining to water. It is indispensable for the ministry and the National Water Company to obtain necessary drilling permit from the concerned authorities before awarding water and sewage projects,” the Council said.

Al-Samaan said the Council also underlined the need for studies for water connectivity among various regions of the Kingdom in order to strengthen the concept of water security.

The Council made the remarks while discussing the annual report of the ministry, read out by Ali Al-Tukhais, chairman of the committee of water, agriculture and environment.

8/11/2016 online at: <http://saudigazette.com.sa/saudi-arabia/shoura-calls-hold-new-water-bills>

### **Water crisis looms as PA refuses to cooperate with Israel**

The IDF has warned the international community that the water infrastructure in the West Bank and Gaza will collapse as long as the Palestinian Authority refuses to cooperate with Israel.

According to Head of the Coordination for Government Activities in the Territories (COGAT), Maj. Gen. Yoav Mordechai, the joint Israeli-Palestinian water distribution council—which manages water infrastructure in the West Bank—hasn’t met since 2010 due to the Palestinians' refusal to approve water infrastructure upgrades in the West Bank settlements.

The major general sent an urgent letter to the UN humanitarian aid coordinator in the West Bank, the head of the Palestinian UNRWA, the head of the Red Cross, head of USAID, and various ambassadors, including the German, UK, Italian, French and EU ambassadors to Israel.

The COGAT head said that he wants significant steps to be taken to fix the water crisis in the West Bank and Gaza, saying "the Gaza Strip almost completely relies on its aquifer, and the water quality in it has become very poor as a result of years of over-pumping and pollution."

Regarding the West Bank, he wrote that "according to Palestinian estimates, 96% of the water drawn from the aquifer there isn't fit to drink, and thus the Palestinians rely on water from Israel... the water infrastructure in place isn't enough to meet the needs of the population, leading to water shortages in certain areas (of the West Bank)."

Meanwhile, he continued "waste water treatment (in the Palestinian Authority) is seriously lacking. According to official estimates, there will be huge water shortages amounting to tens of millions of cubic meters of water in the coming years."

Israel recently approved sending 10 million cubic meters of water to Gaza and six million cubic litres to the West Bank. Yet despite Israeli efforts to help the Palestinians solve this crisis, the problem still hasn't been resolved.

"This additional supply of water to Gaza fulfills the Palestinian request for Israeli aid, and the Palestinians have made it clear that they are not interested in more water," Maj. Gen. Mordechai wrote.

The letter went on to say that "the Israeli Water Authority has commissioned a multi-year, long term plan to be written which will fix the water infrastructure for the benefit of the entire population living in the West Bank."

"In addition," the COGAT head wrote, "the State of Israel supports the promotion of desalination projects and water and sewage infrastructure in Gaza, including the building of the largest desalination plant ever planned in the Strip."

Mordechai said that discussions were currently underway about "two giant projects in Gaza; building a \$250 dollar water desalinization plant—which will be able to desalinate 55 million cubic meters of water— and improving the water management system."

The Palestinian Authority has yet to provide Israel with its estimates for how much water the Authority will require in the future, thereby delaying the creation of a coordinated water management plan.

With this in mind Maj. Gen. Mordechai wrote "we are warning the international community that if there is no immediate change in the water situation, we can expect a water crisis by next summer. (Israel) will continue efforts to cooperate with the Palestinian Authority on this issue, and we hope that our efforts will bear fruit. We call on the international community to

renew its support of our cooperation, and in support of our projects to advance water infrastructure in the West Bank and Gaza Strip."

"Mobilizing the international community to help us prevent this crisis is of the utmost importance," the letter concluded. "Israel will be happy to assist and support any effort to advance these projects."

8/11/2016 online at: <http://www.ynetnews.com/articles/0,7340,L-4876000,00.html>

### **Water-borne diseases on the rise in Tank**

The residents Tuesday asked the Tehsil Municipal Administration (TMA) to take steps for preventing the spread of water-borne diseases in the area.

"People of our area are fetching unhygienic water from far-off area, causing water-borne diseases," said Akhtar, a resident of Tank city. He asked the government to take action against Municipal Committee, Tank, for supplying unhygienic water to citizens.

He said increasing cases of abdominal diseases across the area were reported. "Despite the reports by the media neither the local administration nor the provincial government bothered to take practical steps," City Union Council Nazim Adnan Yousaf Burki deplored.

He said the tehsil municipal administration should replace the decades-old main water pipelines which are rusty. He said the supply-line was choked which had aggravated the problems. He said that contaminated water was the main cause of the spread of Hepatitis in the area.

However, Tehsil Nazim Haibat Khan said solid measures were being taken to ensure clean drinking water for citizen and over two dozens of tube wells were being installed in different union councils to effectively resolve the issue.

9/11/2016 online at: <https://www.thenews.com.pk/print/163379-Water-borne-diseases-on-the-rise-in-Tank>

### **Of lady councilor, water crisis, director and mayor!**

Margalla Town is the youngest 'Model Town' of the four, or is it five, Model Towns that the CDA has declared as its 'satellite settlements' in the federal capital. The first two were the Rawal Town (Gawala Colony in the beginning), and the Humak back in 1979 or may be in 1980. Then Chak Shahzed or 'Shahzad Town' was added to the list. Next to be awarded the status of Model Town was the 'Margalla Town' and if I am not wrong, the 'Kurri' village has also been upgraded as 'Model Town'.

All these model villages confront a host of civic problems and look up to the CDA for relief and resolution of their issues. And water supply remains the one nagging issue faced by the residents of these model villages.

Ms Tasneem Tahir is a lady councillor from UC-24 of Islamabad, residing in Margalla Town. The people of Margalla Town have been facing an acute crisis of water shortage since the

month of Muharram. The people of Margalla Town were so upset that they decided to approach the lady councillor for help. After all she was their representative in the Islamabad Municipal Corporation. So, they knocked at her door.

"Yes? What you people have gathered here for?" she demanded as she opened the door and saw the people.

"There is not a single drop of water we have received for the last four days!" people told her loudly.

"So? I also have not received a single drop in my home."

"But you are our representative and are supposed to solve our problems. And this water shortage is a big problem for all of us, including you. So come out and help us get water."

"Okay. Let's go to the tube-well operator and ask as to what is wrong. Why he is not supplying water. Join me," she said and started walking towards the tube-well. People joined her.

"What's wrong with you? Why aren't you supplying water to the residents for the last four days?" she demanded off the tube-well operator once they reached there.

"The motor is burnt out. It will take time to repair," responded the tube-well operator.

"But only last month it was burnt out and was repaired?" Ms Tasneem demanded.

"Yes. But this is machine. It can breakdown any time," he responded.

"But there are two tube-wells in Margalla Town. Why don't you provide us water from the other tube-well?" she demanded.

"This is not me to decide. Please ask the Director sahib," the tube-well operator responded and closed the discussion.

She called the Director (water supply in the CDA).

"Hello! Sir the people of Margalla Town are facing a serious water shortage crisis as no water is supplied for the last four days. Please help resolve the issue," she said in phone.

"Who is calling?" the Director demanded.

"Sir, I am Tasneem Tahir, the Councillor from UC-24 Margalla Town. I and the people in my area are facing an acute water crisis. Please do something urgently," she said.

"Tell your UC chairman to call me later. I am driving right now," and the director disconnected the call.

She has won the election as an independent candidate and has yet not aligned with any major party, the PML-N or the PTI.

"The chairman of my UC hardly listens to me because I have decided to stay independent. I tried to call the Mayor sahib and he too is not interested listening to my people's problems. The officials in the CDA seem least bothered about our problem. The second tube-well is running smoothly because from there water is supplied to important people living in the area. I am an elected representative of the people and yet I have no powers or official capacity to resolve or mitigate their basic problems. What should I do?" she bemoaned.

Well, will somebody tell the lady councillor as to what to do?

To me the answer is pretty simple but I don't want to make any recommendation to her because only the other night my own colleagues told me not try to act like an 'Advisor'!

10/11/2016 online at: <https://www.thenews.com.pk/print/163674-Of-lady-councillor-water-crisis-director-and-mayor>

### **A grand opening for Dubai water canal**

In a dazzling ceremony marked by laser shows, water-borne acrobatics and fireworks, His Highness Shaikh Mohammad Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai inaugurated the Dubai Water Canal on Wednesday.

Shaikh Mohammad marked the opening by pressing on an electronic panel, flashing an image of Burj Khalifa on massive screens arranged on the canal banks, and sending laser beams racing through and along its bridges.

Shaikh Mohammad, accompanied by Crown Prince of Dubai Shaikh Hamdan and Deputy Ruler of Dubai Shaikh Maktoum, then took a boat ride from Jumeirah Bay Island towards the Dubai Water Canal, followed by a flotilla of ferries and abras boarded by officials and engineers who worked on the Dh2.7-billion (\$730 million) project.

Fireworks lit up the sky over Jumeirah and Safa as the flotilla of boats approached the Shaikh Zayed road bridge, presenting a stunning view of the illuminated waterfall and the Dubai skyline.

The glittering ceremony marked the extension of Dubai Creek from Ras Al Khor via Business Bay to the Arabian Gulf.

The project realises a dream of reviving the legendary Dubai Creek that in ancient times flew all the way to Arabian Gulf passing through what is now Burj Khalifa and Downtown Dubai.

Speaking at the ceremony, Shaikh Mohammad said: "I am very happy with this project. In the past the Creek used to reach the area where Burj Khalifa currently is, and then used to flow towards the sea in the North. So all that we have done is restore Dubai Creek to what it used to be prior to changes caused by the winds and the sands."

He added: "This is a ground-breaking achievement for the UAE. Through the Dubai Water Canal, we bring back the past glory to Dubai Creek. This project will have a positive imprint on the environment in Dubai."

He said that the dream is now a reality with the opening of the Dubai Water Canal, which will change the face of Dubai.

The extension stretching from Ras Al Khor to the Arabian Gulf is 12-kilometres long and was built at a cost of Dh3.7 billion, which includes the 3.2-km second phase of the canal from Shaikh Zayed road to Jumeirah Bay Island built at a cost of Dh2.7 billion.

The canal, which ranges from 80 metres to 120 metres in width, stretches from the Business Bay, crosses the Sheikh Zayed Road, passes Safa Park, Al Wasl Road and Jumeirah 2, terminates at the Arabian Gulf.

Dubai Holding built the first phase of the Water Canal at the cost of Dh1 billion, while the Roads and Transport Authority in association with Meraas and Meydan executed the second phase.

As part of development of the area adjoining the canal, Dubai Holding will build 'Marasi Business Bay.' The development will boast the longest promenade in the UAE, spanning 12 km, featuring water homes, floating restaurants, retail outlets and five palm-lined marinas.

10/11/2016 online at: <http://www.albawaba.com/business/grand-opening-dubai-water-canal-water-cana-902962>

### **Country likely to face 25pc water shortage: Irsa**

Indus River System Authority's (IRSA) is likely to revise upwards the water shortage estimate in the country from 18 percent to 25 percent, for the upcoming Rabi season.

Owing to dry weather and water scarcity in the rivers and reservoirs, the country may face extra water shortage than the earlier announced (18 percent), official sources told The Nation here on Wednesday.

If the current dry weather persists, then it is most likely the water reservoirs will touch the dead level by February, the official maintained. Water level in reservoirs and flow in the rivers are much lower than the previous year, the official said. The official said, "On this day last year, water flow in the rivers across the country was 96500 cusecs but now it is only 50000 cusecs. Due to fewer rains, the water flow in the rivers is too low even the flow in Jhelum and Chanab is below average." Similarly, the official added, the storage in the reservoir during the same period of November last years was 9.4 million acre feet (MAF) but now this year it has reduced to 6.8 MAF, the official added.

The meeting of the advisory committee, held in September, had announced 18 percent shortage for Rabi Season. The Water Accord 1991 empowered IRSA to determine water availability in the country and provincial share twice a year, once for Kharif season and the other for Rabi season. Rabi season starts from October 1st, while Kharif starts from April 1st.

Regarding the possible changes to the initial assessment of the authority, the official said that the main reason is climate change which has made the weather unpredictable. "Due to fewer rains in moon soon season and the mismanagement of WAPDA, the country faced shortage of

water in its river and reservoirs,” he said. Besides, the official said that this is the first time during the last 16 years that Tarbella dam was not filled to the peak level of 1550 feet, the official said. “Around 0.5 MAF less water was stored in Tarbella,” the official added.

Currently, Punjab is receiving 67000 cusecs of water, Sindh 45000 cusecs, Baluchistan 5000 cusecs and Khyber Pakhtunkhwa is getting 3000 cusecs of water, the official maintained. According the initial assessment, the provinces was to receive 31.08 MAF of water during the Rabi season, Punjab will get 16.2 MAF, Sindh will get 12.2 MAF, Baluchistan will get 1.02 MAF and KP will get 0.70 MAF of water. It is anticipated that during Rabi 22.38 MAF water will flow in the rivers, while 9.5 MAF will be used from the water reservoirs.

The official further said that the authority has turned down a verbal request of the Punjab government for providing water from Indus through Taunsa Panjnad Canal. The authority asked Punjab to use water from Mangla through Taunsa Panjnad Canal, the official added.

10/11/2016 online at: <http://nation.com.pk/business/10-Nov-2016/country-likely-to-face-25pc-water-shortage-irsa>

### **Afghanistan’s Water-Sharing Puzzle**

Pakistan and Iran have always had historical claims over the water resources of Afghanistan. These claims have always been rejected by Afghanistan. The chaotic politics of water between Afghanistan and its neighbors has a long history, due to the lack of water-sharing agreements between them.

Despite sharing 90 percent of its water resources with neighbors, Afghanistan has only one bilateral water treaty, with Iran. Signed in 1973, according to the agreement, Iran should receive 850 million cubic meters of water annually from the Helmand River basin.

However, Afghan officials believe the treaty has been not fully implemented from the Iranian side. Iran has been receiving 70 percent more than the amount of water initially agreed upon in 1973. Furthermore, without consulting Afghanistan, Iran has built infrastructure on the water flowing from Afghanistan.

President Ashraf Ghani initiated talks on “water-related issues” during his visit to Iran in 2015 to sign the trilateral Chabahar port agreement. Ghani stated that the government of Afghanistan always considered river basin management to be the best instrument for dealing with water issues.

As for Pakistan, several attempts at an agreement have come up short. In 2006, the World Bank consulted with Afghanistan and Pakistan over a joint treaty on the Kabul River basin. But the intervention of the World Bank did not result in an optimal outcome for both sides, and conflict continued. In 2011, the Ministry of Water and Power of Pakistan once again asked for the intervention of the United States and World Bank in achieving a water treaty with Kabul to avoid disputes on water-sharing issues. Once again, the negotiations failed and water-sharing has become a potential troublemaker between the two neighbors.

According to the World Bank, Afghanistan has 57 billion cubic meters of surface water flowing from its three large river basins; the Amu Darya Basin in the north, the Kabul River Basin in the east, and the Helmand River Basin in the south. Of the existing resources, 17 BCM are currently used; that gives the sense of that Afghanistan's water resources are underused. But it is estimated that Afghanistan's usage will increase to 30 BCM in the future. Afghanistan is currently beginning the second phase of the development on the Kajaki dam, the largest dam in Afghanistan, along with developing the Sorobi dam and accelerating the procurement processes of five major reservoirs and dams.

Pakistan and Iran are both dependent on water flowing out of Afghanistan to irrigate their territories and fuel their development. A decrease in water availability in the future and increase in the capacity of water storage accompanied by the development of new hydropower projects inside Afghanistan would decrease the flow of water to Pakistan and Iran and may threaten their communities.

Thus, Kabul needs to assure Pakistan and Iran that recent development and infrastructure-building on the Helmand and Kabul Rivers is both a legitimate right and immediate domestic need of Afghanistan. Afghanistan must convince its neighbors that these projects will not threaten their downstream communities, but will rather lead to peace-building in the region. To do that Kabul needs to build its capacity in water diplomacy.

In the past there were reports of sabotage targeting Afghan efforts to build dams and hydro projects, originating from both Pakistan and Iran. For instance, in 2012 a story by TIME indicated that Pakistan may have been involved in the murder of Khan Wali, a local militia leader tasked with protecting one of Afghanistan's most important dams, Machalgho Dam in eastern Paktia province. And Iran was meddling in the implementation of Salma Dam until its inauguration in June 2016 by Ghani and Indian Prime Minister Narendra Modi in western Herat province. In 2015 a report by The Guardian says that Iranian guards on the border fired at residents of Kohsan district in Herat province when villager came to collect drinking water from the Hari Rud River. According to Afghan leaders, 10 villagers were shot dead.

Both Pakistan and Iran have a history of sabotaging Afghan efforts to use its water resources, in addition to diplomatic meddling to hijack investment of donor countries in Afghanistan's hydro projects. Clearly, these neighbors do not want Afghanistan to become a hydro-hegemon.

These issues could be solved properly if all actors would commit themselves to regional cooperation and collective action. Any further dispute and disagreement over water sharing between Kabul and the neighboring countries will lead to further tangled ties in the region. And future socioeconomic, environmental, and hydrologic challenges will threaten all.

Any potential water treaty between Afghanistan and neighbors in the future should generate gains for all the stakeholders. It is time for the leaders of these countries to agree on the common cause of development in the region and build their relationships. They must act like statesmen and work for the next generation. The only option the region has for survival is

consensus and agreement on pressing issues such as security, economic progress, and water sharing.

11/11/2016 online at: <http://thediplomat.com/2016/11/afghanistans-water-sharing-puzzle/>

### **Kuwait to reveal increased electricity and water fees within weeks**

Kuwait's increased electricity and water tariffs will be revealed within weeks, according to the Ministry of Electricity and Water.

The Gulf state's parliament passed a bill in April 2016 which allows the government to raise power and water charges on expat residents and businesses, exempting national citizens.

The rates will be publicised before the law goes into effect on May 22 2017, Minister Ahmad Al Jassar said, according to Kuwait Times.

They will see power charges in apartment buildings rise from 2 fils per kilowatt hour to 15 fils and from 2 fils to 25 fils in commercial buildings. Water prices will more than double.

Al Jasser earlier said the government was paying around \$9 billion annually on power and water production. He said the number would rise to \$25 billion if action was not taken.

While MPs had earlier rejected the hikes, they later approved them after citizens were exempted. The new rates will mark the first time in 50 years that oil-rich Kuwait has raised its utility fees.

11/11/2016 online at: <http://www.arabianbusiness.com/kuwait-reveal-increased-electricity-water-fees-within-weeks-652076.html>

### **Rural areas to get six new water schemes soon**

Islamabad Capital Territory (ICT) administration will start six new water supply schemes in rural areas with an allocation of Rs 143 million.

Currently only 60 per cent population of rural areas of Islamabad has access to potable water being provided through government funded water supply schemes. An official of Ministry of Human Rights, when contacted about the complaints in this regard, he said the ministry have received complaints regarding access of clean water, he added that the new schemes for water supply were prepared for the capital territory to redress this problem.

He further informed that 20 water supply schemes for rural areas of ICT were under process during this fiscal.

The official further stated that complaints about sale of adulterated/contaminated milk in ICT have been received. In this regard, he added, District Health Officer (DHO), ICT has been notified as Ex-Officio Food Inspector under West Pakistan Pure Food Ordinance, 1960 to take appropriate action.

The DHO, ICT along with Inspectors of Health Department, conducts regular inspection of milk shops and special teams comprising DHO,

Assistant Commissioners and inspectors have been constituted, to launch campaign against adulterated milk.

These teams are supervised by Additional Deputy Commissioner ICT for effective coordination and speedy action.

On the pattern of Punjab Food Authority Act 2011, "ICT Food Safety and Standard Act 2015" shall be promulgated shortly after due process."

In the last one year 110 milk shops have been inspected and 66 samples were gathered for testing. Among that, he added, 30 were found sub-standard and 35 challans were submitted while 18000 litres adulterated milk wasted during the drive.

13/11/2016 online at: <http://nation.com.pk/islamabad/13-Nov-2016/rural-areas-to-get-six-new-water-schemes-soon>

### **Expert advises switching to greenhouses to overcome water scarcity, salinity**

With challenges like water scarcity, seawater intrusion and water salinity, farmers in the sultanate need better and sustainable options.

And so instead of taxing natural resources in Oman by going the traditional way, experts advise farmers to use Controlled Environment Agriculture (CEA). The option is being seen by many as not just environment-friendly but also a profitable proposition.

CEA is a technology-based approach towards food production. The aim of CEA is to provide protection and maintain optimal growing conditions throughout the development of the crop.

Production takes place within an enclosed growing structure such as a greenhouse or a building. Plants are often grown using hydroponic methods in order to supply proper amounts of water and nutrients to the root zone. CEA optimises the use of resources such as water, energy, space, capital and labour. In Oman, it was found that greenhouse cultivation increased land productivity by almost 12 times and water productivity by almost double.

Dr Abdulrahim al Ismaili, from the department of Soils, Water and Agricultural Engineering, College of Agricultural and Marine Science at Sultan Qaboos University (SQU), said that farmers too have welcomed the technology.

"The number of greenhouses increased from 782 to 2,491 from 2001 to 2008, registering a three-fold increase. In 2010, greenhouses increased to 4,740 indicating an annual greenhouse growth rate of approximately 40 per cent," Dr Ismaili added.

By the end of 2014, the total number of greenhouses in Oman was 5,475 (North Batinah governorate - 515 and South Batinah – 695). The Ministry of Agriculture and Fisheries (MoAF) too is keen on spreading this technology through subsidy programmes and awareness campaigns.

“The subsidy programmes were very successful that for every RO1,000 invested as a subsidy agricultural net returns increased by RO1,690. The success of awareness campaigns by MoAF is evident in the number of farmers who built greenhouses. Many of them have even built greenhouses at their own expenses.”

Citing a study conducted by MoAF and the International Center for Agricultural Research in the Dry Areas (ICARDA) it was found that on an average, a single greenhouse that cultivated cucumbers garnered a profit of RO286 and tomatoes RO142 per season.

Dr Ismaili, however, pointed out that both MoAF and ICARDA have reported a wide range of difficulties faced by farmers using CEA. Some of these include, marketing the agricultural produce and external competition.

Water consumption by the evaporative coolers used in the greenhouses too is a concern.

“It was found that greenhouse water consumption in the evaporative coolers is very high, representing 67 per cent of the total water consumption used in greenhouses. To keep the greenhouse cool, farmers do not have to use freshwater; they can use saline or brackish groundwater as well.”

Despite the challenges, its advantages are too good to be ignored, Dr Ismaili said, adding CEA is an answer to soil salinity and seawater intrusion affecting the Batinah governorates - which houses sultanate’s major agricultural areas. Greenhouse farming will help farmers reduce use of water in irrigation by approximately 80 per cent as compared to open-field agriculture, he said.

A farm owner from Saham said seawater intrusion had destroyed his farms. “My farms were destroyed by seawater intrusion and soil salinity. And so in 2011, I started cultivating different kinds of vegetables especially cucumbers and tomatoes in a greenhouse which has helped me sustain.”

13/11/2016 online at: <http://www.muscatdaily.com/Archive/Oman/Expert-advises-switching-to-greenhouses-to-overcome-water-scarcity-salinity-4v2a>

### **Capital citizens decry water shortage**

Citizens in different sectors of the capital including G-7, F-7 and Red Zone are facing acute shortage of water affecting their routine life.

The citizens of these areas have expressed their disappointment at the lack of interest of the government and the Mayor and Chairman CDA for paying no attention to their problem.

They said they expected a cooperative attitude from the representative of the Local government, as they had made tall claims at the time of polling to ensure excess availability of water.

A senior citizen in G-7 sector while expressing his disappointment said that even the already laid water pipelines have become obsolete and the little quantity of water coming to their houses is highly contaminated and there is no fixed timing for water supply.

He regretted that the Capital Development Authority was paying no attention to the genuine problem of the people. He said water is provided to the residents of his sector in the evening, during day or even after midnight and on sometime there is no water for two days. A number of people in F-7 sector said it was duty of the administration to ensure availability of clean drinking water to the people.

When contacted, Mayor and Chairman CDA Sheikh Ansar Aziz said that the shortage of water is due to reduced supply of water from Khanpur Dam where water level has gone down. He said efforts are being made to enhance water supply to the citizens from different sources including Tube wells.

13/11/2016 online at: <http://nation.com.pk/islamabad/13-Nov-2016/capital-citizens-decry-water-shortage>

### **Iran's Water Crisis**

It is hard to imagine life without access to sufficient quantities of fresh water, but in some parts of the world, particularly the Middle East, that is becoming more than a theoretically disturbing possibility, as climate change, mass migration, environmental degradation, drought and political instability – among other issues – make the use and management of diminishing water resources an increasing challenge.

It's a particular concern in Iran, where a number of problems – not least the stifling effect of years of international sanctions – mean water depletion is now receiving some serious attention.

As Kaveh Madani, an environmental policy expert at London's Imperial College, explains, there are three main reasons for Iran's rapidly declining water resources, "one being the rapid population growth".

He says: "In less than two decades the population of Iran doubled. The second cause is an inefficient agricultural sector. It's been very important for us over the years of war with Iraq and after that during the sanctions. So it was natural to be really worried about food self-sufficiency and food availability in this country. And the third cause being mismanagement."

"Water is also linked to so many things and unless we understand and appreciate the linkages and this complexity, we cannot solve this crisis," he adds.

And a crisis is exactly what it is becoming, Madani explains: “Rivers and lakes are going dry one after another, we’re losing wetlands, we’re seeing land subsidence, we’re seeing desertification, which is really sad.”

But as Iranians watch their beloved bodies of water disappear, their wells dry up and their farmland turn to dust, there is a growing understanding that in order to avoid any kind of existentialist threat in years to come, the country needs to radically rethink its attitude to water use. The government has begun to introduce programmes to conserve and manage water more efficiently – particularly in agriculture – while using social media to alert the public to the problem.

Will these measures prove effective? And do they carry any lessons for other countries in this increasingly arid part of the world?

People & Power sent reporter Gelareh Darabi and a team from Earthrise, Al Jazeera’s environmental series, to investigate the reasons for Iran’s water crisis and the innovative schemes now being adopted to resolve it.

## FILMMAKER’S VIEW

By Gelareh Darabi

Meysam Mir Zendehtdel’s photos of Lake Urmia stopped me in my tracks. He had captured a barren salt covered landscape dotted with massive container ships, tipped over and rusting away. How could this be?

The stories my parents told me about our homeland often involved fond memories of getaways from the congested capital to Urmia’s cooling breezes. It’s not just my family, Lake Urmia features on the yellowed pages of many a photo album in many an Iranian home. It was the backdrop for carefree memories, filled with swan-shaped pedal boats, parasols and smiling faces bobbing up and down in its buoyant waters.

I couldn’t believe that in 15 years one of the world’s largest saltwater lakes, and the pride of the Azeri people, had shrunk to 10 percent of its former size. The images made me realise that the lush, water abundant Iran of my parent’s memories was rapidly fading. The reality was much starker.

Meysam was one of the first photographers to sound the alarm on the crisis of the lake. I got in touch right away. I also reached out to UNDP Iran, one of the first international organisations to officially declare Lake Urmia’s dire situation and create a long-term plan and commitment to restoring as much of it as possible.

Months of emails and Skype calls with my new contacts in Iran began. Although the information they were sharing was compelling it came in patches and spurts. Iran is not exactly an e-mail reliant country. I was frustrated knowing that there was a bigger story to be told beyond what the Western media was extracting from its own jumbled Skype calls.

By chance, a family member had planned a trip to Iran in the following month. I elbowed my way into their travel plans and quickly found myself flying back to my birth-country after being away for 30 years.

I expected the same patchy communication, but instead I was greeted with support and a shared interest in letting the world know that Iran's water resources were quickly drying up. I spent the entire week sitting in the back of taxis in Tehran's notorious traffic, racing from one meeting to the next. I returned home with a suitcase full of notes and a fire in my belly. As soon as I tried to fire up the face-to-face connections that I had made in Tehran, however, I hit the communications wall.

It was one thing to understand the nation-wide scale of the crisis, how Iran's heavy investment in food security during decades of international sanctions had catapulted an already deteriorating and development thirsty water management system over the edge, but it was another to gain the trust and attention of the people who could tell it.

A family friend knew that I was interested in the story of water in Iran, so when he heard a debate on the topic on his crackling kitchen radio, he quickly grabbed a pen. I received a phone call from him. I heard his voice on the other end of the receiver hollering down the line in true and endearing, hard of hearing fashion, "Gelareh, write this name down, K-A-V-E-H M-A-D-A-N-I". I scribbled the name down and moved on.

It was on a particularly frustrating day when I hadn't had a single response to my endless queries in ages, that I thought to go back and find that name. A quick search turned up an office number at the Imperial College of London. I called right away.

That phone conversation was the catalyst that shaped and guided this entire film. Kaveh Madani, turned out to be Dr Kaveh Madani, global water expert and probably the most passionate person about water management that you'll ever meet (there was even a line about water conservation in his wedding vows).

It was Kaveh who opened my eyes to the even greater tragedy happening underground. Iran, he told me, has used up 70 percent of its groundwater. The effects of water scarcity on our culture's most iconic landmarks and exports: Isfahan's famous Zayandeh Rud, the river that gave birth to the ancient city, had dried up. Pistachios, Iran's second largest export after crude oil, were vanishing.

As wetlands and aquifers dried up, we Iranians were losing a big part of our cultural identity, but surprisingly people weren't keeping quiet. The environment, in particular the water crisis, had become a front page topic in the media and on Iranian social networks. As different towns and cities ran out of water and new massive sinkholes appeared, the images spread like rapid fire on those channels.

The country's Vice President and head of the Department of Environment, Masoumeh Ebtekar, a prolific user of social media, sent out almost daily updates on the state of Iran's environmental health. The diagnosis wasn't good.

Western media was also catching on to the story. With an estimated four to five million Iranians living around the world, the expat interest was leading newsrooms around the globe to take a much larger interest in the story.

But it wasn't until the A-list actor and environmental activist Leonardo DiCaprio reposted an image of Lake Urmia from the weather.com Instagram account that the disappearing treasure became a household name.

I wanted to know who had taken that groundbreaking photo. It turned out, it was taken by a young, female photographer named Solmaz Daryani. She was open to talking to me. And she had quite a story to tell.

That first Skype between us was what made me realise we had remarkable story on our hands. Her family's connection to Lake Urmia and the devastation its disappearance has had on them was the final push I needed to make this film a reality.

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