



ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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



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03 October 2017 - 09 October 2017

Arab countries ranked by cleanliness of tap water

Water is one of the most important resources of human life. Our bodies consist of around 60% water, and health authorities recommend the individual intake of water to be around eight 8-ounce glasses per day.

Our health is dependent on uncontaminated water, so much that the United Nations (UN) has made clean drinking water and sanitation the 6th priority on its sustainable development goal list, and one that it hopes every country will abide by.

Based on data compiled from the WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (WHO UNICEF JMP), only one Arab country seemingly ranked 100% in both drinking water and sanitation.

WHO/UNICEF JMP update their data every other year and below are two lists with latest ranks of Arab countries, as well as charts based on the quality of drinking water and sanitation.

The Arab countries are ranked by "safely managed" drinking water, from lowest to highest:

7. Lebanon - 48%
6. Morocco - 69%
5. Oman - 86%
4. Tunisia - 93%
3. Jordan - 93%
2. Bahrain - 99%
1. Kuwait - 100%

Due to limited availability of information, Egypt, Iraq, Libya, Saudi Arabia and the UAE only show a percentage based on "basic" drinking water.

Based on the JMP database, below is a chart that demonstrates a more detailed look at how drinking water quality is broken down within each country:

Dark Blue is the highest quality, considered "safely managed" drinking water, which means it is available when required and the water is free from faecal and priority chemical contamination.

Light Blue is considered water from an improved source.

Light Yellow is drinking water from an improved source in which the collection time requires more than 30 minutes to attain.

Dark Yellow to orange is drinking water from unprotected sources.

Drinking water is not the only point of importance in water management systems, sanitation is also critical.

It represents how countries manage waste, basically... how toilet waste is handled...

Based on the same report, below are the Arab countries ranked by safely managed sanitation methods from highest to lowest:

Kuwait - 100%

UAE - 93%

Saudi Arabia - 85%

Jordan - 77%

Tunisia - 73%

Egypt - 61%

Morocco - 38%

Iraq - 32%

Libya - 26%

Lebanon - 20%

Due to limited availability of information, Bahrain, Oman, and Syria only show percentages for basic sanitation.

Dark Green generally represents the use of improved facilities in which waste is safely disposed of or transported and treated off-site.

Light Green represents a use of improved facilities.

Light Yellow represents the use of improved facilities but that are shared between two or more households.

Dark Yellow to Orange represents the use of open unimproved sanitation to open defecation.

Apart from a few exceptions, most of the Arab countries in the region were able to meet the goals defined by the United Nations.

Moving forward, they will work with the international organisation to implement the requirements of the UN's Sustainable Development Goals (SDGs).

04/10/2017 online at: <https://stepfeed.com/which-arab-country-has-the-cleanest-tap-water-0472>

Kurdish farmers say Iran reduced water supply over secession vote

While Iraq has taken measures against its semi-autonomous Kurdish region for last month's secession vote, Kurdish farmers say they're also being punished by neighboring Iran.

They say Tehran has restricted the flow of water to border towns.

Al Jazeera's Hoda Abdel-Hamid reports from Qaladze, near the Iraq-Iran border.

09/10/2017 online at: <http://www.aljazeera.com/news/2017/10/kurdish-farmers-claims-iran-reduces-water-supply-secession-vote-171009101909468.html>

Six-day water shortage hits remote Rukban displacement camp

For nearly a week, the flow of Jordanian-supplied water to a remote displacement camp on Syria's southern border has been mostly cut off, sources on the ground told Syria Direct on Thursday, leaving tens of thousands of residents with reduced access.

Officially, water reaches the Rukban camp—home to roughly 60,000 displaced Syrians—via two water pumps based directly across the border in Jordan. Rukban itself is located within a desolate no-man's land between two earthen mounds demarcating the border between northern Jordan and southern Syria known as the “berm.”

But since six days ago, one of the two water pumps—the one running directly to the camp—has been out of service. The reason for the cutoff is "maintenance work" on the pump, Mohammad Jarrah, a spokesman for the Free Syrian Army-aligned Maghawir a-Thawra militia told Syria Direct from Rukban. His faction maintains a presence in the camp, where fighters claim they work to “secure” the informal settlement.

A UN official who spoke with Syria Direct on Thursday confirmed “ongoing maintenance work” on the broken water pump. UNICEF is responsible for overseeing the two water pumps supplying Rukban from Jordan.

The second pump supplying water into the camp, though reportedly still functional, is located some seven kilometers away from Rukban, and overseen—though unofficially—by rebel factions who demand a steep price for filling up there, a former camp official told Syria Direct during the last cutoff in June.

The current water shortage is the second time in the last four months that a simple breakdown of one of the water pumps has left tens of thousands of vulnerable, displaced residents of Rukban with reduced access to safe drinking water. In June, the same water pump cut off for unknown reasons, leaving Rukban without reliable water for at least one month.

The UN is currently trucking water to Rukban while the pump is undergoing maintenance, the official said. Even so, camp residents are also reportedly resorting to purchasing "salty," unclean water from a privately owned well located roughly 15 kilometers west of the camp, Mohammad Ahmad a-Darbas, head of Rukban's local council told Syria Direct.

“Water from the well costs around SP1,200 [approximately \$2] per 200-liter barrel,” a-Darbas added—still an exorbitant cost for Rukban’s impoverished, displaced residents. “And the water itself tastes of sulfur. It’s disgusting.”

Many residents continued to rely on that water even as the main pump supplying the camp reportedly sputtered off and on throughout Thursday, said a-Darbas and Jarrah.

For the UN’s part, maintenance work on the broken-down pump is “completed,” with the pump set to resume “full operation” by Friday, the official told Syria Direct.

But the severe impact of the shortage—even after just six days—highlights the vulnerability of camp residents to basic service malfunctions, as they remain stranded in a barren corner of desert with few reliable local water sources.

Camp residents already face dire food and medicine shortages, as well as a general sense of lawlessness as local rebel militias reportedly roam the tents with virtually no repercussions. Islamic State-claimed bomb attacks sporadically strike both Rukban and its outskirts. Approaching regime forces also scared thousands of residents away in recent weeks, as they made risky trips back home across the desert to regime territory, for fear of fighting reaching them in Rukban. Camp residents are forbidden from entering Jordanian territory, except in rare medical cases.

This week, even residents resorting to expensive, questionable local well water from sellers outside the camp often returned to their tents in Rukban empty handed.

"Many people are returning with nothing," Abu Ward, a 25-year-old Rukban resident said. "It was so crowded, they couldn't fill up their containers."

05/10/2017 online at: <http://syriadirect.org/news/six-day-water-shortage-hits-remote-rukban-displacement-camp/>

Surface Water Declines by 7%

The amount of surface water in Iran decreased by 7% in the last water year (ended Sept. 22, 2017) compared with the previous year.

According to the latest report of Energy Ministry, the amount of surface water in the last water year was estimated at 54.7 billion cubic meters, which marks a 7% decline compared to the previous year with 59.1 bcm.

Among the country’s six primary catchment areas, Urmia Lake in the northeast registered the biggest decline in surface water, IRNA reported.

With the current volume at 3.8 bcm, water in Urmia Lake’s catchment area has seen a 38% decline during the last water year compared to the year before when it held about 4.9 bcm.

Karakum in the northeast with 28%, the Persian Gulf and Sea of Oman in the south with 9% and the Caspian Sea in the north with 5%, have had the highest declines in surface water volume during the same period.

On the contrary, surface water in the Central Plateau in Markazi Province and Hamoun Wetlands in the east have increased by 18% and 9% respectively.

Reportedly, the total precipitation rate was 230 mm, declining by 5% in the last water year, which is down from 241 mm in the year before.

The global average annual precipitation is more than 830 mm, based on which Iran is classified as an arid and semi-arid country.

05/10/2017 online at: <https://financialtribune.com/articles/environment/73523/surface-water-declines-by-7>

Need to Renovate 30% of Water Infrastructure

At least 30% of Iran's water and wastewater infrastructure, including a dilapidated supply network that is a major source of water loss due to leakages, require repairs, the caretaker energy minister, Sattar Mahmoudi, said this week.

“To rebuild [water and wastewater] infrastructure, comprehensive planning and major funds are imperative,” Mahmoudi was quoted as saying by ISNA on the sidelines of a ceremony to launch the second phase of a wastewater treatment plant in Karaj, the capital of Alborz Province.

According to reports, at least 30% of Iran's potable water are wasted in the aging water supply network. Experts also underline the residential use of drinking water for other purposes as another reason behind the high wastage.

Stressing that Iran is located in one of the world's most water-stressed regions; Mahmoudi added that subscribers should avoid the profligate use of water.

“Water reservoirs must be used based on the [prioritized] needs and no province should be sacrificed for the benefit of another,” he said without further elaboration.

Some environmentalists have proposed a scheme to import or desalinate water to address shortages, particularly in the central regions of Iran.

A plan to transfer water from the Caspian Sea in the north to the drought-stricken Semnan Province is reportedly awaiting the approval of the Department of Environment.

Emphasizing the critical water scarcity in Semnan, former energy minister, Hamid Chitchian, said in August the use of water from the northern Caspian Sea would help tackle the growing drought in the region.

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

Another disputed plan that has been the cause of wide disagreement in Khuzestan and Chaharmahal-Bakhtiari provinces is the Beheshtabad scheme that aims to transfer water from a branch of Karoun River in Chaharmahal-Bakhtiari to Isfahan Province.

Officials and experts have warned about the adverse impact of the plan on groundwater resources and aquifers.

Karoun is Iran's only navigable river. It rises in the Zardkouh mountains in Chaharmahal-Bakhtiari Province before passing through the capital of Khuzestan, Ahvaz, and then emptying into Arvandroud River.

08/10/2017 online at: <https://financialtribune.com/articles/energy/73745/need-to-renovate-30-of-water-infrastructure>

Iran: The Crisis of Water Scarcity

Sirkan is the easternmost city of Iran with 3 thousand residents. Since 2001, this city has faced the shortage of water, as the authorities are not competent enough to adopt measures. The people only demand the water supply through tankers for 2 hours so that they can stay alive.

On October 8, 2017, state run Mehr News reported that the people of Sirkani could use water tankers for 1 hour within 3 to 4 days. If they arrive late at the water tankers, there would be not much water left to use.

The authorities of Sistan and Baluchestan Province are ignorant about the crisis of water scarcity in Sirkani while this issue has turned into a regional crisis. Mehr News reports that the people living in Sirkani are looking for water in the insanitary puddles and wells. The people hope that it may rain so that they can save few water resources. Unfortunately, there is no aquifer and water supply available due to the dry climate of this region.

One of the residents of Sirkani, called Mohammad Derazehi, says, "We do not expect everything from the authorities. We only expect them to provide us with sufficient water tankers. Given the fact that this issue has become critical these days, no one has ever inquired about us or has held a meeting to solve the problem and relieve us. The authorities have forgotten us. They only need us during the election. No one remembers us."

Another person says, "We no longer have any hope for life because our gardens and farms have dried due to the lack of water. Our livestock have even died. There is no occupation available for the people of Sirkani."

Following the crisis, the Mayor of Sirkani in an interview with Mehr News stated, "There are only two 30000-liter tankers to supply water. The people of Sirkani are very convinced. They only want water for 2 hours so that they can survive. We do not even have water for fire engines and they cannot work to prevent the accidents. There are pipeline networks in the city but there is no water in them. We have addressed the issue many times but no authority has taken effective measures regarding this matter."

09/10/2017 online at: <https://www.ncr-iran.org/en/news/society/23668-iran-the-crisis-of-water-scarcity>

Gazans hope Palestinian reconciliation will end water, power crisis

Palestinian factions took an important step toward reconciliation this week, as the Palestinian national unity government started to take over the administration of the Gaza Strip from the Hamas movement.

But there is still some way to go before the economy recovers and livelihood improves in the coastal enclave.

The local economy and people's livelihood in Gaza have long been deteriorating due to the years of blockade by Israel.

Data shows some 110 million liters of domestic and industrial wastewater is released into the Mediterranean Sea every day and three-fourths of the land and water have been contaminated in the coastal area.

Water shortage is a result of the pollution. Local residents have to carry their buckets to the water station every morning for desalinated sea water.

Yet, according to statistics from the United Nations, 90 percent of such water is not safe for drinking.

Hamas established an administrative committee in the Gaza Strip in March this year, hoping to further tighten control on the area. Then Palestinian President Mahmoud Abbas asked Israel to reduce the power supply to Gaza and cut off 40 percent of the power supply to the area.

The only power plant in the Gaza Strip shut down in mid-April after exhausting its backup fuel, resulting in the drop of daily power supply from six to four or even two hours each day.

The shortages have worsened the already hard daily life and impacted medical institutions.

The local health department said over half of 13 hospitals in the area have a shortage of backup generator fuel, and many surgeries have to be postponed.

When night comes, vehicle lights seem to be the only source of illumination on the street in the Gaza Strip.

It is hoped that the 10-year crisis would be eased when the Palestinian groups unify.

07/10/2017 online at: <https://www.trtworld.com/mea/gazans-hope-palestinian-reconciliation-will-end-water-power-crisis-11088>

Panels to change relationship with water

An innovative product that aims to make clean water accessible to all was introduced to Lebanon Wednesday at Le Gray Hotel in Downtown Beirut, under the patronage of Prime

Minister Saad Hariri. Cody Friesen, the CEO and founder of Zero Mass Water, believes that unequal access to clean water is not due to scarcity, but to human conditions. Inspired by a simple formula, air plus sunlight, equals water, he designed a solution he calls SOURCE.

“Take a deep breath,” Friesen told launch attendees. “See how easy it is? It’s always accessible no matter your socio-economic status. Now, remember your last sip of water. Try to think of the entire process behind getting that sip of water. Water and air are fundamental to life, yet one is free and the other costly.”

Friesen, who has a doctorate in Material Sciences from the Massachusetts Institute of Technology, found a way to turn air into water. He explained the process using sugar cubes. “If you keep a container of sugar cubes open for a long period of time, they will become wet and clumpy. Now if you heat them, you will get some water. Repeat the process continuously and you will obtain a body of water,” Friesen said.

SOURCE emulates that process, but more efficiently. The technology itself is a roof-installed panel that condenses air, producing 2-5 liters of water a day.

The water then flows through a mineral block, absorbing magnesium and calcium – vital minerals for human development – and is stored in a reservoir that can hold up to 30 liters.

There is no need for external pipes or electricity. Nor does air pollution affect the result. According to Zero Mass Water’s data, polluted elements have never been found in water, even in highly polluted environments.

The company partnered with the Rene Moawad Foundation to install SOURCE panels in eight different sites in northern Lebanon, funded by USAID. In July, they installed a total of 35 SOURCE panels at the Eimar Public School, Institut Technique Rene Moawad, Dar al-Aytam and Caritas Elder House, with four more sites to go.

“This region in the north, unfortunately, has a high number of kidney and intestinal problems [in the population] and having SOURCE to replace the polluted water is a great way of eradicating the problem,” Kawthar Itani, head of Akkar Complex at Dar al-Aytam, said.

Zero Mass Water has signed with a distributor in Lebanon, which can not yet be named. But Friesen promised that SOURCE will soon be available for residents in Lebanon at a fixed price of \$2,500.

This includes one panel, installation and maintenance. The lifespan of one panel is 10 years, with a filter change after five years at a minimal cost.

The panels are linked to a wireless data cloud so Zero Mass can keep track of the workings of each panel in real time. Friesen argues that the cost may be high at first, but pays for itself in 2 1/2 years.

These panels will also reduce carbon footprint. According to Zero Mass Water, bottled water accounts for 2 percent of manmade CO2 emissions. “Two SOURCE panels equals removing

one car from the road for a year, offsetting a couple of hundred of metric tons of CO2 a year,” Friesen said.

To make the product more accessible for lower income households, those who buy a SOURCE product can buy an additional panel for a family in need, splitting the cost so the family receiving the panel pays for shipping and installation only.

Lebanese who buy a SOURCE product will not be obligated to split the cost with another family but they have the option to pay extra to help someone else purchase a panel.

“SOURCE product is a luxury item for upper-class families,” Friesen said. “But place it in the home of a lower-class family and it has an impact. That’s how you know it’s transformative. The best kind of technology brings people up.”

05/10/2017 online at: <http://www.dailystar.com.lb/News/Lebanon-News/2017/Oct-05/421551-panels-to-change-relationship-with-water.ashx>

Water map uses design to raise awareness on scarce resource

The theme of this year’s Amman Design Week triggered the imagination of five local designers to come up with a modern installation that highlights one of Jordan’s most pressing issues: the scarcity of water.

Alongside four other designers, Ahmad Sabbagh presented an installation titled “Water Table”, consisting of a table made up of materials used in making water tanks that are placed at the top of residential buildings in addition to a screen on top of the table projecting details.

“Our idea is to raise people’s awareness towards the water problem Jordan is facing. We did a projection on water showing a map of the water movement in Jordan based on a timeline starting from the 1950s up to the future. Visitors can therefore compare the changes in water movement across time,” he told The Jordan Times in an interview at the Hangar Exhibition in Ras Al Ain on Saturday.

Sabbagh said the information showcased in their installation is based on researches and studies.

“Everyone knows that water is the biggest problem the Kingdom is facing and, as designers, we might not be able to come up with solutions as we are not water experts, but we can highlight this problem,” the designer added.

Sabbagh explained that it took them a “long time” researching and interviewing water experts.

Sabbagh said that the water timeline screens a text showing details of the major water projects in the Kingdom, as well as agreements that affected the water movement in Jordan.

“We wanted to use technology to introduce an entertaining new kind of presentation,” he added.

He expressed hope that their project would later be exhibited in a museum or at a workplace in the water sector.

Sabbagh commended the idea of Amman Design Week, noting that the event helps make design accessible for all people.

“We see all segments of society attend the event and this shows that design is for all, not just for specific groups of people because all the works on display are related to all people and their daily life,” he added.

Regarding the hangar location of the exhibition, he said there is a “special bond” between the location and their project.

“The hangar location is really important for us. It is located in Ras Al Ain where a river used to pass by, which is closely related to our project. This gives us a special feeling and our table was also placed in the same direction as the water used to flow from in the past,” he concluded.

09/10/2017 online at: <http://www.jordantimes.com/news/local/water-map-uses-design-raise-awareness-scarce-resource>

Existing only from the Nile, Egypt fears disaster from a dam

The only reason Egypt has even existed from ancient times until today is because of the Nile River, which provides a thin, richly fertile stretch of green through the desert. For the first time, the country fears a potential threat to that lifeline, and it seems to have no idea what to do about it.

Ethiopia is finalizing construction of the Grand Ethiopian Renaissance Dam, its first major dam on the Blue Nile, and then will eventually start filling the giant reservoir behind it to power the largest hydroelectric dam in Africa.

Egypt fears that will cut into its water supply, destroying parts of its precious farmland, hampering its large desert reclamation projects and squeezing its burgeoning population of 93 million people, who already face water shortages.

Dam construction on international rivers often causes disputes over the downstream impact. But the Nile is different: few nations rely so completely on a single river as much as Egypt does. The Nile provides over 90 percent of Egypt’s water supply. Almost the entire population lives cramped in the sliver of the Nile Valley. Around 60 percent of Egypt’s Nile water originates in Ethiopia from the Blue Nile, one of two main tributaries.

Egypt barely gets by with the water it does have. Because of its population, it has one of the lowest per capita shares of water in the world, some 660 cubic meters a person. The strain is further worsened by widespread inefficiency and waste. With the population on a path to double in 50 years, shortages are predicted to become severe even sooner, by 2025.

That is despite the fact that Egypt already receives the lion's share of Nile waters: more than 55 billion of the around 88 billion cubic meters of water that flow down the river each year. It is promised that amount under agreements from 1929 and 1959 that other Nile nations say are unfair and ignore the needs of their own large populations.

Complicating the issue, no one has a clear idea what impact Ethiopia's dam will actually have. Addis Ababa says it will not cause significant harm to Egypt or Sudan downstream.

Much depends on management of the flow and how fast Ethiopia fills its reservoir, which can hold 74 billion cubic meters of water. A faster fill means blocking more water at once, while doing it slowly would mean less reduction downstream.

Once the fill is completed, the flow would in theory return to its previous levels, but the fear in Egypt is that the damage from the fill years could be long-lasting or that Ethiopia could build more dams and hold Egypt hostage by continuing to reduce the flow.

One study by a Cairo University agriculture professor estimated Egypt would lose a staggering 51 percent of its farmland if the fill is done in three years. A somewhat slower fill over six years would cost Egypt 17 percent of its cultivated land, the study claimed — still a catastrophic scenario that would hit the food supply and put tens of thousands out of work in a country where a quarter of the work force is employed in agriculture.

Internal government studies estimate that for every reduction of 1 billion cubic meters of water in Egypt's supply, 200,000 acres of farmland will be lost and livelihoods of 1 million people would be affected, given that an average of five people live off each acre, a senior

Irrigation Ministry official said. He spoke on condition of anonymity because he was not authorized to discuss the figures.

Other experts say the impact will be far smaller, even minimal.

They say Egypt could suffer no damage at all if it and Ethiopia work together and exchange information during the filling of the reservoir, adjusting the rate to ensure that Egypt's own massive reservoir on the Nile, Lake Nasser, stays full enough to meet Egypt's needs during the years of the fill.

Unfortunately, that isn't happening between the two countries, whose ties have often been deeply strained.

"To my knowledge, this situation is unique, particularly at this scale," said Kevin Wheeler at the Oxford University's Environmental Change Institute. "I just can't think of another case that has two large reservoirs in series without a plan on how to operate them together."

Construction on the dam is around 60 percent complete and is likely to be finished this year or early next. Ethiopia has given little information on when it will start the fill or at what rate. It is pushing ahead with construction without waiting for an independent study on the impact that it, Egypt and Sudan agreed to under a 2015 Declaration of Principles agreement.

“We have taken into account (the dam’s) probable effects on countries like Egypt and Sudan,” Ethiopia’s water, irrigation and electricity minister, Sileshi Bekele, told reporters in Addis Ababa. He added that plans for the filling process could be adjusted but did not elaborate.

A joint Ethiopian-Egyptian-Sudanese committee has met 15 times over the past two years, most recently this month, trying to implement the Declaration of Principles. Under that deal, they committed to abide by the impact study and agree on a plan for filling the reservoir and operating the dam. But though the deadline to complete it has passed, the study has hardly begun, held up by differences over information sharing and transparency.

In public, Egyptian officials have said both governments are cooperating.

But the frustration is starting to show.

In June, Egyptian Foreign Minister Sameh Shukri spoke of “difficult talks” and complained of delays in the impact study. He warned that unless Ethiopia addresses Egyptian concerns, Egypt will search for an alternative path, though he did not elaborate. The irrigation official said that Egypt is trying to build international pressure on Ethiopia.

A high-ranking government official acknowledged there’s little Egypt can do. “We can’t stop it and in all cases, it will be harmful to Egypt,” he said.

A senior diplomat involved in the negotiations only shrugged. “We can only wait and see,” he muttered. Both spoke on condition of anonymity because the talks are still ongoing.

Egyptian leaders in the past have rumbled about military action to stop any dam. Recently, Ethiopia accused Egypt of supporting rebels caught trying to sabotage the dam, and there are also accusations that Egypt is setting up a military base in Eritrea to carry out an attack — all claims denied by both Egypt and Eritrea.

A military option seems less likely after the 2015 accord in which Egypt agreed to cooperation.

International law also provides little recourse. International charters spell out broad principles on managing rivers, saying waters should be shared in an equitable way and one country’s projects on a river must not cause “significant harm” to another.

But it is largely left to the riparian countries — those along the river — to work out the details. The 2015 accord committed Egypt to resolve differences in negotiations, and while it can seek outside mediation, all parties would have to consent.

Originating in Ethiopia, the Blue Nile flows into Sudan, where it joins with the White Nile, whose source is Lake Victoria in east Africa. From there it flows north through Egypt to the Mediterranean.

For Ethiopia, the \$5 billion dam is the realization of a long-delayed dream. Ethiopia’s infrastructure is among the least developed in the world, leaving the vast majority of its 95 million people without access to electricity. The dam’s hydroelectric plant is to have a

capacity to generate over 6,400 Megawatts, a massive boost to the country's current production of 4,000 Megawatts.

The longer it takes to fill the reservoir, the longer Ethiopia has to wait for the benefits, meaning lost growth.

"If everybody is working together, if there is trust, it is possible to have win-win," said Kenneth M. Strzepek, professor of water resources engineering and economics at the University of Colorado at Boulder.

He believes that even in the worst case scenario, damage to Egypt's economy will not be huge.

"But you will hurt people," he said. "If you reduce the flow, you hurt the farmers." Over 80 percent of Egypt's water goes to agriculture.

Any blow could resonate hard in Egypt. The country is already undertaking a painful reform program of austerity measures that have hiked inflation in a bid to rebuild an economy deeply damaged by years of turmoil.

At the same time, Egypt uses its water with chronic inefficiency. Nearly a third of the around 9 billion cubic meters of drinking water is wasted each year because of old, dilapidated pipes and distribution networks, according to the official statistics agency.

Farmers irrigate their fields by flooding, increasing water loss. The government has been reluctant to incorporate more efficient sprinkler or irrigation systems into the national water plan because of the cost.

Among Egyptians, there are bitter accusations that Ethiopia is acting unilaterally.

"Ethiopia wants full control over the Nile. It doesn't want to abide by any deals," said Hani Raslan, a Cairo-based expert in African affairs.

"Egypt is fed up," he said. "When the fill-in starts, there will be grave dangers."

But some critics say Egypt only has itself to blame because of its own high-handedness in the past.

Egypt and Sudan, which also gets a large share of the Nile waters under past accords, traditionally rejected pressure by other nations to get a fairer distribution of the water.

In 1999, the countries established the Nile Basin Initiative as a forum on the river's use. Egypt and Sudan walked out of the talks, demanding their "historic rights" be recognized.

The boycott backfired. The other nations went ahead, creating their own Cooperative Framework Agreement in 2010 and throwing support behind Ethiopia's dam. Sudan and Egypt remained hold-outs.

After coming to office in 2014, Egyptian President Abdel-Fattah el-Sissi took a new approach, visiting Sudan, Ethiopia and other upstream nations and talking of diplomatic solutions.

Egypt then signed the 2015 Declaration of Principles. For the first time, it made no mention of its past water shares. Critics said it had gone too far in the other direction and had surrendered its rights.

Salman Salman, a Sudanese water expert, said Egypt ignored past opportunities to work together with Ethiopia. “There is this arrogance (in Egypt) and the feeling that this is our river and no one can touch it,” he said.

Now Egypt is isolated, and Ethiopia is dragging its feet over cooperation — just as Egypt did in the past.

“Egypt is no longer the dominant force along the Nile,” Salman said. “Ethiopia is replacing it.”

03/10/2017 online at: <http://powersource.post-gazette.com/powersource/policy-powersource/2017/10/01/On-China-s-border-with-North-Korea-a-reduced-trade-lifeline-is-still-a-lifeline/stories/201710010259>

Water Scarcity in Morocco Will Be ‘Definitively Resolved’ by 2018: Head of Govt.

Three days after King Mohammed VI instructed Head of Government Saad Eddine El Othmani to chair a committee to find solutions to water scarcity in the kingdom, El Othmani has promised that the group will “definitively resolve” the problem by 2018.

The ministerial committee appointed by the King to solve the problems of water scarcity in rural and mountainous areas “will soon begin its work,” said El Othmani at the Council of the Government held on October 5.

“The water issue is now strategic for the government following the royal instructions,” said the head of government.

The committee, formed by the ministers of the sectors concerned, will meet next week, according to a statement read by the government spokesman Mustapha El Khalfi after the government council.

The monarch gave the order to tackle water scarcity on Monday, while chairing a meeting of the council of ministers in Rabat which discussed the issue of dropping water reserves in several regions in the kingdom.

In recent months, residents of different regions, especially rural areas, have complained about an increasing scarcity of drinking and irrigation water. In cities like Ouazzane, Beni Melal, Zagora, Sefrou, and Azelal, Moroccans took to the streets to draw the government’s attention to the issue.

In rural areas, many groups organized long-distance marches to the regional government offices, sometimes facing blockades set up by the Gendarmerie.

The rate of access to drinking water in rural areas is expected to reach 96.5 percent by the end of 2017, with the state investing more than MAD 1 million in water supply projects, announced Secretary of State in charge of Water, Charafat Afilal, during the July 25 parliamentary session.

The government is in a critical position with regards to water policy. Morocco is one of the 36 countries facing “extremely high” levels of baseline water stress, with more than 80 percent of the water available to agricultural, domestic, and industrial users withdrawn annually. This leaves various communities and economic activities vulnerable to water scarcity, according to World Resources Institute, which has led to the current regional demonstrations on water scarcity.

07/10/2017 online at: <https://www.morocoworldnews.com/2017/10/230401/water-scarcity-morocco-will-definitively-resolved-2018-head-govt/>

Tunisian president inspects wastewater treatment plant project run by Chinese company

Tunisian President Beji Caid Essebsi Wednesday visited a new wastewater treatment plant project which has been entrusted to a Chinese hydroelectric engineering and construction company.

With a total cost of 61 million dinars (25 million U.S. dollars), the Sousse wastewater treatment project, which is three quarters completed and located on the east coast of Tunisia, will particularly benefit the agricultural sector since the treated water will be used to irrigate groundwater.

"It calls for an average of 250 workers per month with a Tunisian majority, and it covers an overall area of 13 hectares. For the financing of this project, Tunisia holds 60 percent, while the remaining 40 percent come from a German financial institution," said Zaher Guigua, head of the Tunisian construction project.

The effective operation of this wastewater treatment plant is divided into two phases, respectively scheduled for May 2018 and December 2018.

"The Tunisian Sousse wastewater treatment project is currently the largest project under construction in Tunisia. After the completion, this purification factory will treat 60 percent of the life and industrial water in Sousse," said Hu Pingjun, manager of the Sousse wastewater treatment project.

"With its global investment potential, China will be able to play a great role in the recovery of the Tunisian economy, particularly in certain sectors including major infrastructure projects, urban sanitation and waste water," said Riadh Mouakhar, Tunisian minister of local affairs and the environment.

According to the minister, Essebsi's visit to this project is part of a tour scheduled in the province of Sousse, and "the importance of this project in the process of global development has aroused the interest of the Tunisian president."

"This new wastewater treatment plant," he said, "will have, once completed, a grand impact on the beautification and the improvement of the entire province of Sousse in light of many assets, including water recycled for the agriculture sector."

In addition, the Tunisian minister added, "this project is distinguished by the fact that it will also favor the production of electricity by cogeneration, which will reduce the operating cost, essentially based on energy."

05/10/2017 online at: http://news.xinhuanet.com/english/2017-10/05/c_136659678.htm

Water should be provided to the thirsty

Countries with good governance spend a handsome portion of their Gross Domestic Product (GDP) on human development projects and act to spread awareness regarding the importance of water, among the masses. Unfortunately, we are far behind them for we lack such policies in our country. Only recently have some developing countries transformed into developed ones. One cannot help but wonder about the reason behind their success and sustainability.

Pakistan, being a developing country itself, dreams of entering the category shared by the developed bloc. But its dreams are hindered by the socio-political ups and downs and also the shortage of electricity and water it suffers from.

While water is essential to Pakistan's progress, its consumption is divided into three categories; domestic, industrial, and agricultural usage. 96 percent of water is used by the agricultural sector while 3 percent is used by the domestic sector and the remaining 3 percent is then consumed by the industries.

However, our water resources are limited. River Indus alone provides 65 percent of total river flow, while Jhelum and Chenab's contribution is 17 percent and 19 percent respectively. But, unfortunately, the low level of water flow in Kotri downstream has been creating hazardous issues and problems related to health & environment along with an economic threat to fishermen. It is also the root cause of land degradation and decreasing fish count.

In addition, the demand for water is rising in proportion to the increasing population. Besides, water and sanitation have become a neglected sector in Pakistan. The government's spending in this sector as compared to other social sectors is negligible. After becoming a signatory to the UN's Millennium Declaration in 2000, the percentage of the contribution to GDP, the contribution has only improved to 0.13 percent from 0.12 percent in the last few years. Moreover, the quality of water has also been deteriorating in Pakistan gradually. It is estimated that in Pakistan bad water quality is the cause of around 30 and 40 percent diseases and deaths.

According to Global Competitiveness Index Report 2012-13, "A population with poor access to water, food, shelter, healthcare, and sanitation cannot develop to its full capacity". This means that it is extremely important for the government to take proper measures to resolve these issues if it is really dedicated to the development of Pakistan.

Pakistan cannot get on the road to sustainability until and unless the federal and provincial governments work to provide basic human rights, including access to clean water, to the people. While it is the government's job to ensure that the rights of the people are protected, there is a great responsibility on the shoulders of the people as well. It is the duty of the people to consume water responsibly because reducing the percentage of the water wasted is the key to prosperity.

To ensure prosperity, more strategic agreements need to be signed with India in order to deal with our current and future water consumption requirements. Also, the government should highlight those agreements on international forums to pressurize India into keeping its word because a proper flow of water in the River Indus can help boost our economy and lead to development.

04/10/2017 online at: <http://dailytimes.com.pk/blog/04-Oct-17/water-should-be-provided-to-the-thirsty>

‘Water availability decreasing in Pakistan’

A delegation of National Security Workshop, National Defence University (NDU), Islamabad, on Friday visited Wapda House to have briefings on the water and power sectors of Pakistan.

The delegation, headed by NDU Chief Instructor Rear Admiral Zain Zulfiqar, included senators, MNAs, MPAs, senior bureaucrats, technocrats, ambassadors, senior military officers and representatives of civil society.

Wapda Member, Power, Muhammad Arshad Chaudhry, Member, Water, Syed Riaz Ali Shah and Wapda Secretary Amer Ahmad were also present on the occasion. Wapda Adviser Dr Izhar-ul-Haq and Pepco General Manager, Revenue and Commercial Operation, Engineer Muhammad Saleem briefed the delegation on the water and power sectors, respectively.

During the briefing on water sector, the delegation was informed that Pakistan could store only 10 percent of its annual flows, sufficient for use of only 30 days. The per capita water availability in the country went down to 908 cubic meter in 2017 from 5,260 cubic metre in 1951, rapid increase in population being the major contributing factor behind the phenomenon. About 29 million acre feet (MAF) of water escapes below Kotri Barrage every year on the average.

The delegation was briefed that the country needs to construct more dams to enhance its water storage capacity to cope with the water requirements. As many as 20 million acres of additional land can be brought under irrigated agriculture if water is made available by constructing more dams.

The delegates were briefed that Wapda was constructing six hydropower projects with cumulative generation capacity of about 4800 MW, of which, three projects with generation capacity of about 2,500 MW would be completed from early 2018 to mid 2018 in a phased manner.

The projects are; Golen Gol, Neelum Jhelum and Tarbela fourth Extension hydropower projects. Seven other projects with gross water storage capacity of more than 10 MAF and power generation capacity of more than 16, 000 MW are ready for construction. They include Diamer Basha Dam, Mohmand Dam, Dasu Stage II, Tarbela fifth Extension and Bunji. In another briefing on the power sector, the delegation was informed about power sector reforms, existing power generation capabilities, generation mix, consumption patterns, line losses, receivables and circular debt. The delegation was also apprised of the government's efforts to improve the situation and overcome the electricity shortage in the country. The delegation was informed of the load forecast, generation additions and long-term transmission expansion plan to evacuate electricity from the power houses to the distribution companies.

The briefing was followed by question and answer session. The delegates asked questions on different aspects of water and power sectors. Later, the Wapda member, power and the delegation head exchanged the souvenirs.

07/10/2017 online at: <https://www.thenews.com.pk/print/235119-Water-availability-decreasing-in-Pakistan>

Sartaj for evolving strategy to tackle water scarcity

Deputy Chairman Planning Commission Sartaj Aziz Sunday underlined the need for evolving an effective strategy to tackle issues like water scarcity, negative impacts of global warming and increasing environmental pollution, describing them man-made disasters.

“Over the years, the National Disaster Management Authority (NDMA) has transformed into a vibrant body as it carried out extensive reconstruction and rehabilitation work after the October 8, 2005 earthquake in affected areas of Khyber Pakhtunkhwa and Azad Jammu and Kashmir, but now we need a strategy to tackle man-made disasters,” he said while addressing a ceremony held in connection with 12th anniversary of the earthquake-2005 here at F-9 Park.

Elaborating the ‘man-made disasters,’ Aziz said the country would be facing some of the biggest challenges in future including water scarcity due to insufficient water storage capacity, negative impacts of global warming and increasing environmental pollution. “We must prepare ourselves for such challenges,” he said.

The Deputy Chairman Planning Commission acknowledged services of NDMA in natural calamities for rescue and relief of the affected people especially in the floods 2010 and 2011 that played havoc, claiming loss of precious lives and damaging public property and crops.

Sartaj Aziz highlighted importance of constructing more water dams and increasing the country's water storage capacity, keeping in view the looming threats of water scarcity. He

also stressed the need for creating awareness among public about water conservation and its wastage.

Chairman NDMA Lt. Gen Umer Hayat Khan said the authority had proposed to observe October 8 as 'National Resilience Day' from next year and the government had accepted the suggestion.

He said the aim behind observing the day with national spirit was to pay homage to the tragedy victims and create awareness among masses about adopting safety measures in natural calamities and other emergency situations. The chairman thanked international donors for extending generous financial support in reconstruction of the damaged infrastructure and rehabilitation of the affected people.

09/10/2017 online at: <https://www.thenews.com.pk/print/235566-Sartaj-for-evolving-strategy-to-tackle-water-scarcity>

Middle East Residential Water Treatment Devices Market to Raise at a CAGR of 6.8% over 2015-2025

Future Market Insights (FMI) recently announced the release of its report titled "Residential Water Treatment Devices: Middle East Industry Analysis and Opportunity Assessment 2015-2025." According to the report, the middle east residential water treatment devices market was valued at US\$ 414.1 Mn in 2014 and is anticipated to reach US\$ 855.3 Mn by 2025, expanding at a CAGR of 6.8% throughout the forecast period.

Total population of Middle East & Africa stood at approximately 346 million in 2015 and is expected to grow at the rate of 2% per annum. The Middle East & Africa is also witnessing mass migration of people to urban centers, thereby leading to increased demand for water purifiers in these centers. Economies of North Africa, on the other hand, have also been registering healthy growth rates over the last few years, which in turn is expected to fuel growth of the residential water treatment devices market in the overall MEA region. Due to large scale industrialization, quality of water in the GCC and Levant countries has deteriorated during the recent years. Water availability in these regions is estimated to be merely 1,200 m³/person/year, which is substantially lower than the global average of 7,000 m³/person/year.

These factors are also prompting urban masses in Middle East countries to opt for water purifiers. Furthermore, the GCC region is witnessing entry of globally established water purifier brands, which has resulted into increased competition in the market. Increased competition, in turn, ensures marginal decline in prices of residential water treatment devices in the retail market in these regions. However, price decline has been largely reported on the reverse osmosis-based water purification devices only, the sales of which have witnessed an upsurge in recent years.

Around 44% of the Middle East & Africa population lives in rural area and is not aware about the necessity and techniques to purify and filter water. Penetrating these markets may be a challenging task for the concerned market participants as most of the vendors would have to

begin by creating awareness regarding water purifier and filters and the importance of these products.

Combination water purification system employs two different treatment technologies in one system. Players such as AquaPro and Kent have started offering RO+UV-based combination water purifiers in the GCC and Levant countries.

Geography-wise, Kingdom of Saudi Arabia dominated the GCC residential water treatment devices market in terms of value in 2014, accounting for more than one-third value share of the GCC residential water treatment devices market. On the other hand, Turkey dominated the Levant residential water treatment devices market in 2014, accounting for more than 40% value share of the overall market in the region. Furthermore, Kingdom of Saudi Arabia is foreseen to expand at a relatively high CAGR during the forecast period and is expected to maintain its revenue share dominance till 2025 end. The governments in the Levant and GCC regions are investing and opening up to Foreign Direct Investments (FDIs) and promoting industrialization, which has been leading to an increase in the per capita income of the residing population in countries such as Kingdom of Saudi Arabia and the UAE.

Countries such as the UAE, Qatar, Egypt and Jordan are expected to register significant Y-o-Y growth during the forecast period. Besides, these countries are projected to bestow more focus on their non-oil and manufacturing sectors in the coming years, which in turn is expected to encourage the water purifier and water filter manufacturers in these countries to go in for domestic production and enhance sales. Countries such as Bahrain, Iraq, Palestine and Syria are currently witnessing moderate growth in demand for residential water treatment devices, and the trend is expected to continue during the forecast period as well.

On the basis of filtration devices, the filtration faucet segment dominated the Middle East residential water treatment devices market in 2014 in terms of revenue, and is foreseen to expand at a significant CAGR during the forecast period. In terms of volume, the water tap faucet segment dominated the Middle East residential water treatment devices market in 2014, accounting for more than half volume share of the overall market.

On the basis of purification devices, the reverse osmosis segment dominated the Middle East residential water treatment devices market in 2014 in terms of revenue, and is foreseen to expand at a relatively high CAGR during the forecast period. In terms of volume, the gravity segment purification devices dominated the Middle East residential water treatment devices market in 2014, accounting for more than 40% volume share of the overall market.

Key market players covered in the report include KENT RO Systems Ltd., Eureka Forbes, Britannic Water Treatment Company W.L.L., Panasonic Corporation, LG Electronics, Pure It LLC, Waterlife, Coolpex Pure Water System, Ultra Tec Water Treatment LLC and AQUA PRO UAE. Most players in the market are engaged in various activities, such as mergers and acquisitions, increasing investments in technological and product developments, geographical expansion and brand building via strong marketing strategies, in order to sustain their position in the competitive market.

05/10/2017 online at: <http://www.military-technologies.net/2017/10/05/middle-east-residential-water-treatment-devices-market-to-raise-at-a-cagr-of-6-8-over-2015-2025/>