



# ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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



**ORSAM WATER BULLETIN**  
*22 November 2016 – 28 November 2016*

**More Than 3 Feet of Dead Sea's Water Vanishes Every Year, Experts Say**

The great salt lake that sits nestled between Israel, Jordan and Palestine is retreating from the shores of all three nations at a rate of more than 3 feet per year, according to environmental organization EcoPeace Middle East.

"When I was a child, the Dead Sea used to wash the coast a few yards from our field," Jordanian farmer Adbul Alhay Alhwemen told PBS. "Now it lies far – over a mile away. In 20 years, no one will know there was something called the Dead Sea here."

The 15-million-year-old sea is really a lake that drains the watershed of the Jordan River, a natural faucet that has been providing less and less water as the years go by, PBS also reported.

"Half of the demise of the Dead Sea is caused by the Jordan River no longer flowing and the diversion of waters that used to run along Jordan to the Dead Sea from the Yarmouk River," Gidon Bromberg, the Israeli head of Friends of the Earth Middle East environmental group, told PBS.

Water inflow levels have already been reduced to just 5 percent of the original volume, EcoPeace Middle East says, and the sea has already lost over a third of its surface area.

Dissolved minerals in the sea's waters, long hailed for their therapeutic properties, are often used in cosmetics and other consumer products, CNN reports. Large-scale extraction operations lower sea levels even further.

Thousands flock to the sea every year to take advantage of those supposed therapeutic powers, or simply float in the highly saline waters. They, and the industry that springs up to cater to them, are also part of the problem, EcoPeace Middle East says. We're literally loving the sea to death.

"Additional construction of water parks, shopping malls and urban facilities for the new influx of employees will all place further pressures on the land and water resources," said EcoPeace Middle East. "Untreated sewage into the Dead Sea from these surrounding areas are projected to increase as well."

Earlier this month, a multinational group of swimmers swam seven hours through the salty, soupy waters of the Dead Sea on Tuesday in a bid, partly organized by EcoPeace, to draw attention to the environmental degradation of the fabled lake.

"We're here for the first ever Dead Sea swim challenge with 25 swimmers that come from all over the world to send out a clear message to save the Dead Sea, which is shrinking today at an alarming rate," EcoPeace spokesperson Mira Edelstein told the Associated Press.

Jackie Cobell, a British long-distance swimmer, told the AP that the Dead Sea swim was "historic and iconic. This is really important because it's disappearing fast."

Efforts are being made to try to halt the process. Israel and Jordan signed a \$900 million deal last year to build a canal from the Red Sea to the Dead Sea, CNN reported. Both countries would be able to use the canal as an alternative water supply and pump much-needed water into the Dead Sea.

Some think the plan is wrong way to go, however.

"Probably the canal will do more harm than help," Youval Arbel, deputy director of the Israeli branch of Friends of the Earth, told German broadcaster Deutsche Welle. "The chemistry of the Red Sea is very different to water in the Dead Sea; you cannot simply mix them."

Arbel suggests tackling the problem at its literal source - the Jordan River. Better water management practices, such as installing modern, more efficient irrigation systems or recycling wastewater, would allow more water to follow its natural path to the Dead Sea.

22/11/2016 online at: <https://www.wunderground.com/news/dead-sea-drying-out-at-alarming-rate>

### **Water Situation Alarming in Gaza**

People will need water, already scarce in the Middle East & North Africa, even more desperately if temperatures rise because of climate change. In Palestine, water resources are critically scarce, and the situation in Gaza is alarming.

Adnan Ghosheh, Senior Water & Sanitation Specialist, remembers a time not so long ago when everyone in Gaza could drink water from their tap. That was in the late 1990s, but so much water has been pumped out of the natural aquifer underneath Gaza since then that seawater has seeped in, making it too salty to drink. These and other factors mean that only 10% of Gaza's population has access to safe drinking water, compared to 90% in the West Bank or about 85% in MENA in general.

What danger does the drop in the level of the aquifer pose?

Raw or poorly treated wastewater, which comes from densely populated areas and refugee camps in Gaza, infiltrates the aquifer or goes to the Mediterranean. As a result, you have a shortage of water coupled with high demand, given the high growth of population now close to two-million.

So there are issues both with the quality of water and the quantity of water, both are making access to improved drinking water very low. As such, people in Gaza are not able to use the water coming into their houses for drinking; they use it for household ends, but for drinking, they have to rely on trucks. There are some 150 operators who provide some kind of desalinated water that has been filtered to make it acceptable for drinking and for cooking. It's

more expensive and not an improved source of water, according to our definitions of water clean enough to drink.

Q. What other sources of water can possibly be considered?

In the past, Israel used to deliver good quantities of water, but the demand has increased with the population growth, and the volume of freshwater provided by Israel under the 1993 Oslo Accords falls far short of what it needs now. So the quantities from the aquifer and Israel are simply not sufficient for Gaza, although this issue had been raised by numerous studies. There were ideas to build a desalination plant, to import water from Egypt or from Israel—transboundary water—and now the Palestinian Water Authority (PWA) is pushing for a central desalination plan with the support of the World Bank. Strengthening the capacity in the Palestinian water institutions to sustainably manage the sector and build such complex infrastructure is being taken into consideration as part of another Bank's project.

At the end of the day, people need water. We, at the World Bank, do development, however, our work in Gaza has also a humanitarian nature because water is a basic need.

Q. What is the Bank's approach to helping address the water crisis?

The World Bank is working closely with the Palestinian Authority in line with its strategic water framework. We are interested in developing infrastructure but also in having the institutional capacities in place to enable the government to sustain it. This is a challenging task.

The PWA and its stakeholders have developed their water strategy for 2017–22. Under this strategy, one of the main objectives is to develop desalination plants as unconventional sources of drinking water because the wells are depleted. They couple this with efficiency measures, so there are less water losses in the system, particularly in Gaza where, due to different conflicts, the infrastructure has been damaged and there are a lot of leaks: we have had projects working on ensuring that services were restored and leaks were detected and fixed.

So, the priority is to secure resources and supply, and of course improve wastewater management. We have a wastewater treatment project in North Gaza, one of the oldest projects on the World Bank's books. It started as an emergency response project, but is currently working on a long term solution where the treated water will be used for irrigation, saving potable water for drinking and other uses.

Q. What about governance issues?

The PWA water strategy includes an institutional and financial objective to ensure economic viability and sustainability. And this is probably the biggest challenge in Gaza, where the governance system is not fully intact, and people cannot afford to pay for water services.

We understand that there are limitations: there are matters that are within the control of the Palestinian Authority, and others that are not. Getting water from Israel, as well as material

and experts into Gaza are beyond its control. We try to intervene on a technical level to ensure services are delivered. In our wastewater treatment project in North Gaza, we finally got approval from the government of Israel for a dedicated power line to operate the treatment plant, a request that was submitted three years ago.

Everyone agrees that environment does not have boundaries, so when a waste water treatment plant is developed, this will serve the interest of all parties because otherwise the wastewater is going to flow to the other side. It's a mutual interest on the Palestinian side but also on the Israeli side. Addressing this necessity is therefore not a luxury.

Q. How quickly has this water crisis happened?

The issue became more acute about 15 years ago, when water supply and availability quickly deteriorated. This water crisis has already led inhabitants to leave Gaza. If we start implementing the measures to secure the water supply and improve water management, the aquifer would clean and replenish itself. But, if by the year 2020, those measures are not in place—if the 55 m<sup>3</sup> of water a year from the desalination plant is not coming to replace the water being taken out, if the waste water plants are not built—we will basically have an irreversible process.

Q. What about other areas of Palestine?

In the West Bank, there is also a challenge of access to water. There are some areas where the daily water consumption per person is of 25–30 liters while the World Health Organization recommends 120 liters per capita per day, mainly because inhabitants of the West Bank are not getting enough water from the supplier. The bulk supplier is Palestinian, but much of the resources in the West Bank are controlled by Israel. The demand is particularly acute in summer time: in Hebron, the municipality is able to deliver water only once every 21 days, and this is generating discontent among the population who are less willing to pay for such poor service. Despite the challenging circumstances, we believe that Palestinians, like any other nation, are entitled to adequate water and sanitation.

22/11/2016 online at: <http://www.worldbank.org/en/news/feature/2016/11/22/water-situation-alarming-in-gaza>

### **Iran Urges Global Action against Water Crisis**

Iran's Deputy Ambassador to the United Nations Gholam Hossein Dehqani called for global cooperation to tackle various water-related challenges facing the world today.

“To meet these challenges, the international community needs to accentuate its political will to promote trans-boundary water cooperation through negotiating, designing, agreeing and implementing custom made and appropriate water-sharing plans and access to water,” Dehqani said on Monday at the UN Security Council Open Debate on “Water, Peace and Security”.

He added, “We need to encourage countries that are facing water related issues to develop cooperation frameworks to addressing their respective needs in order to prevent water related confrontations in the future.”

The following is the full text of Dehqani’s speech at the debate.

Mr. President

At the outset, I would like to express my delegation’s appreciations to you and your delegation for convening this event and presenting the concept note. I would also like to express my gratitude to Mr. Ban Ki-Moon, Secretary General of the United Nations, the Global High-Level Panel on Water and Peace, ICRC and Strategic Foresight Group for their inputs in this debate.

Water is a natural resource that not only has a determining impact on the wealth and welfare of all nations, but it has also a major sway on their stability in the twenty-first century.

Some 1.7 billion people are currently lacking fresh water and are below the real rarity threshold established by the United Nations. This number is expected to rise to 2.4 billion in 2025.

There are more than 260 rivers shared in one way or other by 148 countries and thus water related issues can affect regional peace in a very significant way. It is particularly disturbing that for 158 of the 263 international watercourses there is no cooperation frameworks. Incremental competition between States over trans-boundary water resources has led to regional instability in many places and this will continue and exacerbate in future.

With unprecedented population growth, new emerging economies and the effects of climate change, pressures on our finite freshwater resources are increasing. Meanwhile, the ability of some nations to secure their water-related requirements is being severely challenged, causing great and legitimate concern that tensions around water hotspots will intensify among water users. Yet, water holds an immense potential for cooperation which should be explored and utilized. An increasingly strong and coordinated response is therefore expected from the international community in order to raise awareness and build cooperation from the growing challenges posed by water between sovereign states.

Water and water resources are increasingly becoming a matter of national security and thus as the Concept Note describes as a “potential driver” for conflicts. The fierce competition for fresh water may well become a source of conflict and war in the future, in the same way that land or energy have led to conflicts in the past, if the international community fails to install efficient and effective water management structures at the regional level. As stated in the World Water Development Report 2015, “Inter-state and regional conflicts may also emerge due to water scarcity and poor management structures”.

A Water Diplomacy is needed: A new approach to managing complex water issues and networks, innovative approaches to water managing that should replace outdated zero-sum battles over water. This new approach will serve to promote both short and longer term

cooperation through shared benefits, inclusive multi-stakeholder agreements, and sustainable trans-boundary institution building.

To meet these challenges, the international community needs to accentuate its political will to promote trans-boundary water cooperation through negotiating, designing, agreeing and implementing custom made and appropriate water-sharing plans and access to water. We need to encourage countries that are facing water related issues to develop cooperation frameworks to addressing their respective needs in order to prevent water related confrontations in the future. Upon request by concerned states, the United Nations as well as relevant regional or sub regional organizations also can play a useful role in these efforts, particularly in the fields of capacity building, sharing experiences and model setting.

23/11/2016 online at: <https://www.tasnimnews.com/en/news/2016/11/23/1248414/iran-urges-global-action-against-water-crisis>

### **Pakistan at UN warns water as a tool of coercion is no solution**

Referring to Indus Water Treaty, it urges global community to ensure such bilateral pacts are not abrogated.

In an apparent reference to the row over Indus Water Treaty, Pakistan has warned against use of water as an instrument of coercion or war and asserted that the international community must remain vigilant to any sign of unwillingness to maintain cooperation on resolving water issues.

“The international community must assume a responsibility to develop, nurture and protect normative frameworks, at multilateral and bilateral levels, to ensure that states remain willing to resolve water issues cooperatively,” Pakistan’s Ambassador to the United Nations Maleeha Lodhi said in her address to the United Nations Security Council during an open debate on water, peace and security.

“It must promote bilateral and regional agreements on waterways; and once they are evolved, ensure that they are not undermined through unilateral or coercive measures,” Ms. Lodhi said as she described the India-Pak Indus Water Treaty of 1960, with the World Bank as guarantor, a model of what can be achieved through bilateral agreements.

“But this Treaty is equally a good case study of what could go wrong if such agreements are not honoured or threatened by one of the state parties to be abrogated altogether. The international community must remain vigilant to any sign of unwillingness to maintain cooperation and be willing act to avert any conflict,” Ms. Lodhi said.

Treaty has survived wars: Ban

In his address, the U.N. Secretary General Ban Ki-moon also mentioned the Indus Water Treaty, saying it withstood frequent tensions between India and Pakistan, including wars.

“In the second half of the 20th century, more than 200 water treaties were successfully negotiated. International river agreements have enhanced security and stability in river basins,” he said.

“The 1960 Indus Waters agreement between India and Pakistan has famously survived at least two wars and numerous clashes and diplomatic crises,” Mr. Ban said.

The treaty sets out a mechanism for cooperation and information exchange between the two countries regarding their use of the rivers, known as the Permanent Indus Commission which includes a commissioner from each of the two countries.

It also sets out a process for resolving so-called “questions”, “differences” and “disputes” that may arise between the parties.

He said management of more than 200 international rivers and at least that many transboundary aquifers was especially important.

‘Beware communal flare-ups’

Cautioning that the issue of access to water could exacerbate communal tensions, as in Afghanistan and Peru, Mr. Ban said that armed conflict resulted in destruction of water supply, as seen in Syria and Gaza.

The U.N. actively promotes mediation and dialogue as effective tools for preventing and resolving disputes over water and natural resources, he added.

The World Bank, a signatory to the Indus Waters Treaty, on November 10 asked India and Pakistan to “agree to mediation” in order to settle on a mechanism for how the Treaty should be used to resolve issues regarding two dams under construction along the Indus river system.

India not for arbitration court

India took a strong exception to the World Bank’s “inexplicable” decision to set up a Court of Arbitration and appoint a Neutral Expert to go into Pakistan’s complaint against it over Kishenganga and Ratle hydroelectric projects in Jammu and Kashmir.

Pakistan had sought the establishment of a Court of Arbitration, which is normally the logical next step in the process of resolution in the Treaty. The Neutral Expert can also determine that there are issues beyond mere technical differences, he noted.

Pakistan has raised objections over the design of the hydel project in J&K, saying it is not in line with the criteria laid down under the Indus Water Treaty between the two countries.

23/11/2016 online at: <http://www.thehindu.com/news/international/Pakistan-at-UN-warns-water-as-a-tool-of-coercion-is-no-solution/article16686657.ece>

## **Lanxess elements tackle difficult Nile river water**

The plant was installed at an existing water treatment plant to provide pre-treatment for full demineralisation. The pre-treatment RO system uses 228 Lewabrane B400 FR elements. Lewatit MonoPlus ion exchange resins are used for demineralisation, resulting in demineralised water conductivity of less than 0.08 uS/cm (microsiemens a centimetre), and 2 parts per billion of silicon dioxide.

The RO plant is fed by canal water from the Nile, whose seasonally variable inorganic and organic total dissolved solids content is 300 to 550 milligrams a litre. It has two trains, each with a feed stream of 120 m<sup>3</sup>/h, and a recovery rate of 74 per cent. The trains comprise two stages, in a 13:6 array, with six elements to a vessel.

The RO elements reject salts up to levels of 99.76 per cent, resulting in permeate conductivity of 3 to 5 uS/cm; and significantly reducing the ionic load for the resins at the demineralisation unit, increasing its cycle times by four.

"The membrane elements from Lanxess exhibit an excellent level of performance with the difficult Nile river surface water. The rejection measured even exceeds expectations. Using reverse osmosis for pre-treatment means that we can reduce the consumption of specific chemicals for resin bed regeneration by around 60 per cent," said Alexander Scheffler, director of membrane business in Lanxess' liquid purification technologies unit.

23/11/2016 online at: <http://www.desalination.biz/news/0/Lanxess-elements-tackle-difficult-Nile-river-water/8599/>

## **Palestinians Hold up Water-Sharing Deal with Israel and Jordan**

Implementation of a regional agreement for water security and development is being held up by the Palestinian Authority, which has thus far failed to sign the agreement.

The Regional Cooperation Ministry, led by Deputy Minister Ayoob Kara, headed the Israeli delegation to a conference on water security and lasting development that was held Tuesday and Wednesday on the Jordanian side of the Dead Sea and which dealt with the challenges common to all states in the region vis-à-vis the environment and water security.

In his remarks to the opening of the conference, Deputy Minister Kara noted that Israel and the Palestinian Authority – with Jordanian assistance – had recently succeeded in formulating a water sharing agreement, but said that the Palestinians were delaying the signing and thus hurting their own people.

Kara also pointed out that Israel and Jordan were partners in many fields and said that joint work would assist the residents of both countries. He noted that Israel and Jordan had common interests and common challenges, as well as common enemies, and declared that the

only way to deal with them was to have a common stand. He said that Israel had taken the initiative and was advancing the opening of an additional crossing between the two countries south of the Dead Sea.

In addition to Deputy Minister Kara, MK Nava Boker, mayors and regional council chairpersons, Water Authority representatives and other officials also participated in the Israeli delegation.&

The conference was organized by EcoPeace Middle East& in cooperation with the Swedish International Development Cooperation Agency (SIDA) and held under the sponsorship of Jordanian Water and Irrigation Minister Dr. Hazem El Nasser.&

23/11/2016 online at: <http://hamodia.com/2016/11/23/palestinians-hold-water-sharing-deal-israel-jordan/>

### **Algeria: Ouali, UNDP Representative Examine Water Resources Cooperation**

Minister of Water Resources and Environment, Abdelkader Ouali on Thursday in Algiers received the resident representative of the UN Development Programme (UNDP) in Algeria, Eric Overvest, said the ministry in a release.

This meeting allowed assessing the cooperation between Algeria and the UN agency and examining the means for its promotion, notably in the field of water resources and environment, said the same source.

In this regard, the two parties agreed to encourage all the initiatives aiming to set up a of water resources cooperation programme, comprising the expertise in dam monitoring, the elaboration of maps of ground resources, the safeguard and the rehabilitation of underwater drainage "foggaras" and search of underground water.

Concerning the environment, cooperation with the UNDP is centered on the preparation of the 3rd communication on climate change and on the natural planning on the biological diversity.

It also focuses on the application in Algeria of the strategic plan of the convention on the biological diversity 2011-2020.

24/11/2016 online at: <http://allafrica.com/stories/201611250871.html>

### **India, Israel sign MoU on water management, desalination: Govt**

India and Israel have signed a memorandum of understanding for cooperation in the field of water management and development with desalination being one of the main areas of the collaboration, the Lok Sabha was informed.

"India and Israel signed a memorandum of understanding (MoU) for cooperation in the field of water resources management and development in New Delhi on November 11, 2016.

Desalination is one of the main areas for collaboration and sharing of experience and expertise in the MoU," Union Minister of State for Water Resources Sanjeev Balyan said in a written reply.

He said this while replying to a query whether the government plans to expand and incentivise use of desalination technologies to meet growing water needs.

Balyan said the Department of Science and Technology (DST) has supported demonstration plants based on indigenously developed reverse osmosis technology for brackish and sea water desalination.

The DST has also supported solar bio-mass hybrid multi-effect distillation, thermal desalination system at Naripayyur in Tamil Nadu's Ramanathapuram district, the Minister said.

Apart from this, the Ministry of Drinking Water and Sanitation envisages installation of desalination plants where availability of surface and ground water is a problem or has hazardous substances like arsenic and fluoride.

25/11/2016 online at: [http://www.moneycontrol.com/news/economy/india-israel-sign-mouwater-management-desalination-govt\\_8017941.html](http://www.moneycontrol.com/news/economy/india-israel-sign-mouwater-management-desalination-govt_8017941.html)

### **'Water belonging to India cannot go to Pakistan,' says Modi**

Indian Prime Minister Narendra Modi on Friday said that water which 'belongs' to India cannot be allowed to flow into Pakistan, Indian Express reported.

"The fields of our farmers must have adequate water. Water that belongs to India cannot be allowed to go to Pakistan... The government will do everything to provide enough water to our farmers," the Indian PM said at the inauguration of the All India Institute of Medical Sciences in Bathinda.

Speaking in reference to the Indus Waters Treaty with Pakistan, the hardline Hindu nationalist denied being concerned with politics, even as his statements were termed a bid to woo Punjabi farmers by Indian media.

"We formed a task force on the Indus Waters Treaty to ensure the farmers of Punjab and other states get each drop of water due to them," Modi said.

The 1960 World Bank-mediated Indus Waters Treaty between India and Pakistan is considered one of the great success stories of water diplomacy, especially as it has survived the India-Pakistan wars of 1965, 1971, 1999 and much bad blood during and after the wars.

Under the treaty, which was signed by Prime Minister Jawaharlal Nehru and President Ayub Khan in Sept 1960, water of six rivers — Beas, Ravi, Sutlej, Indus, Chenab and Jhelum — are to be shared between the two countries.

Pakistan has said revocation of the Indus Waters Treaty can be taken as a 'hostile' act against Pakistan.

Adviser to the Prime Minister on Foreign Affairs Sartaj Aziz earlier said that if India tries to interrupt water flow into Pakistan, it will not only violate the Indus Waters Treaty, but also set a regional state practice under which international law can be serve as a precedent. "It will provide China, for example, a justification to consider of suspension of waters of the Brahmaputra river," he said.

Tension between the two countries is again at a peak following an alleged Indian 'surgical strike', unrest in Kashmir and the Uri army base attack in September.

Since then there have been repeated outbreaks of cross-border firing in Kashmir, with both sides reporting deaths and injuries including of civilians.

The Indian premier's fresh statements come just days after Indian troops targeted a passenger bus and ambulance across the Line of Control, and killed three Pakistan Army soldiers and 10 civilians in various incidents of 'unprovoked' firing.

Modi stepped up a drive to isolate Pakistan diplomatically after the Uri army base attack in September in which 19 Indian soldiers were killed. Hours after the attack occurred, Indian Home Minister Rajnath Singh termed Pakistan a 'terrorist state' and accused Pakistan of involvement.

Shortly after, India decided to suspend Indus Water Commission talks until "Pakistan-sponsored terror" in India ended.

The Uri attack occurred days before Prime Minister Nawaz Sharif was set to address the United Nations General Assembly regarding Indian human rights violations in held Kashmir.

Following the attack, India claimed it had conducted a cross-border 'surgical strike' against 'launch pads of terror' in Azad Jammu and Kashmir — a claim Pakistan has strongly rejected.

Pakistan maintains that India is attempting to divert the world's attention away from atrocities committed by government forces in India-held Kashmir.

Pakistan and India have, most recently, locked horns over Kashmir since Indian forces stepped up a crackdown against protesters after Hizbul Mujahideen commander Burhan Wani was killed by government forces in July.

25/11/2016 online at: <http://www.dawn.com/news/1298575/water-belonging-to-india-cannot-go-to-pakistan-says-modi>

## **Experts call for Pak-Afghan water treaty**

At a time when India is hurling threats to block water flow from Western rivers into Pakistan, a leading expert called for strengthening office of Indus Water Commission and increasing water storage capacity of the country.

“We must enhance our water storage capacity from existing 30 days to 90 days and it could only be happened if we build more dams,” said adviser to the government on Mega Dams and Water and Power Development Authority (WAPDA) engineer Abdul Khaliq Khan.

While delivering a lecture at Pakistan Engineering Congress on “Pakistan’s Water Issues”, he highlighted the need for having a water treaty between Pakistan and Afghanistan. He warned that the country could face worst water and food shortages after 10-year if the resources were not properly utilised and planning was not done accordingly.

“Trans-boundary water issues are challenge for the country’s water security,” he said. Khaliq emphasised the need for enhancing capacity of Pakistan’s office of Indus Water Commission. “The government should strengthen capacity of the Indus Water Commission so that it could strongly defend the case on legal front at international forums,” he added.

It is pertinent to mention here that India’s Prime Minister Narendra Modi on Friday issued another “warning” to block water of western rivers flowing through held Kashmir into Pakistan. Though experts do not give any weightage to Modi’s slogan saying it is legally and technically impossible for India to block Pakistan’s water given to it under Indus Water Treaty of 1962. The experts urged the government to build dams, including the Kalabagh, to increase its indigenous water storage. The water treaty between Pakistan and Afghanistan is also need of the hour as Kabul River flows between the two countries, the experts said.

Pakistan’s office of Indus Water Commission faces problems due to shortage of technical staff and legal and old and outdated infrastructure. Khaliq said the government should utilise sources to immediately start construction of Diamer Bhasha Dam. He also suggested that feasibility report of Kalabagh Dam should be updated and its case should be sent to Council of Common Interests for approval.

He asked for provision of subsidies to promote high efficiency irrigation systems, such as land levelling and drip irrigation system. Lining of water courses should be carried out, he suggested. Legislation is required for utilising ground water mining, he added. “We should adopt integrated approach to mitigate flood damages. Climate change centers should be established to understand and incorporate challenges of climate change especially in KPK and Balochistan,” he added.

Talking about water need of mega cities, he said groundwater in Quetta valley went down to unworkable levels. In Lahore, he said groundwater table went down to alarming low level of 750 ft. “The total depth of aquifer is not more than 1000 ft,” he added.

He said Karachi was facing a shortage of 650 millions of water gallons per day and the problem of water supply in the port city was going to be worst with every day passing. Saying

Gwadar was tomorrow's mega city, Khaliq emphasised the need for water management for the future port city. Pakistan Engineering Congress president Chaudhry Ghulam Hussain also expressed his thoughts on the occasion

26/11/2016 online at: <http://nation.com.pk/business/26-Nov-2016/experts-call-for-pak-afghan-water-treaty>

### **Saudi Arabia might need '\$50 billion' in water investment**

Saudi Arabia could need more than \$53 billion in water sector investment supported by private funds as demand grows, officials said on Sunday.

The world's largest oil exporter, whose petroleum revenues fell 51 percent last year on declining crude prices, is pushing to diversify its economy through greater private sector investment and development of new industries.

Among government agencies targeted for privatisation is the Saline Water Conversion Corporation (SWCC), which desalinates water from the Gulf and Red Sea coasts.

"Future plants will be tendered to the private sector," Ali al-Hazmi, SWCC governor, told the government-organised Water Investment Forum.

"We have everything ready for privatisation."

The desert kingdom, which has no rivers, obtains most of its water from desalination and the rest from ground sources.

"This requires a lot of money and a lot of capital investment," Mansour al-Mushaiti, a deputy minister with the ministry of environment, water and agriculture, told the forum.

"We are envisaging that the capital requirements in the next five years will reach up to 200 billion Saudi riyals (\$53.3 billion)."

SWCC, created in 1974, is the world's largest producer of desalinated water. It operates 28 plants and as part of the process is able to generate electricity for the national power grid.

Saudi water demand is increasing by more than five percent annually, Hazmi said at the start of the two-day forum.

By 2020 the kingdom is targeting 52 percent of desalinated water production through "strategic partners".

27/11/2016 online at: <https://www.alaraby.co.uk/english/news/2016/11/27/saudi-arabia-might-need-50-billion-in-water-investment>

### **Iran to attend Budapest Water Summit 2016**

Iran's ambassador to Hungary said Deputy Energy Minister Meidani will represent Iran at the second Budapest Water Summit (BWS) on November 28.

Gholamali Rajabi Yazdi, Iran's Ambassador to Hungary, said the summit, under the motto of 'Water Connects', will be hosted by the Hungarian government in collaboration with the World Water Council.

He noted that Iran, as an active member, will participate at the event and Rahim Meidani, Deputy Energy Minister for Water and Wastewater Affairs, will be a keynote speaker at the summit.

Around 1800 participants and 600 Sustainable Water Solutions Expo visitors from 117 countries are expected to take part at the event, he continued.

The official went on to underline that the BWS 2016 will serve as a platform for discussion for heads of state and government, ministers, high-level representatives of international organizations, states and governments, members of the scientific, business and financial sectors and representatives of civil society from all over the world.

"The main events of the Budapest Water Summit 2016 are the thematic plenary sessions with keynote participants discussing issues in the framework of six thematic plenary panels concerning the implementation of the Sustainable Development Goals related to water (SDG6)."

In addition to the plenary sessions, parallel stakeholder meetings will be held, namely the Science-Technology Forum, the Youth Forum, the Civil Forum and the Women's Forum.

On the margin of the Budapest Water Summit 2016, a Sustainable Water Solutions Expo will be held as well. The Expo is intended to focus on sustainable, innovative, environment-friendly solutions in the field of drinking water production, water treatment and water supply.

The first Budapest Water Summit held between 8 and 11 October 2013 in Budapest was attended by more than 1400 participants from 105 countries in order to discuss the role of water in the global sustainable development agenda with the participation of top officials of the UN system, including Secretary-General Ban Ki-moon, as well as heads of major UN agencies and leaders of international water organizations.

Also at the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal.

The agreement sets out a global action plan to put the world on track to avoid dangerous climate change by limiting global warming to well below 2°C.

The 2015 Paris Climate Conference (COP 21) indicated that the today world pays special attention to the issue of climate change and is trying to decrease of the greenhouse gases

Iran, for its part, has voluntarily promised to decrease emission by four percent of carbon dioxide to year of 2030.

27/11/2016 online at: <http://en.mehrnews.com/news/121633/Iran-to-attend-Budapest-Water-Summit-2016>

### **Saudi Arabia Inaugurates World's Largest Desalination Plant**

Environment, Water and Agriculture Minister Abdul Rahman al-Fadli said that Ras al-Khair's desalination plant, which has made it into the Guinness Book of Records as the world's largest dual-function plant, will supply Riyadh and other provinces in Saudi Arabia.

Al-Fadli said that Custodian of the Two Holy Mosque's visit to the Eastern Province proves his willingness to rapid the execution of the projects aiming at meeting the needs of citizens.

He noted that this plant is considered one of the most important development and services projects implemented by the government in this field as it contains techniques used for the first time in the world in line with attaining Saudi Vision 2030.

He mentioned that the SAR25 billion project currently has an annual production capacity of 1.025 million cubic meters of desalinated water and 2,400MW of electricity.

On the other hand, Governor of Saudi Arabia's Saline Water Corporation's (SWCC) Ali bin Abdulrahman al-Hazmi confirmed that the inauguration of these mega projects indicate the Keeness of King Salman to establish a firm base to be adopted by Saudi economy in achieving the Kingdom's 2030 vision.

He further noted that implementing these projects will contribute in boosting Saudi Arabia's presence in global markets regardless of letting the private sector benefit from the industrial integration and exploiting investment opportunities in transformative industries. Notably, Saudi Arabia's King Salman is scheduled to inaugurate the new plant on Tuesday.

28/11/2016 online at: <http://english.aawsat.com/2016/11/article55362976/saudi-arabia-inaugurates-worlds-largest-desalination-plant>

### **Water crisis in Aleppo ends after Syrian Army captures important water pumping station**

For the first time in two years, the residents of Aleppo will have consistent running water after the Syrian Arab Army (SAA) finally expelled the jihadist rebels occupying the Suleiman Al-Halabi Water Pumping Station.

Shutting off water to the residents of government-held Aleppo was one of the ways that the jihadist rebels would punish the civilians for not backing their forces.

Over time, the Syrian government would find ways to work around this problem; however, their fixes were always temporary and limited to certain neighborhoods.

With the Suleiman Al-Halabi Water Pumping Station under their control, the Syrian government can supply water to over 1 million residents in Aleppo, ending one of the biggest problems plaguing the city.

28/11/2016 online at: <https://www.almasdarnews.com/article/water-crisis-aleppo-ends-syrian-army-captures-important-water-pumping-station/>

### **Entrepreneurs urged to focus on water, energy, food as interconnected sectors**

Entrepreneurs and researchers in the Arab region are invited to focus on the interlinked sectors of energy, food and water and be catalysts of change to create more environmentally aware and sustainable societies, thought leaders agreed on Monday.

During AMWAJ Forum 2016, the experts in environment-sustainability and social entrepreneurship called on the Arab youth to generate real and innovative solutions to build a more sustainable future for the Middle East.

Speaking at the opening of the forum, HRH Princess Sumaya, the president of the Royal Scientific Society, underscored that the region is going through a critical time, highlighting that sustainability is not just an abstract word, but it is about addressing things that might be a problem in the future.

Princess Sumaya indicated that the Levant is facing, according to National Aeronautics and Space Administration, what is probably the worst drought in 900 years, but noted that as bad as problems are here in Jordan and in the region as a whole, there is a reason for optimism.

"No one can deny that the West Asia and North Africa [WANA] region is rich in scientific knowledge. Just one figure; today we have over 136,000 registered engineers in Jordan, that's equivalent to a city bigger than Aqaba. Imagine what that concentration of expertise could do if it was used to fulfil its potential," Princess Sumaya, who is also the president of the board of trustees of the Princess Sumaya University for Technology, said.

Likewise no one can deny that the people of WANA are entrepreneurial, the princess added.

"The three interlinked sectors of energy, food and water pose unprecedented existential threats to all our people; I believe that these must be the constants of which science for peace is built," the princess told the audience.

As part of AMWAJ Forum, representatives from the private and public sectors, civil society and academia from the Middle East and North Africa region are sharing socially innovative ideas to identify practical solutions that create an inclusive, sustainable future for the region, according to organisers.

Tarik Yousef, director of the Brookings Doha Centre, urged young Arab entrepreneurs to steer their innovations towards sectors such as water, energy and environment, to bring about a sustainable future for the region.

He also called for innovation and research to promote scientific development in the Arab region.

Also yesterday, Revolve Media released the 2016 Water Around the Mediterranean Report, which shows a growing link between water and energy and the critical importance of addressing water scarcity in the MENA and the Mediterranean regions.

28/11/2016 online at: <http://www.jordantimes.com/news/local/entrepreneurs-urged-focus-water-energy-food-interconnected-sectors>

### **Jordan picks firms for ambitious canal project linking Dead Sea with Red Sea**

Jordan said Monday it had chosen five international consortiums to build the first phase of a multi-million-dollar canal linking the Red Sea to the shrinking Dead Sea.

The ambitious \$1.1 billion project has been in the works for more than a decade and aims to provide much-needed water to Jordan, Israel and the Palestinian territories.

It moved closer to reality in December 2013 when Israel, Jordan and the Palestinian Authority signed a water-sharing deal.

Jordan's water and irrigation ministry in a statement Monday said the consortiums were made up of 20 engineering firms from Asia, Europe and North America.

The first phase of the project involves building a conveyance system to transfer 300 million cubic meters (10.6 billion cubic feet) of water each year from the Red Sea to the Dead Sea.

The ministry has said it would also see the construction of a desalination plant with a capacity of 65-85 million cubic meters a year.

Experts have warned that the Dead Sea, the lowest and saltiest body of water in the world, is on course to dry out by 2050.

Its degradation started in the 1960s when Israel, Jordan and Syria began to divert water from the Jordan River, the main source for the Dead Sea.

Water is a rare resource in Jordan, where 92 percent of the land is desert. The country is home to around seven million people and the population is growing with an influx of refugees from Syria.

Several environmental groups have warned that the project could undermine the fragile ecosystem of the Dead Sea, which they fear could be contaminated by water from the Red Sea.

28/11/2016 online at: <http://www.dailysabah.com/mideast/2016/11/28/jordan-picks-firms-for-ambitious-canal-project-linking-dead-sea-with-red-sea>

