



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

15 September – 21 September 2014

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❖ Iraq's oil output revival at stake for want of water

Project designed to raise oil extraction rates

- * But red tape, cost disputes slow it down
- * Some mature fields already suffering from lack of water
- * Project may not now be enough, even if completed
- * Some oil majors now building own facilities

By Rania El Gamal

DUBAI, Sept 17 (Reuters) - A lack of water threatens Iraq's plans to raise its oil output, boost its stumbling economy and become a leading producer in the region after Saudi Arabia.

A multi-billion dollar common seawater injection scheme designed to boost production from the giant export oilfields in Iraq's south is snarled up in red tape and acrimony.

The seawater injection project is core to the development of the southern fields - which account for most of Iraq's production - and aims partly to flush oil to the surface and overcome declines in production at fields such as Rumaila, West Qurna, Zubair and Majnoon.

While the Islamist insurgency has hit oil exports from Iraq's northern pipeline, the southern oilfields have not been affected by Baghdad's fight with Islamic State.

But the shortage of water is hurting production at two main southern fields: West Qurna-1 and Zubair, official and industry sources told Reuters.

Further production declines from both mature fields look likely if water scarcity persists, the sources said.

Output from West Qurna-1 - operated by ExxonMobil - has fallen almost 40 percent to around 300,000 barrels per day compared with last year, an industry source said, adding that a shortage of water was one of the reasons.

Zubair, run by Italy's ENI, is feeling the pain too. A source at state run South Oil Company said production from Zubair had fallen, but declined to give further details. It was currently pumping around 280,000 bpd, the source said.

"100 percent correct," another Iraqi oil source in Baghdad said when asked if lack of water was a reason behind the production decline in the two oilfields.

Infrastructure and logistical constraints, as well as security worries, have already forced Iraq to cut its 2014 oil output target more than once -- to 3.7 million bpd from an initial target of 4.5 million bpd,

excluding Kurdish oil exports. Saudi Arabia's output was around 9.6 million bpd in August, according to OPEC figures.

The water injection project, where the first phase is designed to pump 5.2 million bpd of treated seawater from the Gulf to the fields, was originally supposed to be completed by the end of 2013. It is now not due to come online before 2018-2019, the sources say.

When the plan was announced in 2010, U.S. oil company ExxonMobil was chosen to take the lead in coordinating initial studies for the plan.

But red tape and disputes over cost delayed the plan for months, and Exxon was removed from the project in 2012 due to disagreements over the economics of the deal. State-run South Oil Co. has since taken over project management.

Apart from the project itself, hurdles to approving contracts for service work, such as building new pipelines and drilling wells, as well as getting visas and customs clearance are top complains by oil executives working in the south.

"It is not just getting the water to the field, it is getting the pumps and pipes to get it into the ground, and then new kit to separate out the larger quantities of water," said a second industry source.

"Quite a bit of the fate of production is in the hands of those who have the inclination to speed up the process."

Officials at South Oil Company could not be reached for comment and an oil ministry spokesman said he had no immediate comment and was still looking into the matter.

PRODUCTION FALLS

Zubair produced 315,000 bpd on average during the second quarter of this year, according to a document by South Korea's KOGAS, a partner with Eni at the field.

Madhi Abdul Razzaq, head of the joint management committee for West Qurna-1 told Reuters in March last year that output from the field was 480,000 bpd and it had been projected to reach 600,000 bpd by the end of 2013.

In June, former Oil Minister Abdul-Karim al-Luaibi told reporters in Vienna that output from West Qurna-1 was around 350,000 bpd. He gave no reason for the drop.

"Oil production has definitely been impacted but I have not seen any indication of what's happening with the common seawater supply project, absolutely none," the first industry source said.

Rumaila oilfield, which accounts for almost half of Iraq's production and is operated by BP, gets around 500,000-700,000 bpd of treated water from the Qarmat Ali facility, which covers its water needs, at least for now.

Even relatively young oilfields such as West Qurna-2, run by Lukoil, and Majnoon, led by Royal Dutch Shell , may start feeling the pressure by 2016-2017 as they need water to manage their reservoirs and lift output, the industry sources said.

Revisions to some of the existing contracts between Baghdad and foreign oil companies include a provision that protects the companies in case Iraq cannot supply the water needed to boost output, two sources told Reuters.

But the long delays to the project mean that even when the seawater project comes online, it may not be enough to meet demand, one industry source said. Oil majors are already seeking alternatives and are building their own water facilities.

"The issue is not just the delay, but the impact the delay is having," said another industry source.

"The longer you leave the project, the demand (for water) increases, so effectively by delaying the project, it becomes more difficult to execute."

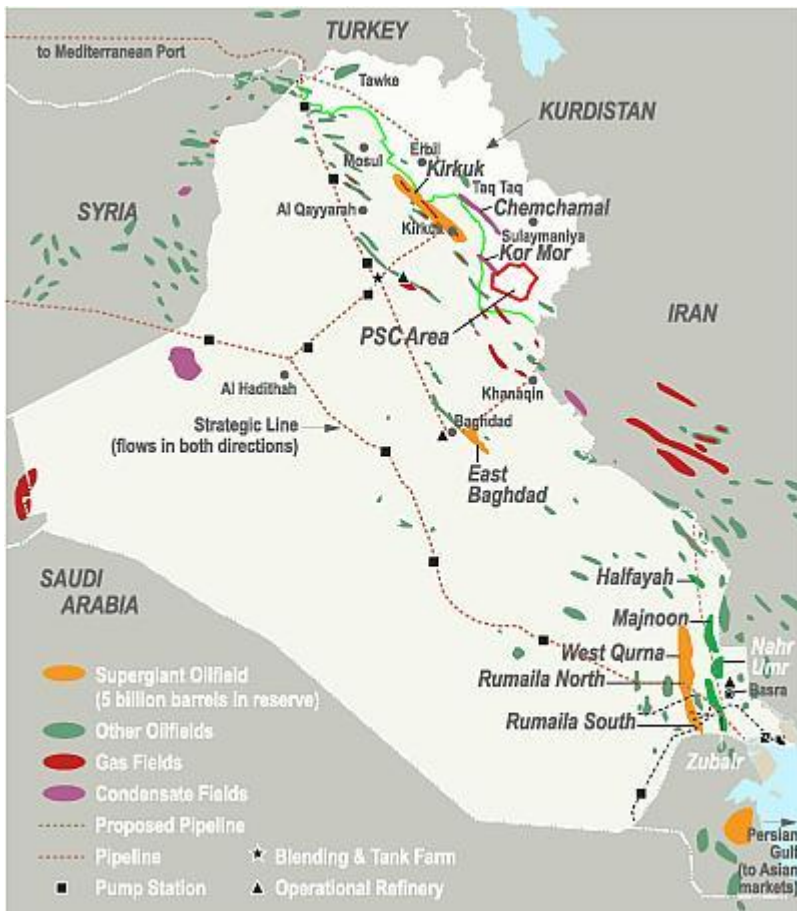
"Iraq's oil output revival at stake for want of water", 17/09/2014, online at:
<http://www.reuters.com/article/2014/09/17/iraq-oil-water-idUSL6N0RI28H20140917>

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❖ Water Scarcity- Not ISIS- Is The Larger Threat To Iraq's Southern Oilfields

Iraq's southern oilfields account for most of the country's production. They have so far been spared the fate of the oilfields in the north, many of which have been overrun by ISIS militants.

But a dearth of water threatens to compromise Iraq's plans to increase its oil output from these fields, thereby rendering it difficult for the country to boost its ailing economy and surpass Saudi Arabia as a leading producer in the region.



Iraq's major oilfields; Source: Vox.com

It is for these reasons that the bureaucratic bottleneck and political conflicts surrounding a multi-billion dollar seawater injection project aimed at boosting production from these southern fields is especially problematic.

The project, first announced in 2010, is an essential component of the development of the southern fields, and seeks to partly flush oil to the surface and alleviate production declines at fields such as West Qurna, Rumaila, Majnoon and Zubair.

The West Qurna-1 and Zubair fields are been particularly impacted by water shortage, industry and official sources told Reuters news agency. They said that further production declines from both fields are probable if this water shortage continues.

One industry source told the news agency that production from West Qurna-1 has dropped nearly 40% to about 300,000 bpd compared to 2013- and water scarcity is a key culprit in this decline.

A source at South Oil Company told Reuters that the Zubair field (operated by Eni) is experiencing production declines as well. The field's output is currently roughly 280,000 bpd.

The water injection project was originally slated for completion by the end of 2013. But now, the sources told Reuters, it is not scheduled to come online before 2018-2019.

When the project was first announced, ExxonMobil was chosen to head the initial studies for the plan. But in 2012 the company was removed from the project due to disagreements pertaining to the economics of the deal. Since then, state-run South Oil Co has assumed control of project management.

Reuters reports that the long delays to the project mean that even when the project starts up, it may not be sufficient to meet demand, one industry source said. Oil majors are already exploring other options and constructing their own water facilities.

“Water Scarcity- Not ISIS- Is The Larger Threat To Iraq's Southern Oilfields”, 18/09/2014, online at:
<http://oilpro.com/post/7123/water-scarcity-not-isis-larger-threat-to-iraq-southern-oilfields>

❖ Grainy Picture

Iraq's ability to feed itself will be put to the test by the current violence, as the state reaches out to Australian expertise

As if the recent deadly march of ISIS isn't enough for the beleaguered population of Iraq to contend with, another potentially existential danger looms large.

In late June, the UN Food and Agriculture Organisation (FAO) warned that the displacement of Iraqi farmers threatened to cut wheat and barley supplies in the country, which in any case must import roughly 80 per cent of its food needs.

Prior to the renewed ISIS-inspired violence, Iraq's agricultural sector had been hoping for a good harvest this year, continuing a recovery in output, which started five years ago. Above average rainfall last winter had prompted the FAO to predict a three million tonne wheat harvest in the country this year, a 16 per cent increase on the five-year average.

The Iraqi trade minister was also in bullish mood when in June this year he addressed the International Grains Council's annual conference in London.

Iraqi wheat production has steadily grown over the last five years, from 1.7 million tonnes in 2009 to an estimated 4.2 million tonnes in 2014, Khairullah Hasan Babakir told delegates.

"According to the timetable of receiving wheat from farmers, we are successful and we have no problems. There will be 4.2 million tonnes of wheat in Iraq," he insisted. Iraq bought 950,000 tonnes of foreign wheat between January and May, and expects to import 1.2 million tonnes in total over the year, he said. In the past five years, Iraq had imported about 11 million tonnes of wheat, Babakir added in his presentation.

"We are in production at self-sufficiency in quantity," Babakir declared.

The FAO offered a very different assessment in June, however.

"Iraq's favourable crop forecast for 2014 is now in jeopardy," it warned grimly, highlighting the cruelly ironic twist in fortunes the sectarian conflict now rains on farmers and the population. Cereal imports, the FAO adds, would now likely exceed the 2.7 million tonnes of wheat and 1.3 million tonnes of rice Iraq bought in 2013-2014.

"Reports indicate that in Nineveh and Salahaddin governorates, grain reserves are being depleted and levels of available food via the public distribution system are fast deteriorating. The system is the

main source of food for the poorest Iraqis, providing them with subsidised rice, wheat flour, oil, sugar and baby milk formula," the FAO noted. Iraq's trade ministry, through the Public Food Distribution System (PFDS), provides Iraqis with five basic food commodities at subsidised prices. Before the latest bloody rampage, Iraq had been taking concrete steps to guarantee long-term food supplies from both domestic production and imports. In March, a delegation of food exporters from the Australian state of Victoria visited Baghdad where they discussed with Iraqi trade and agriculture officials bilateral trade and ways to help Iraqi farmers boost their own production capabilities. Victoria aims to double its own agricultural output by 2030, and sees countries like Iraq as being potentially lucrative long-term markets.

Peter Walsh, the state's minister for agriculture and food security, led the delegation to Baghdad. He told The Gulf that the Iraqi authorities had made it clear that they needed large quantities of both food and expertise in irrigated agriculture from Australia and elsewhere.

"The Middle East is a highly important market for our food and fibre exporters, and demand for our produce from the region has been significantly increasing for the past several years," he explained.

While Victorian exports to Iraq remain relatively small, the value of food exports to the Middle Eastern country rose more than 1,000 per cent to A\$59 million (\$55.4 million) in 2012-2013, including A\$53 million-worth of grain. According to the state government, overall Australian wheat exports to Iraq reached 1.2 million tonnes in 2012-2013. Walsh said Iraqis favour Australian wheat due to its superior milling qualities for flat bread. The gluten content of Iraqi wheat is below the required 28 per cent.

Water could also be key to the future bilateral relationship. Having experienced a crippling drought between 1996 and 2009, the antipodean country believes it can help water scarce countries in the Middle East like Iraq manage their meagre - and dwindling - resources more effectively.

"Victoria, and Australia more broadly, has built up a strong technical and policy capability in managing water resources effectively in times of scarcity and competing demands in both the public and private sectors that may be of assistance to Middle East countries," the minister noted.

Implementing an effective water management system - with the investment, planning and logistics that entails - is clearly not easy in a war zone. It may be that Iraq in the long-term pursues the sort of mixed strategy of food imports, investment in domestic water management systems and overseas land acquisition that Gulf Co-operation Council (GCC) countries have achieved to positive effect. In

relation to the latter strategy, both the UAE and Qatar have in recent years acquired prime land in Australia to grow crops, for example.

Producing more food at home will likely remain a priority for Iraq, however, as it attempts to avoid exposure to external price shocks. Frustration over food inflation was, after all, one of the underlying initial causes of the Arab Spring uprisings in 2011.

Minister Walsh said establishing a sound water management policy requires close collaboration between stakeholders.

"It is vital to involve industry and the community in planning and decision making processes to ensure that any proposed actions in improving water management have a greater chance of success," Walsh explained, speaking of Victoria's own experiences.

In the daily chaos of a battle-riven Iraq, where even the ability to form a post-election government has proved elusive, such collaborations may be difficult to achieve.

"While security clearly needs to be considered carefully there are large numbers of companies from many countries operating successfully, and safely, in Iraq," the minister counters.

"We are positioning Victoria to grow its exports for years to come and supply the Middle East and the world with more high quality food."

"Grainy Picture", 18/09/2014, online at: http://www.zawya.com/story/Grainy_picture-ZAWYA20140918101843/

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❖ Neighboring Countries Play Water Card Against Iraqi Kurds

“Large dams have been built and the route of Kurdistan rivers has been altered by the neighboring countries,” according to the Agriculture and Water Resources Minister of Kurdistan.

In reponse, Kurdish MP has claimed, “This is a huge threat to our national security.”

The Agriculture and Water Resources Minister, Abdul-satar Majeed stated that neighboring countries have implemented policies affecting Kurdistan, which are illegal according to International Water Law.

“We have had negotiations with the general directorates of the dams and we have set plans for building some small dams in Kurdistan,” said Majeed in an exclusive interview with BasNews.

“We have observed that neighboring countries have built huge dams which have changed (altered) the course of rivers in Kurdistan, which is completely proscribed according to the International Water Law.”

The Agriculture Minister said that Iraq is responsible for the budget for the construction of some strategic dam projects. In Kurdistan, 28 small dams are in the process of being built whilst more are planned.

Meanwhile, agriculture committee member in Kurdistan parliament, Abbas Ghazali told BasNews that even though 80 percent of Iraq’s water resources are in Kurdistan, they are yet to be efficiently exploited.

“The resources are Darbandikhan, Dukan, Duhok and Mosul dam, which is now in the hands of the Peshmarga and under the control of the Kurdistan Regional Government.”

“Iran is currently building a series of dams starting from Khane to Sardasht [two Kurdish cities

located in Iran) which have changed the direction of rivers leading to Kurdistan, a huge threat to national security. It will affect Alwan river and Dukan and lead to a severe shortage of water,” Ghazali added.

“The same process is going on in Turkey with the Tigris River, but with fewer negative consequences for Kurdistan than the situation with Iran.” Ghazali concluded.

“Neighboring Countries Play Water Card Against Iraqi Kurds”, 16/09/2014, online at:
<http://basnews.com/en/News/Details/Neighboring-Countries-Play-Water-Card-Against-Iraqi-Kurds/34202>

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❖ Iran Makes Good on Warnings, Cuts Water to Tehran Users

Iran has backed up months of warnings to Tehran residents to reduce their water use amid continuing shortages by cutting supplies to those deemed as consuming too much, state media said.

Some 3,057 “large consumers” of water in the capital have had their supplies cut by seven hours a day, said Rasoul Bagheri, Tehran Province Water and Wastewater Co. deputy for revenue and consumer affairs, according to an **Iranian Students News Agency** report. Bagheri didn’t say how long the punishments would last or what it would take for a return to normalcy.

The government has urged Iranians all year to be more mindful of their water consumption. President Hassan Rouhani called for a water conservation plan in 2013 to address Iran’s “historic” shortage. City tap water is overused, farmers must be more efficient and use irrigation, and illegal drilling of wells that deplete underground sources must be reined in, Rouhani said last October.

Mohammad Parvaresh, director of the Tehran Province Water and Wastewater Co. said residents whose usage surpassed 50 cubic meters a month would undergo interruptions should the consumption pattern not improve. About 3,000 families in the Iranian capital were identified, and warnings issued, Parvaresh was cited as saying in an Aug. 6 report in the Tehran-based **Kayhan** newspaper.

Since December, when residents were first sent literature cautioning them to decrease consumption to appropriate levels, periodic reminders have been sent, Bagheri was quoted as saying in a report by the **Iranian Labour News Agency**.

The capital has 3.6 million water consumers, 3.2 million of whom are private users, ISNA said today. The city itself has 9 million residents.

“Iran Makes Good on Warnings, Cuts Water to Tehran Users”, 16/09/2014, online at:
<http://www.bloomberg.com/news/2014-09-16/iran-makes-good-on-warnings-cuts-water-to-tehran-users.html>

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❖ **Iranians Protest Water Shortages, Government Inaction**

Iranian citizens have taken to the streets to protest what they say is a failure by the country's government to address water shortages and protect water resources amid ongoing drought.

"The number of residents who had turned up for the demonstration was astonishing," environmental activist Mohamed Reza told news outlet Al Monitor last week.

Thousands of residents from Isfahan and smaller cities and villages near the Zayanderood River -- the biggest river in Iran's central plateau region, parts of which have dried up due to 14 years of drought, climate change and mismanagement -- chanted slogans like "we only want water" and "where is my River Zayanderood," Reza said.

OOSKANews reported last month that the Iranian government was allocating \$45 billion USD to fight drought in Isfahan province.

First Vice President Es'haq Jahangiri, who made the announcement, also stressed the need for improved water management throughout the country, through measures like economizing agricultural water usage; reviewing the type of crops being planted and limiting those that require large amounts of water; and not issuing permits for water-based industries during emergency situations.

Earlier in August, Iranian President Hassan Rouhani announced that his administration would allocate at least \$2 billion USD per year over the next several years to resolve water shortages nationwide.

Energy Minister Hamid Chitchin had previously warned that the water situation in Iran has passed the critical stage. He said 96 billion cubic meters of the country's 120 billion cubic meters of total

renewable water resources are being consumed annually; a country that uses of 40-60 percent of its renewable water resources is considered to be facing a critical shortage.

Water consumption levels have increased, while at the same time available water resources have decreased by 10 billion cubic meters, Chitchin said.

“Iranians Protest Water Shortages, Government Inaction”, 15/09/2014, online
at: https://www.ooskanews.com/story/2014/09/iranians-protest-water-shortages-government-inaction_162181

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❖ Iran's Department of Environment opposes water transfer from Caspian Sea

Iran's Environment Protection Organization has opposed the water transfer from the Caspian Sea to central parts of the country. The organization's director Masoumeh Ebtekar said no agreement has been reached in this regard so far, Iran's IRNA news agency reported on September 20.

Iran is located in an arid zone, and the drought of 1992-2002 caused a major blow to agriculture. There were quotas imposed for fresh water in several cities, including the capital Tehran.

The main problem is the mismanagement of water resources, Ebtekar said, adding that there is no appropriate pattern for the use of water in the agriculture sector.

In October 2012, the Iranian energy ministry received the permission to transfer water from the Caspian Sea to central parts of the country.

In December 2013, the Mehr News Agency quoted Iranian deputy energy minister Sattar Mahmoudi as saying that Iran has finished preliminary studies for transferring water from the Caspian Sea to inland.

Some 200 million cubic meters of water is projected to be transferred per year to the central parts of the country for drinking and industrial purposes, according to the official.

In April 2013, ex-Energy Minister Majid Namjou said that Iran will start operations to transfer water from the Caspian Sea to the central parts of the country in the near future.

The required budget, which is about 20 trillion rials (about \$800 million), has been provided, he said, adding that the project will be completed by March 2016.

"Iran's Department of Environment opposes water transfer from Caspian Sea", 20/09/2014, online at:
<http://en.trend.az/iran/society/2313949.html>

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❖ Iran to build water market to economize water consumption

TEHRAN, Sept. 20 (Xinhua) -- Iran will establish a water market with the goal of economizing the consumption of water resources, Tehran Times daily reported on Saturday.

The water market project will be implemented in 609 regions across the country in order to curb losses and establish an economically justified system of pricing, Iranian Energy Minister Hamid Chitchian was quoted as saying.

The decision has been made by the High Council for Water, he said, adding that the NGOs will be in charge of supervising the water market.

'Water market' refers to mechanisms which aim at acquiring and redistributing water. Water trading can promote efficient water allocations especially as urban populations increase and in times of drought.

Currently, Iran's government is supplying major part of water needs for the citizens, but with the new plan private sector will play crucial role in this market.

"Water scarcity poses the most severe human security challenge in Iran today," Gary Lewis, United Nations Resident Coordinator for Iran, was quoted as saying by Tehran Times daily.

Excessive damming of rivers, bad irrigation practices, drought and climate change have all contributed to Iran's water crisis. On top of this, low water prices encourage wasteful consumption while some farmers and organizations have been accused of stealing water supplies for their own purposes.

A 2013 study conducted by the World Resources Institute ranked Iran as the world's 24th most water-stressed nation, putting it at extremely high risk of future water scarcity.

"Iran to build water market to economize water consumption", 20/09/2014, online at:
http://www.shanghaidaily.com/article/article_xinhua.aspx?id=242122

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❖ Iran to launch water markets to curb losses

Iran will launch "water markets" (general term for mechanisms used to acquire and redistribute water) in 609 regions across the country in a bid to curb water losses.

Iranian Energy Minister Hamid Chitchian said the decision has been made by the High Council for Water in order to cut down the consumption of water, Iran's IRNA news agency reported on September 19.

The council also approved that the supervision on the consumption of water to be transferred from the administration to NGOs, Chitchian said.

Iran's President Hassan Rouhani said on Aug. 12 that his administration has decided to allocate at least \$2 billion every year to deal with water shortage crisis in the country. He also said the administration will follow the same policy in the years to come.

Iran is located in an arid zone, and the drought of 1992-2002 caused a major blow to agriculture. There were quotas imposed for fresh water in several cities, including the capital Tehran.

"Iran to launch water markets to curb losses", 19/09/2014, online at: <http://en.trend.az/iran/business/2313537.html>

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❖ Iran May Import Water From Tajikistan to Avert Crisis

Iran is considering importing water from neighboring **Tajikistan** as the government allocated emergency funds to help avert a supply crisis in the capital Tehran.

Iranian officials discussed the possibility of importing water during a trip to Tajikistan this month, the state-run **Mehr** news agency reported without giving specifics, citing the energy minister, Hamid Chitchian.

Iran's cabinet has made 300 billion rials (\$11 million) available to the energy ministry to accelerate the "emergency supply of water to Tehran," said Mohammad Bagher Nobakht, vice president for planning and strategic supervision, the official **Islamic Republic News Agency** reported. That will help Iran complete a water-treatment plant and a link from Mamlou dam 45 kilometers (28 miles) east of Tehran, **IRNA** said.

The latest responses are taking place days after the government, backing up months of warnings to Tehran residents to reduce water use, enacted temporary cuts to those identified as excessive consumers.

Tehran's water is fed from reservoirs including the Lar and Taleghan dams and wells in the south of the city, Chitchian said. Given reduced rainfall and supply strains, Tehran is now relying more heavily on wells, he said.

In a meeting yesterday, members of the government including the energy, agriculture and interior ministers reviewed options to enforce limits on Tehran residents' water consumption by installing devices that restrict excessive use or by introducing higher rates for large users, Mehr said.

Iranian Usage

While a dozen major Iranian cities, including central Esfahan and southeastern Kerman, are prone to water shortages, the situation in the capital is dire. The city of 9 million represents 12 percent of the

country's population, with its residents consuming one-fourth of **Iran**'s drinking water, Chitchian said, according to Mehr.

The average Tehran resident uses 325 liters of water (86 gallons) per day, according to Chitchian.

In comparison, the average American uses about 575 liters of water per day -- half of that for tasks such as watering lawns or washing cars, and the average European uses 250 liters of water a day, according to 2009 figures cited by the **Circle of Blue** group.

The issue of water shortage this year is "twice as severe" given the decrease in rain and low dam water levels, Eshagh Jahangiri, the first vice president, said in a separate Mehr report.

"Beyond emergency actions, Iran needs both short- and long-term plans," Jahangiri said. "The more we waste time, the worse the situation will be."

"Iran May Import Water From Tajikistan to Avert Crisis", 18/09/2014, online at:

<http://www.bloomberg.com/news/2014-09-18/iran-may-import-water-from-tajikistan-to-avert-crisis.html>

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❖ Iran cuts water supply to Tehran amid ‘historic shortage’

After issuing repeated warning to the capital city of Iran, the national government has finally cut down supply of water to Tehran.

Some 3,057 “large consumers” of water in the capital have had their supplies cut by seven hours a day, said Rasoul Bagheri, Tehran Province Water and Wastewater Co. deputy for revenue and consumer affairs, according to an Iranian Students News Agency report published in Bloomberg.

Reports also suggest that President Hassan Rouhani called for a water conservation plan in 2013 to address Iran’s “historic” shortage. “City tap water is overused, farmers must be more efficient and use irrigation, and illegal drilling of wells that deplete underground sources must be reined in,” Rouhani had said last October.

According to a report published in Trend and quoting Iran's energy minister, Hamid Chitchian, in August this year, the total volume of the water in Tehran's five reservoirs has decreased by 40 percent in comparison with last year.

West Asia crippled by water crisis

Iran is located in an arid zone and the country has been repeatedly faced with drought in the past 40 years. A few other countries in the West Asia are presently reeling under water shortage. While [water is being increasingly used as a weapon](#) of war in strife-torn Iraq, [Gaza is facing a humanitarian crisis followed by Israeli airstrikes](#).

“Iran cuts water supply to Tehran amid ‘historic shortage’”, 18/09/2014, online at:
<http://www.downtoearth.org.in/content/iran-cuts-water-supply-tehran-amid-historic-shortage>

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❖ 20 Water Treatment Projects Underway by Private Sector

TEHRAN (FNA)- The private sector will take part in implementation of 20 water and wastewater treatment projects across the country including in Tehran, Khorasan Razavi, Ardebil and several other provinces.

Managing Director of the National Water and Wastewater Engineering Company of Iran Hamid Reza Janbaz noted water and wastewater treatment industry of the country has been able to take great steps forwards realization of Ministry of Energy's targets by relying on investors from the private sector, Shana reported.

According to Janbaz, the private sector will implement the projects under the terms of buy-back contracts.

He further noted that participation of the private sector in water treatment projects has ensured acceleration of the projects and has created a sustainable, healthy environment.

Janbaz called on lawmakers to take into account achievements in water and wastewater treatment sector following investments made by private sector.

I call on lawmakers to ensure the success of water and wastewater sector by allocating adequate funds to the sector in next year's budget, Energy Ministry's official concluded.

"20 Water Treatment Projects Underway by Private Sector", 17/09/2014, online at:
<http://english.farsnews.com/newstext.aspx?nn=13930626000074>

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❖ **Abu Dhabi Aspires To Become One Of The Most Efficient Users Of Water In The World**

With Abu Dhabi's population currently forecasted to exceed five million by 2030, the Emirate's demand for potable water is expected to double. In order to address this rapidly growing demand, Abu Dhabi is investing in wastewater reuse and wastewater recycling projects to ensure the sustainability of its water supply.

The Abu Dhabi Sewerage Services Company (ADSSC) is currently undertaking an extensive expansion of its collection network including the strategic tunnel engineering project (STEP). This multi-billion dirham programme of work will deliver wastewater collection capacity which is expected to be sufficient to meet anticipated growth in the coming decades.

Alan Thomson, Managing Director of Abu Dhabi Sewerage Services Company, will be providing a keynote address and an update on the progress of STEP at the upcoming WaterWorld Middle East Conference and Exhibition (WWME).

"In the past, both in the region and around the globe, water deficits have been met by just adding additional desalination capacity into the mix," said Tom Freyberg, Conference Director for WaterWorld Middle East. "A cheaper alternative that helps bridge the gap between demand and supply is water reuse. One of the goals of our conference is to introduce decision makers in the region to leading water reuse-related technologies that will not only save investment dollars but will directly contribute towards the protection of the local environment."

As wastewater reuse and water recycling will be a key theme during WWME, the conference will host a session on "Wastewater Reuse Technologies" that will focus on case studies associated with moving bed biofilm reactor (MBBR), ultraviolet (UV) treatment and reed bed technology.

The most effective, efficient and environmentally-friendly technology associated with desalination will also be reviewed at the conference. Although there is a commitment from several countries in the region to focus on water reuse, a total of 39 million cubic meters a day of desalination capacity is expected to be added between 2010 and 2020. This represents an approximate investment of

between USD 40-50 billion, and the recognized need to ensure a stable water supply while additional water recovery capacity comes online.

WaterWorld Middle East will have two conference sessions on desalination - “Thermal Desalination Energy Optimisation” and “Membrane Operational Improvements.”

“With GCC countries looking to invest \$130 billion over the next decade to meet future water demand and introduce new measures to best project limited water resources, now is the time to review the supply mix and determine the most energy and environmentally efficient way forward to ensure demand is met,” said Tom Freyberg. “Waterworld Middle East will enable Abu Dhabi to showcase its numerous water management-related projects to demonstrate its commitment to technological innovation and to share learned best practices with the rest of the industry.”

The WaterWorld Middle East Conference and Exhibition will run in tandem with POWER-GEN Middle East from 12 to 14 October at Abu Dhabi National Exhibition Centre (ADNEC). The event will bring together the region’s leading plant owners and operators, consultants, utilities, investors and academics, with representatives of over 80 companies from 30 countries.

“Abu Dhabi Aspires To Become One Of The Most Efficient Users Of Water In The World”, 17/09/2014, online at: <http://www.abudhabicityguide.com/news/news-details.asp?newsid=16468&newstype=Local%20News>

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❖ Experts Say Jordan in Danger - and Israel's Next in Line

In a new article, Professor Arnon Sofer, head of the Chaikin Chair of Geo-Strategy at the University of Haifa, and Anton Berkovsky discuss the danger of immigration from the turmoil-filled Arab states to Israel.

"Countries in the Middle East are currently in states of internal and external war, pressing the State of Israel to prepare for waves of immigrants from Arab countries to Israeli territory, which may endanger her existence," they wrote.

According to Sofer and Berkovsky, the waves of immigrants already constitute a real danger to the future of Jordan. The worst case scenario being the movement of ISIS into Jordan, and subsequently creating a pure "Islamic State" within the country.

According to the data presented in the article, 2013 showed a record number of immigrants in the world - more than 232 million people, or about 3.2% of the world's population. Professor Sofer suggests that the Middle East presents a unique picture. "Within 30 years (1950-1980), the population doubled, and in the next 30 years (1980-2010), the population doubled again. This is one of the main reasons why the demographics, economics, and politics of the Middle East have resulted in disorder and instability." Sofer added that climate changes which led to severe water shortages in areas like North East Syria near the border with Turkey and Iraq, should also be taken into account.

Sofer argues that the events of the Arab Spring, the Civil War in Syria, and repeated crises in Iraq, have already created waves of refugees, resulting in demographic changes in the population map that are beyond recognition. According to estimates, following the Civil War in Syria, 3-4 million people became refugees outside of Syria, and another 8 million have become refugees in their own homeland. Wars between the various factions in Iraq have led to 750 thousand refugees, who have already left Iraq - mainly to Jordan, and another 3 million refugees inside Iraq. These refugees, who flood into neighboring countries cause societal changes that threaten the stability of such countries.

The most troubling possibility is Jordan. A million to a million and a half refugees from Iraq and Syria have become part of the population of 6.5 million citizens of Jordan. The Palestinian population

rate decreased from 70% to about 60% of the total population, according to the study, while the percentage of Syrian refugees is estimated between 8%-15%.

"The Jordan of 2014 presents a new ethnic mosaic, and the national dynamic has completely changed. It should be remembered that some of the refugees are intruders from extremist groups, such as ISIS. Other refugees are in such a terrible situation that it is easy for such radical groups to recruit them " noted Professor Sofer.

Sofer suggests three possibilities: The first, and optimistic approach - allowing massive Western aid to maintain Jordan's stability; The second - The collapse of the kingdom and the outbreak of civil war, similar to the situation in Syria. In this scenario, Sofer envisions the Palestinians trying to take over the kingdom and establish a Palestinian state; The third and most dangerous option is for ISIS to take over large parts of the country thereby joining Jordan to their Sunni caliphate. The last two possibilities will cause hundreds of thousands of additional refugees to the Middle East.

According to Prof. Sofer, if such events materialize and instability grows, there is a real danger to Israel. Not only would it mean the existence of unstable regimes, extreme and hostile, close to its borders, but also the fact that a considerable portion of the hundreds of thousands of refugees could attempt to enter Israel.

The authors say that according to the 2013 data, an estimated 250,000 immigrants remained in Israel illegally. Additionally, thousands of Palestinians have entered Israel since 1967. The dangers of demographic turmoil taking place in neighboring countries could cause these numbers to grow significantly.

"Therefore, we must quickly prepare for new waves of immigration, in addition to those who have already entered Israel, mostly Palestinian and Arab immigrants from Syria, Jordan, Iraq, and Lebanon," concluded Professor Sofer.

"Experts Say Jordan in Danger - and Israel's Next in Line", 14/09/2014, online at:
http://www.israelnationalnews.com/News/News.aspx/185083#.VCK9u_1_uFU

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❖ **Israeli occupation forces destroy water networks and launch assault on farmers**

Israeli occupation forces issued on Wednesday a decree banning farmers from irrigating agriculture on their stepped lands in Atov, located in eastern Tubas city in the occupied West Bank, threatening to arrest any citizen who cultivates his or her land.

Palestine's *Safa* news agency reported that occupation forces destroyed the water system three days ago that the farmers of the area had connected to their lands, in continuation of a policy that deprives the Atov area of all kinds of infrastructure.

The president of the Atov Council told Safa that, "Arresting and threatening the farmers today is the second step following the destruction of the water network," pointing out that the goal of the occupation forces is to exercise full control over Atov and Al-Bakya'a.

He added that dozens of people were taken to Tyaseer camp today after their identity cards had been confiscated merely because they were working in the agricultural lands of the region.

He explained that the occupation forces have already confiscated tractors and agricultural equipment belonging to farmers Mustafa Beni Ouda and Jamal Mohammed Qasim Ouda Tammoun and threatened to confiscate other agricultural equipment working in the area.

- See more at: <http://www.middleeastmonitor.com/news/middle-east/14205-israeli-occupation-forces-destroy-water-networks-and-launch-assault-on-farmers#sthash.AUzh0CIL.dpuf>

"Israeli occupation forces destroy water networks and launch assault on farmers", 18/09/2014, online at: <http://www.middleeastmonitor.com/news/middle-east/14205-israeli-occupation-forces-destroy-water-networks-and-launch-assault-on-farmers#sthash.AUzh0CIL.dpuf>

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❖ Foreign Ministry Condemns Israeli ‘War’ on Water Resources

RAMALLAH, September 21, 2014 (WAFA) – Ministry of Foreign Affairs condemned, in a statement Sunday, the “Israeli war” on the Palestinian water resources in the West Bank, which it said aims at undermining the Palestinian presence in Area C, under full Israeli control.

“The Israeli authorities practice this policy while the whole world is watching; a policy which is primarily based on seizing Palestinian water resources, depriving the Palestinian people of their water rights, and transforming [water] into an issue of political blackmail,” the statement said.

“These practices are done through preventing Palestinians from digging artesian wells, seizing and Judaizing of land with underground water reservoirs, and closure of agricultural land through first declaring it a closed military zone, and second denying owners access unless through special permits, which are difficult to obtain and are rarely issued” the statement added.

Several Palestinian artesian wells have recently been closed by the Israeli authorities, which the ministry said it is following up on with keen interest.

The ministry said that such a procedure aims at undermining the Palestinian presence, drying up Palestinian-owned land in order to force Palestinians to rely on Israeli products. It said that Israel targets fertile agricultural land in order to empty the land from its lawful owners for the benefit of settlement construction.

The ministry said that such Israeli actions require a serious stand through determining the necessary mechanisms to face these Israeli measures, particularly in light of the absence of effective mechanisms, allowed by Israel, to deal with such actions.

“Foreign Ministry Condemns Israeli ‘War’ on Water Resources”, 21/09/2014, online at:
<http://english.wafa.ps/index.php?action=detail&id=26593>

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❖ China group pays \$20m for Israeli smart agritech firm

AutoAgronom's advanced drip irrigation system 'listens to the roots,' gives crops what they need to thrive

After winning a slew of start-up contests, environmental technology competitions, and start-up awards, Israel's [AutoAgronom](#) is moving on to the next level — bringing its smart agricultural technology to the vast fields of China. AutoAgronom was bought out this week by Yuanda Enterprise Group, a Chinese conglomerate that does practically everything, including construction, electronics, and environmental technology.

Details of the deal were not disclosed, but reports pegged the buyout price at \$20 million.

AutoAgronom said it would continue its product development in Israel, while Yuanda would market its products and services in China and beyond. In the wake of the deal, AutoAgronom is likely to open a facility in China.

Drip irrigation was Israeli water-saving technology 1.0 — enabling farmers to avoid waste by targeting only the growing areas that actually needed water. AutoAgronom supplies drip 2.0 tech by employing smart sensor technology to drip irrigation systems, saving farmers significant amounts of water, and cutting down on the use of pesticides as well.

Combining irrigation and fertilization (an agriculture tech method called [fertigation](#)), AutoAgronom uses sensors attached to plant roots and embedded in the ground to examine soil conditions, weather, water levels, nutrient levels in the soil, pest conditions, and more. Using advanced algorithms, the system then directs the computerized water and pest control systems on exactly how much of each to release and when to release it, for maximum positive effects.

AutoAgronom, based on Kibbutz Ramat Hashofet in northern Israel, supplies impressive figures on the results of its technology. In the UK, for example, strawberry farmers have been able to cut down on water use by 30% and increase yield by 28%, while reducing their use of pesticides by 70%, a major boon for lovers of the fruit who have been [scared off](#) because of farmers' use of

environmentally unfriendly chemicals and pesticides. AutoAgronom's smart fertigation system has been successfully used with 70 different types of crops in 13 countries, the company said.

Beyond the figures are the accolades AutoAgronom has garnered since it was established in 2012. In the past year, the company either won or was a top contender in international contests like the MassChallenge 2014 Accelerator Program, Globes/Bank Hapoalim Smart Start-up contest, and Israel Cleantech Open 2014. The company will represent Israel in Cleantech Open Global Ideas 2014, set to take place in California in November.

For China, water savings of the kind AutoAgronom provides are worth their weight in gold — much more than \$20 million. Even in normal times, Chinese farmers are notorious water wasters, relying mostly on surface irrigation to water crops. But these are not normal times. The country is in the midst of its worst drought in six decades, but it still has a billion mouths to feed.

AutoAgronom CEO Nissim Daniely says his company's tech will probably help a lot. "Every year, the area of drip irrigation system farming in China increases about 20 percent, which is more than in Israel and Europe together," he told China Daily. "It is a huge market in China. The movement to new technology there is huge."

"China group pays \$20m for Israeli smart agritech firm", 19/09/2014, online at: <http://www.timesofisrael.com/china-group-pays-20m-for-israeli-smart-agritech-firm/>

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❖ **Minister of Economy, Constantin Nita, and the Minister of National Infrastructure, Energy and Water Resources of the Israeli State, Silvan Shalom, had talks on cooperation in advanced Technologies**

Romania remains a viable alternative for the Israeli investors, as it offers multiple advantages, both in its capacity as a EU member state and also while considering its geographical position and the environment milieu, Minister of Economy, Constantin Nita, underscored on Tuesday, during a meeting with the Minister of National Infrastructure, Energy and Water Resources of the Israeli State, Silvan Shalom.

Constantin Nita mentioned at the meeting attended by the Israeli Ambassador in Romania, Dan Ben-Eliezer, and numerous representatives of large Israeli companies operating in energy, natural gas and water management resources fields, that Romania represents one of the most attractive destinations for the Israeli investors interested in entering or strengthening their position on the European market.

According to a release of the ME, the unfolding of the second joint meeting of the Romanian and Israeli governments, held in Jerusalem on June 24, 2014, had marked the beginning of a new stage in the bilateral relations, while the Tuesday meeting represented another opportunity for the two dignitaries to discuss in detail about their further development.

Other topics tackled by the two high officials were related to the energy issue, from both a global and regional perspective, starting from both countries's position as consumers of raw energy materials and, also, from the fact that Israel is soon to become a natural gas exporter.

During the talks, the Romanian Minister of Economy and the Israeli Minister of National Infrastructure, Energy and Water Resources agreed over the existence of an important potential for cooperation in advanced technologies, with a view to developing in Romania products for the aeronautical and electronic industry, information technology industry, communications, pharmaceutical industry, foodstuff industry and agriculture.

Moreover, the Israeli companies will be able to take part in a series of projects in the fields of road infrastructure, energy, running water and sewerage, water purification in Romania, but also in other industrial fields, agriculture, financial-banking and insurance sectors, real estate and trade etc. On the other hand, the Romanian companies will be able to join in their turn to Israeli ones to develop projects in Israel or third markets, especially in the constructions field (including here infrastructure works), oil and gas, energy, road and rail infrastructure.

Israel is one of the important economic partners of Romania, with the highest level of bilateral exchanges recorded in 2013, the same as the highest level of exports to this country was recorded last year. Bilateral trade exchanges accounted for 491.8 million dollars, by 5.7 per cent more than in 2012, while Romanian exports to this country totaled 274.1 million US dollars (up 28.8 per cent) and imports from Israel stood at 117.7 million US dollars in 2013.

The major product groups in Romanian exports to Israel in 2013 were: mineral products (28.8 per cent), vegetal products (14.2 per cent), foodstuffs (10.3 per cent), wood-made products 910.2 per cent), tools and equipment (9.3 per cent), livestock (6.7 per cent), furniture (2 per cent), metal-made products (5.6 per cent) and transportation means (4.6 per cent).

Bilateral trade exchanges saw a 2.5 per cent growth in H1 2014 against H1 2013, and exports recorded 4.6 per cent growth.

According to data provided by the National office of the Trade Register direct Israeli investments in Romania totaled 80.5 million US dollars on July 31, 2014, representing the total subscribed share capital of 6,664 companies running on Israeli capital, which placed Israel on the 33rd spot in the ranking of direct foreign investments in Romania.

“Minister of Economy, Constantin Nita, and the Minister of National Infrastructure, Energy and Water Resources of the Israeli State, Silvan Shalom, had talks on cooperation in advanced Technologies”, 18/09/2014, online at:

<http://actmedia.eu/daily/minister-of-economy-constantin-nita-and-the-minister-of-national-infrastructure-energy-and-water-resources-of-the-israeli-state-silvan-shalom-had-talks-on-cooperation-in-advanced-technologies/54255>

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❖ **90% of Gazans live below poverty line, 95% of water undrinkable**

Head of the Popular Committee against the Siege Jamal Al-Khodari has described living conditions in the Gaza Strip as "disastrous" after the latest Israeli war.

In a briefed press release, Al-Khodari said that more than 90 per cent of Palestinians in Gaza live under the poverty line because of the sharp increase of unemployment rates.

"Displaced Gazans, who live in shelters, experience disastrous conditions," Al-Khodari said, "as they lost the basic needs of life after the collapse of almost all facilities of major services such as electricity, water and sanitation."

He noted that the humanitarian crises had increased after the latest Israeli war on the coastal enclave. "Individual income became below \$2 per day," he said.

Life in Gaza after the Israeli assault:

- 90% live under the poverty line
- 95% of water is undrinkable
- 40 million litres of untreated sewage water is poured into the sea every day

Al-Khodari said that around 95 per cent of Gaza's water is undrinkable and the sea water is polluted because 40 million litres of untreated sewage water is pouring into it every day. "This has catastrophic effects on the public health and the fishing industry as well," he said.

Regarding the infrastructure, Al-Khodari stressed, it was already battered before the latest Israeli war because of the Israeli siege, and the air strikes during the war aggravated the problems.

"In general, all aspects of life were severely affected, including the agriculture sector," the head of the anti-siege committee said. "Agricultural soil was polluted by the poisonous materials of the Israeli rockets that hit the farms," he added.

Al-Khodari called for all world bodies and Arab organisations to urgently offer swift solutions in order to save the lives of Gaza's residents.

"90% of Gazans live below poverty line, 95% of water undrinkable", 17/09/2014, online at:

<https://www.middleeastmonitor.com/news/middle-east/14198-90-of-gazans-live-below-poverty-line-95-of-water-undrinkable>

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❖ Urgent water and food shortage in besieged Yarmouk

An estimated 20,000 Yarmouk residents are currently drinking contaminated water as the UN warns it may decrease food aid to Syria as funds fall short - See more at:

The lives of thousands of Palestinian refugees in Yarmouk camp are in jeopardy after the Syrian government has failed to provide drinking water for at least ten days, an activist in the camp said on Thursday.

"Death is threatening the lives of 20,000 civilians due to the water shortage, with no water around Yarmouk," Rami Sayyid told Anadolu Agency, claiming the humanitarian situation was worsening in southern Syria.

Sayyid said residents are drinking contaminated well water which health officials fear could cause the spread of contagious diseases.

Tens of thousands of people, mostly Palestinian women and children, live in the camp, which has been under a Syrian government forces and pro-regime militias siege since last September.

Located on the outskirts of Damascus, eight kilometres from the city centre, the camp accommodated more than 160,000 Palestinian refugees before the Syrian civil war started in March 2011.

Around 140,000 refugees have left the camp as a result of the war which has killed more than 160,000 people and displaced millions of others since then.

Beyond the immediate water crisis, the UN on Thursday warned that the food aid it provides to nearly six million war-affected Syrians is under imminent threat because of a shortfall in funding.

The World Food Programme (WFP) said it will be forced to cut the size of food rations it provides to needy families inside Syria and the number of refugees it supports in neighbouring countries if donor countries do not provide additional funds in the next few days.

"We have reached a critical point in our humanitarian response in Syria and in neighbouring countries," said the UN agency's regional emergency coordinator for the Syrian crisis, Muhannad Hadi.

"Unless we manage to secure significant funding in the next few days, I am afraid we will have no choice but to scale back our operation."

The WFP said it requires \$352 million (273 million euros) for its operations inside and outside Syria until the end of the year.

Inside Syria, existing funds are sufficient to provide only a reduced food parcel in October, which will then have to be further cut in November. There are no funds at all for December.

In Turkey, as many as 170,000 refugees may go without assistance in October.

In Iraq, Jordan and Lebanon assistance will be reduced, while in Egypt, only the most vulnerable will be assisted, unless fresh funds are received, the WFP said.

"Urgent water and food shortage in besieged Yarmouk", 19/09/2014, online at:

<http://www.middleeasteye.net/news/water-shortage-poses-threat-yarmouk-camp-refugees-1481652631>

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❖ Water Wars

The long list of the world's woes, add another: the growing impact of climate change, which could heighten tensions among nations and even spark new wars. That's the grim assessment of the government's new [National Intelligence Strategy](#), which lays out what America's top spies think are the major challenges facing U.S. national security.

The document, released Thursday, is a kind of road map of hazards meant to help U.S. intelligence agencies decide which of the world's biggest problems to study most intensively over the next four years. Water shortages, as well as fierce competition for food and energy, will continue to bedevil leaders in the United States and abroad, the document concludes. "Many governments will face challenges to meet even the basic needs of their people as they confront demographic change, resource constraints, effects of climate change, and risks of global infectious disease outbreaks."

The strain of a growing world population, coupled with the effects of pollution and climate change, has taxed many of the water systems that feed the world's people and are vital for agriculture. More than half of the world's wetlands have disappeared, and climate change around the world has altered weather patterns and led to water shortages, experts say.

Scarcity now poses a global security threat that U.S. intelligence agencies take as seriously as the proliferation of weapons of mass destruction, terrorism, and cyberattacks on critical infrastructure, according to the strategy, which was produced by the Office of the Director of National Intelligence, which oversees all American intelligence agencies. And hints of a dystopian future can already be seen. In East Africa, drought has led to lethal fighting among Somali clans for access to potable water. The United Nations World Food Program has estimated that 650 million people are living in areas where flood and droughts can lead to wild spikes in food prices. Public anxiety -- and fascination -- has given rise to a new genre of films, "cli-fi," with apocalyptic climate-change scenarios at the heart of their plots.

To deal with the destabilizing effects of global climate change, as well as other massive threats, the intelligence community plans to focus on providing "deep context, knowledge, and understanding"

about how natural resource concerns are affecting nations on a case-by-case basis, the document states.

This isn't the first time that U.S. national security officials have warned that shortages could bring countries into violent competition with one another over life's basic necessities. The [previous intelligence strategy](#), published in 2009, also noted the risks posed by climate change. But the new strategy contains more urgency about the problem, and says that shortages could "exacerbate" regional conflicts that are already raging around the world, whether in war-torn countries or those threatened by pandemics.

The Defense Department has also been sounding alarms on climate change. The 2010 Quadrennial Defense Review for the first time added it to the list of threats facing the United States. And in 2009, the CIA established a center devoted to studying the security risks from climate change.

The new intelligence strategy arrives at a particularly vulnerable time for the United States, when America's spies are less capable of gathering vital information than they were a year ago, according to James Clapper, the director of national intelligence, who oversaw its writing. Clapper argues that intelligence collection has been set back because of the leak of classified NSA documents by Edward Snowden, and that relationships with foreign intelligence agencies have been damaged, as well. Add to that increasingly tight budgets, which have led some unnamed agencies to stop collecting intelligence on important targets, and the result is a "perfect storm" that means "we -- as a nation -- are taking more risk," Clapper said in a statement accompanying the strategy's release.

The new strategy is also notable because, for the first time, it includes a set of "principles of professional ethics" for U.S. intelligence agencies and personnel. The seven principles include "lawfulness" and "integrity," and are partly a response to the criticism that U.S. spy agencies have taken over their role in torture, warrantless wiretapping, and other controversies since the attacks of September 11, 2001.

"I believe, if we keep these [principles] in front of us, we can continue the crucial work in support of our senior policymakers while we also increase transparency and protect privacy and civil liberties," Clapper said. Ever since NSA documents were leaked by Snowden last year, Clapper's office has

been under pressure to release more information about the legal justification for intrusive surveillance programs, particularly the bulk collection of Americans' phone records by the NSA. Clapper's office has declassified and published thousands of pages of court documents and legal memoranda in an effort to counter critics who say that the Obama administration, contrary to the president's commitment to transparency, has shrouded the actions of U.S. spy agencies in secrecy and launched an unprecedented crackdown on government employees who leak to journalists about programs that the employees think could violate the law.

The Obama administration has prosecuted more federal employees for unauthorized disclosures of classified information than all previous administrations combined. And the Justice Department is currently trying to force a Pulitzer Prize-winning *New York Times* reporter, James Risen, to identify his source for a story about a failed CIA effort to stall Iran's nuclear weapons program. Risen has refused to identify his source in court, and his case is likely to end up in the Supreme Court, with far-reaching implications for press freedoms and the intelligence agencies.

“Water Wars”, 18/09/2014, online at:

http://www.foreignpolicy.com/articles/2014/09/18/water_wars_climate_change_intelligence_strategy

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❖ Nile River monitoring influences northeast Africa's future

Curtin University research that monitors the volume of water in the Nile River Basin will help to level the playing field for more than 200 million North-East Africans who rely on the river's water supply

Despite being arguably the longest river in the world, winding through nine different countries, the Nile River is shallow and has a low volume, making its water precious, particularly to those countries located downstream.

Curtin Associate Professor Joseph Awange, Department of Spatial Sciences, has been monitoring extractions or additions of water to the Nile River, and reporting the results to affected countries to allow them to plan for sustainable use of its resources in the future.

"Water levels can be affected by both man-made and natural causes, and our research separates the effects of rain downpours, drought and environmental degradation, so that we can learn about the effects of human uses," Associate Professor Awange said.

"The difficulty is that human uses – including increased population and domestic water consumption, hydroelectric power and increased agriculture – are all tied to the economic growth of the country implementing it.

"Our project, which was undertaken with Associate Professor Michael Kuhn, also from Curtin's Department of Spatial Sciences, in conjunction with German researchers, has provided independent, factual understandings which the countries involved can then use to make better decisions, and hopefully plan for sustainable use of the river's resources for the whole region."

The project uses data from the Gravity Recovery and Climate Experiment (GRACE) satellite mission, which uses two satellites to detect spatio-temporal changes in the Earth's gravity field, combined with mathematic techniques to isolate the total water storage (surface, groundwater, and soil moisture) of specific areas.

This technique is vital because traditional 'on the ground' measuring techniques are difficult due to poor access and high levels of political unrest in different countries, the size and scale of the area being measured, and lack of appropriate monitoring equipment in the area.

“Nile River monitoring influences northeast Africa's future”, 18/09/2014, online at:

<http://phys.org/news/2014-09-nile-river-northeast-africa-future.html>

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❖ **Technical panel convenes in Ethiopia on Nile dam**

A tripartite technical committee tasked with studying Ethiopia's mega-dam being built on the Nile River convened in Ethiopian capital Addis Ababa on Saturday.

The panel brings together four experts from Ethiopia, Egypt and Sudan for talks on the construction of the Grand Ethiopian Renaissance Dam (GERD).

The two-day meeting will discuss the date and means of hiring an international consultant to conduct two studies on the Ethiopian dam project.

Head of the Egyptian delegation Ashraf El-Ashaal said that Egypt has come up with three points to be included in the agenda, but refused to detail them.

"The points are ones that we think would expedite the whole process," he told Anadolu Agency.

Ethiopian delegation head Gedion Asfaw, for his part, said Ethiopia wants the bidding process to be in line with international standards and procedures.

"This will ensure the conduct of a credible and acceptable study," he said. "It is on the basis of the final report of the international panel of experts that we are meeting today."

He said that Ethiopia is ready to expedite the work of the technical panel.

"We will discuss the issue of the selection of the international firm that is expected to conduct the two studies," he said.

Seifedin Hamad, the head of Sudan's delegation to the meeting, said that "The issues that are being discussed in the current meeting are not the hard ones."

Ethiopia is building a \$6.4-billion hydroelectric dam on the upper reaches of the Nile River – Egypt's primary water source.

The project – which Ethiopia says is necessary for its national development plans – has raised alarm bells in Egypt, which relies on the river for almost all of its water needs.

Ethiopia insists the project won't impact Egypt's traditional share of Nile water, which has long been determined by a colonial-era water-sharing treaty that Addis Ababa has never recognized.

Last month, a trilateral committee – comprised of the Egyptian, Ethiopian and Sudanese water ministers – convened in Khartoum where they agreed to form a follow-up committee comprised of water experts from the three countries to discuss the impact of the Ethiopian dam project.

“Technical panel convenes in Ethiopia on Nile dam”, 20/09/2014, online at:

<http://www.worldbulletin.net/world/144782/technical-panel-convenes-in-ethiopia-on-nile-dam>

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❖ Pakistan floods trigger fresh dam debate

As Pakistan battles the ferocious waves of its angry rivers, Mirza Asif Baig, chairman of the Indus Water Commission (IWC), argues the destruction of the floods could have been averted if the country had invested more in dams.

While Pakistan is currently wracked by floods, for most of the year the arid country has little rain. This year's floods have killed almost 500 people in Pakistan and Indian administered Kashmir, displaced hundreds of thousands more and destroyed swathes of cotton crops. But most of the water dumped during the monsoon deluge will be wasted.

Baig laments the loss of the “precious resource” and believes the answer lies in building big dams on the Indus River. But big dams have become a politically charged issue. **“The sensitivity leant to the dam issue has damaged the national point of view,”** he said.

In May this year, Prime Minister Nawaz Sharif gave the green light for construction of the 4,500-megawatt Diamer-Bhasha Dam and the 2,000 megawatt Dasu Hydropower Project on the Indus river.

Akhtar Ali, a water specialist at the Asian Development Bank believes these new reservoirs are crucial, given the country's looming water and energy crises, against a backdrop of rapid urbanisation, population growth, food insecurity and growing water demand from industry.

“Dams facilitate water regulation; it is up to us how we manage that,” he said. **“The increased storage capacity from building new reservoirs could store floodwater for productive use and lessen flood peaks downstream,”** he added.

Dams also provide valuable water storage for agriculture, Baig pointed out. **“If we can control water by investing in big dams we can overcome the electricity crisis and improve our agriculture.”**

The Indus basin irrigates about 14 million hectares of land in Pakistan – the largest irrigated area in the world – for which a huge amount of water is needed. With only two existing major reservoirs in

the Indus basin – the Mangla and Tarbela – the storage capacity of Pakistan is only about 30 days, while most of the developed countries have 1-2 years water storage capability.

Pakistan is fast becoming a water scarce country. **“Pakistan’s per capita water availability is presently estimated at 950 cubic metres, quite a dip from 5,500 cubic metres in 1951,”** said Ghulam Rasul, deputy director general of the Pakistan Meteorological Department. **“If we continue business as usual, how will we meet the water needs of a growing population?”**

However, not everyone agrees that dams are the best solution. Professor Mushtaq Mirani, director of the Centre of Engineering and Development at the Mehran University of Engineering and Technology in Sindh province, believes dam proponents fail to take into account the hydrologic changes that may result from building dams.

“The conversation about dams takes place after every flood,” he said, but most dam proponents come from the upstream Punjab province. The Kalabagh dam, a hydroelectric project planned on the Indus River in Punjab has been a bone of contention for over three decades. It has strong support in Punjab, Pakistan’s largest province, but Sindh and Khyber Pakhtunkhwa fiercely oppose the 3,600 megawatt dam which they argue would give Punjab control over their water.

“Before a big dam has to be built, one has to understand the natural flow regime very carefully as dams can heavily modify the volume of water flowing downstream,” Mirani, also an engineer, pointed out.

Mirani, an opponent of big dams, says construction of big reservoirs require huge investment, displacement of local communities and loss of rich biodiversity. Others fear big dams could become easy targets for militants, as the Mosul dam recently became in Iraq.

A recent study from Oxford University’s Said Business School concluded that mega dams are not economically viable and come at great human and ecological cost. Little independent research on the viability of large dams has been carried out since the findings of the World Commission on Dams in 2000. And by 2000, the number of large dams had climbed to more than 47,000, and an additional 800,000 smaller dams blocked the flow of the world’s rivers.

The Oxford study, based on data from 245 large dams in 65 countries, claims dam building has burdened countries with large amounts of debt. It argues “smaller, more flexible hydroelectric projects” built faster should be the preferred choice. After a decade-long “lull” in dam building, emerging economies of Brazil, China, Ethiopia and Pakistan among others are rushing to build mega-dams on an unprecedented scale, the report claims.

Dams not the only solution

Shafqat Kakakhel, former ambassador and former official of the United Nations Environment Programme, argues big dams are “not the only or the best solution for diverting and storing flood water. Dams of various sizes should be seen as one of the numerous interventions for managing the kind of floods that we have seen in recent years and are likely to experience in future thanks to climate change and other factors.”

Mirani insists that before building dams Pakistan needs to put its irrigation system in order. **“We waste nearly 60% of water because of our outdated canal and irrigation system. In addition, we still practise flood irrigation when we should be turning towards controlled irrigation.”** He claims Pakistan has enough water even to divert it towards the drought-stricken Thar desert, the Indus delta where sea water intrusion is destroying swathes of agricultural land or even to urban centres like Karachi, which is experiencing water shortages.

The benefits and challenges of each project need to be weighed up. **“I acknowledge the plight of the communities displaced by huge dams,”** said Kakakhel. **“But we also need to look at the enormous benefits of the Three Gorges Project such as production of huge quantity of electricity and controlling floods in the Yangtze basin,”** he said.

Often hydropower supplies cities while communities close to the project remain in the dark. Kakakhel agrees, citing the example of Kashmiris, in Indian-administered part of Kashmir, who complain that while dams use their water and land to generate power for the rest of India, the valley itself frequently suffers from black-outs of the type endured by Pakistanis. **“But such complaints can be addressed without abandoning a hydropower project that is otherwise necessary,”** he added.

Kakakhel still favours dams over solar and wind energy, since multi-purpose dams do “much more than electricity generation” as seen in the case of the Tarbela and Mangla dams “which expanded cultivable areas”.

“Pakistan floods trigger fresh dam debate”, 17/09/2014, online at: <http://www.dawn.com/news/1132514/pakistan-floods-trigger-fresh-dam-debate>

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❖ **New dams a must to face Indian water aggression**

Jamaatud Dawa Ameer Hafiz Muhammad Saeed has said that the JuD has launched a grand relief operation for flood affected people and appealed to philanthropists come forward and donate generously for their brethren in distress.

Addressing Seeratun Nabi conference here at Tauheed Chowk here, Hafiz Saeed declared that he was striving hard to get the Pakistani nation united against Indian water terrorism and rehabilitate the flood affectees.

He stated that India had hatched a conspiracy to collapse Pakistan's economy by unleashing water on Pakistan, adding that India had constructed 4000 since 1980 including 62 in occupied Kashmir while Pakistan could only built two dams.

The JuD chief termed flash floods the most critical issue Pakistan had been grappling with for the past five years. He warned that if India completed the construction of Laddakh dam, no one would be able to crops and huge population of Pakistan. Hafiz Saeed pointed out that arch enemy India would continue military aggression as well as water aggression against Pakistan unless every individual set aside politics of personal interest and focus on national interest.

“Politicking should not be given any consideration on the issue of dams,” he stressed and called for construction of all dams on war footings.

Hafiz Saeed informed that like Pakistan, occupied Kashmir was also in the grip of flash floods but the Indian government was busy only to rescue tourists and shift its armed forces personnel to safer places. The JuD chief revealed that during his telephonic conversation with Kashmiri leaders including Syed Ali Gileeni and Shabbir Shah, “they informed that Indian army officials were asking Kashmiris to call Pakistan for help.” He demanded the Pakistan government to come forward and play its role to save Kashmiri flood victims from complete devastation.

Earlier, Tehreek Hurmat-e-Rasool Chairman Maulana Ameer Hamza, Jamiat Ahle Hadith central leaders including Maulana Muhammad Sharif Chingwani, Maulana Abdul Ghani Saqib, Maulana Abdul Sattar Alipuri and JuD central leaders - Maulana Saifullah Khalid and Qari Muhammad Yaqoob Sheikh also addressed the Seerat conference which was attended by hundreds of people.

“New dams a must to face Indian water aggression”, 19/09/2014, online at:

<http://nation.com.pk/national/19-Sep-2014/new-dams-a-must-to-face-indian-water-aggression>

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❖ Discuss dams on Brahmaputra with Xi, says Assam CM

Assam Chief Minister Tarun Gogoi on Thursday requested Prime Minister Narendra Modi to take up the issue of construction of dams on the river Brahmaputra by China with the visiting Chinese President Xi Jinping.

In a letter to Prime Minister, Mr. Gogoi said that there had been serious concerns about the construction of dams by China over the Brahmaputra that would adversely impact downstream flows.

“It is feared that construction of the dams is likely to trigger fresh concerns on how the flows of the Brahmaputra downstream will be impacted. It would be most appropriate to convey India’s concerns to the visiting Chinese President,” wrote Mr. Gogoi adding that his government had all along been raising the issue at the highest level.

Mr. Gogoi also hoped that the visit of the Chinese President would help to deepen trade ties and boost Chinese investment in India, particularly in Assam and other north-eastern States, an official release said.

“As the visiting Chinese President is expected to pledge billions of dollars in investment, including plans for Chinese-funded industrial parks, we hope to get a fair share of it in infrastructure and other sectors in Assam,” he said.

“Discuss dams on Brahmaputra with Xi, says Assam CM”, 19/09/2014, online at:

<http://www.samachar.com/Gogoi-raises-concern-over-construction-of-dams-by-China-ojst8Ihdbjg.html>

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❖ **Convey Assam's concern to China over construction of dams on Brahmaputra: Gogoi to Modi**

A day after Chinese president Xi Jinping arrived in India in his first-ever tour of India, Assam chief minister Tarun Gogoi on Thursday requested Prime Minister Narendra Modi to take up the issue of construction of dams on the Brahmaputra river by China with the visiting dignitary.

Gogoi, in a letter to PM Modi, said there have been serious concerns about the construction of a series of dams by China on the Brahmaputra that would adversely impact downstream flows, official sources said.

“It is feared that construction of the dams is likely to trigger fresh concerns on how the flows of the Brahmaputra downstream will be impacted. It would be most appropriate to convey India's concerns to the visiting Chinese President,” Gogoi, in his letter to the prime minister said. The Assam government has been all along raising the issue at the highest level, he added.

The 2880-km Brahmaputra originates in Tibet, flows about 1650 kms in China, 918 kms in India and 337 kms in Bangladesh before emptying itself into the Bay of Bengal. While China's 510-mw Zangmu dam on the Tsangpo – as the Brahmaputra is known in that country – is scheduled to be commissioned in 2015, there have been fears that the river's water would get diverted, leaving little for India. Chief minister Gogoi also told the prime minister that he hoped that the Chinese President's visit would help deepen trade ties and boost Chinese investment in India, particularly in Assam and other Northeast states. “As the visiting Chinese President is expected to pledge billions of dollars in investment, including plans for Chinese-funded industrial parks, we hope to get a fair share of it in infrastructure and other sectors in Assam,” Gogoi said.

“Convey Assam's concern to China over construction of dams on Brahmaputra: Gogoi to Modi”, 18/09/2014, online at: <http://indianexpress.com/article/india/india-others/convey-assams-concern-to-china-over-construction-of-dams-on-brahmaputra-gogoi-to-modi/>

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❖ Desecuritizing Transboundary Water in South Asia

Severe [floods in the Kashmir region](#) of Northern India and Pakistan over the past few weeks have taken 450 lives so far, and uprooted thousands of residents on both sides of the highly politicized border. Heavy monsoon rains caused the Chenab and Jhelum rivers (tributaries of the Indus River system) to overflow their banks, resulting in a scale of flooding that some are calling unprecedented. In an effort to stem a growing crisis, both governments have ramped up flood relief and rescue efforts, even as thousands have been rendered homeless with many more trapped by floodwaters or reported missing. With more rain expected in coming weeks, critics have [pointed to government failure](#) in both countries to effectively mitigate and manage the flood crisis.

Floods are a frequent occurrence in South Asia, where for centuries, transboundary rivers such as the Indus, the Ganges, and the Brahmaputra have served as the cradles of civilization. Worshipped, revered, and the source of livelihoods for an estimated 700 million, these rivers are the lifeline of the subcontinent but also the source of much misery and devastation. Seasonal variations in the monsoon coupled with the effects of global warming and climate change have led to a growing number of intense floods in the region including the 2008 Kosi floods in Nepal, the 2010 Indus floods in Pakistan, and the 2011 Uttarakhand floods in India.

Despite the frequency and transboundary nature of these extreme events, cooperation between countries remains limited and piecemeal at the best of times. Given the subcontinent's complex and contentious [geo-politics](#), all things that flow from one side of the border to the other are inextricably tied to national security. Securitization of South Asia's water has meant that even basic information about transboundary rivers, including stream and sediment flow, water withdrawal, and usage is notoriously difficult to access within countries – let alone across borders. In India for example, all data and information on the Indus, Ganges, and Brahmaputra rivers is considered classified information. The Indian government's 2013 [Hydro-meteorological Data Dissemination Policy](#) spells out a procedure to enable users (including citizens, commercial entities, and foreigners) to access this data, but requires applicants to sign a secrecy agreement that prohibits disclosure of the information publicly, and breach of the agreement invites the penalty of civil liability.

While data is not as vigorously securitized in neighboring Pakistan, Bangladesh, and Nepal, accessibility remains as arduous. This is ironic given the fact that most South Asian countries, and India in particular, are at the forefront of the open data and transparency movement and have served

as models for the enactment of [right to information](#) (RTI) or access to information laws in other developing countries. On water- and climate-induced disasters, South Asian countries have chosen to vault critical information rather than use it to collectively reduce the effects of the annual onslaught that repeats itself every monsoon.

To understand the nature and effects of the secrecy regime on water and climate data in the region, over the past year, The Asia Foundation, in partnership with the World Resources Institute and civil society organizations in Bangladesh, India, and Nepal, has implemented a project* to access data and information on three rivers in the region: the Padma River (Bangladesh), Kosi River (India and Nepal), and the Sharda or Mahakali River (India). The project conducted in-depth, country-level assessments to test the availability of data and information on selected parameters for each of these rivers. Using RTI legislation in all three countries, our partners, the Legal Initiative for Forest and Environment (LIFE), the Institute for Social and Environmental Transition (ISET-N), and the Bangladesh Centre for Advanced Studies, filed requests for data on stream flow, sediment flow, and dams and hydrological structures for the focus rivers in each country. [Early findings](#) point to the fragmented availability of information on the selected rivers and parameters, poor quality of data and records management practices, limited proactive disclosure of information, and weak capacity of governments to effectively implement the right to information.

Our research also found that while there were issues with data availability and quality in all three countries, information was far easier to access in Bangladesh and Nepal. In both countries government departments were more willing and able to provide information (where it is available) informally compared to formal requests for information. This seems to indicate two things: In general, information pertaining to transboundary rivers is not considered classified or secret in Bangladesh and Nepal, but rather this information is not collected, retained, or disseminated in a sustained manner; and the implementation of RTI laws in these countries is still at a nascent stage compared with India.

Research also found that government departments and officials in Bangladesh and Nepal lack the necessary knowledge and capacity to respond effectively to requests for information. Therefore, the efficacy of RTI as a tool to access data and information on water and climate issues cannot yet be written off. What this indicates is an opportunity to work with governments, civil society, and the media more closely in Bangladesh and Nepal to start opening up on water- and climate-related data and information in a more targeted manner. In India, on the other hand, while we were able to get

some data and information, by and large efforts to use RTI to get information on the Kosi and Sharda rivers were unsuccessful. In most instances, RTI requests were denied on the grounds that the information pertained to national security and could not be shared. The government's position of secrecy on transboundary issues is even more puzzling because information pertaining to peninsular Indian rivers – which have a long history of inter-state disputes – is relatively open and publicly accessible in comparison.

While there is nascent recognition that the disclosure of information is important (as exhibited in India's [National Water Policy 2012](#), [Hydro-meteorological Data Dissemination Policy 2013](#), and [Bangladesh's Water Act 2013](#)), the idea that water-related information is vital to public livelihood is clearly still not widespread. As incoming monsoon rains threaten an already submerged Kashmir Valley, the need for greater democratization of information on water within the region could not be more urgent in order for governments to prepare for such events more ably in the future.

**This project is funded by the [Skoll Global Threats Fund](#).*

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“Desecuritizing Transboundary Water in South Asia”, 17/09/2014, online at:
<http://asiafoundation.org/in-asia/2014/09/17/desecuritizing-transboundary-water-in-south-asia/>

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❖ Dam construction threatened ancient Chinese sturgeon

The Chinese sturgeon shows negative response to reproduction since last year according to news reports. Naturally, the fish stays at the ocean and goes back to the river for reproduction. However, not even an egg was seen at the Yangtze River which is the main habitat of the fish.

Scientists said that the dam construction was the main reason why the species come to its extinction. They believed that the habitat of the species are threatened because of the construction. Reduced water quality, pollution and over fishing are also believed among the results of the construction.

The Chinese fish which can grow up to 13 feet or more is considered as a long-lived species. However, similar to other sturgeons, the species is not easy to reproduce and once depleted it is not easy to build the population. The aquatic pandas, nickname of the sturgeon, cannot expect that the newly-built dams will be tore down as there are no plans discussed at the moment. The ancient fish is listed as a wild creature under national protection.

“Dam construction threatened ancient Chinese sturgeon”, 15/09/2014, online at:
<http://www.istreetresearch.com/dam-construction-threatened-ancient-chinese-sturgeon/259337/>

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❖ China, Asia's water hegemon

China should abandon its unilateralist approach and enter into water-sharing pacts with its neighbours

Asia's water resources are largely transnational, making inter-country cooperation and collaboration essential. Yet the vast majority of the 57 transnational river basins in continental Asia have no water-sharing arrangement or any other cooperative mechanism. This troubling reality has to be seen in the context of the strained political relations in several Asian sub-regions. The river basins in continental Asia that have a treaty-based sharing arrangement currently in place are the Al-Asi/Orontes (Lebanon-Syria), Araks-Atrek (Iran-Russia), El-Kaber (Lebanon-Syria), Euphrates (Iraq-Syria), Gandhak (India-Nepal), Ganges (Bangladesh-India), Indus (India-Pakistan), Jordan (Israel-Jordan), and Mahakali (India-Nepal). Arrangements in some of these basins, such as the Gandhak, Jordan, and Mahakali, do not incorporate a formula dividing the shared waters between the parties but rather centre on specific water withdrawals, transfers, or rights of utilization. An important arrangement in the Mekong Basin is centred on sustainable water management but without any water sharing. The only treaties in Asia with specific sharing formulas on cross-border river flows are the ones between India and its two downriver neighbours, Pakistan and Bangladesh. The Indus Waters Treaty remains the world's most generous water-sharing arrangement, under which India agreed to keep for itself only a 19.48% share of the waters. (The volume of waters earmarked for Pakistan—by way of comparison—is over 90 times greater than the 1.85 billion cubic meters the US is required to release to Mexico under a 1944 treaty with that country.) In addition, Soviet-era water arrangements in Central Asia continue to hold, even if tenuously. Such is the competition over scarce water resources that even sharing arrangements are not free of rancour and discord. More broadly, Asia's water map stands out for the unique riparian status that China enjoys. It has established a hydro-hegemony unparalleled on any continent by annexing in 1951 the Tibetan Plateau, the starting place of major international rivers. Another sprawling territory Beijing forcibly absorbed, Xinjiang, is the source of the transnational Irtysh and Ili Rivers. China is the source of rivers for a dozen countries. No other country in the world serves as the riverhead for so many countries. This makes China the central driver of inter-riparian relations in Asia. Yet China also stands out for not having a single water-sharing arrangement or cooperation treaty with any co-riparian state. Its refusal to accede to the Mekong Agreement of 1995, for example, has stunted the development of a genuine basin

community. By building mega-dams and reservoirs in its borderlands, China is working to unilaterally reengineer the flows of major rivers that are the lifeblood for the lower riparian states. To be sure, China trumpets several bilateral water agreements. But none is about water sharing or institutionalized cooperation on shared resources. Some accords are commercial contracts to sell hydrological data to downstream nations. Others centre on joint research initiatives, flood-control projects, hydropower development, fishing, navigation, river islands, hydrologic work, border demarcation, environmental principles, or non-binding memorandums of understanding. By fobbing off such accords as water agreements, China creates a false impression that it has cooperative riparian relations. In fact, it is to deflect attention from its unwillingness to enter into water sharing or institutionalized cooperation that Beijing even advertises the accords it has signed on sharing flow statistics with co-riparian states. These agreements are merely contracts to sell hydrological data, which some other upstream countries provide free to downriver states. The plain fact is that China rejects the very concept of water sharing. It also asserts a general principle that standing and flowing waters are subject to the full sovereignty of the state where they are located. It thus claims “indisputable sovereignty” over the waters on its side of the international boundary, including the right to divert as much shared water as it wishes for its legitimate needs. This principle was embodied in the now-discredited “Harmon Doctrine” in the US more than a century ago. This doctrine is named after US Attorney General Judson Harmon, who put forth the argument that the US owed no obligations under international law to Mexico on shared water resources and was effectively free to divert as much of the shared waters as it wished for US needs. Yet, despite this thesis, the US went on to conclude water-sharing agreements with Mexico between 1906 and 1944. China, in rejecting the 1997 UN Watercourse Convention (which lays down rules on shared water resources to establish an international water law), placed on record its assertion of absolute territorial sovereignty over the waters within its borders: “The text did not reflect the principle of territorial sovereignty of a watercourse state. Such a state had indisputable sovereignty over a watercourse which flowed through its territory.” This indicates that the Harmon Doctrine may be dead in the country of its birth but is alive and kicking in China. In this light, it is hardly a surprise that water has become a new divide in China’s relations with riparian neighbours. This divide has become apparent as Beijing has increasingly shifted its dam-building focus from the dam-saturated internal rivers to international rivers, most of which originate on the water-rich Tibetan Plateau. Then Indian prime minister Manmohan Singh personally proposed to Chinese President Xi Jinping and Premier Li Keqiang, in

separate meetings in the spring of 2013, that the two countries enter into a water treaty or establish an intergovernmental institution to define mutual rights and responsibilities on shared rivers. Both Xi and Li, however, spurned the proposal. The Indian assumption that booming bilateral trade would make Beijing more amenable to solving border and water disputes has clearly been belied. Only three important transnational rivers—the Amur, the Irtysh, and the Ili, which flow to Russia or Kazakhstan—originate in China outside the Tibetan plateau, whose wealth of water and mineral resources is a big factor in its political subjugation. China's water disputes with neighbours extend even to North Korea, with which it has yet to settle issues relating to Lake Chonji and two border rivers, the Yalu and the Tumen. China's rush to build more dams promises to roil inter-riparian relations, fostering greater water competition and impeding the already slow progress toward regional cooperation and integration. By erecting dams, barrages, and other water diversion structures in its borderlands, China is spurring growing unease and concern in downriver countries. Getting China on board has thus become critical to shape water for peace in Asia. Most of China's dams serve multiple functions, including generating electric power and supplying water for manufacturing, mining, irrigation, and households. Dam building in downstream countries, although stoking interstate disputes too, pales in comparison with the extent of China's dam building. For example, China's latest dam on the Mekong River, the 5,850 megawatt electric (MWe) Nuozhadu, can alone generate more electricity than the combined installed hydropower capacity in the lower-Mekong countries at present. The 330 MWe Indian dam project on the Kishenganga (Neelum) stream that prompted Pakistan to invoke international arbitration proceedings under the Indus Treaty in 2010 is of a size that Chinese dam builders would scoff at, considering it uneconomical as a stand-alone project unconnected to a cascade of dams. At a time when dam building has run into growing grassroots opposition in Asian democracies such as Japan, South Korea, and India, China will remain the nucleus of the world's dam projects. Significantly, China is also the global leader in exporting dams. While the dams China is building in Africa and Latin America are largely designed to supply the energy for its mineral-resource extraction and processing there, many of its dam projects in Southeast Asia are intended to generate electricity for export to its own market. China is demonstrating that it has no qualms about building dams in disputed territories, such as Pakistan-administered Kashmir, or in areas torn by ethnic separatism, such as northern Myanmar. Transparency, collaboration, and sharing are the building blocks of water peace. Renewed efforts are needed to try and co-opt China in basin-level institutions. Without China's active participation in water institutions, it will not be

possible to transform Asian competition into cooperation. Only water institutions involving all important co-riparians can make headway to regulate inter-country competition, help balance the rights and obligations of co-basin states, and promote sustainable practices. If China were to accept rule-based cooperation, it would have to strike a balance between its right to harness transnational water resources for its development and a corresponding obligation (embedded in customary international law and the UN Watercourse Convention) not to cause palpable harm to any co-riparian state. A balance between rights and obligations indeed is at the heart of how to achieve harmonious, rule-based relations between co-basin states. To be sure, any water arrangement's comparative benefits and burdens should be such that the advantages outweigh the duties and responsibilities, or else a key state that sees itself as a loser may walk out of discussions or fail to comply with its obligations. China must be persuaded that its diplomatic and economic interests would be better served by joining forward-looking institutionalized cooperation. Beijing will need considerable convincing, of course, if it is to participate in any basin-level framework centred on compromise, coordination, and collaboration. If China insists on staying on its current unilateralist course, the risk is not only that it will define and implement its water interests in ways irreconcilable with those of its co-riparian states, but also that prospects for a rule-based order in Asia could perish forever. Brahma Chellaney is a professor at the Centre for Policy Research.

“China, Asia’s water hegemon”, 16/09/2014, online at:

<http://www.livemint.com/Opinion/rM0WMFDmz8ADEeXGJjkEMP/China-Asias-water-hegemon.html>

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❖ Communities Band Together to Oppose Mekong Dams

Networks of fishing communities from Cambodia and Thailand are banding together to try to halt hydropower dam construction along the Mekong River. Community leaders and environmentalists warn disrupting the water flow and fish migration will impact millions of lives in the lower Mekong Region, and they are now working together to try to convince governments to abandon the projects.

The campaign by the networks brought together local fishing communities from Thailand and Cambodia who collectively fear the potential loss of livelihoods from the damming of waters along the lower reaches of the 4,300 kilometer Mekong River.

Millions of people in Cambodia and Thailand directly depend on access to fish for food security. The fishing community networks say they oppose all large scale hydro-power dams in the Mekong basin. Up to 11 hydro-power dams are planned on the Lower Mekong.

After years pressing their cases against individual dams, they are now trying to join forces and lobby each government in the region.

Om Savath is executive director of the Cambodia-based Fisheries Action Coalition Team (FACT).

"We try to push the government especially the Cambodian government and other countries to study, to stop the dam along the Mekong River, especially the Don Sahongm because it is near the Cambodia border with Laos. This will have a lot of effect to the fisheries," ha said. "We are joining together especially from Cambodia networks, Thailand, Lao and Vietnam. We plan to connect to Myanmar."

The networks called for Laos to halt construction of the \$3.5 billion Xayaburi Dam in northern Laos and stop the planned 260 megawatt Don Sahong dam near the borders of Cambodia and Thailand.

Scientists say the Don Sahong dam, would impact vital fish migration. The area is considered to be the only secure fish passage during the region's dry season.

Premrudee Daoroung, co-director for the non-government Foundation for Ecological Recovery, says local communities need to have to say in the future as any development will directly affect their livelihoods.

"The people need to have more voice directly, people who are going to be directly affected face the impact from the dam," sha said. "In the movement on the hydropower dam in the Mekong there are many groups involved, (but) that the strongest voice in terms of the local people are Thailand and Cambodia."

Dam construction on the lower Mekong in Laos impacts Thailand where several rivers are tributaries of the Mekong mainstream. In north eastern Thailand's Ubon Rathchathani province the Pak Mun River communities have fought for almost 30 years against a dam and later to ensure flood gates are regularly open to allow fish access from the Mekong.

Leader of the Pak Mun river community, Sompong Viengchan, says a dam at Don Sahong would have a major impact on stocks and lives in the local community.

"I can say very clearly that any dam that is built on the river, like Mun River when they cut us off from our own river," sha said. "And it is going to be the same about the Mekong as well. The Mekong is the River of us all. If the Don Sahong really happen, the Pak Mun people cannot live as well, it will immediately affect us."

In Cambodia up to six million people are directly dependent on fish for food security from the Great Lake, or Ton Le Sap.

The leader of the Ton Le Sap Fisher network, Long Sochet, says those communities fear the future if the Don Sahong dam goes ahead.

Long Sochet says to block the water from the Mekong would cause fishing stocks to fall rapidly leading to the suffering of local people due to the loss of livelihood and the impact on the natural

resources.

A study by the intergovernmental body, the Mekong River Commission (MRC) -which brings together Laos, Thailand, Cambodia, and Vietnam, has warned damming the Lower Mekong could reduce fish stocks by up to 300,000 metric tons a year, hitting hard communities in Cambodia.

In Phnom Penh in early September activists rallied against Malaysian-based investors backing the Don Sahong dam project, with some quarter of million signatures and identities pressing for a suspension of the project.

In June the Laos government agreed to participate in a prior consultation process (PNPCA), seen by analysts as a concession by Laos in the face of rising criticism over the Don Sahong dam.

But groups such as Save the Mekong Coalition (SMC) have raised concerns the process was inadequate and raised the issue in letters to the Prime Ministers of Laos, Cambodia, Thailand and Vietnam.

Vietnam has taken a strong stand on the projects. In April at a summit of Mekong leaders, Vietnam called for a 10 year moratorium on all damming construction on the Mekong mainstream.

Vietnam's state controlled media had said dams on the Mekong River were already impacting farming by disrupting water flow, leading to increased salinity, soil run off valued as a natural fertilizer, flooding and lower fish stocks.

“Communities Band Together to Oppose Mekong Dams”, 18/09/2014, online at:
<http://www.voanews.com/content/communities-band-together-to-oppose-mekong-dams/2454113.html>

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❖ World water crisis 'unconscionable' speaker says

There's a good chance you showered this morning, and brushed your teeth and flushed the toilet without giving much mind to the water with which we are blessed.

But around the world in developing nations, there are 748 million people without safe drinking water everyday. There are 2.5 billion people living without an appropriate place to go to the bathroom.

There's between 1 million and 3 million children 5 and younger dying every year from preventable water borne diarrheal disease.

“The key word there, of course, is preventable in 2014, and what the hey, it's unconscionable,” said John Oldfield, chief executive officer of WASH Advocates, which stands for water sanitation hygiene — for everyone.

Oldfield, speaking at the Paul Simon Public Policy Institute to media Wednesday morning, ticked off these statistics, and he was blunt in his warning that a world water crisis is here.

“It's actually not a lack of water that's killing all these kids all over the world. It's an environment contaminated by human feces,” he said. “That's the problem. They're not dying of thirst. They're dying of diseases because they're drinking their neighbors' lukewarm feces. Pretty gross. But that's exactly what's killing them.”

Oldfield and former U.S. Sen. Paul Simon's wife, Patti Simon, also spoke on the topic at event at the SIU Student Center Wednesday evening.

Policy related to access to safe water was a hallmark of the late Sen. Simon — he penned a book on the topic called “Tapped Out” — and Patti Simon has carried on the legacy of her husband.

“Safe water and sanitation is the first line of defense against diseases, and when you don't have it, you can see it spreading,” Simon said.

Patti Simon said her husband became interested in water issues at the beginning of his political career, when he was a member of the Illinois General Assembly representing the rural community of Troy.

“A lot of areas around there did not have access to water,” she said. “A lot of people had wells. They didn’t have a lot of the sewer systems and things like that.”

She said Paul Simon worked to implement a rural water district program in the state. She said her husband became more engrossed with the issue after he was elected to Congress in the 1970s.

“One of the things that struck Paul is that government can do some very good to solve these problems, but they can also make some big mistakes,” Patti Simon said.

Simon and Oldfield are advocating for congressional passage of the Senator Paul Simon Water for the World Act, which they said makes advances to the Senator Paul Simon Water for the Poor Act of 2005.

The legislation calls for increased monitoring and evaluation and for a more focused approach on the world’s poorest countries and communities, Oldfield said.

He said that as of Wednesday morning, the bill had 102 bipartisan cosponsors in the U.S. House.

Now is the time for its passage, he said, and now is the time to tackle this issue — even if the conversation may make a few uncomfortable.

“Hell, it took us 25 years to be able to talk about HIV, right? But what part of there’s 1 to 3 million kids dying every year don’t you understand? This is preventable and it needs to stop now and I’m not going to wait 25 years to be able to make people comfortable talking about diarrhea,” Oldfield said.

“We don’t die from diarrhea here. We have a Pedialyte ice pop and we catch up on our Netflix and that’s fine. Diarrhea happens everywhere, but folks die from it from Africa, and Asia and Latin America.”

“World water crisis 'unconscionable' speaker says”, 18/09/2014, online at:

http://thesouthern.com/news/local/siu/world-water-crisis-unconscionable-speaker-says/article_dc497aa1-1c0f-5830-a6dd-2fd0d35b1456.html

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❖ **SMC objects to Don Sahong Dam prior-consultation process**

The Save the Mekong Coalition (SMC) has written to the Prime Ministers of Laos, Cambodia, Thailand and Vietnam voicing concerns over the Prior Consultation for Don Sahong Dam project recently submitted by the Lao government.

SMC said that under the Procedures for Notification, Prior Consultation and Agreement (PNPCA), the prior consultation for the Laos project is not legitimate.

Submission of the Don Sahong Dam for Prior Consultation must not be used as a way for Laos to legitimize their actions under the 1995 Mekong Agreement, but rather ensure a true commitment to regional decision-making in good faith, in the spirit of the Mekong Agreement, SMC said.

Many studies have shown that, if built, the Don Sahong Dam will have severe impacts on Mekong fish and their migration throughout the Lower Mekong River Basin. This threatens food security and livelihoods of millions of people, as well as economic and political stability of the region.

SMC said the government of Laos has claimed that construction has halted, while Mega First Corporation Berhad, which is responsible for developing the project, has claimed construction is underway.

“Therefore, we call on Mekong leaders to immediately halt the Prior Consultation process for the Don Sahong Dam and address critical flaws in the PNPCA and allow more time for studies on impacts of mainstream dams to be completed,” the group said.

In addition, it is now widely acknowledged that the Xayaburi Dam's Prior Consultation process was a failure. Many groups in Vietnam and Cambodia voiced their dissatisfaction with the lack of participation in the process.

On June 24, Thailand's Supreme Administrative Court accepted a lawsuit filed by villagers in northern and northeastern Thailand who would be affected by the Xayaburi Dam, acknowledging in their ruling the potential trans-boundary impacts of the Xayaburi Dam and calling for further environmental, health and social impact assessments in Thailand.

At the Second Mekong Summit in April, Vietnam reiterated recommendations in the Mekong River Commission's 2010 Strategic Environmental Assessment, calling for a 10-year moratorium on all damming work on the Mekong mainstream.

SMC consisting of over 40 organizations in Vietnam, Thailand, Cambodia, Myanmar, the US, Japan and Canada signed the letter.

"SMC objects to Don Sahong Dam prior-consultation process", 17/09/2014, online at:
<http://www.eco-business.com/news/smc-objects-don-sahong-dam-prior-consultation-process/>

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