



# 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

18 November 2013 – 24 November 2013

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### ❖ Turkish Cypriots offer to share water with South

*"Water is a problem of southern Cyprus as well and we can share our water with them if an agreement is made" says natural resources minister of TRNC.*

The water to come to the Turkish Republic of Northern Cyprus (TRNC) from Turkey via "Water Provision Project" - a project consists of under-the-sea pipelines that will carry water from Turkey to Northern Cyprus - can be called "peace water", said Turkish Cypriot minister, adding that "Water is a problem of southern Cyprus as well and we can share our water with them if a deal is reached."

TRNC Natural Resources Minister Hamit Bakirci gave an interview to Anadolu Agency, stating that the low water reserves in the world urges the countries to form their own water policies and use their water wisely. "Projects such as the 'Water Provision Project' become more important in countries with very low water supply like ours," said Bakirci.

Bakirci underlined that TRNC is very content for Turkey's help on the water issue by saying, "with this help, we know that the relation with our motherland (Turkey) will go on forever."

"Water Provision Project" is 90 percent complete in the Turkish side and the construction for the under sea water pipeline will commence in the upcoming days.

Once the project is completed, water demand in TRNC, currently suffering from water shortage, will be met for 50 years.

Water transfer is scheduled to begin in March 2014, previously announced by Turkish Prime Minister Recep Tayyip Erdogan.

"Turkish Cypriots offer to share water with South", 21/11/2013, online at:  
<http://www.worldbulletin.net/?aType=haber&ArticleID=123420>

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### ❖ Iraq brings up water issue again during FM Ahmet Davutoğlu's visit

During Foreign Minister Ahmet Davutoğlu's visit to Iraq last week, Iraq's Shiite leader Grand Ayatollah Ali Sistani stated that Turkey is responsible for the water shortage in Iraq due to the dams Turkey built on the Euphrates and Tigris rivers and suggested that the water issue should be resolved through UN arbitration, if necessary.

There is no trilateral agreement regarding the use of the waters of the Euphrates-Tigris basin. However, Turkey has always said that basin waters would be sufficient for all three countries if the water resources were used equitably, reasonably and efficiently. To that end, in 1984 Turkey proposed a three-stage plan for the optimal utilization of the Euphrates-Tigris basin waters at the meeting of the Joint Technical Committee.

When we look at the background, we find numerous bilateral agreements regarding the riparian countries of the Euphrates and Tigris basin. Protocol No. 1, "Regulation of the Waters of the Tigris and Euphrates and of their Tributaries," which is annexed to the "Friendship and Good Neighborly Relations Agreement" between Turkey and Iraq, was signed on March 29, 1946, and the "Economic and Technical Cooperation Agreement" was signed by the two in Baghdad on Feb. 7, 1976.

The most important protocol regarding the use of the Euphrates-Tigris basin waters is the one that was signed between Turkey and Syria on July 17, 1987. A significant result was reached in the 1987 protocol in terms of the negotiations on the water issue. The protocol was considered a temporary agreement until a final agreement was signed. The text of Article 6 of the protocol reads as follows: "During the filling period of the Atatürk dam reservoir and until the final allocation of the waters of the Euphrates among the three riparian countries, the Turkish side undertakes to release a yearly average of more than 500m<sup>3</sup>/sec at the Turkish-Syrian border and in cases where the monthly flow falls below the level of 500m<sup>3</sup>/sec, the Turkish side agrees to compensate for the difference during the following month." The 13th Joint Technical Committee on Regional Waters meeting was held in Baghdad on April 16, 1990. According to an agreement between Syria and Iraq, Iraq shares the Euphrates' waters with Syria on a 58 percent basis. In 2009, Turkey signed bilateral protocols called the "Agreement on Water" regarding the Euphrates-Tigris and Orontes rivers with Syria and Iraq. Within the scope of the protocols, cooperation on the management of the water resources of the

Euphrates and Tigris is specifically described, including terms and references related to the management of basin-based water resources, water quality and penalties for polluters.

The protocols were signed by the Ministry of Water Resources (Iraq), Ministry of Water Resources (Syria) and Ministry of Environment and Forestry (Turkey), which are responsible for technical and functional issues such as development, management and protection of water resources. Significant issues requiring transboundary water cooperation were designated in those agreements.

As for dams, the Ilisu Dam in particular has been brought forward at every meeting held with Iraq in recent years. Being the third largest dam after the Atatürk and Karakaya Dams in the Southeastern Anatolia Project (GAP), the Ilisu Dam is expected to be complete by 2014. The purpose of the dam is to produce hydroelectric power; it will not serve irrigation purposes. As we know, power production is generated via a flow of water through turbines. In other words, you have to let water flow from the dam in order to generate electricity. Furthermore, the dam is expected to store extra water during flood periods, which would protect the Mosul Dam, damaged during periods of war in northern Iraq.

In field studies carried out by ORSAM in Iraq, we had the opportunity to see the causes of the water shortage that prevails in Iraq for ourselves. Above all, as stated by the UN on World Water Day in 2011, 50 percent of the water produced in Iraq is lost due to system inefficiencies and domestic wastage. That water loss is caused by the mismanagement of water resources and damaged structures (dams, canals, water supply networks, irrigation systems, etc.). In addition, discharging waste water directly into rivers impairs water quality and thus makes water unusable. Iraq is trying to appear innocent in terms of the water shortage in the country that is caused by both the damage created by long-lasting wars and also the mismanagement of water resources by putting the blame on Turkey.

“Iraq brings up water issue again during FM Ahmet Davutoğlu's visit”, Tuğba Evrim Maden, Today's Zaman, 24/11/2013, online at: <http://www.todayszaman.com/news-332107-iraq-brings-up-water-issue-again-during-fm-ahmet-davutoglus-visit.html>

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❖ **Conditions unbearable for Iranian dissidents in water-logged Camp Liberty, Iraq, a week after flood**

NCRI - Worsening living conditions in Camp Liberty are posing a serious health risk to residents a week after flooding and blockade of vital supplies and equipment by the Iraqi government.

Heavy rainfall severely damaged the camp's roads, drainage and trailer accommodation, with food rotting and sanitary equipment rendered useless.

Many injured or sick residents are now unable to travel across the camp due to sludge and water-logged roads remaining unusable on foot or in vehicles.

Liberty's over 3,000 Iranian dissidents have been making repeated requests for a year for Iraqi contractors to repair the drainage system and make-shift roads at their own expense, but their demands have been ignored by prime minister Nouri al-Maliki's agents.

Iraqi officials are also barring the entry into the camp of many essential goods needed by residents, including pipes, hoses, water pumps, sealants for sealing the trailers, and even waterproof clothing to enter the camp.

“Conditions unbearable for Iranian dissidents in water-logged Camp Liberty, Iraq, a week after flood”, 23/11/2013, online at: <http://www.ncr-iran.org/en/news/ashraf-liberty/15318-conditions-unbearable-for-iranian-dissidents-in-water-logged-camp-liberty-iraq-a-week-after-flood>

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### ❖ **Flooding in central and southern Iraq kills at least 11**

Flooding in central and southern Iraq killed at least 11 people as rising waters swamped city streets and toppled buildings, sparking anger over the dilapidated sewage system, officials said Wednesday.

Three days of driving rain led to flooding in the capital, as well as major cities in the south, including Nasiriyah, Diwaniyah and Hilla, sparking protests among residents angry over poor public services.

"What is happening is because of the government," said Ali Hussein, a protester in Nasiriyah.

"There must be real measures taken after what has happened. They should take things seriously, as the conditions here are really bad."

Six people died in building collapses caused by flooding in Nasiriyah, while two women and a child were killed in similar circumstances in Diwaniyah.

In Babil province, south of Baghdad, two children died as a result of collapsing buildings, while more than 50 families had to take shelter at a tourist resort after their houses flooded.

Authorities have in recent weeks tried to limit the damage of the rain by declaring national holidays, with one instituted earlier in the month.

Heavy rains in December 2012 caused severe flooding, prompting the government to take similar action.

Oil-rich Iraq is still plagued by crumbling infrastructure and poor services more than 10 years after the US-led invasion that toppled Saddam Hussein, and Iraqis have long struggled with frequent power outages, high unemployment and rampant corruption.

"Flooding in central and southern Iraq kills at least 11", 20/11/2013, online at:  
[http://www.yourmiddleeast.com/news/flooding-in-central-and-southern-iraq-kills-at-least-11\\_19591](http://www.yourmiddleeast.com/news/flooding-in-central-and-southern-iraq-kills-at-least-11_19591)

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### ❖ **Floods provide Internet fodder for frustrated Iraqis**

*BAGHDAD: Flooding across Iraq that has left at least 13 people dead and caused widespread structural damage has also provided rich fodder for sarcastic Iraqis bemoaning their decrepit public services.*

The floodwaters, which have cut off entire areas of Baghdad and several other cities to most vehicles, were caused by several days of heavy rainfall that overwhelmed the crumbling drainage system.

Video footage posted on Facebook depicted residents of the Iraqi capital negotiating water-logged streets in life rafts or on planks of wood, armed with makeshift oars.

Edited pictures proliferated on social networks, jokingly placing crocodiles in the Baghdad floodwaters.

Another superimposed Leonardo DiCaprio and Kate Winslet's characters from 1998 blockbuster film Titanic on a bus making its way through the capital's flooded streets.

Another depicted a bikini-clad Western woman in the waters with the accompanying comment: "We have turned our neighbourhood into a tourist resort." Others still showed residents sitting by well-known Baghdad streets with fishing rods.

"We are so lucky," one Facebook user commented. "We have seen how people live in Venice, despite never having visited it!"

Some have parodied a speech by Prime Minister Nuri al-Maliki in which he blamed political opponents for the flooding, suggesting deliberate sabotage was behind the failure of the drainage system.

"I saw a political opponent standing next to the drainage system, but I did not expect that he would ruin it!" Facebook user Yassir al-Mussawi wrote, alongside accompanying pictures of his partially flooded home.

"Next time, I will arrest him and hand him over to the authorities."

Others have mocked comments by senior Baghdad official Naim Aboub, in which he blamed the flooding on a 150 kilogramme (330 pound) rock blocking a main drain.

“Baghdad needs its own special forces regiment to protect the drains!” joked commentator Omar al-Shaher.

Mocking Iraq’s myriad of security forces, each with its own chain of command, Shaher asked: “What shall we name it? Will it belong to the Baghdad mayor’s office, or the Baghdad provincial council? I hope parliament takes care of this.”

The black humour has been accompanied by widespread frustration with the authorities over the flooding, which has caused extensive property damage.

At fault is a decrepit drainage system that, alongside an unreliable power supply and rampant corruption, is a leading complaint of ordinary Iraqis more than a decade after the US-led invasion that ousted Saddam Hussein.

“The rains have just illustrated how bad the corruption is on projects, especially sewerage projects,” said writer Hussein al-Shammari.

“In all the provinces, projects were given to inefficient companies on the basis of nepotism,” he said.

“This is what we planted — we elected them, and they are our fruit.”

Authorities have tried to limit the disruption caused by the flooding by declaring one-off public holidays.

They resorted to the same tactic when heavy rains sparked similar flooding in December last year.

Heavy rains also hit neighbouring Saudi Arabia earlier this week, sparking widespread flooding in the capital Riyadh and the northeastern city of Arar that left seven people dead. AFP

“Floods provide Internet fodder for frustrated Iraqis”, 22/11/2013, online at: <http://www.nst.com.my/latest/floods-provide-internet-fodder-for-frustrated-iraqis-1.408861>

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### ❖ Germany sign 13.5-mln-USD aid deal with Jordan

AMMAN, Nov. 19 (Xinhua) -- Germany signed a 13.5-million-U.S.- dollar aid agreement with Jordan to help it overcome its water scarcity, especially in the north, the state-run Petra news agency reported Tuesday.

The aid will be used to complete some water projects, which, according to Jordan's Minister of Planning and International Cooperation Ibrahim Seif, will help meet the needs of a large segment of citizens for water.

Jordan is ranked as the fourth poorest country in terms of water, according to the Ministry of Water and Irrigation. Moreover, some 600,000 Syrian refugees in Jordan have worsened the country's severe water shortage.

“Germany sign 13.5-mln-USD aid deal with Jordan”, 20/11/2013, online at:

<http://english.cntv.cn/20131120/103555.shtml>

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### ❖ A water war in Israel? Hardly.

Detractors of Israel often seem so overtaken with critical fervor that they miss the truths that may seem obvious to more fair-minded observers of the Middle East.

Take, for example, Saree Makdisi's attack on Israel for supposedly cutting off Palestinians' access to water. He wrote in his Op-Ed article Monday that Israel uses 80% of the West Bank's groundwater and makes it practically impossible for Palestinians to find new sources of water.

Such misleading claims do a disservice to the Palestinians by diverting attention from steps that can bring about a real improvement in water access for Palestinians. Israel can be instrumental in bringing about such an improvement. Genuine friends of the Palestinians would do well to inform themselves of the real water situation in Israel and the West Bank rather than be misled by the same tired diatribes to which we have regrettably grown accustomed. They'll be surprised by what they discover.

### **ABOUT BLOWBACK: FAQs and submission policy**

On the eve of the Six-Day War in 1967, the Palestinians had at their disposal 65 million cubic meters of natural freshwater per year. By 2006, because of intensive Israeli investment in water infrastructure in Palestinian areas and increased access to Israel's supply, the figure was 180 million cubic meters.

Furthermore, Israel's and the Palestinians' per-capita water consumption rates have been steadily converging, with the current difference being about 30%. This has been due in part to Israel's growing population, a prolonged drought and depleting groundwater sources. But it is also attributable to a very substantial improvement in water infrastructure in Palestinian areas.

In 1995, as part of the Oslo Accords, Israel and the Palestinians signed a water agreement, which is still in force. The Joint Water Commission (JWC) established by this agreement still meets several times a year to deliberate on matters of mutual interest. The work of the JWC is regularly monitored and reported to the international community.

Despite the fact that Israel has scrupulously abided by the agreement and has over the years even gone significantly beyond it in the Palestinians' favor, Israel still finds itself being unfairly maligned for exploiting the mountain aquifer beneath Judea and Samaria. The sad truth is that Israel's efforts to assist the Palestinians in improving the water and sewage systems in Judea and Samaria and Gaza have largely been met with politically motivated refusal, causing severe damage to the environment shared by both sides. A welcome exception has been a sewage treatment project in the Hebron area, in which Israeli and Palestinian water authorities, with international partners, have succeeded in reducing local sewage pollution. This is an important example that illustrates what can be achieved when reflexive animosity gives way to common sense.

More broadly, Israel is a world leader in water technology, management and monitoring. Just last month the governors of Nevada and Texas were among the 5,000 attendees at WATEC, Israel's world-renowned water technology conference. Israel's water reclamation rate of 75% is the world's highest; the second-place nation hovers at about 12%. Israel's agricultural sector is a pioneer in water



efficiency, having developed innovative drip-irrigation techniques that revolutionized modern food production.

Israeli scientists have been instrumental in developing cutting-edge desalination technologies, and Israel now houses the world's two largest reverse-osmosis desalination plants. The Israeli company that built them is currently designing what will be the largest desalination plant in the United States, in nearby Carlsbad.

Such technologies can be revolutionary. Until just recently, Israel was perpetually on the verge of a major water crisis. Desalination has essentially resolved the problem, and Israel's water future now looks brighter than ever.

This has enormous potential for the Middle East at large and is especially propitious for the Palestinians, who face severe challenges regarding water. A combination of proper pipe maintenance, introduction of water reclamation technologies and desalination could have an enormously positive effect on the Palestinians' water use. Imagine if even a fraction of the energy devoted by the Palestinians and their ostensible supporters to making misleading claims about Israel were devoted to cooperation on water infrastructure. The region's water scarcity could be a thing of the past.

Israel's "water bashers" might want to listen to Jay Famiglietti, the expert on water technology who heads UC Irvine's Hydrology & Climate Research Group. Last year, Famiglietti and a team of researchers visited Israel, the West Bank and Jordan. Referring to Israel's water management system as "a well-oiled, robust machine," Famiglietti said: "For Israel, there are clear economic and political benefits for improved water management in Palestine and Jordan. With any luck, water management will come forward as an issue of mutual interest for regional cooperation."

Would that Israel's most strident critics listen to such a voice of reason.

"A water war in Israel? Hardly.", 20/11/2013, online at: <http://www.latimes.com/opinion/opinion-la/la-ol-israel-water-palestinians-blowback-20131120,0,4900065.story#axzz2laSBYWGw>

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### ❖ 'It's Like The Canals Of Venice In Gaza City, But With Rivers Of Sewage'

CAIRO, Egypt -- In parts of Gaza City, raw sewage pouring into the streets has forced some residents to travel by boat.

Facing an already dire shortage of expensive gas from Israel, Gaza was forced to shut down its only power plant earlier this month after Egypt closed its Rafah border and began to destroy tunnels used to smuggle fuel. Since then, several feet of sewage water has poured into Gaza's biggest city.

"It's like the canals of Venice in Gaza City," Majed Abusalama, a Gazan human rights activist, told The Huffington Post on Thursday. "But with rivers of sewage."

Egypt's Rafah border leading to Gaza -- home to some 1.7 million Palestinians -- has been closed for weeks at a time in recent months. Students, unable to leave or enter the Gaza Strip, have lost their scholarships. Patients seeking life-saving surgeries wait stranded at the border. And fuel that was sent across the border almost every day can no longer be transported.

Egypt also adopted a strict policy of destroying underground tunnels leading to Gaza following the ouster of its controversial Islamist President Mohammed Morsi. Both Egypt and Israel say the tunnels are used to smuggle in weapons, but locals say tens of thousands of workers who made a living smuggling in everything from fuel to medicine to Hummers now have no source of income. And they warn they can't survive for much longer without fuel.

Gaza City residents have electricity for sometimes only four hours a day now. Children have to choose to either miss class, or wade through raw sewage to get to school. Gas prices are skyrocketing, and many families don't have any gas left, forcing them to cook over open fires. Gazans in neighborhoods not yet submerged in sewage have put up sandbags just in case.

As the fuel shortage and sewage crisis continue, already limited amounts of clean water are under threat. Houses might not be able to get clean drinking water if the pumps stop working. According to United Nations statistics from July, only one-fourth of Gazan homes get running water for a few hours a day, and a staggering 90 percent of water from Gaza's only aquifer is not drinkable. By 2016, this aquifer might not be usable.

The New York Times reported that while many Gazans don't have enough fuel for basic, everyday needs, some have pointed out that Hamas government cars are still running, seemingly unaffected by the fuel shortage.

Gazans not only have a sewage crisis to battle, they also have the everyday realities of living in what seems to be an endless conflict with Israel. On Tuesday, four Israeli air strikes hit the Gaza Strip following the launch of a rocket at southern Israel, an Israeli Defense Forces spokesman said, according to the AFP.

"In retaliation, the air force targeted a weapons workshop and two terrorist tunnels in the southern Gaza Strip," the spokesman said. "As well as a location used for terrorist activities in the north."

Gazans are also tweeting that sonic boom raids are ongoing as of Thursday morning -- a tactic used by Israeli Air Force planes to break the sound barrier at a low altitude, sending shockwaves sounding like bombs. Israel has said that sonic boom air raids are nonlethal, but the United Nations insists they cause psychological harm, blow out windows, and damage schools and other buildings.

While Israel has long been viewed as the enemy by Palestinians in the Gaza Strip, anger is boiling as Egypt continues to destroy smuggling tunnels and keep the border closed. Gazans now feel trapped -- and betrayed -- by both Israel and Egypt.

"We are angry with Egypt," Majed said over a crackly Skype connection. "Palestinians and Gazans have a history with Egypt. People here expect oppression from the occupation -- not from our Egyptian brothers."

"It's Like The Canals Of Venice In Gaza City, But With Rivers Of Sewage", 21/11/2013, online at: [http://www.huffingtonpost.com/2013/11/21/gaza-city-sewage\\_n\\_4315803.html](http://www.huffingtonpost.com/2013/11/21/gaza-city-sewage_n_4315803.html)

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### ❖ Israeli forces demolish water tank in Nablus village

NABLUS (Ma'an) -- Israeli forces demolished a water tank and an agricultural structure in the Nablus village of Aqraba on Wednesday, a local official said.

Deputy mayor of Aqraba Bilal Abdul-Hadi told Ma'an that three bulldozers escorted by seven military vehicles stormed the al-Taweel neighborhood and began demolishing the structures, claiming they were built without authorization.

The steel agricultural structure belongs to Marwan Hussein Abdul-Hadi and the water tank to Imad Fathi Minnat Allah.

Israel has destroyed more than 558 Palestinian properties in the West Bank and East Jerusalem since the beginning of this year, displacing 919 people, according to OCHA.

Between 2009 and 2011, Israel's military destroyed 173 water, sanitation and hygiene structures in the West Bank including 40 wells, 57 rainwater collection cisterns and at least 20 toilets and sinks, OCHA says.

"Israeli forces demolish water tank in Nablus village", 20/11/2013, online at:  
<http://www.maannews.net/eng/ViewDetails.aspx?ID=649221>

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### ❖ Data Shows Significant Increase in Connection to Water Networks

RAMALLAH, November 19, 2013 (WAFA) – A report by the Palestinian Central Bureau of Statistics (PCBS) on household environmental survey for 2013 said Tuesday that new data showed a significant increase in the percentage of households connected to a water network in Palestine compared to previous years.

The percentage of households living in a housing unit connected to a water network was 96.4% this year compared to 88.4% in 2009 and 91.8% in 2011.

However, this percentage varies from one geographic region to another, said the PCBS.

Households consumed about 16 million cubic meters of water per month this year – 10 million in West Bank and six million in Gaza Strip.

Monthly average household consumption of water in Palestine was 22.1 cubic meters – 21.4 cubic meters in West Bank and 23.5 cubic meters in Gaza Strip.

The PCBS said that disposal of wastewater using the wastewater network has also increased significantly this year compared to previous years.

It said 55.3% of households in Palestine used a wastewater network to dispose of their wastewater in 2013 compared to 55.0% in 2011 and 52.1% in 2009.

Local authorities collected solid waste for 71.5% of households in Palestine, the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) collected 8.5% of solid waste, and in 2.3% of households a special contractor collected the solid waste.

The average daily household waste generated in Palestine in 2013 was estimated to be 2.7 kilograms compared to 3 kilograms in 2011.

“Data Shows Significant Increase in Connection to Water Networks” , WAFA, 19/11/2013, online at: <http://mideastenvironment.apps01.yorku.ca/2013/11/data-shows-significant-increase-in-connection-to-water-networks-wafa/>

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## ❖ Turning the Be'er Sheva River from garbage dump to eco-wonder

A plan to convert the normally dry river from a sewage-ridden dump into a water park is underway.

Can it really emulate San Antonio?

By Zafir Rinat | Nov. 11, 2013

The Be'er Sheva River looked like a vision from an apocalypse. Piled garbage sat on the remains of the dry riverbed, from which land had been illegally dredged for construction. Sewage from neighboring towns had oozed alongside.

That was how it was. Now the river, located near the southern entrance of the Negev city, is undergoing a makeover to create the Be'er Sheva River Park, from the Arad Valley westward to the Be'er Sheva Valley. The 8-kilometer long park features green lawns, groves of trees, a botanical garden, footpaths and bicycle paths, and a promenade. And, still, despite all, garbage and various other eyesores.

The Be'er Sheva River Park, which the Jewish National Fund fondly calls the “ecological park of the Negev’s capital,” encompasses two smaller parks, Bell Park and Beit Eshel Park, as well as an archaeological site dating from the early Bronze Age. Work has also begun on an artificial lake.

It’s a work in process. And meanwhile, environmental hazards – primarily sewage seeping from the West Bank city of Hebron – continue to threaten the Be'er Sheva River.

Psst. Want a used carburettor?

One environmental eyesore is a thriving business selling used car parts. It looks like one big dump. So while on one side of the river a promenade is being built, on the other side sits this monstrosity. The Environmental Protection Agency has ordered the owners to remove the massive piles of used car parts that form a sort of wall overlooking the riverbed, but as of last week they were still there. The Be'er Sheva municipality says it’s working on an agreement to evacuate the site and move the car parts elsewhere.

But the more serious hazard is the Hebron River, which meets up with the Be'er Sheva River, bearing the sewage of Hebron residents.

“We encourage people to visit here,” said Eyal Yaffe, the Environmental Protection Ministry official responsible for river rehabilitation. And when they do come, they’re greeted with pollution, stench, mosquitoes and foul water, he says.

That said, he feels confident that: “The more successful the program is and the more people come to the park, the greater the pressure will become on decision makers to act to resolve the problem of the sewage flow and get rid of the car parts junk yard.”

Water, water everywhere except here

The Be'er Sheva River is actually a seasonal riverbed that is dry during most of the year. But the planners feel that since the river is meant to be a tourist draw, it should have water running through it year round. The park might even offer boating eventually, said Yaffe.

“The river is in a desert region, but near an urban area. Therefore we decided that we have to make it possible for there to be a certain flow of water, that simulates how it flows after winter flooding.” Where is this water to come from? The sewage purification facilities, which will also be a primary source of water for the artificial lake.

There’s a snag. The sewage treatment facilities in place have proved insufficient. Israel has set up water purification facilities near the Green Line to purify the Hebron River sewage, but their capacity is too small to be fully effective. The existing purification system could be upgraded and an agreement could be reached an agreement with the Palestinians about setting up another purification facility near Hebron – something the European Union has already agreed to fund, but which has yet to get off the ground. In the meantime, large amounts of sewage continue to flow from Hebron to Be'er Sheva.

The real breakthrough in developing the area took place four years ago, when the government allocated NIS 300 million to fund the project. Only half the funding is meant to come from the

government itself. The other half is coming from donations, primarily funds raised by the Jewish National Fund in the United States.

The drainage authorities in the area began working on cleaning up the river a decade ago. At the same time, the municipality and Environmental Protection Ministry began preparing the ground for the hiking spots and other tourist draws near the river that would make up the Be'er Sheva River Park. Since then, several parts of the promenade have been built, as well as an amphitheater on the western side of the park. A bridge offers pedestrians an easy way to cross the river, and work has begun on preparing the ground for a large man-made lake that will be partly situated on land that had been contaminated in the past and will now be rehabilitated.

#### A boost to property values

Although it is not yet complete, the Be'er Sheva River Park has already changed both the look of the area and the real estate market, said Yaffe.

He said the Be'er Sheva municipality is working harder to maintain the smaller parks that run alongside the Be'er Sheva River Park and fix damage caused by vandals. The benches and garbage cans have been replaced as well, and are now made of cement, to make them less susceptible to hoodlums' whims.

The government and real estate agents appear to be betting that the sewage problem will work out somehow, and that the Be'er Sheva River Park will become a major attraction for visitors to the Negev, according to Yaffe.

"The Housing and Construction Ministry realized the change that this plan will engender in the municipal area. It built neighborhoods here and invested in building the boardwalk," he said. "Apartments in Be'er Sheva are being sold in part on the basis of their proximity to the park."

Park planners would do well to learn from the challenges encountered by builders of the first man-made lake in the Negev, located near Yeruham. It was intended as a place for floodwaters – and tourists – to go, but ended up as a sewage collection point rather than a hot spot for visitors. Then the city built a sewage treatment plant a few years ago and planners decided to revive the lake project,



making sure it was used only for excess rainwater and treated sewage that had undergone a high-level purification process, and once more are aiming to attract visitors.

But Yaffe and Environmental Protection Minister Amir Peretz are looking further afield than Yeruham. They hope to replicate the successful model implemented in large desert cities in the United States like San Antonio, Texas, and Phoenix, Arizona. Last week Peretz visited the San Antonio River Walk, a public park along the San Antonio River that is lined with hotels, restaurants and other tourist attractions. He has fond hopes that Israel can build a similar venue near its major desert city, making Be'er Sheva the next San Antonio.

“Turning the Be’er Sheva River from garbage dump to eco-wonder “, Haaretz, 19/11/2013, online at:

<http://mideastenvironment.apps01.yorku.ca/2013/11/turning-the-beer-sheva-river-from-garbage-dump-to-eco-wonder-haaretz/>

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## ❖ Global Water Distress: Middle East & Africa

### Global Water Distress:

Water is a basic requirement for humanity, yet for 783 million people, water is a somewhat unattainable luxury.

Eleven percent of the global population doesn't have access to clean drinking water, according to the African Wildlife Foundation (AWF), and 2.5 billion people don't have basic sanitation. Water scarcity is expected to increase by 50 percent for developing countries and 18 percent for developed countries by 2025, according to the AWF.

### The Middle East and Africa:

Since 40 percent of the global population faces water shortages, water conservation awareness is indispensable. Below is a look at how the Middle East, United Arab Emirates, South Africa, and Kenya are handling water crises.

#### The Middle East

Scarce water resources and poor resource management plague the Middle East. Countries such as Yemen, Saudi Arabia, and Iraq struggle to gain access to sanitary water, says *The Water Project*. Agricultural land needs water to thrive and the misuse of available water supplies for agriculture, such as heavy irrigation, causes droughts and desertification.

Despite lavish cities and upscale living, the United Arab Emirates is on its way to depleting its natural natural water resource. Sharing the UAE's water scarcity epidemic, Saudi Arabia tries to replenish the water supply with desalination plants, which are a major health and environmental concern as millions of barrels of oil are consumed each year to operate the desal plants. The following is a cursory look at the water crisis in the UAE specifically.

#### United Arab Emirates

The Middle East water supply is a high-priority concern, and farmers in Abu Dhabi are on a mission to ensure water conservation and sustainability. By partnering with the government, farmers plan to reduce agricultural water use by half as of next year, according to *The New York Times*. In spring of 2013, the Emirate was reported to use 73 billion gallons of water annually, and about 70 percent is earmarked to be used for agriculture and urban landscapes.

Amid challenges such as a hostile climate and barren soil, Abu Dhabi is working to protect its groundwater with upgraded irrigation installations, implementing new production techniques, water metering, and reusing treated sewage water.

### **South Africa**

**The Water Project** also draws attention to the water crisis in South Africa, a region with ever increasing water demands. Climate change and even stolen water affect the South African water supply. New dam construction faces delays while older dams are collapsing. Water sanitation is insufficient, and waterborne diseases threaten rural communities. Raw sewage also harms wildlife. Since wildlife, the ecosystem and the economy are all interconnected, communities and people are negatively impacted when wildlife suffers. AWF explains that “*protecting Africa’s wildlife means conserving its land.*” Both land and wildlife conservation can help improve agricultural and irrigation practices that contribute to water shortages.

### **Kenya**

#### **Hope springs eternal:**

Not all nations experiencing water insecurity should feel hopeless. The New York Times reported this past fall that five aquifers were discovered in water-deprived and impoverished northern Kenya. The aquifers discovered in Turkana County are a glimmer of hope for the 17 million Kenyans who are without access to safe drinking water and 28 million Kenyans without basic sanitation, according to UNESCO. Now UNESCO is working to explore and safeguard these resources as not only drinking water, but a source for irrigation and water supply for livestock.

Global awareness and support can help combat the world’s looming and grave water scarcity threat. Share knowledge and donate to organizations such as Resilience.org and TheWaterProject.org. Don’t forget to do your part by fixing leaks and taking shorter showers to conserve the earth’s water supply.

“Global Water Distress: Middle East & Africa”, 23/11/2013, online at: <http://arabiangazette.com/global-water-distress-20131124/>

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## ❖ Middle East Seeks Groundwater Conservation Solutions Amid Rising Water Scarcity

The Sustainable Water Solutions Village at the International Water Summit from 20-22 January 2014 in Abu Dhabi will bring together global ideas and best practices to find solutions

Abu Dhabi, Nov 18, 2013 - (ACN Newswire) - With new predictions that water scarcity in the Middle East and North Africa will worsen, conserving groundwater resources as part of the region's water security strategy is becoming more urgent.

A recent study by the Potsdam Institute for Climate Impact and Research, published in the journal Environmental Research Letters, concludes that an expected rise of 3.5 degrees C in global mean temperature by the end of the century will expose 668 million people worldwide to new or aggravated water scarcity, on top of the 1.3 billion currently living in water-scarce regions.

The problem will be even more severe in arid regions such as the Middle East with these expected changes in climate delivering less rain and further diminishing the availability of scarce groundwater resources.

Conserving precious groundwater resources, which, as an example, accounts for 63.3 per cent of water resources in the emirate of Abu Dhabi in the UAE, will be a key focus of the Sustainable Water Solutions Village at the 2nd International Water Summit (IWS) from 20-22 January 2014 in Abu Dhabi, hosted by Masdar.

The Sustainable Water Solutions Village at IWS 2014 will bring together global ideas, best practices and think-tanks that have been successfully implemented in water-scarce communities to achieve water sustainability and conserve natural resources.

"Conserving groundwater is a major social and environmental issue across the region, and the new predictions outlined in recent studies shows the issues will get worse if urgent action is not taken," said Ara Fernezian, Managing Director- Middle East for Reed Exhibitions, organizer of the 2nd International Water Summit.



"However, it also opens a range of commercial opportunities, with over \$300 billion of investment on water projects being planned by governments in GCC countries by 2022. The Sustainable Water Solutions Village at IWS 2014 will provide many successful ideas for investing in and managing these projects to address the water scarcity challenges."

"The success of the Sustainable Water Solutions Village at this year's inaugural IWS encouraged us to expand the village in 2014, and we will engage even more governments, NGOs, universities and companies in an effort to find solutions, alternative water resources and strategies to protect groundwater," said Mr Fernezian.

IWS 2014 is a global platform that hosts world leaders, government organizations, policymakers, public and private sector investors, business leaders, consultants and water experts to interact, negotiate and finalise plans to develop diverse and sustainable water portfolios in the GCC and other regions.

The Sustainable Water Solutions Village in the exhibition area at IWS 2014 will feature technologies, projects and case studies that offer solutions to the challenges of water security, with a particular focus on water solutions for agriculture and groundwater conservation.

IWS is co-located with the World Future Energy Summit, also hosted by Masdar, as a part of Abu Dhabi Sustainability Week (ADSW), a global platform that addresses the interconnected challenges that affect the widespread acceleration and adoption of sustainable development and renewable energy. The largest gathering on sustainability in the history of the Middle East, ADSW encourages actionable outcomes to carve a pathway toward sustainability worldwide.

#### About International Water Summit

IWS 2014, hosted by Masdar, is a global platform that hosts world leaders, government organizations, policymakers, public and private sector investors, business leaders, consultants and water experts to interact, negotiate and finalise plans to develop diverse and sustainable water

portfolios in the GCC and other regions.

The inaugural edition of International Water Summit 2013, hosted by Masdar with the strategic Partnership of ADWEA, was attended by over 4700 attendees from 75 countries and contributed significantly to addressing global water issues such as water scarcity in Arab regions, sustainable growth and economic development in arid regions, the future challenges of water availability and cross-boundary collaboration through international water governance and the water - energy nexus.

IWS 2014, from 20-22 January 2014, is co-located with World Future Energy Summit, also hosted by Masdar, as a part of Abu Dhabi Sustainability Week (ADSW), a global platform that addresses the interconnected challenges that affect the widespread acceleration and adoption of sustainable development and renewable energy. For more information about the International Water Summit, visit: [www.iwsabudhabi.com](http://www.iwsabudhabi.com).

“Middle East Seeks Groundwater Conservation Solutions Amid Rising Water Scarcity”, 17/11/2013, online at: <http://www.sys-con.com/node/2874855>

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[WWW.ORSAM.ORG.TR](http://WWW.ORSAM.ORG.TR)

## ❖ Avert water wars - build desalination plants

Get ready for the water wars.

Most of the world's population takes water for granted, just like air - two life-sustaining substances. After all, the human body is nearly two-thirds water.

But a Hindustan Times blogger said that in India right now, as in so many other places around the globe, drinkable water has become such a precious commodity that it's dragging the world into "water wars to follow the ones for the control of fuel oil."

Climate change is drying up lakes and rivers almost everywhere. In Australia, for example, an unprecedented heat wave brought on massive wildfires and critical water shortages.

As water grows scarce, more countries are building dams on rivers to hog most of the water for themselves, depriving the nations downstream. Already, Egypt had threatened to bomb the Grand Renaissance Dam upstream on the Nile River in Ethiopia.

And as the Earth's population crossed the 7 billion mark last year, more and more water sources are so polluted that drinking the water can kill you. No one's counting, but various government and private estimates indicate that worldwide, tens of thousands of children die every day from drinking contaminated water.

By most estimates, half the world's people live in places where clean water is not easily available. Bangalore, India, for example once had 400 lakes in its vicinity. Now, the New Indian Express newspaper wrote, only 40 are left, and all of them are polluted.

Hence the fights. One of the biggest areas of conflict is the India-Pakistan-China nexus. Multiple rivers intertwine the countries, and as water levels fall, all three are building dams to keep much of the water for themselves.

China has built more dams than any other nation, making numerous countries angry because Chinese rivers flow into more adjacent states than from any other state. And yet, even with 14 different downstream border states, China refuses to agree to any water treaties. Right now, China has

approved plans to build 54 more dams on rivers, many of which serve as the lifeblood of neighboring states.

In China's north, "desertification" is turning vast areas into dust bowls. So the government is trying to divert 6 trillion gallons of water per year from the Yangtze River to reclaim the area, worrying people in other parts of China who rely on the Yangtze for their own water.

In Iran, farmers in one region destroyed a water-pump station that was carrying water away from their area to the city of Yazd. That started a fight with security forces, but the farmers are remaining on station to make sure the pump is not rebuilt.

A recent NASA study warned of an "alarming rate of decrease in total water storage" in Iraq's "Tigris and Euphrates river basins, which currently have the second-fastest rate of groundwater storage loss on Earth, after India." The report warned that water scarcity could become another cause of conflict.

Egypt's military threats against Ethiopia begin to make sense when you realize that Egypt's 84 million people draw 95 percent of their water from the Nile River. A common saying is that without the Nile there is no Egypt.

The [U.S. House of Representatives](#) recently held a hearing on water shortages and other threats in Central Asia, and Rep. [Dana Rohrabacher](#), R-Costa Mesa (Orange County), warned of another potential conflict, quoting Uzbekistan's president, [Islam Karimov](#): "Uzbekistan will even use weapons if necessary" against its northern neighbor Kazakhstan "to get the water passing through (Kyrgyzstan) territory that we intend to accumulate in reservoirs."

In Sri Lanka this month, the Daily News wrote: "We can live many days without food, but without water it is about three days." Still, "we can't seem to get the right water to the right people at the right time. ... More people have access to cell phones than safe water."

So where is all this water going? With ever-rising temperatures, more and more water evaporates and returns to the ground as rain. But most of it falls into the oceans. That's one reason sea levels are rising worldwide, threatening vast coastal areas.

But all of that leaves the world with an expensive but straightforward solution to the water-shortage problem everywhere. Build desalination plants, as Australia, Israel, Saudi Arabia and other well-off, water-stressed states are already doing.

Soon enough, whichever country starts marketing these critically important plants worldwide will make a lot of money and grow to be seen as a savior for millions of the world's people.

“Avert water wars - build desalination plants”, 22/11/2013, online at:

<http://www.sfgate.com/opinion/brinkley/article/Avert-water-wars-build-desalination-plants-5002898.php>

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### ❖ India's polluted Ganges River threatens people's livelihoods

*The Ganges is India's holiest river, considered a source of spiritual purification for devout Hindus. But today the river is among the world's most polluted, struggling under the pressures of modern India.*

On the banks of the Ganges River in the Indian city of Varanasi, a man in his thirties is washing clothes by rhythmically hitting on them on a granite slab. Surrounding him on the steps that rise out of the water is a brightly colored patchwork of saris, drying in the morning sun. The man's name is Vijay Kumar and his family has been working on the river bank washing clothes for generations.

"Every day I'm here," he said. "I start at 5 a.m., then later in the day I iron everything. In the evening I deliver clothes to the customers."

Vijay Kumar's spot on the river is right next to one of Varanasi's traditional cremation areas - a place where Hindus come to burn the bodies of their dead. As he washes clothes, human ashes are dumped into the water just meters away, and smoke from the burning funeral pyres wafts out over the river behind him.

"It's a problem that the bodies are burning just near to me. But what can I do?" said Vijay. "This is our traditional place to wash clothes, and there is nowhere else to go. The government promised us a new location some years ago, but nothing has changed."

#### *River a lifeline*

Vijay Kumar is just one of the more than 400 million people who depend on the Ganges River for their livelihoods. But he said he's struggling today because local environmental authorities are trying to shut down his business, saying that his soap suds are polluting the river.

This sort of challenge to balance economic interests and environmental protection is one being played out the world over. But with this river - and particularly here in Varanasi - there is another dimension: the Ganges River is not just an economic lifeline, but also a spiritual one.

Hindus worship the river as a goddess, Maa Ganga - or Mother Ganga. Anthropologist Dr Assa Doron explained: "The city itself is very much associated with Shiva, and of course Shiva himself has a very strong relationship with the goddess Ganga [...] who has a whole purificatory element - both of them together is what really makes this city shine," he said.



Every year millions of Hindu pilgrims come to Varanasi, seeking spiritual purification in the waters of the Ganges. Many other Hindus who come to Varanasi cremate their loved ones and throw the ashes in the sacred river.

Hindus believe that if you die or are cremated in Varanasi, you get moksha - or liberation from the cycles of death and rebirth. But while the river Ganges - known in India as the Ganga - may be pure for religious believers, in secular terms it's in fact gravely polluted.

### *Multiple river threats*

Varanasi's cremation grounds, however, are just a small fraction of the wider pollution problem facing the Ganges.

Leading water pollution expert B.D. Tripathi of Benares Hindu University described three major Ganges pollution problems: domestic waste, untreated industrial effluent including toxic and heavy metals, and cremation grounds (two in Varanasi alone).

The river runs for some 2,500 kilometers (1,550 miles), with more than two dozen major urban centers located on its banks. With many factories and business dumping toxic chemicals into the river, human sewage compounds the situation.

An estimated 3 billion liters (800,000 gallons) of sewage is released into the Ganges each day, of which only a third - according official figures - is processed by treatment plants. Agricultural businesses are also draining the river basin and adding toxic pesticides and fertilizers into the river system.

Tripathi said that if pollution in the Ganges remains unchecked, the river faces a potentially terminal decline. Without conservation measures, he warned, the river will become fragmented into ponds and streams. "The entire structure of the river will be changed," he said.

### *Changing, and staying the same*

As India grows economically, those who depend on the river are already bearing witness to the changing health of the river water.

Jaylal Sahani, a boatman now in his 50s, spends his days ferrying pilgrims and tourists in Varanasi. He remembers a time in his childhood when the river was pure enough to drink.

"If we drink the water now, we will get sick," he said.

Kumar, the clothes-washer, says the big factories and businesses are the real problem.

"The government should control the big business and leave us small people in peace. We have no choice but to work here," he said.

While modern pollution is forcing many people to break their ties with the river, Hindu scholar Krishnakant Shukla argued that the Ganges's unique place in Hindu cosmology means the river will remain at the heart of Hindu life - however severe the pressures of modern life may become.

Myth lives on in Varanasi, Krishnakant said. "Due to some inexplicable miracle, you can still find people here doing their daily practices the way they did one thousand years ago," he said. "This is amazing - I really don't think there is any other place in the world."

"India's polluted Ganges River threatens people's livelihoods", 21/11/2013, online at: <http://www.dw.de/indias-polluted-ganges-river-threatens-peoples-livelihoods/a-17237276>

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### ❖ Nile talks between Egypt, Ethiopia fail to reach deal

November 21, 2013 (ADDIS ABABA) – The Ethiopian and Egyptian leaders on Tuesday held talks in Kuwait over Cairo’s concern regarding the construction of what will upon completion be Africa’s biggest hydro power plant.

According to Al Jazeera, Ethiopia’s prime minister, Hailemariam Desalegn, and Egypt’s interim president, Adly Mansour, discussed the row over the Nile on the sidelines of an Afro-Arab Summit in Kuwait.

However, the talks between the two leaders ended with failure to reach an agreement, particularly after the Egyptian president demanded to negotiate over the dam project, a request rejected by the Ethiopian premier.

Egypt has proposed for reduction in the size of Nile dam’s structure and on the water holding capacity of its reservoir which is projected to hold 63 billion cubic meters.

*Sudan Tribune’s* attempts to contact officials in the prime minister’s office were futile as they were reported to be out of the country.

Egypt says the Ethiopia’s Grand Renaissance Dam, being built at Nile tributary near the Sudanese border will diminish the water supply to its soil.

Water security is a prime concern to the North African nation as the Blue Nile -which has its source in Ethiopia- is the source to 85 % of Egypt’s resource of water.

Egypt argues that it does not have other alternative water sources unlike other Nile Basin Countries and insists the colonial-era agreement which gives Egypt around 70 percent of Nile River water sources shouldn’t be violated.

Addis Ababa however says its controversial dam project will not affect the water interest of the two downstream countries - Egypt and Sudan.

Ethiopia's Minister of Water and Energy, Alemayehu Tegen, told *Sudan Tribune* that his country won't back off from its plans to build the power plant because of Egypt's concern.

He said one country's hegemony over a regional resource that belongs to all Nile Basin Countries is unacceptable.

Tegen further said the hydropower plant is a regional project that would benefit all Nile Basin Countries and it shouldn't be a source confrontation but cooperation.

A panel of international experts who were tasked to assess the dam project's regional impact said in their final findings that the power plant project doesn't have any adverse impacts on Egypt or Sudan.

The meeting in Kuwait was the first for the two leaders since former Egyptian president; Mohamed Morsi was ousted in July by the military following mass protests.

Egypt has in the past warned against any upstream projects and there has never been such bigger project along the river since Ethiopia launched the mega dam project two years ago.

Tensions between Ethiopia and Egypt escalated after Addis Ababa started diverting the course of the Nile River in May as part of an engineering work.

Following the diversion work Egypt's president, Mohamed Morsi, warned that all options were being considered to stop the dam.

The \$4.2 billion massive Hydro power plant is currently 30 % complete and will produce 6,000 Megawatts of energy upon completion.

"Nile talks between Egypt, Ethiopia fail to reach deal", 21/11/2013, online at:  
<http://www.sudantribune.com/spip.php?article48888>

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## ❖ Egypt and Ethiopia leaders meet over Nile row

### **First talks on Ethiopia's plan to dam the Nile since Egypt's Mansour took power end without agreement in Kuwait.**

The Egyptian and Ethiopian leaders have met for the first time to discuss tensions over Ethiopia's construction of a huge hydropower dam on the river Nile but the meeting ended without any agreement, sources said.

The Egyptian interim president, Adly Mansour, and Ethiopia's prime minister, Hailemariam Desalegn, met on Tuesday on the sidelines of an Afro-Arab Summit in Kuwait, sources familiar with the meeting told Al Jazeera.

It was the first meeting between leaders of the two countries over the Grand Renaissance Dam since the deposed Egyptian president, Mohamed Morsi, met Hailemariam in May.

Ethiopia began diverting the Blue Nile in May to build what will be Africa's largest dam when it is finished in 2017. Thirty percent of its construction has already been completed, according to Ethiopia. The hydropower station will have a 6,000-megawatt capacity when finished.

Egypt, almost totally dependent on the river, fears the dam could diminish its water supply. Ethiopia, which hopes the hydropower dam will boost its economy through power exports, has said there will be no major impact.

The sources said the Egyptian side had requested the meeting to "negotiate" over the project but that nothing was agreed.

Hailemariam, a source said, rejected a request from Mansour that he be involved in discussions about the project.

Colonial-era treaties negotiated by the British gave Egypt and Sudan a majority share of Nile waters. Seven other countries through which the river flows argue the agreements were unjust and need to be torn up.

Egypt's only current recourse lies with a panel of 10 experts from Egypt, Ethiopia, Sudan and other countries who have been reviewing the social and environmental impact of the dam.

The panel has issued a report about the project's potential impact on water levels, which has not yet been made public.

At a one-day meeting in the Sudanese capital Khartoum this month the water ministers of Egypt, Sudan and Ethiopia agreed to form a panel to implement the expert recommendations.

But Egyptian objections about the composition of the committee have been delaying its formation, Ethiopia's water minister has said.

A second round of negotiations is scheduled for Khartoum on December 8.

### **Perceived insult**

Egypt has previously sought to delay the construction of the dam and its requests to inspect it have been rejected by the Ethiopians, who say Egypt needs to relinquish its power to veto projects on the Nile, which it was also given as part of the 1929 and 1959 treaties.

Under those agreements, Egypt is entitled to 55.5 billion cubic meters a year, most of the Nile's total flow of about 84 billion cubic meters. However, about 85 percent of the river's water originates in the Ethiopian highlands.

A new deal signed in 2010 by other Nile Basin countries, including Ethiopia, allows them to work on river projects without Cairo's prior agreement. Egypt has not signed that deal.

The meeting on Tuesday, the sources told Al Jazeera, was almost called off because Hailemariam, who is also the current chairman of the African Union, was insulted by a request that he should go to Mansour.

The issue was resolved when the leaders agreed to meet halfway - in a corridor.

“Egypt and Ethiopia leaders meet over Nile row”, 20/11/2013, online at:

<http://www.aljazeera.com/news/africa/2013/11/egypt-ethiopia-leaders-meet-over-nile-row-2013112013910856978.html>

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## ❖ Ethiopia: Watery Confusion

Egypt's sense of nationhood is tied up in control of the Nile. So too is energy self sufficiency for Ethiopia. The clash between these two realities could have deadly consequences. America will be tempted to intervene - on the wrong side.

The issue is a major dam under construction by Ethiopia on the Blue Nile River - the source of over 80pc of the water that eventually enters the Nile River system. The Blue Nile starts in Lake Tana in Ethiopia and flows through tall, narrow chasms to the Sudan border. Within Sudan, the Blue Nile meets the White Nile, in Khartoum, and from there flows into Egypt.

For many years, all the Nile's water has been divided between Sudan and Egypt; any other country that dared to touch the Nile was met with stern threats from Egypt and its protectors: first England, then America. When Ethiopia sought World Bank (WB) financing for this dam more than 20 years ago, the US leaned on the Bank to say no.

Egypt was at peace with Israel at America's request, and they demanded America's help with the Nile question (and two billion dollars a year) in return. The calculus was clear: Ethiopia brought us nothing, Egypt, under Hosni Mubarak, brought peace with Israel. So we did Egypt's bidding with the World Bank.

The last several years, however, have brought Ethiopia into a partnership with the US in attacking Al-Qaeda and similar groups in Somalia. Meantime, Egypt deposed of a longtime US ally and Americans were not enthusiastic about his replacement, Mohamed Morsi.

Trying to stir up nationalist sentiment, Morsi focused on Ethiopia's announcement that it would start to divert the Blue Nile, in order for dam construction to begin. He said - "We will defend each drop of Nile water with our blood if necessary", and summoned leaders of the Islamic parties to discuss Egypt's likely response.

Infamously, a leader of one of those parties, not knowing the meeting was being broadcast, said on live television that the "real enemies" were America and Israel. Talk included a military strike.

Morsi is gone. The US Secretary of State John Kerry has embraced the new military government. The danger is that the US, in its effort to prop up the Egyptian military successors to Morsi, will try to give them a victory over the dam issue.

When has the US ever managed to play the internal politics of another country with any success?

It is so much more likely that, if we go down this route, we will alienate all of our allies in the fight against extremism in Somalia, and do nothing to appease the widely held belief in Egypt, voiced at that televised meeting, that somehow all wrongs are due to America. We will choose the wrong side-one again.

Why do we need to take sides at all?

We cannot stop Ethiopia by cutting off its financing: Ethiopia has come up with the funding for this project from the sale of bonds and loans from China. The dam, once finished, will produce tremendous amounts of electricity that can be sold to neighboring countries to retire the bonds.

And, if the new Egyptian regime wants to show it is at least as nationalistic as the deposed Morsi government and threatens to bomb the dam, will we be proud to be associated with that?

If we do take sides, the dam is the right thing to do for environmental and humanitarian reasons. Ethiopia will become a net energy exporter in a part of the world chronically lacking in electricity. The stored water can alleviate the drought that occurs every seven years, filling world newspapers with horrifying pictures of starvation in Sudan and Ethiopia.

Once the reservoir is filled, the flow of the Nile would not be diminished. The time to fill the reservoir can be during the wet seasons and spread out over many years.

There are many ways for America to signal its support of the new regime in Egypt. Shutting down Ethiopia's dam, or looking the other way while Egypt does so, is not one of them.

“Ethiopia: Watery Confusion”, 17/11/2013, online at: <http://allafrica.com/stories/201311182122.html>

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### ❖ Water systems research fills in the details for Africa's largest dam

When the government of Ethiopia finishes building the Grand Ethiopian Renaissance Dam (GERD) in 2017 or 2018, it will not only have built the largest hydroelectric power-generation plant in Africa, but also stirred up tensions among African nations, and indelibly altered a river that itself has guided millennia of human history in the region.

Built astride the Blue Nile branch of the Nile River, the dam will have a huge impact on water resources on the north-flowing river's next stops: Sudan and Egypt. Governments around the world tussle over water politics, but what makes GERD even more contentious is that many parties don't think the Ethiopian government has provided sufficient technical detail on the project.

Paul Block, an assistant professor of civil and environmental engineering at UW-Madison, is one of many researchers around the world and across disciplines trying to bring more empirical data and analysis to the debate.

"Some of the analyses have been fairly simplistic and they need to be more rigorous," Block says.

"We're laying out scenarios that are plausible so that there are discussion points."

Block and his students are focusing on how Ethiopia might find the water to fill the dam's reservoir. One way or another, this process will have staggering implications, diverting about 74 billion cubic meters of water from the Blue Nile.

Block's group is developing computer models to help predict the outcomes of different methods of filling the dam, accounting for such variables as climate change, evaporation and rainfall. One of his Ph.D. students, Ying Zhang, currently has a paper in review about possible GERD fill policies and their implications for hydropower generation and the Nile's downstream flow.

"If they fill it slowly, there are fewer effects on the livelihoods of people who live downstream, but that means Ethiopia won't be able to generate as much hydropower early on," Block says.

On the other hand, if Ethiopia fills the dam quickly, the country might make a quicker return on its investment — and aggravate the Egyptian government, which fears the dam will disrupt agriculture in Egypt.

Block, who has studied water management issues in Ethiopia for about 10 years, says he and his students have to confront several layers of unknowns in this research.

"The dam project was a secret for quite a while, and there's still not a lot of information on that," he says. "There's also a limited amount of monitoring and observation of precipitation and stream flows within Ethiopia."

The goal, Block adds, is not to advocate for one particular technical approach to the dam, but to make sure that all the governments debating the project have a reliable body of research to draw on.

That said, his insights are already part of the public debate in Africa. In a wide-ranging analysis in the November issue of "Africa Today," Block gives technical comments on filling GERD's reservoir, and even points out the hair-raising political and economic consequences should the dam's construction be stalled. That the article even raises such a possibility only highlights how provocative GERD really is, and how far its effects, positive or negative, will reverberate.

The research brings Block into contact with researchers in fields from law to the social sciences. It's a powerful example of engineering work that's impossible to separate from the broader social consequences.

"Everybody preaches interdisciplinary work, but in this case it really is as much as anything figuring out the social and political pieces," he says. "We're just trying to add a little bit to that — the technical questions aren't even the biggest things people are considering."

"Water systems research fills in the details for Africa's largest dam", 22/11/2013, online at:  
<http://www.news.wisc.edu/22337>

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## ❖ Fighting China's Water Woes

Environmental problems such as climate change, ozone depletion, water pollution, and resource degradation are compounded by the expanding world population and increasing social mobility. These issues are often at the heart of many political and social challenges states face. Thus, environmental stewardship is a cornerstone of social welfare. Water is an indispensable and irreplaceable natural resource. It is an essential element for all human and animal life, as well as for any sustained socio-economic development. Public policy needs to address a broad range of transnational environmental issues that require mutual understanding and international cooperation to solve.

Yuan Xikun, an artist, educator, and environmentalist who resides in China (a country facing a severe water crisis), realizes the significance of water. Xikun launched the water awareness campaign, Champion of Water Alliance, to address the policy and cultural implications that relate to environmental and relevant trans-boundary issues by embracing a cross-disciplinary and intercultural approach. Champion of Water Alliances is dedicated to promoting the wise use of water resources through campaigns such as marking water bottles, washing cars with one bucket of water, and educating young people. The idea that "we do not inherit the earth from our ancestors; we borrow it from our future generation" inspires Xikun's activities. He aims to bring his creativity and sense of social responsibility to this important issue through this innovative initiative.

With the increasing complexity of social issues and cross-national interactions, culture and arts policy offers an opportunity to advance cross-sector collaboration. Art plays a unique role in connecting visual understanding with social issues. Since both culture and environment have the power to unite people through their unique features and transcend boundaries. Champion of Water Alliance explores new hybrid forms of integration that promote private-public partnership, civic engagement, and multilateral agreement on solving trans-boundary issues.

The "Marking Your Water Bottle" initiative was implemented as a practical water-saving solution by the United Nations Environment Programme (UNEP) during the 'Green Economy Conference in Beijing. The conference is co-hosted by UNEP Executive Director - Achim Steiner.

The founder of Champion of Water Alliance, Professor Yuan Xikun, demonstrates the technique of 'wash a car with a bucket of water' to media, school communities, and households. He is joined by youth actors and actresses

The Beijing Tourism Development Committee joined the campaign of Champion of Water Alliance, through which they mobilized more than thousands of local hotels and restaurants to set the measures and metrics to reduce the water consumption. Yuan presented the sculpture 'Urgency of Polar Region' to the Director of the Beijing Tourism Development Committee to highlight the role of energy and water in the larger context of climate change.

The "Marking Your Water Bottle" initiative of Champion of Water Alliance was implemented during China's two political Sessions (National People's Congress and Chinese People's Political Consultative Conference). Legislators and policymakers all joined the campaign and expressed positive support for the initiative, while generating the coalitions needed to pass important environment- and water-related legislation.

In partnership with schools, educational institutions, and youth groups, Champion of Water Alliance highlights the importance of the educational aspect of water conservation. The campaign engaged with more than 30 schools and universities and nearly 20,000 students.

Parental engagement is one of the key components of the 'Washing the car with the bucket of water' initiative, which stresses the significance of parent-school partnerships to raise awareness for increasing efficiency of water usage in a community.

By working with experts and teachers from education and technology sectors, we introduced a series of curriculum and workshop for students to learn technological solutions, techniques, and knowledge about alternative approaches to increasing the efficiency of water usage and to reduce water consumption. This experimental project generates a unique opportunity for students to apply knowledge from text books to real life experiences.

"Fighting China's Water Woes", 20/11/2013, online at: <http://www.worldpolicy.org/blog/2013/11/20/fighting-chinas-water-woes>

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## ❖ Mekong Dams Threaten Food Supply for Thousands

Hydroelectric dam constructions on the Mekong River in Laos financed by foreign businesses could undermine the massive river's fish stocks on which thousands of people Burmese depend for food, a US-based environmental organisation has warned.

A dam now under construction directly on the Mekong at Xayaburi and part financed by the Electricity Generating Authority of Thailand (EGAT) is one such potential threat to fish stocks. But a new project just approved by the Lao government at Don Sahong, near the Lao-Cambodian border, poses an even bigger menace to fishing, said leading global river watchdog NGO International Rivers, based in California.

"The Don Sahong Dam is threatening to block the only channel of the Mekong that currently allows for year-round fish migrations on a large scale, while also wiping out one of the last pools of the endangered Irrawaddy dolphins," said International Rivers.

The Mekong forms the border between Burma's Shan State and Laos for more than 200 kilometres (124 miles) through the so-called Golden Triangle region.

"Over 22,000 primarily indigenous peoples live in the mountainous region of this isolated stretch of the river in Burma," said the NGO Burma Rivers Network, which also campaigns against the disruptive effects of hydroelectric dams.

Fish from the Mekong, as well as the Salween and Irrawaddy rivers, provide up to 80 percent of protein needs for communities living alongside, said International Rivers. Dams built downstream on the Mekong will disrupt or prevent the seasonal migration upstream of fish and could thus drastically reduce the food supply of river-dwelling communities, the NGO said.

The Don Sahong project—clouded in secrecy and with even the identity of its main financial backers unclear—is "reckless and irresponsible," International Rivers' Southeast Asia Program Director Ame Trandem said in a statement this week.

"Scientific experts have warned that the Don Sahong and Xayaburi dams have the potential to dramatically alter fish stocks and even wipe out species, leading to serious regional food security concerns," Trandem said.

Both dams are being built despite objections by Cambodia and Vietnam, two member countries of the Mekong River Commission (MRC) which is supposed to be a watchdog for the river shared by six countries though which it flows.

The MRC's full members are Thailand, Laos, Cambodia and Vietnam. While Burma and China are not full members, they take part in meetings as "dialogue partners."

The Xayaburi project in northern Laos will be capable of generating up to 1,280 megawatts of electricity—more than 25 percent of Burma's existing power capacity—and the Don Sahong in southern Laos will generate 360 megawatts.

Most of the electricity is expected to be bought by Thailand.

"It is still unclear who is financing Don Sahong dam. One of major issues for Don Sahong, like other large-scaled project in the region, is the lack of transparency," a Thailand coordinator for International Rivers, Pianporn Deetes, told The Irrawaddy.

"A main concern for both Xayaburi and Don Sahong dams in Laos is trans-boundary impacts on ecosystems and fish migration. The dams will create inevitably devastating impacts on riverine communities and dwellers whose livelihoods and food security depend on the Mekong River's resources such as fisheries. This includes [communities] in Burma," said Pianporn.

It is understood that two Malaysian engineering firms, led by Mega First Corporation, are to construct the Don Sahong dam, which the Lao government insists will go ahead even though the MRC has not yet discussed its possible impact and despite its location close to the Cambodian border.

International Rivers is urging MRC members and partners to take action to protect the Mekong according to the brief of their commission's constitution.

"Laos has ignored advice provided by the MRC that the Don Sahong Dam must undergo the 'prior consultation' process, instead choosing only to notify neighboring countries of its unilateral decision to build the dam," said Pianporn.

"The Lao government released the project's Environmental Impact Assessment to neighboring countries and to the public only days before construction was set to begin on the Don Sahong coffer dam (temporary enclosure) and work camps. Such decisions should not be shrouded in a cloak of secrecy, but rather demand a regional decision that takes into account the opinions of millions of people whose lives depend on the Mekong," Pianporn said.

According to International Rivers, Thailand's EGAT is also at the forefront of plans for two hydroelectric dams on Burma's Salween River—at Hut Gyi and Mai Tong, previously known as Ta Sang. It said fish stocks and local community food supplies would be disrupted if those projects went ahead.

Thailand aims to draw more 10,000 megawatts of electricity from hydro systems on rivers in Burma and Laos over the next 20 years, the governor of EGAT Sutat Patmasiriwat is on record as saying. Burma is desperate for electricity to fuel its developing economy but the Naypyidaw government halted a massive hydro dam project on the Irrawaddy River at Myitsone on environmental grounds. Most of the electricity would have been transmitted into China's Yunnan Province.

Public opposition to big-river dams is growing, not least in Thailand where not-in-my-backyard protests have virtually halted all new dam work and pushed EGAT to venture abroad.

Vietnam, which until now has relied on scores of small-to-medium-sized hydro dams to generate up to 60 percent of the country's electricity, is scaling back not on environmental grounds but because electricity generation is variable and dependent on reservoir water levels.

However, countries such as Laos are being encouraged to promote dams by the World Bank which has once again embraced this “clean” energy source. A decade ago, the bank had abandoned financial support for large dams but has recently reversed that decision because of concerns about climate change triggered by burning fossil fuels such as coal and oil.

“The Mekong is in an extremely precarious situation. The full extent of the dams' impact has yet to be understood,” said International Rivers' Pianporn. “Trans-boundary impact assessments have not been carried out for the Don Sahong or Xayaburi dams, and the MRC's study has yet to begin. Informed decisions are clearly taking a back seat to individual interests.”

“Mekong Dams Threaten Food Supply for Thousands”, 20/11/2013, online at: <http://www.irrawaddy.org/business/mekong-dams-threaten-food-supply-thousands.html>

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### ❖ **Proposed Laos dam on the Mekong raises ecological fears**

Nineteenth-century Mekong explorers marvelled at the wetlands of Siphandone in southern Laos, a district of spectacular waterfalls, swirling rapids, steep narrow gorges and myriad islets.

Beyond the rapids, a colony of rare Irrawaddy Dolphins still frolic near the Cambodia border.

But experts say this ecotourism paradise, known as the "Four Thousand Islands" region, could soon be irreversibly damaged by the construction of a hydro-electric dam recently announced by Laos, only a few kilometres from the renowned Khone Waterfall, a major tourist attraction.

The communist government notified the Mekong River Commission [MRC] on September 30 of its plans to launch construction of the Don Sahong Dam next year. The 260 megawatt dam would be Laos' second Mekong hydropower project.

The commission is the multi-nation body that supposedly oversees development on the vital waterway.

Concerns about the new dam were raised this week in Bangkok at a forum of 103 Thai NGOs campaigning against it.

Photo-journalist Suthep Kritsanavarin, who has documented the communities of the region for National Geographic magazine told the forum: "If the water level in the Hou Sahong [channel] increases [to support the dam], we will see a decrease in other areas, including the Pha Pheng [Khone] Waterfall.

"If there's only half of the water in the dry season, would anyone want to go there?"

The NGOs claim to represent the people of eight Thai provinces bordering the Mekong, who experts say will suffer major losses of fisheries and agricultural fertility if the dam is built.

Dr Ian Baird a Mekong specialist at the University of Wisconsin-Madison told the Post: "The dam would cause serious nutritional problems throughout the Mekong region. Decreasing availability of fish in the marketplace would lead to higher prices, reducing fish consumption, especially by poorer consumers."

The Hou Sahong channel, which would feed the dam's reservoir, is the key route used by 80 to 90 per cent of migratory fish coming from Cambodia.

UK fisheries expert Terry Warren, a consultant on the dam's first environmental assessment said "if these fish can complete this migration, Cambodian fisheries will continue to flourish".

"[But] stop a migration and within a few years everything will start to collapse and eventually cease to exist. I see disaster looming for the fisheries of Cambodia and southern Laos, if this project goes ahead," he said.

Dam-builder Megafirst has dismissed these concerns. Megafirst Senior Environmental Manager Dr Peter Hawkins told the Vientiane Times "environmental impacts can be mitigated by using other natural channels adjacent to the Hou Sahong".

The Laotian government has long been embroiled in controversy over its first dam on the Lower Mekong at Xayaburi. It is determined to press ahead with Don Sahong, despite objections from downstream nations.

Sin Niny, the Cambodian deputy chairman of their National Mekong Committee, has demanded that Laos stop all construction plans until its neighbours have reviewed the environmental impact. Vietnam has called for a 10-year moratorium on all mainstream dam building.

MRC members have been bitterly divided over unilateral damming of the Lower Mekong. Cambodia and Vietnam want independent scientific studies before any dam goes ahead.

Don Sahong will be another major test-case for the MRC and its mandate to ensure the Mekong's health. Its fisheries support 60 million people.

Laos surprised many with its unilateral assessment that Don Sahong "is not a mainstream dam", a move that would allow it to avoid public forums.

Cambodia and Vietnam insist Don Sahong is a mainstream site. Hans Guttman, CEO of the MRC, said: "Don Sahong is a mainstream dam [according to the MRC Secretariat] ... since its inflow comes not from a tributary, but rather through the mainstream."

Increasingly the Mekong's future looks bleak. The MRC has no right of veto over what many NGOs view as a destructive dam-building spree.

“Proposed Laos dam on the Mekong raises ecological fears”, 23/11/2013, online at:

<http://www.scmp.com/news/asia/article/1362726/proposed-laos-dam-mekong-raises-ecological-fears>

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## ❖ Greater Mekong Subregion Ministers Endorse Plan To Accelerate Cross Border Trade

MANILA, Nov 22 (BERNAMA-NNN-ADB) -- Countries of the Greater Mekong Subregion (GMS) have endorsed measures to expedite and expand cross border transport and trade, including stepping up bilateral and trilateral country agreements.

"Intraregional trade, tourism, and investments are essential for boosting growth and standards of living in the subregion," said James Lynch, Director of the Asian Development Bank's (ADB) Regional Cooperation Division in the Southeast Asia Department.

"Member countries have agreed to continue to fast track and streamline transport and trade facilitation measures, and we will continue to accelerate our common goals of transforming transport corridors into economic corridors," he said.

At the 4th Joint Committee Meeting for the GMS Cross Border Transport Agreement (CBTA) in Nay Pyi Taw, Myanmar, GMS transport ministers endorsed a three-year action plan (2013 to 2016) to support implementation of the next phase of transport and trade facilitation measures.

This pioneering transport agreement, ratified in 2003, provides a blueprint for non-physical measures needed to boost cross border land transport, including 'single stop' customs inspections.

ADB is a key development partner of the GMS, and serves as secretariat for the Joint Committee.

The GMS, with strong support from development partners, including ADB and Australian Aid, has made significant headway since 2010 with bilateral transport and traffic rights agreements; agreement on the extension of the East-West Economic Corridor to include key capitals and deep sea ports; and the launching of a transport and trade facilitation knowledge portal.

Among the most significant recent achievements are an agreement between the People's Republic of China (PRC) and Viet Nam allowing trucks and buses of both countries to travel into each other's

inland territories along a 1,300 kilometer route, boosting tourism and trade.

The three-year action plan targets swifter implementation of bilateral traffic rights agreements between the PRC and Myanmar and Myanmar and Thailand, and implementation of trilateral agreements among the PRC, Lao People's Democratic Republic (Lao PDR), and Thailand, as well as Cambodia, Lao PDR, and Thailand.

It will also aim to expand transport and trade routes, increase transport permit quotas under traffic rights exchanges, further streamline and improve customs procedures, and encourage the establishment of cross border vehicle insurance mechanisms.

ADB is a lead supporter of the GMS Economic Cooperation Program, developed to strengthen transport, trade and tourism links, boost competitiveness, improve access to social services, increase energy access and security, and protect the environment.

GMS members include Cambodia, Lao PDR, Myanmar, Thailand, Viet Nam, and Yunnan province and the Guangxi autonomous region in the PRC.

The subregion, bound together by the Mekong River, covers an area about the size of Western Europe and has a combined population larger than that of the United States.

“Greater Mekong Subregion Ministers Endorse Plan To Accelerate Cross Border Trade”, 22/11/2013, online at: <http://www.bernama.com.my/bernama/v7/wn/newsworld.php?id=995300>

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### ❖ **Vietnam dams reviled over high death toll**

Disgruntlement and anger over rampant construction of hydroelectric dams, simmering for many years now, has risen to a crescendo in Vietnam following the death of 41 people in the central and Central Highlands regions last weekend.

While authorities have continued to blame heavy rains triggered by a tropical depression for flooding that caused the deaths and left 74 other people injured, many media reports have said that the flooding was compounded by the discharge of water from 15 dams in the two regions.

According to the Central and Central Highlands Center for Flood and Storm Prevention and Control, on Saturday (November 16) alone, nine of the 15 dams discharged huge amounts of water - from 600 to 2,500 cubic meters per second.

It said heavy rains had made water in the 15 dams rise high to the level 3, the highest alarm threshold, forcing operators to release water to prevent a possible breach.

As a result, residents did not have the time to cope with the massive flooding that followed the discharge.

Binh Dinh Province suffered the most with 18 people dead and one missing, the center said in a release Tuesday. It was followed by Quang Ngai with 15 dead, 73 injured and one missing.

The other provinces that lost lives were Quang Nam, Phu Yen, Gia Lai and Kon Tum.

The Voice of Vietnam Sunday cited a district official in Binh Dinh as saying authorities were not able to inform local people of the water discharge because of the power outage.

Nguyen Su, Party chief of Hoi An Town in Quang Nam Province, told the Tuoi Tre (Youth) newspaper hydropower dams are only good for energy production.

“I am against [hydropower dams], no matter who supports them.

“Each time a [local] dam discharges water, Hoi An has to suffer. The loss for tourism sector is terribly high.”

In the dry season, the dams suck rivers dry, causing drought, he said, and in the rainy season, they discharge water, causing floods, erosion and change of current.

Ho Van Man, deputy head of the Committee for Flood Prevention and Rescue in Quang Nam Province’s Dai Loc District, told Tuoi Tre the committee was informed of dams’ water discharge in advance, and it had in turn informed residents.

However, not all residents received the information, he said. Many were not at home when local authorities issued the announcements, and when they got home the floods had already happened.

Man said agencies in charge of supervising hydropower dams should keep a close watch on the process of water discharge of the dams and co-ordinate the process.

“They [the dams] should discharge water early, for example, when river water reaches the levels 1 and 2.

“Do not wait until it reaches level 3.”

In his district, A Vuong is the only dam that has pledged to inform the public about an impending discharge in advance through public loudspeakers, Man said.

A new government resolution last month warned that hydropower investors would be charged over VND25-30 million (\$1,185-1,423) for discharging water without giving proper warning, but officials in the central region, which has a profusion of dams, said the fine was too small to change anything.

### **Too many negative impacts**

According to official statistics, the government has scrapped 424 planned hydropower projects with a total capacity of more than 2,000 MW, saying they would yield low economic benefit while carrying high social and environmental risks.

After three years of construction, the Serepok 4A Hydropower Plant in Dak Lak Province's Buon Don District will soon become operational. Experts have voiced concern it would shrink the large Serepok River into a small stream.

The plant has attracted much public attention as the river runs through the Yok Don National Park, Vietnam's largest wildlife preserve.

According to the park management, the negative impacts the plant would have on the park's ecology are huge.

While construction was underway, vehicles, equipment and mines used to break up rocks, causing environmental pollution and high levels of noise that drove animals away, it said.

In addition, construction of the plant interfered with the flow of the Serepok River, blocking animal migration and reproduction, and changing the living environment of plants and animals.

In Quang Nam Province, residents living in Dai Loc District have complained that a series of hydropower dams on Vu Gia River have led to serious drought during the dry season and erosion during the rainy season, claiming a huge area of farming land.

They said the river had nearly run out of fish, making people's lives miserable.

Erosion is a constant nightmare for hundreds of residents in a rural hamlet in Dai Loc District's Dai An Commune, as the banks of Quang Hue River get seriously eroded each time a local dam discharges water.

Over the last three years, around 50 meters of land on the banks have been swallowed by flood waters.

Vietnam depends on hydropower plants for up to 40 percent of its electricity consumption.

Experts have said that the surge in hydropower plants over the past 10 years has resulted in a wide range of problems including flooding, dam breaches, earthquakes, forest loss and ecological destruction.

The government last week decided that all future hydropower projects, irrespective of scale, will have to be approved by the Prime Minister.

The decision was made in an attempt to place hydropower investments under higher scrutiny.

Currently, small dams, defined as those with a capacity of less than 30 MW, are approved and supervised by city/provincial governments, while larger ones fall under the purview of central government agencies.

“Vietnam dams reviled over high death toll”, 22/11/2013, online at:

<http://www.thanhniennnews.com/index/pages/20131122-dams-reviled-over-high-death-toll-1.aspx>

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❖ **India firms up its strategy on Brahmaputra water diversion**

*India's action plan to pre-empt Chinese threats to divert Brahmaputra waters involves several key govt departments*

**New Delhi:** *India and China have been engaged in a dispute over the diversion of the Brahmaputra river, which originates in Tibet. Even while India is still exploring a diplomatic option, it has initiated an action plan that would give it user rights. In the first of a three-part series, Mint chronicles the government efforts to accelerate hydroelectric projects in Arunachal Pradesh, a key element of the multi-pronged strategy.*

Even as India seems to be playing down the potential problems associated with China's plans to divert river waters that flow into the Brahmaputra, it is simultaneously working on a detailed strategy involving several key government departments—racing to pre-empt Chinese threats.

According to documents reviewed by *Mint*, a technical expert group (TEG) entrusted with devising India's game plan has made a slew of recommendations, including expeditiously allotting at least one major hydropower project each in strategically located Subansiri, Lohit and Siang basins in Arunachal Pradesh as close to the international border as possible in order to establish 'existing user rights'.

The TEG was set up by a committee of secretaries (CoS) on the Brahmaputra water diversion issue to address the concerns emerging from the actions of the Chinese. In addition, signalling the government's growing concern, an inter-ministerial expert group (IMEG) was simultaneously set up to monitor and collate information on the sensitive issue that has major strategic ramifications for India.

The multi-pronged strategy includes completion of regional environment impact studies and biodiversity studies; resolving the issues of possible submergence of habitations and towns by hydropower projects and allotment of projects to central public sector units such as **NHPC Ltd** and **SJVN Ltd**. There is also a focus on developing meteorological and hydrological data banks.

India and China have sparred intermittently over hydropower projects in Arunachal Pradesh, which borders China and has the highest potential for hydropower generation in India.

With China planning to divert waters from rivers that flow into the Brahmaputra to the arid zones of Xinjiang and Gansu, India is worried about the slow pace of work on hydropower projects awarded in Arunachal Pradesh.

Any delay in executing these projects, particularly on rivers originating in China, will affect India's strategy of establishing a prior-use claim. Under international law, a country's right over natural resources it shares with other nations becomes stronger if it is already putting these resources to use.

This comes in the backdrop of recent agreements over sharing flood data, signed during Prime Minister [Manmohan Singh](#)'s visit to China last month.

Apart from the CoS, the government created a ministerial group headed by finance minister [P. Chidambaram](#) on developing the north-eastern region of the country.

The CoS comprises the secretaries and chiefs in the ministries and departments of home, power, cabinet secretariat, intelligence bureau, National Technical Research Organization, defence, foreign affairs, economic affairs, space, water resources, Planning Commission, environment and forests, chairman of joint intelligence committee and chief secretaries of Arunachal Pradesh and Assam.

“Regular meetings are now being held and we are working to implement the recommendations. The seriousness of the issue has been grasped and we are on the job. However, a lot of time has been lost,” said a senior Indian government official aware of the government's strategy, requesting anonymity.

The three major rivers of Arunachal Pradesh that originate in China are Siang, Subansiri and Lohit. Of the Brahmaputra's 2,880km-length, 1,625km is in Tibet, 918km in India, and 337km in Bangladesh. To speed up work on these projects, the TEG has recommended declaring them 'National Projects', hastening technical concurrence—including approvals from the ministries of defence and home affairs—and development of the road infrastructure in the region.

Another move involves the possible re-allocation of the 1,800 megawatts (MW) Subansiri Upper project, currently with [KSK Energy Ventures Ltd](#), to a state-owned firm—which would give the government greater control over its execution.

Measures are also planned to speed up a study of the strategic river basins of Siang, Subansiri and Lohit and the construction of transmission links for the evacuation of power to other parts of India.

India's anxiety stems from the fact that out of Arunachal Pradesh's estimated potential of unleashing 50,064MW of power, less than 1%, or 405MW, has been harnessed so far. This is in spite of the fact that 94 projects with a combined capacity of 41,502.5MW have been allotted across eight river basins—all in Arunachal Pradesh—of Kameng, Subansiri, Tawang, Siang, Dibang, Lohit, Dikrong and Tirap.

government official who also didn't wish to be identified due to the sensitive nature of the issue identified the strategic projects as Siang Upper stage one (6,000MW); Siang Upper stage two (3,750MW); Oju (1,800MW); Naba (1,000MW); Kalai one (1,352MW); and Kalai two (1,200MW) in the critical Siang, Subansiri and Lohit basins. Queries emailed to KSK Energy on 10 November remained unanswered, but a second

"These projects are close to India's border with China," the official said.

The ministries of water resources and power have already expressed their reservations on Beijing's ambitious water diversion scheme, into which it is pouring \$62 billion. China is building 36 projects on rivers that lie upstream of the Brahmaputra.

Commenting on India's plans, [Alka Acharya](#) and editor of , director of the New Delhi-based Institute of Chinese Studies *China Report*, said, "Well, one hopes. The kinds of sentiments and expectations that have been stoked have heightened the sense of uncertainty. With the spotlight on the issue, the Indian government will be putting much more effort and focus on the issue. The need for these efforts is gaining traction. The success of such efforts will depend upon the extent to which the Indian government is able to bring in partners from the Northeast."

Arguing along the similar lines, [Umesh Narayan Panjiar](#), chairman, Bihar Electricity Regulatory Commission and former secretary, ministry of water resources, said, "It is never too late. However, to expedite the projects one has to convince the Arunachal Pradesh government and make sure that the people affected by the project are taken care of. Another big bottleneck is the infrastructure in the north-eastern part of the country. We have to construct strong roads to carry large equipment."

The Central Water Commission (CWC) has been asked to conduct the studies for the Subansiri sub-basin and Siang sub-basin in consultation with the Central Electricity Authority (CEA)—India’s apex power sector planning body—and ministry of environment and forests (MoEF). After completing these two studies, the CWC will carry out studies in the other basins.

Also, it has been decided that for accelerating the projects, MoEF will not deny clearances to the projects located in the three strategic basins of Siang, Subansiri and Lohit in the absence of basin-wise environmental impact assessment (EIA) studies. Cumulative EIA studies of Siang, Subansiri, Lohit, Dibang and Tawang are set to be completed shortly.

Land acquisition problems and delays in securing government clearances have delayed hydropower development in the country. Hydroelectric projects with a capacity to generate 16,754MW of power—enough to meet the demands of states such as Uttar Pradesh and Punjab—are awaiting environmental clearances, even though they have been cleared by CEA.

“The water debates have also brought focus to the issue. The debate has also become more pronounced within China from the point of view of pollution, environment concerns and the need for water. Within India it has been put under the security perspective. This has heightened the issue. This has also become an important agenda with the coming together of other issues such as development of India’s Northeast and India’s Look East policy,” added Acharya, who has authored *China and India: Politics of Incremental Engagement*.

The development of infrastructure in the Northeast is also key to India’s so-called Look East policy—a focus on South-East Asia. There have also been an increase in Chinese military incursions into the Northeast.

Given the quantum of capacity being planned in the region, India plans to commission power transmission links for the evacuation of power to other parts of India in sync with the projects. The first set of projects, Pare (110MW), is set to be commissioned by 2015, followed by lower Subansiri (2,000MW) and Kameng (600MW) by 2017.

Transmitting electricity through Chicken’s Neck, a 22km strip in West Bengal that tenuously connects the Northeast with the rest of the country, has been a major constraint for the transmission

of power from the region. The government is also planning to strengthen the intra-state transmission and distribution system in Arunachal Pradesh.

The planned commissioning of the projects comes against the backdrop of the central government stepping up efforts to develop infrastructure in a region that has often complained of being neglected.

“India firms up its strategy on Brahmaputra water diversion”, 20/11/2013, online at:

[http://www.livemint.com/Politics/x5r1vZxcNvx1ReMtfxWE6N/India-firms-up-its-strategy-on-Brahmaputra-water-diversion.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=ecdddaad4a-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-ecdddaad4a-250657169](http://www.livemint.com/Politics/x5r1vZxcNvx1ReMtfxWE6N/India-firms-up-its-strategy-on-Brahmaputra-water-diversion.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=ecdddaad4a-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-ecdddaad4a-250657169)

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