



# 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**

**04 February 2013 - 10 February 2013**

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## ❖ New villages seek to improve agriculture sector in Iraq

The Iraqi Ministry of Agriculture recently announced it started construction on two modern agricultural villages in the desert area of Najaf province, as part of a strategic ministerial plan adopted in 2008, officials said.

Under a contract signed with the Ministry of Industry and Minerals, the ministry has started work on the two-year, 58 billion dinar (\$49.8 million) project, which will accommodate agricultural engineers and veterinary doctors, ministry undersecretary Ghazi al-Abboudi told Mawtani.

Two 5,000 dunam plots of land in the al-Ruhaimiya and al-Rahba districts in the Najaf desert have been designated for the villages, and the Ministry of Agriculture has obtained rights to the land, said Najaf Agriculture department director Majeed Jayyad.

The two sites have been deemed suitable for agricultural reclamation and for the construction of cattle farms, and have access to electricity services and paved roads, Jayyad told Mawtani.

The two ministries have formed a joint committee with the Najaf Agriculture department to follow up on the project, and the resident engineers have been named, he said.

In addition to their role in reviving and supporting agricultural production, the villages will play an important role in reducing unemployment, Jayyad said.

The villages will provide employment opportunities for graduates of agriculture and veterinary colleges, enabling them to participate in building up and serving the country, he said.

Model housing units are being built to high-level technical specifications, and the project will include a health unit, an elementary and a middle school, a police station, a gas station, a nursery and a recreational club among its amenities, al-Abboudi said.

"The objective behind this project is to grow agricultural production, both in terms of cattle and crops, by reclaiming the land surrounding the two villages," al-Abboudi said.

Recent graduates of agriculture and veterinary colleges will be invited to apply for the programme, he said, adding that selection criteria will include the graduation year, the applicant's academic average and whether they are a member of a martyr family.

Each beneficiary will be given 40 dunams to start an agricultural project, he said.

"Also, we will grant the beneficiaries interest-free, easy-term loans to finance their own private projects in addition to meeting their needs for machinery, technologies, agricultural vehicles, fertilisers and vaccines," he said.

The strategic plan aims to improve the agricultural sector through the gradual construction of modern agricultural villages throughout Iraq, al-Abboudi said.

Two villages will eventually be constructed in each province, except in the Kurdistan Region, at a total cost of more than 600 billion dinars (\$515 million), he said.

Adel al-Mukhtar, an advisor to the parliamentary committee on agriculture and water, welcomed the construction of the two villages in Najaf.

Specialised agricultural projects such as this are "among the successful projects worldwide", he said. "They have proven to be effective in the agricultural development process."

"These projects have a great impact on increasing the planted areas and raising the productivity of the dunam, as well as achieving high-yield animal production and pushing the country towards self-sufficiency and food security," he said.

"These projects are also very important in directing and guiding farmers in rural communities to adopt modern agricultural methods, in addition to their role in helping to fight desertification, improving the environment and addressing unemployment among those working in the agricultural sector," al-Mukhtar said.

"New villages seek to improve agriculture sector in Iraq", 04/02/2013, online at: [http://mawtani.al-shorfa.com/en\\_GB/articles/iii/features/2013/02/04/feature-01](http://mawtani.al-shorfa.com/en_GB/articles/iii/features/2013/02/04/feature-01)

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❖ **MP calls to use modern technology in detecting expected floods**

Baghdad (AIN) -The member of the parliamentary Agriculture & Water Resources Committee, Hadi al-Yasiri called the Ministry of Water Resources to use modern technology in detecting the floods in the timely manner.

Yasiri said in a statement received by AIN "The bad experience suffered by Iraq over the past days following the water wave which significantly damaged large areas of the country especially in Salah il-Din necessitates taking careful measures to address the problem in this regard."

"MP calls to use modern technology in detecting expected floods", 06/02/2013, online at: <http://www.alliraqnews.com/en/index.php?catid=zecxwxsukz>

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## ❖ Heavy rainfall encourages Iraq's agriculture and cattle industries

Iraqi farmers, investors and agriculture officials are welcoming the heavy rains that have drenched parts of the country in the past few weeks, saying these will provide a needed boost for the agriculture and cattle industries.

Ali Abdul Hassan, an agricultural engineer at the Babil Agricultural Directorate, told Mawtani this kind of rainfall improves the agricultural output of palm trees, fruit plants and citrus trees by cleansing them and removing many pests.

It also creates huge reservoirs of underground water, he said, adding that many farms and orchards use sprinklers fed by these reservoirs to irrigate acreages planted with wheat and barley.

### **INFLUX OF INVESTORS**

Businessmen and investors in Iraq's agricultural sector also welcomed the rain that swept the country.

"Increased rain leads to an influx of investors into this sector," Naseer Hadi, one such investor, told Mawtani.

"As businessmen with capital, we turned towards investing in greenhouses because they are more suitable and require less water, unlike the traditional method of agriculture," he said.

"But, greenhouses alone will not meet local market needs, for we need to plant grains and other crops whose planting requires large areas and abundant water," he said.

Heavy rainfall, according to Hadi, "boosts investment in agriculture, because now we have a huge surplus of water that encourages us, as investors, to plant the largest areas possible, which can then meet the market's need for local agricultural products."

### **BOOM YEAR FOR CROPS AND CATTLE**

Cattle ranchers and farmers from various Iraqi provinces told Mawtani they feel their businesses will flourish this year due to the abundant water supply.

Jabbar al-Ameri, who owns a citrus farm that depends on irrigation from the Tigris River, said many citrus and palm tree farms suffered "serious drops in their output due to the fall of the river's water levels in past years, which negatively affected thousands of dunams of orchards".

"The rise in the river's level will help me water an entire citrus orchard, in contrast to previous years when I was not able to provide enough water for the trees," he said.

Cattle rancher Fadhel Mahbash told Mawtani he and his fellow ranchers have suffered from a lack of rainfall in previous years, as the huge areas their cattle grazed on turned into arid land.

"We have artesian wells, which are used to water the areas set aside for grazing, and many of them dried up because of the lack of rain," he said. "But the current rainy season will replenish them, and consequently grazing areas will grow, giving us the chance to increase and improve the cattle population."

Dhahi al-Sultani, an investor in the cattle industry, told Mawtani he believes the coming years will witness a huge increase in the number of cattle.

"There are vast areas of desert in which grass and shrubs will [now] grow and provide thousands of kilometres of suitable pasture areas," he said.

Cattle must feed on natural grass if the consumer wants high-quality meat, al-Sultani said.

When a lack of rain leads to the desertification of many pasture areas, cattle ranchers often resort to special fodder to feed their cattle, which may lead to an increase in costs, he added.

"But, if precipitation continues to be heavy in the coming seasons, we shall see robust investment in the cattle industry because the process would solely rely on natural grass, thus producing high-quality meat," he said.

"Heavy rainfall encourages Iraq's agriculture and cattle industries", 06/02/2013, online at: [http://mawtani.al-shorfa.com/en\\_GB/articles/iii/features/2013/02/06/feature-01](http://mawtani.al-shorfa.com/en_GB/articles/iii/features/2013/02/06/feature-01)

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## ❖ Iraq: UN assists thousands after flooding along Tigris River basin

7 February 2013 – The United Nations in Iraq is distributing emergency supplies to hundreds of families in the north-central part of the country after heavy rainfall caused severe damage and displaced an estimated 5,000 people, and warned of the growing risk of water-borne and communicable diseases.

Torrential rains caused the Tigris River that flows from Turkey through Iraq to overflow on 29 and 30 January, flooding Beiji sub-district, located 50 kilometres from the city of Tikrit in Salaheddine province.

“Assessments were conducted in the area over the weekend and 600 non-food items kits were distributed to 600 families, while another 600 families will be assisted within the next days,” said a [press release](#) issued today by the UN Assistance Mission for Iraq ([UNAMI](#)).

Each family receives mattresses, blankets, plastic sheeting, jerry cans and heaters.

The Mission continues to monitor the situation and has established contact with authorities along the Tigris River basin through its network of staff.

The disaster response is headed by UNAMI’s Resident Coordinator and Deputy Special Representative of the Secretary-General for Development and Humanitarian Affairs, with coordination from the Ministry of Displacement and Migration and local authorities. Additional aid is being distributed by the Iraqi Red Crescent Society.

Local authorities estimate the damage to be at around \$230 million. During a special meeting on 4 February, the Council of Ministers granted two million Dinars or the equivalent of \$1,600 to each family affected by the flooding.

UN agencies, funds and programmes will in the coming days assess the needs in the province. The flooding could bring an increase in water-borne and communicable diseases. The assessment team will also survey damaged schools.

“Iraq: UN assists thousands after flooding along Tigris River basin”, 07/02/2013, online at:  
<http://www.un.org/apps/news/story.asp?NewsID=44093&Cr=iraq&Cr1=#.URam6B26fIQ>

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❖ **Wave of floods over in Baghdad, heads towards Wasit province**

Baghdad (AIN) –The crisis committee confirmed that the "The risks of floods have passed and the committee decided to start the process of reconnecting Kriyat bridge which was dismantled on last Saturday in a precautionary step of rising the water level of Tigris River."

The Minister of Water Resources, Muhanad al-Saadi, announced on Monday morning that "The wave of the floods is over in Baghdad and it is heading towards Wasit province."

He noted that "The level of water in Tigris River riased up to 31 meters while the avarege of water level in this River used to be 28 eters."

The local government of Salah-il-Din province warned the people to evacuate their houses in fear of floods which occurred due to heavy rainfall.

“Wave of floods over in Baghdad, heads towards Wasit province (alliraqnews)”, 04/02/2013, online at: [http://www.alliraqnews.com/en/index.php?option=com\\_content&view=article&id=27892](http://www.alliraqnews.com/en/index.php?option=com_content&view=article&id=27892)

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❖ **As murder rate drops, flood levels rise and inundate Baghdad with raw sewage**

Torrential rain caused floods all over Baghdad last week. It was not a pleasant sight: as the city's ageing sewage system failed to cope, streets filled with murky grey water that smelled and looked as if it was heavily polluted with raw sewage. Upriver, the Tigris rose 15 feet in five hours, the highest it had been for 50 years, and dozens of villages were inundated.

The disaster is not great by Baghdad standards, given the Iraqi capital's recent experience of car bombs, assassination, occupation and mass sectarian slaughter. I decided to take a drive to see how people were affected by the floods, what the government was doing to help them and, more generally, what the city looks like 10 years after the US-led invasion.

Driving in these conditions is easier said than done, since the flooding makes even worse the horrendous traffic jams that are normal in the city. People were in a bad mood and, without exception, blamed government incompetence and corruption for failing to clean and repair the old concrete sewers which often date from the 1960s. A few road tankers trying to suck up the water from giant pools were not having much impact.

Baghdad has a population of 7.6 million, or a quarter of the total Iraqi population, living in it. It is a dangerous but fascinating city where every neighbourhood has a different sectarian or political complexion. Though political murder is frequent by the standard of any country – 178 people were killed in January – there is far less violence than in the recent past. In the worst of times, in 2006 and 2007, up to 3,000 Sunni and Shia Iraqis were being killed every month, mostly in Baghdad.

Explosions and gunfire were constant at that time, but in the past week I have not heard the sound of a single shot or bomb explosion.

Improved security is the most positive development, but in most other ways Baghdad has not changed. It still looks dirty, battered and poor, its people weary and on edge. For all Iraq's immense oil income – \$100bn last year – there are beggars on every street corner. "We produce over three million barrels of oil a day, so where is the money?" said a friend. This is the endlessly repeated refrain of Iraqis trying to understand why they have to live with only six hours of electricity a day and why half the population are unemployed or underemployed.

As I drove from central Baghdad east towards the Shia working-class bastion of Sadr City last week, it was clear that the floods were worst in the poorer districts. In addition, the water was so filthy and mixed with floating garbage that it was impossible to judge if it was a few inches deep or one was about to plunge into a deep pool. Traffic was all the heavier because there had been severe flooding on 25 December and, knowing what had happened then, people were rushing home to do what they could to protect their homes.

We drove into New Baghdad, a district that was once mixed but which the Sunni fled in 2006. Now it is Shia with a minority of Christians. Shia-dominated districts are easy to identify because of the green flags and posters of Imam Hussein or the al-Sadr family. The Shia working class may be better off than they were under Saddam Hussein since more jobs are open to them, but the improvement is relative. Despite the rain there were beggars and peddlers everywhere, one of them standing in the middle of the road trying to sell large inflatable white ducks with blue wings and orange beaks that appeared to have been designed for somebody's swimming pool.

Many Iraqi Christians have fled persecution and crime, but in New Baghdad a substantial Chaldean Christian community stayed on. The dome of their church rises above the houses. The Sunni may have been driven out, but there are physical signs of their past presence. An old security headquarters from Saddam Hussein's time has been converted into a prison, its gatehouse surmounted by Shia flags and pictures of Imam Hussein and his brother warrior Abbas. A few yards further, surrounded by a lake of water, is a former Sunni mosque taken over by the Shia and renamed the Imam al Hussein mosque.

There are signs that the government security forces share power with tribes and militias. The Mahdi Army of Muqtada al-Sadr may have been dissolved, but militias are only young men with guns, easily obtainable in Baghdad. On the edge of Sadr City, we drove nervously through an area dominated by the Asa'ib Ahl al-Haq (League of Righteousness) of Qais al-Ghazali, who leads this violent splinter group from the main Sadrist movement. This was the group that kidnapped the British computer expert Peter Moore in 2008 and killed four of his bodyguards.

A little further on we waited a long time at the heavily guarded entrance to Sadr City, almost a twin city to the rest of Baghdad and home to three million people. But the flooding was getting worse, the traffic impossible, and we returned to central Baghdad. A day later I visited the bird market in the

Shurja area of central Baghdad, a place I used to come to on Fridays in the 1990s because it was full of enthusiasts for doves, pigeons, falcons and eagles. Their single-minded love for birds was an antidote to the otherwise depressing prospect of Baghdad under sanctions.

After 2003, the market was repeatedly targeted by al-Qa'ida bombers, but stayed open despite horrific casualties. "Not even 100 bombs will close us down," said one shop owner to me last week. He complained of country people coming to the market with birds they had reared and undercutting prices. It is a general complaint of long-established Baghdadis that they are being swamped by people from the rest of Iraq, political leaders from the Shia south and former farmers impoverished by the collapse of Iraqi agriculture.

The bird shop owner said he sold animals as well as birds and asked if I would be interested in buying a tiger or lion cub. He showed me picture of the cubs frolicking at his farm on the outskirts of Baghdad. I asked him who had the money to buy them, and he said: "Mostly tribal sheikhs. Just at the moment there is a fashion for cubs like these." Some people in Iraq have a great deal of money though they keep quiet about it.

One does not see the new rich elite walking on the streets or even in restaurants. Instead, they roar past in heavily armed convoys, like so many medieval dukes and their retainers contemptuously brushing aside the peasantry.

We has crossed the Tigris on our way to Mansur district when we were gestured by soldiers at a checkpoint to the side of the road along with other drivers. A procession of armoured cars and civilian vehicles with smoked-glass windows screamed past. "That is why I want to leave this country," said my friend who was driving. "I don't know who that was but he must be one of our new rulers who care nothing for ordinary Iraqis."

"As murder rate drops, flood levels rise and inundate Baghdad with raw sewage", 03/02/2013, online at: <http://www.independent.co.uk/voices/comment/as-murder-rate-drops-flood-levels-rise-and-inundate-baghdad-with-raw-sewage-8478431.html>

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❖ **Disruption of sanitation services in Syria putting children’s health at risk – UNICEF**

8 February 2013 – The severe disruption of water and sanitation services and a lack of access to basic hygiene in Syria have increased the risk of water-borne diseases among children, the United Nations Children’s Fund ([UNICEF](http://www.unicef.org)) today warned, following a nationwide assessment.

The agency found that in areas affected by the conflict, water supplies are only available at one-third of pre-crisis levels, with many people having only 25 litres of water a day, compared with 75 litres when the conflict began two years ago.

“These results underline why UNICEF has prioritized assistance to the water and sanitation sector,” said the UNICEF Representative in Syria, Youssouf Abdel-Jelil. “This month we began an operation to ship 1 million litres of chlorine to provide safe water for more than 10 million people, or nearly half the national population, for three months.”

The assessment, carried out in cooperation with municipal water departments and local private contractors, identifies six areas where people’s ability to access safe water has been most severely restricted: rural Damascus, Idlib, Der Ez-Zor, Homs, Aleppo and al-Raqqa.

More than 60,000 people, mostly civilians, have been killed since the uprising against President Bashar al-Assad began in early 2011. Recent months have witnessed an escalation in the conflict, which has also left more than four million people in need of humanitarian assistance. UNICEF estimates that out of the four million people in need, 50 per cent are children.

Due to the conflict, national production of water treatment chemicals has almost ceased, increasing the risk of tap water being contaminated. Power cuts, fuel shortages and damage to infrastructure have also contributed to worsening water shortages.

UNICEF stated that families are increasingly relying on buying water supplied by mobile tankers, which can be very expensive. A family of seven, for example, must spend at least \$15 every 15 days on water, which is more than many people can afford.

The assessment also found that in affected towns the treatment of sewage water has decreased by half – from 70 per cent before the crisis to 35 per cent now. In particular, UNICEF said people living in collective shelters are more vulnerable due to a lack of toilets, showers, hygiene items such as soap, and rationed access to water.

“We are doing everything possible to scale up our reach and ensure safe water and sanitation are available to more people,” said Mr. Abdel-Jelil, adding that the lack of funds is a major constraint.

So far, UNICEF has provided more than 22,000 emergency-affected people with drinking and domestic (for household use) water, and has distributed hygiene kits to some 225,000 people in conflict-affected areas.

The agency is appealing for \$22.5 million as part of the Syria Humanitarian Assistance Response Plan launched in December to be able to provide safe drinking and domestic water, soap and hygiene kits, as well as toilets and bathrooms to 750,000 people through June.

UNICEF also plans to give 50,000 children water and sanitation facilities at schools and in child-friendly and temporary learning spaces, and to repair and rehabilitate community-based water systems.

The international community has committed more than \$1.5 billion for humanitarian aid to Syrians. Supporting reconstruction of critical infrastructure, such as water pumping stations, and providing essential relief supplies like medicines are among the top four priorities inside the country, along with helping people who have fled their homes and the communities hosting them and helping the poorest avoid total destitution.

Meanwhile, the UN Relief and Works Agency for Palestine Refugees in the Near East ([UNRWA](#)) today warned that a grave humanitarian crisis has emerged in the Rid Damascus governorate where several Palestine refugee camps are situated.

The deteriorating security conditions surrounding the camps have severely limited access to services and have restricted movement, making it difficult for UNRWA to reach those who need assistance.

“UNRWA deplores the suffering inflicted on civilians in Syria and calls on all sides to do everything possible to ease it, including refraining from conducting the conflict in residential areas,” the agency said in a news release. “All sides must conduct themselves in ways that safeguard human life, protect civilians, ensure safe and free movement for civilians and allow unimpeded access to UNRWA and other humanitarian agencies.”

UN agencies are working both inside Syria and in neighbouring countries, where hundreds of thousands have fled. This week, the World Food Programme ([WFP](#)) started to distribute monthly

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food vouchers in Egypt to allow Syrian refugees to purchase essential items such as fruits, vegetables and dairy products. The voucher is aimed to provide the daily nutritional requirements of 2,100 kilocalories. WFP said it is aiming to reach 30,000 beneficiaries by June.

“Disruption of sanitation services in Syria putting children’s health at risk – UNICEF”, 08/02/2013, online at:  
<http://www.un.org/apps/news/story.asp?NewsID=44100&Cr=syria&Cr1=#.UR9vx26fIR>

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

❖ **Water supplies in war-hit Syria cut by a third: U.N.**

Syrians living in areas affected by the nearly two-year conflict have seen their water supplies cut by one third, putting children at especially high risk of disease, the United Nations said on Friday.

The results of the first U.N. Fund for Children nationwide assessment of water and sanitation since hostilities began revealed that populations in contested areas have only 25 liters (5.5 gallons) of water a day, compared with 75 liters two years ago.

Of the estimated 4 million people in need, 50 percent are children, the United Nations Children's Fund (UNICEF) said.

In regions where fighting has been the fiercest, including in Deir Ezzor province in the east, water was being pumped at just 10 percent of pre-crisis capacity.

The other hardest-hit areas are rural areas of Damascus province, the provinces of Idlib, Aleppo and Raqa along the northern border with Turkey and the central province of Homs.

“National production of water treatment chemicals almost ceased because of conflict, increasing the risk that tap water is contaminated,” said UNICEF’s Syria representative Youssouf Abdel-Jelil.

The agency emphasized that children were particularly vulnerable to waterborne disease because of protracted water cuts, damage to sanitation systems and a lack of access to basic hygiene.

UNICEF reported that conditions were especially dire for displaced people living in collective shelters, including in 1,500 schools where they have taken refuge.

“Living conditions are often unsanitary due to the lack of toilets, showers, hygiene items such as soap, and rationed access to water -- often less than 10 liters per person per day,” it said.

The agency noted that many families are forced to buy water from mobile tankers, the quality of which is either poor or questionable. Moreover, the \$30 per month cost is far above the means of

most families.

UNICEF is struggling to meet its goal of providing 750,000 people in Syria with safe drinking water, soap, hygiene kits, toilets and bathrooms by June, because of a funding gap of 80 percent.

“Water supplies in war-hit Syria cut by a third: U.N.”, 08/02/2013, online at: <http://english.alarabiya.net/articles/2013/02/08/265192.html>

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❖ **Syria: UN begins delivery of safe water supplies for 10 million people**

4 February 2013 – A large-scale operation is under way in Syria to secure safe water supplies for more than 10 million people – close to half the population, the United Nations Children’s Fund ([UNICEF](#)) said today, amid reports that the quality and quantity of water is continuing to deteriorate with negative impacts for children’s health.

“This shipment is very timely as supplies of chlorine in Syria have fallen dangerously low, making access to safe water challenging for many families,” [said](#) Youssouf Abdel-Jelil, UNICEF Representative in Syria.

“This puts the population – and children especially – at high risk of contracting diarrhoea and other water-borne diseases.”

The first four trucks carrying 80 tons of sodium hypochlorite water chlorination supplies crossed the Jordanian border into Syria on Sunday, heading for Aleppo, Hama, Idleb and Homs. Approximately 420,000 people – half of them children – need urgent humanitarian aid in Homs, UNICEF said last week, following a recent inter-agency mission to the country.

Over the coming weeks, UNICEF, in coordination with the technical department of the Ministry of Water Resources and the Syrian Arab Red Crescent, will deliver 1,000 tons of chlorine to cities and communities across all 14 governorates in Syria.

Meanwhile, the World Health Organization ([WHO](#)) has co-signed an agreement with Saudi Arabia to provide \$2.1 million worth of essential medicines, vaccines and medical equipment. As many as three million Syrians will benefit from the donation, which will cover a one-year period starting this month.

A shortage of medicines in Syria is becoming more critical, as is waste management and the availability of safe drinking water, WHO has said. Poor hygiene is increasing the risk of infectious diseases such as lice, hepatitis A and leishmaniasis, a sore-causing disease transmitted by sandflies.

More than 60,000 people, mostly civilians, have been killed since the uprising against President Bashar al-Assad began in early 2011. Recent months have witnessed an escalation in the conflict, which has also left more than four million people in need of humanitarian assistance.

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The international community has committed more than \$1.5 billion for humanitarian aid to Syrians. Supporting reconstruction of critical infrastructure, such as water pumping stations, and providing essential relief supplies like medicines are among the top four priorities inside the country, along with helping people who have fled their homes and the communities hosting them and helping the poorest avoid total destitution.

“Syria: UN begins delivery of safe water supplies for 10 million people”, 04/02/2013, online at:  
<http://www.un.org/apps/news/story.asp?NewsID=44063&Cr=Syria&Cr1=#.UR91x26fIR>

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❖ **Iran, one of world's five major dam-building states**

Bandar Abbas, hormuzgan Prov - Iran is one of the five major dam-building countries of the world, said Managing Director of Iran's Water Management Company Mohammad Haj-Rasouli Monday. Addressing a local ceremony in this southern provincial capital city, Haj-Rasouli said Iran has currently 145 operational dams with the total capacity of 50 billion cubic meters.

Referring to the fact that dry and semi-dry climate has dominated some 75 percent of Iran's soil, he said that during the past decade, the country has faced severe climate situation and lack of rainfalls.

However, he added that the crisis was successfully overcome to some extent through appropriate management and planning.

“Iran, one of world's five major dam-building states”, 04/02/2013, online at:

[http://www.zawya.com/story/Iran\\_one\\_of\\_worlds\\_five\\_major\\_dambuilding\\_states-ZAWYA20130205052948/](http://www.zawya.com/story/Iran_one_of_worlds_five_major_dambuilding_states-ZAWYA20130205052948/)

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### ❖ **Iran 95 per cent self-sufficient in water industry**

Iran is now self-sufficient by 95 per cent in meeting its water industry needs, IRIB quoted Deputy Energy Minister Alireza Daemi as saying.

We are currently importing just precision tools and all other necessary equipment is provided by capable Iranian manufacturers, he added.

Over 99 per cent of the urban population and 77 per cent of the rural population in Iran have been supplied with portable water, he noted.

First Vice President Mohammad Reza Rahimi has said that Iran ranks first in the region and third in world in terms of the dam construction industry.

He added that currently contractors are building 135 new dams across the country and also doing several projects in other countries.

In July 2011, Iran celebrated self-sufficiency in dam construction by inaugurating the Karun-4 dam, the largest concrete one in Iran, which has been completely designed and constructed by domestic engineers.

“Iran 95 per cent self-sufficient in water industry”, 06/02/2013, online at:

[http://www.zawya.com/story/Iran\\_95\\_selfsufficient\\_in\\_water\\_industry-ZAWYA20130207070334/](http://www.zawya.com/story/Iran_95_selfsufficient_in_water_industry-ZAWYA20130207070334/)

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## ❖ Water under the bridge: how the Oslo agreement robbed the Palestinians

**Ian Black:** 'Cooperation' with Israel over West Bank water supplies helped consolidate illegal settlements and undermine the two-state solution, a new study shows.

Oslo, the landmark 1993 agreement between Israel and the PLO, has had a bad press for the latter part of its (nearly) 20-year life. The deal between Yasser Arafat and Yitzhak Rabin has turned out to be more about process than securing a viable peace. Over that period Israel has continued to expand settlements in the West Bank while the Islamist movement Hamas has taken control of the Gaza Strip and Israel has shifted to the right. Negotiations on a final accord have got nowhere slowly. Many believe that a two-state solution to the conflict is now no longer attainable.

Settlements are a wearily familiar issue. But a new academic study shows that what has been billed as bilateral "cooperation" over water resources is much more like domination — in which the Palestinians not only acquiesce in Israeli demands but effectively "consent to their own colonization." Using the records of the Israeli-Palestinian Joint Water Committee (JWC) Sussex University's Jan Selby demonstrates that Israel made approval of improvements to Palestinian water supplies conditional upon Palestinian Authority (PA) approval of new water facilities for settlements, sometimes explicitly so. Palestinians face serious water shortages and an underdeveloped supply system but have given their approval in almost every case. Settlements are not only illegal under international law but are one of the major impediments to Palestinian statehood.

Building settlements means that one side is steadily eating the pizza while negotiations are continuing on how to divide it up.

The Oslo water regime was created in 1995 — the year Rabin was assassinated by a right-wing Israeli. The PA applied for four times as many water projects as Israel but their character differed, JWC records show. The Palestinian ones were for small distribution lines within and between Palestinian communities. The Israeli ones were for larger water transmission networks between settlements — and to connect settlements to Israel's national water network, raising questions about Israel's long-term intentions. PA projects also faced far longer approval times than Israeli ones.

Oslo reflected Israel's priorities — to restrict Palestinian water consumption and maintain its hegemony over the mountain aquifer. But the agreement excluded the Gaza Strip and the Jordan river

as well as the 60% of the West Bank (Area "C") that remained under Israel's direct security control. The water issue was emblematic, Selby argues, of the PA's role as "subcontractor" — practiced most visibly for internal security. "As in the peace process more broadly, the Oslo water regime effected a disarticulation of power and responsibility — enshrining Israeli power over decision making and key resources, whilst delegating to the PA responsibility for local water supplies and lesser value resources."

The overall imbalance of power was reflected in hard facts on the ground: Palestinians certainly constructed wells and cisterns without licences — 50 were destroyed by the Israeli military between 2010-11 alone. But unilateral Israeli actions have been government-implemented and remained beyond the reach of the PA. If Israel cared, there was "continuous and truly Kafkaesque micro-coordination."

As Amnesty International has said:

Swimming pools, well-watered lawns and large irrigated farms in Israeli settlements stand in stark contrast to Palestinian villages whose inhabitants struggle even to meet their essential domestic water needs. In parts of the West Bank Israeli settlers use up to 20 times more water than neighbouring Palestinians who survive on barely 20 litres of water per capita a day, the minimum amount recommended by the WHO for emergency situations response.

Arafat and his successor Mahmoud Abbas have been criticised by their own people for the structural shortcomings of Oslo as well as the role played by the PA over settlements and other issues. Both men were aware of the PA's approval of settlement water infrastructure.

The Palestine Papers published by the Guardian and al-Jazeera in 2011 revealed the extent of concessions offered by the Palestinians in the last meaningful talks held with Israel in 2008. PLO negotiators were exposed to the charge of betraying their people's cause – not so much because of the substance of their offers as the friendly tone and pragmatic approach they used in private. The PA looked embarrassingly encircled and dependent.

"None of the parties emerge very well from these findings," Selby commented. "Israel has been exploiting Palestinian desperation for improved water supplies. The Palestinian Authority has been pressured into consenting to its own colonization, and has not contested Israel's cynical tactics as forcefully as it might have done. And international donors have variously stood by or been complicit

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in activity which is contrary to international law, and contrary to their own policies on the peace process, and which has helped to undermine the possibility of a two state solution."

"Water under the bridge: how the Oslo agreement robbed the Palestinians", 04/02/2013, online at:  
<http://www.guardian.co.uk/world/on-the-middle-east/2013/feb/04/israel-palestinians-water-arafat-abbas>

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

### ❖ Israel's water crisis over, but on whose bill?

RAMALLAH: “The water crisis [in Israel] is over,” said Alexander Kushner, head of the country’s Water Authority, reports YNet. The announcement comes after the authority lifted a seven-year-long “severe drought” advisory on the water market.

The latest rain storms, Kushner explains, added to an already growing Sea of Galilee, a large lake partly supplied by underground springs and the Jordan River. High rainfall in recent years, he added, has afforded Israel a “safety net...providing a safe distance from red lines and underground water reservoirs.”

Additionally, the desalinization and water reclamation market, although “an extremely expensive endeavor,” have “brought Israel back from the brink.”

### **The Golan Heights**

Neither the Ynet nor the Head of the Water Authority mentioned that the main water resources for Israel are located in the Golan Heights, Syrian territory occupied illegally under international law.

The Golan Heights were occupied by Israeli forces during the June 1967 War. Some 130,000 Syrians fled or were expelled during the fighting. The return of all occupied territories—including the Sinai, the West Bank, and the Gaza Strip, as well as the Golan Heights—was enshrined in international law by UN Security Council Resolution 242. Until today the Sinai is the only territory Israel has ceded.

In 1981, Israel moved to essentially annex the territory. Though to no effect, the UN Security Council quickly passed condemnation in Resolution 497, which stated that “the Israeli decision impose its laws, jurisdiction and administration in the occupied Syrian Golan Heights is null and void and without international legal effect”

Presently some 20,000 Israeli settlers are scattered across more than 30 settlements, and a roughly equal population of Syrians, mostly Druze, remain in six villages.

According to the Israeli Ministry of Foreign Affairs, one of the most important reasons the Golan Heights are “strategically important” and thus justifiably occupied, is because it “controls the main

water resources of the State of Israel.”Indeed, the area provides Israel with around one-third of its total water supply.

According to Article 55 of the Hague Regulations, however, water use in occupied territories is “limited to military needs and may not exceed past use.” Surely past use did not include serving as one-third of Israel’s total water resources.

### **The West Bank**

Israel also shares two joint water sources with the Occupied Palestinian Territories: (1) the Mountain Aquifer, an approximately 130 kilometer system that runs from Mount Carmel to Beersheba, and (2) the upper Jordan River and its tributaries, which includes the Sea of Galilee, the Yarmuh, and the lower Jordan River.

According to Israeli NGO B’Tselem, the Mountain Aquifer “supplies about one-quarter of the water needs of Israel and the Israeli settlements and almost all the running water that Palestinians in the West Bank receive.” The upper Jordan River and its offshoots, on the other hand, “supply approximately one-third of Israel’s water needs,” although “Palestinians do not receive any water from this source.”

Water resources, as one of the issues put off for later discussion in the Oslo Accords, remains under Israeli control until this day.

Under international law, as an occupying power, Israel is prohibited under Article 27 of the Fourth Geneva Convention of 1949 from discriminating resource allocation between residents of an occupied territory. But Israeli settlers consume around 300 liters per person each day, while their Palestinian counterparts receive around 65 liters per head each day (a solid 35 liters under the World Health Organization’s recommended 100 liters).

On the ground, these discrepancies produce serious repercussions for Palestinians, and each area of the West Bank faces unique challenges.

In Susiya, a small village of 350 in the South Hebron Hills, villagers are not allowed to dig wells for “security reasons.” Their water cisterns are regularly destroyed by Israeli military forces, and on several instances, they have been poisoned by neighboring Israeli settlers.

As a result, the UN Office for Coordination of Humanitarian Affairs estimates that average water consumption has dropped to roughly 28 liters per person each day and prices have soared to 25 New Israeli Shekels per day—over five times more than the neighboring settlement. Susiya’s residents spend up to one-third of their income on water alone.

This is to say nothing of the Gaza Strip, under a suffocating Israeli blockade, where a recent UN report found that 90 percent of the water is “unusable,” largely as a result of Israeli bombing campaigns and extenuating circumstances that put a strain on the narrow coastal enclave’s resources.

### **The water crisis continues**

“With the correct water market management, we can create an actual ‘safety zone’ that will last until 2025—even if we go through another two or three dry years,” Kushner said.

YNet boldly proclaims that the country is almost “back from the brink,” but neglects to mention that the solution to Israel’s water woes was largely paid for at the expense of occupied territories. Israelis may rest easier knowing that their water supply is secured, but for others the crisis is far from over.

“Israel’s water crisis over, but on whose bill?”, 04/03/2013, online at: <http://bikyaneews.com/85105/israels-water-crisis-over-but-on-whose-bill/>

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❖ **Israel declares water crisis is over**

Israel's Water Authority on Monday officially declared the national water crisis to be over, and lifted its "severe drought advisory."

"The water crisis is over" and the situation is stable, but Israelis must not become complacent lest the nation find itself in a drought situation again, stated Water Authority Head Alexander Kushner.

Israel has suffered from dryer than usual winters for the past seven years, resulting in an overdraft of its national reservoirs, in particular the Sea of Galilee.

But, heavy winters rains and snow this year, combined with increased desalination efforts and conservatory behavior on the part of the public, has brought the Sea of Galilee to within two meters (six feet) of its capacity. Experts believe the lake will fill the rest of the way when the winter snow atop the Golan Heights melts later this year.

Over the past seven dry years, Israel established three large desalination plants along its Mediterranean coast that today provide the nation with nearly half of its drinking water. Two more plants are scheduled to come online in the near future.

"Israel declares water crisis is over", 04/02/2013, online at:

[http://www.israeltoday.co.il/NewsItem/tabid/178/nid/23658/Default.aspx?hp=article\\_title](http://www.israeltoday.co.il/NewsItem/tabid/178/nid/23658/Default.aspx?hp=article_title)

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## ❖ How water became a weapon in Arab-Israeli conflict

The conflict between the Palestinians and Israel is fought on many fronts nowadays. This is the result of a change in strategy decided on by the current Palestinian Authority leadership in 2008. A 2008 report by The Palestinian Strategy Group, which advises the PA, called “Regaining the Initiative” formed the basis of this strategic overhaul in PA politics vis-à-vis Israel.

According to the report, the negotiation route standard between 1988 and 2008 was to be shut down indefinitely and terror (termed “resistance” by the PSG) would be replaced by a more sophisticated “threat power.” This would entail the refusal to cooperate and the push for boycotts.

Another important element in the new strategy was eliciting more third-party support and ensuring the Palestinian discourse would be the primary viewpoint in the discussion about the “Palestinian national project.”

Cognitive warfare, a form of propaganda, has become a successful element in this Palestinian attempt to elicit third-party support. Disinformation about the Israeli settlements in the West Bank spearheaded this campaign.

Today much of the world is convinced that the Israeli settlements are the main reason for the absence of peace.

But in many other fields, too, the Palestinian discourse dominates the international attitude toward the Palestinian- Israeli conflict. The dispute about the water resources in the West Bank is a good example. The international community has been willfully misled by Palestinian propaganda on water issues.

UNTIL NOW much of the literature about the water conflict followed either the Palestinian discourse (vast majority) or the Israeli discourse (small minority).

However, a thesis titled “The Politicization of the Oslo Water Agreement,” written by Lauro Burkart, a Swiss graduate of the Institute of International and Development studies in Geneva gives a more accurate and impartial picture of the topic of the scarcity of water in the Palestinian Authority. Burkart interviewed many key players in the water conflict, Palestinians and Israelis as well as representatives of NGOs and the donor countries. He also examined many original documents such as the minutes of the meetings of the joint Israeli Palestinian Water Committee (JWC).

Here are some of the most important conclusions in Burkart's thesis:

- The goals of the Oslo II water agreement have been reached regarding the quantities of water provided to the Palestinian population (178 mcm/year in 2006). The Oslo water agreement estimated that demand would eventually reach 200 mcm/year.
- The JWC functioned well in the first years following signature of the agreement, but since 2008 cooperation has come to a halt.
- The facts disseminated by the Palestinians, international organizations and donors about the root causes of the water scarcity in the West Bank are incorrect.

Burkart writes: "It is not the Israeli occupation policy but the Palestinian political resistance against joint management and cooperation that is responsible for the relatively slow development of the Palestinian water sector and the deteriorating human rights situation in the Palestinian Territories" and "There is convincing evidence of mismanagement within the Palestinian Water Authority (PWA)."

He cites the pro-Palestinian NGO Aman, that concluded that there is "no clear legal separation between the political and executive levels within the Palestinian water institutions. To date there is no real functioning water law. Furthermore the National Water Council is not meeting and not functioning well."

Although the PWA embarked on an institutional reform process in reaction to international critics such as the World Bank this did not solve the issue of mismanagement within the institution. The head of the Palestinian Hydrology Group called the reform a "fundraising mechanism."

The PWA also did not manage to gain control over many municipalities (where Israel has no control) due to the autocratic and undemocratic manner in which they are managed. These power holders did not want to lose control of the water systems since it was one of the main services provided by the municipalities.

As a result the water supply is not centralized and illegal drilling is rampant. The fact that the PA pays most of the water bills of the Palestinian population gives no incentive for saving and leads to an unreasonable use of water in the domestic sphere as well as in the agricultural sector.

BURKART ALSO interviewed Dr. Shaddad Attili, head of the PWA, who was appointed in 2008. Attili, a Fatah member, is responsible for the de facto ending of the cooperation with Israel in order to bolster Palestinian water rights claims. He did this to strengthen the position of Fatah after the Hamas victory in the Palestinian elections.

This policy is conducted at the expense of the marginalized and peripheral Palestinian population which is suffering from water shortages. Burkart writes that the abundance of donor money allowed Attili to continue the noncooperation strategy which has led to a complete stagnation of the water negotiations during the past five years.

One of the results of the refusal to cooperate with Israel is that almost all of the 52 mcm of waste water generated by the Palestinian population flows untreated into Israel and the West Bank, where it contaminates shared groundwater resources. Nevertheless, the Palestinians claim that Israel is blocking their waste water infrastructure.

The facts are that most of the Palestinian waste water treatment and reuse projects have already received foreign funding and were supported by Israel.

The PA, however, has not taken sufficient action to execute those projects. Instead the PA claims Israel is demanding an unreasonably high level of treatment (BOD 10/10).

A JWC memorandum of understanding from 2003, however, which was signed by both parties, agreed on a gradual process to achieve this standard (starting with BOD 20/30).

Following a meeting in November 2011 between Colonel Avi Shalev of the Civil Administration and PWA officials about the implementation of Palestinian water projects, Israel offered to finance water and waste water projects that would serve Palestinian communities in the West Bank. The Palestinians didn't respond.

Another solution that could solve the water crisis in the PA is seawater desalination. In fact Israel made an offer to the Palestinians to build a desalination plant in Hadera south of Haifa and pump the desalinated water to the northern West Bank. The Palestinians rejected this solution since it would put Israel in an upstream position to the West Bank. Another reason for this rejection has to do with water rights since the Palestinians claim the Mountain Aquifers.

Attili even withdrew a PWA expert team from an Israeli desalination program using the argument that Israel had unilaterally destroyed a number of illegal wells on the West Bank. This proved to be another example of Attili's propaganda campaign. Israel responded after Attili complained about the wells in a letter to the international community. The decision to shut down these wells was taken by the Joint Water Committee. After that several reminders were sent to the PWA which reiterated its intention to execute the JWC decision. Nothing happened, however. Four years after the decision was taken Israel decided to execute the decision since illegal drilling diminishes the amount of water produced by legal wells and damages the main aquifers.

It is obvious that Attili's non-cooperation strategy is connected to the overall change in strategy vis-à-vis Israel in 2008 by the PA. Water has become a weapon against the so-called Israeli occupation. Unfortunately Attili has been able to convince the international community that Israel is to blame for the slow development of the Palestinian water sector. A good example is Abdelkarim Yakobi, the project manager in the department of water, transport and energy at the Office of the EU representative for the West Bank and Gaza. Yakobi, who was interviewed by Burkart, also blamed Israel for the slow development of the Palestinian water sector.

This is strange; if a Swiss graduate was able to get access to all the relevant information, why did the European Union, with all of its resources, not do the same? Had it done so there is no doubt the EU would have found out who really is to blame.

The EU has allocated funds for at least seven waste water treatment plants. It is reasonable to assume that the Europeans would have some oversight on the execution of these projects – so why did they not demand accountability from the PWA? In fact the PA has now been given a free pass to use water as a weapon against Israel. By doing so, the international community is in fact contributing to the aggravation of the conflict and harming the interests of the Palestinian population.

“How water became a weapon in Arab-Israeli conflict”, 03/02/2013, online at: <http://www.jpost.com/Opinion/Op-EdContributors/Article.aspx?id=301982>

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## ❖ Crimes against Humanity: Stealing Palestine’s Water Resources

The Israeli national water company Mekorot undermines Palestinians’ access to water, according to a new report commissioned by the United Nations Human Rights Council.

The [report](#) finds that deep water drillings by Mekorot and the Israeli agri-industrial firm Mehadrin in the occupied Jordan Valley have caused the drying up of Palestinian wells and springs. About 80 percent of all water drilled in this area is consumed by Israel and its illegal settlements in the West Bank.

Mekorot took over responsibility for the West Bank’s water resources from the Israeli military in 1982. The new report documents a clear pattern of discrimination against Palestinians. Whereas Palestinians living in most of the West Bank face “chronic shortages,” Israeli settlements enjoy a constant supply of water. Palestinians are prevented from using wastewater provided to Israeli settlements for irrigation and instead have to rely on more expensive water for that purpose. Furthermore, valves supplying Palestinians tend to be cut off when water shortages occur, yet no such restrictions are applied to the use of water by Israeli settlers.

The World Health Organization recommends that each individual should have access to 100 liters of water per day. Israeli settlers in the West Bank typically consume 400 liters per day, the report states, while Palestinians have to make do with just 73 liters or, in the case of Palestinian Bedouins, as little as 10 liters.

### **Hampered**

The new UN report is the result of a mission investigating Israeli settlements in the West Bank, including East Jerusalem. Israel tried to hamper field visits to Israel and the West Bank by the mission, led by French magistrate [Christine Chanet](#), by ignoring five request for cooperation. However, the mission succeeded in obtaining first-hand information during meetings held in Jordan. The report highlights the role of businesses in Israel’s settlements.

Information gathered by the mission shows that private firms have enabled, facilitated and profited, directly and indirectly, from the construction and growth of the settlements. It identified a number of business activities that raise particular concerns about abuses of human rights. They include:

- The supply of equipment and materials facilitating the construction of settlements and Israel's wall in the West Bank;
- The supply of surveillance and identification equipment for settlements, the wall and military checkpoints;
- The supply of equipment for the demolition of housing and property, including the destruction of farms, greenhouses, olives groves and crops,;
- The supply of security services, equipment and materials to businesses operating in settlements;
- The provision of transport and other services to support the maintenance of settlements;
- Banking and financial operations helping to develop, expand or maintain settlements and their activities, including loans for housing and business development;
- The use of natural resources, in particular water and land, for business purposes;
- Pollution, dumping and transfer of waste to Palestinian villages;
- The way Palestinian financial and economic markets are held captive by Israel, as well as practices that disadvantage Palestinian businesses, including through restrictions on movement, and administrative and legal constraints.

### **Fully aware**

According to the new report, companies active in the settlements are fully aware that they are abusing international law and contributing to violations of human rights.

Industrial parks in settlements, such as Barkan and Mishor Adumim, are criticized for enticing firms to the settlements with tax sweeteners and by emphasizing how Palestinians are paid lower wages than Israeli workers. Economic activities in these zones are growing, the mission adds.

The mission also notes that a number of banks provide mortgages for homebuyers and special loans for building projects in settlements. In some cases, the banks are physically present there.

It also states that Israel labels all its export products as originating from Israel, including those wholly or partially produced in settlements. Some companies operating in settlements have been accused of

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hiding the original place of production of their products. This poses problems for the customs authorities of other countries, as well as raising issues in relation to consumers' right to information.

The mission urges private companies to cease operating in the settlements.

“Crimes against Humanity: Stealing Palestine’s Water Resources”, 03/02/2013, online at:  
<http://www.globalresearch.ca/crimes-against-humanity-stealing-palestines-water-resources/5321547>

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### ❖ Israeli Forces Demolish Water Well Near Hebron

Israeli forces Wednesday demolished a water well in al-Fawwar refugee camp, south of Hebron, reported Palestinian official news Wafa.

Local sources told Wafa that Israeli bulldozers demolished a well used to collect rainwater located at the entrance of the refugee camp. The bulldozers, according to witnesses, were protected by soldiers and accompanied by a staff from the so-called civil administration, the Israeli military government's arm in the occupied West Bank.

Israel prevents Palestinians from collecting rainwater, because the Israelis normally collect this water in underground aquifers in the West Bank that are under its control.

"Israeli Forces Demolish Water Well Near Hebron", 06/02/2013, online at: <http://english.pnn.ps/index.php/politics/3807-israeli-forces-demolishes-water-well-near-hebron>

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## ❖ Israel No Longer Facing Water Crisis

Israel has lifted its long-standing severe drought advisory. Heavy rainfall, increased conservation efforts, and desalination plants have helped the country avert the water crisis that has plagued the nation for the last seven years.

"The water crisis is over," Water Authority head **Alexander Kushner** announced on Monday. Kushner stressed that abundant rainfall in the past year has helped to contribute to Israel's current water security. "Good rainfall gives us a safety net," he stated.

Public conservation efforts have also helped alleviate the nation's water woes. "The average household water consumption has decreased by 10 percent compared to the previous decade," Kushner said.

Since the water crisis began, Israel has also dramatically changed how it sources fresh water. Three desalination plants built in recent years throughout the country now provide half of all fresh water consumed in Israel. By 2014, Israel plans on having two new plants fully operational, allowing the nation to meet 75 percent of its water needs through desalination efforts.

Unfortunately for Israeli consumers, the high cost of manufacturing water will likely keep water prices at drought level even as the nation's water reserves increase. "Manufacturing water cost money – there's no way around it," Kushner noted. "Nevertheless, we are exploring how we can reduce the number of water corporations, which can bring about a 5 percent savings. We're also looking into efficiency measures as well as a new rates system."

The Water Authority also stressed the need for Israelis to continue their efforts to conserve water, even though the nation is no longer in a severe drought emergency. "The basic water conservation rules, like not watering gardens indiscriminately, washing cars with hoses etcetera, still apply," Kushner said.

"Israel No Longer Facing Water Crisis", 07/02/2013, online at: <http://www.jspace.com/news/articles/israel-no-longer-facing-water-crisis/12808>

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### ❖ SPNI calls to save country's rare salt marshes

Society for the Protection of Nature in Israel calls protection of the country's dwindling salt marshes.

The Society for the Protection of Nature in Israel has called for the country's policymakers to save the special habitats that make up the country's dwindling salt marshes, in a newly released 30-page report titled "The Salt Marshes of Israel – Extreme and Unique Living Environment."

The country's salt marshes, home to exclusive and rare species, are facing an imminent threat of extinction, according to the report, dated January 2013. It defines salt marshes as lands characterized by extreme salinity, brought about by underground water flow and above ground regional topographical conditions.

The report, which makes recommendations to policymakers, planners and educators on the preservation of these lands, was written by Dr. Gil Ben-Natan of Ben-Gurion University's Dead Sea and Arava Science Center, and edited by Alon Rothschild, biological diversity coordinator at the (SPNI).

Because most plants and animals are unable to extract the water they need from the hyper-saline environment of the salt marshes, only rare species exist in this environment – those that have adapted evolutionarily to such harsh conditions, the report explains. Some of these species are exclusive to the salt marsh environment and require its extreme conditions to survive.

"Together, they present a special species composition not found elsewhere," the authors write.

Because salt marshes only exist when a very specific set of conditions are given – and due to ongoing development and construction – they are found only minimally in Israel. In the past, marshes existed only along the northern coast, but most of these original spots have disappeared.

Some portions of salt marshes have survived along the Kishon River banks, but face the threat of urban development, says the report. Meanwhile, some salt marshes in the Dead Sea region have been either destroyed or disrupted, as the basin's water level changed. A bit further south, some Arava

Desert salt marshes have been damaged, while others have been protected and even designated as nature reserves, the report says.

Due to the fact that evolution has occurred in the salt marshes in extremely harsh environments, these ecosystems provide windows into “valuable biological processes” and mechanisms that can aid the development of agriculture, industry and medicine, according to the authors of the report.

Some of the plants that commonly appear in these saline zones are the tamarisk tree, the monocious seablite shrub and the glaucous glasswort – the latter two are found in the Sodom salt marsh near Ein Gedi. This area is also inhabited by a local population of wild boars, Dead Sea sparrows and Nubian Nightjar birds.

Other salt marshes – many of which have suffered sever damage or have been destroyed – in the country occur in the Kishon, Atlit, the northern Dead Sea region, Zohar, HaTzeva, Ein Yahav, Yotvata, Eilat and Evrona, the report says.

“The salt marshes’ inherent value, together with the increasing risk of their extinction from Israel, require decisive action for their preservation, for present and for future generations,” it says.

In order to facilitate this preservation, decision-makers need to take action, such as determining a water quota for nature in salt marshes.

Secondly, authorities must work to protect habitat continuity when possible; and at sites already fragmented, to maintain the functionality of these ecosystems. It is likewise crucial to collect information regarding the composition of the salt marshes, in order to be able to properly generate management plans for both the marshes themselves and surrounding areas.

Educational initiatives to familiarize the public with the endangered habitat are also critical, the report adds.

“SPNI calls to save country’s rare salt marshes”, Jerusalem Post, 08/02/2013, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=6824>

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### ❖ Hartha families ‘reap what they sow’ via water management project

IRBID — Every day, Nour Obeidat’s family members have fresh vegetables and fruit on their table — the product of their very own roof garden, cultivated with enthusiasm and irrigated by stored rainwater.

“I have my own greenhouse on the roof of my home. My children are very enthusiastic about the initiative and planted some of the vegetables and fruits. They wake up early every morning to check on their work,” Obeidat told The Jordan Times in a recent interview at his house. Obeidat is one of several residents of Hartha, 106 kilometres to the north of Amman, who benefited from the USAID-funded Community-Based Initiative for Water Demand Management, implemented by Mercy Corps from 2006 through 2013.

The project works directly at the local level to improve water-use efficiency by promoting citizen participation within rural communities to address water demand and conservation issues, according to a USAID statement.

It includes providing grants to competitively selected community-based organisations to support households to develop and implement water saving/efficiency projects.

The initiative also includes implementing pilot projects in integrated water and energy resource management at the community level.

Mohammad Bani Mustafa, Mercy Corps team leader, said the project entails providing charitable societies with revolving loans to conserve water — by implementing rainwater harvesting — and change the way of irrigation.

“A total of 135 societies across the Kingdom have benefited from the project. The initiative also addresses water scarcity,” he told The Jordan Times.

Nour said it took him three days to build the greenhouse at his home, adding that he began cultivating it one week later.

Bani Mustafa noted that Nour’s JD4,000 project consists of four elements.

“Obeidat managed... to do rainwater harvesting by storing water in barrels, plant whatever he wants, breed fish and receive a free energy source,” he told The Jordan Times.

Bani Mustafa said Nour uses the fish to provide organic fertilisers for the igneous rocks.

The amateur farmer said he plants his greenhouse in accordance with the season.

“For example, one of the fruits I plant during winter is strawberries. By the end of the year, I believe that I can get 300 kilos of fruit and vegetables,” the 42-year-old noted added that he also enjoys free heating thanks to the project.

“When the temperature reaches 26°C in the greenhouse, the heat is directed to my living room,” the father of seven explained.

Baha Obeidat, another project beneficiary, said he now has a permanent water source by storing rainwater instead of having to go out to buy water.

“I have a well that can collect around 36 cubic metres. It can serve me for a lifetime,” he told The Jordan Times.

Mahmoud Obeidat, head of the Hartha Charitable Society, said around 90 wells were built within the project to collect water in the village of Hartha, which has a population of around 6,000.

“Village residents are really interested in benefiting from the project. People who want to be part of it contact the society,” he said.

“We help the ones who can pay back the loan we provide,” Mahmoud added, noting that beneficiaries pay JD30 a month for a period of 30 months.

The Hartha Elementary Girls School has also benefited from the initiative.

The school implemented a rainwater harvesting project last year, which significantly improved the water situation, according to its principal, Hind Obeidat.

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“Around 235 students benefited from the project, which included constructing a well to collect water,” she said, noting that the school used to receive water one day a week.

Hind added that students also use the stored water to irrigate the school’s garden.

“Students plant the garden with the supervision of the teachers. The school mainly depends on olive trees, selling the produce and using the money to renovate the facilities. This season, we made around JD400,” she said.

“Hartha families ‘reap what they sow’ via water management project”, Jordan Times, 08/02/2013,online at:  
<http://mideastenvironment.apps01.yorku.ca/?p=6826>

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### ❖ **Could Climate Change Be Al-Qaida’s Best Friend in Africa?**

French troops are currently planning a [swift exit from Mali](#), but the local government’s battle with Islamist insurgents rages on. Meanwhile, the international community continues to ask itself what went wrong in a country [once seen as a model for the region](#). But some climate analysts say they saw the civil war brewing—and, more importantly, that climate change could be an increasingly prominent factor in crises in the region.

There’s a lot of debate in the global security establishment about how much we can blame climate—let alone climate *change*—for conflict. On one side, there are thinkers like the team of Columbia and Princeton scientists who claim [El Niño contributed to one-fifth of the world’s civil wars between 1950 and 2004](#). On the other, there are analysts like Lionel Beehner, a fellow at the Truman National Security Project, who published [an influential article](#) last year refuting such one-to-one relationships. To split the difference, climate-watchers prefer using terms like “threat multiplier” in cases like Mali’s.

In Mali, “a lot of the unrest is deep-seated,” says climate-security analyst Caitlin E. Werrell. For example, the Libyan war brought an influx of weapons and militants, and Tuareg separatists had long operated in the arid north.

But the north had been getting [a whole lot more arid in recent years](#), thanks to factors like burning wood for fuel and greenhouse gas emissions from India and China. Much of Mali’s land is in the massive strip of land known as the Sahel, which was wracked by one of its increasingly severe droughts in the months leading up to last year’s coup d’état. [As early as 2010](#), leading climate-aware observers began to [warn of instability](#).

Francesco Femia, a founding director of the Center for Climate and Security, agrees with Werrell that there isn’t a straightforward cause-effect relationship here. “But when a government has a great deal of difficulty providing basic resources for its public,” he says, “and when climate-exacerbated droughts make that situation worse, then the staying power of non-state actors”—such as [al-Qaida in the Islamic Maghreb](#)—“and sympathy for non-state actors can rise.”

Right now, many of those ingredients are also being cooked up just a few hundred miles from the Malian border, in Africa’s most populous country.

“If I had to put money on it, I think we’re likely to see similar situations or more violence and instability in Nigeria,” said Nancy Brune, a senior fellow at the Center for a New American Security. The Nigerian government is in [a growing fight](#) with the Islamist militia known as Boko Haram, and

she sees ongoing climate-related problems—like agricultural collapse and rural-to-urban migration—as major contributors to that conflict.

However, analysts aren't without hope when it comes to areas prone to both Islamic extremism and climate change. Brune, Femia, and Werrell all call for local and international investment in “climate resilience” projects—for example, housing for internally displaced farmers or green-energy alternatives to burning wood.

“It's not as if you address climate change, you'll have world peace,” says Werrell. “[B]ut it's an important factor.”

“Could Climate Change Be Al-Qaida's Best Friend in Africa?”, Abraham Riesman, 07/02/2013, online at: [http://www.slate.com/blogs/future\\_tense/2013/02/07/mali\\_islamist\\_insurgents\\_could\\_climate\\_change\\_be\\_al\\_qaida\\_s\\_best\\_friend.html](http://www.slate.com/blogs/future_tense/2013/02/07/mali_islamist_insurgents_could_climate_change_be_al_qaida_s_best_friend.html)

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## ❖ Worse Than Poisoned Water: Dwindling Water, in China's North

BEIJING — When 39 tons of the toxic chemical aniline spilled from a factory in Changzhi in China's Shanxi province at the end of December, polluting drinking water for hundreds of thousands of people downstream along the Zhuozhang River and [dangerously fouling the environment](#), it seemed a grave enough disaster. And it was.

So it's hard to believe, perhaps, but in mid-January, just days after local officials belatedly revealed the spill to the public, a "rapid response team" sent by Greenpeace China to investigate found something even [worse than the spill](#), the blogger Zhou Wei wrote in chinadialogue, an online magazine about China's environment. Greenpeace found that the fast pace of water consumption by coal and chemical industries in the area is drying up all water resources further downstream. In fact, by 2015, water consumption by coal and chemical industry in China's dry, western areas is set to use up a whopping quarter of the water flowing annually in the nearby Yellow River, which forms much of the border of Shanxi Province and is popularly known as China's "[Mother River](#)," wrote chinadialogue.

As chinadialogue wrote, citing Greenpeace, "Even more worrying than the chemical leak is the high water consumption of the coal and chemical industries in the area."

The blog post, which chinadialogue says hasn't been translated into English yet, cited [Tong Zhongyu](#) of Greenpeace's East Asia office as saying that the situation was "growing more severe by the day."

None of this may be news to hardened followers of China's crumbling environment, but the scale of the water consumption in the water-scarce area is nonetheless shocking: The Tianji Coal Chemical Industry Group, which caused the spill, consumes water equivalent to the consumption of about 300,000 people per year, chinadialogue wrote, citing the Greenpeace investigation.

The coal and chemical industry is simply "a major water-eater," the post said.

Water is a key challenge for the country as [the racing economy guzzles it faster and faster](#). In the last 40 years, 13 percent of China's lakes have disappeared, half its coastal wetlands have been lost to

reclamation and 50 percent of cities left without drinking water that meets acceptable hygienic standards, the World Wildlife Fund said, according to another article in chinadialogue. The United Nations has singled China out as one of 13 countries with extreme water shortages.

“By any measure, the situation is bleak,” chinadialogue said. For now, the government is split between small-scale, practical solutions to the problem and huge engineering projects, such as the South-North water diversion scheme, which aims to transfer water from the rainy south to the dry north but has been widely criticized by environmentalists as too big, inefficient and ultimately unworkable.

“My heart is really out for the leadership trying to come up with solutions because China’s just so maddeningly complex,” Michael Bennett, an environmental economist, was quoted as saying. As evidence of serious efforts to solve the problem, Mr. Bennett pointed to widespread, small-scale, government-approved water conservation programs taking place around the country.

Will China solve its really serious water problems?

“The trend is in the right direction, the question is whether it’s going to be fast enough,” Mr. Bennett said.

“Worse Than Poisoned Water: Dwindling Water, in China’s North”, 05/02/2013, online at:  
[http://rendezvous.blogs.nytimes.com/2013/02/05/worse-than-poisoned-water-dwindling-water-in-chinas-north-and-west/?partner=rssnyt&emc=rss&utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=6c7d5ab6e3-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email](http://rendezvous.blogs.nytimes.com/2013/02/05/worse-than-poisoned-water-dwindling-water-in-chinas-north-and-west/?partner=rssnyt&emc=rss&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6c7d5ab6e3-RSS_EMAIL_CAMPAIGN&utm_medium=email)

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## ❖ China's Hydro-Hegemony

ASIA is the world's most water-stressed continent, a situation compounded by China's hydro-supremacy in the region. Beijing's recent decision to build a slew of giant new dams on rivers flowing to other countries is thus set to roil riparian relations.

China — which already boasts more large dams than the rest of the world put together and has unveiled a mammoth \$635-billion fresh investment in water infrastructure over the next decade — has emerged as the key obstacle to building institutionalized collaboration on shared water resources in Asia.

In contrast to the bilateral water treaties between many of its neighbors, China rejects the concept of a water-sharing arrangement or joint, rules-based management of common resources.

For example, in rejecting the 1997 United Nations convention that lays down rules on shared water resources, Beijing asserted its claim that an upstream power has the right to assert absolute territorial sovereignty over the waters on its side of the international boundary — or the right to divert as much water as it wishes for its needs, irrespective of the effects on a downriver state.

Today, by building megadams and reservoirs in its borderlands, China is working to re-engineer the flows of major rivers that are the lifeline of lower riparian states.

China is the source of transboundary riverflows to the largest number of countries in the world — from Russia, Kazakhstan and Kyrgyzstan to the states in the Indochina peninsula and Southern Asia. This pre-eminence resulted from its absorption of the ethnic-minority homelands that now make up 60 percent of its landmass and are the origin of all the international rivers flowing out of Chinese-held territory. No other country in the world comes close to the hydro-hegemony that China has established.

Since the last decade, China's dam building has been moving from dam-saturated internal rivers to international rivers. Most of the new megaprojects designated recently by China's state council as priority ventures are concentrated in the country's seismically active southwest, which is largely populated by ethnic minorities. Such dam building is triggering new ethnic tensions over displacement and submergence.

The state council approved an array of new dams on the Salween, Brahmaputra and Mekong rivers, which originate on the Tibetan plateau and flow to South Asia and Southeast Asia. The unveiling of projects on the Brahmaputra evoked Indian diplomatic concern at a time when water has emerged as a new Chinese-Indian divide, while the Salween projects end the suspension of dam building on that river announced eight years ago.

The Salween — known in Chinese as Nu Jiang, or the “Angry River” — is Asia’s last largely free-flowing river, running through deep, spectacular gorges and glaciated peaks on its way to Burma and Thailand. Its upstream basin is inhabited by at least a dozen different ethnic groups and rated as one of the world’s most biologically diverse regions, home to more than 5,000 plant species and nearly half of China’s animal species. No sooner had this stunning region, known as the Three Parallel Rivers, been added to the World Heritage List by Unesco in 2003 than Beijing unveiled plans for a cascade of dams near the area.

The international furor that followed led Prime Minister Wen Jiabao to suspend work. The reversal of that suspension, significantly, comes before Wen and President Hu Jintao step down as part of the country’s power transition.

The third international river cited by the state council in its new project approvals has already been a major target of Chinese dam building. Chinese engineers have constructed six megadams on the Mekong, including the 4,200-megawatt Xiaowan, and a greater water appropriator, the 5,850-megawatt Nuozhadu, whose first generator began producing electricity last September.

Asia needs institutionalized water cooperation because it awaits a future made hotter and drier by climate and environmental change and resource depletion. The continent’s water challenges have been exacerbated by growing consumption, unsustainable irrigation practices, rapid industrialization, pollution and geopolitical shifts.

Asia has morphed into the most likely flash point for water wars. Several countries are currently engaged in dam building on transnational rivers. The majority of these dams are being financed and built by Chinese state entities. Most Chinese-aided dam projects in Laos, Cambodia and Myanmar are designed to pump electricity into China’s southern electricity grid, with the lower riparians bearing the environmental and social costs.

But it is China’s dam-building spree at home — reflected in the fact that it boasts half of the 50,000 large dams in the world — that carries the greatest international implications and obstructs the development of an Asian rules-based order.

China has made the control and manipulation of natural-river flows a fulcrum of its power and economic development. Although promoting multilateralism on the world stage, it has given the cold shoulder to multilateral cooperation among basin nations — as symbolized, for example, by the Mekong River Commission — and rebuffed efforts by states sharing its rivers to seek bilateral water-sharing arrangements.

Beijing already has significant financial, trade and political leverage over most of its neighbors. Now, by building an asymmetric control over cross-border flows, it is seeking to have its hand on Asia’s water tap.

Given China’s unique riparian position and role, it will not be possible to transform the Asian water competition into cooperation without Beijing playing a leadership role to develop a rules-based system.

“China’s Hydro-Hegemony”, 07/02/2013, online at: [http://www.nytimes.com/2013/02/08/opinion/global/chinas-hydro-hegemony.html?partner=rssnyt&emc=rss&\\_r=1&utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=5cb0b8fb32-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&](http://www.nytimes.com/2013/02/08/opinion/global/chinas-hydro-hegemony.html?partner=rssnyt&emc=rss&_r=1&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=5cb0b8fb32-RSS_EMAIL_CAMPAIGN&utm_medium=email&)

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## ❖ Chinese Environmentalists Lose Fight to Stop Nu River Dams

One of the sayings trotted out when people try to explain Chinese politics is, “The mountains are high, and the emperor is far away.” It is meant to describe the limits on the power of the central government and the ability of local authorities to do much as they wish. Like most such clichés it is only partly useful. If something is considered a threat to the rule of the Communist Party, for instance, the emperor, or his minions at least, are never far away. They are tapping phones, hacking computers and knocking on doors in even the most remote corners of the People’s Republic.

But if the question is one further down the list of priorities — environmental protection, for instance — then the emperor can be indeed far away, and the directives of the central government can often be ignored. I was reminded of that by the news that after a decade of debate, plans are going ahead for the construction of a series of dams on the Nu River, also known as the Salween, one of the last free-flowing rivers in the China. It flows south from the Tibetan plateau through western Yunnan province, into Burma and along the Thai border for a stretch before entering into the Andaman Sea. In 2003, plans to build 13 hydroelectric dams on the river set off a furor among Chinese environmentalists, who feared the project would jeopardize the 80 threatened or endangered animal species in the river valley. They further argued that damming the river would force large-scale relocation of residents and harm the unique culture of the region. Nu prefecture is home to more than one-third of China’s ethnic groups including some, like the Derung people, with small populations numbering in the thousands.

In 2004, Premier Wen Jiabao called a halt to the project to order further impact assessments as required under a then new environmental law. Chinese green groups celebrated a rare victory over unrestrained growth. But some of the leading critics of the dam proposal, such as Yu Xiaogang, who runs a Yunnan-based environmental group, and Wang Yongchen, a journalist in Beijing who co-founded one of the country’s first environmental NGOs, questioned whether the project was truly killed or merely postponed.

Then a strange thing happened: work continued on the dams anyway, with preparation permitted at four of the proposed sites. I witnessed this on a reporting trip in 2008 and a follow-up visit in 2009.

While there was no construction on the river itself, development efforts were clearly under way. This is what I saw in 2008:

Public discussion or not, work along the Nu is moving ahead. Xiaoshaba, a riverside village of 120 families just a few miles upstream from the regional capital of Liuku, has been leveled and its residents relocated to higher ground. The project was officially carried out under the national “New Socialist Countryside” program. Villagers were compensated for the loss of fields that will be flooded. Earth movers, laborers and survey teams from the Sinohydro company, a member of the consortium that wants to dam the river, crawl over the site.

Ninety-seven km downstream other crews are at work on a bridge and dam foundation at Saige, which along with Xiaoshaba are the two sites mentioned in the development-and-reform commission’s five-year plan. While signs say the Saige work is for a transportation project, a surveyor standing on the roadside by the site readily admits they are building a hydropower dam.

Indeed, while the single political leader who obstructed their path would eventually go away, China’s voracious appetite for energy certainly wouldn’t. Wen’s 10-year tenure as Premier will end in March, when he will be replaced by Li Keqiang. From 2006 to 2010 only about a third of dam projects identified as a priority went ahead, Reuters quoted Zhang Boting, who represents a Chinese hydropower industry group, as saying in November. That is expected to change in the coming years. The country’s 2012 white paper on energy policy declared, “China will energetically develop hydropower.” So it was little surprise that China’s State Council, the central administrative body chaired by the Premier, moved late last month to lift the ban on damming the Nu River and gave Sinohydro the go-ahead for five dams including the Liuku and Saige sites I visited five years ago. In particular, the Songta dam, the farthest upriver and the only structure on the Nu in Tibet, has been approved for construction by 2015, notes International Rivers, a U.S.-based environmental NGO.

Environmentalists have denounced the move, arguing that in addition to the effect on the Nu region’s people and wildlife, there is a significant danger that the weight of massive new reservoirs will add to the risk of seismic instability. Some scientists have said the Zipingpu dam in Sichuan may have been one of the factors that helped trigger the 2008 Wenchuan earthquake, which left 87,000 people dead

or missing. Other scientists question that assertion and say the water weight couldn't possibly trigger the quake on its own.

What is certain is that the new dams along the Nu will dramatically change the region. Thousands of people will be relocated, fields in the river valley will be inundated, and a river that has always run wild will be shackled and harnessed. In TIME Asia's 2009 Best of Asia edition, the magazine named the Nu River Valley as a place to visit before it disappears. That advice is now truer than ever.

"Chinese Environmentalists Lose Fight to Stop Nu River Dams", 05/02/2013, online at:  
<http://world.time.com/2013/02/05/chinese-environmentalists-lose-fight-to-stop-nu-river-dams/#ixzz2KV80ZVp8>

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## ❖ Plans for Nu River Dam a Setback for Chinese Environmental Transparency

The phrase “Ecological Civilization,” meant to describe a balance between economic development and environmental protection, was introduced in Chinese politics when the country held its 18th National Congress in November, 2012. Touted as an important part of China’s “Scientific Outlook of Development,” “Ecological Civilization” was said to be important for the well-being of the Chinese people and the future of China.

Around the same time, China’s Ministry of Environmental Protection published a document promoting transparency in environmental issues. However, only two months after the convening of the National Congress, China’s State Council quietly approved a measure allowing construction to resume on the controversial Nu River Dams project, which had been deemed ecologically destructive just ten years ago, without seeking any approval or feedback from the public. The Nu River, also known as the Salween River, flows from the Tibetan Plateau in Western China to the Andaman Sea in Southeast Asia, winding through China, Thailand and Myanmar. It is currently the only undammed river in China and is the longest free-flowing river in all of Southeast Asia. In 2003, however, a state-owned Chinese-corporation made plans to build 13 hydroelectric and irrigation dams to generate more electricity for China and bolster the power supply in the contiguous Southeast Asian countries.

Many Chinese opposed the plan on the grounds that the dams and reservoirs would destroy the Three Parallel Rivers, a UNESCO World Heritage Site in Yunnan Province, and harm local and regional biodiversity. Other concerns stemmed from the project’s potential displacement of those who would lose their homes, land, and right to live in the affected area. Due to large-scale opposition and protests, then-Premier Wen Jiabao suspended the project in 2004.

Premier Wen seemed to play a crucial role in protecting the Nu River from being dammed, but according to ecological protection group International Rivers, China has been ready to push forward with hydroelectric projects on the Nu River since 2011. As Wen Jiabao departed in 2012, the new leadership began to fast-track hydroelectric projects. Shi Lishan, the deputy director of new energy at China’s National Energy Administration (NEA), also stated on national radio, “We believe

the Nu River can be developed, and we hope that the progress can be made during the 12th Five-Year Plan period, from 2011-2015.”

On January 23, 2013, China’s State Council released the “Twelfth-Five Year Energy Plan,” announcing that China is going to actively develop its hydropower system. There will be five dams constructed on the Nu River and construction will be completed on 50 other dams before 2015. Authorities are going to build many hydroelectric power plants on rivers in southwestern China over the next five years.

Facing both international and domestic pressure, China is planning to reduce its dependence on coal and make its economy cleaner and more energy-efficient. Hydroelectricity has therefore become key to ensuring China’s economic growth and large-scale development. However, the environmental and societal problems caused by hydroelectric development are a source of concern. Dams and reservoirs will block the movement of migratory fish, alter animals’ habitats, and damage the ecosystem. Many people will be forced to move elsewhere and abandon their homes in order to “support” the dam projects. Numerous historical sites will be flooded once the dams are complete.

Although only a few social media sources reported the “Twelfth-Five” Energy Plan, and not many civic groups and netizens were aware of it, people who saw the news still reacted angrily. A director with the environmental NGO Friends of Nature angrily criticized the Nu River Dams project upon hearing of its resumption: “If implemented, these projects could destroy the baseline for ecological security, which completely goes against a promise highlighted by the new leadership to preserve a beautiful homeland for our future generations.” Sina Weibo user @落伍 commented, “Before the hydro development, local residents are poor, but live in a green ecological environment; while after the development, the people will still be poor, and will always be threatened by earthquakes.”

Another commenter, @露玲珑, suggested that, “Perhaps the government should consider sources of energy like wind and solar power, which do not impact the environment, and avoid changing the environment. The price for developing hydropower is cutting off the natural flow of rivers, which permanently alters the habitats of marine animals.”

According to the NEA, China is planning to build an additional 140 gigawatts of hydropower capacity over the next five years, or over 50 dams. Further development may generate more power for China’s growing population, but will also have a lasting impact on the country’s ecosystem. Only

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time will tell whether public pushback will do anything to curb or alter the new leadership's drive to dam China's rivers.

“Plans for Nu River Dam a Setback for Chinese Environmental Transparency”, 04/02/2013, online at:  
<http://www.tealeafnation.com/2013/02/plans-for-nu-river-dam-a-setback-for-chinese-environmental-transparency/>

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### ❖ Costly drops

## Removing salt from seawater might help slake some of northern China's thirst, but it comes at a high price

CHINESE officials are fond of grandiose engineering projects. After more than a decade of toil, one of the biggest since the construction of the Great Wall is close to achieving what they like to call a “decisive victory”. In coming months, canals and pipelines hundreds of kilometres long will bring water from the Yangzi River basin to the parched north. But growing demand is forcing officials to look for other sources. A promising one, they believe, is the sea.

The Beijiang Power and Desalination Plant lies a few hundred metres from the coast; its chimney and two cooling towers dominate a desolate expanse of salt farms. The \$4.1 billion facility is one of the pet projects of the government in the port city of Tianjin, a manufacturing and logistics hub that, like nearby Beijing, enjoys provincial-level status and is one of China's fastest-growing regions.

The Beijiang plant began generating electricity in 2009, and the following year became China's first large-scale supplier of desalinated water through a city main. For Tianjin at least, the plant offers a ray of hope. The city, like most of northern China, is desperately dry. Local water resources per person are less than 7% of the national average.



By the middle of this year the first of three planned water-diversion projects bringing water to the north from the Yangzi basin is due to open for trial use. This easterly route (see map), which is more than 1,100 kilometres (700 miles) long, was partly intended to help satisfy Tianjin's thirst, but its construction has suffered years of delays.

The project will initially provide water to the provinces of Shandong, Jiangsu and Anhui. No date has yet been set for Tianjin to tap in. The city will not get its first taste of Yangzi-basin water until the middle of the three routes is ready, which officials say will be late in 2014. This is also several years later than planned (moving 330,000 people to make way for the project has proved arduous). Even when the water flows into Tianjin, at an initial rate of about 1 billion cubic metres a year, it will still not satisfy demand. The government news agency, Xinhua, says Tianjin will need an additional 600m cubic metres a year.

The delays, shortcomings and mounting costs of the water-diversion scheme (more than \$34 billion spent so far) have encouraged officials to look at other solutions. China has been a slow starter in desalination, but in recent years the country has become one of the world's fastest-growing markets for the technology. This does not come cheap, but the government can lean on state-owned enterprises such as SDIC, which operates the Beijiang plant, to shoulder the cost. A year ago the government said China would produce up to 2.6m cubic metres of desalinated water daily by 2015, a more than fourfold increase. That would be a tiny share of China's unmet demand, but nearly the amount that Tianjin expects to receive from the diversion scheme's middle route.

### **Dry days**

China is still heavily dependent on imported technology. The Beijiang plant uses Israeli equipment to distil the seawater, but officials say China's own technology will reach world standards in the next few years. Tan Peidong, a deputy general manager of the Beijiang facility, predicts that this will help reduce costs. He also expects help from rising water tariffs, which China has long kept below market levels in order to protect consumers. Within a couple of years, he says, Beijiang will begin turning a profit on its water, which by next year it will be able to produce at a rate of 200,000 cubic metres a day, twice today's capacity (though current output is much less).

Mr Tan does not see any threat to his business from next year's arrival of diverted water. Not only will there remain a shortage, but his water will be cheaper to supply to the grid than diverted water from the Yangzi basin. A cubic metre of water from the plant costs about 8 yuan (\$1.30) to produce—slightly more than the price paid by industrial users, but 60% higher than the tariff for households. Mr Tan says a cubic metre of Yangzi-basin water will cost about 10 yuan. He says he is “very hopeful” that some of his output will be piped to Beijing. Supplying desalinated water to the capital will still cost about the same or only a little more than channelling in water from the south, he reckons.

In its first five-year plan for the industry, in December, the government insisted that desalination was “of benefit to sustainable development”. It was better, it argued, than sucking more water out of the north's fast-diminishing aquifers. That is surely right. Yet desalinating water uses enormous amounts of energy, which comes mainly from highly polluting coal (though Beijiang's advanced technology is more efficient than that found in standard power plants). And diverting water from the river basin could exacerbate the impact of droughts in the south. No wonder that environmentalists complain that the government is relying on costly remedies, and doing too little to encourage conservation.

“Costly drops”, 09/02/2013, online at: <http://www.economist.com/news/china/21571437-removing-salt-seawater-might-help-slake-some-northern-chinas-thirst-it-comes-high>

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## ❖ Mekong Countries at Odds Over Mega-Dams

*Governments are struggling to decide whether the Mekong River should continue to feed 60 million people or become a source of hydroelectric power.*

What started as a debate about a hydroelectric dam has become a high profile dispute over the future of food security in the Mekong region. The controversial Xayaburi Dam in Laos has resulted in increasing political tensions and a crackdown on civil society, culminating in the disappearance of a Lao activist in December.

Over 60 million people living in Cambodia, Laos, Thailand, and Vietnam depend on the Mekong River. It is the world's largest inland fishery and the second most biodiverse river, behind only the Amazon. The river's fish are the main source of protein for millions of people. The river also nourishes some of the region's most productive agricultural fields. Tourists flock to the Mekong River from across the world, contributing to all four countries' economies.

Now Laos wants to build nine hydropower dams on the river and sell the electricity to neighboring countries. With the help of Thailand, Laos has already started construction on the first project, called the Xayaburi Dam. The problem is that the dams in Laos will cause significant harm to countries downstream. This puts Laos' neighbors in a difficult situation. Scientists have concluded that if the dams are built, the food security of millions of people in all four countries will be threatened.

### **The costs of damming the Mekong**

The stakes are high. As one of Asia's poorest countries, Laos sees the dams as an opportunity to earn much needed revenue. For the project developers, the Xayaburi Dam provides a cash windfall. Yet leading scientific studies have found that many of the dams' costs will be borne by other governments and people living downstream, rather than the dam developers themselves. The dams will block fish migrations, leading to drastic declines in Cambodia's fisheries industry. They will also reduce the flow of nutrients downstream to rice paddies and agricultural fields in Vietnam's Mekong Delta. Many of the region's poorest villagers who live along the riverbanks will lose their farmland and the fish that provide their main source of protein. Scientists have found no viable measures to mitigate the harm or replace lost food security.

### **As a water dispute arises, a treaty fails**

In 1995, Cambodia, Laos, Thailand, and Vietnam signed a treaty to promote cooperation in use of the Mekong River. The treaty created the Mekong River Commission, which is tasked with finding mutually acceptable ways to use and sustain the river. As part of this, the treaty requires the governments to seek agreement before beginning major projects on the Mekong, using a process called "prior consultation."

The Xayaburi Dam was the first big test for the commission. Instead of seeking agreement, however, the commission hit gridlock. When the four governments first met to discuss the project in April

2011, Cambodia and Vietnam asked for dam construction to be postponed, so that transboundary impacts studies could be conducted. Laos and Thailand refused to do these studies.

With no clear resolution to the prior consultation, Laos and Thailand decided to proceed with the project anyway. The commission provided few opportunities for the fishermen and communities who would live near the dams to be heard, and many still do not know when construction vehicles will show up or when they will be told to move.

On November 7, 2012, Laos held a groundbreaking ceremony for the Xayaburi Dam (although construction actually began in late 2010). Laos claimed that the dam had been re-designed to address Cambodia's and Vietnam's concerns, although the Mekong River Commission had not yet seen details of the re-design. Cambodia and Vietnam remained silent after the announcement, leading to speculation that a deal had been struck.

### **Cambodia and Vietnam find their voice**

On January 17, government ministers gathered in Laos for the annual meeting of the Mekong River Commission's governing body. Although the Xayaburi Dam was not on the agenda, the governments finally spoke out. Discussions became tense. Cambodia said that Laos had misinterpreted the 1995 Mekong treaty by proceeding with the Xayaburi Dam before the "prior consultation" was finished. Vietnam said that the recent launching of the dam "is causing concerns...about its adverse impacts on downstream areas." Even Thailand acknowledged that concerns still exist.

Donors to the Mekong River Commission also spoke up. In a joint statement, Australia, Japan, European countries, the United States, and others said, "It is our consensus that building dams on the mainstream of the Mekong may irrevocably change the river and hence constitute a challenge for food security, sustainable development, and biodiversity conservation." At the end of the meeting, Laos announced "with deep regrets" that it could not sign the meeting's official minutes, signaling that it did not acknowledge the criticisms. Days later, the Lao government's *Vientiane Times* published an article claiming that the commission supported the Xayaburi Dam.

### **Public concern with the dams**

As the commission's meetings falter along, citizens in all four countries have searched for ways to raise their concerns to government officials. Thai villagers who live near the Mekong River have protested their country's involvement in the project and filed a lawsuit. Journalists and civil society groups continue to monitor the situation and report on the status of the dams, because the Mekong River Commission's own transparency has been limited. Scientists across the world continue to raise concerns.

Meanwhile, Laos has prevented any public criticism of the dam within its own borders. In December, the government expelled a Swiss activist, Anne-Sophie Gindroz. One week later, prominent Lao activist Sombath Somphone was kidnapped. Although the reason for his kidnapping is unknown, evidence suggests that the Lao government was involved. Both Mr. Somphone and Ms. Gindroz helped to organize a forum last October where the Mekong dams were publicly criticized. Mr.

Somphone remains missing, and other Lao citizens who have been critical of the Mekong dams are now in hiding.

### **What happens next?**

Is this the beginning of a Mekong water conflict? Conflict may grow as the Xayaburi Dam's impacts are felt over the coming years, and as Laos moves forward with other Mekong dams. Within the next year, evidence suggests that Laos will give the go-ahead for construction on two other dams, including one that is only two kilometers from the Cambodian border.

On the other hand, the politics of the Mekong are complicated. The region's economies are closely intertwined, and governments are hesitant to damage relations with one another. Cambodia has proposed to build two of its own dams on the Mekong, and Vietnam is involved in three of the proposed dams, although none of these projects are likely to move forward anytime soon. Thailand plans to buy the electricity from eight of the eleven dams, although energy experts in Thailand are saying that the electricity is not needed. China is involved in several of the dams as well and may be exerting pressure on Cambodia and Vietnam to support the dams.

As the Mekong governments become entangled in a diplomatic dispute, the outcome is uncertain, but one thing is clear. For the millions of poor villagers who depend on the Mekong River for food security, and who have no voice in their governments' decisions, challenging times lie ahead.

"Mekong Countries at Odds Over Mega-Dams", 05/02/2013, online at: <http://www.fairobserver.com/article/mekong-countries-odds-over-mega-dams>

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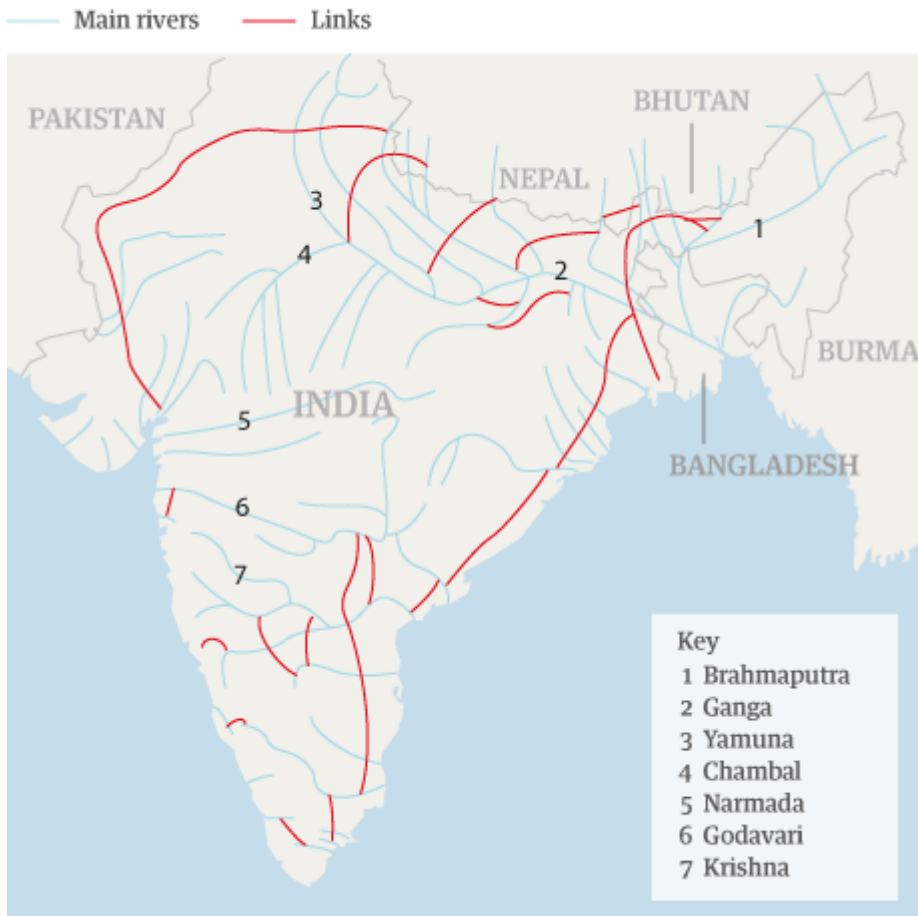
## ❖ India's river-linking project mired in cost squabbles and politics

India's plan to link 37 rivers would save the country from drought and flood and help feed millions. So why is progress so slow?

The idea of linking [India's rivers](#) to put an end to droughts and floods has exercised a mesmerising grip on the nation's mind for decades. That grip has become even stronger since neighbouring [China embarked upon various water diversion projects](#), and pushed ahead with its own gargantuan engineering projects.

So it came as no surprise when [in December 2012 India announced progress on plans to connect 37 rivers across the nation](#) through 31 links with 9,000 km of canals, saying such a project was feasible. This exercise, the government estimates, would cost \$140bn.

### India's river-linking project



SOURCE: IWMI

But even after [China went ahead with its plan to construct more than half a dozen dams](#) that India says would affect the flow of [water](#) downstream into its own territory, the plan to link Indian rivers by 2016 does not seem to be progressing easily, with both economists and environmentalists now believing the project is unfeasible.

The government's own estimates suggest that inflation and debt-servicing costs during the four-year period of construction would push costs even higher than the already-unaffordable \$140bn estimate. The supreme court [is also concerned](#) over potential financial shortfalls. Last February, the supreme court criticised the government and [directed the authorities to implement the plan without any delay](#), calling it "a matter of national benefit and progress".

India's average annual rainfall of about 4,000bn cubic metres is unevenly distributed – both regionally and seasonally. The pro-linking lobby suggests that networking would help maintain the flow of water in all the rivers, as well as reducing the risk of drought and floods in various states. Many large- and medium-size rivers [are close to each other](#) and these rivers can be [connected](#) depending on their direction and surge. Environmentalists and water experts, however, [reject claims that it is of national benefit](#). They suggest it is a "mindless proposition", and that the government is unsure of how to reconcile such huge engineering with the environmental impact. Some activists [have warned the plan could result in ecological disaster](#).

The battle has spilled over into politics. India's main opposition party, the Bharatiya Janata Party (BJP), which banks on votes from vulnerable people living near rivers, is questioning the will of the government to implement the project just a year before national elections.

BJP's top leader, L K Advani, [writes in his blog](#) that the government is not keen on the project despite the supreme court's judgement. Not following the judicial directive is a contempt of court, he says.

Although the government [is happy to talk up the benefits of river-linking](#)– such as providing up to 45GW of new electricity capacity, and a better supply of water for irrigation in about 120m acres of land, as well as flood control – it is strangely hushed on the subject of execution.

“India's river-linking project mired in cost squabbles and politics”, **Ravi S Jha**, 05/02/2013, online at: [http://www.guardian.co.uk/environment/2013/feb/05/india-river-link-plan-progress-slow?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=6c7d5ab6e3-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email](http://www.guardian.co.uk/environment/2013/feb/05/india-river-link-plan-progress-slow?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6c7d5ab6e3-RSS_EMAIL_CAMPAIGN&utm_medium=email)

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### ❖ Harare residents appeal for water intervention

Residents living in different suburbs across Harare are appealing for urgent intervention, after days without fresh water have raised fears of the spread of potential diseases.

Mainly western areas of the capital have not had fresh water since last Thursday. This includes the densely populated Mbare suburb, as well as Glen View, Budiro, Rugare, Sunningdale and others.

Although there has been no official reason given for the water shortages, it is understood that a main water pipe at the Warren Control pump station burst last week.

Precious Shumba, the head of the Harare Residents Trust (HRT), said Monday that there has been no attempt by the city authorities to communicate these problems to residents. He told SW Radio Africa that most residents affected by the shortages spend hours queuing for water at the limited boreholes available.

“In the communities where there are boreholes there are unemployed youths who have claimed ownership (of the boreholes) and are charging people to get water and jump the queues,” Shumba explained.

He said this has often forced residents to travel outside the city to find water. But he said this does not eliminate the risks of contracting water borne diseases like typhoid.

“The council needs to prioritise this issue. They are trying to treat it as a minor problem but this is a crisis,” Shumba said.

The spread of typhoid has continued across the country, with local councils failing to provide clean water. Cases have been reported in different parts of Zimbabwe since 2011, including Kuwadzana, Mufakose, Bindura, Norton and Zvimba. Chitungwiza and Kadoma have also reported serious outbreaks.

The total number of people affected by typhoid alone is believed to be well over than 5,000 officially registered cases. The government’s Health and Child Welfare’s Dr Portia Manangazira has reported

that in January eleven people died because of diarrhoea, which is the main symptom of diseases like typhoid.

“Harare residents appeal for water intervention”, 04/02/2013, online at:

[http://www.swradioafrica.com/2013/02/04/harare-residents-appeal-for-water-intervention/?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=7da2e9c914-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email](http://www.swradioafrica.com/2013/02/04/harare-residents-appeal-for-water-intervention/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=7da2e9c914-RSS_EMAIL_CAMPAIGN&utm_medium=email)

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## ❖ From Emergency Response to Development for Water Supply and Sanitation in Liberia

The first Joint Sector Review and launch of the national Sector Investment Plan (SIP) for the Liberian water, sanitation and hygiene (WASH) sector will take place on February 5-7. With improved sector coordination and a new, systematic plan to achieve national objectives, Liberia is well-positioned to successfully tackle its WASH challenges – if sufficient funding is found.

I began working in Liberia in late 2010 to help transition from a WASH sector dominated by donor-administered emergency projects, to one led by national institutions in a systematic manner. Only when a country's own institutions have the capacity and resources to carry out long-term planning and successful interventions are sustainable improvements in services to be expected. In Liberia, these improvements are direly needed given that 40% of the rural population still lacks access to safe water, and less than 20% has access to improved sanitation.

The first point of our engagement was to improve the data on rural water infrastructure available to the national sector institutions. We worked with the Ministry of Public Works to create the first comprehensive database of protected public water points in post-war Liberia. This was achieved by deploying innovative new mobile-to-web mapping technology (FLOW) that allowed 150 local staff to rapidly map the entire country – from the capital city of Monrovia to remote rural villages. Thus, the Water and Sanitation Program (WSP) helped the ministry obtain a clear overview of needs for new infrastructure and repairs, and this data has become a key input into the sector investment plan.

The SIP provides an overall strategy for the water, sanitation and hygiene sector – but more than that, it gives clear estimates of the funds required to achieve national objectives, highlights priority areas and prices even concrete projects the government and its partners should pursue in the core-period of 2012 to 2017. It thus provides a concrete plan on how to meet the commitments H.E. the President of Liberia Ellen Johnson Sirleaf has made with her recent signature of the WASH compact.

Of course Liberia's success will hinge on the availability of funds. The SIP estimates that US\$ 400 million is needed to achieve the WASH targets for 2017, but much of this sum is yet to be mobilized. With a new plan and a reinvigorated sector, the time to step up has come. The launch of the SIP could provide the impetus for real action to bring relief to the millions of Liberians still denied some of the most basic human needs: safe water, clean sanitation, and proper hygiene.

“From Emergency Response to Development for Water Supply and Sanitation in Liberia”, 06/02/2013, online at: <http://blogs.worldbank.org/water/from-emergency-response-to-development-for-water-supply-and-sanitation-in-liberia>

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### ❖ Kenya: No End to Nakuru Water Shortage

RESIDENTS of Kiamunyi, Elburgon and Molo areas in Nakuru County will experience longer spells of water shortage as the Nakuru Rural Water and Sanitation Company plans works out plans to ensure equitable and constant supply to customers.

The company says supply services had been constrained by the archaic facilities and rapid rise in population that is way beyond demand.

“There has been a steady increase in demand of volumes to be supplied to clients,” NARUWASCO Managing Director Engineer Job Tomno said.

He attributed low supply to dwindling production from boreholes and ageing infrastructure but pledged to ensure higher budget for procurement of modern facilities.

“We incur more costs due to recurrent breakdowns caused by the ageing infrastructure. This also inconveniences clients but we promise to address the challenges in the best way we can,” said the MD. Tomno said the firm had adopted a rationing programme as a short-term solution to the problem.

“Kenya: No End to Nakuru Water Shortage”, 09/02/2013, online at: [http://nepadwatercoe.org/kenya-no-end-to-nakuru-water-shortage/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=kenya-no-end-to-nakuru-water-shortage](http://nepadwatercoe.org/kenya-no-end-to-nakuru-water-shortage/?utm_source=rss&utm_medium=rss&utm_campaign=kenya-no-end-to-nakuru-water-shortage)

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## ❖ Nestlé's Peter Brabeck: our attitude towards water needs to change

Nestlé chair Peter Brabeck talks to Jo Confino about the need to build water stewardship into core business strategy and how a sense of entitlement causes irresponsible use

Nestlé chair Peter Brabeck is seeking a solution to the old conundrum that you can take a horse to water but you cannot force it to drink.

The 68-year-old Austrian believes water scarcity is perhaps the biggest threat facing humanity and while governments and businesses are finally waking up to this, precious little action is being taken. Brabeck says he became a convert to the cause of water stewardship a few years ago when he was planning the food and drink giant's 140th anniversary and wondered what the challenges might prevent it from celebrating another 140 years in business.

The "surprising" answer led him to step back from his role as chief executive to devote more time to his water crusade, and taking a lead in the development of the Water Resources Group (WRG), which is seeking to bring governments, business and civil society together to find solutions. Progress is nowhere near fast enough, given that global demand is expected to outstrip supply by up to 30% within the next 17 years, but Brabeck believes the most effective way to encourage the proverbial horse to drink is if it sees another quenching its thirst.

The WRG has created successful test projects in countries such as Jordan and South Africa and as a result, several other countries are queuing up to form partnerships, including Tanzania and Ethiopia.

### Building momentum

Sitting in Davos, after the WRG's annual meeting, Brabeck says: "I've been coming up here [World Economic Forum] for 15 years and nobody was talking about water. They were talking about CO2, they were talking about climate change; that we're going to roast and burn.

"We're talking about running out of oil, well it happens that we have 120 years of proven oil reserves, we have 240 years of proven gas reserves, we have 550 years of proven coal reserves, we have thousands of years of proven Uranium reserves and we are running out of water today." Brabeck says that while water is the paramount issue, it also needs to be seen in relationship to the two other key challenges humanity is facing, namely food and energy security.

He points, for example, to the fact that we are using more water, rather than less, to produce our food and energy. Unconventional oil is also a disaster waiting to happen, he says, given that it uses up to six litres of water to produce one litre of oil, in contrast to 0.1 litre for conventional oil.

"I mean that's enormous," he says. "It's the same with water efficiency on the agricultural side. We are using more and more water because we are using more and more irrigation, partly because we have more drought. This is why, if we cannot fix the water issue, we will not be able to give food or energy security. That's where the nexus is established.

"You can talk today to the energy sector and they realise now water is becoming the most critical element. That's a big step. You wouldn't have had that five years ago."

Brabeck is convinced we need to go back to a holistic view of the world, because our tendency to specialise has meant we have lost sight of the big picture.

"If you become more and more and more specialised in a world that is more and more interconnected, you are losing your impact and your credibility to find solutions," he says. "It's not only water. With most other problems, it's a nexus issue. Even the Millenium Development Goals were very specialised and therefore they were also missing out on the nexus."

A difficult sell?

Brabeck talks about credibility but knows that Nestlé still attracts distrust from the infamous 1970s baby milk scandal and its own more recent approach to water. Activists accuse Nestlé, the leading seller of bottled water – which accounted for nearly 8% of its total 2011 sales of 83.6bn Swiss francs (£58bn) – of being more interested in lining its own pockets through a back-door privatisation of countries' water supplies, than in saving the planet.

Last year, a documentary film, *Bottled Life*, accused Nestlé of extracting ground water for its bottled brands at the expense of local communities, often in poor countries. While the company refused to take part in the film, it did post online a rebuttal of the allegations.

Brabeck, in combative mood, responds that it is important to be less emotional and more analytical about the issues, although he acknowledges that pressure from civil society groups forced Nestlé to recognise that a company cannot create value for its shareholders if it doesn't create value for society in parallel.

"The fact is they [activists] are talking first of all only about the smallest part of the water usage," he says. "I am the first one to say water is a human right. This human right is the five litres of water we need for our daily hydration and the 25 litres we need for minimum hygiene.

"This amount of water is the primary responsibility of every government to make available to every citizen of this world, but this amount of water accounts for 1.5% of the total water which is for all human usage.

"Where I have an issue is that the 98.5% of the water we are using, which is for everything else, is not a human right and because we treat it as one, we are using it in an irresponsible manner, although it is the most precious resource we have. Why? Because we don't want to give any value to this water. And we know very well that if something doesn't have a value, it's human behaviour that we use it in an irresponsible manner.

"If you look back to when I was born, there were 2.7 billion people and we were not even using 40% of the renewable water, but by seven billion we are already over-using it and if we are going to be up to 10 billion [people], we have to change our relationship with this resource."

The role of business, governments and NGOs

If the challenge of water scarcity is to be met, Brabeck says all players in society need to become more effective. Businesses that recognise the scale of the problem have to put pressure on others to act and the thousands of active NGOs need to start working together to create change, rather than each pushing their own particular agendas.

Brabeck warns businesses not to hide behind a philanthropic agenda but to build water stewardship into the heart of their business strategies. He also says that cross-sector partnerships need to be professionalised and institutionalised so that they do not fall apart as passionate individuals move on. "One always needs to come back to the principles, as these have to become part of the culture of an institution," he says. "That is something which we are being reproached for – for example, at Nestlé. They say we are like a sect because we have a very strong culture, but that allows me to run Nestlé, for example, in a completely decentralised manner."

Brabeck believes in action, rather than just talking, which is expressed through his love for climbing, skiing, flying, Formula One and motorcycling, and insists the only sign of success will be projects on the ground, not the creation of another thinktank or conference.

While the journey ahead is long and uncertain, Brabeck does see signals that change is starting: "I'm not the prophet who thinks that tomorrow everybody is convinced and will be on the bandwagon," he says. "But what I can see is that when five years ago I started to talk about the water issue and we were 10 people in the room, today water is being recognised as the number two societal risk of this world. That's quite a good step and I am gladdened by the amount of companies and colleagues of mine who are getting involved. But, above all, it is the politicians who are starting to say 'we have to do something about it'."

"Nestlé's Peter Brabeck: our attitude towards water needs to change", 04/02/2013, online at:

<http://www.guardian.co.uk/sustainable-business/nestle-peter-brabeck-attitude-water-change-stewardship>

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## ❖ Recycled Stormwater Among Australia Options as Water Plant Idled

Victoria Water Minister Peter Walsh, whose government is paying A\$1.8 million (\$1.9 million) a day for an idled desalination plant, said the facility costs too much and the state is considering recycling stormwater instead to meet some needs.

“There are other options to ensure [Melbourne](#)’s water supply” including more efficient recycling of drainwater, Walsh said in a telephone interview. “The previous government could have been looking at this rather than making a rash decision on a very expensive project.”

Walsh’s Liberal-National coalition inherited the A\$3.5 billion Wonthaggi plant on Australia’s south coast when it beat Labor in the November 2010 state election. Since the plant was ordered in 2007, the nation’s most prolonged drought has broken, leaving nearly dry dams in Victoria state almost full after floods and storms caused at least A\$7 billion of insured [losses](#) and 40 deaths nationwide the past three years.

Termed “Labor’s white elephant” by the Canberra Times, the plant co-developed by [Suez Environnement \(SEV\)](#) shows the perils of planning water supplies in the driest populated continent. The desalination plant for Sydney, Australia’s largest city, has been idle since July. The Gold Coast desalination plant in Queensland state was turned on last month after a two-year hiatus to provide water for the third-biggest city, Brisbane.

Since 2006, the nation’s five largest cities have spent billions on desalination plants for a secondary source of water. The energy-intensive plants make the water more costly than that from aquifers and reservoirs.

### **On Standby**

Adelaide’s desalination plant, built at a cost of A\$1.8 billion, completed work to double its capacity to 100 gegaliters in December and is in the process of commissioning, the South Australian state government said in an e-mailed statement.

In Melbourne’s case, AquaSure Pty Ltd. was created to bid for the project in a group that included Suez, [Europe](#)’s second-largest water utility, its subsidiary Degremont SA, and construction company Thiess Pty Ltd. to build and operate a plant capable of turning as much as 150 billion liters (39.6 billion gallons) of saltwater a year into potable water.

“The project timetable was always very demanding,” Aquasure said in an e-mailed response to questions. “It was made worse by the rainfall” and industrial disputes.

Suez, which is Paris-based and supplies 30 percent of Australia’s drinking water, has taken 322 million euros (\$435 million) of provisions on the project due to delays, cost overruns, strikes and bad weather, according to the company.

Under the contract the previous Labor government signed with AquaSure, the plant, operating or not, now costs Victoria state a minimum of A\$1.8 million a day, Walsh said. Should water be ordered, the cost will increase at a fixed rate.

### **‘Last Resort’**

“Our view is there should be a desalination plant as a last resort for Melbourne,” Walsh said Jan. 30 of the country’s second-largest city. “It didn’t need to be as big as or as expensive as this one.”

“In any given year there’s more stormwater that runs off Melbourne into Port Phillip Bay than Melbourne consumes,” Walsh said. “We’re not saying we should be drinking that but we are saying that can be utilized for non-potable purposes,” including watering urban parks and sports fields. The government has allocated A\$50 million in grants to assist water authorities to utilize stormwater and recycled water. A new suburb in East Werribee will predominantly use stormwater for public spaces, he said.

Tony Wong, chief executive officer of the Cooperative Research Centre for Water Sensitive Cities, said securing water supplies for [Australia](#) should be beyond politics.

### **Projects ‘Politicized’**

“Notwithstanding the debate on whether it needed to be as large as it is, the circumstances leading to the decision to commission the desalination plant, and its strategic function, are often conveniently forgotten,” Wong said. “I am always concerned that important nation-building infrastructure projects are politicized.”

The desalination plant “will provide Melbourne with an important underpinning water security that enables it to now develop a broader strategy for a sustainable and resilient water system,” he said.

“Recycled Stormwater Among Australia Options as Water Plant Idled”, 05/02/2013, online at:

[http://www.bloomberg.com/news/2013-02-05/recycled-stormwater-among-australia-options-as-water-plant-idled.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=6c7d5ab6e3-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email](http://www.bloomberg.com/news/2013-02-05/recycled-stormwater-among-australia-options-as-water-plant-idled.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6c7d5ab6e3-RSS_EMAIL_CAMPAIGN&utm_medium=email)

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