



# 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

28 October 2013 – 03 November 2013

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### ❖ Tigris, Euphrates have enough water for Turkey, Iraq, Syria

*Over the past 25 years, four essential accords have been signed on the subjects of the Tigris and the Euphrates, which provide water to an area larger than 900 square kilometers and a life source to more than 54 million people*

Experts note that, when it comes to water, the Tigris and [Euphrates](#) are almost as often fought over as the Nile, but the fact is that these two rivers have more than an adequate amount of water for the three countries they run through -- [Turkey](#), Iraq and Syria.

These same experts note that it is due to the inefficient use of water by both Iraq and Syria that more than half of the water from these rivers pours into the Persian Gulf.

Professor Mehmet Dalar from Abant İzzet Baysal University's department of international relations says that 20 billion of the [Euphrates](#)' 36 billion cubic meters of water, and a full 20-30 billion of the Tigris' 45 billion cubic meters of water, pour completely unused into the sea.

İbrahim Erdoğan from the Faculty of Economics and Administrative Sciences at Balıkesir University -- an institution known for its research on transnational water resources -- asserts that, in fact, the Tigris and [Euphrates](#) posses more water than [Turkey](#), Iraq and Syria even have a need for.

Ruled by dictatorial regimes for many years, neither Iraq nor Syria responded positively to calls from Turkey to use water from these rivers in smart, optimal ways. Instead, policies from these countries turned these waters into a significant source of tension and problems.

Professor Timuçin Kodaman from Süleyman Demirel University's Faculty of Economics and Administrative Sciences says if the sharing of the waters of the Tigris and the [Euphrates](#) were to develop parallel to regional levels of democracy, current problems could certainly be transcended with ease. He adds that these two rivers could even turn into guarantors of peace for the larger region.

In the meantime, neither the United Nations nor other significant international organizations have been able to come to mutual agreements on the sharing of water resources. While some countries take advantage of river water that runs through more than just their own country, other countries accept such waters as being “international.”

According to a study undertaken by the UN'S Economic and Social Commission for Western Asia (ESCWA) and the German Federal Institute for Geosciences and Natural Resources (BGR), there are 263 transboundary rivers in the world and more than 300 aquifers which flow through multiple countries.

This same study underscores the importance of transboundary waters, such as the Tigris and the [Euphrates](#), in terms of the opportunities they actually provide for unity. At the same time, the study notes that when cooperation is not achieved over such waters, they can wind up introducing clashes, pollution and excessive salinization.

Over the past 25 years, four essential accords have been signed on the subjects of the Tigris and the [Euphrates](#), which provide water to an area larger than 900 square kilometers and a life source to more than 54 million people.

According to the Protocol of Economic Cooperation signed by Turkey and Syria in 1987, Turkey agreed to allow 500 cubic meters of water to flow into Syria per second.

Afterward, the Turkish-Syrian Strategic Cooperation Council accord signed in 2009, in line with already-developing relations between the two countries at that time, aimed to increase the quality of water as well as the number of shared water pumping stations and dams.

An accord reached that same year between Turkey and Iraq called for the sharing of hydrological and meteorological information between the two countries as well as cooperation between water resource experts.

As for Iraq and [Syria](#), both signed an accord in 1990 agreeing that 58 percent of the waters of the [Euphrates](#) would go to Iraq while 42 percent would go to Syria.

Dalar notes that if these three countries that share shorelines with the Tigris and the [Euphrates](#) were to sit down in good faith with one another, then many problems linked to these rivers would be eliminated. He asserts that the real and biggest problem lies simply in the lack of effective and productive sharing of water resources.

He also says that though Turkey has worked to solve the problem of sharing water through technical paths, the other two countries used the rivers in the past as a tool for political maneuvering.

According to the study, the quality of the waters of the Tigris and the [Euphrates](#) as they run through Iraq and Syria is fast declining due to pollution and salinization. Prime Minister Recep Tayyip Erdoğan also notes that one-third of the water running through Syria winds up evaporating.

Erdoğan says the dependence on agriculture for survival in countries of the region means these problems are not getting solved and that this problem has compounded trust issues between the region's countries.

Another point of conflict between the three countries when it comes to the Tigris and the [Euphrates](#) concerns the status of the basin formed by the two rivers. While Turkey insists that there is just one basin -- formed by the Shatt al-Arab River, which is created by the union of the Tigris and [Euphrates](#) -- Iraq and Syria insist that there are two different basins formed by the two rivers.

And while Turkey also insists that talks and accords need to include the waters of the Asi River (Orontes), Syria opposes this. In the same way, Iraq insists that any agreements on these matters are not to include the issue of waters flowing from Iran onto Iraqi land.

Erdoğan expresses certainty that there is no problem concerning the rivers that cannot be solved as long as the three countries sit down and sincerely work on the issue, though he notes that Iraq and Syria always bring water demands greater than their actual needs to meetings about the Tigris and the [Euphrates](#).

Kodaman says that in order for the two rivers to turn into a source of peace rather than conflict, regional conflicts must come to an end and democracy must be fostered.

But as he sees it, there is no war on the immediate horizon over the waters of these two critical rivers, and he adds that if Turkey increases its soft power, any risk of war would be completely eliminated.

The prime minister says that while Turkey follows more effective policies regarding the rivers compared to Iraq and [Syria](#), it still lags behind global standards and needs more effective mid and long-term planning on water usage.

As for Dalar, he notes that Turkey's very ambitious Southeastern Anatolia Project (GAP) has only been able to achieve around 10-12 percent of its goals for irrigation and around 50-60 percent of its goals for dam construction.

Kodaman additionally stresses that Turkey's water usage projects cannot be called very productive, as the country has not been able to deduce just how much water it actually has.

“Tigris, Euphrates have enough water for Turkey, Iraq, Syria”, 29/10/2013, online at: <http://www.worldbulletin.net/?aType=haber&ArticleID=121727>

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### ❖ **KKTC water supply project getting closer to completion**

A typical Mediterranean climate prevails in the Turkish Republic of Northern Cyprus (KKTC), and water scarcity in the country not only manifests itself as a problem in terms of quantity, but also as a problem in terms of water quality.

The potable water quality in the many parts of the country is below world standards, and there is nowhere else from where the water can be supplied. Despite the fact that the KKTC has a total land area of 3,299 square kilometers (329,890 hectares) 187,069 hectares (56.70 percent) is used for agriculture and only 9,482 hectares of this is used for irrigation-based agriculture. Only one-tenth of the agricultural land can be cultivated with irrigation, and a quality product cannot be cultivated due to degradation of the water quality and limited water resources. As seen, water scarcity not only affects the use of potable water, but also the agricultural use of water.

As for solutions to the KKTC's water scarcity, three different water transfer methods have been concentrated on: Water transfer through Medusa bags, transportation by water tanker and water transfer via a pipeline. The first water transfer to north Cyprus in Medusa bags with a capacity of 10,000 cubic meters took place on July 25, 1998. However, the project could not be maintained due to financial and technical setbacks.

### **Potable Water Supply Project to KKTC**

The foundation of the KKTC Potable Water Supply Project, also known as the project of the century since it is the first in the world, took place on March 7, 2011.

The available water per year in the KKTC is 117.5 million cubic meters. According to recent studies, the total water needed in the KKTC is some 190-197 million cubic meters. The annual water deficit between the current water potential and water need is about 70-75 million cubic meters. Some 2.38 cubic meters of water is set to be transferred via the pipeline per second by this project, which is envisaged to be completed by March 2014. The figure equals 75 million cubic meters per year, which could meet the aforementioned deficit. Some 50.3 percent of the water that is to be transferred to



KKTC is going to be provided for drinking and domestic purposes, and the remaining 49.7 percent is going to be provided for irrigation. With this project, both the 50-year water need of the KKTC will be met by allocating water for drinking and domestic use and also an agricultural income will be provided by irrigation an area of 4,824 hectares.

The 2.38 cubic meters of water per second is to be transferred into the reservoir of the Geçitköy Dam through the three-kilometer-long force main. The 1.20 cubic meters per second of water allocated for drinking and domestic use per year is to be connected to potable water pipelines via the Geçitköy force main, and 1.18 cubic meters per second of water to be used for agricultural irrigation is to be stored in the reservoir of the Geçitköy Dam and has a total capacity of 26.52 million cubic meters for THE agricultural irrigation season. The foundation of the Geçitköy dam was laid on April 2, 2012. The construction of pipelines, on the other hand, was launched in October 2012. The Alaköprü dam is expected to be completed by the beginning of next year.

Turkey is transferring water to the KKTC through the KKTC Potable Water Project, envisaged to be completed by March 2014.

With this project:

- The people in the KKTC, forced to use water below world standards for a long time, will have access to good quality water.
- Ground water is heavily used in KKTC to meet the water need. It is estimated that the pressure on ground water resources will be reduced through the amount of water to be transferred from Turkey.
- The quality of agricultural products is directly affected by the quality of water as well. Good-quality and efficiently used water will have a positive impact on agricultural products both in terms of quantity and quality.
- The contribution of water transfer to agriculture will provide economic development.
- The project will set a significant example for the East Mediterranean and Middle East, where water scarcity is a common problem.

-Water transfer to southern Cyprus might be brought into question in case of a demand for water transfer via the pipeline.

-By this project, of which the economic return is not at a considerable level, Turkey might reinforce its geopolitical position in the region by selling other river waters flowing into the sea to Greek islands and Mediterranean islands, where water scarcity prevails.

“KKTC water supply project getting closer to completion”, 03/11/2013, online at: <http://www.todayszaman.com/news-330405-kktc-water-supply-project-getting-closer-to-completion.html>

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

## ❖ Water scarcity exacerbates Syria's position

Throughout the world protests ensue to make a statement and incite change in social, political or religious ideologies. was already in chaos due to political instability and climate change before escalating into civil war. As climate change manifests itself in the availability of water, it became clear that one of the leading reasons that this brutal conflict occurred is a resource that we take for granted.

The conflict in Syria only continues to increase while many people keep asking the same question: “What is happening in Syria?” Essentially, Syrians became inspired by the protests in Egypt and Tunisia and started their own peaceful protests against the dictatorship in power.

The government responded by sending security forces out to suppress the rebellion. Soon, the military began to open fire on the protesters as well as deploy chemical weapons on civilians on top of the murder, rape and torture already taking place. This turned into an extremely violent conflict that continues today and will until compromise or exhaustion is reached.

The Middle East and North Africa are the most water stressed regions of the world. Syria in particular has been going through a drought since 2006. Jay Famiglietti reports that his research team found the region consisting of Turkey, Syria, Iraq and Iran has lost 144 cubic kilometers of fresh water between 2003 and 2009. As if the climate change alone wasn't enough to increase tensions, Turkey employs the Greater Anatolia Project. This is a system of reservoirs built upstream of Syria and Iraq that allows Turkey to store plenty of water within its borders while simultaneously reducing river flow into Iraq and Syria by 40 to 80 percent, according to Famiglietti's “Water and the Roots of Violent Conflict in Syria”. Scientists observed the dropping water levels around the same time politicians noticed the rising tensions within the country as well as between the neighboring nations.

These areas are already experiencing political instability but the water inequities only adds fuel to the fire. Syria is located directly in the Middle East hotspot. A high demand for a resource that isn't readily available caused the tension in Syria to escalate. The unemployed, displaced civilians felt the need to protest against their ineffective government, which led to bloodshed.

When humankind is deprived of its basic necessities such as food, water, shelter and clothing conflicts will arise. The drought and lack of fresh water catalyzed a huge reaction by causing substantial crop failure, causing a mass migration of farmers to the urban areas. However, they still remain unemployed in these regions. This is causing cities to experience economic hardships, which pose numerous security risks. With a refugee crisis affecting bordering nations and food insecurity due to climate change and lack of water, it causes a violent eruption in a stressed region.

Syria has a long history of water related conflicts. Joshua Hammer tells the Smithsonian magazine that the earliest war over water occurred near the junction of the Tigris and Euphrates River over 4,500 years ago. Wars are a way of acquiring the commodities a region desires through brute force. Increasing population in the modern day only blazes a pathway for more intense and advanced warfare.

The government is unable to help its civilians by creating water treaties and increasing water efficiency, conservation and reuse. This causes hostility between the government and its people leaving the country in turmoil. Water scarcity in Syria is what tipped the scale from tension to full on war. Civilizations have risen and fallen based on the availability of water and that pattern continues in this modern day and age. As advanced as modern wars may be, they are being caused by something most of us take for granted, water.

“Water scarcity exacerbates Syria’s position”, 29/10/2013, online at: <http://www.dailycampus.com/commentary/water-scarcity-exacerbates-syria-s-position-1.3102621#.UnVfnnBysZE>

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## ❖ Polio outbreak in Syria threatens whole region, WHO says

Polio has broken out among young children in northeast [Syria](#) after probably originating in [Pakistan](#) and poses a threat to millions of children across the Middle East, the World Health Organization (WHO) said on Tuesday.

The crippling disease, which is caused by a virus transmitted via contaminated food and water, could spread especially fast in [Syria](#), where civil war has led to falling vaccination rates.

Twenty-two children in Deir al-Zor province bordering [Iraq](#) became paralyzed on October 17 and the polio virus has been confirmed in samples taken from 10 victims. Results on the other 12 are expected within days.

"This virus has come over land which means the virus is not just in that corner of [Syria](#) but in a broad area," Bruce Aylward, WHO assistant director-general for polio, emergencies and country collaboration, told Reuters in an interview.

"We know a polio virus from [Pakistan](#) was found in the sewage of Cairo in December. The same virus was found in [Israel](#) in April, also in the West Bank and Gaza.

"It... is putting the whole Middle East at risk quite frankly," he said by telephone from Oman.

Polio, which invades the nervous system and can cause irreversible paralysis within hours, can spread rapidly among children under five, especially in the unsanitary conditions endured by the displaced in Syria or crowded refugee camps in neighboring countries.

It is endemic in just three countries - Nigeria, [Pakistan](#) and [Afghanistan](#) - raising the possibility that foreign fighters imported the virus into Syria, where Islamist militants are among the groups battling to oust President Bashar al-Assad.

Genetic sequencing of the virus found in Syria is expected within the next days, which will identify the geographic origin of the first polio outbreak in the war-torn country since 1999.

"Everything suggests this virus will be linked to the virus that originated in Pakistan," Aylward said.

"We are looking basically at re-infection of the Middle East. Syria is the canary in the [coal](#) mine," he said.

## VACCINATIONS

Most of the 22 Syrian victims are under two years old and are believed never to have been vaccinated or to have received only a single dose of the oral vaccine instead of the three which ensure protection, WHO spokesman Oliver Rosenbauer said.

"Immunizations have started in that area," Rosenbauer said, referring to Deir al-Zor, whose main city is partly controlled by Assad forces while rebels hold the surrounding countryside.

A previously planned immunization campaign was launched in Syria on October 24 to vaccinate 1.6 million children against polio, measles, mumps and rubella, in both government-controlled and contested areas, the WHO said on Tuesday.

Anthony Lake, executive director of the U.N. Children's Fund (UNICEF), said he had held "businesslike and encouraging" talks with Syrian Prime Minister Wael al-Halqi in Damascus.

He called for the estimated half a million Syrian children who have not been vaccinated against polio and other debilitating diseases because of the war to be vaccinated.

Syria has about three million under-5s in total.

As well as Syria, Aylward said at least six other Middle East nations - [Egypt](#), [Iraq](#), [Turkey](#), Lebanon, Jordan and the Palestinian territories - plan polio immunization campaigns.

"This will cover over 20 million children in the next months," he said.

The campaigns are likely to begin in early November and to last at least six to eight months, the WHO said in a statement.

About 4,000 refugees flee the war in Syria every day, mainly crossing into Lebanon, Iraq, Jordan and [Turkey](#).

Before the conflict, which began with peaceful protests in March 2011 and led to a civil war, 91 percent of Syrian children had been vaccinated against diseases including polio, but the rate has fallen to about 68 percent, Rosenbauer said.

"So it makes sense that very young kids would get it."

"Polio outbreak in Syria threatens whole region, WHO says", 29/10/2013, online at:

[http://www.reuters.com/article/2013/10/29/us-syria-crisis-polio-idUSBRE99S0FI20131029?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=aa38d6279f-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-aa38d6279f-250657169](http://www.reuters.com/article/2013/10/29/us-syria-crisis-polio-idUSBRE99S0FI20131029?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=aa38d6279f-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-aa38d6279f-250657169)

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## ❖ Tehran Faces Water Rationing Unless Usage Drops: Minister

[Iran](#) may be forced to impose water rationing in Tehran should the capital's residents fail to cut consumption by about 20 percent, Iranian Energy Minister Hamid Chitchian said.

Water rationing is under consideration in part as levels of reservoirs outside Tehran have fallen due to a sharp decline in rainfall this year, Chitchian told reporters after a Cabinet meeting yesterday, according to the [Tehran Times](#) newspaper.

His comments follow those by President Hassan Rouhani, who this week called for a national water-conservation plan to address Iran's "historic" water shortage. Overuse of city tap water should be curbed, the farm industry must become more efficient and use irrigation, and protecting underground sources and preventing illegal drilling of wells is needed, said Rouhani, who took office in August.

Iran, holder of the fourth-largest proven oil reserves whose population has grown to 77 million amid recent dry spells, will struggle to meet its water needs in coming years, the Ankara-based [Center for Middle Eastern Strategic Studies' Water Research Programme](#) said in a July report.

Chitchian said at least 100 billion cubic meters of water have been extracted from strategic underground waters in recent years, causing wells in farmlands to turn salty, the Tehran-based paper said. About 12 million people reside in the Tehran metropolitan area.

"Tehran Faces Water Rationing Unless Usage Drops: Minister", 31/10/2013, online at:

[http://www.bloomberg.com/news/2013-10-31/tehran-faces-water-rationing-unless-usage-drops-minister.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=6945412e7c-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-6945412e7c-250657169](http://www.bloomberg.com/news/2013-10-31/tehran-faces-water-rationing-unless-usage-drops-minister.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6945412e7c-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-6945412e7c-250657169)

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## ❖ Iran's Rouhani Seeks 'National Will' to Conserve Water

Iran, suffering from drought that's drying waterways and depleted groundwaters as its population grows, must draw up a national water-conservation plan to ensure supplies, Iranian President Hassan Rouhani said.

Iran's water shortage is an "historic" issue and can only be resolved through "national will," Rouhani told top officials yesterday, the [Tehran Times](#) reported. Iran's energy, agriculture, industries and interior ministers were at the meeting. Officials there also included the vice president for planning and strategic affairs and the chairwoman of the Environmental Protection Organization, the newspaper said.

Saving water in the farm industry through efficiencies including irrigation, curbing overuse of city tap water, protecting underground sources and preventing illegal drilling of wells must be addressed, Rouhani said.

Iran, with an expanding population of 77 million and recent dry spells, will struggle to meet its water needs in coming years, the Ankara-based [ORSAM - Center for Middle Eastern Strategic Studies' Water Research Programme](#) said in a July report on its website. "Insufficient investment and mismanagement" have also created challenges for the sustainable control of water resources, the report said.

Iranian officials ratified directives yesterday that encourage the involvement of non-governmental organizations to conserve water resources and raise public awareness about its use, the Tehran-based paper said.

Rouhani, who started his term in August after eight years of Mahmoud Ahmadinejad presidency, has said he will seek to revive an economy battered by government mismanagement and international sanctions over the country's disputed nuclear program. Rouhani told officials earlier this week that his government inherited "scary" economic indicators.

"Iran's Rouhani Seeks 'National Will' to Conserve Water", 30/10/2013, online at:

<http://www.bloomberg.com/news/2013-10-30/iran-s-rouhani-seeks-national-will-to-conserve-water.html>

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❖ **Iran must draw up a national plan for water conservation: Rouhani**

**TEHRAN** – At a meeting of Iran’s High Council for Water on Tuesday, President Hassan Rouhani stated that a national plan for the conservation and efficient use of water must be drawn up.

The first vice president, the energy, agriculture, industries, and interior ministers, the vice president for planning and strategic affairs, the chairwoman of the Environmental Protection Organization, and some other officials also attended the meeting.

Tap water in the large cities of Mashhad and Isfahan, the quality of water of the Karoun River, and the issue of the Gotvand Dam in Khuzestan Province were some of the issues discussed at the meeting.

Rouhani said Iran’s water shortage is a historical problem that can only be resolved through “national will”.

The president added, “The government of prudence and hope is seriously pursuing the issue of the water problem, and all relevant bodies and officials are obliged to implement the ratifications of the High Council for Water.”

He went on to say that all bodies and branches of the government should be involved in the issue of water conservation, parliament must approve pertinent laws, and the Judiciary should also deal with any violations of laws on the use of water.

It is necessary to draw up a plan to save water in the agricultural sector, prevent the excessive use of tap water, protect underground sources of water, and prevent the illegal drilling of water wells, the president stated.

He also said that the agriculture and energy ministries must establish close cooperation to promote the efficient use of water in the agricultural sector.

At the meeting, the High Council for Water also ratified directives calling for the activation and involvement of NGOs in the efforts to conserve water resources and raise public awareness about the efficient use of water.

In addition, Energy Minister Hamid Chitchian presented a report about ways to address the water shortage and to conserve water resources.

He also provided information about the amount of rainfall in Iran over the past two years and the country's flowing waters.

“Iran must draw up a national plan for water conservation: Rouhani”, 29/10/2013, online at:  
<http://www.tehrantimes.com/politics/111809-iran-must-draw-up-a-national-plan-for-water-conservation-rouhani>

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### ❖ **Tehran Faces Water Rationing Unless Usage Drops, Minister Says**

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"Tehran Faces Water Rationing Unless Usage Drops, Minister Says", 31/10/2013, online at:

<http://www.businessweek.com/news/2013-10-31/tehran-faces-water-rationing-unless-usage-drops-minister-says>

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### ❖ Jordan conference addresses regional water scarcity

Representatives from aid organisations, UN agencies and the Jordanian government gathered to discuss the water scarcity issues facing the kingdom and the Arab world on Thursday (October 31st), The Jordan Times reported.

Participants at the "Water Security: A Global Challenge" conference, chaired by Jordan's Prince Hassan, who also chairs the UN Secretary General's Advisory Board on Water, said comprehensive water management strategies need to be implemented nationally and regionally.

Hassan called on countries across the region to come together and develop a common agenda to address the challenges they are facing in terms of sanitation, water and energy.

According to a recent report by the Arab Forum for Environment and Development, Arab countries are expected to face severe water scarcity as early as 2015, with the situation nearing a crisis in many of them.

“Jordan conference addresses regional water scarcity”, 01/11/2013, online at: [http://al-shorfa.com/en\\_GB/articles/meii/newsbriefs/2013/11/01/newsbrief-07](http://al-shorfa.com/en_GB/articles/meii/newsbriefs/2013/11/01/newsbrief-07)

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❖ **'Water scarcity requires regional, national cooperation'**

*AMMAN -- Comprehensive strategies need to be implemented both at national and regional levels to address water scarcity and sanitation issues facing Jordan and the Arab world, experts and government representatives said on Thursday.*

During a conference dubbed "Water Security: A Global Challenge" and chaired by HRH Prince Hassan, representatives from aid organisations, UN agencies and the government gathered to discuss some of the achievements, projects and challenges related to the management of water resources in the Kingdom.

Prince Hassan, who is chairman of the UN Secretary General's Advisory Board on Water and Sanitation, called on countries across the region to come together and develop a common agenda to address the challenges they are facing in terms of sanitation, water and energy.

"If the European Union started with the coal and steel community, why can't we start with water and energy?" the prince said.

According to a recent report by the Arab Forum for Environment and Development, Arab countries are expected to face severe water scarcity as early as 2015, with the situation nearing a crisis in most of them.

The report also attributed the degradation to misguided short-term outlooks and political inertia when it comes to introducing reforms in the water sector.

Prince Hassan said millions of people in the Arab world lack proper access to water and wastewater services, highlighting the under-representation of the region and its water scarcity problems at international conferences.

Suggesting that the envisioned cooperation should include representatives from countries like Turkey, Iran, Iraq and Lebanon, the prince noted that the Israeli-Palestinian question should be left out of the debate, but Israel remains a question mark should such an endeavour materialise.

"Until now, Israel has not been a positive actor... and they are blocking three projects, one of which is the Red-Dead project. We hope it will change, because, otherwise, the only way would be for the countries to request more financial aid in order to find alternative solutions," Water Minister Hazem Nasser told The Jordan Times on Thursday.

Initial plans for the Red Sea-Dead Sea Water Conveyance Project, which includes Jordan, Palestine and Israel, propose pumping one billion cubic metres of water annually from the Red Sea into the rapidly shrinking Dead Sea to stop its depletion.

## Syrian influx

With over 80 per cent of the nearly 600,000 Syrian refugees in the Kingdom living in host communities, both government representatives and aid agencies highlighted the additional burden put on Jordan's scarce water resources.

Highlighting the need for increased coordination at the local level, Nasser noted that the government is in the process of establishing an agenda to harmonise work between all stakeholders and civil society organisations.

"Organisations do not always consult us before implementing projects, and so far, the response remains modest as our costs are much higher," he said, adding that if donors do not meet the country's financial needs, there is a risk that water might have to be rationed and services for refugees limited.

While dismissing the idea of turning back refugees if the situation worsens, the minister noted that providing water and sanitation services for Syrians costs the government an additional \$600 million per year.

Representatives from aid organisations supporting Jordan in hosting refugees also highlighted the need to focus on improving water and waste management infrastructure, noting that access to water for Jordanians and Syrians alike should be one of the major priorities.

HRH Princess Sumaya, president of the Royal Scientific Society, also attended Thursday's conference.

"Water scarcity requires regional, national cooperation", 31/10/2013, online at:

[http://www.zawya.com/story/Water\\_scarcity\\_requires\\_regional\\_national\\_cooperation-ZAWYA20131101063513/](http://www.zawya.com/story/Water_scarcity_requires_regional_national_cooperation-ZAWYA20131101063513/)

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### ❖ Mayor back from Israel with ideas on water management

Returning from a trip to Israel after studying water management practices there, Mayor Subhash Chawla has opined that small sewerage treatment plants could be set up at different places in the city, especially near those places that are to be supplied treated water.

A report of the visit would be prepared that would be tabled in the House. The Mayor, along with Municipal Commissioner Vivek Pratap Singh and an executive engineer of the Public Health department visited Administrative Staff College of India at Hyderabad and then Israel for the conference wherein officials from other states also participated. Chawla says that instead of setting up treatment plants of larger capacity at one place, smaller ones were installed at Israel. Some were also potable in nature.

The civic body has already spent crores on setting up sewerage treatment plants and also laying a network of pipelines for supplying treated water to all parks and greenbelts under JNNURM. Another technology that the team from the city found useful was for plugging leaks in the pipelines. There is wastage of water in the city due to leakages.

However, with the conditions in Israel being different from Chandigarh, there is not much that can be replicated in the city. With water being scarce in Israel, the price charged from the consumers is quite high. A private company is responsible for the water supply. The Mayor said that sophisticated water meters were installed in Israel. These ensured error-free billing. The cost was, however, between Rs 5,000 to Rs 6,000 per meter against around Rs 1,500 that is charged in Chandigarh.

Chawla says that the technology that was in use in Israel for water management was quite expensive, adding that it needs to be discussed whether this kind of technology can be adopted in India or not.

The drinking water there is not provided for agriculture like what happens here. Also the water is pumped up from 400 metres in order to cater to the needs of the people.

“Mayor back from Israel with ideas on water management”, 28/10/2013, online at:

<http://www.indianexpress.com/news/mayor-back-from-israel-with-ideas-on-water-management/1188097/>

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

## ❖ Palestine, Part I: Water and Land in the Occupied Territories

*I have travelled to the Palestinian Territories twice: on a three-week Christian study tour in 2010, and for a one-month internship in the capital, Ramallah, in summer 2012. Since multiple people on this site have mentioned that most of their knowledge of Palestine comes from the news, I decided to write a piece on my experiences. This should have been written last year; however, it's a highly emotional topic for me and I found writing about it difficult. Here it is, finally.*

You enter Israel through Ben-Gurion International Airport, halfway between Tel Aviv and Jerusalem. It's modernist in design and an attractive introduction to the country, filled with fountains and waterfalls. In a predominantly desert land, this is a statement equivalent to covering the interior in gold leaf.

Water quickly becomes one of the distinguishing factors between Israel and the Occupied Palestinian Territories. West Jerusalem, Israeli territory, has green and spacious parks filled with flowers; East Jerusalem – legally Palestinian territory, but annexed by Israel following the Six-Day War of 1967 – has few to none. Water for both Israel and Palestine comes from three aquifers and from the Jordan Valley. The Eastern and Northeastern aquifers are located almost entirely within the Palestinian Territories; the Western lies underneath areas of both Israel and the Palestinian Territories but derives some 85% of its water from rainfall in the West Bank. Despite this geography, the Oslo Accords granted Israel use of the vast majority of the water in the three aquifers, with the Palestinian Territories permitted to use only 20% of the total estimated potential volume; when the actual volume was found to be greater than estimated, only Israel's portion increased. Even beyond this, Israel uses well over 50% more water than the Oslo Accords allow it, an unsustainable level of use which is draining the aquifers. Palestinian per capita water use is approximately 25% that of Israelis, and has been falling since Oslo. When I was living in Ramallah, the group which organized my internship encouraged me to minimize shower time in order to conserve water.

The Jordan Valley within the Palestinian Territories is also entirely controlled by the Israelis, as are the substantial groves of date palms alongside it which Israel and settlers draw profits from. The same is true of the portions of the Dead Sea shoreline within the Palestinian Territories, and the



lucrative salt extraction plants there, which produce globally-sold and highly-valued cosmetics; Ahava is a cosmetic company known to source its products from Israeli settlements in the West Bank. Under international law concerning permanent sovereignty over natural resources, including rulings by the International Court of Justice, resources in the territory of an occupied population may be used solely with the consent of that population and for their benefit, so this is a clearly illegal activity that has seriously detrimental consequences for the economy of the Palestinian Territories. The potential value of the Dead Sea shore to the Palestinian economy, both in cosmetics and in resort development, is substantial, and Israel's occupation both denies this value to the Palestinians and removes value through their own extraction activities and resource-processing in settlements.

Settlements themselves are ubiquitous in the Palestinian Territories; some 345,000 Israeli settlers now live in the West Bank, with another 200,000 in East Jerusalem. Even between my two visits I could see that major growth had occurred, and that far more of my travel time in the West Bank involved watching settlement after settlement pass by the windows, distinctive from their red, peaked roofs, very different from the typical white, angular construction of buildings in the rest of the region. West Bank settlement has more than tripled since the signing of the Oslo Accords: in 1993, when they were signed, there were 111,600 settlers in the West Bank. Netanyahu has been continuously accelerating it even further: to compare, in a presentation I made for my church after returning from my 2010 trip, West Bank settlement numbers were 305,000, and 180,000 in Jerusalem. Current settlement construction in 2013 is up 70% over last year.

The residents in the settlements vary. Some of them are there for purely economic reasons – the Israeli government subsidizes the settlements heavily, so it's cheaper to live in a settlement near Jerusalem and commute than it is to live in Israel. Others are for religious reasons: I've visited two on my trips, Ephrat and Gush Etzion. One of the members of my Christian study tour asked the settler we talked to in Ephrat how settlement and the treatment of the Palestinians related to the Torah's statements on justice and caring for the oppressed; he responded that these injunctions applied to looking out for oppressed Jews, and didn't apply to treatment of other people groups. The group in Gush Etzion had a fairly sophisticated museum and showed us a long propaganda film about the heroic settlers making farmland out of a wilderness and being attacked by the evil Arabs. (Their settlement was in fact located near Bethlehem, where Palestinians had been cultivating the land for

many generations before Zionist settlement.) When my group brought up the Palestinians, he said the radicals and rock-throwers were dangerous, but some of the Palestinians did repairs and picked cherries on the settlements and were fine people – he even made a cup of coffee for one of them once! These are the comparatively moderate religious settlers. The third type of settlers are the ones around Hebron, who throw junk in Palestinians' yards and doorways so they can't get into their houses, stand on the roofs and toss garbage down on them in the marketplace (the Palestinians put up a net to catch it, so then the settlers threw bleach), and even threaten and beat Palestinian children on the way to school. There are Palestinian and international groups that walk the kids to school in order to guard them from settler attacks. The city of Hebron itself has heavy security, with gates and checkpoints and Israeli soldiers with machine guns, but they do nothing about the settlers' actions.

There's considerable determination among the settlers to expand. One night on my second trip I stayed at the Tent of Nations: a farm, summer camp, and peacebuilding/advocacy organization created by a Palestinian Christian family a little outside of Bethlehem. A nearby settlement offered them a blank cheque for their land. They refused; this is their home. The Israeli government has repeatedly threatened to demolish their house and wells, but so far they have had sufficient international support, and sufficient legal assistance with the courts, to prevent demolition. Their challenges are continuous, though. From their latest newsletter:

*In December 2012, the high court rejected our appeal for a building permit for the 13 demolishing orders for our structures. They said that we have to apply again according to the new rules. Before applying the land must be surveyed again. Our Lawyer did the paper work and we started a new process in the Israeli courts to protect our structures. It is a frustrated situation for us but we still believe in justice and one day justice will prevail. With your prayers and support we are able to keep this hope alive and are able also to overcome our obstacles.*

Permits are one of the several ways the Israelis justify their demolition of Palestinian homes, which is common in East Jerusalem as well as the West Bank. Building permits are rarely granted to Palestinian families, though apartments rise unabated in West Jerusalem and building continues apace in the settlements. When the families go ahead and build anyway, the Israeli government calls their homes illegal and bulldozes them, charging the family for the demolition costs. It's realized the

public relations issues with this and now gives less and less notification and does the demolition in the early mornings, when there's less chance of people seeing it or being there to protest. On some occasions they've demolished houses with the family inside. I saw some of these demolished houses in East Jerusalem, with newly built settler houses – again identifiable by the peaked red roofs – right beside them. Settlers have no trouble with permits.

But there are a range of other ways to justify land confiscations in the West Bank. Sometimes it's for a nature reserve. Sometimes it's because the family doesn't have a written document of land title *from the Ottoman period*. Sometimes it's for "security reasons", but those security reasons don't stop the government from being able to build a settlement on the place where Palestinian homes used to be. All the hilltops in Palestine have been taken by the Israelis for security reason (a Palestinian man involved in setting up Palestine's telecom network discussed the problems this caused for that endeavour), and many of those now have settlements covering them. Sometimes it's because settlements need a certain area around them as a security zone – Palestinian homes can't be too near a settlement, so even if the Palestinians were there long before the settlement was, that means demolition. This security zone also means Palestinians can't farm their fields or olive groves if they're within that region. A law from the Jordanian occupation of Palestine says that land can revert to the state if it isn't cultivated for several years – so after several years, the land within the security zone, which Palestinians aren't permitted to farm, is claimed by the Israeli government and used to expand the settlement. The settlement then needs a new security zone, so more fields and orchards go unused and more houses and wells are demolished. And that's how a settlement grows.

Settlement has several advantages for Israel. The simplest one is that it acquires additional land for housing its population (which had its own form of the Occupy movement over domestic socioeconomic issues, including housing), a valuable thing for a small state, particularly when much of that land can serve as commuter suburbs for Jerusalem. The second is that it renders a functional Palestinian state impossible, and ensures that the remaining Palestinian-populated areas are divided and difficult to travel between.

Creating divisions between the West Bank and East Jerusalem, and between different areas of the West Bank, has a systematic plan and a deliberate policy of the Israeli government ever since 1967 –

or rather, a debate between two policies. The Allon Plan would have Israel take control of the Jordan Valley and Dead Sea shore to separate Palestinian territory from Jordan, use settlements to disconnect the West Bank from East Jerusalem, and divide the remainder of the West Bank in two through large settlements in its central areas – such as Ma’ale Adumim. The more comprehensive Sharon Plan, developed by Ariel Sharon in 1977, called for large numbers of settlements throughout the West Bank with a population of 2 million, splitting the West Bank into a substantial number of small, disconnected islands in a sea of Israeli-controlled areas. If you look at a map of West Bank Areas A (Palestinian civil and military control) and B (Palestinian civil control, Israeli military control) surrounded by C (full Israeli military control), you’ll see the resemblance. Neither of these plans involved anything resembling a viable Palestinian state.

The success of these plans is constantly visible when you travel in the Palestinian Territories. Due to having to skirt the settlements and the wall, it’s a 90-minute journey from Ramallah (north of Jerusalem) to Bethlehem (south of Jerusalem), cities about 10 miles apart. Settlements are close to cutting Ramallah off from East Jerusalem, and the major Ma’ale Adumim settlement reaches from Jerusalem to Jericho in the Jordan Valley. Last year Israel announced an expansion of Ma’ale Adumim that will cut the West Bank in half, combining with Israeli military control of the Jordan Valley to block travel between the north and south. *Foreign Policy* has called it “the settlement that broke the two-state solution.”

All this is a major factor in Palestinians’ conviction that Israel never intends – and *neverintended* – to allow a Palestinian state or to cease its occupation of the lands captured in 1967. If you’re going to give up control of land, why deliberately – and at an ever-increasing rate – transfer large portions of your population into it, people who have zero interest in ever being part of a Palestinian state? The only reason is annexation, and we’ve seen that as Israeli leaders – such as Netanyahu – continuously talk about needing to draw borders in line with “facts on the ground” (ie: the large Israeli settler population) rather than according to the 1967 border.

If you want to know why the Second Intifada happened, look at settlement, and look at the Oslo Accords. The Oslo Accords were supposed to be a basis for permanent status agreements; Palestinians believed that it would, at last, end the occupation. The Accords stated that there would

be a “transitional period **not exceeding five years**”, with the negotiations taking place within that time leading to “the implementation of Security Council Resolutions 242 and 338”. Resolution 242 calls for Israel’s withdrawal from the territories occupied in 1967. The Oslo Accords demanded much from the Palestinians (including the unequal agreement about water described above, acceptance of continued occupation in the short term, and no restrictions on settlements during the term of negotiations); the Palestinian people accepted it with the expectation that, in return, they would see an end to the occupation and the creation of their own state. The expanding pace of settlement made it increasingly clear that the Israelis had no intention of leaving; when the “deadline” for the end of the occupation was reached in 2000 and the occupation still showed no signs of ending, frustrations boiled over. I don’t defend many of the actions that were taken, but no people will tolerate a permanent state of occupation and mistreatment, nor should they be expected to do so. To the Palestinians – and frankly, to me – it looks as if they were conned: the Oslo Accords let the international community, and for a time the Palestinians, feel like progress was being made, and so bought Israel time to solidify its hold on the Occupied Territories through settlement expansion.

A poll by the Palestinian Centre for Policy and Survey Research finds that over 75% of Palestinians now believe that Israel intends to annex the West Bank and either expel its population or deny them political and civil rights. This echoes what I heard when I was last in the region. Israel wouldn’t annex the West Bank as a whole – if it did, its population would become roughly 50% Jewish and 50% Palestinian, with a slight Palestinian majority. The plan outlined to me by people who had been watching the political developments was that Israel would split the significant Palestinian towns and cities off from each other by driving out most of the population of Area C, and then annex Area C. The Palestinian population of Area C is now less than half the size of the settler population there, and continually shrinking due to house and well demolitions, evictions, physical attacks and destruction of olive groves by settlers, and economic pressures. Thus, annexing Area C wouldn’t require Israel to absorb (and grant civil rights to) any substantial number of Palestinians, but would enable it to gain the majority of the land in the West Bank – and the best land, including all the Jordan Valley. It would also allow Israel to control the divided and surrounded Palestinian areas of Areas A and B, and permanently end the possibility of a Palestinian state, an entity which no Israeli leader – even Rabin, by his own admission – ever wanted in the first place.

As long as settlement continues, negotiations are a stalling tactic by Israel, not an act of good faith. They don't need negotiations when they can get what they want – land – and avoid what they don't want – Palestinian citizens of Israel – without negotiating. All they need is a little more time, and a little more international complacency.

“Palestine, Part I: Water and Land in the Occupied Territories”, 27/10/2013, online at: <http://ordinary-gentlemen.com/blog/2013/10/27/palestine-part-i-water-and-land-in-the-occupied-territories>

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### ❖ **Palestinian NGO statement on the World Bank-sponsored Red-Dead Sea Canal**

The undersigned Palestinian NGOs call on the Palestine Liberation Organization (PLO) and the Palestinian National Authority (PNA) to halt all forms of cooperation with the World Bank-sponsored Red Sea - Dead Sea Conveyance Project (RSDSCP) and to take an unequivocal public stance of rejection to the project.

It has become clear beyond doubt that the project is an unacceptable attempt to force the Palestinian population to consent to their own dispossession and to compromise on their own rights.

Any lack of a clear position by the Palestinian leadership on this outrageous project, any stand of ambiguity or positive criticism towards it, contributes to the impunity that for far too long has allowed Israel to appropriate Palestinian water and deny Palestinians their rights.

Five reasons why the RSDSCP must be rejected:

1. The project undermines Palestinian water rights and legitimizes Palestinian dispossession from the Jordan River. Israel unilaterally controls the flow from the upper Jordan River and prevents Palestinians from making use of their rightful share of the lower river's water. This is the sole cause for the gradual disappearance of the Dead Sea. Instead of addressing Israel's water theft, the project aims to maintain the unjust status-quo of the river and allegedly "save" the Dead Sea through large scale Red Sea water transfer.
2. The project attempts to replace the river's natural fresh water appropriated by Israel from the upper Jordan River with desalinated Red Sea water sold at high costs to severely water-dispossessed Palestinians and at pitiful quantities. Even these sales remain merely an "option" and the World Bank studies plan to 'supply' only Jericho, which is currently the only water-rich place in the occupied West Bank. With every drop of water that Palestinians purchase, they capitulate to their own deprivation.
3. Neither the World Bank's Feasibility Study (FS) nor its Environmental & Social Assessment study

(ESA) address the grave damage to the West Bank Eastern Aquifer, currently the only source Palestinians have for water supply and development. The Eastern aquifer is rapidly depleting, and its water table is dropping at an alarming rate - both as a direct result of the shrinking Dead Sea. Consenting to the project entails closing an eye to the rapid destruction of the only other water resource in the Eastern West Bank. Instead, Israel should be held accountable for the damage it caused to this vital resource on which over 1 million Palestinians currently depend.

4. Far from “saving the Dead Sea”, the RSDSCP will actually destroy the unique features of the Dead Sea and its ecosystem. Under the project, the Dead Sea is slated to turn into a dead, engineered pool of Red Sea water and desal brines, destroying this Palestinian and world heritage site.

5. Both Red-Dead studies (FS & ESA) and the entire conduct of the World Bank lack credibility and transparency, and make a mockery of the alleged consultation and participation process. Throughout the process, the Bank has systematically turned a blind eye to Israeli violations of Palestinian water rights.

The Bank repeatedly and deliberately ignored key concerns expressed by Palestinians since the project’s inception and during the “consultation” meetings in severe breach of its very own Code of Conduct, as well as the project’s Terms of Reference.

In addition, the Bank management has so far refused to make public the results of the Feasibility and ESA studies. The World Bank’s actions are tantamount to a cover-up.

Palestinian civil society organizations reiterate their rejection of the Red Sea - Dead Sea Conveyance Project and invite Palestinians of all walks to demand that the PLO and the PNA honor their aspirations for self-determination and justice by voicing a clear, loud and unequivocal “No!” to the Red-Dead Sea scam.

This project can only result in further damaging and undermining Palestinian water rights and all cooperation with it should cease immediately. Reparation and compensation for past damages and respect for Palestinian water rights are long overdue and the only way forward.

Endorsing organizations and individuals:

1. Palestinian Environment NGO Network (PENGON)
2. MAAN Development Center
3. Palestinian Wastewater Engineers Group (PalWEG)
4. Stop the Wall
5. Palestinian Farmers Union
6. Applied Research Institute Jerusalem (ARIJ)
7. Land Research Center
8. Media Environmental Center
9. Palestine Hydrology Group (PHG)
10. Palestinian Agricultural Relief Committees (PARC)
11. Union of Agricultural Work Committees (UWAC)
12. Environmental Education Center (EEC)
13. Institute of Environmental and Water Studies - Birziet University
14. Palestinian Center for Human Rights (PCHR)
15. Palestinian Environment Friends (PEF)
16. Arab Center for Agricultural Development (ACAD)
17. Earth and Human Center for Research and Studies (EHCRS)
18. Palestinian Farmers Association
19. The Arab Agronomists Association (AAA)
20. Prof. Dr. Hilmi S. Salem, Palestine Technical University - Kadoorie (PTUK)
21. Clemens Messerschmid, Hydrologist
22. Prof. Dr. Samir Afifi, Environmental & Earth Sciences Department, Islamic University of Gaza

“Palestinian NGO statement on the World Bank-sponsored Red-Dead Sea Canal”, 01/11/2013, online at:  
<http://www.imemc.org/article/66339>

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### ❖ As Dead Sea shrinks, Israel attempts damage control

As Dead Sea water levels recede and land erodes, efforts are being made to save the 'world's lowest nature reserve': Einot Tzukim.

Visitors to the Einot Tzukim nature reserve near the Dead Sea might be surprised to discover two new pools at the site. The artificial pools were created by the Israel Nature and Parks Authority as part of its effort to stem the damaging side effects of the Dead Sea's receding water levels. The authority plans to create additional such pools, to replace the habitats that have been harmed, although officials admit they do not know if this plan can ultimately save what is known as “the world’s lowest nature reserve.”

The Einot Tzukim (Ein Fashkha) reserve is one of the most important aquatic habitats in the Judean desert. It is home to a high concentration of plant and animal species, and dozens of springs and natural pools. The shores of the Dead Sea used to reach the preserve’s limits, making it a popular site, but the sea's dropping water levels (estimated to be a meter per year) have separated it from the reserve, leaving behind a muddy surface that is dangerous for visitors -- so much so that the Nature and Parks Authority cut off access from the reserve to the sea several years ago.

The distance between Einot Tzukim and the Dead Sea did great harm to the ground structure and to the distribution of water sources within the nature reserve. Spring water, which previously had flowed directly to the sea, began to create deep channels underground, gnawing away at the land in the nature reserve. This geological process, called undermining, occurs when the ground undergoes a process of weathering and erosion, causing water to wash away the upper levels of earth. In a few isolated areas, the channels destroyed plant life and caused the natural water sources to dry up.

The Dead Sea's dwindling water levels have also changed the way fresh groundwater flows to the area, such that the water now flows directly to the sea, instead of filling the pools and springs as it did in the past. One of the site’s largest pools, which used to be called “the lake,” now looks like nothing more than a small pool. Site manager Eldad Hazan said that the pool is one of the last habitats for the Jordan Tilapia fish.

A nature preserve, by definition, is meant to be an area with minimal human intervention, but in the case of Einot Tzukim, Nature and Parks Authority officials understood they had no choice but to intervene.

“We decided to build a few pools in the area that would absorb the water flowing into the preserve, in place of the pools that dried up,” Hazan said. “The idea is that these pools would create new habitats for plants and animals. The decrease in the water level is so severe that, in this case, we needed to intervene,” he said. Two pools have been completed in recent weeks, and natural vegetation quickly sprouted up. There are plans to build more pools, but a budget to fund the plans has not yet been created.

According to Hazan, aside from creating a small earth barrier around the land, no additional work was done at the site, and the pools were created by the natural flow of water.

If the pools do achieve their purpose over time and bring about renewed vegetation, the Jordan Tilapia fish could return as well. Yet it is still unclear what steps the authority might have to take if the Dead Sea’s water levels continue to decline.

“As Dead Sea shrinks, Israel attempts damage control”, 28/10/2013, online at:  
<http://www.haaretz.com/news/national/1.554802>

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### ❖ Mekorot to draw up Azerbaijan water master plan

*The four-year project, worth an estimated tens of millions of euros, will get underway in 2014.*

[Mekorot National Water Company](#) will draw up a water master plan for Azerbaijan and supply monitoring equipment to the country. The four-year project, worth an estimated tens of millions of euros, will get underway in 2014.

The decision on the project was made during Azerbaijan Water Resources Development and Management director Ragif Muradov's visit to Israel last week.

Mekorot and the Azerbaijan government signed a memorandum of understanding for cooperation in 2012. They agreed to carry out several large projects, including the cleaning of the water sources of the capital, Baku, the establishment of a command and control center, and the treatment of water sources contaminated with radioactive elements.

Azerbaijan has suffered from pollution of its drinking water sources and the absence of a master plan of its water sources since declaring independence in 1991. When it was part of the USSR, the Russians built missile plants in the country, and they left behind some of the contaminated sites on the planet.

Since the cooperation agreement was signed, Mekorot has supplied drinking water monitoring laboratories and sampling equipment, and has been training Azeris at seminars in Israel.

“Mekorot to draw up Azerbaijan water master plan”, 28/10/2013, online at:  
<http://www.globes.co.il/serveen/globes/docview.asp?did=1000889297&fid=1725>

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### ❖ **Water scarcity could drive conflict or cooperation**

UNITED NATIONS—When the General Assembly declared 2013 the International Year of Water Cooperation (IYWC) three years ago, the UN’s highest policy-making body was conscious of the perennial conflicts triggered by competition over one of the world’s most critical finite resources.

Current and past water conflicts and marine disputes have included confrontations between Israel and Jordan, India and Pakistan, Egypt and Ethiopia, Palestine and Israel, and Bolivia, Peru and Chile.

Picking up the cue from the United Nations, the Stockholm International Water Institute (Siwi) focused its weeklong meeting this year on the theme “Water Cooperation: Building Partnerships.”

The 23rd annual meeting in the Swedish capital, attended by over 2,500 delegates, was held early this month.

Striking a more optimistic note, Siwi Executive Director Torgny Holmgren told Inter Press Service (IPS) that historically, water has been a source of cooperation more often than not. Over the past 50 years, he noted, there has been almost 2,000 interactions on transboundary basins of which only seven have involved violence and 70 percent have been cooperative.

“I think the future situation depends very much on our ability to deal with the water-demand challenge,” said Holmgren, a former ambassador and head of the Department for Development Policy at the Swedish Ministry for Foreign Affairs.

“If we are able to increase water productivity so that we can free up water resources for protecting our environment, thereby ensuring the sustainability of the supply, and allowing for new users and uses, it will be easy to cooperate,” he said. “If we aren’t able to manage demand, and water management becomes more of a zero-sum exercise, avoiding conflict will be a challenge.”

Irina Bokova, director general of the Paris-based UN Educational, Scientific and Cultural Organization (Unesco), the lead UN agency which will oversee IYWC, points out that there are numerous examples in which transboundary waters have proved to be a source of cooperation rather than conflict.

Nearly 450 agreements on international waters were signed between 1820 and 2007. And over 90 international water agreements were drawn up to help manage shared water basins on the African continent, she said in an interview with IPS in March.

According to the London-based WaterAid, nearly 768 million people in the world live without safe water, roughly one in eight people. Some 2.5 billion others live without access to sanitation, about 39 percent of the world's population.

The US intelligence community has already portrayed a grim scenario for the foreseeable future: ethnic conflicts, regional tensions, political instability and even mass killings.

During the next 10 years, “many countries important to the United States will almost certainly experience water problems—shortages, poor water quality, or floods—that will contribute to the risk of instability and state failure, and increased regional tensions,” stated a National Intelligence Estimate released last year.

In a report released on September 2, Siwi said that in a world where the population is growing fast and the demand for freshwater is growing along with it, “the fact that we all depend on the same finite water resources is becoming impossible to ignore.

“Cooperation between sectors is fundamental if we are to successfully share and manage our most precious resource,” the group said.

The water problem is not something that can be solved only by experts, said the report titled Cooperation for a Water Wise World: Partnerships for Sustainable Development.

“We need to cooperate with actors outside the water sector, to foster collaboration between the various decision-making institutions, between the private, public and civic sectors, as well as between actors who work in research, policy and practice,” it said.

“Only through sound and forward-looking partnerships can we achieve a water wise world,” Holmgren noted.

Addressing the meeting, UN Deputy Secretary-General Jan Eliasson said in a world of population growth and pressures on water resources within and among nations, sound and fair water management “is a huge task and a clear imperative for all of us. And we have no time to waste.”

The 2015 deadline for the UN Millennium Development Goals (MDGs) is rapidly approaching. And there is good news in some areas, he said. Since the adoption of the MDGs in the year 2000, global poverty rates have been reduced by half. Two hundred million slum dwellers live better lives. School enrollment rates have increased dramatically.

“And last year we were able to announce that the world had reached the target for access to improved sources of water,” Eliasson said.

But water quality to a large degree still fails to meet basic World Health Organization standards, he cautioned.

One of the main factors that negatively affects water quality is the lack of sanitation. The sanitation target is among the most lagging of the MDGs, with more than 2.5 billion people around the world without adequate sanitation—more than one-third of humanity, Eliasson said.

Asked if water and sanitation should stand alone as one of the proposed Sustainable Development Goals (SDGs) currently under discussion as part of the UN’s post-2015 development agenda, Holmgren told IPS, “I think we need a dedicated water SDG that stresses both the productive and protective roles of water resources management and the sustainable of water and sanitation.”

In addition, he said, the intimate connections between water, food, energy, security, biodiversity, and other issues must be spelled out, either in the water goal or in other goals.

“Water scarcity could drive conflict or cooperation”, 28/10/2013, online at:

<http://businessmirror.com.ph/index.php/en/features/science/19995-water-scarcity-could-drive-conflict-or-cooperation>

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### ❖ Global warming, global security

On September 27, the 195 member countries of the United Nations Intergovernmental Panel on Climate Change (IPCC), supported by the work of thousands of scientists from around the world, released its Fifth Assessment Report. Even for a military man like me, the latest scientific evidence on global warming makes for a chilling read.

The scenarios set forth in the report indicate that if the world continues on its current track, burning more and more fossil fuels and increasing the levels of pollution in our atmosphere year after year, global average temperatures could rise by 4oC by the end of the century. That amount of warming would cause sea levels to rise, displacing tens of millions of people worldwide. Moreover, it would disrupt weather systems, destroying harvests and threatening populations with droughts, floods, and storms of ever-increasing intensity. It would also place a massive strain on global water resources.

When I was a major general in Bangladesh's military, my job was to avoid conflict while planning for the worst-case scenario. And, from the perspective of the military, the consequences of global warming constitute the worst-case scenario.

My country, Bangladesh, is a frontline state in the face of climate challenges. It is ground zero for the effects of climate change and the security implications they present. In Bangladesh, climate change is not a theory, a story, or a concept; it is a way of life. As I write, lives are being lost to rising seas, water shortages, and the resulting diseases. Gradual and large-scale displacement of people is taking place, and every day the threat is increasing.

Bangladesh, like India, China, and Pakistan, depends for its water on the glaciers of the Himalayas.

Those glaciers are disappearing, and the world's most populous countries — all with significant military capabilities, including nuclear weapons — will find themselves facing an existential crisis if too little water is available. We know that this will happen, and we know that people do not always make the wisest decisions when faced with deprivation of an essential resource.

When I meet with my colleagues at the Global Military Advisory Council on Climate Change — generals and admirals from around the world, all with career-long experience in military planning

and operations — I am struck by the similarity of our concerns. All countries of the world are experiencing changes that are destabilising communities and increasing security concerns. Diseases are spreading, wells are drying up, storms are smashing cities and destroying crops, and rain is either a distant memory or an acute danger.

Many of these effects are being felt most intensely in regions — such as South and Central Asia, or West and East Africa — where security is already fragile. Climate change does not respect borders and we can already see the impact of global warming at play in many internal crises. When a river that crosses a border or flows through disputed territory becomes a matter of life and death, or food prices skyrocket because a local crop has failed (or even because a major global producer redirects its exports to its own hungry people), conflict can start and spiral out of control very quickly. Militaries need to plan for these scenarios and work with politicians to ensure that they never arise.

In global security circles, we often speak of the “international community”. Climate change is the ultimate global challenge and global threat, and the global community must meet it together. We cannot have our separate attitudes and plans.

People are dying now. Food prices are rising now. And soldiers are on streets around the world dealing with the effects of climate change — from natural disasters to social unrest.

We cannot risk the local, regional, and global security threats that climate change will generate if politicians, civil-society groups, industry, academia, the military, and all other sectors of society do not act together and act now.

World leaders should read what the IPCC has to say and take heed. Climate change is the greatest global security threat of the 21st century, and if we do not tackle it now, the worst-case scenarios will be our reality.

“Global warming, global security “, Jordan Times, 27/10/2013, online at:  
<http://mideastenvironment.apps01.yorku.ca/?p=7669>

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### ❖ Sikkim villagers revive lake dry for 25 years

*News this week: Sikkim villagers revive lake, power production from Kudankulam nuclear plant begins and solar micro-grid project to come up in Bihar.*

#### **Sikkim village revives lake that lay dry for 25 years**

Using the Mahatma Gandhi National Rural Employment Guarentee Scheme, the villagers of Namthang block in Sikkim have [revived the Nagi lake](#) that went dry 25 years ago. People, under the banner of Nagi Karek Gram Panchayat Unit, redirected spring water from a distance of 10 kms to revive the lake. The moisture retention and groundwater recharge from the lake is now benefitting about 1700 people in nine villages of the drought-prone block. Agricultural output is said to have gone up while new areas have also been brought under cultivation.

#### **Kudankulam starts production**

13 years after its construction, unit 1 of the Kudankulam nuclear plant in south Tamil Nadu's Tirunelveli [supplied 160 mega watts to the southern grid](#) this week. The unit, with a capacity of 1000 MW, has got permission to supply only 500 MW to the grid from the Atomic Energy Regulatory Board till all tests are performed on it. Prime Minister Manmohan Singh's visit to Russia where he had talks with the government about supplying two more 1000 MW Russian reactors for the Kudankulam plant coincided with this. Agreement for two reactors has already been signed with the Russian government. When commissioned, the nuclear power plant would be the biggest in India in terms of capacity.

#### **Bihar village to have NGO-funded solar micro-grid project**

Greenpeace has laid the foundation of a [micro-grid project](#) in Dharnai Village in Jahanabad district of Bihar. The micro grid will involve about 100 kilowatts of solar panels that will supply round the clock electricity to 350 households in Dharnai. The NGO is setting up the project, which will be operational by next year, to prove that the real solution for rural electrification lies in decentralized renewable energy. Dharnai, a village dependent on diesel-based gensets for its power needs, has been



selected by the NGO keeping in mind its socio-economic profile, demography and accessibility.

### **Power plant in Nagpur to have the biggest unit in the country to run on treated sewage**

Mahagenco, a thermal power company, will run its [660 MW Unit 8 on treated wastewater](#). The unit, trial run for which will begin in January next year, will have two more units running on treated wastewater in the next two years. Mahagenco is constructing a sewage treatment plant with a capacity of 130 million litres per day to treat the wastewater of Nag river. The use of treated sewage will reduce the dependence of Mahagenco on water from the Totladoh dam even as it will stop flow of the Nag river sewage into Gosikhurd dam.

### **200 foundries in Kolhapur to go green**

Foundries in Kolhapur are set to go green soon as part of a World Bank project to [change over to cleaner technologies](#), good practices for efficient use of energy and reduction of gases affecting environment. As part of the project, the auditing agency Price Waterhouse Coopers undertook the energy audit of 200 foundries in the region. Experts from the Bureau of Energy Efficiency suggested changes like the use of induction furnace, which runs on electricity instead of the traditional furnace which uses coal for fuel. The foundries will receive grants in the form of subsidy for the next few years from the World Bank if they follow the norms.

“Sikkim villagers revive lake dry for 25 years”, 01/11/2013, online at: <http://www.indiawaterportal.org/articles/sikkim-villagers-revive-lake-dry-25-years#.UnR2vIraj6M.twitter>

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## ❖ Cancer Express Carries Sufferers of India's Deadly Waters

Mahendra Singh parts the crowd massed on the dimly lit platform to pull his ailing mother-in-law on board the train locals call the Cancer Express.

The farmer from northern [India](#) jostles for space in the blue train before gently laying Charanjit Kaur down on the bare wooden bench. Cradling two small bags, the couple are bound on an overnight train for a hospital a state away in Rajasthan where she's to be tested for suspected water poisoning.

"I thought we were done with this disease," said Mahendra, 55, who lost his mother to [breast cancer](#) four years earlier. "But it never goes away. People say we've dirtied our water and that's why we're suffering."

Mahendra and farmers across Punjab state helped India double farm yields in 50 years, making the country a food exporter from a chronically hungry one in the 1960s. The "Green Revolution" introduced them to chemical fertilizers and pesticides that seeped into increasingly scarce water sources and contaminated food and soil. People in the second-most populous nation are now paying for it with their lives.

With health issues costing India 2 percent of [gross domestic product](#) a year at a time the economy is growing at its slowest pace in a decade, Mahendra paid less than \$2 in rupees for the 330-kilometer (205-mile) trip.

About 50 others aboard the train are also bound from Bhatinda to Bikaner to the same hospital for the same tests to see whether area waters are contaminated or toxic. Some are so sick they won't return.

### **Bread, Pickle**

Mahendra and his mother-in-law eat Indian bread and pickle for dinner, which they fetch from a cloth bag.

Pesticide overuse on wheat fields critical to feeding Indians that ended up in drinking supplies or arsenic in water drained by wells may have led to the [lung cancer](#) that convulses the septuagenarian, leaving her gasping for air.

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“Cancer Express Carries Sufferers of India’s Deadly Waters”, 28/10/2013, online at:

[http://www.bloomberg.com/news/2013-10-28/cancer-express-carries-sufferers-of-india-s-deadly-waters.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=aa38d6279f-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-aa38d6279f-250657169](http://www.bloomberg.com/news/2013-10-28/cancer-express-carries-sufferers-of-india-s-deadly-waters.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=aa38d6279f-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-aa38d6279f-250657169)

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## ❖ India's water supply at risk

India's president has called for stricter regulations to conserve the country's water supply.

"Population expansion, rapid urbanization and developmental needs have exerted tremendous pressure on India's water availability," President [Pranab Mukherjee](#) said in his opening address Monday at the India Water Forum 2013 in New Delhi.

While India has 17 percent of the world's population, it holds only 4 percent of the world's renewable water resource, Mukherjee said, noting that in 10 years -- from 2001 to 2011 -- the per-capita availability of water in India dropped from 1,816 cubic meters per year to 1,545 cubic meters and is projected to fall to 1,140 cubic meters by 2050.

The president said India's current legal framework regarding water is inconsistent and inadequate to deal with the country's complex water situation.

"A broad over-arching national legal framework of general principles on water could pave the way for essential legislation on water governance in the country," Mukherjee said. "Concerted effort is also required to make the water sector policies and regulations clear, coordinated and comprehensive. Only then can India hope to mitigate the impact of the looming water crisis."

India's Infrastructure Development Finance Co., a non-governmental group, says 14 of India's 20 major river basins are considered water-stressed, as they are strained by the country's rising population and economic growth.

"As we grapple with diminishing water resources and escalating water demand, water use efficiency holds great promise. In today's context, the saying 'water saved is water generated' is truer than ever before," Mukherjee said.

The president said water management must also address the threat of climate change.

"By altering river flows, decreasing groundwater recharge, intensifying floods and droughts, and allowing salt water intrusion in coastal aquifers, climate change can severely affect water resources. This challenge has to be met by efficient water management," he said.

While agriculture previously was India's biggest consumer of water, the president said "unprecedented urbanization" has shifted water usage from rural to urban consumers, "creating an inter-sectoral rivalry."

"With the sources of water remaining unchanged, this inter-sectoral competition over allocation of water is likely to rise in the future," Mukherjee said.

The meeting was organized by The Energy and Resources Institute, the World Bank and India's Ministry of Water Resources.

The World Bank had announced Friday it will provide \$360 million in loans for water-related projects, including modernizing irrigation, rebuilding dams and drainage systems, and for groundwater studies in the northern state of Uttar Pradesh.

"India's water supply at risk", 29/10/2013, online at: [http://www.upi.com/Business\\_News/Energy-Resources/2013/10/29/Indias-water-supply-at-risk/UPI-49881383070421/?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=1b39224cc1-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-1b39224cc1-250657169](http://www.upi.com/Business_News/Energy-Resources/2013/10/29/Indias-water-supply-at-risk/UPI-49881383070421/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=1b39224cc1-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-1b39224cc1-250657169)

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### ❖ Kalabagh Dam issue: PPP, ANP flared up at Imran's comment

*ISLAMABAD: Opposition parties' lawmakers in the upper house on Tuesday raised an outcry against Pakistan Tehreek-e-Insaf chairman Imran Khan's alleged statement to start a campaign to pave way for construction of Kalabagh dam (KBD).*

Pakistan Peoples Party (PPP) Senator Aijaz Dhamra triggered the debate. He alleged that Imran Khan – while speaking to Indian media recently – had expressed his will to soon initiate a campaign across Pakistan for KBD construction.

He said Imran's statement was an insult to three provincial assemblies that had passed unanimous resolutions against the construction of the KBD. He claimed that almost 200,000 acres of land in Thatta and Badin would turn into desert if the dam was built. "Any such move would be opposed at all costs," Dhamra warned.

His party colleague, veteran politician Senator Raza Rabbani said it was the K-P assembly which first opposed the construction of the KBD.

"People talking of the KBD should first try bring a resolution in its favour in the K-P assembly, Rabbani said, adding that any effort at the KBD construction would first have to deal with the resolutions passed by the provincial assemblies.

"Kalabagh dam has been buried once and for all. When a military dictator could not build it; so how can the leader of a new political party undertake the task?" said Senator Abdul Nabi Bangash from Awami National Party (ANP).

He said the KBD would make barren thousands of acres of land in Khyber Pakhtunkhwa (KP) and Sindh and. "Instead the huge potential to generate 34,000 megawatt (MW) of power in Chitral and Swat should be utilised," he said, adding that the government should focus on investing in those areas.

Senator Chaudhry Jaffar Iqbal from treasury benches further infuriated the ANP and PPP senators, when he accused that India spend Rs12 billion annually for funding opposition to KBD in Pakistan.

He said the PML-N government was not keen on constructing the KBD. "However, it is a fact that the country needs dams to overcome energy crisis," Iqbal said.

### Gas issue



The PPP and the ANP members also alleged that the federal government was denying provinces' industrial units their right to provision of gas supply particular the gas producing areas of Sindh and the K-P.

"It is violating Article 158 of the Constitution by not providing gas particularly to Karachi," said Senator Rabbani. He also protested the absence of the relevant minister in the Senate to answer the senators' questions.

Later, Federal Minister for Petroleum Shahid Khaqan Abbasi told the house that the federal government could not provide gas to any new locations due to acute shortage of resources. "The provinces or the parliamentarians themselves would have to pay for lying down pipelines and other expenses if they wanted gas supply to new locations," he added.

He further told senators that the government would immediately implement Rs25,000 in urgent fees for installation of new gas connections and 10% of all new gas connections would be installed on urgent fee.

"Kalabagh Dam issue: PPP, ANP flared up at Imran's comment", 30/10/2013, online at:  
<http://tribune.com.pk/story/624596/kalabagh-dam-issue-ppp-anp-flared-up-at-imrans-comment/>

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❖ **Small dam construction to benefit rain-dependent farmers**

**HYDERABAD: The small dam construction is to benefit the communities depending on rain for cultivation and recharging underground water level in the rain-fed areas.**

But, to 80-year old shepherd woman Wasil Palari, such small dams (weirs) are rather horrible. She belongs to Kohistani (mountainous) community, residing in an isolated locality – which is situated in once the green Loyach Valley, a few kilometers away from Nooriabad industrial zone, Jamshoro district.

The locality named after the great grandfather of her husband Faqir Mohammed is located close to Kalu Dam on Loyach River (natural rainy river). It was the scenic grassland, which used to attract shepherds to bring their animals for rearing during the monsoon rains.

The provincial government authorities identified the place to benefit the Kohistani people, as they had lost the source of water wells, which either have dried or turned poisonous after years due to rainfall shortage. Now, the dam with all streams receives nothing but industrial waste, which has poisoned the surface and underground water in the wide area. As a result, people are reluctant to fetch water from wells and hand pumps.

Wasil recalls the childhood how she used to wander after animals in the green valley the entire day at that time.

“Our family was well-off in the entire area with herds of buffalos, goats and cows. But, then like others we have also lost the assets, 20 buffalos, cows and goats, which died after getting poisonous water from the dam’s catchment area,” she said, adding that now hardly a few lucky families have one or two heads of animals to have milk in the village.

The mother of 11 children, she has a long story to share about their life to migrate annually with animals to different barrage areas for six months in the wheat harvest season and return during the monsoons for animal grazing.

She delves into her memory lane to remind the seasonal migration to various areas as adventurers, taking that the last meeting to say goodbye with pray for each other for having a safe journey. The sisters, the brothers and relatives used to start leaving native places to the unknown destinations by crying and hugging. And of course, similar was for their safe return to the native place along with adequate food grains and animal to celebrate the reunion and happiness.

However, despite the fact she has spent adventurous life at this moment, she likes to see the same old days, as she hates the destruction in the name of development.

Collecting fruity trees, naturally grown variety of vegetables, mushrooms and hunting animals – all activities contributed a lot to make their life quite easier and healthy.

The mountainous people were supposed to have been the main supplier of meat and milk to urban centers, including Karachi and Hyderabad long ago. Now smoke-emitting industries and chemical effluent, flowing into the natural water ways, have made their life hazardous.

Wasil – surrounded by her granddaughters – points finger to her embroidered assets, says women from rocky area who were known as a hard worker, traveling long distance for harvesting the wheat crop in southern districts of Sindh, specially Hyderabad and Tando Allahyar. That is why they still call agriculture zone Tando Allahyar as Sakhar (meaning prosperous and rich in Sindhi language). They used to collect wheat to meet the annual needs of food for families in return of their painstaking work.

According to the local people, when the development of Nooriabad industrial zone was started initially on 3,342 acres of land in 1983, it created a ray of hope for the local youth to get jobs and a source of alternate income.

But gradually, they saw its impact on their life, typical occupation and water resources.

Only in Faqir Mohammed Palari village, comprising 55 households, majority of minor children and youth are the victims of different skin ailments. Since then these people neither have animals for rearing to have own milk and butter nor do they move to barrage areas for harvesting wheat. Shepherd women, who earlier had left their old occupation, have right now resumed the same skills of making broom, mat and embroidery. They use dried mountainous grass to make pillow and cushion.

Kohistan originates from Qambar-Shahdadt to Thatta and outskirts of Karachi, where hill torrent has a mean annual runoff of 518,582 acre-feet and can irrigate an area of 706,572 acres of barren land. Presently, the situation in the entire area worsens as the water resources have dried, compelling communities to migrate to other areas.

These natural rivers stream from hilly areas to feed the major fresh water Keenjhar Lake, which is the main source of water to Karachi, besides benefitting the local people.

Haleem Adil Shaikh, president of Pakistan Relief Foundation (PRF) – who is leading the recently launched campaign against the contamination of water sources, specifically focusing on Karachi – said there are more than 15 villages located in the catchment of Loyach and 12 other natural rivers that receive waste from 61 industries in Nooriabad.

“The PRF is going to file a case to compensate the affected families of Kohistan areas and stop further polluting the natural water resources,” he said, adding that his team is collecting data about the impact of air and water pollution.

The plight of these mountainous people indicates one thing for sure that after losing their natural asset (livestock) they are involved in collecting firewood for sale to earn a livelihood.

People in the hilly areas are already aware to store rainwater through developing muddy wall at the downstream of natural waterway during the monsoon season for domestic use and for livestock. About the small dam construction they say that village elders were not taken into confidence.

Anyway, once the brave shepherd Wasil Palari looks optimistic and takes her hands up to pray for her grandchildren's future – which is overcast of course because of the wide-ranging shrinking of wealth.

“Small dam construction to benefit rain-dependent farmers”, 03/11/2013, online at: <http://www.thenews.com.pk/Todays-News-3-211884-Small-dam-construction-to-benefit-rain-dependent-farmers>

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

### ❖ Egypt: Govt, Ethiopia, Sudan to Hold Fresh Meeting Monday On Nile Dam

Minister of Water Resources and Irrigation Mohamed Abdel Muttaleb said that Egypt, Ethiopia and Sudan will hold a new round of talks starting Monday to weigh the regional impact of a giant dam being built on a Nile River tributary in Ethiopia after earlier studies proved questionable.

A meeting of water officials from the three nations in Sudan's capital, Khartoum, on 4 November will discuss the impact of the hydroelectric project on downstream countries.

The minister said a new round of talks would be held between ministers and delegates of the three countries over the coming weeks.

"Next week's meeting will be the first of a series of talks between the three nations aiming to reach a settlement," according to Abdel-Muttaleb.

"Dialogue is fundamental to furthering the interests of the three countries, and that's what Egypt is looking forward to in the near future," he added.

The minister made it clear that Egypt seeks to bolster cooperation with the Nile Basin counties as major strategic allies.

"Egypt: Govt, Ethiopia, Sudan to Hold Fresh Meeting Monday On Nile Dam", 01/11/2013, online at:  
<http://allafrica.com/stories/201311020107.html>

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## ❖ Environmentalists declare the Mekong under threat

*Environmentalists call for urgent moratorium by heads of governments surrounding the river writes Asia Sentinel.*

Nineteen local, regional and international environmental groups under an umbrella called Save the Mekong are calling for an urgent moratorium on plans by the Laotian government to build a new hydroelectric dam which they fear will do irreparable damage to the giant river's ecosystem.

The Laos government says it expects to start construction of the Don Sahong dam this month near the picturesque Khone Falls, with commercial operation of its 260 MW of power to begin in 2018.

One of the world's most impoverished countries, Laos has a wealth of natural resources that it is anxious to exploit in a drive to build a more sophisticated economy. With annual per capita gross domestic product a minuscule US\$3,100 per year by purchasing power parity, it ranks 176<sup>th</sup> in the world. The government in Vientiane nonetheless hopes energy sales, mostly to Thailand and China, can put it on the way to lower middle income status and provide jobs outside of agriculture, which currently accounts for 75 percent of employment.

However, the dam, the environmentalists said, "will irreversibly alter the Khone Falls and Mekong River basin. It will create a non-passable barrier across the Hou Sahong channel, recognized by fishery experts as one of the worst possible sites to build a dam, as it is the passage of maximum fish migration on the Mekong, which supports the world's largest inland fisheries."

"Environmentalists declare the Mekong under threat", 02/11/2013, online at:

<http://asiancorrespondent.com/115200/environmentalists-declare-the-mekong-under-threat/>

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### ❖ **Scientist Disputes Laos' Claim About Dam**

The Lao government believes that the Don Sahong dam, which is to be built on a stretch of the Mekong River just 1 km from the Cambodian border, will have no significant consequences for fisheries in downriver countries, according to documents released Wednesday by the Mekong River Commission.

According to a cumulative impact assessment—which was carried out by Laos and attempts to measure the dam's impact in the region—the impact of the dam will be “insignificant.”

“[The dam] will not have significant cumulative impacts on the Mekong River flows, sediment transport, fish migration, or fisheries,” according to the report, dated January 2013.

The report notes that Mekong fisheries could be affected but only if the project is poorly managed.

“If poorly managed, this project would exacerbate the existing natural ‘choke’ on fish migration at this location in the system,” the report says.

However, the dam's placement in only one of 17 channels, which allows fish to access other migration routes on the Mekong, the report continues.

The dam's environmental impact assessment (EIA) report also says the project does not have measures in place to mitigate the alteration of river flow and sediments, as they will not be affected by the dam.

“As the [Don Sahong dam] will not significantly increase any of these threats, no mitigation or management actions have been proposed for them by this project,” the EIA report states, adding that the region's fisheries face more of a threat from over-fishing than migration routes blocked by the dam.

Ian Baird, assistant professor of geography at the University of Wisconsin-Madison—and one of the foremost scientists of Laos' Khone Falls fisheries who has produced numerous scientific articles on that area's fish migration and biodiversity—said in an email that it was false for the report to infer that the dam would not impact downstream countries.

“[I]t is completely inaccurate to claim that the dam would not have any impact on Cambodia, Vietnam or Thailand. It will—the only question is how much,” he said. “The stakes are simply too high to test out these unproven measures on such an important resource for the whole region.”

“Everything is so far unproven, and there is no guarantee that any of the parts of the mitigation plan will be successful,” Mr. Baird said. “The authors of the studies admit as much, but they do not offer to be responsible for miscalculations.”

Also skeptical of the reports’ claims that there will not be significant impacts on the Mekong’s fisheries, Chheng Phen, director-general of the Inland Fisheries Research Institute at the Ministry of Agriculture, called into question the independence of the company that authored it.

“They cannot say that there is no impact,” Mr. Phen said.

Meach Mean, coordinator for local environmental group 3S Rivers Protection Network, echoed similar concerns.

“This is the findings of the report from Laos and the company who wants the dam. It does not mean that they are really looking at the scientific effects on the fisheries or the impact on the downstream countries,” Mr. Mean said.

Pianporn Deetes, Thailand coordinator for environmental group International Rivers, called for an independent review of the reports in order to fully understand its shortcomings.

“The [Mekong River Commission] should carry out an immediate review and the Mekong public should also have an opportunity to review the reports to determine their accuracy before proceeding with this project,” she said in an email.

“Scientist Disputes Laos’ Claim About Dam”, 31/10/2013, online at: <http://www.cambodiadaily.com/news/scientist-disputes-laos-claim-about-dam-46396/>

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### ❖ Lao consultants give dam the thumbs up

The controversial Don Sahong hydropower dam, which Laos says it will soon build just a kilometre from the Cambodian border, will not have significant effects on the Mekong River, according to an environmental impact assessment paid for by the dam's builder.

Obtained yesterday, the report – prepared for Malaysian developer Mega First Corporation Berhad – says the project will actually benefit Laos, despite widespread concerns from environment groups.

“[The dam] will not have significant local or cumulative impacts on the Mekong River flows, fish migration, or fisheries,” the document says.

The EIA, submitted in January, adds that only 11 households will be relocated to make way for the project, which may have “small but positive impacts on global climate change by providing electricity that does not involve the burning of fossil fuels”.

“The health risks facing people living in the Lao PDR are higher than for those living elsewhere in the region ...the hydropower project can improve this situation.”

The EIA was prepared by the National Consulting Company, which is based in the Lao capital, Vientiane, following an earlier EIA in 2007.

Laos, which has committed to building hydropower projects on the Mekong in the face of opposition from environment groups and its neighbours, pressed ahead with building the 1,285-megawatt Xayaburi dam last November.

A number of Lao ministries, including the prime minister's office, were involved in the environmental assessment process, the Don Sahong EIA says.

Environment group International Rivers has warned that the dam “spells disaster for Mekong fish” and threatens the survival of the already endangered Irrawaddy dolphin.

Adding to these concerns, Meach Mean, a coordinator at the 3S Rivers Protection Network, said yesterday that the EIA had not considered Cambodians living downstream.

“It just focuses on the Laos side and the company that is investing . . . the communities downstream here, we have had not any consultation,” he said. “It will have a huge effect on fisheries, especially during the dry season.”

“Lao consultants give dam the thumbs up”, 31/10/2013, online at: <http://www.phnompenhpost.com/national/lao-consultants-give-dam-thumbs>

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### ❖ Drake & Scull unit wins EU water projects

Drake & Scull International said its German subsidiary Passavant-Roediger has won two major water treatment plant projects in Romania and Turkey worth Dh152 million.

The new contracts affirm Passavant's growing presence in the European market, said the leading developer of wastewater, water and sludge treatment technologies, with operations across Europe, Africa, Asia and the Middle East.

Under the terms of the Romanian agreement, Passavant-Roediger will undertake the EPC and commissioning works for the extension and modernization of the wastewater treatment plant in the cities of Campina and Plopeni in Romania.

Earlier in 2012, the company embarked on two similar projects that paved the way for this latest win, it stated.

The contract in Turkey, involves the development of an activated sludge plant with primary clarifiers, biological nitrification/de-nitrification and biological/chemical phosphorous removal and anaerobic stabilization capabilities.

Commenting on the win, Dr Mazen Bachir, the managing director, said: "We at Passavant-Roediger are constantly striving to improve technologies and products to cater to the demands of the international water and waste water industry."

"Our high-rate water purification technology using our patented Turbo-LME process and the new state-of-the-art manufacturing facilities for specialized digestion components are key assets that we will leverage for these and future developments," he stated.

"As both Romania and Turkey are critical to our expansion plans in the EU, we will apply our expertise into meeting the specific requirements of both these projects," he added.

Drake & Scull acquired Passavant-Roediger in 2009 to enhance its capabilities in the region's water



and wastewater sector.

"The GCC remains a key growth market for Passavant and we continue to deliver on our on-going projects in UAE, Saudi, Iraq and Lebanon. In recent years, the company has steadily grown its footprint in the GCC with successful implementation in Qatar, UAE, and Saudi Arabia," said Dr Bachir.

"Drake & Scull unit wins EU water projects", 30/10/2013, online at:  
[http://www.tradearabia.com/news/CONS\\_245338.html](http://www.tradearabia.com/news/CONS_245338.html)

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### ❖ Future mining and dining booms depend on water

The next mining boom and the emerging 'dining boom' in agriculture will depend critically on whether Australia has enough water to support them.

Mining and farming both use huge volumes of water, and with surface supplies becoming scarce, our future economic prospects are likely to rely increasingly on our underground 'water bank', says Professor Craig Simmons, Director of the National Centre for Groundwater Research and Training (NCGRT).

"Currently, \$34 billion worth of Australian industry per annum is dependent on groundwater, and the direct value of groundwater to the national economy is around \$7 billion a year, according to a new report which the Centre has commissioned from Deloitte Access Economics," he says.

"However with Australia now starting to outgrow its surface resources and the prospect of erratic rain fall under climate change projections, it is clear we will rely increasingly on groundwater to support large scale food, mineral and energy production into the future," he says.

The study finds that Australia currently uses around 3500 gegalitres (GL, or billion litres) a year of groundwater, from an estimated sustainable reserve of 29,173 GL. Around 6500 GL is held in entitlements to extract groundwater.

Agriculture and grazing are the biggest users, accounting for 60-70 per cent of total use, followed by mining and manufacturing with around 20-30 per cent and cities with 10 per cent. Groundwater also provides major services to the Australian landscape, in the form of water for trees, vegetation and wetlands, as well as providing 'base flow' into rivers and lakes, where it is widely used for recreation and in drinking supplies.

The Deloitte Access Economics study suggests that the value of Australian groundwater is likely to increase as surface supplies become scarcer during times of drought and under changing climates. It thus provides a valuable 'buffer' in times of shortages.

The study shows that:

- Agriculture typically uses about 2GL of groundwater each year, mainly for irrigation and livestock, and groundwater underpins \$4.7 billion of production
- Mining uses 410,000 megalitres (ML), and groundwater underpins mining production of \$24.5 billion each year
- Manufacturing uses 588,000 ML, and groundwater underpins production of \$4.4 billion to the economy a year
- Our cities use 303,000 ML of groundwater a year.

"It is not generally appreciated, but mining and energy production involve a lot of water – either for dewatering mines and bores, for moving minerals as slurries, for extracting minerals using hydrometallurgy, for suppressing dust, washing equipment, restoring landscapes and so on. You can't have a big mineral operation without a good source of water or a major water issue – and more often than not, that means groundwater," Prof. Simmons says.

"So any future mineral booms will depend critically on how well we manage our groundwater.

"Likewise, the much-talked of 'dining boom' – the expansion in worldwide agriculture driven by global food insecurity – will also depend critically on water, especially for irrigation. Given the scarcity of Australia's surface supplies, more of this water will come from underground in future."

Prof. Simmons says the report makes it clear that Australia currently only uses about 8 per cent of its estimated sustainable reserves of groundwater in any year, though it has issued licences for up to 16 per cent.

"Groundwater is a priceless asset in a world that is rapidly running out of cheap, accessible water – and Australians need to take great care of it because, if we do, it will remain sustainable."

Prof Simmons cautions that Australia still lacks a detailed knowledge of the exact size of its groundwater resources and how rapidly they are renewed. Without knowing this essential

information, there is always a danger we will over-exploit it, causing supplies to run out – as is happening elsewhere around the world.

"This means, more than anything else, we need the scientific and technical tools to understand, predict and manage our groundwater, which will clearly become the nation's most valuable physical resource into the future."

"If we look after our groundwater, Australia can not only enjoy future mining and dining booms, but also provide for healthy landscapes and environments and thriving cities and towns.

"Because it is underground it is so easy to forget groundwater, to miscalculate its reserves. But we should never forget it constitutes more than 90 per cent of Australia's total available fresh water reserve – and is therefore the key to our national future."

"Future mining and dining booms depend on water", 28/10/2013, online at: [http://phys.org/news/2013-10-future-dining-booms.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=fa5bf19cf4-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-fa5bf19cf4-250657169](http://phys.org/news/2013-10-future-dining-booms.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=fa5bf19cf4-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-fa5bf19cf4-250657169)

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### ❖ How Much Water Actually Goes Into Making A Bottle Of Water?

Environmental activists have long claimed that bottled water is wasteful. Usually, they point to the roughly 50 billion (mostly plastic) bottles we throw away every year.

The International Bottled Water Association, ever sensitive to criticism that it's wasting precious resources, has commissioned its first ever study to figure out how much water goes into producing one liter. The results, released this month, show that for North American companies, it takes 1.39 liters to make one liter of water.

That's less than the global averages of a liter of soda, which requires 2.02 liters of water. A liter of beer, meanwhile, needs 4 liters of water, wine demands 4.74 liters. Hard alcohol, it turns out, is the greediest, guzzling 34.55 liters of water for every liter.

This, the bottled water industry says, is evidence that its product isn't so bad. "Bottled water products are extremely efficient in terms of water use compared to some other packaged beverages," says Chris Hogan, spokesman for the International Bottled Water Association.

But water activists say the IBWA study highlights a problem throughout the beverage industry: Few companies take the whole water-use picture into account when calculating their water use. Just as companies are beginning to calculate their carbon footprint, they also need to analyze their water footprints to find opportunities for conservation.

Bottled water companies (along with many other beverage companies) should include the water in their supply chain, says Ertug Ercin with the Water Footprint Network. Ercin says a true water footprint includes all freshwater used in production, including the water used for packaging.

"Packaging makes a significant footprint," he says, adding that three liters of water might be used to make a half-liter bottle. In other words, the amount of water going into making the bottle could be up to six or seven times what's inside the bottle.

Drilling for oil to make plastic, Ercin says, uses a substantial amount of groundwater. And you need water to make the paper, too, he adds.

Still, Ercin notes, bottled water packaging uses far less water than soda, which needs extra water to grow sugar and make dyes.

Hogan says that one reason why the IBWA didnt look at these issues is that it's hard to know where to stop. "You could extrapolate that ad infinitum," he says.

Hogan says some companies say they don't think they can get any more efficient, but they're trying. "Water," Hogan says, "is the lifeblood of the industry and they want to be as efficient as possible."

“How Much Water Actually Goes Into Making A Bottle Of Water?”, 30/10/2013, online at:  
[http://www.npr.org/blogs/thesalt/2013/10/28/241419373/how-much-water-actually-goes-into-making-a-bottle-of-water?utm\\_source=Circle%20of%20Blue%20WaterNews%20&%20Alerts&utm\\_campaign=1b39224cc1-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-1b39224cc1-250657169](http://www.npr.org/blogs/thesalt/2013/10/28/241419373/how-much-water-actually-goes-into-making-a-bottle-of-water?utm_source=Circle%20of%20Blue%20WaterNews%20&%20Alerts&utm_campaign=1b39224cc1-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-1b39224cc1-250657169)

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## ❖ Norway Sovereign Wealth Fund Says Water Risks May Affect Returns

Norway's \$808 billion sovereign wealth fund, the world's largest, said today that long-term returns may be impacted should the companies it invests in fail to adequately manage and mitigate water-related risks.

Norges Bank Investment Management is exposed to water-related risks through investments in about 7,500 companies, it said today. It has investments in water-intensive industries including food and beverages as well as oil, gas and chemicals, NBIM said in a [statement](#). These all rely on water in their operations and supply chain.

The institution supports the Carbon Disclosure Project's Water Programme that today published a report on water-related risk management to help investors learn how to identify and curb water challenges. Almost two-thirds of the businesses said water-related issues will impact them within five years.

Each company in the sample faces an average of seven water-related risks, with 70 percent stating that water presents substantive challenges to their business. Half have already experienced detrimental business impacts in the past five years.

The report found that water poses "substantial risk" to companies and threatens profits, CDP said in a statement on its website. It said instead of focusing just on water use, companies need to curb water risk across their value chain.

"While the framework for water stewardship is being solidified and many companies remain at the beginning of the journey, some are moving from managing water risk within their direct operations to evaluating and, in some cases, mitigating water risk across their value chain," Will Sarni, director and practice leader, enterprise water strategy for Deloitte Consulting LLP, said in the statement.

"For those companies mitigating water risk across their value chain, engaging in collective action programs and taking responsibility for externalities such as access to clean water, sanitation and hygiene, leadership is within reach, if not already achieved."

"Norway Sovereign Wealth Fund Says Water Risks May Affect Returns", 31/10/2013, online at: [http://www.bloomberg.com/news/2013-10-31/norway-sovereign-wealth-fund-says-water-risks-may-affect-returns.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=3d73d7bd8b-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email&utm\\_term=0\\_c1265b6ed7-3d73d7bd8b-250657169](http://www.bloomberg.com/news/2013-10-31/norway-sovereign-wealth-fund-says-water-risks-may-affect-returns.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=3d73d7bd8b-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-3d73d7bd8b-250657169)

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### ❖ Brazilian Judge Halts Belo Monte Dam Construction, Temporarily

Controversy continues over a major hydroelectric project in the heart of Brazil's Amazon rain forest after a federal judge halted on work on the site, only to have his ruling reversed five days later.

Agence France-Presse reported Brasilia Federal Court Judge Antonio Souza suspended construction on the Belo Monte dam on Friday, Oct. 25, saying Norte Energia, the consortium behind the project, violated its environmental commitments. The following Wednesday, Federal Court President Mario Cesar Ribeiro, ordered work to resume on the grounds that only special courts can suspend the project.

Throughout the stoppage, Norte Energia told AFP it was "rigorously complying with its obligations and commitments." Still, the rulings reflect the ongoing battle over the \$13-billion megaproject, which was initially approved in 2011 over the objections of indigenous communities who warned of ecological damage and mass displacement.

If built, Belo Monte would become the world's third largest dam and would require the more earth moving than the construction of the Panama Canal, according to a report by The Rainforest Foundation.

Belo Monte is expected to produce 11,000 megawatts of electricity and will flood 500-square-kilometer (300-square-mile) of the Xingu river basin, displacing roughly 16,000 people and affecting 18 different ethnic groups.

The project will divert the Xingu River, reducing its water flow by 80 percent in an area known as the Volta Grande or "Big Bend", where large indigenous communities rely on the river for transportation, food production and fish.

"Belo Monte would be the first major dam in the last 20 years to displace and affect the natural resources of indigenous peoples in Brazil," the Rainforest Foundation stated in its report. "This is an important test for the dozens of dams that are planned and would impact indigenous lands."

Belo Monte is one of more than 40 dams planned for the Amazon River basin over the next decade and the recent legal conflicts are not the first to interrupt work on the site. In March 2012, a first regional court stopped construction on Belo Monte, but the Supreme Federal Tribunal overturned that ruling two months later.

Independent researchers have said the majority of Belo Monte's energy output will go towards the aluminum industry and will not benefit the people living in the Para region where it will be constructed.

“Brazilian Judge Halts Belo Monte Dam Construction, Temporarily”, 01/11/2013, online at:

<http://upsidedownworld.org/main/news-briefs-archives-68/4540-brazilian-judge-halts-belo-monte-dam-construction-temporarily>

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### ❖ Belo Monte dam suspended

Construction on Belo Monte, Brazil's largest dam, was again halted by a federal court due to concerns over its license, reports Amazon Watch, an NGO that is mobilizing opposition to the project.

"Last week the Federal Regional Court of the 1st Region (TRF-1) accepted a request made by public prosecutors of the Federal Public Ministry (MPF) and suspended the installation license (LI- Licença de Instalação) which had authorized the start of construction sites of the Belo Monte Hydroelectric Dam in 2011," said Amazon Watch in an emailed statement. "The Court also ruled that BNDES (Brazilian National Development Bank) should not transfer further resources to Norte Energia, the company responsible for construction of the dam complex, before the 40 conditions of the preliminary license (LP-Licença Prévia) are met."

The 40 conditions include developing infrastructure for health, education and security in cities that will receive thousands of migrants who will come to work on the dam. Norte Energia and the government would also have to remove non-indigenous occupants from the indigenous lands in the region, according to Amazon Watch. The conditions were supposed to have been met before construction moved beyond the preliminary phase of the project.

"In January of 2011 IBAMA [Brazil's Environmental Agency] granted a partial installation license (LI-Licença de Instalação) that permitted the start of construction solely for the construction sites," explained Amazon Watch. "The court action by the MPF was filed against this partial installation license, because it had been given without consideration of the constraints issued by IBAMA, considered indispensable prior to the start of any construction."

The suspension isn't the first time Belo Monte has been halted by a court. But in each previous instance, the order was quickly overruled or suspended.

Human rights groups and environmentalists remain staunchly opposed to Belo Monte, which will flood tens of thousands of hectares of land and require diversion of about 80 percent of one of the Amazon River's mightiest tributaries. Critics fear the project will spur increased deforestation in the region and necessitate a series of upstream dams, amplifying the impact of the scheme.

"Brazilian Judge Halts Belo Monte Dam Construction, Temporarily", 01/11/2013, online at:  
<http://upsidedownworld.org/main/news-briefs-archives-68/4540-brazilian-judge-halts-belo-monte-dam-construction-temporarily>

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