



# 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

11 June – 17 June 2012

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❖ **Turkey: 1st tunnel under Bosphorus built, but only for water**

(ANSAméd) - ANKARA, JUNE 13 - In addition to the two existing bridges and a third under construction, there is now also a tunnel which spans the Bosphorus linking Asia to Europe. However, it will be used to transport water and not people.

Turkish group STFA has announced the completion of the first tunnel below the famous strait, which will be used to transport 3 million cubic metres of drinking water from springs in Anatolia to the chaotic and overcrowded European side of Istanbul. The Turkish megalopolis now has a population estimated to be around 15 million.

The tunnel was drilled in 1,200 days at a depth of 145 metres, Hurriyet news reports. The third bridge over the Bosphorus will be built by the consortium of the Italian firm Astaldi and the Turkish company Ictas.(ANSAméd).

“Turkey: 1st tunnel under Bosphorus built, but only for water”, 13/06/2012, online at:

[http://www.ansamed.info/ansamed/en/news/nations/turkey/2012/06/13/Turkey-1st-tunnel-Bosphorus-built-only-water\\_7028416.html](http://www.ansamed.info/ansamed/en/news/nations/turkey/2012/06/13/Turkey-1st-tunnel-Bosphorus-built-only-water_7028416.html)

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### ❖ Iraq ‘green belt’ front line in anti-desertification fight

Trees as far as the eye can see are the weapons one Iraqi province is using in the fight against desertification in a country where decades of conflict have exacted a terrible environmental toll.

Karbala, 110 kilometers (70 miles) south of Baghdad, is best known as the site of the shrines of Imam Hussein and Abbas, who are among the most revered figures in Shiite Islam, and sees millions of pilgrims visit every year.

But it is also the location of a six-year-old project aimed at fighting worsening desertification in Iraq: a “green belt,” or a 27-kilometer crescent lined with thousands of young trees in orderly patterns, irrigated by dozens of wells.

The area had been used as a military encampment but is now the front line of Karbala’s battle against increasingly frequent sandstorms and salinization of the land.

“If we do nothing, the desert will envelop us,” said Hassan Jabbar, who heads the “green belt” project. “So we must go on the offensive, not on the defensive, and we must establish new irrigation projects.”

The project has involved the planting of 62,000 olive trees, 20,500 palm trees, 37,000 eucalyptus trees, and 4,200 tamarind trees, all of which were chosen for their root strength as well as for the food some eventually produce.

Karbala province governor Amal al-Din al-Har, himself a former director of the provincial agriculture department, spoke with pride of the project, and said he hoped to widen the belt tenfold from its current 100-metre (330 feet) width.

“For 30 years, Iraq has been combating desertification, but after we established the (national) anti-desertification office, what we have accomplished in Karbala has been the most ambitious and most successful effort in Iraq,” Har said.

The country’s environment ministry estimated in 2009 that 39 percent of Iraq’s surface was affected by desertification, while an additional 54 percent was under threat.

And while the ministry estimates that 28 percent of Iraq’s territory is comprised of arable land, around 250 square kilometers (96 square miles) are lost every year due to degradation of various kinds.

Iraq is far from the only country affected by desertification, but its tumultuous history has made it particularly vulnerable.

“Iraq has fought many wars,” noted Mohammed Ghazi Saeed, head of the national agriculture ministry’s anti-desertification department. “They have greatly damaged the country’s environment.”

Saeed said the situation worsened notably after now-executed dictator Saddam Hussein's 1990 invasion of Kuwait, and the subsequent international coalition that formed to evict him from the neighboring emirate.

As Saddam's forces fled Kuwait, they burned oil wells there, which Saeed said left Iraq "black, literally."

"Of course, this poisoned the soil, the water, and led to the disappearance of many plant areas."

The dictator's military vehicles also destroyed green areas in the south and center of Iraq by loosening the soil as they traversed them, and his forces chopped or burned down swathes of vegetation as part of efforts to track down internal dissidents.

This has combined with climate change — Iraq has suffered several droughts over the past decade — to worsen an already difficult environmental situation, with sandstorms in Baghdad regularly forcing the closure of the capital's airport, and leading to increased hospital visits due to respiratory problems.

In response, the Iraqi government has adopted a roadmap to fight desertification, involving efforts such as the Karbala green belt and planting programs in the areas near the western Anbar desert.

But Saeed said that while Iraq had started doing its part, neighboring countries were not pulling their weight, and insisted they had to allocate greater budgets to environmental preservation.

He also admitted that while authorities across Iraq were working to combat desertification, he was still not confident they would see the plans through to their conclusion.

"It is not really difficult to plant a tree — what is important is to let it grow," he said. "I must admit that the government is not yet fully capable, it is still weak in terms of completing projects."

Har was even harsher in his assessment of how much more needed to be done.

"I think Iraq is really far behind when it comes to the fight against desertification, and it really does not have strong measures to push efficient water usage," he said.

"Even today, we do not consider it an essential part of life, and we waste water."

Alluding to the years of violence that racked Iraq from 2006 to 2008, when confessional violence left tens of thousands dead, Har added: "Sandstorms now pose more of a problem than explosions."

"Iraq 'green belt' front line in anti-desertification fight", Al Arabiya, 13/06/2012, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=5207>

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### ❖ Iraq approves draft law to form national water council

The Iraqi government approved a draft law Wednesday (June 13th) creating a national council responsible for managing the country's water resources.

According to the law, the new council will be headed by the prime minister and be comprised of his three deputies and 11 cabinet ministers, including the ministers of water resources, agriculture, foreign affairs, planning, environment and industry. The national security advisor and the ministers of agriculture and water resources of the Kurdish Regional Government will also be on the council.

The council will be comprised of two committees: the Higher Committee for Negotiations on Joint International Waters, which will be headed by the foreign minister, and the Higher Committee for Management of Internal Water Resources, which will be headed by the minister of water resources.

"The water shortage and its repercussions represent a major challenge today for the state, and this challenge requires that all the concerned ministries make a concerted effort to deal with it through the creation of a higher national council concerned with proposing grassroots solutions for this problem and confronting its negative effects," said Ali Hashim, spokesman for the Ministry of Water Resources.

For several years Iraq has suffered a decline in water resources because of drought and decreasing water levels in neighbouring countries. As a result, dust storms and desertification have increased, transforming agricultural land into arid territory.

Hashim told Mawtani the water council "will assume drafting and following up on the plans and measures that will help exploit surface and underground waters in an ideal way, conserving it against waste and losses, and distributing it in a fair way amongst the country's provinces, in addition to preparing and executing studies concerned with water, agricultural and environmental policies".

The negotiating committee will also be responsible for reaching agreements with neighbouring countries to secure fair amounts of water from shared rivers, he said.

Mahdai al-Qaisi, undersecretary for the agricultural ministry, said the national water council will assist in "reinforcing water security, which is considered the basis for national development of all agricultural, industrial, economic and social sectors".

Water resource management is an important issue in Iraq and the Middle East, especially in areas where drought has been present for many years, al-Qaisi told Mawtani.

"Iraq was not immune from the effects of climate change and the accompanying serious decline in the quantities of waters flowing down the Tigris and Euphrates rivers and the other rivers on which we chiefly rely to water plants and secure drinking water," he added.

Adel al-Mukhtar, an advisor on the parliamentary committee on water and agriculture, told Mawtani, "This draft will not take a long time to discuss and approve, and maybe it will be one of the fastest



drafts to be approved by parliament because there is a consensus among parliament members about the need to form this council as soon as possible."

"Iraq approves draft law to form national water council", 15/06/2012, online at:

[http://www.mawtani.com/cocoon/iii/xhtml/en\\_GB/features/iii/features/iraqtoday/2012/06/15/feature-01](http://www.mawtani.com/cocoon/iii/xhtml/en_GB/features/iii/features/iraqtoday/2012/06/15/feature-01)

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### ❖ Iran-Tajik plans good on paper

Tajikistan and Iran last week concluded the ninth meeting of the Joint Economic Commission in Tehran, where the two countries signed five agreements in the hydroelectric, oil and health sectors. The issues of water and hydro-electricity featured prominently in the discussions, including agreements reached concerning the proposed Ayni dam in Tajikistan and the nearly completed Sangtuda-2 dam, also in Tajikistan.

According to Iranian Minister of Energy Majidi Namjou, both parties have agreed that Sangtuda-2 will be completed with money from Iran's National Development Fund. Iran expected the initial cost of the dam to be US\$180 million; however the price tag has increased by \$70 million and it remains unclear if and how the money will be paid back. As it stands now, Iran plans to recoup its investment over 12.5 years, after which full ownership of the dam would be transferred to Tajikistan.

Perhaps the most notable outcome of the meetings was a negotiation concerning a potential pipeline for the export of 1 billion cubic meters of potable water from Tajikistan to Iran. Tajikistan is rich in water resources, and since independence the issue of exporting water to other countries in Central Asia and the Persian Gulf has been raised periodically. However, Tajikistan's civil war and the subsequent years of tenuous stability have dissuaded investors.

Iran has expressed an interest in Tajikistan's water in order to supply the arid eastern provinces of what was formally known as Khorasan (as of 2004, this province was divided into South, North and Razavi Khorasan). According to local officials, Razavi Khorasan is especially in need of extra water to accommodate the 30 million pilgrims who come to visit the Shrine of the Imam Reza in the city of Mashhad each year.

In Tajikistan, the most likely source of water for such a project would be Lake Sarez, the 17-billion-cubic-meter lake that formed in 1911 after an earthquake. Sarez is a huge source of potable water in the comparatively dry region of Central Asia, but the fact that it is contained by a 550-meter natural dam has caused concern.

Were the dam to give way, up to an estimated 5.5 million downstream residents of Tajikistan, Afghanistan, Uzbekistan and Turkmenistan could be killed, and a 50-200 meter wave of water would reach as far as the Aral Sea. Geologists have determined three scenarios, which could lead to such a breach: a repeat of the sort of seismic activity that initially created the reservoir, an increase in the water level and influx of sediment from surrounding mountains.

The potential danger posed by Sarez was recognized by the Soviet authorities who controlled the reservoir and surrounding area directly from Moscow. At present, a special permit is required to visit the area and the Tajik government in partnership with international donors has established an early

warning detection center on the shores of the lake that is staffed 24 hours a day and seven days a week by nine technicians.

From the government's perspective, exporting water from Sarez would not only be profitable (Tajikistan's officials estimate yearly revenues of up to \$100 million), but a reduction of the volume of water would also mitigate the potential risk of a catastrophe.

However, some experts are skeptical about the plausibility of a water pipeline from Sarez to Iran. Anvarjon Kamolidinov, a Tajik water expert, estimates that the cost of such a pipeline could reach \$42 billion. At the same time, he suggests that a similar pipeline from the Panj River in southern Tajikistan would be both cheaper and more technologically feasible.

Downstream countries like Uzbekistan, Kazakhstan and Turkmenistan have also raised concerns, adding to an already tense situation between Tajikistan and its neighbors over water. Murod Aminjonov, an expert on Tajikistan's water issues says, "The five countries of Central Asia should negotiate together. Currently Turkmenistan and Uzbekistan are fighting our [Tajikistan's] attempts to reservoir our own water. How will we export [an additional] 1 billion cubic meters? We will be forced to give our own water to Iran, but if we do this half of the Vakhsh Valley will be waterless."

According to Abbas Bayani, Iran's economic attache in Dushanbe, to increase the economic viability of the project Iran and Tajikistan have discussed making a water pipeline merely one facet of a larger "joint corridor" that would connect not only water pipelines, but electricity lines and even a gas and oil pipeline between the two counties via Afghanistan.

Iran at present produces a surplus of 10,000 megawatts of electricity annually and has expressed a willingness to supply Tajikistan with up to 500 megawatts of that surplus in the summer months.

However, even if such a corridor were economically viable, the issue of ever-widening sanctions against Iran looms large over negotiations. In spite of American encouragement to observe sanctions against Iran, so far Tajikistani officials and businessmen have shown little interest in doing so. In fact, this week Gul Sherali, Tajikistan's Minister of Industry and Energy, formally announced his country's willingness to purchase crude oil from Iran.

Still, given the magnitude of projects such as the proposed Ayni dam and envisioned "joint corridor", outside investment would likely be required. Neither cash-strapped Tajikistan nor Iran's National Development Fund, with a budget of \$55 billion (20% of which is spent on foreign projects), would likely be able or willing to foot the bill.

To complicate matters, the most recent hydro-electricity agreements between the two counties involve the Iranian firm Khatam al-Anbiya Construction (KAA), controlled by the Revolutionary Guard Corps. KAA is sanctioned by both the United States and the United Nations, who describe the company as "involved in large scale civil and military construction projects and other engineering

activities ... In particular, KAA subsidiaries were heavily involved in the construction of the uranium enrichment site at Qom/Fordow."

If fears of widening sanctions are not enough to dissuade Tajikistan's government from cooperating with the KAA, in April a dam in Kerman, Iran, built by the Islamic Republic collapsed shortly before it could be unveiled, raising the question of the firm's competency. No one died in the ensuing flood; however, it was an embarrassment for the Iranian officials who shortly before had heralded the completion of the dam as a "national achievement".

In spite of the collapse, at least Tehran's confidence in the KAA has not wavered. Last week, Iranian officials canceled a \$2 billion contract with the Chinese firm Sinohydro Group to build the Bakhtiari dam in Lorestan. Instead, they awarded the lucrative contract to the KAA.

As is the case with its plan to supply electricity to Pakistan, Tajikistan might be better off providing for its domestic needs before pursuing export strategies. While, as a whole, Tajikistan possesses much of Central Asia's water wealth, paradoxically 43% of rural Tajiks do not have sufficient access to potable water.

"Iran-Tajik plans good on paper", Mark Vinson, 16/06/2012, online at:  
[http://www.atimes.com/atimes/Central\\_Asia/NF16Ag01.html](http://www.atimes.com/atimes/Central_Asia/NF16Ag01.html)

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### ❖ Sahar: Azerbaijan takes more water from Araks

Iranian farmers complain that Azerbaijan is illegally taking more water from River Araks than it's fixed, Iranian news site Sahar TV said.

It's reported that inhabitants of Parsabad village told Sahar journalist that Azerbaijan is illegally taking more water from Araks.

“The treaty signed between Iran and Azerbaijan defined norms for the two sides to take water from the river, however, Azerbaijan's government built illegal canals and takes more water which cuts water volume for the Iranian farmers and damages the agriculture,” said Iranian source.

“Sahar: Azerbaijan takes more water from Araks”, 16/06/2012, online at:  
<http://www.panorama.am/en/society/2012/06/16/araks-river/>

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### ❖ China, Iran discuss \$10 bln water finance package project

As Iran develops a comprehensive national water plan, it negotiates with China to secure a \$10 billion finance package for below dam irrigation and drainage networks.

Energy Minister, Majid Namjoo, said that's just one of the major water projects his ministry's working on, Mehr news agency reports.

Another key water project is the pipeline that transfers water from the Caspian Sea in northern Iran to the country's central regions. That water pipeline is to follow the same path as previously laid oil pipelines. Most part of financing designed for the pipeline would come from the sale of stocks that can be assigned to the Khatam al-Anbiya Construction Headquarters as its contractor.

Although Namjoo has dismissed concerns and questions about the government's project, it is a controversial one. Iran's Supreme Audit Court and another supervisory body, the Iranian General Inspection Office (GIO), have asked the Energy Ministry for documents on the Caspian Sea water transfer project.

Inaugurated in the Mazandaran Province's town of Sari, the pipeline is to deliver water southeast to the Semnan Province in its first phase.

Once completed, the project would send 500 million cubic meters of desalinated water from the Caspian to central Iran annually.

The comprehensive water plan also adds 2 million hectares to agricultural lands, getting water to it. Provincial governors will be given special authority to move this project forward.

At present, there are \$73 billion worth of proposed water projects in Iran. Their fulfillment will depend on the administration and Majlis' (parliament) close cooperation, Namjoo said.

“China, Iran discuss \$10 bln water finance package Project”, 11/06/2012, online at:  
<http://en.trend.az/regions/iran/2036054.html#popupInfo>

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## ❖ Water pacts re-examined amid Arab Spring

There are moves to rewrite contentious water-sharing agreements that are becoming a major source of friction in the Middle East as water supplies shrink.

BAGHDAD, June 14 (UPI) -- Amid the profound political changes sweeping the Arab world, there are moves to rewrite contentious water-sharing agreements that are becoming a major source of friction in the Middle East as water supplies shrink.

In May, Iraqi Prime Minister [Nouri al-Maliki](#) warned his neighbors, with Turkey and Syria his main targets, that the region faces conflict unless the issue of dwindling water resources is addressed by regional governments.

Baghdad is increasingly angry and frustrated at the failure of Turkey, in the north, and Syria, to the west, to resolve a growing crisis over the reduced flow and the deteriorating quality of water from the Euphrates and the Tigris rivers they allow Iraq.

Maliki's biggest fear is that the water shortage, which has been worsening for a decade or more, will trigger violence within Iraq.

"As the dust settles on the political unrest of 2011 and new governments and leaders are elected in Libya and Egypt over the next two years and South Sudan joins a group of countries looking to renegotiate the distribution of the Nile, there is likely to be renewed focus on resource security," the Middle East Economic Digest observed.

The water issue is a constant factor in the tension between Israel and the Palestinians in the occupied West Bank.

The business weekly said "the most contentious dispute over water resources in the region" centers on the Jordan River, which flows through Lebanon, Syria, the West Bank, Jordan and Israel.

Israelis use 66 gallons a day, while Palestinians are limited to 15.4 gallons, even though they claim a major underground aquifer and access to Jordan River.

Rivers including the Euphrates, Tigris, Nile and even the Jordan River, which cross national boundaries and are a major source of water supply, could well become flashpoints for rising regional tension.

"Equally, governments' ability to manage their rivers and negotiate with their upstream neighbors could well, as is the case in Iraq, lead to growing unrest at home," the weekly warned.

Thirteen of the 20 states that make up the Arab League rank among the world's most water-scarce nations.

In the Persian Gulf, the oil-rich Arab monarchies led by Saudi Arabia are investing heavily in new-generation desalination plants equipped with advanced technology to meet an ever-growing demand for water due to population growth and major economic expansion.

Without rivers and little rainfall, the countries of the Arabian Peninsula have little choice but to opt for highly expensive desalination systems.

But the other Arab states, with the possible exception of Iraq whose oil production is steadily rising, cannot afford to do that, making agreements on sharing riverine water flows with their neighbors strategically important.

Iraq has been badly hit by Turkey's massive dam construction in Anatolia that has reduced the flow of the Euphrates and the Tigris which rise close to each other in the Taurus Mountains of eastern Turkey.

A major stumbling block to a meaningful dialogue on the issue for Iraq is the dearth of data on the water sector.

"Iraq really doesn't know how much water it has or how much it needs," says Casey Walther, who until January was water projects coordinator in Iraq for the U.N. Educational, Scientific and Cultural Organization.

"Negotiators from Baghdad arriving at summits have found it almost impossible to get what they want out of talks because they can't accurately state what they actually need."

In the emerging new Egypt, following the 2011 downfall of longtime dictator [Hosni Mubarak](#), one of the key issues that has to be tackled soon is the long and acrimonious dispute over the Nile.

Eight upstream states, led by Ethiopia, where the Blue Nile rises, have been demanding a more equitable share of the Nile's waters that have been controlled by Cairo under British colonial era agreements.

Mubarak refused to surrender Egypt's right to 75 percent of the Nile's flow under agreements these states argue have become historical relics.

The Nile is Egypt's lifeline. With a population of 82 million expected to hit 101 million by 2025, it's going to need much more water than it currently gets.

Egypt's new rulers may be more accommodating but to do that they'll have to find another source of water while Ethiopia and the upstream states build dozens of dams to satisfy their burgeoning populations.

"Water pacts re-examined amid Arab Spring", 14/06/2012, online at: [http://www.upi.com/Business\\_News/Energy-Resources/2012/06/14/Water-pacts-re-examined-amid-Arab-Spring/UPI-60651339699729/?spt=hs&or=er](http://www.upi.com/Business_News/Energy-Resources/2012/06/14/Water-pacts-re-examined-amid-Arab-Spring/UPI-60651339699729/?spt=hs&or=er)

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## ❖ An Arab Spring Economics Recipe: Add High Food Prices to Trade Barriers, Get Revolutions

*Tyler Cowen, an economics professor at George Mason University, has recently published a book called An Economist Gets Lunch: New Rules for Everyday Foodies about how you can apply basic theories of economics to get the best meal for your money.*

*On a serious note, he tells Arabic Knowledge@Wharton, most people don't realize there is not a shortage of food, but rather too many poor people unable to pay for it. Cowen also discusses how food prices and trade barriers in the Middle East helped drive the Arab revolutions.*

An edited transcript of the conversation follows:

**Arabic Knowledge@Wharton:** You state that food is a result of capitalist supply and demand. It seems logical and simple, but people don't think about food in those terms. How did you come up with that?

**Cowen:** I grew up as a kid reading classical economic works by Adam Smith, David Ricardo and James Mill. Those are the origins of economics, as we all know. For obvious reasons, they're obsessed with food. That's almost all they write about because that's what the economy was about back then. If you have a background in classical economics, the notion that economics is about food comes very naturally. Maybe the world has forgotten that somewhat.

**Arabic Knowledge@Wharton:** In the Middle East, eating a more Westernized diet is a sign of worldliness but it may not be as healthy as eating traditional meals. How did the idea of local eating transform into a lower-status symbol?

**Cowen:** There's a class division in a lot of those societies. You either do things that are Western to show you have money, but it's not necessarily healthy. I think if they became a little more obsessed with, say Indian or Chinese food, they'll do better. There are issues with diabetes and obesity in many of these wealthier Gulf nations. They also tend not to be physically active because that also has a stigma. So it's one thing to eat if you're physically active, you can get away with doing so much more.

Also, they have servants, and they import labor. A lot of people are just not working; they don't have to work. That's a lethal combination. And the idea of, "Oh, I'm going to go to the gym," like they say in America, it's not the same there. It's too much like work.

**Arabic Knowledge@Wharton:** You point out that there is no shortage of food in the world. But there is a shortage of money for poor people to buy the food. It seems almost ironic. What are the factors that affect this polar phenomenon?

**Cowen:** If you look at wheat and rice, there have been price spikes over the last five years and they've made food a lot harder for poor people to afford. The so-called "Green Revolution" has somewhat slowed down. This is an unreported story. Crop yields are stagnant. It isn't a problem

we can solve overnight but it's really one of the biggest problems in the world. It hardly gets any publicity. But for poor people in India, the Middle East and parts of Africa, it really matters.

Some of the problems are we don't have enough trade. It could be either legal barriers or just costly to transport or trade things. If there could be a shortage of rice in one place, it actually not that easy to ship a lot of rice in there because of bad roads and so on.

**Arabic Knowledge@Wharton:** So if countries worked on improving the transportation infrastructure, that would lower food prices in some parts of the world?

**Cowen:** Exactly, that would do a lot to feed people. Again, it sounds much more mundane but it's more important than what people in the food world usually talk about.

**Arabic Knowledge@Wharton:** So when companies like Wal-Mart bring their logistics ability to Africa, it actually could be a good thing for the poor people of Africa?

**Cowen:** It's exactly what we need more of. Yes.

**Arabic Knowledge@Wharton:** Yet there's a fear Wal-Mart will put the smaller stores out of business.

**Cowen:** Yes, they do so sometimes, but they do so by charging lower prices. It makes it more accessible and more reliable. It's not just the pricing at any one point and time. It's what happens in the very worst periods. Companies like Wal-Mart are very, very good at keeping up supply and being regular.

**Arabic Knowledge@Wharton:** Are there other things that people can do to feed the poor people in the Middle East, especially in the Arab nations that have undergone revolutions?

**Cowen:** Well, they have very bad economic policies; it's hard to know where to start. They tend to have bad energy and bad water policies. They overuse energy and they overuse water and protect their domestic farmers. It creates an unholy triad of subsidies with water, food and energy in a way that's environmentally unsustainable. They should rely more on free trade. They tend not to trust it and I understand why, given their histories. But what they're doing now isn't really working.

**Arabic Knowledge@Wharton:** Do you think people recognize that when they're forming the new governments?

**Cowen:** I think very often they do. There are a lot of sophisticated people in the governments. But that doesn't mean they have the power to set things straight.

Plus, it depends on which country in the Middle East you're talking about. So Tunisia is better run than most places. Lebanon has a saner agricultural policy than most places. Yemen is a total disaster. Algeria and Egypt have not gone so well. So there's a lot of variety within the Middle East. If you think of a model like Turkey, which isn't technically in the Middle East, they've

liberalized and encouraged agribusiness. Turks are much better fed than 20 years ago. When you ask a country like Iran, what should we do? It's hard to know even where to start.

**Arabic Knowledge@Wharton:** As you said, Egypt hasn't gone well. And Egypt is in the beginnings of forming a new government, it sounds like they have a very big uphill battle.

**Cowen:** Yes, I think it'll get worse before it gets better. They're prevailing on economic policy based on mercantilism -- powerful, bad, old-fashioned mercantilism in the greediest way. It doesn't work. Mercantilism backed by military rule not a good idea.

**Arabic Knowledge@Wharton:** You point out that the Middle East imports about half of the wheat they use, which is needed for bread and other staples. This system of importing a food staple contributes to high food prices, which is one of the reasons for the political unrest and an impetus for the Arab revolutions. What can the Middle East do to reverse this trend?

**Cowen:** Well, it's not just up to the Middle East. One reason that wheat prices and other prices have gone up is because the world as a whole has slacked off in research and development in agricultural productivity. I don't think the Middle East can solve that problem on its own.

**Arabic Knowledge@Wharton:** Why has the world slacked off in such research and development?

**Cowen:** I don't know. It's a bigger public policy question. In a lot of areas, we're spending more on short-term consumption and less on long-term investment. And I think that's our fault. It's a general trend and you see it in a lot of different countries.

Somehow, our time horizons are shortening. But most Middle Eastern countries do not have free trade in food. And if they did have free trade in food and didn't protect their domestic farmers with subsidies, they would have cheaper food. So they treat their domestic farmers as a lobby that should be catered to when they should not. I wouldn't suggest that would solve all their food problems. It wouldn't.

**Arabic Knowledge@Wharton:** The domestic farmers would argue they would be put out of business.

**Cowen:** Sure, but should Saudi Arabia be growing bananas and paying for all that water in the desert? It's crazy. There's a long history in many of these countries, trying to be self-sufficient with fairly outrageous water and farm subsidies, which raises prices. It costs a lot of money in the budget. It's not really a successful path forward but it does buy the support of some interest groups of course. That's why they do it.

But the notion of saying something simple like "Well, Lebanon has more water than we do so we should just stop subsidizing water and buy it from them." Those countries would be much better off.

**Arabic Knowledge@Wharton:** So if some of these countries just traded across borders?

**Cowen:** Yes. I don't mean to get into politics but Israel has the highest agricultural productivity in the Middle East. And they use technology much better. But a lot of countries are very reluctant to trade with Israel. Even share information and have any dealings at all. That's another mistake they make and that's part of the problem.

**Arabic Knowledge@Wharton:** While water is scarce in some regional countries, like Yemen, it's actually abundant in Syria, Lebanon and Turkey. Can you explain more about the water inequality problem in the Middle East?

**Cowen:** Typically, the Gulf has the worst problem with water. I'm not even sure Yemen is even a viable country because there's some chance, they will literally run out of water in the next 20 years in a lot of parts of the country. At this point, I don't know what they can do. Saudi Arabia is a lot wealthier and they've returned to some sanity. Every now and then, the price of oil dips and they decide they can't afford to be as they used to be, so they cut back on their subsidies for the better. They ought to just say their domestic farmers have to pay the market price for their water. And if they can't produce food at that price, we'll buy from Lebanon, Turkey, Israel or wherever else.

**Arabic Knowledge@Wharton:** So to buy water and food products from other nations?

**Cowen:** Often how you buy water is to buy it in the product. If you buy a tomato, one way to think of that transaction is you are buying water. It's called virtual water, so yes.

**Arabic Knowledge@Wharton:** In India, the economy is growing at 8 to 9% but agriculture is growing at 3% because agribusiness is not allowed. Can you explain the problem and discuss some of the solutions required?

**Cowen:** India has slowed down since the book came out. India is now at the 6% range. They have a climate that's very hostile to agribusiness. They don't want to let in Wal-Mart. They don't let in generally consolidated land holdings. Agriculturally, they're one of the least efficient countries. Half of the children under five are malnourished. And half of the workforce is in agriculture.

**Arabic Knowledge@Wharton:** Why doesn't India let agribusiness grow?

**Cowen:** They protect their own small farmers. The result of that is massive malnutrition, which have terrible consequences, not just for the kids, but for the whole country. People grow up and have inferior opportunities. One thing the world does know how to do, even in non-ideal countries, is to raise agricultural productivity. Turkey has done it. Most of South America has done it. But India has not been willing to take that step. It's a huge, huge problem for them. Millions of people suffer in a very serious way.

**Arabic Knowledge@Wharton:** Can you explain how the European fear for GMO's (genetically modified organisms) is affecting Africa's agricultural economy?



**Cowen:** There are a few reasons African countries are reluctant to use GMOs. Some of them do, mostly South Africa. But partly they don't have the infrastructure to do it at all. And some are afraid that if they do, they can't export to the European Union, which is their main market and more important than the United States. So they've held back on investing.

African agriculture has a lot of problems. But the biggest problem is simpler than GMOs. Africa has terrible roads. In Africa, it takes four to six time times to transport a product, which is crazy. It's such a poor place. It's relatively dry so they really need fertilizer. And to think an African farmer has to pay four to six times more than what an African farmer has to pay for fertilizer? A lot of that is because they have bad roads.

But not doing GMOs is part of a bigger, broader set of problems and it could make their agriculture more productive. I'm not sure injecting GMOs and doing nothing else will make a huge difference. If there's no road to bring your crop to market, it doesn't matter what you do to your crop. But it's part of a series of big, interrelated problems.

**Arabic Knowledge@Wharton:** This fear of GMOs is more of a European fear than an American fear?

**Cowen:** Yes, that's right. There's a very small minority of Americans who worry about this kind of thing. In terms of law and public policy debate, it's pretty much taken for granted. People have been eating GMO products for 20 years and there's really no evidence of ill effects. Why is it this way in Europe? I don't know. To me, it's a bit like the right wing, climate change, etc. People start obsessing over it in a bad way and they're not willing to face up to the evidence.

**Arabic Knowledge@Wharton:** In your book you point out New Zealand lamb. Its two biggest consumers are the U.S. and the Arab World. If segments of the U.S. population decided to boycott New Zealand lamb due to transportation not being environmentally friendly, how would that effect prices in the Arab World?

**Cowen:** In that example, I just tried to point out that boycotts are often not very effective. They make people feel good. If you get a lot of people to boycott, people somewhere else will just buy more of it. There's a system-wide effect. In general, I tend to be skeptical of boycotts as a way to change the world. Sometimes they work but more often than not, they don't.

“An Arab Spring Economics Recipe: Add High Food Prices to Trade Barriers, Get Revolutions”, 12/06/2012, online at: [http://knowledge.wharton.upenn.edu/arabic/article.cfm?articleid=2836&language\\_id=1](http://knowledge.wharton.upenn.edu/arabic/article.cfm?articleid=2836&language_id=1)

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## ❖ **MUST READ: Why wars for water are unavoidable**

*The battles of yesterday were fought over land. Those of today are over energy. But the battles of tomorrow may be over water. Along with population growth and increasing per capita water consumption, massive pollution of the world's surface water systems has placed a great strain on remaining supplies of clean fresh water. Global deforestation, destruction of wetlands, dumping of pesticides and fertilizer into waterways, and global warming are all taking a terrible toll on the Earth's fragile water system, writes Dr Nitish Priyadarshi.*

The combination of increasing demand and shrinking supply has attracted the interest of global corporations who want to sell water for a profit. The water industry is touted by the World Bank as a potential trillion-dollar industry. Water has become the "blue gold" of the 21st century.

In any part of the world, one major river supplies water to multiple countries. Climate change, pollution and population growth are putting a significant strain on supplies. In some areas renewable water reserves are in danger of dropping below the 500 cubic meters per person per year -- considered minimum for a functioning society.

In recent times, several studies around the globe show that climatic change is likely to impact significantly upon availability of freshwater resources. In India, demand for water has already increased manifold over the years due to urbanisation, agriculture expansion, increasing population, rapid industrialisation and economic development.

At present, changes in cropping and land-use patterns, over-exploitation of water storage and changes in irrigation and drainage are modifying the hydrological cycle in many climate regions and river basins of India.

By 2050, big cities of the world will not have enough water

Major cities worldwide may face a water shortage crisis by 2050 if relevant governments don't react quickly. The water shortage will mostly affect basic daily needs such as drinking, cooking, bathing and washing clothes, and the poor residents of the world's major cities in developing countries are the ones who will suffer most.

By 2050, big cities that will not have enough water available nearby include Beijing, New Delhi, Mexico City, Lagos and Tehran. China and India will be particularly hard hit unless significant new efforts are taken by their cities.

### **There are the several principal manifestations of the water crisis:**

- Inadequate access to safe drinking water for about 884 million people in the world.
- Inadequate access to water for sanitation and waste disposal for 2.5 billion people.
- Groundwater over drafting (excessive use) leading to diminished agricultural yields.
- Overuse and pollution of water resources harming biodiversity.
- Regional conflicts over scarce water resources sometimes resulting in warfare.

Water stress is set to become Asia's defining crisis

• **Here are the potential hot spots:**

- **Egypt:** A coalition led by Ethiopia is challenging old agreements that allow Egypt to use more than 50 percent of the Nile's flow. Without the river, all of Egypt would be desert.
- **Eastern Europe:** Decades of pollution have fouled the Danube, leaving down-stream countries, such as Hungary and the Republic of Moldova, scrambling to find new sources of water.
- **Middle East:** The Jordan River, racked by drought and diverted by Israeli, Syrian and the Jordanian dams, has lost 95 percent of its former flow.
- **Former Soviet Union:** The Aral sea, at one time the world's fourth largest inland sea, has lost 75 percent of its water because of diversion programs begun in the 1960s.
- There are many other countries of the world that are severely impacted with regard to human health and inadequate drinking water.
- Water stress is set to become Asia's defining crisis of the twenty-first century, creating obstacles to economic growth, stoking interstate tensions over shared resources, exacerbating long time territorial disputes, and imposing further hardships on the poor.
- Asia is home to many of the world's great rivers and lakes, but its huge population, pollution and exploding economic and agricultural demand for water make it the most water-scare continent on a per capita basis. Many of Asia's water sources cross national boundaries, and as less and less water is available, international tensions will rise.

Disputes over water are likely to become endemic

The poor management of river basins, environmentally unsustainable irrigation practices, an overuse of groundwater, and the contamination of water sources have all helped aggravate Asian water woes.

- The over exploitation of subterranean water in the large parts of the Asia has resulted in a rapidly falling groundwater saturation level, known as the water table.
- In the Gangetic delta, wells have tapped into naturally occurring arsenic deposits, causing millions of people in Bangladesh, and Eastern India, including Jharkhand and Bihar, to be exposed to high levels of poisonous arsenic in drinking water and staple agricultural products like rice.
- Asia will continue to have the world's largest number of people without basic or adequate access to water. The Asian water sector is plagued by serious problems, including inadequate infrastructure and poor system maintenance, financially strapped utilities, low-cost recovery, growing pollution, watershed degradation, and unsustainable groundwater extraction.

- Owing to leaks and system inefficiencies, a sizable portion of the water supply is lost before reaching the consumer.
- As water distress intensifies and global warming accelerates, local, national, and interstate disputes over water are likely to become endemic in Asia.
- Water, for its part, could trigger increased conflicts within and between states, and open new political disputes in Asia. Water shortages, likely to be aggravated by fast-rising use and climate change, pose a potential threat to political stability, economic modernisation, public health, food security, and internal cohesion in a number of Asian states.
- The sharing of waters of the river Kaveri had been the bone of contention of a serious conflict between the states of Karnataka and Tamil Nadu. Parched throats in Rajasthan are crying hoarse over Gujarat allegedly stealing its share of the Mahi river waters by constructing the Sujalam Sufalam irrigation canal.

Reduction in availability of water could trigger an Indo-Pak war

The declining snow cover and receding glaciers in the Himalayan state of Jammu and Kashmir could trigger renewed hostilities between India and Pakistan, neighbouring states in the South Asian region that are at odds on a host of issues.

The two countries share the Indus River, one of the longest rivers in the world. Pakistan and India have long been embroiled in a territorial dispute over Kashmir, but have so far managed to uphold a World Bank-mediated Indus Water Treaty that provides mechanisms for resolving disputes over water sharing. Any drastic reduction in the availability of water in the region has the potential of causing a war between the hostile south Asian neighbours.

Transboundary water sharing between India and Pakistan will become an extremely difficult proposition as surface water would become a scarce commodity with the depletion of water reserves up in the mountains.

The sharing of the Ganga waters is a long-standing issue between India and Bangladesh over the appropriate allocation and development of the water resources of the Ganga that flows from northern India into Bangladesh. The issue has remained a subject of conflict for almost 35 years, with several bilateral agreements and rounds of talks failing to produce results.

The Farakka Barrage is a dam on the Bhagirathi river located in West Bengal, roughly 10 km (6.2 mi) from the border with Bangladesh. India uses it to control the flow of the Ganga. The dam was built to divert the Ganga water into the Hooghly river during the dry season, from January to June, in order to flush out the accumulating silt which in the 1950s and 1960s was a problem at the Kolkata port on the Hooghly river.



Bangladesh claims that its rivers were drying up because of excess drawing of water by India. In May 1974 a joint declaration was issued to resolve the water-sharing issue before the Farakka Barrage was put into operation. This was followed by an interim agreement in 1975 to allow India to operate feeder canals of the barrage for short periods.

However, India withdrew from the process of negotiations by September 1976 as both nations grew apart after the killing of Sheikh Mujib and establishment of military rule. Bangladesh protested India's unilateral action at a summit of the Non-Aligned Movement and at the 31st session of the United Nations General Assembly. At the urging of other nations and the UN, both India and Bangladesh agreed to resume dialogue, but with no results.

Not only can water float a boat, it can sink it also

In China, at present, the government estimates that 30 million people are already being displaced by climate change. Some authorities set the figure higher, at up to 72 million. A one-meter rise of sea level would flood of all of Shanghai, plus 96 percent of the province around it.

Egypt will lose 12-15 percent of its arable land, creating 14 million refugees. As the sea encroached, salt water would move into the foreshortened Nile, threatening the irrigated lands that produce almost all of Egypt's food.

In some areas, more destructive river flooding is also predicted, for instance through a heavier than usual monsoon.

In Bangladesh, melting glaciers in the Himalayas would add to such floods.

Rising sea levels also threaten delta areas-such as the Mekong in the Vietnam, the Yangtze in China, the Irrawaddy in Myanmar, the Tigris- Euphrates in Iraq, the Indus in Pakistan, the Orinoco in Venezuela and the Amazon in Brazil -- that hold more than one billion people (two billion by 2050).

Vietnam has engaged in several dam construction projects without consulting with Cambodia, as has Laos.

There is a famous Chinese proverb that warns "not only can water float a boat, it can sink it also." And with global water shortages on the horizon, climate change supporters say an extreme response will be needed from international governments to stem the potential for conflict it will create around the world.

“MUST READ: Why wars for water are unavoidable”, 13/06/2012, online at: <http://www.rediff.com/news/slide-show/slide-show-1-warning-why-wars-for-water-are-unavoidable/20120613.htm>

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### ❖ Luxembourg Ratifies 1997 Watercourses Convention

On 8 June 2012, Luxembourg became the 26th nation to ratify or otherwise become a full party to the [1997 UN Convention on the Non-navigational Uses of International Watercourses](#). The other 25 states include: Burkina Faso, Denmark, Finland, France, Germany, Greece, Guinea-Bissau, Hungary, Iraq, Jordan, Lebanon, Libya, Morocco, Namibia, The Netherlands, Nigeria, Norway, Portugal, Qatar, South Africa, Spain, Sweden, Syria, Tunisia, and Uzbekistan. In addition four nations have signed the treaty but have yet to become full ratifying members: Côte d'Ivoire, Paraguay, Venezuela, and Yemen. You can find the updated status of the Convention [here](#).

Of the 26 ratifications, two occurred in 2012 (so far), three in 2011, three in 2010, and two in 2009. If the present rate of ratifications continue, the Convention could come into force within three or so years. The Convention requires 35 parties for it to achieve that status.

While it is probably still too early to identify any definitive trends, it is at least curious that of the 26 states that have ratified the Convention, twenty are either from Africa (8) or Europe (12). Five others are from the non-African Middle East region, albeit it's also true that eight are MENA nations. Only one ratifying state is found in Asia (Central Asia to be precise) and none come from the American hemisphere.

What this might mean is still unclear. But the geographic distribution of the ratifications could suggest a geographic bias or disfavor for the Convention. As nations continue to ratify the instrument (and I do expect more nations to do so), it will be interesting to see whether this trend continues. Moreover, it will be interesting to see what this might mean if and when the Convention comes into force.

"Luxembourg Ratifies 1997 Watercourses Convention", 12/06/2012, online at:

<http://www.internationalwaterlaw.org/blog/2012/06/12/luxembourg-ratifies-1997-watercourses-convention/>

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❖ **World food stocks to rise, but hunger risks persist in Sahel, Near East / Food security worsening in Syria, Yemen, amid unrest, says FAO**

ROME, Italy, June 13, 2012/African Press Organization (APO)/ — FAO’s quarterly forecast of agricultural production and food security gives an overall positive outlook for cereal production worldwide, but warns that several regions of the world are expected to struggle with the consequences of poor rainfall, severe weather, armed conflict and displacement.

The Crop Prospects and Food Situation report forecasts a record increase of 3.2 percent in world cereal production in 2012, totalling an estimated 2 419 million tonnes, mainly on the strength of a bumper maize crop in the United States. Wheat and coarse grains prices eased in May, mostly during the second half, driven by good supply prospects.

Despite the positive global trends, countries in the Sahel continue to face serious challenges to food security due to locally high food prices and civil strife, FAO warns. The Syrian Arab Republic and Yemen are also among the countries experiencing increasing levels of food insecurity.

“The situation in Yemen and Syria reminds us of the clear link between food security and peace. In this case, internal conflict is causing food insecurity. But, it works the other way around as well. Throughout the world we see crisis after crisis caused, in its entirety or in part, by the lack of food or disputes over natural resources, especially land and water,” FAO Director-General José Graziano da Silva said.

The report also lists 35 countries in need of external food assistance, including Afghanistan, the Democratic People’s Republic of Korea, Haiti, Iraq and Mali. Of the total, 28 countries are in Africa.

“This only goes to show, again, that hunger today is mainly a problem of access. Millions of poor families worldwide lack the means to produce their own food or decent jobs and income to buy the food they need,” Graziano da Silva said.

**Africa, Near East**

West Africa continues to face “increasing food insecurity and malnutrition in several countries,” due to a sharp drop in cereal and pasture production in 2011, combined with high local food prices and civil strife.

Escalating conflict in Mali, resulting displacement towards neighbouring countries, and Desert Locust outbreaks moving southward from North Africa are considered additional threats to 2012 agricultural production in the Sahel, especially in Niger, Mali and Chad, FAO said.

In Eastern Africa, the main season rains started late, shortening the crop growing period. Furthermore, floods affected areas in Kenya, Somalia, the United Republic of Tanzania and Uganda, while severe dry conditions persist in parts of northeastern and coastal districts in Kenya.

In North Africa, Morocco is expected to see sharp declines in production following “erratic and insufficient” rains, while the rest of the region is expected to produce above-average harvests.

Unfavourable weather conditions in 2012, including dry spells and cyclones, resulted in cereal production declines in parts of Southern Africa, while high food prices in Malawi worsen food insecurity.

In the Near East, the deteriorating food security situation was cited as a major concern in the Syrian Arab Republic and Yemen as a result of the civil unrest. An estimated 1 million people are in need of humanitarian assistance in Syria due to the impact of the continuing social unrest on households and food distribution channels in several markets.

In Yemen, about 5 million people are estimated to be severely food insecure and in need of emergency food assistance, as a result of high levels of poverty, prolonged conflict and high food and fuel prices.

**Ukraine bread basket vulnerable**

In the Commonwealth of Independent States (CIS) in Europe, FAO forecasts a six-percent decline in cereal production, to 148 million tonnes, against last year’s level. This mainly reflects the unfavourable prospects in Ukraine, where adverse weather conditions during the winter cropping are taking its toll on grain crops. Wheat production is forecast at 14 million tonnes, nearly 40 percent below last year’s bumper crop and well below the average of the past five years.

The significant drop in Ukraine, a major food producer in the region, is expected to have an impact on supplies and pricing in neighbouring countries.

In the CIS in Asia, wheat production in Kazakhstan, the major cereal producer in the sub-region, was put at 14.7 million tonnes, one-third below last year’s record level.

## Asia, Americas see gains

The FAO report forecasts a record increase of 3.2 percent in world cereal production in 2012, totalling an estimated 2 419 million tonnes, mainly on account of a bumper maize crop in the United States.

Record harvests and improved production were expected across much of Asia, North America, Central America and South America.

World cereal stocks for crop seasons ending in 2013 are forecast to increase to 548 million tonnes, up 7 percent from their opening levels and the highest since 2002. This outlook is 4 percent (or 23.5 million tonnes) higher than was reported last month, entirely due to an increase in the forecast for world coarse grain inventories which now stand at 201 million tonnes — up 20 percent from the previous season's low of 167 million tonnes.

## Food prices

Globally, the FAO Food Price Index, which measures the monthly change in international prices of a basket of food commodities, dropped by 4 percent in May due to generally favourable supplies, growing world economic uncertainties, and a strengthening of the US dollar.

“World food stocks to rise, but hunger risks persist in Sahel, Near East / Food security worsening in Syria, Yemen, amid unrest, says FAO”, 13/06/2012, online at: <http://spyghana.com/ghana-general-news/reports/press-releases/world-food-stocks-to-rise-but-hunger-risks-persist-in-sahel-near-east-food-security-worsening-in-syria-yemen-amid-unrest-says-fao/>

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### ❖ OECD: Israeli tech can halt global water crisis

OECD sends envoy to tap Israeli expertise in producing water in arid conditions.

Senior Mekorot officials met with Secretary General of the Organization for Economic Cooperation and Development (OECD) Angel Gurría in Tel Aviv recently to find ways [Israel's national water company can help in halting the global water shortage](#). Gurria said he came to Israel to acquire “knowledge, experience and professionalism” to solve the crisis.

“The global water crisis is gaining momentum and the demand for water is increasing at a much higher rate than the increase in population,” Gurria said in a statement. “The organization is interested in disseminating Israeli know-how and technologies to third world countries as part of an effort to deal with the global water crisis.”

Mekorot officials said the rise in population together with climate changes and a 55 percent hike in demand for freshwater could cost the world \$800 billion in damages by the year 2050.

“The underdeveloped world doesn’t understand that water is the number one problem in the world. Not oil. Not gas. Not other resources. Water,” Mekorot Chairman Alex Wiznitzer told *Reuters*. “I am sure we can contribute there and even flourish.”

Mekorot showed OECD officials the [different technologies it had developed to deal with water crises and technologies it already promotes around the world](#).

Israel is renowned for its wastewater reuse, water security and desalination, drip irrigation, and the ability to produce water in the Arava Desert.

“OECD: Israeli tech can halt global water crisis”, 10/06/2012, online at: <http://israel21c.org/news/oecd-israeli-tech-can-halt-global-water-crisis/>

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❖ **Gaza water too contaminated to drink, say charities**

**Gaza's only fresh source of water is too dangerous to drink because of contamination by fertiliser and human waste, a new report says.**

The charities Save the Children and Medical Aid for Palestinians say the number of children being treated for diarrhoea has doubled in five years.

They say Israel's five-year blockade of the territory is preventing crucial sanitation equipment from getting in.

The blockade must be lifted "in its entirety", they say.

The report, Gaza's Children: Falling Behind, says that high levels of nitrates and other contaminants have been found in the main water supply.

Nitrates, found in faeces and fertiliser, are linked to the doubling of the incidence of watery diarrhoea in children since the blockade began, it says.

As well as the blockade, it blames war damage and chronic underinvestment.

Desperate families are turning to private water sources - without realising that this water too is contaminated, often at 10 times the safe level, the report says.

And Gaza's sewage system is "completely broken".

Israel insists that the blockade of Gaza has been eased considerably in recent months, says the BBC's Wyre Davies in Jerusalem.

It says more supplies and building materials to help reconstruction of the territory's battered infrastructure are being allowed in.

But the report says this is not enough.

"As a matter of urgent priority for the health and well-being of Gaza's children, Israel must lift the blockade in its entirety to enable the free movement of people and goods in and out of Gaza," it says.

It also calls on the international community, the Palestinian Authority and aid donors to do more.

"Gaza water too contaminated to drink, say charities", 14/06/2012, online at: <http://www.bbc.co.uk/news/world-middle-east-18436602>

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### ❖ **Israelis Sabotage Water Supply of Bedouins**

Israel police arrested four Israelis on suspicion they had sabotaged the water supply to a cluster of Bedouin settlement in Khan al-Ahmar, east of Jerusalem.

The four were arrested in Sunday night close to the place where the sabotage had taken place, after the Bedouins called the police.

The Police Judea and Samaria District said that the suspects were released under restrictions and their file was transferred to the State Attorney's Office.

Approximately 100 Bedouins are dependent on the pipeline for their water supply since was laid down in 1983. Id Abu Hamis, a resident of the area, told Haaretz that this hasn't been the first incident of sabotage the water supply to the area suffered in recent times. During May, saboteurs sabotaged the pipeline five times, forcing them to hire guards.

On Sunday night, Abu Hamis recounted the last case of sabotage, a silver Nissan jeep appeared. Three armed men got out carrying saws and large wire cutters. The two guards were afraid to approach the armed persons and opted to call the police.

"Israelis Sabotage Water Supply of Bedouins", 10/06/2012, online at: <http://forward.com/articles/157595/israelis-sabotage-water-supply-of-bedouins/>

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## ❖ Irrigation expert crosses religious, political lines to win World Food Prize

*Daniel Hillel developed a system called micro-irrigation, which has opened up dry regions to farming, revolutionizing agriculture worldwide. The Israeli scientist has worked closely with Arab friends in Jordan, Egypt, and the United Arab Emirates.*

An Israeli scientist who has reached across political and ethnic boundaries to help dozens of countries in the Middle East, Africa, Asia, and South America improve agriculture with new methods of irrigation will receive the World Food Prize, the prize's foundation announced June 12.

Daniel Hillel, who is credited with developing drip irrigation methods that conserve water while allowing food to be grown in some of the world's driest climates, was named the winner of this year's \$250,000 prize during a ceremony in Washington. He will officially receive the prize Oct. 18 during the annual World Food Prize Symposium in Des Moines, Iowa.

The system Hillel developed, called micro-irrigation, carries water through narrow plastic pipes to plants, where it drips or trickles onto the roots in a continuous way. It has revolutionized agricultural practices in more than 30 countries over the past 50 to 60 years, helping thousands of farmers, said World Food Prize Foundation president Kenneth Quinn, a former US ambassador.

Mr. Quinn, in announcing the award, talked not only about Hillel's research but the fact that an Israeli found a way to work with leaders in Arab nations to improve food production.

Hillel's work significantly improved agriculture in Jordan and Egypt, Quinn said. He also worked in Palestinian communities adjacent to Israel, making friends and improving lives.

"He's able to reach across the intercultural gap with this agricultural achievement in order to address that problem that they have in common about how to lift people out of poverty and reduce hunger by working together," Quinn said. "In an area of the world and in lands where the divides — whether they be ethnic, political, religious, or diplomatic — seem so great, here is a man who by devoting his life to this peaceful development has sought to bridge those gaps."

Quinn noted several of the letters supporting Hillel's nomination for the prize came from individuals and institutions in Egypt, Jordan, and the United Arab Emirates.

Secretary of State Hillary Clinton, who delivered the keynote address at the Washington ceremony, spoke of the importance of getting the most out of every drop of water. In many regions of the world, water is either too scarce or too unpredictable to sustain an American style of agriculture, she said. "For 40 years, Dr. Hillel has worked to solve this problem by bringing his micro-irrigation techniques to the driest and least hospitable growing climates on earth, from Israel to Pakistan to Sudan," she said. "Today, farmers using micro-irrigation produce high-yield, nutritious crops on more than 6 million hectares [23,000 square miles] worldwide. Dr. Hillel's work will become even more important as we grapple with how to feed the world's growing population."

Hillel told The Associated Press in a phone interview from Israel that managing natural resources, respecting ecosystems, and living in an environmentally sustainable manner transcends boundaries. "I'm a great believer in international cooperation, and I've devoted much of my career to it," he said. "I believe in peace. I'm a passionate believer in peace rather than rivalry, enmity, and destruction."

Hillel, 81, was born in Los Angeles, but after his father died, he moved at age 1 in 1931 with his family to Palestine, a part of which became the state of Israel in 1948.

At age 9, he was sent to live in a rural, communal settlement known as a kibbutz, where he learned farming practices and gained a respect for the land and preservation of resources. After earning undergraduate and graduate degrees in the United States, he returned to Israel in 1951 and joined the Ministry of Agriculture, where he helped create the first map of the country's soil and water resources.

Within a year, however, he joined a group of settlers who were dedicated to creating a viable agricultural community in the Negev Desert highlands in southern Israel, where water was scarce. Working with those farmers, who were willing to set aside tradition and experiment with new methods, allowed him to develop and refine his ideas on micro-irrigation, he said.

For thousands of years in the Middle East, irrigation involved diverting large quantities of water from rivers, trapping it in basins, and using it to soak farmland. The soil would then gradually dry out. It was an inefficient method of growing crops, Hillel said.

The availability of inexpensive, small plastic pipes after World War II created the possibility of moving water to crops in a more continuous fashion. The pipes could be perforated to allow water to drip from small holes down to the roots of plants, Hillel said. In time, fertilizer was added to the water.

"With a little bit of water, you'd get a much better crop," Hillel said. "This was a great innovation. I was in on the ground floor of this. I can't say that I was the inventor of it, but I was very active on the early stages of it and developing the philosophy of it."

David Ben-Gurion, the founder and first prime minister of Israel, visited the farm and was so impressed he asked Hillel to take his ideas to Asia, Africa, and South America. Hillel said he's visited as many as 40 different countries during his career, teaching, experimenting, and learning more about crop production and water management.

In recent years, he's focused his studies and writing on the global climate, deforestation, and degradation of land, working with two institutes at Columbia University in New York City.

"We need to learn how to manage land so that it will not degrade and do it efficiently. At the same time, we must maintain natural ecosystems without encroaching upon them without excessive deforestation and destruction of biodiversity," he said. "All of that is a great concern to me, and I'm devoting my career to it."



Cynthia E. Rosenzweig, a scientist who heads the Climate Impacts Group at NASA Goddard Institute for Space Studies at Columbia, works with Hillel on developing ways for agriculture to adapt in a changing climate.

"He is known as the father of sustainable water management," she said. "His work on water is so significant, but he didn't stop there. Sustainability and climate change are now the issues that are challenging agriculture today, and he has turned his attention to the current challenges, never forgetting the issues of water."

The World Food Prize, which honors efforts to fight global hunger, was created by Iowa native Norman Borlaug, the winner of the 1970 Nobel Peace Prize for his efforts to increase food production in developing nations with the use of hybrid crops. He died in 2009.

"Irrigation expert crosses religious, political lines to win World Food Prize", 13/06/2012, online at:  
<http://www.csmonitor.com/World/Making-a-difference/Change-Agent/2012/0613/Irrigation-expert-crosses-religious-political-lines-to-win-World-Food-Prize>

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## ❖ Israel's Mekorot Builds Global Connections Through Water

Israel's national water company, Mekorot (who we've interviewed here), is expanding with projects across the globe. It will build and operate two desalination plants in Cyprus to supply almost half of the country's drinking water. Also on the horizon is a \$180 million deal to build a water filtering facility along the La Plata River near Buenos Aires, Argentina. Mekorot Chairman Alex Wiznitzer said he hopes Mekorot's water projects will be able to create contacts in nearby Arab countries. The United Nation's has called the Middle East the world's most water-stressed region. Water security is a vital regional issue.

Wiznitzer told Reuters: "The underdeveloped world doesn't understand that water is the number one problem in the world. Not oil. Not gas. Not other resources. Water."

The Organization for Economic Cooperation and Development predicts that by 2050 global water demand will increase by 55 percent. By marketing its expertise and technologies related to wastewater reuse, water security and desalination, Israel has developed a billion-dollar industry. Mekorot plans to invest \$1.5 billion over the next four years to reach its goal of reclaiming 90 percent of Israel's wastewater. The company says it currently reuses 75 percent, mainly for irrigation, making it the world's most efficient national water recycling system. Spain claims the distant second place with 12 percent.

Geoffrey d. Dabelko, the director of the Environmental Change and Security Program (ECSP), a nonpartisan policy forum on environment, population, health, and security issues at the Woodrow Wilson International Center for Scholars in Washington DC, believes that cooperation over limited water resources could potentially lead to peace in the Middle East. So far cooperative regional projects have been marginal and inconsistent. It looks like only time will tell if waning water resources in the Middle East will lead to increased cooperation or conflict.

"Israel's Mekorot Builds Global Connections Through Water", 12/06/2012, online at:  
<http://www.greenprophet.com/2012/06/israel-global-connections-water/>

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### ❖ ‘Israel needs environmental court’

Ministerial Legislative Committee mulls proposal to form designated judicial body to handle environmental violations, legislation

The Ministerial Legislative Committee has recently discussed a proposal to form a judicial body that will focus solely on environmental issues.

The proposal was brought before the committee by MK Dov Khenin (Hadash).

Fumbling

Khenin suggested forming the environmental court, said that a designated body will upgrade the status of such claims, enable legislative specialization, enable the State to better protect the environment, nature, wildlife and natural resources; and also help clear the dockets of the lower instances.

“The various expressions of environmental violations in Israel today mandate the legislator to adopt a different method of dealing with environmental issues,” MK Khenin said.

Many countries have already formed an environmental court and “There is no reason for Israel not to follow suit,” he added.

“‘Israel needs environmental court’”, YNET, 15/06/2012, online at: <http://mideastenvironment.apps01.yorku.ca/?p=5231>

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## ❖ Solving the world's environmental problems

Environmental Protection Minister Gilad Erdan talks about Israel's green innovation ahead of UN Conference on Development.

As a 66-member Israeli delegation makes its way to Rio de Janeiro for a global climate summit, the country's environmental leaders hope to help provide answers to the planet's looming environmental crises.

The Rio+20 United Nations Conference on Sustainable Development is a two-week summit filled with negotiations, forums and training courses culminating in a three-day high-level summit from June 20 through 22 in Brazil. The conference marks two decades since the previous Rio de Janeiro climate summit, the 1992 UN Conference on Environment and Development, as well as the 10th anniversary of the 2002 World Summit on Sustainable Development in Johannesburg. About 50,000 people and 130 state heads are expected to attend the event, including a 66-member delegation from Israel led by Environmental Protection Minister Gilad Erdan.

"Our main goal is to present Israel's solution to the world crisis," Erdan told The Jerusalem Post on Wednesday night, emphasizing the country's particular strengths in sustainable agriculture, irrigation and other water technologies.

This is the perfect arena, he explained, to help solve the challenges faced by two billion people in the world who lack access to sanitation and water.

"We want to focus on giving them our knowledge," Erdan said.

The Israeli delegation contains members from the government, civil society and local authorities as well as two Knesset members – MKs Carmel Shama-Hacohen (Likud) and Dov Henin (Hadash).

In addition to participating in the high-level segment next week, Israel will be leading two official side events on June 19 and 20 – the first about sustainable agriculture, in cooperation the Foreign Ministry, the Agriculture Ministry, the United States, Canada and Germany, and the second about water management, together with the Industry, Labor and Trade Ministry, the Mekorot national water company and the city of Sao Paolo.

"Our main message is that the world has the problems and the challenges and Israel has the solutions," said Galit Cohen, the Environment Ministry's senior deputy director-general of planning and sustainability. "In our side event and in our speech whenever we are participating we will give those messages – the Israeli solution, Israeli innovation for the world."

Aside from hosting multilateral discussions on climate issues, one of the desired outcomes is the signing of the Rio Declaration, also known as the Zero Document, whose goal, according to the conference, is to determine "the future we want."

The final negotiations over this declaration are taking place in the days leading up to the high-level summit – negotiations that have been occurring for two weeks every month for the past six months among member states of the UN.

The Rio Declaration, Cohen said, is essentially a consensus paper among 193 countries that are aiming to reach an agreement on several issues related to sustainable development and how to proceed in the future with the subjects of food security; water; energy; sustainable cities; forests; oceans; sustainable consumption and green jobs. Also included in the declaration are social issues, gender and generational equality and parity among developed and developing countries, she added.

In terms of food security, the developing countries want to ensure that all their citizens have access to nutritious foods, while developed countries want to make sure that their food is produced in a sustainable way. As far as water goes, the developing countries strive to have access to water for every individual, while developed countries want to make sure that their water is clean, according to Cohen.

Israel has been an integral part of these negotiations from the beginning, with constant representation from both the Environmental Protection Ministry and the Foreign Ministry.

“There is a real spirit of compromise and determination among delegations to produce a document that can be endorsed by heads of state and government,” said Sha Zukang, Rio+20 secretary-general in a statement released by his office.

“Rio+20 will provide the inspiration and the guidance to accelerate progress on the sustainability agenda.”

While some Environment Ministry officials expressed hopefulness that the Rio Declaration will be signed, others feared a failure due to financial disagreements; As developing countries demand more money for their projects, developed countries are apt to say no.

“I’m not sure that there will be a declaration,” Erdan said. “I’m not optimistic because of the economic crisis. I’ve heard this from other ministers around the world and especially from Africa. They are afraid – because of the crisis in Europe it will be very hard to agree on dates and numbers and money to be transferred to those countries that are suffering.”

Two main issues of focus in Rio, according to the ministry, will be creating sustainable, green economies for poverty prevention in the context of sustainable development and establishing an international institutional framework for environmental structures and bodies.

“In the concept of green economy, Israel has a lot to offer and that is our message as a delegation,” ministry officials said.

TO PROMOTE Israel’s innovations and experience in coping with environmental challenges, the Israeli delegation will have a special booth in the exhibition alongside the summit. The background of the pavilion will feature an image of a green brain in a field of grass.



An ongoing presentation displayed in the booth will feature Israel's historic invention and usage of drip irrigation, which waters about 80% percent of Israeli farmland, and will also promote Israel's record-breaking reuse of wastewater. While Israel reuses 80% of its wastewater, the closest country in the world to our record is Spain, which reuses less than 20% of its own sewage, according to ministry data.

Meanwhile, the pavilion will also showcase the country's productivity and efficiency in food production, which has increased by 450% since 1950, the ministry reported. During the 1950s, one farmer in Israel was only able to feed about 15 people, but that same farmer can now feed up to 100 people.

The booth will also highlight Israel's desalination activities, the country's extremely productive dairy cattle industry and its requirement installation of solar water heaters on new buildings.

"All of these solutions are relevant to developing countries and help reduce water use, reduce energy use," officials said.

In addition to the pavilion and side events coordinated by the ministry, Keren Kayemeth LeIsrael-Jewish National Fund will also be hosting a learning center on reforestation.

Different from an ordinary side event, such centers encompass a longer, approximately three-hour time period and require advanced registration, David Brand, KKL-JNF chief forester, told the Post on Wednesday.

The learning center will look at water harvesting as a means of forestation in semi-arid zones, advanced nursery practices, improvements in drought-resistance and how to deal with invasive species, such as insects that attack forest plantations, according to Brand. In addition to an oral presentation, KKL-JNF staff will be directly involving workshop participants "to share knowledge with other countries" in a collaborative setting, he said.

"Our target in these conferences is to share our advanced knowledge that we gained during the last 40 to 50 years, the advanced research, and develop ways to find collaboration with developing countries," Brand added.

With an eye forward toward Rio, Israel has created its own Sustainability Outlook for 2030 as well as Israeli adaptations of the Organization for Economic Cooperation and Development's Environmental Outlook to 2050 and the United Nations Environmental Program's Global Environmental Outlook, Cohen explained.

MEANWHILE, THE Environmental Protection Ministry is pushing toward green growth in Israel, with an emphasis that there are economic indicators beyond the simple gross domestic product.

The ministry as well as KKL-JNF will be distributing materials about Israel's green growth policies, its waste revolution and its path toward sustainable consumption in hotels throughout Rio as well as at the summit.

“Israel has a solution that everybody is looking for,” Cohen said.

European countries often lack such solutions because they have not had to cope with issues of water scarcity and developing creative means of irrigation, she explained.

“Now that the world is facing climate change conditions, the Israeli experience is very, very important,” Cohen added. “That is something we are hearing all the time in the OECD.”

Recently, Iranian President Mahmoud Ahmadinejad announced that he will attend the Rio+20, as will Palestinian Authority President Mahmoud Abbas.

Regarding their attendance – and that of other leaders with less than friendly relations to Israel – Erdan said that the Israeli delegation did not want to focus on Middle East conflict issues. Rather, he said, the Israeli representatives prefer to focus on Israel’s environmental technologies and innovative solutions to the global hunger and water crises.

“But we also did all the preparations in case the Palestinians or the Iranians or you name it will try to take the discussion to the Israeli-Palestinian conflict,” Erdan said. “But we are not going to start with that. We won’t initiate that discussion.”

Regarding Ahmadenijad in particular, Erdan said that he finds it “a real shame” that the UN is giving the stage to the Iranian president, an individual who expresses a desire to destroy another UN member country, at a conference that aims to help the world survive through sustainable development.

“I think it’s a disgrace for the UN.

But he’s there and there’s nothing that we can do about it,” Erdan said. “I don’t want to give them the excuses to move the discussion from what we need to stress about Israel and what we need to demonstrate about our technologies and solutions to what they want.”

While it might be in the Iranian interest to talk about the Israeli- Palestinian conflict, the Israeli team would prefer to discuss “the Middle East as a place that suffers from desertification and water scarcity and [the ways] we learn how to live with that and develop solutions,” the minister added.

Also important, in Erdan’s eyes, are the various meetings that both he and Israel’s innovators will be holding with ministers from Africa and other places that truly need Israeli environmental technologies.

“In every country where I find the need and they are ready to accept our experts, I will try to get the support from the prime minister and the Foreign Ministry to hire more engineers and advisers to send them to those countries,” he said.

If there is another Rio climate conference in 20 years – a Rio+40 – Environment Ministry officials said they hope that as a whole, the global population will have changed its behavioral patterns, as the Earth’s inhabitants are currently overshooting the planet’s capacity.

Although the world has generally become more environmentally friendly, Cohen pointed out that because there is an ever-increasing population, people are producing more – a “volume effect.”

Ultimately, the Environment Ministry officials did not expect any monumental, immediately globe-altering decisions to take place in Rio, but rather a more gradual trickle-down effect of environmental improvements.

“I think that it helps us to create a new paradigm, a new language,” Cohen said. “It’s something that helps us think about the connections, the impact between the environment and the economy. A green economy is a good solution for the whole world right now and this is the direction – going green, green economy.”

Erdan expressed similar sentiments, stressing that events such as Rio+20 are significant simply because they happen. At the Copenhagen Climate Conference in 2009, for example, no agreement was signed, but because so many leaders were present, they understood the need to dramatically transform their domestic and international greening policies, according to Erdan. Shortly after that conference, the Israeli government invested NIS 2.2 billion in a plan to reduce greenhouse gas emissions by 20% by the year 2020.

Today, in the background of Rio+20, the Environmental Protection Ministry along with the Industry, Trade and Labor Ministry has built a plan for green growth that the team will present to the government upon returning from Rio, Erdan explained.

“We think there is a great chance that it will pass and we will have another budget – to make a cleaner, wiser economy that uses less and less resources,” he said.

Quoting Prime Minister Binyamin Netanyahu, Erdan added that Israel – and other countries across the globe – must continue to strive “to do more with less.”

“Solving the world’s environmental problems”, Jerusalem Post, SHARON UDASIN, 15/06/2012, online at: <http://mideastenvironment.apps01.yorku.ca/?p=5229>

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### ❖ Greening the seventh summit of ROI Community

Young entrepreneurs group implementing initiatives to lower the environmental impact of their latest summit.

To offset the carbon footprint that participants are creating in flying to and from their summit this week, the ROI Community will be providing solar water heaters to 51 needy Israeli families.

From Sunday through Thursday this week, young entrepreneurs are gathering in Jerusalem for the seventh annual summit of the ROI Community, a global network of Jewish innovators established by Jewish American philanthropist Lynn Schusterman.

This year, however, in addition to providing its usual training workshops and networking platforms for the participants, the summit is also going green.

While it is still early in the greening process for the ROI Community, the organization has already made drastic improvements, said Irene Rompa, a Dutch environmental consultant for the summit.

Rompa started out as a volunteer for TedxAmsterdam and then performed greening operations at TedxSummit in Qatar this spring, where she met Beto Maya, director of gatherings and recruitment at the ROI Community, who asked her to green the summit.

“We’ve been doing conferences for the past seven years and I think that slowly we came to the realization that these conferences have an impact on the environment,” Maya told The Jerusalem Post on Sunday. “In today’s world it’s impossible to avoid thinking about how to make these things happen and at the same time to lower the impact of what we’re doing.”

Already, the summit is employing several new green tactics, Rompa told the Post.

In order to fly in the summit participants, the ROI Community calculated that it is creating a carbon footprint of about 300 tons of carbon dioxide, she explained. The organization is therefore investing in solar water heaters for 51 Israeli families in need of replacing their diesel boilers, which will generate the amount of clean energy equivalent to the footprint they are creating.

“It comes down to awareness,” she said.

When attendees arrived to the conference, they each received a refillable water bottle to discourage them from using disposable plastic bottles and encourage them to simply drink from the Jerusalem tap, according to Rompa.

“That will save tons of plastic,” she said. “It’s not just a plastic bottle, it’s the production of the bottle and water and the waste from the bottle.”

Meanwhile, in the hotel where the participants are staying, ROI Community staff installed signs in each room instructing attendees to reuse their towels and coffee cups, Rompa explained. At the conference itself, there are special recycling bins where participants can separate their waste, which

will then be brought to a recycling center and to a small community that will use the food waste for compost.

“It’s a way of trying to set an example,” Rompa said. “It’s a very international crowd so I hope if they get inspired in a way if they take this in and bring it home to their home countries, it can leave a legacy.”

While the summit has already made vast improvements in its greening policies, there is still much work to be done, according to Rompa.

For example, some targets for next year could be minimizing the materials distributed in the gift bags for the participants and making them more sustainable, as well as switching to a vegetarian menu, she said.

“This is the first year that we’re making an effort as to how we can improve for next year,” she said. “It’s a starting point.”

For next year, Rompa also said some good ideas might be to work with suppliers closely, to make sure all paper is FSC certified, the catering is sustainable and the conference providers have green visions.

As far as Israel as a whole goes, Rompa praised the country for its “very visible” plastic bottle collection in the streets.

However, she also suggested that Israel could install more water fountain taps on these same streets.

“I don’t see in the taps in the streets,” she said, noting that in Holland, the government is actively installing fountains in the middle of the streets. “If you put water in the streets then people wouldn’t have to go buy plastic bottles.”

She also encouraged the government to speed up its implementation of a recycling system for different waste streams, since it has launched positive initiatives in this area already.

All in all, however, Rompa was pleased with the progress Israel as a whole was making environmentally and both she and Maya hoped to see an even greener ROI Summit next year.

“In today’s world there are two kinds of people – the people into environmental things, carbon offsetting and the people who are cynical about it,” Maya said. “My goal is that by doing this with leaders from all over the world, we will be able to make this more of a norm in events all over the world.”

“Greening the seventh summit of ROI Community”, Jerusalem Post, Sharon Udasin, 15/06/2012, online at: <http://mideastenvironment.apps01.yorku.ca/?p=5227>

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### ❖ **Water in blockaded Gaza ‘not fit for human consumption’**

The water in Gaza is too dangerous to drink as it is contaminated with fertilizers and sewage, says a new report. Several charitable organizations have called on Israel to immediately lift its blockade to allow crucial sanitation equipment in.

Sanitary conditions have reached crisis point in Gaza after five years of blockade. Authorities have warned inhabitants that the only source of running water is too dangerous to consume.

A report by charities Save the Children and Medical Aid for Palestinians says that the levels of contamination are more often than not ten times what is safe for consumption. Many poor families have no choice but to drink the water.

*“The children of Gaza are living in prison-like conditions, entrapped on a strip of hostile land that prevents them from even dreaming of a better future. Since the beginning of the blockade in 2007, the number of children under 3 years of age being treated for diarrhea has doubled,”* said Save the Children director Valerio Neri. He added that conditions were so dire in the region that *“even a simple case of diarrhea can be fatal for a child.”*

As well as the blockade, the report cites war damage and lack of investment as the root causes of the sanitary crisis.

The charities highlighted the fact that Israel’s repeated bombing of Gaza had left the sewage system *“completely broken.”*

The Israeli government maintains that it has eased up the blockade on the region over the past couple of months with a view curbing the crisis. It says that medical supplies and building materials are being allowed through to aid in Gaza’s reconstruction.

However, the report says this is not enough and calls on the international community and the Palestinian Authority to do more.

*"As a matter of urgent priority for the health and well-being of Gaza's children, Israel must lift the blockade in its entirety to enable the free movement of people and goods in and out of Gaza."*

“Water in blockaded Gaza ‘not fit for human consumption’”, 15/06/2012, online at: <http://www.rt.com/news/water-dangerous-contaminated-gaza-909/>

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### ❖ Villages Near Bethlehem Face Water Crisis

Bethlehem, June 13 (BNA) - Seven villages near Bethlehem are suffering from a water crisis with no running water for more than 15 days, Palestinian officials have announced.

According to the Bethlehem Joint services Council for Planning and Development, Israel's National Water Company (Mekorot) which the Palestinian government purchases from, has ignored the area's increase in population for 25 years, which has now reached 30,000.

The Palestinian Authority, only able to use 20% of West Bank water resources under a 1995 agreement with Israel, is forced to buy extra supplies from Israel's Mekorot, the Emergency Water, Sanitation and Hygiene group says.

Bethlehem Joint services Council Chair Khader Hamdan called on the Palestinian water and environment authorities to press Israel for increased water allocation, as well as to update the water distribution network in the area.

“Villages Near Bethlehem Face Water Crisis”, 13/06/2012, online at: <http://www.bna.bh/portal/en/news/512812>

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### ❖ Kishon riverbed clean-up project set to go

A project to rehabilitate the bed of the Kishon River, which has been polluted for years, is due to be launched in the coming days.

The Environmental Protection Ministry announced yesterday it had issued a tender last week to do the earthwork the project will require, and that this would begin during the summer.

Later this month an international tender will be issued for removing and purifying the soil in the riverbed, which will take about a year and a half. The total cost of the project is estimated at NIS 220 million, to be funded by the government, the local authorities in the area, and several of the industrial concerns located near the river, including Oil Refineries, Ltd. and Haifa Chemicals.

Under the rehabilitation plan, the winner of the earthwork tender will divert the route of the Kishon River that goes past the oil refineries slightly southward. The dry area that will result near the oil refineries will be used to store the polluted soil that will be removed from the river.

This soil will be stored in an area of 200 dunams (50 acres ) and will undergo drying and bacterial processes to break down the pollutants. After these processes are completed, the area will serve as part of a park.

For years the Kishon River was a dumping ground for chemical runoffs that included crude oil products, fertilizer byproducts, and heavy metals. Some of these pollutants sank to the river bed.

In 1992 a large drainage project on the Kishon removed much of the polluted river bed to adjoining pools, but a layer of polluted soil still remains, which this project aims to take care of.

A number of experts have criticized the plan, claiming the level of pollutants still in the riverbed do not justify such an expensive project. They say simpler soil treatment would suffice, as would simply removing the soil for burial in a garbage dump.

The Environmental Protection Ministry has rejected the criticism, arguing that the soil needs treatment to prevent environmental pollution.

One of the primary reasons behind this project is not to further clean the Kishon, but to improve the river's drainage to prevent flooding during the winter. Four years ago, the High Court of Justice ruled that the government and local authorities in the area are responsible for any damage such flooding might cause.

In recent years the Kishon's water quality has improved significantly. The Environment Ministry and Kishon River Authority have succeed in getting the factories near the river to reduce the pollutants in their effluents. Many species of birds, turtles and fish that hadn't been seen at the river for years have returned.

The rehabilitation project is being carried out in accordance with a government decision promoted by Environmental Affairs Minister Gilad Erdan, with the aim of turning the areas adjacent to the river into a park for Haifa area residents.

“Kishon riverbed clean-up project set to go”, Haaretz, 13/06/2012, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=5209>

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### ❖ ‘Millions to benefit from Zarqa water expansion projects’

AMMAN — A set of multimillion-dollar projects to improve water and wastewater services in Zarqa Governorate is on track and will be completed on time and budget, Millennium Challenge Corporation (MCC) CEO Daniel Yohannes said.

Yohannes, whose organisation is funding the project, told The Jordan Times that three million people in Zarqa and Amman would benefit from the ongoing five-year project, while over 19,000 households in Zarqa will be connected to sewage networks once the venture is completed.

“I am very satisfied with where we are today and I’m 100 per cent confident that the project will be done on time and on budget in spite of all difficulties... The project will be able to provide the kind of services that are required and demanded by people in Zarqa,” Yohannes said.

The MCC extended a \$275 million grant compact to Jordan in October 2010 to renovate and extend water networks in Zarqa Governorate. The grant, which went into effect in December last year, is managed and implemented by the Millennium Challenge Account (MCA)-Jordan.

Under the MCC grant programme, three integrated projects will be implemented: a \$108-million water network project, a \$58-million wastewater network project, and the \$93-million Samra Wastewater Treatment Plant expansion project.

“There are always challenges, especially in construction projects, but we have assembled an outstanding team with experts in water. We have an excellent partnership with the government,” Yohannes highlighted.

Noting that the project is progressing, he added that most of the work will be completed during the next one-year-and-a-half.

“By expanding the wastewater treatment plant, more water for irrigation uses will be provided, which means more water to be used for household needs.”

He also underscored the importance of the Samra Wastewater Treatment Plant expansion project, noting that it is a model of public-private partnership that aims at ensuring Jordan a secure water supply.

Asked whether the corporation would provide Jordan with additional aid in the future, the MCC chief said that completing the water and wastewater project in Zarqa is its main focus now.

He noted that the MCC is trying to encourage public-private sector cooperation in its partner countries to invest in areas that need development.

“Ultimately, our model is to encourage countries to replace aid with investment from the private sector, so that aid is no longer needed,” Yohannes explained.

In 2006, the MCC provided Jordan with a \$25 million threshold programme to support the government's efforts in advancing political and economic reforms.

The \$25 million grant was allocated in two areas over the course of two years: \$16.5 million to support municipal development programmes, and \$8.5 million for modernising the customs administration.

“All of our projects, whether threshold programmes or compacts, are all identified by our partner countries... As a result of the \$25 million investment, very much improved customs processing resulted: 80 per cent of the processing has improved significantly since the investment in that area,” Yohannes said.

The MCC is an independent US foreign aid agency created by the US Congress in 2004 to promote economic growth and poverty reduction.

““Millions to benefit from Zarqa water expansion projects””, Jordan Times, 13/06/2012, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=5213>

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### ❖ **Officials call for action as Bethlehem villages run dry**

BETHLEHEM (Ma'an) — Rural villages near Bethlehem are facing a water crisis despite sitting on top of the second largest reservoir in the West Bank, an official delegation to the area said on Monday.

Seven villages have not had running water for more than 15 days, in an area with a population of 30,000, the joint services council for development and planning said.

Council chair Khader Hamdan said the Israeli national water company, which the Palestinian government purchases from, has not taken into account the area's increase in population since it started selling water 25 years ago.

The Palestinian Authority, only able to use 20 percent of West Bank water resources under a 1995 agreement with Israel, is forced to buy extra supplies from Israel's Mekorot company, the Emergency Water, Sanitation and Hygiene group says.

Hamdan called on the Palestinian Authority water and environment authorities to press Israel for increased water allocation, as well as to update the water distribution network in the area.

Meeting with local councils in Hindaza, Hanata, Beit Tamir, Zatara, Shawawra, Jubbet Al Dhib, and Kisan villages, Hamdan said the construction of water tanks could help solve the problem.

The chief of the Palestine Water Authority warned in January that Israel was systematically destroying Palestinian water infrastructure in areas under its military control.

Negotiations to resolve the allocation of water have failed, Shaddad Attili said, adding that the Joint Water Committee established in the Oslo Accords effectively gave Israel veto power over all Palestinian water projects.

Water is one of the six final-status issues to be resolved in a peace agreement, alongside settlements, refugees, borders, security and Jerusalem.

"Without water, and without ensuring Palestinian water rights, there can be no viable or sovereign Palestinian state," Attili warned.

"Officials call for action as Bethlehem villages run dry", Maan, 13/06/2012, online at:  
<http://mideastenvironment.apps01.yorku.ca/?p=5215>

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### ❖ **Settler organization granted control over spring in East Jerusalem**

A right-wing organization that was granted use yesterday of an ancient East Jerusalem spring said the move would keep Haredi men from bothering the tourists by taking illicit dips in the nude. But opponents say the zoning board decision is just another way of imposing Israeli control over Palestinian resources.

Gihon Spring in Silwan is already a pilgrimage site for religious Jewish men, most of them ultra-Orthodox, seeking to benefit from the waters thought to impart blessings to those who take a ritual dip, which can be done only when fully unclothed. Yesterday the Jerusalem District Planning and Building Committee granted Elad, an organization that seeks to boost the Jewish presence in predominantly Arab parts of Jerusalem, the right to designate a 1.5 meter by 1.5 meters section of the spring as an “immersion pit.”

“There have been several times when embarrassing situations arise at the site,” said Elad spokesman Udi Ragones. “The idea is to regularize the immersion pit.”

The pit is similar to a mikveh, but is smaller than most ritual baths and is not enclosed. It is also open to the public, said Elad director David Be’eri – but, he added, those who use it “must come naked.”

The immersion pit is part of a larger construction project the planning committee approved yesterday for the area that includes Beit Hama’ayan, a large building that overlooks the mouth of Gihon Spring. As part of the plan, Elad was granted the right to build a large tourist center with an observation deck above the spring and the archaeological remains that have been discovered over the years.

The project is being funded by the municipality and the national government, and is being carried out in conjunction with the Israel Antiquities Authority and the Israel Nature and Parks Authority. Silwan is built on the City of David, considered to be the site where King David established his kingdom.

Not everyone is enthusiastic about the construction project, of course.

“It’s another phase in the settlers’ takeover process,” said archaeologist Yoni Mizrahi. “Unfortunately, Israel’s planning authorities see archaeological excavations as Israeli assets that must be preserved in closed complexes.

“It’s clear that the mikveh is not intended for the Palestinian residents,” said Mizrahi. He noted that the spring was shut down for excavations in 1995 and has not been easily accessible to residents since then.

According to one Jewish tradition, the spring is considered to be the spot where Adam went after his sin in the Garden of Eden. Some also say the Holy Temple priests occasionally immersed in the Gihon.

“Settler organization granted control over spring in East Jerusalem”, Haaretz, 13/04/2012, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=5217>

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### ❖ Israeli irrigation expert wins World Food Prize

DES MOINES, Iowa — An Israeli scientist who has reached across political and ethnic boundaries to help dozens of countries in the Middle East, Africa, Asia, and South America improve agriculture with new irrigation methods will receive the World Food Prize, the prize's foundation announced Tuesday.

Daniel Hillel, who is credited with developing drip irrigation methods that conserve water while allowing food to be grown in some of the world's driest climates, was named the winner of this year's \$250,000 prize during a ceremony in Washington. He will officially receive the prize October 18 during the annual World Food Prize Symposium in Iowa.

The system Hillel developed, called micro-irrigation, carries water through narrow plastic pipes to plants, where it drips or trickles onto the roots. It has revolutionised agricultural practices in more than 30 countries over the past 50 to 60 years, helping thousands of farmers, said World Food Prize Foundation President Kenneth Quinn.

The World Food Prize, which honours efforts to fight global hunger, was created by Norman Borlaug, the winner of the 1970 Nobel Peace Prize for his efforts to increase food production in developing nations with the use of hybrid crops. He died in 2009.

Quinn noted that several of the letters supporting Hillel's nomination came from individuals and institutions in the region.

"He's able to reach across the intercultural gap with this agricultural achievement in order to address that problem that they have in common about how to lift people out of poverty and reduce hunger by working together," Quinn said. "In an area of the world and in lands where the divides — whether they be ethnic, political, religious, or diplomatic — seem so great, here is a man who by devoting his life to this peaceful development has sought to bridge those gaps."

Hillel told the Associated Press in a phone interview from Israel that managing natural resources, respecting ecosystems, and living in an environmentally sustainable manner transcends boundaries.

"I'm a great believer in international cooperation, and I've devoted much of my career to it," he said. "I believe in peace. I'm a passionate believer in peace rather than rivalry, enmity and destruction."

Hillel, 81, was born in Los Angeles, but after his father died, he moved at age 1 in 1931 with his family to Palestine, a part of which became the state of Israel in 1948.

At age 9, he was sent to live in a rural, communal settlement known as a kibbutz, where he learned farming practices and gained a respect for the land. After earning undergraduate and graduate degrees in the United States, he returned to Israel in 1951 and joined the ministry of agriculture, where he helped create the first map of the country's soil and water resources.

Within a year, he joined a group of settlers who were dedicated to creating a viable agricultural community in the Negev Desert highlands in southern Israel, where water was scarce. Working with those farmers allowed him to develop and refine his ideas on micro-irrigation, he said.

For thousands of years in the Middle East, irrigation involved diverting large quantities of water from rivers, trapping it in basins and using it to soak farmland. The soil would then gradually dry out. It was an inefficient method of growing crops, Hillel said.

The availability of inexpensive, small plastic pipes after World War II created the possibility of moving water to crops in a more continuous fashion. The pipes could be perforated to allow water to drip from small holes down to the roots of plants, Hillel said. In time, fertiliser was added to the water.

“With a little bit of water, you’d get a much better crop,” Hillel said. “This was a great innovation. I was in on the ground floor of this. I can’t say that I was the inventor of it, but I was very active on the early stages of it and developing the philosophy of it.”

David Ben-Gurion, the founder and first prime minister of Israel, visited the farm and was so impressed he asked Hillel to take his ideas to Asia, Africa and South America. Hillel said he’s visited as many as 40 different countries during his career.

“We need to learn how to manage land so that it will not degrade and do it efficiently. At the same time, we must maintain natural ecosystems without encroaching upon them without excessive deforestation and destruction of biodiversity,” he said. “All of that is a great concern to me, and I’m devoting my career to it.”

“Israeli irrigation expert wins World Food Prize”, Jordan Times, 13/06/2012, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=5219>

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### ❖ Jordan preparing third climate change report

AMMAN — The Ministry of Environment is preparing a national report identifying the sectors that produce greenhouse gases, the quantities of these emissions and strategies to reduce them, a government official said on Tuesday.

The Third National Communication to the United Nations Framework Convention on Climate Change (UNFCCC) — an inventory of sectors that emit the highest amounts of greenhouse gases — is scheduled to be completed in 2014, Environment Ministry Spokesperson Isa Shboul said.

The third national report will evaluate the effect of climate change on socio-economic conditions, the country's vital sectors — mainly agriculture, energy, waste and industry — land use, and forests,” Shboul told The Jordan Times.

National communications by each state party to the convention measure their greenhouse gas emissions that cause global warming, predict the rise in these emissions in 30 years and lay the foundation for an analysis of the way forward on climate change.

“Climate change issues will be added to school curricula, while national development plans will be formulated taking into consideration the impact of the global phenomenon,” Shboul said, outlining some of the steps the Kingdom plans to take to address the issue.

The report, which will cost \$480,000, is supported by the United Nations Development Programme and the Global Environment Fund, and will be prepared by the environment ministry in cooperation with several other ministries and institutions.

Jordan issued its first national communication to the UNFCCC in 1998, becoming the first developing country to submit such a report, and the second in 2009.

The 2009 national communication indicated that the energy sector was responsible for 74 per cent of greenhouse gas emissions in the Kingdom, with carbon dioxide constituting 98 per cent of these emissions.

The waste sector came second, accounting for 13.5 per cent, followed by industrial processes (7.9 per cent), land use conversion and forestry (3.7 per cent), and agriculture (0.9 per cent).

The Middle East, one of the driest regions in the world, will witness shifting rainfall patterns due to climate change, which will result in less freshwater for the region's growing population, according to recent reports.

As experts predict effects of climate change to start affecting the region within 50-100 years, reports indicate that Jordan, among other countries including the Palestinian territories and Israel, are already experiencing change

“Jordan preparing third climate change report”, Jordan Times, 13/06/2012, online at:  
<http://mideastenvironment.apps01.yorku.ca/?p=5222>

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❖ **Mideast: Gaza; children at risk, toxic water & conditions**

(ANSamed) - ROME - Five years into an embargo that has drastically reduced the volume of goods and humanitarian aid flowing into Gaza, hygienic and sanitary conditions for the population have reached crisis levels, says a report issued today by Save the Children along with the organisation Medical Aid for Palestinians (MAP).

The organisations are launching an appeal to the Israeli and Palestinian authorities as well as to the international community to intervene immediately. The only source of running water available in Gaza is extremely dangerous as it is contaminated with fertilizers and human waste. With 1.7 million people massed in just 365 square kilometres - over 800,000 of whom are children - health conditions for thousands of people is at grave risk due to the blockade of the transit of goods and persons imposed in 2007, the report says. Thousands of households are unable to buy or to produce foodstuffs and the risk of chronic malnutrition remains high, affecting 10% of all children under five. Anaemia, which is usually a result of poor nutrition and lack of iron, is affecting 58.6% of school-aged children, 68.1% of children between 9 and 12 months and 36.8% of pregnant women. In the words of Valerio Neri, General Director of Save the Children Italia: "The children of Gaza are living in prison-like conditions, entrapped on a strip of hostile land that prevents them from even dreaming of a better future. Since the beginning of the blockade in 2007, the number of children under 3 years of age being treated for diarrhoea has doubled. This is because they have no choice but to drink poisoned and harmful water.

Sanitary conditions on the Strip are worsening steadily, to the point that even a simple case of diarrhoea can be fatal for a child".

The system of effluent discharge was completely destroyed during operation Cast Lead and treatment plants are overloaded or short of fuel. The sumps for sewage collection are situated close to residences and in the first two months of 2012 alone, three children lost their lives through drowning in these open sewers.(ANSamed).

"Mideast: Gaza; children at risk, toxic water & conditions", 14/06/2012, online at:

[http://ansamed.ansa.it/ansamed/en/news/sections/generalnews/2012/06/14/Mideast-Gaza-children-risk-toxic-water-conditions\\_7037536.html](http://ansamed.ansa.it/ansamed/en/news/sections/generalnews/2012/06/14/Mideast-Gaza-children-risk-toxic-water-conditions_7037536.html)

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### ❖ Solutions sought for produced water in Middle East fields

**ABERDEEN, UK** – Global technology facilitator ITF is inviting proposals for new technical solutions to tackle produced water management in Middle East oil and gas fields. Up to 100% funding will be available for successful submissions.

Due to water shortage in the region, ITF says, it is important that oil companies dispose of secondary water from production safely to ensure that water supplies do not become contaminated.

ITF opened a regional office in Abu Dhabi last year, and this is the first program to emerge from the regional managers group members' discussions.

Ryan McPherson, ITF's regional director in the Middle East and Asia/Pacific, said: "Technology needs to become more effective in order to meet the legal requirements of the Ministry for Environment standards, and the Regional Organisation for the Protection of the Marine Environment (ROPME).

"There is a clear need for new technologies to provide a definitive solution to the problem, and we hope to bring innovative technologies to market by acting as the honest broker between our operator and service company members and technology developers. We are working hard to build close links with technology organisations and academic institutions to encourage them to come forward with bespoke proposals for new technologies."

The deadline for proposals is June 18. ITF's members will look to select projects to fund by September.

Identified priorities are:

- Technologies to deal with viscosity of up to 60 cP that can achieve oil in water (OIW) specification, without degradation of polymer
- Water quality at inlet of OIW 200 ppmv, 20 mg/l Total Suspended Solids and outlet of 5 ppmv OIW and 2 mg/l TSS
- Development of produced water treatment equipment to handle high viscosity water that achieves OIW specifications required: viscosity range should be up to 60cP as higher limit with a base case up to 10 cP
- Improved techniques for detection and characterization of back produced polymer in produced water
- Improved technologies for desalination of water with back produced polymer
- Improved solutions for degradation of back produced polymer without shearing the oil in water.

The challenges in the treatment of produced water for reinjection and other applications include:

- Development of a coalescence technology to adequately treat produced water so it can be reinjected or disposed off safely to comply with local legislation. The ROPME Protocol for

overboard discharge standard is 15 mg/l and the Ministry for Environment standard for disposal into the sea is 40ppmv. The aim is to reduce salinity and develop cost-effective techniques for coalescing technologies without changing cartridges frequently with a target oil in water concentration of less than 2ppm. Technologies submitted to address this challenge should be able to treat 100,000 b/d of produced water

- Alternative technologies for treatment of produced water to comply with ROPME and the Ministry of Environment standards
- Proposed technologies suitable for a range of water cut in the region 30% – 90%
- Development of techniques to ensure water content in the crude oil after separation is minimal
- Development of a system that does not use a compressor or a pump to separate gas from liquids (gas, crude, and water mixture) with the gas and crude oil returned to the flowline. This system should be automated and reliable to allow deployment in unmanned and remote locations
- Cost-effective produced treated water transportation in a cost-effective way, using alternatives to carbon steel lined pipelines
- Cost-effective treatment of high salinity produced water (salinity >50,000 mg/l) for reuse in steam generation.

“Solutions sought for produced water in Middle East fields”, 12/06/2012, online at: <http://www.offshore-mag.com/articles/2012/06/solutions-sought-for-produced.html>

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### ❖ U.N. global food forecasts good, but Mideast and Sahel risk hunger

The U.N.'s food agency said Wednesday that this year's forecasts for global food production are positive overall but warned that some areas will likely struggle due to armed conflict and displacement.

The Food and Agriculture Organization's report forecasts "a record increase of 3.2 percent in world cereal production in 2012, mainly on the strength of a bumper maize crop in the United States."

"Wheat and coarse grains prices eased in May, mostly during the second half, driven by good supply prospects," the FAO said.

Despite the positive trend, "several regions of the world are expected to struggle with the consequences of poor rainfall, severe weather, armed conflict and displacement," the Rome-based agency said.

Countries in the Sahel continue to face serious challenges to food security due to locally high food prices and civil strife, it said, adding that Syria and Yemen are also experiencing increasing difficulties.

"The situation in Yemen and Syria reminds us of the clear link between food security and peace. Internal conflict is causing food insecurity. But it works the other way around as well," FAO head Jose Graziano da Silva said.

"Throughout the world we see crisis after crisis caused, in its entirety or in part, by the lack of food or disputes over natural resources, especially land and water," he added.

The report lists 35 countries -- 28 in Africa -- which are in need of external food assistance, including Afghanistan, North Korea, Haiti, Iraq and Mali.

West Africa faces malnutrition in several countries. Agricultural production in the Sahel, especially Niger, Mali and Chad, is threatened by the escalating conflict in Mali as well as locust outbreaks from North Africa.

Civil unrest in Syria has left an estimated one million people in need of humanitarian assistance while in Yemen about five million people are thought to need emergency food aid due to extreme poverty and prolonged conflict.

However, "record harvests and improved production were expected across much of Asia, North America, Central America and South America," the FAO said.

"World cereal stocks for crop seasons ending in 2013 are forecast to increase to 548 million tons, up seven percent from their opening levels and the highest since 2002," the report added.

"U.N. global food forecasts good, but Mideast and Sahel risk hunger", 13/06/2012, online at:  
<http://english.alarabiya.net/articles/2012/06/13/220473.html>

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## ❖ **Gidon Bromberg at TEDx on Peacebuilding Through Water in the Middle East**

“Cooperation over water is not a privilege, it’s a necessity,” said Gidon Bromberg, co-director of Friends of the Earth Middle East, in a TEDx talk at Yale. He sees the shortage of water in Jordan, Israel, and Palestine as an opportunity to bring these contentious communities together – even more so during this period of upheaval in the region.

Water woes have long contributed to regional tensions, said Bromberg. Water rights between Israel and Palestine were supposed to be settled during the Oslo accords in 1993, but negotiations were unsuccessful and water discussions were consequently left unfinished. The lack of formal negotiations caused each side to seize whatever resources they could. Although Jordan was not part of the negotiations, it does share water resources with Israel and the West Bank and thus has been impacted by the lack of formal allocation processes. Both Jordan and Israel have diverted flow of the Jordan River into dams and irrigation projects. As a result, the Jordan River has lost 98 percent of its historic flow and the Dead Sea has lost one-third of its surface area.

Today, Israel has restricted Palestinian water use such that Palestinians have access to water only once a week in winter and once every three weeks in the summer, leading them to store water in containers on their roofs, Bromberg said. Though mismanagement is as much to blame as conflict, he notes, Palestinians chafe under the limitations.

Yet Friends of the Earth Middle East has used this difficult situation to educate the public, propose reforms, and build trust between Palestinian, Jordanian, and Israeli communities. Bromberg highlighted “fear of a small but vocal minority on both sides” as a key factor in preventing dialogue between the communities, but insists that water can bring people together. Neighboring communities have to work together, he said, “not because they’re best friends,” but to improve their own water situations.

Friends of the Earth provides that opportunity with their Good Water Neighbors project and hopes the trust built between communities extends beyond water issues as well. Since communities have strong motives to solve these problems, they work together more effectively than high-level politicians who may not be as apt to collaborate.

A positive update on the state of the Jordan River given in an interview with ECSP in October suggests that Bromberg may be on to something.

“Gidon Bromberg at TEDx on Peacebuilding Through Water in the Middle East”, 14/06/2012, online at:

<http://www.newsecuritybeat.org/2012/06/eye-on-gidon-bromberg-at-tedx-on.html>

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❖ **Will the Middle East starve?**

***Saudi Arabia and others have oil but not enough water or farmland. So they're buying land from poorer nations***

*Excerpted from "**The Land Grabbers: The New Fight Over Who Owns the Earth**" by Fred Pearce*

Fly over Saudi Arabia today and you will see that the desert sands are dotted with huge circles of green. They were not there 30 years ago. These geometric oases are man-made, the result of a \$40 billion national effort to create giant farms in the desert to irrigate fields of wheat, fruit and fodder crops. Look down carefully, and you may also see giant sheds holding tens of thousands of cattle in the desert.

The Tabuk plain in the northwest of the country, close to Jordan, gets an average of just 2 inches of rain a year. Yet it is a prairie of wheat fields. Fortunes are being made here. The biggest farm — covering nearly 90,000 acres, or eight Manhattans — is run by the Tabuk Agricultural Development Company (TADCO). Its irrigation pumps extract up to a million acre-feet of water each year from beneath the sands.

TADCO is part of the vast business empire of the al-Rajhi brothers — Sulaiman, Saleh, Abdullah, and Mohammed. As the Economist put it, they have made “one fortune from money brokering and another from farming.” Each brother became a billionaire as they turned a small money-changing business servicing migrant workers in Saudi Arabia into the world’s largest Islamic bank, the Al-Rajhi Bank. Then they joined the country’s 1980s cropping boom which, for a while, made Saudi Arabia self-sufficient in wheat.

But Saudis don’t live by bread alone. Dairy farming is the other big domestic agricultural business. Raising cows in the desert seems even odder than growing wheat. But in the center of the country, near the capital, Riyadh, the late Prince Abdullah al-Faisal, eldest son of the former King Faisal, has established the world’s largest dairy farm. At the heart of the Al Safi farm are six giant sheds, where 30,000 Holstein cows from Europe produce around 42 million gallons of milk a year, sold under the Danone brand. To keep their udders productive, the cows are cooled by a constantly circulating mist of water. Surrounding the sheds are 7,400 acres of fields, where dozens of movable irrigation units called central pivots, each up to a third of a mile long, irrigate alfalfa, sorghum, and hay destined for the cows’ feedlots. This too takes prodigious amounts of water, pumped from more than a mile below the sand.

Not far away, Almarai, a food conglomerate also owned by the Saudi royal family, has five dairy farms with 36,000 cows. This giant was established in 1976 by racehorse-breeding Prince Sultan bin Mohammed bin Saud Al Kabeer and a colorful Irish dairy magnate, Alastair McGuckian. In semi-retirement today, back home in Dublin, the jovial piano-playing McGuckian now writes musicals. He still oversees an agricultural empire that extends from the bogs of Ireland to China, Egypt, Germany,



Thailand, the United States, Britain, Russia, Romania and Zambia, where he grows marigolds. But his enterprise amid the singing Saudi sands is still his biggest.

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There is a madness about farming in the desert — especially when temperatures are above 100 degrees Fahrenheit, there isn't a river for hundreds of miles, and the only water is more than a mile underground. The technological bravado is breathtaking, but Saudis are slowly realizing that it cannot go on. That their dream of turning oil wealth into food self-sufficiency is doomed, and they will have to get food from elsewhere. I heard this at a conference on the country's changing attitude to water, held at the Jeddah Hilton in 2009. Outwardly everything looked normal — normal at any rate for the commercial capital of a superrich petro-kingdom. There were flowers and fountains in the atrium, '90s-style lifts zooming up and down in glass shafts, and limousines outside delivering ministers and industrialists. Not far away a huge desalination plant was making the waters of the Red Sea drinkable for the city.

Saudi Arabians have grown colossally rich on the country's oil reserves. They have grown used to the idea that petrodollars can buy them anything. But Saudis are waking up to the fact that all their wealth will count for nothing if they have nothing to eat. And — despite the conference tables heaving with French, Persian, American and Arab cuisine — that is a growing threat. "If we want our grandchildren to live as we are, we need to change now, or we will be like an African country in 50 years, asking for aid," Adil Bushnak, a former member of the Saudi Supreme Economic Council, told me during a conference session I was chairing.

The desert farms are magnificent 20th century monuments to unsustainable agriculture. They were created in the aftermath of the oil crisis of 1973. Back then, the OPEC oil-producing states, headed by Saudi Arabia, held the world hostage over oil supplies, causing fuel rationing and lines at gas stations around the world. As anger grew, the United States threatened to organize retaliatory food sanctions. OPEC got its way, restricting oil supplies. The world has paid much higher oil prices ever since. But in the aftermath, the Saudis took that American threat to heart. And with the huge new wealth that the oil revenues were generating for them, they set about insulating themselves against any future food embargo by farming the desert. Even the Saudis cannot use sea water to irrigate fields, so they are pumping up underground water reserves from beneath the desert.

By the 1990s, with \$85 billion invested, Saudi Arabia was one of the world's largest wheat exporters. Like the dairy business, the wheat crop was vastly subsidized. Money was no object. The government paid its farmers five times the international price for wheat — not just for the wheat the nation wanted, but for any wheat the farmers cared to produce. Riyadh charged nothing for the water pumped from beneath the desert, and virtually nothing for the fuel needed to pump it. This deluge of largesse generated full granaries but staggering inefficiency, not least in the use of water. Every ton of wheat required between 3,000 and 6,000 tons of water — three to six times the global average.

Why such hydrological madness? Saudis thought they had water to waste because beneath the Arabian sands lay one of the world's largest underground reservoirs of water. In the late 1970s, when



pumping started, the pores of the sandstone rocks contained around 400 million acre-feet of water, enough to fill Lake Erie. The water had percolated underground during the last ice age, when Arabia was wet. So it was not being replaced. It was fossil water — and like Saudi oil, once it is gone it will be gone for good. And that time is now coming. In recent years, the Saudis have been pumping up the underground reserves of water at a rate of 16 million acre-feet a year. Hydrologists estimate that only a fifth of the reserve remains, and it could be gone before the decade is out.

It took years for the truth to sink in. But in 2008, the Saudi government announced it would end wheat subsidies, with the aim of phasing out all production by 2016. Instead, it would import wheat to make Saudi bread. It decided to keep the cowsheds, but reduce their water needs by feeding the animals on foreign fodder. Then, just as the Saudis abandoned their former goal of food self-sufficiency, came the first world food-price spike. A bit of food inflation didn't worry the Saudis much. Almost any world price for grains was cheaper than growing them at home. What did scare the Saudis was when their key grain suppliers started banning exports to protect their home consumers. This eventuality, after all, was the nightmare that pushed the Saudis into attempting self-sufficiency in the first place.

So, finding it impossible to feed itself, and unwilling to rely on international food markets, Saudi Arabia came up with Plan C. Under the King Abdullah Initiative for Saudi Agricultural Investment Abroad, announced in 2008 in the wake of the global food crisis, the sheikhs decided to buy up farmland in foreign countries. The King called in his country's agribusiness billionaires, including the al-Rajhi brothers and a number of royal princes. He offered to underwrite the creation of a series of giant consortia to find and cultivate foreign fields and bring the food home. Soon, the commerce ministry had identified 27 countries that might appreciate Saudi investment in their farms; the ministry of agriculture opened diplomatic doors; the Saudi Industrial Development Fund granted credit; and the government put up \$800 million.

For those who had gotten rich emptying the country's water reserves but who now had farms running on empty, it was manna from Allah. Now they could double their money by going on a subsidized global land grab. So the desert cattle raiser, Prince Sultan Al Kabeer, bought a 48-year lease to grow wheat on 22,000 irrigated acres on the banks of the Nile, north of Khartoum in Sudan. Meanwhile his dairy rival, TADCO boss Mohammed al-Rajhi, took charge of two royalty-backed land-grabbing consortia. One was Jannat Agricultural Investment, looking for 530,000 acres to grow wheat in Egypt and Sudan. The other was Far East Agricultural Investment, which by late 2010 had negotiated leases to grow rice in Cambodia, Vietnam, Pakistan and the Philippines.

Saudi Arabia is the world's second-largest importer of rice. Securing rice supplies had become a key concern of the Saudis, since India and Pakistan cut rice exports in 2008. The majority of its land grabs have been to grow rice, usually in fellow Muslim countries in Asia or North Africa.

Sometimes the deals have found local acceptance. In the Catholic Philippines, rice-hunting al-Rajhi's Far East Agricultural Investment homed in on the mainly Muslim island of Mindanao. The island is poor but fertile — and rebellious. The Moro Islamic Liberation Front controls parts of the island. Al-

Rajhi signed up local chiefs for a scheme to plant rice, pineapples, bananas, and corn on up to 190,000 acres of communally owned land across Mindanao. The national government was in favor, and so too was the leader of the liberation front. Far from opposing foreign land grabs, he backed the deal “because it is coming from our Muslim brothers.”

But the path has not always been smooth. The Bin Laden Group — an 80-year-old Saudi family industrial conglomerate with an infamous black-sheep son — led a consortium to grow rice on more than a million acres in the Indonesian province of Papua. At one swoop, it gave the Saudis a third of the Merauke Integrated Food and Energy Estate, a \$5 billion megaproject being developed by the Indonesian government. But, while Indonesia is a Muslim nation, Papua is unruly, and much of it is not Muslim. In mid-2010, the Merauke project was put on hold by its director after opposition from local tribal animists and Christians reluctant to give up their land to Muslims from either Jakarta or Jeddah.

The Bin Laden Group is also behind a scheme to grow rice in Africa. The other main backer is Sheikh Saleh Kamel, a veteran Saudi billionaire who runs a satellite TV group. The AgroGlobe project aims to produce 7 million tons of rice a year within seven years on 1.7 million acres of irrigated land in the West African Muslim states of Mali, Senegal, Sudan, Mauritania, and Niger, as well as in northern Nigeria. It promises to recruit Thai rice experts to help West Africa cut its rice imports while simultaneously supplying the Saudis. But these plans too seem destined to create domestic strife among the hosts.

The Senegalese government is keen. “We are offering Saudi Arabia 400,000 hectares of farmland,” a senior official said in late 2010. Most of the land is on the banks of the River Senegal, which will provide the water for irrigation in an arid land. Contracts say that 70 percent of the rice would be destined for Saudi mouths, and only 30 percent for locals. So this is a water grab as well as a land grab. The government says existing rice farmers there “have no problems with these lease deals.” But traditional farmers do object, and local cattle herders will lose vital dry-season pastures near the river.

Saudi rice farmers could also get an angry reception in neighboring Mauritania, where the president has promised them nearly 100,000 acres of land on its northern banks of the River Senegal. Just over 20 years ago, the Koranic scholars and land barons who run the secretive Saharan state presided over a pogrom against black Mauritians who lived there. It happened during a war with Senegal that began with a dispute over grazing rights along the banks of the River Senegal. Hundreds died and some 100,000 black Mauritians fled to Senegal. As they have slowly returned since, many have found their former land taken for irrigated rice crops. Now it looks like the black Mauritians may lose more of their land to the Saudis.

A sign of the power of Saudi land grabbers in fellow Muslim countries could be seen at a curious ceremony at the Saudi King Abdullah’s royal palace in Mecca in September 2010. In attendance were the king himself and the UN Food and Agriculture Organization’s director general, the Senegalese diplomat Jacques Diouf. Diouf was on record a couple of years before as condemning international land grabbing as “neo-colonialism.” But now he was in Mecca to award the king, Saudi

Arabia's land-grabber-in-chief, his organization's Agricola Medal "in recognition of his support for improving world food security." It was an ignominious retreat for the world's top food official.

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Saudi Arabia is just one of the Gulf petro-states. The other super-rich emirates were as panicked by the 2008 price spike as the Saudis. They face the same triple whammy of concerns. Demand for food is soaring as the arrival of millions of foreign workers sets them on course to double their populations by 2030. The emptying of water reserves is making food production at home impossible. And the emirs are losing faith in global markets to provide future food.

So, like the Saudi sheikhs, they have gone on a buying spree for farmland, calling on their Muslim brothers to open up their borders to Gulf land grabbers. One assessment at the end of 2009 found that Saudi Arabia and the other Gulf states were responsible for a third of the land purchased, leased, or under offer to foreigners by poorer countries.

The United Arab Emirates (UAE), a federation of seven Gulf emirates headed by Abu Dhabi and Dubai, took the lead. The Gulf's largest private equity company, Dubai-based Abraaj Capital, said in 2008 that it had acquired 800,000 acres of "barren" farmland to grow rice and wheat in the Pakistani provinces of Punjab, Sindh, and Baluchistan. Others securing land in the Punjab, Pakistan's breadbasket, included the Emirates Investment Group, a private group in Sharjah, and Abu Dhabi-based Al Qudra Holding. If even a fraction of this goes ahead, the implications could be grim for small Pakistani farmers, most of whom are sharecropping tenants of feudal families with vast landholdings who dominate Pakistani politics as well as the military. They will lose control of their plots of land and will probably not even find regular work as laborers on the new mechanized farms. UAE officials also said its companies had acquired 700,000 acres of Sudan, paying virtually nothing, on condition only that they invest. But, as in Pakistan, details of these deals remain sketchy. There have been lots of promises and pledges, but few statements detail specific projects, and there has been even less activity on the ground.

Other Gulf states have been almost as busy. The Kuwaiti government has followed the Saudis in doing deals to grow rice in Southeast Asian countries such as the Philippines, Burma, Laos and Cambodia. But the most dramatic dealing has been from the tiny island state of Qatar. The more I learned about Qatar's exploits on the world land markets, the more extraordinary they appear. There is nowhere on the planet like Qatar, and its tentacles are everywhere.

Qatar is a small thumb-shaped peninsula of desert sticking out into the Persian Gulf from Saudi Arabia. It is smaller than Connecticut, with a population about the same as Little Rock, Ark. It was a poverty-stricken community of pearl divers until the development of oil reserves in the 1950s. Then came the discovery, just offshore, of vast reserves of natural gas. Today, Qatar is the world's largest exporter of natural gas (8.8 trillion cubic feet a year, for anyone who is counting). It is superrich, even by Gulf standards. The 800,000 Qataris have both the highest average income and the largest per-capita carbon footprint on the planet. Its capital, Doha, is planning on being the next Dubai.

Qatar is an absolute monarchy. It has been dominated for more than a century by the Al Thani family, a Bedouin clan originally from Arabia. The current all-powerful emir, Sheikh Hamad bin Khalifa Al Thani, took power from his father in a palace coup in 1995. He has since secured his power by locking up a cousin, allegedly for using state funds to go on a billion-dollar shopping spree in the world's art auction rooms. A curious amalgam of modernity and tradition, the emir funds the Al-Jazeera TV network, which helped fan the flames of the Arab Spring, and he has bought the right to hold the soccer World Cup in 2022.

Nobody knows quite where the state's wealth ends and the emir's wealth begins. For now, they amount to the same thing. And Qatar has been spending this money all over the world in a way that is surely unmatched for any small nation. In 2011, it was the world's largest investor in overseas real estate. Much of that was spent in cities. In London alone, it spent billions buying the upscale department store Harrods and the vacated U.S. embassy in Grosvenor Square, while redeveloping the billion-dollar Chelsea Barracks site and building Europe's tallest tower, the "shard of glass" near London Bridge. It also owns almost half of the Canary Wharf financial district.

But there has been no shortage of cash for farmland. The emir's vehicle for farm grabs is a company called Hassad Food. It is the agricultural arm of the Qatar Investment Authority and thus effectively the property of the emir. It has done deals for land in Vietnam, Cambodia, Uzbekistan, Senegal, Kenya, Argentina, Ukraine and Turkey. It has set up partnerships with cattle ranches in Tajikistan and bought 370,000 acres of sheep ranches across three states of Australia. In Brazil, it is developing a 25-million-ton-a-year sugar scheme and a poultry project that will supply most of Qatar's chicken and eggs. Hassad says it has secured 250,000 acres in the Philippines to grow rice. For a while, the Qatar government promised to build a billion-dollar freight port at Lamu Island on the coast of Kenya in return for 100,000 acres of irrigable land in the nearby Tana river delta — though that deal now seems to be off.

The pace has been astounding. It is hard to be sure, but it looks like the country has control of more land in other countries than at home. And while some projects, like many from the Saudis and the UAE, will probably never happen, the Al Thanis do seem bent on spending their treasure chest. There are plenty of takers for this Arab largesse. A constant stream of leaders from around the world has flown to the Gulf, offering land in return for investment. Indonesia's agriculture minister Suswono went wooing Gulf states in 2010, offering 19 million acres of "sleeping land" for agribusiness investment. The veteran chief minister of Sarawak, the Borneo province of Malaysia, was looking for Gulf investment in his "Halal hub," 190,000 acres of former rainforest being turned into farms for him by a Taiwanese company. Abdul Taib Mahmud, who is old enough to remember the Japanese landing in Borneo during the Second World War, was undaunted by fears of a new land invasion. He returned with a promise of a billion dollars from Perigon Advisory, an investment fund based in Bahrain.

For a while in 2009, Gulf investors showed signs of getting cold feet, as the credit crunch created the debt crisis that almost engulfed the region's most visible totem of wealth, the desert megacity of Dubai. Some deals were quietly put on hold or dropped. Abu Dhabi's Al Qudra Holding had



promised in 2008 to acquire 1 million acres in a host of countries from Australia to Eritrea, Croatia to Thailand, and Ukraine to Pakistan. The first harvests, said CEO Mahmood Ibrahim Al Mahmood, would be shipped during 2011. But in 2011 there were no firm sightings of either land or harvest. Likewise, there was no subsequent trace of Qatar's plan to buy the Pakistani government's giant Kollurkar farm in Punjab, which farm leaders said threatened the homes of 25,000 people.

Eckart Woertz, director of economic studies at the Gulf Research Center, a privately funded think tank based in Dubai, said in June 2010: "Investment in land was the flavor of the month in 2008, but they are far away from building actual farm developments and overcoming political disagreements." Agricultural expertise was often lacking. Financiers were sitting in their offices with wads of cash but not an engineer on their books, wondering what to do next.

But by late 2010, enthusiasm had revived with food prices. There were more grand declarations. This time, the Abu Dhabi Declaration on Food Security for Gulf Cooperation Council Countries took pride of place. And some investors, at least, were taking out their checkbooks again. But there were also signs of a new realism, with investors seeking out the expertise needed to turn their pipe dreams into reality.

They were turning to the Egyptians, for instance. In 2010, Gulf money was paying for Sudan to bring in Egyptians to revamp its large but dilapidated Gezira irrigation project — originally built by the British in the 1920s. Gezira grows cotton, sorghum, wheat, and groundnuts across 2.5 million acres of rich alluvial soil close to where the Blue and White Niles join. Weeks later, Khartoum and Islamabad were in discussions about shipping in Pakistanis to work the new farms.

And they were turning to Americans. The Pharos Financial Group, a Dubai-based hedge fund, is paying up to \$100 million for an American pig farmer to start transforming part of Tanzania into a replica of the American Midwest. Bruce Rastetter's plan is to take a 99-year lease on three huge refugee camps in southwest Tanzania that have housed escapees from the brutal conflicts in central Africa, including the Rwanda massacres of 1994. By late 2011, the Tanzanian government had emptied the first camp, the 60,000-acre Lugufu camp, which had been home to 100,000 people. Rastetter's team, Agrisol, told me they would soon be growing corn and soy and raising poultry, initially for sale within Tanzania. Pharos promises worker training, community development funds, and a system to buy produce from outgrowers, but the heart of the scheme will be a vast expanse of commercialized, high-tech agriculture — Iowa in Tanzania.

Rastetter, who back home in the United States is known as a philanthropist and staunch Republican Party funder, told the local Des Moines Register that the project is "the farthest thing from a land grab that could exist." But I would bet that if you are sitting in a camp in Tanzania, where you have lived your entire life, hearing reports of Arabs paying for fleets of John Deere tractors and truckloads of Monsanto seeds to come in from Iowa to take over your kitchen garden, you might not agree.

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Whatever one feels about such projects, the Gulf governments were certainly right to be alarmed about the possible impact of rising food prices on their people. Perhaps more than they knew. By early 2011, the Middle East and North Africa were erupting with the Arab Spring. While the Western media concentrated on the politics of reform, many on the streets were protesting as much about bread prices as corruption. They were waving baguettes as they marched into Cairo's Tahrir Square and Tunis's November 7 Square (now renamed Mohamed Bouazizi Square, after the vegetable seller whose suicide sparked the revolution). In Yemen, they turned on their leaders with chapatis strapped to their temples.

The only Gulf state directly impacted by the uprising was Bahrain. But this was uncomfortably close for many of the region's autocrats. Bahrain is connected by a causeway to Saudi Arabia. Governments reacted to shore up their popularity. Saudi Arabia increased food subsidies twice. Kuwait promised fourteen months of free food rations. Bahrain simply handed out cash as the people rioted against the ruling Al Khalifa royal family. The politics of food is now a serious issue for the princes of petroleum. And right now, cultivating foreign soil seems like their only salvation.

*Excerpted from "The Land Grabbers: The New Fight Over Who Owns the Earth" by Fred Pearce (Beacon Press, 2012). Reprinted with permission of Beacon Press.*

"Will the Middle East starve?", 10/06/2012, online at:  
[http://www.salon.com/2012/06/10/will\\_the\\_middle\\_east\\_starve/singleton/](http://www.salon.com/2012/06/10/will_the_middle_east_starve/singleton/)

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### ❖ Delhi water crisis grows as Haryana cuts supply

NEW DELHI: Haryana has tightened the water [squeeze](#) on Delhi. On Wednesday, it curtailed supply to the capital's Wazirabad pond where the level fell from the mandated 674.5 feet to 672.8 feet. The city has been reeling under shortage of water since two weeks back when Haryana reduced its supply to the Haiderpur water treatment plant. Large parts of the city, including south, southwest, west and NDMC areas, are parched.

The capital has been demanding its fair share of 80 million gallons daily from the newly-constructed Munak canal but Haryana has refused to turn the tap any further, claiming that Delhi is withdrawing more than its allocated share. Delhi officials have taken [up](#) the matter with the prime minister and are even contemplating approaching Supreme Court.

If Delhi had only taken the task of reducing its transmission losses seriously, the crisis won't be so grave. An IIT-D report claims that these losses are a massive 40%. By DJB's own admission, the water it loses through leaks and other unaccountable means is 30% of what's available. With a total of 845 MGD available for supply, the city it seems gets just 510-590 MGD.

For now, Delhi can only blame Haryana. "Against the mandated 425 cusec, Haryana has been supplying only 385 cusec for the Haiderpur plant for the past several days. Haryana is right in saying that they are maintaining the canal level but they are actively restricting the water from entering Delhi's system. Production at the plant has dropped by 18 MGD and more than a lakh people have been affected. We have approached the Upper Yamuna River Board and ministry of water resources for help," said DJB officials.

Senior DJB officials claim [the situation](#) this year is actually better than 2011 and more areas have been brought into the network. "Since 2011, 783 unauthorised colonies with a few lakh people have been covered by the water network. However, there has been no increase in supply during this period," said an official.

Independent experts say Delhi, which is already enjoying an average of 229 litres per capita per day (lpcd) against a standard of 135 lpcd, is not really short of water. "There are undoubtedly huge inequities in the supply system but if all leaks were to be plugged and DJB adopted a more efficient system of supply, a lot of the water worries would be over," said a Central Ground Water Authority official.

IIT Delhi's civil engineering department's analysis of unaccounted for water (UFW) in Delhi says it is as high as 40%. In fact, professor [AK](#) Mittal of the IIT team claims the figure is probably higher than 40%. "I would say there is no water shortage in Delhi. The gap between how much water is produced and how much reaches the consumer is huge. More than 40% of the water doesn't reach consumers. Leakage is only one reason. There are many others like tankers, illegal connections, theft, maintenance problems etc," points out Mittal. According to Delhi Jal Board estimates, however, we lose around 30% of the water to leakages and other transmission losses.

Despite severe shortage of water, recycled sewage water which can be extensively used for non-drinking purposes is not utilized. The IIT team is currently working on a research project to assess the

potential of using treated sewage water in Delhi. "We don't use even 10% of the sewage we generate. At least institutions like the railways, DMRC and industries can use recycled sewage water. Even if we utilize 50% of sewage water we generate, it will help meet the demand-supply gap," adds Mittal. He add that Delhi's water charges were much lower compared to Chennai, Bangalore or Mumbai which only encourages wastage.

#### Times View

Every summer it's the same story. Swathes of the city go dry, Delhi fights with Haryana and UP for more supplies, but nothing really is done to see that the situation gets better the next year. For starters, we suggest that the Delhi government make rainwater harvesting compulsory for all buildings - commercial and residential. [Sheila Dikshit](#) should put her foot down and ensure that this happens. It may not fully solve Delhi's water crisis, but will certainly mitigate the problem. If cities like Chennai and Hyderabad can make rainwater harvesting compulsory, why can't Delhi?

"Delhi water crisis grows as Haryana cuts supply", 14/06/2012, online at:  
[http://articles.timesofindia.indiatimes.com/2012-06-14/delhi/32234195\\_1\\_munak-haiderpur-supply](http://articles.timesofindia.indiatimes.com/2012-06-14/delhi/32234195_1_munak-haiderpur-supply)

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## ❖ Indo-Pak water dispute

Recently, a document titled “United Nations Framework Convention on Climate Change” (UNFCCC), reveals that India is all set to get the carbon credits of almost \$700 million for 10 years against seven hydropower projects being built on Pakistan’s river Indus, Chenab and Jhelum from UN on 28 July . This will automatically provide legitimacy to all the projects. India’s seeking carbon credits from UN is also linked with Kishanganga project. Pakistan is already in a legal battle with India on Kishanganga Project in International Court of Arbitration at The Hague. The International Court of Arbitration (ICA) has granted a stay order, restraining India from going ahead with the controversial hydro power project over river Kishanganga in Gurez area of occupied Kashmir. Under the ICA order, India will not construct a permanent structure over River Neelum/Kishanganga that may affect the flow of water downstream. Pakistan had lodged a complaint in the court of arbitration that Indian bid to build Kishanganga dam was violation of World Bank brokered Indus Water Treaty of 1960. On Indian refusal Pakistan went to the ICA, which now issued the interim order on the issue restraining India from dam construction. Pakistan is confronted with a situation whereby India is trying to make IWT ineffective. Kishanganga is one among many projects that Pakistan is becoming wary of. Pakistan is a lower riparian state, which gets almost all its water from Indian Held Kashmir. To negate any major confrontation between the two countries, the World Bank helped them reach an agreement through the Indus Water Treaty (IWT) in 1960. The treaty has withstood two major wars between the nuclear-armed countries besides smaller conflicts. But now the situation is changing, as Pakistan’s water needs have increased and the country is confronted with water shortage. India initiated the Kishanganga project, costing \$820 million, in the Gurez-Bandipora area of Kashmir, which would divert parts Neelum/Kishanganga flow which will be used to generate energy and raised level of water in the Wullar Lake. It involves construction of a 37-meter high concrete faced rock-fill dam which connected via a 22-kilometer water diversion tunnel. If completed, the dam would result in a 21% drop in Neelum River’s inflow; thereby the diversion of the Kishanganga River by India will reduce 27 per cent of the power-generation capacity of its Neelum-Jhelum Hydroelectric Project. There is also fear of reduced river flows for at least six months every year, irreparable loss to the environment, especially to the Musk Deer Gurez Park, a vast national park in AJK near the LoC, and a dent in the tourism potential of the Neelum valley. About 200 kilometers of riverbed will be affected by the project and about 40 kilometers of the length of the river will completely dry up; the water reduction will also severely affect agriculture. Kishanganga is not the only project that India and Pakistan have been fighting over. The two countries had faced off over the Baglihar hydel-power project, built by damming the Chenab River in Indian Kashmir. In 2008 Pakistan was faced with decreased flow of water in the Chenab when India started to fill the dam. The river feeds water to 21 major canals and irrigates about 2.8 million hectares of arable land in Pakistan. Pakistan Economy Watch (PEW), an economic think-tank, calculated that filling the Baglihar dam would inflict a loss of \$1.5 billion on Pakistan. Analysts termed it a hydro weapon. The fast-flowing Chenab, a vital river for Pakistan’s agriculture, has a high potential for generating power and India plans to generate

16,000MW of energy by constructing nine power houses on it. India maintains a huge military machine in Occupied Kashmir, much larger than the United States and its allies, put together, have in Iraq and Afghanistan. In Occupied Kashmir, its three-quarters of a million troops perhaps out number any such expeditionary force stationed in an occupied or disputed area since the Second World War. On the face of it, the deployment is tasked to deal with freedom fighters, which of course is a daunting challenge, but more importantly, it is there to change the face of the Muslim-majority landscape called Kashmir; its main weapon being brutal use of force against unarmed civilian population. But where its work goes almost unnoticed is the security it provides to Indian engineers, who are planning and working day and night to build dams on rivers that take water to Pakistan. So furiously are they working and in such so-far inaccessible areas that of late, New Delhi is thinking of bringing these projects under the enhanced protection cover of the Central Industrial Security Force (CISF). All this work falls within the definition of an aqua war India is preparing to foist on Pakistan. India is rapidly moving towards its target of making Pakistan totally barren by building dams on three major rivers Chenab, Jhelum and Indus flowing into Pakistan from the Indian side of the border. These dams are being built in shrewd violation of provisions in Indus Water Treaty signed between the two countries to ensure equitable distribution of water resources. India is doing its best to overturn the IWT but Pakistan must not fall into the Indian trap by following a two-pronged strategy. First, to pursue this case with full vigour, and ensure that the stay is confirmed, second, to utilize this breathing space to start building irrigation-cum-generation projects on the Indus. However, a permanent solution will involve a settlement of the Kashmir issue. It would mean a general Indo-Pak settlement, ridding us of threat of water projects in Indian Held Kashmir.

“Indo-Pak water dispute”, 17/06/2012, online at: <http://www.thefrontierpost.com/article/167056/>

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

### ❖ Firms mobilised to construct Nai Gaj, Naulong dams

Lahore – Following the award of contracts by the WAPDA for Nai Gaj and Naulong dams, the contractors have been mobilised to the sites to start construction work on the projects. “On the direction of the President of Pakistan, the WAPDA is constructing a number of small and medium-sized dams in the four provinces and FATA in addition to executing mega projects in water and hydropower sectors. These small and medium dams are being constructed for socio-economic development of the people of remote areas in the country. The projects will help store water for irrigated agriculture, mitigate floods, generate low-cost hydel electricity for the local populace, provide employment opportunities and emancipation of women,” said a statement issued by the WAPDA on Tuesday. It has been stated that Nai Gaj and Naulong dams have been taken up in compliance with the President’s directives for betterment of the people in backward areas. According to the details, the Nai Gaj Dam is being constructed across Gaj River in district Dadu of Sindh with a total project cost of about Rs.26.2 billion. The 194-foot high dam will store 300,000 acre feet of water to irrigate about 29,000 acres of land. The project will create employment opportunities for 6,500 persons during the construction, operation and its maintenance. Annual benefits of the project have been estimated more than Rs.3 billion. Similarly, the WAPDA said, the Naulong Dam is being constructed on Mula River in Jhal Magsi district of Balochistan with a total project cost of about Rs.16 billion. The project, with a water storage capacity of nearly 250,000 acre feet, will irrigate 47,000 acres of land. Some 4,300 employment opportunities will be generated during the construction, operation and maintenance of the project. Benefits of the project have been calculated more than Rs.2 billion per annum. It is pertinent to mention that high efficiency irrigation systems - drip, sprinkler, etc. - are also being introduced at the project to maximise benefits of the stored water. The Federal Government has announced to provide upto 25 acres of land to the poor women of the project areas.

“Firms mobilised to construct Nai Gaj, Naulong dams”, 13/06/2012, online at: <http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/business/13-Jun-2012/firms-mobilised-to-construct-nai-gaj-naulong-dams>

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### ❖ **NEPAL: Thousands families denied access to safe water in Nepal**

As a right to food activist for the last five years, I had a dream to travel to the Karnali region, a mountainous area while doing field work. Mugu in the Karnali region is surrounded by nature. Out of the 75 districts in Nepal, it is listed last in terms of the human development index. Many people around the world appreciate its natural beauty -- sky blue Rara Lake nearby Mugu. However, one can find extreme poverty and hardship that the villagers face in their daily life. In April 2011 I visited Mugu for the first time along with my foreign colleagues. (*PHOTO: Pots to collect water, Palpa district, taken by Jin Ju*)

We went down from the airplane landing area to Rugha Village Development Community (VDC) in Mugu. The village is on the lap of Mugu where anyone can observe the difficult life of the villagers. There we had an informal conversation with a woman from the Dalit community who expressed various problems in her life. "This is hell, not Mugu" she said with tears in her eyes. "We face death even from a common and curable disease because they don't have access to medical treatment here. Sometimes we even feel like we are living in a desert when we face scarcity of water, who said that Nepal holds second position in world's richest country in water resources?"

People come here with many programs for sanitation and health but do not last long since there is no water. How could the medicine work if there is absence of basic things like water? Indeed, the first job of the day that women are expected to do is fetch water to wash dishes, make tea and cook food. Women in Rugha VDC ward 4 always think about how to get water and there is no exception in Mugu. Women carry a water jar on their waist and on their head and go a long way down to the Karnali River, which is a hard labour and causes health issues. In summer, the river is contaminated by rain and flood. A woman of Rugha has lost three children out of seven due to diarrhea after drinking contaminated river water. Yet, she does not have any other option to get water. Taking one and half hours back and forth to fetch water from the river, walking on slopes and rough paths with jars filled with water, she spends 18 hours a day for housework. There is no respite even during pregnancy.

A 80 year-old woman expressed her feelings with tears in her eyes that she spent her whole life thinking about getting water from river more easily. But it has not happened. She even lost her child in the Karnali River who drowned while playing. Her husband went to India looking for employment opportunities while she looked after her children. At that time she found it difficult to go for taking water every day from the river. She never took rest even when she was sick or pregnant. "The problems I faced are being faced by my daughter and daughter-in-law now, which is very intolerable for me." Holding my hands, she was so eager to ask me to bring water for her village. "I will bless you if you did but curse you if you made fake promises."

The villagers are mostly engaged in agricultural labor in an environment of high temperatures but a shortage of drinking water. Spending so much time in getting water for various purposes all day long, women are physically and mentally under pressure. They often suffer from anxiety, stress, lightheadedness, vomiting and vertigo after walking hours and hours with a huge gallon of water in an empty stomach. (*PHOTO: Mugu, Nepal, taken by Jin Ju*)



### **Dalit women and water - Far Eastern region**

Similar problems have been faced by the Dalit women living in Koteli village ward no 5, of Dadeldhura district which lies in far eastern region. They have been facing a shortage of drinking water for the past 16 years merely because they are Dalits. In 1995 the government introduced the safe drinking water scheme in Koteli village ward no 7, 5, and 4 where upper caste Brahmin and Dalit communities jointly reside. Brahmin households reside next to the Dalit households. Around 100 Dalits households live in ward no. 5. The administration installed water-pipe and tap for all villagers but the non-Dalit community blocked water from flowing to the Dalit household's tap. The Dalits could not get a single drop of water from their tap. When the Dalit community made a complaint to the district drinking water office, nobody listened to them. They hence have to go to another village to fetch water taking more than 5 hours from their village back and forth with the jar of water, which causes health issues for the Dalit women. The women carry 25-30 liters of water on their head and back at the same time. This result in delays in sending the children to school. They also suffer from different types of diseases. This daily discriminatory practice against the Dalits which causes water scarcity in farming also harms their food production.

### **Water first! - middle-east region**

Palpa district is one of the well-known tourist areas to foreigners. Being located on the way to Lumbini, Buddha's birth place, one can see some foreigners enjoying Nepali culture as well as nature. Yet women living here are not free from lack of water either. Upland villages like Vuwan Pokhari are the worst examples. The villagers produce maize and millet on this dry slope area with which people feed themselves for only 3-4 months and the men usually migrate to India or other districts of Nepal for the rest of the year to feed the family. The women and children are left behind. The picture is rather common in many rural areas in Nepal. In Vuwan Pokhari village ward no 9 in Palpa district 75 Dalit households have been residing here for generation

After climbing up to the village in a van that quickly filled one can see two big jars built in front of almost every household. They are there to store rain which will be used for various purposes; washing, cooking, drinking, etc. This scheme was financially supported by Friend Nepal to provide two jars to each house. There is a tube to connect the jar to the roof, which makes rain water go into the jar. If the family wanted to have more than two, they have to pay the full cost. There is no other water supply in the village. Indeed, it looks beautiful and unique though it is a symbol of water scarcity and pain of the village. When we arrived all the villagers shouted at once, "Give us water first!"

What if rain doesn't come? April is not the rainy season and there was no water in the jars when we visited the village. Thus it is a huge burden for women. Women have to go down to fetch water from the well on the roadside, which usually takes one hour. Though the road was constructed in the village five years ago to commute to other villages, it is narrow, steep, stony and dusty.

A villager, Ms. Sukmaya Pariyar said, "If there is any social function like marriage ceremony or funeral in the community, every household has to collect a jar of water for the function. After we wash dishes and cloths, we reuse water for our domestic animals and vegetables farming".

There is a belief in Nepal that while carrying water a woman should not stop walking because if she stopped to take a rest the water would get impure. This custom makes it even more difficult for

women who have to carry heavy loads of water for more than one hour without taking a break.

A 75 year-old woman, Sobhi Pahadi, seemed to be in charge of all the rituals. She is the oldest woman, who prays for all villagers, according to Hindu tradition. She even gave a big warm hug to the visitors. She is proud of her son, a Constituent Assembly member, Mr. Binod Pahadi. She has been living in the village since she was 13-years-old when she married her husband who was then in the army. She recalled her memories about water. She also went down to fetch water, which was enough for her family on those days. But many women are now in the queue for water as water from the same well is now far less than before. Due to road construction nearby the well, the source of water seems to have been buried by dust and soil. Her son has tried to initiate a safe drinking water scheme in the villager but the outcome is uncertain.

### **Caste based discrimination, denying access to safe drinking water**

In the villages, though water resources are common for everyone, Dalit communities find it difficult to access water. Residential areas are separated between Dalits and non-Dalits or so called upper castes. In general, upper caste communities reside in the lowland where more resources are available or easily accessible. Due to Hindu traditional practice which is a social caste-based discrimination, Dalits are often denied to access water resources in the villages. In Vuwan Pokhari of Palpa introduced above, Dalits live in the upland and the so called upper caste communities reside in the lowland with easier accessibility to various resources including water and farmland. Water, like oxygen, is necessary in our life and the most significant determinant of food production as well as health. Although we might have enough food, without safe drinking water, one could die of water borne diseases or be affected by food contaminated by water. As the climate gets drier, food production is considerably affected by shortage of water as many depend on rain for cultivation. Given the fact that women take all responsibility for housework and child care in Nepal, they confront more discrimination and difficulties to manage housework, food, and child care at home. The erroneous belief that Dalits are dirty by birth may be rooted by this. Within limited water resources, it is natural that they use less water for washing and bathing than others, which has been daily practicing among Dalits. If people, just to wash their hands and mouths have to walk more than one hour, how can they maintain their health and sanitation?

It is not a matter of budget but the matter of access, control and ownership over the resources, utilization and equal sharing of it without any de facto discrimination. For example in the Dadelhura case, the government provided a pipeline and tap for Dalits but the so called upper caste persons do not allow Dalits to use the same water. The government has failed to intervene to prevent this or eliminate the deeply rooted caste based discrimination. The government believes that their duty does not go beyond providing resources or facilities. It is indeed more important and difficult to change routine practices committed among different castes and the government should give a priority to the issues related to the fundamental rights. Needless to say, right to access safe drinking water is one of the fundamental rights to enjoy right to life with dignity as a human being. Regardless of the budget availability, it should be properly respected by efficient policy and its implementation, which will be promoted by the active and collective participation of the Dalit communities in the process of policy making and enforcement. Participation is the basic element of democracy and equality. Both cases in Palpa and Mugu narrated above expose lack of participation of the Dalits. They are shouting, though no one pays attention, "Give me water!"

### **Water Supply Policies and obstacles**

The government's 9th Five-Year Plan (1997-2002) estimated national urban water supply coverage at 62.5%, and set a target for 100 % coverage, with sanitation for 40 % of the population, by the end of the plan. This proved to be an ambitious target and Drinking Water Supply and Sanitation Department projected early on that by 2002 only 71 % would be covered by drinking water quantity and 30 % by sanitation. These figures are also questionable, because they do not take into account the poor operational status or the poor quality of water supplies from the facilities that have already been built. As high as 92% of the piped water supplies and 25% of the tube wells are reported to be either out of operation or in need of rehabilitation. The development of the water and sanitation sector remains a high priority of the government, and in this regard the 10th Plan (2003-2007) targetted to supply water to 85 percent of the rural population and 100 percent for the urban population. The policies and commitment of the government have resulted in an extension of this sector under multilateral aid agencies like World Bank(WB), Asian Development Board (ADB), bilaterally assisted projects and International/National Non-Governmental Organizations (I/NGOs) working in this sector. Different approaches are being used by different organizations working with different projects in many parts of Nepal, but the goal is the same: the provision of safe drinking water and sanitation for all.

The government has realized that providing drinking water and sanitation facilities to all, especially in rural areas, promoting people's participation for making water and sanitation systems can be sustainable, reliable and cost effective, through the mobilization for community based organization. But the policy frameworks are either often isolated from the international provision in right to access to resources like the article 14 of the CEDAW over land resources but although being a signatory of CEDAW, there is no concrete provision made by the government to fulfill the obligation of international instruments.

### **International Human rights standard**

On 28 July 2010, through [Resolution 64/292](#), the United Nations General Assembly explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realization of all human rights. The Resolution calls upon states and international organizations to provide financial resources help capacity-building and technology transfer to help countries, in particular developing countries, to provide safe, clean, accessible and affordable drinking water and sanitation for all. In November 2002, the Committee on Economic, Social and Cultural Rights adopted [General Comment No. 15](#) on the right to water. Article I.1 states that "The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for the realization of other human rights". Comment No. 15 also defined the right to water as the right of everyone to sufficient, safe, acceptable and physically accessible and affordable water for personal and domestic uses<sup>1</sup>.

The water supply for each person must be sufficient and continuous for personal and domestic uses. These uses ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene. According to the World Health Organization (WHO), between **50 and 100 liters** of water per person per day are needed to ensure that most basic needs are met and few health concerns arise. The water required for each personal or domestic use must be safe, therefore free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person's health. Measures of drinking-water safety are usually defined by national and/or

local standards for drinking-water quality. The **World Health Organization (WHO) Guidelines for drinking-water quality** provide a basis for the development of national standards that, if properly implemented, will ensure the safety of drinking-water. **Acceptable.** Water should be of an acceptable color, odour and taste for each personal or domestic use. All water facilities and services must be **culturally** appropriate and sensitive to **gender, lifecycle** and **privacy** requirements. **Physically accessible.** Everyone has the right to a water and sanitation service that is physically accessible within, or in the immediate vicinity of the household, educational institution, workplace or health institution. According to the WHO, the water source has to be within **1,000 meters** of the home and collection time should not exceed **30 minutes**. **Affordable.** Water, and water facilities and services, must be affordable for all. The United Nations Development Programme (UNDP) suggests that water costs should not exceed **3 per cent** of household income<sup>2</sup>. Nepal is a state party to ESCR rights 1996, WHO, but nothing has implemented.

The Dalit community we mentioned above is denied all this provision because of the state weak policy which could not reach to this community. Whatever policy and provision related to drinking water is very general. Access to quality water supply is one of the fundamental requirements for sustaining human life. Without safe, good quality water, people are vulnerable to various water related diseases. Therefore the concern of the government and the people should have safe water accessibility of adequate water supplies without discrimination to any community. This is not the lack of water resources but due to lack of participation in local government to concern themselves in the problem. The government should take immediate measure to allocate budget for Vuwan Pokahari village, create an environment to allow water for the Dalit community in Koteli village and initiate collective efforts in Mugu district to provide safe drinking water.

*Notes:*

1. Resolution A/RES/64/292. United Nations General Assembly, July 2010
2. Human Development Report 2006. Beyond scarcity: Power, poverty and the global water crisis. UNDP, 2006

“NEPAL: Thousands families denied access to safe water in Nepal”, 13/06/2012, online at:  
<http://www.humanrights.asia/news/ahrc-news/AHRC-ART-051-2012>

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### ❖ Privatisation of water to be opposed

The Peoples' Campaign for Right to Water - Karnataka has decided to intensify its struggle against moves to privatise water in the state. At a state-level planning consultation in Bangalore on Monday, it reviewed the situation across the state and called for intensification of struggle against forces that were promoting privatisation of water in the state.

They planned to build on the successes achieved in cities like Mysore, by demanding a complete reversal of privatisation plans, and demanded an alternative water policy.

The organisation on June 28 will organise 'Namma Neeru - a coordinated peoples' march' in districts that have sources of water such as rivers and lakes. The march is to sensitise people on claiming common ownership over water.

There will also be a coordinated protest and representations made to the governor in Bangalore and to deputy commissioners in districts with specific demands for rejection of the National Water Policy 2012, and immediately stop all water privatisation plans in the state.

"Privatisation of water to be opposed", 14/06/2012, online at: [http://www.dnaindia.com/bangalore/report\\_privatisation-of-water-to-be-opposed\\_1702147](http://www.dnaindia.com/bangalore/report_privatisation-of-water-to-be-opposed_1702147)

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## ❖ **USAID to train Pakistani experts on water conservation**

*ISLAMABAD: The United States Agency for International Development (USAID) will train Pakistani officials to develop more water efficient policies and design high efficiency irrigation system in the country.*

Nine Pakistani officials will be leaving for United States on Saturday on a ten-day study tour to learn about water issues and expertise to enhancing agricultural productivity and marketing linkages. The officials hailing from Khyber Pakhtunkhwa, Balochistan, and Gilgit-Baltistan provinces will travel to the United States on a study tour sponsored by the US Government to learn about irrigation water management practices from June 16-27, 2012. This study tour will enable provincial government officials and project staff working in the development sector to develop efficient water management policies, design high efficiency irrigation systems, as well as enhance agricultural productivity and marketing linkages”.

“This initiative is part of the United States commitment to support the development of Pakistan’s agricultural sector,” said USAID Acting Deputy Country Director, Jeff Bakken, addressing the orientation ceremony held for the participants of the study tour. “The participants will be exposed to some of the best practices used in the United States.”

The study tour will be hosted by the Colorado State University which is known internationally for its research and educational programmes related to water management solutions, farm water management, efficient irrigation systems, and water policy reforms.

Participants are scheduled to visit an irrigation project, a land cooperative, packing sheds, agri-businesses, and farms where they will learn various aspect of water management in the agricultural sector.

The tour will also include visits to the CSU Agricultural Research Development and Education Center, the CSU Horticulture farm, and the Northern Colorado Irrigation Ditch Association. At the latter, participants will discuss and observe how this association determines water schedules, allotments, and distribution patterns.

Miss Anny another USAID official described the study tour as an opportunity for the participants to learn about international water conservation and water usage practices. “It will enhance capacity of the participants to better under the issue and cope with the future challenges”.

Two participants also expressed their views on the occasion and hoped they will fully benefit from the tour. “Pakistan is currently facing extreme water crisis which hinders food production and economic growth. Such study tours as we are about to undertake are essential for introducing international best practices in water management in the agriculture sector,” said Zahid Saleem, Provincial Coordinator Drought Relief, Balochistan.

“USAID to train Pakistani experts on water conservation”, 16/06/2012, online at: <http://www.thenews.com.pk/Todays-News-2-114813-USAID-to-train-Pakistani-experts-on-water-conservation>

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### ❖ China helps solve Ghana's water problems

Elizabeth Amponsah turns the pipe on to see whether water will flow but no water gushes out. It had been like that for the past one month. She needed water for her domestic chores. Her Kenkey selling business has grounded to a halt for lack of portable water. Her only alternative is the untreated lagoon water which is polluted by waste products such as human excreta and garbage. Outside and on the streets are women and children of school-going-age carrying yellowish gallons searching for water. Some of these children have been out of school in search of water thus depriving them of the opportunity to be in the classroom. The water situation in Ghana can only be described as grim and if water indeed is life, then more must be done to save the life of the people of Ghana. Statistics from the Ministry of Water Resource, Works and Housing indicates that Ghana Water Company Limited, one of the major water production and distributing outlets in Ghana currently operates eighty-one (81) urban water supply systems throughout the country which together produce about 142 million gallons of water a day. According to Ghana Statistical Services, Ghana's urban population rate is estimated at about 46%.

While the daily production of portable water in the urban areas is about 142 million gallons per day, the daily demand is about 242 million gallons per day which leaves a daily shortfall of about 100 million gallons per day. The only effective urban water supply coverage currently (2011) is about 58%. The government of Ghana however, hopes to increase this coverage to 75% by 2013 with the various interventions by way of water projects the ministry intends to undertake all over the country. According to a national water supply and sanitation survey conducted in 1993, the supply of potable water only reached about 76 percent of the urban and 46 percent of the rural population. This means that there has been a decline in urban water supply.

In a research titled "Improved Water Supply in the Ghanaian Volta Basin; Who Uses it and Who Participates in Community Decision Making?" conducted by the Environment Production Technology Division of the International Food Policy Research Institute, about 67 percent of households along the Ghanaian Volta Basin have access to improved water, while 43 percent of these continue to use unsafe sources as their main domestic water source. Governments over the years have tried various means to improve the water situation in Ghana. In the past, the Ghana Water and Sewage Cooperation (GWSC) had the mandate to provide an adequate supply of domestic water to the country's rural and urban population. Recognizing the GWSC's failure to fulfill this mandate, the Ghanaian government introduced—as part of its general decentralization policy for the public sector—institutional reforms in the domestic water sector, which are currently under implementation. As part of this reform process the urban and rural domestic water sectors were separated.

In 1994, the government established the Community Water and Sanitation Project (CWSP) by launching the National Community Water and Sanitation Program (NCWSP). Initially the CWSP was part of GWSC, but later was turned into an autonomous institution known as the Community Water and Sanitation Agency (CWSA) responsible for rural drinking water supply and facilitating the implementation of the national community and sanitation strategy (established by Act 564, 1998). Urban water supply remained the responsibility of GWSC, which in July of 1999 was legally converted to a limited liability company – the Ghana Water Company Limited.

And in line with Government's policy objectives in the domestic water sector, two additional institutions – the Water Resources Commission (WRC) and the Public Utilities Regulatory Commission (PURC) – have been set up. The PURC is responsible for approving water tariffs and to ensure proper water industry practices. The WRC, on the other hand, is empowered to oversee the sustainable utilization of the country's water resources and is responsible for water abstraction, pollution control, water quality standards, water rights, and license fees.

As part of President Attah Mills' government decision to further improve the water situation in Ghana, the NDC government signed a Memorandum of Understanding (MOU) in August 2011 with the Chinese government in the sum of \$270 million for the expansion of the Kpong Water Supply project. The loan agreement which was signed by His Excellency, the President of the Republic of Ghana, during his recent trip to China is one of the major water projects the Ministry is undertaking to boost water supply to parts of Accra-Tema and its environs. The loan was obtained from the China Exim Bank (Exim). The main scope of expansion works of this project is estimated to cost about \$273million.

The construction company for the project is Messrs China Gezhouba Group Company Limited of China. The China Gezhouba Group Company Limited primarily engages in the construction of projects on contract basis in China and internationally. It undertakes contracts for the construction of projects, which include power plants, dams, roads, and bridges, as well as offers civil engineering services. The company also involves in the investment and construction of two highways in Hubei province, China; and manufacture of cement and civil explosives, as well as in hydro power generation business. In addition, it engages in property development business, which includes development of residential communities in Yichang, Hubei province. The company is based in Beijing, China.

According to Mr. Michael Agyemang, the Public Relations Manager of the Ghana Water Company Limited, the expansion of the Kpong water supply project will cover the following areas: The construction of a new 40 million gallon treatment plant, construction of new transmission mainly through Dodowa, Adenta to Accra Booster Stations, Distribution Improvement and Reservoir provision and a dedicated electricity supply through arrangements with the electricity Company of Ghana.

According to the Minister for Water Resources Works and Housing, "So far, the Environmental Impact Assessment (EIA) has been conducted and completed as a condition for the loan. Cabinet and Parliamentary approvals have also been secured and an implementation Team for the project has arrived in Ghana from China for data collection and assessment for design."

ChinAfrica can confirm that the Messrs China Gezhouba Group Company Limited has started the Kpong project work in earnest. When ChinAfrica visited the Kpong Water Project site, many Ghanaians and Chinese workers are assiduously constructing the 40 million gallon treatment plant. "Work is on schedule and we hope to be ready with the plant construction in the middle of 2014," said Mr. Chen Jing, the Public Relations Manager of the Messrs China Gezhouba Group Company Limited.

The site engineer of the company Mr. Wubin was happy with the state of work. “We are very satisfied with the state of work so far and hope to finish on schedule,” he said. Residents along the Kpong, Tema-Accra metropolitan areas are looking forward to the end of their water problems when the construction work is completed. “We cannot wait to see the completion of the Kpong Water Treatment Plant,” Said Elizabeth Amponsah, the Kenkey seller at Dodowa near Accra. “We can now have water at home for our domestic use and that will also mean that our children will rest from the hustles of looking for water before going to school.”

“China helps solve Ghana’s water problems”, 11/06/2012, online at: <http://www.newstimeafrica.com/archives/26136>

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❖ **Water, the next flash-point: tensions rising in the Middle East over shrinking water supplies**

**June 15, 2012 – MIDDLE EAST** – Amid the profound political changes sweeping the Arab world, there are moves to rewrite contentious water-sharing agreements that are becoming a major source of friction in the Middle East as water supplies shrink. In May, Iraqi Prime Minister Nouri al-Maliki warned his neighbors, with Turkey and Syria his main targets that the region faces conflict unless the issue of dwindling water resources is addressed by regional governments. Baghdad is increasingly angry and frustrated at the failure of Turkey, in the north, and Syria, to the west, to resolve a growing crisis over the reduced flow and the deteriorating quality of water from the Euphrates and the Tigris rivers they allow Iraq. Maliki's biggest fear is that the water shortage, which has been worsening for a decade or more, will trigger violence within Iraq. "As the dust settles on the political unrest of 2011 and new governments and leaders are elected in Libya and Egypt over the next two years and South Sudan joins a group of countries looking to renegotiate the distribution of the Nile, there is likely to be renewed focus on resource security," the Middle East Economic Digest observed. The water issue is a constant factor in the tension between Israel and the Palestinians in the occupied West Bank. The business weekly said "the most contentious dispute over water resources in the region" centers on the Jordan River, which flows through Lebanon, Syria, the West Bank, Jordan and Israel. Israelis use 66 gallons a day, while Palestinians are limited to 15.4 gallons, even though they claim a major underground aquifer and access to Jordan River. Rivers including the Euphrates, Tigris, Nile and even the Jordan River, which cross national boundaries and are a major source of water supply, could well become flashpoints for rising regional tension. "Equally, governments' ability to manage their rivers and negotiate with their upstream neighbors could well, as is the case in Iraq, lead to growing unrest at home," the weekly warned. Thirteen of the 20 states that make up the Arab League rank among the world's most water-scarce nations. **-UPI**

"Water, the next flash-point: tensions rising in the Middle East over shrinking water supplies", 15/06/2012, online at: <http://theextinctionprotocol.wordpress.com/2012/06/15/water-the-next-flash-point-tensions-rising-in-the-middle-east-over-shrinking-war-supplies/>

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### ❖ Water plan to take effect by 2012

BEIJING, June 11 (Xinhuanet) -- By the end of 2012, a water resource allocation plan for 25 rivers that flow through more than one province will be put into use, limiting the amount of water that can be taken from the rivers by each of the provinces.

"We are doing our best to accelerate the process," said Chen Ming, deputy head of the Water Resources Department at the Ministry of Water Resources. "Hopefully, the plan will come out by August."

The water resource allocation plan is one of the moves the ministry has taken to promote the implementation of the most stringent regulations in Chinese water resource management.

Announced in January by the State Council, the regulation set four "must-complete" targets by 2030, including limiting the country's annual total water consumption to less than 700 billion cubic meters.

The regulation also asks the entire country to limit the scale of water exploitation, improve the efficiency of water usage and curb water pollution.

"There are no other countries that have set such detailed targets to restrict their own development by limiting usage of water resources," Chen said.

China's average per capita water capacity is 2,100 cu m, only 28 percent of the world's per capita level. The annual average water shortfall is 50 billion cu m, according to the ministry.

In contrast with the severe water shortage, the efficiency of water usage is far below the world's leading level.

"If we don't change the way we use water resources, by 2030 the country's average per capita water capacity will be only 1,730 cu m," said Chen.

Anything below 1,700 cu m is deemed as "falling short with water", according to the standard set by the United Nations Educational, Scientific and Cultural Organization.

According to international common practices, the exploitable water resources of a country must be less than 40 percent of its total water resources, otherwise the ecosystem will be largely damaged.

Chen said the first target in the regulation - the figure of 700 billion cu m annual total water consumption - was calculated after considering the necessary amount needed for development, the exploitable amount that the environment can afford and the principle of a properly tightened budget. The current figure is about 600 billion cu m.

Many cities rely heavily on water-consuming industries to boost the local economy. The central government has come up with several policies to deal with this situation.

The core is a plan called water resources assessment, which is completed in some cities before the environmental impact assessment. Newly built water-consuming projects must use recycled water or seawater during production to receive approval from the National Development and Reform Commission, Chen said.

He said the enterprises should also improve their production line to reduce the water consumption of each product. Those who do well will receive subsidies from government at various levels.

"If the enterprises were cows, there are both policies to lead and to force them to run," said Chen. "But in the long run, they are sure to benefit from the policies."

Chen emphasized that once the water quota is allocated to all provinces, it cannot be traded in the market, because the law system to explain the notion of water rights is still inadequate in China.

"Administrative measures and market mechanisms are now working in parallel in China," he said. "The former one is currently in the lead because it hasn't played enough of a role in the past. But the trend in the future is the latter one."

A policy featuring the principle of water rights is undergoing a test run in Zhangye, Gansu province. Farmers there are given a water quota based on the scale of the land they are cultivating and the types of plants they grow. If they use less water than they are given, they can trade the quota left for money.

"Directly linking the concept of saving water and the farmers' revenue together is probably the best way to promote this concept in this group of people," Chen said.

Another part of work that is developing quickly is the construction of a nationwide monitoring system, Chen said.

The ministry currently only directly monitors about 30 percent of all the important rivers and reservoirs and relies on provincial governments for information about the rest of the bodies of water.

Within three years, a nationwide monitoring system will cover all major water-consuming enterprises, interprovincial river cross sections and important lakes and reservoirs, with more than 10,000 monitoring points transferring real-time data of water pumped from the water bodies.

"When reaching all the targets in 2030, changes in the mode we use water resources to boost economic development should also be finished," said Chen.



"Then the country will start a whole new page in the way it consumes its water resources, with the growth in the annual water consumption stopping. Thus, a more stringent regulation is unnecessary in future if we can successfully implement this one."

"Water plan to take effect by 2012", 11/06/2012, online at: [http://news.xinhuanet.com/english/china/2012-06/11/c\\_131644516.htm?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=8774c20272-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email](http://news.xinhuanet.com/english/china/2012-06/11/c_131644516.htm?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=8774c20272-RSS_EMAIL_CAMPAIGN&utm_medium=email)

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## ❖ Squeezing Africa dry: behind every land grab is a water grab

*Food cannot be grown without water. In Africa, one in three people endure water scarcity and climate change will make things worse. Building on Africa's highly sophisticated indigenous water management systems could help resolve this growing crisis, but these very systems are being destroyed by large-scale land grabs amidst claims that Africa's water is abundant, under-utilised and ready to be harnessed for export-oriented agriculture. GRAIN looks behind the current scramble for land in Africa to reveal a global struggle for what is increasingly seen as a commodity more precious than gold or oil - water.*

The Alwero river in Ethiopia's Gambela region provides both sustenance and identity for the indigenous Anuak people who have fished its waters and farmed its banks and surrounding lands for centuries. Some Anuak are pastoralists, but most are farmers who move to drier areas in the rainy season before returning to the river banks. This seasonal agricultural cycle helps nurture and maintain soil fertility. It also helps structure the culture around the collective repetition of traditional cultivation practices related to rainfall and rising rivers as each community looks after its own territory and the waters and farmlands within it.

One new plantation in Gambela, owned by Saudi-based billionaire Mohammed al-Amoudi, is irrigated with water diverted from the Alwero River. Thousands of people depend on Alwero's water for their survival and Al-Moudi's industrial irrigation plans could undermine their access to it. In April 2012, tensions over the project spilled over, when an armed group ambushed Al-Amoudi's Saudi Star Development Company operations, leaving five people dead.

The tensions in south western Ethiopia illustrate the central importance of access to water in the global land rush. Hidden behind the current scramble for land is a world-wide struggle for control over water. Those who have been buying up vast stretches of farmland in recent years, whether they are based in Addis Ababa, Dubai or London, understand that the access to water they gain, often included for free and without restriction, may well be worth more over the long-term, than the land deals themselves.

In recent years, Saudi Arabian companies have been acquiring millions of hectares of land overseas to produce food to ship back home. Saudi Arabia does not lack land for food production. What's missing in the Kingdom is water, and its companies are seeking it in countries like Ethiopia.

Indian companies like Bangalore-based Karuturi Global are doing the same. Aquifers across the sub-continent have been depleted by decades of unsustainable irrigation. The only way to feed India's growing population, the claim is made, is by sourcing food production overseas, where water is more available.

"The value is not in the land," says Neil Crowder of UK-based Chayton Capital which has been acquiring farmland in Zambia. "The real value is in water." [1]

And companies like Chayton Capital think that Africa is the best place to find that water. The message repeated at farmland investor conferences around the globe is that water is abundant in Africa. It is said that Africa's water resources are vastly under utilised, and ready to be harnessed for export oriented agriculture projects.

The reality is that a third of Africans already live in water-scarce environments and climate change is likely to increase these numbers significantly. Massive land deals could rob millions of people of their access to water and risk the depletion of the continent's most precious fresh water sources.

All of the land deals in Africa involve large-scale, industrial agriculture operations that will consume massive amounts of water. Nearly all of them are located in major river basins with access to irrigation. They occupy fertile and fragile wetlands, or are located in more arid areas that can draw water from major rivers. In some cases the farms directly access ground water by pumping it up. These water resources are lifelines for local farmers, pastoralists and other rural communities. Many already lack sufficient access to water for their livelihoods. If there is anything to be learnt from the past, it is that such mega-irrigation schemes can not only put the livelihoods of millions of rural communities at risk, they can threaten the freshwater sources of entire regions.

“Squeezing Africa dry: behind every land grab is a water grab”, GRAIN, 11/06/2012, online at:

<http://www.grain.org/article/entries/4516-squeezing-africa-dry-behind-every-land-grab-is-a-water-grab>

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## ❖ Africa land deals lead to water giveaway

Africa heads for 'hydrological suicide' as land deals hand water resources to foreign firms, threatening environmental disaster.

Millions of people will lose access to traditional sources of [water](#) because of "land grabs" in Africa, according to a report on Monday that looks behind the scramble for farmland in Africa.

The report: [Squeezing Africa dry: behind every land grab is a water grab](#), shows how land deals, covering millions of acres of fertile lands, also pose a threat to Africa's fresh water systems.

"If these land grabs are allowed to continue, Africa is heading for a hydrological suicide," said Henk Hobbelink, co-ordinator of Grain, a group that backs small farmers.

The report – the latest to raise the alarm over competition for scarce water resources – said all land deals in Africa involve large-scale industrial agriculture operations that will consume massive amounts of water, could rob millions of people of their [access to water](#) and risk the depletion of the continent's most precious water sources.

Grain cites the Nile and Niger river basins as two examples of the "giveaway" of land and water rights. Three of the bigger countries in the Nile basin – Ethiopia, South Sudan and Egypt – have already leased out millions of hectares in the basin. Citing figures from the UN's Food and Agriculture Organisation (FAO), Grain said these made clear that recent land deals vastly outstrip water availability in Nile basin.

According to Grain, Ethiopia, Sudan, South Sudan and Egypt already have irrigation infrastructures in place for 5.4 million hectares (13 million acres) of land and have now leased out a further 8.6 million hectares of land.

"This would require much more water than what is available now in the entire Nile basin and would amount to no less than hydrological suicide," said the report.

In the Niger river basin, independent experts believe Mali has the water capacity to irrigate only 250,000 hectares. Yet, said Grain, the Malian government has already signed over 470,000 hectares to foreign companies from Libya, China, the UK, Saudi Arabia and other countries in recent years, virtually all of it in the Niger basin.

Grain said the secrecy around land deals makes it hard to know exactly what is being handed over to foreign companies, but from those contracts leaked or made public, it is clear they tend not to contain any specific mention of water rights, leaving the companies free to build dams and irrigation canals at their discretion.

The group warns that the impact of the land deals will last beyond the immediately affected communities and constitutes an environmental disaster in the making as there is simply not enough water in Africa's rivers and water tables to irrigate all the newly acquired land.

"If and when they are put under production, these 21st century industrial plantations will rapidly destroy, deplete and pollute water sources across the continent," said Grain, citing India and China where soil degradation, salinisation and waterlogging have occurred following such techniques.

"If the goal is to increase food production," said Grain, "then there is ample evidence that this can be most effectively done by building on the traditional water and soil conservations systems of local communities. Their collective and customary rights over land and water sources should be strengthened not trampled."

Other groups have raised the alarm over water in connection with big land deals in Africa. The [International Institute for Environment and Development said in a report in November that African governments seem to have been signing away water rights](#) for decades, with major implications for local communities.

Last month, the [European Report on Development said the international community needed to "radically transform" the way it manages water, energy and land](#) to ensure the needs of the poorest people are met and the environment is protected.

"Africa land deals lead to water giveaway", 12/06/2012, online at: <http://www.guardian.co.uk/global-development/2012/jun/12/africa-land-deals-water-giveaway?newsfeed=true>

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## ❖ Africa: Efficient Water Use Critical, Clinton Says

Washington — The world will experience a water crisis if more ways to efficiently use the resource are not found, says Secretary of State Hillary Rodham Clinton.

Clinton spoke June 12 at a State Department ceremony announcing Israeli water and soil expert Daniel Hillel as winner of the 2012 World Food Prize. Hillel was named in honor of his 40 years of work developing microirrigation methods for arid regions, opening those regions to farming. The methods consistently apply small, accurate amounts of water to plant roots, producing major increases in crop yields and conserving water.

Drawn to the critical need for water in arid regions during his years as a child living in the highlands of the Negev desert, Hillel developed the new approach to provide low-volume, high-frequency measured water to crops.

Hillel's methods were first applied in the Middle East, then spread to Africa, Asia and the Americas.

"Today, farmers using microirrigation produce high-yield, nutritious crops on more than 6 million hectares worldwide," Clinton said. She noted that more water is used for agriculture than for any other purpose.

Clinton said the Obama administration has prioritized agricultural development through its Feed the Future food-security initiative. Feed the Future focuses on "finding ways to do more with less and deliver results to people in need," she said. Since 2011, Feed the Future has dedicated more than \$100 million to promote water productivity in agricultural development.

One example of a Feed the Future effort is in Senegal, where the U.S. Agency for International Development (USAID) and the Peace Corps developed a program to teach farmers how to reduce the amount of water they lose through evaporation while tripling their maize yields.

Nearly 1 billion people around the world go to bed hungry every day, and by 2050 the world's population is estimated to reach 9 billion, Clinton said. The U.N. Food and Agriculture Organization estimates that in that time agricultural production must increase by 60 percent and the demand for water to grow food will increase by 20 percent. Yet the world's water supply is finite, Clinton said. "Doctor Hillel's work will become even more important as we grapple with how to feed the world's growing population," she added.

"Scarce food resources can lead to panic buying, countries disrupting or even stopping their food trades, and spikes in the prices of food," Clinton said. "That can then lead to public unrest or violent protests."

At the G8 summit outside Washington in May, President Obama announced the latest agriculture partnership, called the New Alliance for Food Security and Nutrition. The G8 consists of Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States.

"The Green Revolution saved as many as a billion people from starvation. It is up to us to make sure we save the next billion," Clinton said.

"Africa: Efficient Water Use Critical, Clinton Says", 13/06/2012, online at:

<http://allafrica.com/stories/201206131388.html>



## ❖ **Uganda: Government Allocates 355 BN/= to the Water Sector**

The government of Uganda has allocated Shs. 355 billion to the water sector in the 2012/2013 financial year.

In last year's budget, the government earmarked Shs 271 billion to the same sector.

The minister of finance, planning and economic development, Maria Kiwanuka said the increase is necessary because "the component for bulk water supply previously under the agricultural sector has now been transferred to the water sector."

While presenting the national budget in Kampala, Kiwanuka said the government's priority in the water sector is to avail it for production.

She noted that the government plans to have an emergency rehabilitation and upgrading of Gaba I and II intake to increase water production capacity to 300 million liters per day and construction of a four million liters reservoir at Namasuba-a city suburb.

Kiwanuka revealed that in next financial year, gravity flow schemes supplying Nabweya, Lirima and Kanyampaga and small piped water systems for Luanda, Kabumba and Ongino Rural Growth centers will be constructed, for improved rural water supply.

She added that piped water systems will also be built in Lamwo, Agago and Nwoya, among many others. The ongoing construction of piped water systems in Paidha, Patongo, Opit, Omugo and 25 other township townships will be completed.

About a quarter of Uganda's population lack access to safe water

The government will also start constructing new systems in Moyo, Ibuye, Kalongo, Purongo and Akujo, she said.

She also revealed plans for further investments in urban water supply and drilling of boreholes.

Through the National Water and Sewerage Corporation, she added, the government will undertake a number of projects of constructing a water treatment plant, rehabilitation of Bugolobi Sewage treatment plant and construction of waste water management plant.

In order to address constraints in water for production, the government plans to rehabilitate windmills in Karamoja Region, construct Kitasi-Sanga-Kanyaryeru bulk water scheme in Kiruhura district, design the Rwengaaju irrigation scheme in Kabarole and Kulwodong dam in Abim District.

About a quarter of Uganda's population lack access to safe water.

"Uganda: Government Allocates 355 BN/= to the Water Sector", Paschal B. Bagonza, 15/06/2012, online at:

<http://waterjournalistsafrika.wordpress.com/2012/06/15/uganda-government-allocates-355-bn-to-the-water-sector/>

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### ❖ **Zambia: Call-Boys Urinate against Poor Sanitation**

In a bizarre way of demonstrating, call-boys at the main commuter station of Zambia's tourist capital Livingstone have urinated against poor sanitation during a visit by the parliamentary committee on local government.

Call-boys are the rowdy youths who earn their living by shouting for customers and wooing commuters at bus stations or bus stops.

The peculiar incident happened when committee members led by Eustackio Kazunga visited the Livingstone bus station to familiarize themselves with the challenges being faced by the Livingstone City Council in terms of sanitation last week.

Poor Sanitation and hygiene remains one of dangerous threats to good health in most Africa's towns

Determined to raise the profile of their plight, albeit in a unique way, the call boys invited the cameraman from the public broadcaster, the Zambia National Broadcasting Corporation (ZNBC) who was covering the tour and led him to a caravan situated next to a makeshift restaurant commonly known as 'Savage Restaurant' where they openly urinated.

"We want to show you how we go about our daily lives. This is our only toilet and behind this caravan is a restaurant," said one call boy as others joined him in the urinating mission.

As the committee bypassed the caravan, the call boys shouted while pointing at the heaps of garbage and their makeshift 'toilets'.

Three other boys urinating as Kazonga, who is former local government minister, hurriedly walked on.

Earlier, a minibus driver pushed his way through the councilors who accompanied Kazonga to brief him on the bad state of the station.

"This place is very bad, especially during the rainy season. We want it to be worked on," said.

In response, Kazonga said "The council management is here with the Town Clerk and the mayor and they are listening. We want this place to be a decent one with toilets and running water."

"Zambia: Call-Boys Urinate against Poor Sanitation", Newton Sibanda, 15/06/2012, online at:  
<http://waterjournalistsafrika.wordpress.com/2012/06/15/zambia-call-boys-urinate-against-poor-sanitation/>

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## ❖ UN And Bahrain Highlight RIO+20

Manama-June-10(BNA) Manama, 10 June 2012 (UN Information Centre) – In line with the preparations for the United Nations Rio+20 Conference on Sustainable Development, the UN Country Team in Bahrain jointly with the Public Commission for the Protection of Marine Resources, Environment & Wildlife, held a press conference to shed light on the Rio+20 Conference on Sustainable Development that the UN is set to hold at the level of heads of states and government from 20-22 June 2012 in Rio de Janeiro, Brazil.

The press conference brought together Dr Adel Al Zayani, Director-General of the Public Commission for the Protection of Marine Resources, Environment & Wildlife, Dr Iyad Abumoghli, Director & Regional Representative of the United Nations Environment Programme Office for West Asia and Mr Peter Grohmann, Resident Representative of the United Nations Development Programme Bahrain and UN Resident Coordinator.

In his opening statement, Dr Al Zayani praised the partnership between the Kingdom of Bahrain and the UN System in the country and hailed Bahrain 's commitment to promoting sustainable development with a focus on the environment. Dr Al Zayani further expressed his enthusiasm on Bahrain 's participation at the Rio+20 conference pledging that the outcomes of the summit will be incorporated in Bahrain 's development strategy and its 2030 vision.

In his statement, Mr Grohmann stated that “We are 10 days away from the start of the Earth Summit in Rio or Rio plus 20.This Conference represents a once-in-a-generation opportunity to transform ideas and concepts into clear actions for sustainable development. Rio+20 stands under the slogan “the future we want” and may generate a strong commitment from leaders across the world to building the future we all want, a future made to last—one that affords greater prosperity and equitable growth on a healthy planet for present and future generations.”

Mr Grohmann further stated that Bahrain has made great progress in achieving the Millennium Development Goals and higher Human Development in General and that the next step is to foster sustainable development goals that put Bahrain's economic and social development on an environmentally sustainable path. He noted that as a Small Island Developing State, Bahrain faces water scarcity and vulnerability to Sea Level Rise. Greater Energy Efficiency and the use of renewable energy sources are another priority. With recent projects like the solar energy park, Bahrain is already putting notable efforts in addressing its sustainability issues. Mr Grohmann said that the discussions in Rio+20 may be crucial for Bahrain to design its Sustainable Development Goals that provide a clear roadmap with measurable goals towards an environmentally friendly development.

Mr Grohmann further assured that the United Nations System in Bahrain is strongly committed to accompanying the Government and people of Bahrain on their path to sustainable development. The resident agencies UNEP, UNDP, UNIDO and the World Meteorological Organization are all contributing expertise, ideas and policy advice on issues such as environmental planning, energy efficiency and renewable energy, integrated management of water resources and coastal zone management, climate change, biodiversity and green industry. He declared that the UN System in Bahrain plans this year, in close consultation with the Government, to develop a framework for

strategic interventions in the area of environment, which will build on the outcomes of the Rio+20 conference.

In his address at the conference, Dr Abumoghli stated “During the past four years, ten new million jobs have been created by Green Economy in fields such as renewable energy, agriculture, recycling as well as in the sustainable transportation and green building sectors. Such green economy opportunities lead to an economic growth (between 1/2 to 2%), in the developing countries.”

Dr Abumoghli said that Green Economy is not a common standard of living to be applied by all the countries at once. Each country, community, company or individual is invited to adopt the appropriate means that comply with his capabilities and apply the international standards convenient to the local policies of the state. He declared that there are many examples that show the benefits resulting from the Green Economy. For instance, Germany declared last week, that most of the country has implemented the renewable energy measures. The country investment in the Green Economy reached 100 billion dollars.

Dr Abumoghli further stated that many of the Arab Countries are currently involved in the Green Economy initiative and have adopted the same in their transportation policies, such as the project of the Gulf Railway that connects the six Arab Gulf countries, the sustainable buildings such as MASDAR City and the Green buildings in Jordan, as well as a decree in Syria which stipulates the implementation of Solar Water heaters in new buildings. He emphasized the need to establish an Arab Financial fund to sponsor the regional projects relating to the desertification, dust storms, renewable energy, food security, access to the freshwater etc.

“UN And Bahrain Highlight RIO+20”, 10/06/2012, online at: <http://www.bna.bh/portal/en/news/512451>

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## ❖ The Coca-Cola Foundation Awards \$26 Million to 85 Global Organizations During First Quarter 2012 Funding Supports Global Efforts To Create Sustainable Communities

ATLANTA, Jun 11, 2012 (BUSINESS WIRE) -- The Coca-Cola Foundation -- the global philanthropic arm of The Coca-Cola Company -- awarded US\$26 million in grants to 85 community organizations during the first quarter. The grants support the Foundation's global priority areas, including: \$9.7 million for water stewardship; \$3.6 million for fitness and nutrition; \$7.4 million for education (including \$5 million for first generation college scholarships); and \$4.9 million for community recycling, and other local priorities, such as HIV/AIDS, malaria, youth development, and civic initiatives.

"We measure the success of our commitments by the impact these grants will have in people's lives, in their neighborhoods and in their communities all over the world," said Ingrid Saunders Jones, Chairperson of The Coca-Cola Foundation. "Seeing the tangible results of partnership and innovation inspires our continued investment to help build sustainable communities around the world."

These grants will make a powerful difference and will benefit:

- 2 million people worldwide with improved access to clean water or sanitation;
- 3.1 billion liters of water will be conserved; 48 tons of debris will be collected;
- 8.9 million people will benefit from increased water conservation and education;
- 2.3 million youth and adults will participate in fitness or nutrition programs; and
- 255,000 students will benefit from education programs; 32,639 will be awarded scholarships; and 169 colleges and other schools will receive grant support.

Organizations receiving grant funding from The Coca-Cola Foundation include:

### WATER STEWARDSHIP

- ACF Stakeholders, Inc., Sustainable Water Management Plan, benefiting residents of 80 counties in Georgia, Alabama and Florida, United States, \$50,000.
- Bonneville Environmental Foundation, East Fork Bear River Water Restoration Certificate Project, benefiting watershed conservation efforts and providing protection for the Bonneville cutthroat trout and other state-listed sensitive species, United States, \$250,000.
- The Coca-Cola Africa Foundation -- Global Environment & Technology Foundation, Replenish Africa Initiative, benefiting two million people in 17 African countries with improved access to water and sanitation services, Africa, \$7 million.



- Earth Day Network Philippines, Inc., Agos Ram Pump Project, to provide access to water and sanitation for more than 15,000 residents of 12 upland communities, Philippines, \$279,630.
- Landcare Australia Ltd., Coca-Cola & Landcare Australia Watershed Protection and Regeneration Program 2012, supporting 12 community water quality improvement projects, Australia, \$102,000.
- Mediterranean Information Office for Environment, Culture and Sustainable Development (Dodecanese, Greece), Rainwater Harvesting Program, to support installation of rainwater harvesting projects, Greece, \$300,000.
- Plan International India Chapter, Improving Water and Sanitation Facilities in Indian Schools, benefiting 10,000 children in 50 schools, India, \$249,984.
- Pronatura Mexico, A.C., Catch Water Ponds in Five Communities in Mexico, to support the rebuilding of five rainwater catchment ponds, benefiting 2,000 people, Mexico, \$500,000.
- Pronatura Mexico, A.C., Drip Irrigation Systems, benefiting 500 small farmers with irrigation systems for backyard vegetable gardens, Mexico, \$100,000.
- Thames21 Limited, Big Waterways Clean Up 2012, an initiative to organize 4,000 volunteers to clear London-area rivers and canals of debris in advance of the 2012 Olympic Games, Great Britain, \$40,000.
- UN-Habitat, Schools for Wash and Groundwater Recharge Promotion South Asia, benefiting 30,000 children by providing improved water, sanitation facilities and rainwater harvesting structures in Bangladesh, India, Nepal, Pakistan and Sri Lanka, \$750,000.
- Urban Farming, Inc., Urban Farming/Coca-Cola Rain Barrel Harvesting Project, to support installation of rainwater harvesting and irrigation systems in Ohio and Michigan, United States, \$100,000.
- Water Environment Federation, U.S. Stockholm Junior Water Prize, to support the 2012 U.S. Stockholm Junior Water Prize competition in the U.S., benefiting students and schools participating in water-related science projects and education, United States, \$25,000.

## COMMUNITY RECYCLING

- Piedmont Park Conservancy, Inc., Piedmont Park Recycling Program, for ongoing operations of recycling programs and public education at Atlanta's Piedmont Park, diverting 48 tons of recyclables from landfills, United States, \$20,000.
- Singapore Environment Council, Community Recycling in Public Housing, to support a recycling awareness campaign, Singapore, \$50,000.



## ACTIVE HEALTHY LIVING

- 100 Black Men of America, Inc., 100 Healthy Living Project 2012, benefiting 1,200 young people through mini-grants to seven local chapters to expand the "Nutrition and Physical Activity The 100 Way Program" and "Youth Movement," a track and field program for at-risk youth, United States, \$150,000.
- Agricultural University of Athens, Nutrition and Physical Activity Program for School and Family Environments, benefiting 6,500 children and parents participating in a nutrition and physical activity program, Greece, \$250,000.
- Aktif Yasam Dernegi, Active Schools, benefiting 25,000 children by providing playgrounds and physical activity programming in 60 schools, Turkey, \$750,000.
- China Youth Care Foundation, Balanced Diet-Active Living Program, to continue support for the China School Active Lifestyle Campaign in 20 cities and more than 60 universities, China, \$400,000.
- Delta Citizens Alliance, Delta Energy Youth Program, to support a network of daycare centers for children in the mid-Delta region of Mississippi with programming to encourage healthy eating and exercise, United States, \$25,000.
- French Diabetics' Association, Balanced Diet and Physical Activity for Diabetic Peer Support Groups, to support training for 180 diabetic patients who will lead support groups for 18,000 adults coping with diabetes, France, \$300,000.
- Harokopio University, Medweight Study: Lifestyles for Weight Loss Maintenance, to fund a study of lifestyle factors associated with long-term weight loss maintenance in the Mediterranean population, Greece, \$175,000.
- International Sport And Culture Association, +100m Campaign For Sport And Physical Activity, supporting the European Parliament's Committee on Culture and Education campaign to encourage 100 million more Europeans to become active in sports and physical activity, Iceland, Norway and Switzerland, \$500,000.
- Klichko Brothers Foundation, Call Your Friends -- Let's Play Together, benefiting 10,000 children and their families by building 12 playgrounds, Ukraine, \$210,000.
- Maistobankas (Food Bank), Sveikatiada Healthy School Program, benefiting 11,000 students and adults by expanding nutrition and physical activity education in 56 schools, Lithuania, \$15,000.
- NGO Sport Club Motion, National "Let's Get Active!" Campaign, to fund a national public awareness campaign to educate Estonians on the need to increase physical activity and have a balanced diet, Estonia, \$60,000.

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- Olimpiady Specjaine Polska (Special Olympics), Special Olympics -- Poland, benefiting more than 16,000 children participating in regional and national Special Olympics events, Poland, \$30,000.
  - Palestine Association for Children's Encouragement of Sports, Positive Change Through Sports, benefiting 6,800 students by funding summer and after-school sports programs, Jordan, Lebanon and Palestinian Territories, \$50,000.
  - Piedmont Park Conservancy, Inc., Kids Get Active, benefiting more than one million children through operations and upkeep of the playground and other facilities at Atlanta's Piedmont Park, United States, \$30,000.
  - San Francisco Parks Alliance, Mobile Recreation Program, benefiting over 1,600 young people through expansion of the Mobile Recreation program at 17 centers, United States, \$100,000.
  - Serbian Institute of Sport, Physical Activity, Health and Exercise Therapy, benefiting 17,000 students and adults in a pilot program prescribing regular physical activity for elementary school students, Serbia, \$215,000.
  - SIEMACHA Association, Juliada, benefiting 5,500 at-risk youth with support for free sports programming, Poland, \$35,000.
  - Slniecko - Obcianske Zdruzenie Celiatikov S Rodinou I PriateImi Presovsko -- Sabinovsko, "Don't Be Lazy" Campaign, benefiting 5,000 teenagers through development of interactive classroom seminars that promote healthy, active lifestyles, Slovakia, \$35,000.
  - Szkolny Związek Sportowy (Sport School Association), Animator Of The Sports For Children And Young People, for a national contest to recognize the 15 best youth sports programs in the country, including coaches and creators, Poland, \$100,000.
  - Young Men's Christian Association of Metropolitan Atlanta, Inc., Scholarships to Attend Camp High Harbour, benefiting more than 30 youth with scholarships to attend summer camp, United States, \$25,000.

## EDUCATION

- Seventeen colleges and universities will share grants totaling \$5 million as part of The Coca-Cola First Generation College Scholarship Program, including:
  - Alabama A&M University Foundation, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - Alcorn State University Foundation, Inc., Coca-Cola First Generation Scholarships, benefiting four students who are their first in their immediate family to attend college, United States, \$50,000.

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- Asian And Pacific Islander American Scholarship Fund, Coca-Cola First Generation Scholarship Program, to provide scholarships to 45 Asian American and Pacific Islander students who are the first in their immediate family to attend college, United States, \$150,000.
  - Bethune-Cookman University, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - California State University, Long Beach Foundation, Coca-Cola First Generation Scholarships, benefiting 25 students from California who are the first in their immediate family to attend college, United States, \$500,000.
  - Fayetteville State University Foundation, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - Jackie Robinson Foundation, Inc., Coca-Cola First Generation Scholarships, benefiting five students who are the first in their immediate family to attend college, United States, \$100,000.
  - Johnson C. Smith University, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - Kentucky State University, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - Mississippi Valley State University, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - Morehouse College, Coca-Cola First Generation Scholarships and Pre-College Leadership Program, benefiting more than 150 students through the Campaign for a Morehouse Renaissance, United States, \$1.2 million.
  - Oglethorpe University, Coca-Cola Oglethorpe Scholars Program, benefiting 100 students who are the first in their immediate family to attend college, United States, \$1 million.
  - South Carolina State University, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - Texas Southern University Foundation, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.
  - University of Arkansas at Pine Bluff, Coca-Cola First Generation Scholarships, benefiting four students who are the first in their immediate family to attend college, United States, \$50,000.

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- University of Illinois at Urbana-Champaign, First Generation Coca-Cola Scholars at Illinois, benefiting 24 students who are the first in their immediate family to attend college, United States, \$500,000.
  - The University of Texas-Pan American Foundation, Coca-Cola First Generation Scholars at The University of Texas-Pan American, benefiting 20 students who are the first in their immediate family to attend college, United States, \$500,000.
  - Villanova University, Coca-Cola First Generation Scholarship Program, benefiting 20 students who are the first in their immediate family to attend college, United States, \$500,000.
- Other educational grants awarded during the first quarter of 2012 include:
- Abyssinian Development Corporation, The Abyssinian Neighborhood Education Plan, benefiting 500 students at the Bread & Roses Integrated Arts High School in Harlem, New York City, through support of school improvement efforts, United States, \$500,000.
  - American Association of Community Colleges, New Century Scholarship Program, benefiting 50 community college students through continued support for scholarships, United States, \$55,000.
  - Apollo Theater Foundation, Inc., The Apollo Theater Academy, to support the education of 3,000 New York City high school students on careers in the arts and entertainment industry, United States, \$200,000.
  - Atlanta Fulton County Zoo, Inc., Education Programs, benefiting 172,000 students through education and outreach programs aimed at enhancing the zoo's accessibility to the entire community, United States, \$250,000.
  - Atlanta Girls' School, Inc., Financial Aid Program, to provide financial assistance to 70 students recruited through A Better Chance, United States, \$50,000.
  - China Youth Development Foundation, Project Hope Post-Construction School Program and Teacher Training, benefiting 32,000 students through renovation and improvement of 69 Project Hope Schools and training for 100 teachers, China, \$500,000.
  - The Coca-Cola Africa Foundation -- Zawadi Africa Educational Fund, Zawadi Africa Educational Fund, to provide support for 180 young women participating in the Zawadi Scholarship Program and for programs aimed at 600 high school graduates; Ghana, Kenya, South Africa, Uganda and United States, \$100,000.
  - The Executive Leadership Foundation, Award for Excellence in Business Commentary National Essay Competition, benefiting 30 undergraduate students through scholarship support, United States, \$450,000.

- The Georgia Charter Schools Association, Georgia Charter School of the Year Award 2012, to fund the award to recognize a single Georgia charter school that exemplifies excellence in critical success areas, United States, \$50,000.
- Holy Innocents' Episcopal School, Financial Aid Support For Minority Students, to provide tuition assistance to up to five students recruited through A Better Chance, Atlanta, United States, \$50,000.
- NGO Publishers' Forum, International Children's Festival -- Bookmania, benefiting 25,000 children and teenagers with funding for a series of literary events and a reading competition, Ukraine, \$20,000.
- Somali and American Fund for Education, Improving Access to K-12 Education, benefiting 250 students by renovating a primary school and increasing access to education, Somalia, \$10,000.

#### LOCAL PRIORITIES

- Six global organizations will receive grants totaling \$3.5 million to support HIV/AIDS and malaria awareness and prevention
- AID for AIDS International, Cuanto Sabes? (How Much Do You Know About HIV and AIDS?), benefiting 150,000 teenagers through support of an HIV/AIDS prevention program, Colombia, Dominican Republic, Panama and Venezuela, \$100,000.
- The Coca-Cola Africa Foundation -- Hope Worldwide, Ltd., Care And Support For Orphans And Vulnerable Children In Africa, providing care and support for 30,000 children and training for caregivers and community partners in Botswana, Ivory Coast, Kenya, Mozambique, Nigeria, South Africa, Zambia and Zimbabwe, \$400,000.
- The Coca-Cola Africa Foundation -- Rotarians For Fighting AIDS, Inc., Rotary Family Health Day 2012, benefiting 75,000 people with HIV/AIDS testing and counseling and other health care services at 210 sites, Kenya, Nigeria and Uganda, \$250,000.
- The Coca-Cola Africa Foundation -- Citihope International Inc., The Coca-Cola Medical Relief Initiative, benefiting over 125,000 patients and health care workers through distribution of pharmaceuticals and medical supplies in Cameroon, Ethiopia, Kenya, Malawi and Morocco, \$600,000.
- The Coca-Cola Africa Foundation -- Episcopal Relief & Development, NetsforLife -- A Malaria Prevention Program, support for net distribution and ongoing evaluation and monitoring of more than 21 million people in Kenya, Liberia, Malawi, Mozambique, Namibia, Nigeria, Sierra Leone, Tanzania, Uganda, Zambia and Zimbabwe, \$1 million.



-- The Coca-Cola Africa Foundation -- Medshare International Inc., Donations to Medically Underserved Facilities, to support delivery of medical supplies and biomedical equipment to hospitals and healthcare facilities in Cameroon, Ghana, Kenya, Malawi and Morocco, \$800,000.

Other local priorities receiving grants during the first quarter of 2012, include:

-- World Vision India, Support My School Campaign, benefiting more than 17,000 students through the renovation of schools, India, \$250,000.

-- Girls Incorporated, Exploring Entrepreneurial Experiences (E3), benefiting 50 students through expansion of the E3 Program, which introduces girls to financial literacy and entrepreneurial concepts, United States, \$100,000.

-- Junior Achievement of Georgia, Inc., Junior Achievement Means Success and JA Fellows Programs, benefiting 650 middle and high school students in Georgia with programs that teach economic and financial literacy skills, United States, \$25,000.

-- Maynard Jackson Youth Foundation Inc., Leadership Academy and Foundation Operations, benefiting 80 Atlanta-area high school students in the Leadership Academy, United States, \$50,000.

-- National Black Arts Festival, Inc., National Black Arts Festival 2012 Education Programs, to support the 2012 Children's Education Village, benefiting more than 5,000 youth from summer camps across the southeast, United States, \$100,000.

-- Aga Khan Foundation USA, Economic Development And Education Opportunities For Youth In Kyrgyzstan And Afghanistan, benefiting more than 12,000 students, youth entrepreneurs, teachers and farmers through support of entrepreneurial and education programs, Afghanistan and Kyrgyzstan, \$200,000.

-- Agence Du Don En Nature -- Eurogiki, Replication and Roll-out of L'Agence du Don en Nature (Gift In-Kind Agency), to support logistics and operations that benefit 300,000 people through collection and distribution of unsold non-food products, France, \$134,000.

-- Atlanta Leadership Development Foundation, Inc., Leadership Atlanta 2012-2013 Program Year, benefiting 80 program participants, United States, \$25,000.

-- United Way of Metropolitan Atlanta, 2012-2013 Women's Leadership Council Match, supporting the 2012 United Way Annual Campaign Women's Initiative, United States, \$100,000.

-- International Relief & Development, Improve Citrus Orchard Productivity of Small Farmers, supporting improved agricultural practices for 400 small citrus farmers, Pakistan, \$100,000.



- Pronatura Mexico, A.C., Creating Community Companies for Forest Plant Production, benefiting reforestation efforts across the country, Mexico, \$750,000.
- Pronatura Mexico, A.C., Education to Conserve Mexican Forest, to support forest conservation education and awareness, Mexico, \$150,000.
- Human Rights Campaign Foundation, A 50-State Campaign To Improve Care, to fund a campaign to improve healthcare equality for Lesbian, Gay, Bisexual and Transgender patients, United States, \$100,000.

#### About The Coca-Cola Foundation

The Coca-Cola Foundation awarded more than \$70 million to 263 community organizations around the world in 2011 to support sustainable community initiatives, including water stewardship, community recycling, active healthy living, and education. For more information about The Coca-Cola Foundation, please go to [www.thecoca-colacompany.com/citizenship/foundation\\_coke.html](http://www.thecoca-colacompany.com/citizenship/foundation_coke.html)

#### The Coca-Cola Company

The Coca-Cola Company KO +1.41% is the world's largest beverage company, refreshing consumers with more than 500 sparkling and still brands. Led by Coca-Cola, the world's most valuable brand, our Company's portfolio features 15 billion-dollar brands including Diet Coke, Fanta, Sprite, Coca-Cola Zero, vitaminwater, Powerade, Minute Maid, Simply, Georgia and Del Valle. Globally, we are the No. 1 provider of sparkling beverages, ready-to-drink coffees, and juices and juice drinks. Through the world's largest beverage distribution system, consumers in more than 200 countries enjoy our beverages at a rate of 1.8 billion servings a day. With an enduring commitment to building sustainable communities, our Company is focused on initiatives that reduce our environmental footprint, support active, healthy living, create a safe, inclusive work environment for our associates, and enhance the economic development of the communities where we operate. Together with our bottling partners, we rank among the world's top 10 private employers with more than 700,000 system employees. For more information, please visit [www.thecoca-colacompany.com](http://www.thecoca-colacompany.com) or follow us on Twitter at [twitter.com/CocaColaCo](https://twitter.com/CocaColaCo).

SOURCE: The Coca-Cola Foundation

“The Coca-Cola Foundation Awards \$26 Million to 85 Global Organizations During First Quarter 2012”, 11/06/2012, online at: <http://www.marketwatch.com/story/the-coca-cola-foundation-awards-26-million-to-85-global-organizations-during-first-quarter-2012-2012-06-11>

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## ❖ Land grabs menace food security in Latin America despite FAO claims

The Food and Agriculture Organisation of the United Nations position on land grabs legitimises the industrial monocultures responsible for the expulsion of farmers and indigenous communities from their lands say Latin American and Caribbean social movements and organisations. The groups denounced FAO's position in a "Declaration of Buenos Aires" signed at the third special Conference on Food Sovereignty [1], March 22-25th just prior to FAO's Regional Conference for Latin America and the Caribbean. The social movement conference gathered over 100 organisations from 20 countries in Latin America and the Caribbean to debate the most pressing issues in the region and propose policies towards achieving food sovereignty. The FAO-LAC conference, held every two years, is meant to help establish budget and programme priorities for FAO actions worldwide. FAO's claim, in recent studies, that "the land grabbing phenomenon is in its early stages and only found in two large countries: Argentina and Brazil" [2] set off alarm bells for conference participants and provoked a highly critical analysis of the FAO's position.

### Background

Faced with the ongoing issue of land grabbing, FAO stated the need for "responsible investment in agriculture", and proposed "the creation of an international consensus on the Principles for Responsible Agricultural Investments (RAI)" [3] along with other organizations such as the UN Organization on Commerce and Development (UNCTAD), the International Fund for Agricultural Development (IFAD) and the World Bank.

In response to these proposals, civil society organizations issued the Dakar Appeal during the Dakar Social Forum [4] asking the Committee on World Food Security (CFS) to reject RAI, considering it both illegitimate and inadequate to deal with the phenomenon of land grabbing.

FAO, IFAD and the International Institute for Environment and Development (IIED) published a joint study on the increase of land grabbing in Africa, in 2009. Following this report, the FAO's Regional Office for Latin America and the Caribbean (RLC) took the initiative to look for evidence that could indicate if the phenomenon of land grabbing was taking place in Latin America, and if so, to what extent. With this goal in mind, the RLC commissioned national studies in 17 countries across the region, focusing on the concentration and dynamics of land ownership over the last five years. On the 14th and 15th of November 2011, the FAO convened a meeting in Santiago, Chile, entitled "Dynamics of the Land Market in Latin America and the Caribbean", where they presented these studies and the aforementioned conclusion.

### Public or private?

According to social movements in Buenos Aires, the work presented by FAO "provides a very grave overview of the state of land in Latin America, the processes of land grabbing, and the foreign takeover of production of basic foodstuffs, agro-fuels, forestry production, tourism, mining and conservation."

The real surprise was the final report, which came to the conclusion that "the phenomenon of land

grabbing is in its early stages and is only to be found in the two largest countries: Argentina and Brazil." According to the social organizations, "these conclusions result from using very limited criteria: the buying up of large extensions of land for the production of food, where at least one foreign government make up the actors or agents involved." In fact, the RLC does not consider land grabbing to be the appropriate label where private investors are involved; in their view, land grabbing only results from sovereign (state) investment.

This position is unacceptable for many civil society organizations. It is worth underlining that similar arguments are currently coming up in other regions too, in order to limit the debate. In Australia, for example, where 12% of agricultural land is in the hands of foreign investors, certain groups are trying to distinguish between private and public investors in order to limit the search for better controls and regulations - as if private investment is seen as somehow beyond question, as something that makes the world go round.

Taking control of large extents of land, territories and related rights is a problem regardless of whether we are talking about Beidahuang Group (a state enterprise of the Heilongjiang Province of China), Hassad Food (formed by the Qatari government), a company like CalyxAgro (a subsidiary of the French group Louis Dreyfus Commodities) or Adecoagro (directed by the Hungarian-American investor George Soros).

Global agribusiness' brutal expansion in Latin America is one of the main factors driving land grabbing in the region. Other important causes include mining in countries such as Argentina, Chile, Peru, Ecuador, Costa Rica, Mexico and Guatemala, as well as the mega hydroelectric projects and the large tourism businesses that usurp common land. It is also important to note that false solutions to Climate Change such as those represented by REDD+ and the planting of monocultures for biomass production for energy purposes are further conducive factors to land grabbing in Latin America.

The groups' meeting in Buenos Aires also discussed another report titled 'Report of the High Level Panel of Experts of the Committee for World Food Security (CFS) on land tenure and international investments in agriculture' of July 2011. This report, which seeks to orient debate on the issue, points to opportunities that can arise from foreign investment in land, without denouncing land grabbing.

### **Going beyond definitions**

The Declaration [5] which was presented at the 32nd Regional Conference of FAO expressed, with respect to land grabbing, that:

"... we declare our disagreement with the conclusions of the FAO-RLC's final report, Dynamics of the land market in Latin America and the Caribbean, which maintains that 'the phenomenon of land grabbing is now in its early phases and is limited to just two large countries: Argentina and Brazil.' These conclusions are the result of the application of very limited criteria for land grabbing in which only large-scale acquisitions of foreign lands for the production of food by sovereign nations are included. Moreover, the July 2011 document proposed to orient debate on the issue, The Report of

the High Level Panel of Experts of the Committee for World Food Security (CFS) on land tenure and international investments in agriculture, points to the “opportunities” of foreign investment in land, without denouncing land grabbing.

While the documents included in the FAO-RLC report paint a deeply worrying picture of the land situation in Latin America and the Caribbean and the foreign takeover of lands, whether for the production of foods, agrofuels, tree plantations, tourism, mining or conservation, we believe that the report's conclusions are extremely dangerous, as they hide and blur – behind supposedly rigorous scientific analysis and technical language – a problem of enormous proportions in terms of the scale of the land involved and the impacts on local economies and the lives of millions of peasants, people of Afro-communities, indigenous peoples, family farmers, and fisherfolk.

As organisations and social movements struggling against land grabbing all over the world, we demand that FAO-RLC urgently revise its position, listen to the voices and demands of the people, and act in accordance with processes implemented by the FAO at the international level. What is of fundamental importance is not the definition of "land grabbing" but urgent action to stop a process that is pushing people out of their territories every day.

In this sense, we also reject the definition of 'Forests' established by the FAO, as this too promotes land grabbing for the creation of large monoculture plantations. By allowing plantations to be defined as 'Forests', the FAO legitimises industrial monocultures that are responsible for innumerable negative impacts, including the expulsion of farmers and indigenous communities from their lands."

### **Say ‘No’ to all land grabbing!**

GRAIN, along with hundreds of social movement groups, is convinced that the only alternative is an immediate halt land grabbing on a global level. Following the proposals of the Dakar appeal: "We call on our parliaments and on our national governments to put an immediate stop to large-scale land grabs – both now and in the future – and to reinstate the lands taken."

The recent report by GRAIN [6] which exposes more than 400 land grabbing cases involving a surface area of nearly 35 million hectares in 66 countries, provides undeniable evidence of this problem. And it is important to note that dozens of cases included in this report are located in Latin America.

### **More information:**

- 1- The International Planning Committee for Food Sovereignty [www.foodsovereignty.org/](http://www.foodsovereignty.org/)
- 2- Dinámicas en el mercado de la tierra en América Latina y el Caribe [www.rlc.fao.org/es/agenda/dinamicas-en-el-mercado-de-la-tierra-en-america-latina-y-el-caribe/](http://www.rlc.fao.org/es/agenda/dinamicas-en-el-mercado-de-la-tierra-en-america-latina-y-el-caribe/)

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- 3- Foreign investments in agriculture for food security [www.fao.org/economic/est/issues/investments/en/](http://www.fao.org/economic/est/issues/investments/en/)
  - 4- The Dakar Appeal against the land grab [www.dakarappeal.org/index.php/en/](http://www.dakarappeal.org/index.php/en/)
  - 5- Declaration of the 3rd Special Conference for Food Sovereignty, Rights and Life, [www.radiomundoreal.fm/5326-real-solution?lang=en](http://www.radiomundoreal.fm/5326-real-solution?lang=en)
  - 6- GRAIN has published a collection of more than 400 land grabs of agricultural lands worldwide [/e/4479](http://www.grain.org/article/entries/4479)

“Land grabs menace food security in Latin America despite FAO claims”, GRAIN, 11/06/2012, online at: <http://www.grain.org/article/entries/4502-land-grabs-menace-food-security-in-latin-america-despite-fao-claims>

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## ❖ Water: Managing the World's Most Precious Resource

The world's demand for fresh water is growing so fast that, by 2030, agriculture, industry, and expanding cities will face such scarce supplies that the confrontation could disrupt economic development and threaten political stability and public health.

People in places as disparate as north Africa, Central Valley, California, and India's northern states, among others, are already facing similar threats to their livelihoods, while population growth, ageing infrastructure, pollution, and resource-intensive ways of life are putting a huge strain on local freshwater supplies.

By 2050, demand for food, water, and energy is projected to grow by 30 percent to 50 percent. Meanwhile, more than 750 million people do not have adequate access to safe drinking water.

How can we hope to meet these demands without integrated policy reform and comprehensive solutions that take local conditions and a diversity of stakeholders into account? As it stands, ineffective financial incentives, institutional structures, and a lack of trusted data make joint cooperation almost impossible.

The world's capacity to respond is in doubt.

But some promising models are emerging quickly — the 2011 World Economic Forum book, [Water Security – the Food, Energy, Water and Climate Nexus](#), and a recent [conference about water, food, and energy](#), hosted in Bonn by the German Government, framed the issues and developed comprehensive, cross-cutting science and policy recommendations.

Many governments are implementing innovative new policies to improve water management. Civil society, governments, and businesses are coming together in organizations, such as the [2030 Water Resources Group](#), to help build common and comprehensive databases on water issues.

The [Alliance for Water Stewardship](#) and the UN Global Compact's [CEO Water Mandate](#) are pioneering a new model of corporate water policy and management that facilitates collaboration among businesses, governments, NGOs, and communities.

However, at current rates, the challenges are outpacing the solutions.

We need to share accurate data more effectively to inform collective policy action. Even in our data-flooded age, localized information is often minimal, outdated, or inaccessible.

- We need a common, open-source platform for collecting, interpreting, and sharing trusted data from a variety of sources.
- We need more sharing of innovations in technology, practice, and policy.
- We need to understand local and regional needs.
- We need to engage with all stakeholder communities in a spirit of transparency and accountability.



- We need to improve communications across business, government, NGOs, media, and citizens to encourage greater policy awareness and participation.

Serious global investment in water security – financial and political – will nurture economic development, create a more stable political environment, and give hope and health to millions of people.

It's the most powerful investment of time and energy we can make.

“Water: Managing the World’s Most Precious Resource”, Stuart Orr, World Wildlife Fund, J. Carl Ganter, Circle of Blue, Jeff Seabright, The Coca-Cola Company, 15/06/2012, online at: <http://www.circleofblue.org/waternews/2012/commentary/editorial-in-the-circle-fresh-focus/water-managing-the-worlds-most-precious-resource/>

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### ❖ Mövenpick Hotels reduces green house gases and water use in Middle East

Green Globe Certification and Mövenpick Hotels&Resorts today announced major reductions of greenhouse gases (GHG) and significant water savings by all Mövenpick properties across the Middle East. After the first year of Green Globe certification of hotels in UAE, Qatar, Lebanon, Jordan, Saudi Arabia, Kuwait, and Bahrain, analysis of energy and water consumption reveals the reduction of 11,765 tons of CO<sub>2</sub>e and savings of 129,346 m<sup>3</sup> of potable water in the last 12 months.

Green Globe Certification CEO Mr. Guido Bauer said: “This is absolute proof that certification by Green Globe leads to great outcomes for the environment, as well as utility savings for hotels and resorts.

“These reductions are equivalent to saving one Olympic pool of water per week, each week for a year. The GHG saved by Mövenpick hotels is the same as the emissions of 5 non-stop, round-trip flights from Dubai to London.”

Green Globe Certification has been contracted by Mövenpick to certify all their hotels and resorts worldwide. The certification process covers all sustainability criteria including the key environmental indicators of energy and water.

Green Globe Certification’s preferred partner in the Middle East, Farnek Avireal, provides third-party verification of the sustainability achievements of Green Globe members, including Mövenpick properties. Avireal’s online environmental monitoring system, Hotel Optimizer, has tracked the improved performance of the hotels throughout this first year of certification.

Mövenpick Hotels & esorts, Vice President of Operations in the Middle East and India, Mr. Gerard Hotelier, said: “The energy savings we have achieved in the last 12 months are equal to powering a 200-room hotel for one-and-half years.

“The total savings on utilities in this period are AED 2.5 million, which is almost US\$700,000, and this represents a 4 percent savings in water and electricity costs, while at the same time we have seen a 8.3 percent increase in occupancy across the properties.”

Green Globe Certification and its preferred partner, Farnek Avireal, will continue to monitor the reduction of environmental impacts across the Mövenpick properties in the Middle East along with all Green Globe members in this region.

“Mövenpick Hotels reduces green house gases and water use in Middle East”, 16/06/2012, online at:  
<http://www.breakingtravelnews.com/news/article/moevenpick-hotels-reduces-green-house-gases-and-water-use-in-middle-east/>

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### ❖ European Investment Bank Grants Water, Sanitation Loan for Spain

The [European Investment Bank](#) granted a 350 million-euro (\$441 million) loan to Acuamed for water and sanitation improvements along Spain's Mediterranean coast, the first installment of as much as 500 million euros in financing. The funds will help improve water supply systems, develop desalination plants, re-use wastewater, improve irrigation and boost environmental protection in Spain's five Mediterranean river basins, including the Ebro, the EIB said today on its website.

"European Investment Bank Grants Water, Sanitation Loan for Spain", 14/06/2012, online at:  
[http://www.bloomberg.com/news/2012-06-14/european-investment-bank-grants-water-sanitation-loan-for-spain.html?utm\\_source=Circle+of+Blue+WaterNews+%26+Alerts&utm\\_campaign=2abe19f241-RSS\\_EMAIL\\_CAMPAIGN&utm\\_medium=email](http://www.bloomberg.com/news/2012-06-14/european-investment-bank-grants-water-sanitation-loan-for-spain.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2abe19f241-RSS_EMAIL_CAMPAIGN&utm_medium=email)

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❖ **Water shortage 'to hinder world's economic growth'**

**Vital river systems in developing countries face unsustainable rise in water consumption**

Seven of the world's 10 most populated regions face such severe water shortages over the next three decades that they threaten to derail the growth which hundreds of millions of people in the developing world are banking on to lift them out of poverty.

The value of goods and services produced in these regions – which include large parts of India, Bangladesh and North-eastern Africa and are all in the developing world – is forecast to increase more than sevenfold to \$15.6 trillion (£10.1 trillion) by 2050. This would increase their share of the growing global economy from 3 per cent now to 12 per cent, and bring prosperity to hundreds of millions of people.

However, water use in these regions is growing so fast that unless action is taken to safeguard its supply they will "face unsustainable water consumption, with significant water scarcity," warns a report by Frontier Economics.

Failure to improve the efficiency with which the water is collected and used, for example by improving pipelines and other infrastructure, could mean that the economic growth expected in these regions "would not materialise," the report adds.

The report has divided and analysed the world in terms of its "river basins" – areas of land, sometimes vast, drained by a river and its tributaries – the most populated of which is the Ganges, which straddles parts of India, Bangladesh and Nepal.

David Tickner, head of freshwater at WWF-UK, said: "This is an extremely serious issue for economies around the world. Improving the way we manage and allocate water is among the great challenges facing the world in the 21st century."

The situation is so serious that Douglas Flint, chairman of the HSBC banking giant, yesterday called for politicians, businesses and individuals around the world to join forces to tackle the problem. "Today's findings show that the future of river basins is critical for global economic growth. Rapid, collaborative action is needed to improve water resource management in river basins," said Mr Flint as he launched a \$100m partnership with the environmental groups WWF, WaterAid and Earthwatch.

To make matters worse, far from delivering an increasing investment to improve provision, "total aid for water access and sanitation has actually declined," Mr Flint added.

Consumption becomes unsustainable when the volume of water extracted from ground and surface water flows exceeds 30 per cent of natural run-off, and the situation is regarded as "severe" if it exceeds 40 per cent, as seven river basins are forecast to do by 2050. Furthermore, three of the river basins – the Indus, which takes in parts of India, China and Pakistan, the Hai basin in China and the Krishna in India – are on course to breach the 100 per cent mark over the next 30 years.

The report also calculates that providing universal access to safe water and sanitation in Brazil, India and China would result in an "economic gain" of \$113bn a year, increasing to \$220bn a year if such a policy was implemented globally.

Although the upfront capital investment costs would be huge – estimated at more than \$725bn by Frontier Economics – the infrastructure would last for about 35 years, giving a return of \$5 for each \$1 invested, including maintenance costs, Frontier Economics forecasts.

The only basin of the world's top 10 which is not in the developing world is the Danube, which straddles 10 countries in central and eastern Europe, including Germany, Austria, Ukraine and Romania.

“Water shortage 'to hinder world's economic growth'”, 11/06/2012,online at:

<http://www.independent.co.uk/news/business/news/water-shortage-to-hinder-worlds-economic-growth-7834944.html>

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## ❖ Balance needed in water allocation

Decisions around policy for freshwater management have to be balanced and reflect both economic and environmental directions, former Environment Minister Dr Nick Smith says.

Balance was pivotal for the country to be prosperous as well as clean and green, Dr Smith said at a cross-party panel discussion on the future of New Zealand's water policy at a Federated Farmers-run water forum in Ashburton.

"It's got to come from a balanced perspective. This country has got huge opportunities around the fact we have the second most amount of fresh water per head of any country in the world."

Decisions also had to be based on good science. It was easy to get carried away on rhetoric and skew statistics around water issues, he said.

Collaboration was also important. Having highly polarised positions achieved nothing, he said.

There had to be stronger national leadership around water issues. Central government needed to set guidelines such as the National Policy Statement (NPS) on freshwater.

Dr Smith defended changes he made to the NPS on freshwater. Applying blanket rules across the country was not smart because of the variations of different issues around water quality in different areas.

It was a step forward and put the onus on regional councils to provide allocation and water quality limits.

New Zealand First MP Richard Prosser favoured a collaborative approach but decisions on how water should be managed in the future needed to be made now, he said.

"We're at the point where we don't have a problem, but if we don't manage the way we go forward we will have one," he said.

Green Party water spokeswoman Eugene Sage said water quality trends were still bad and would get worse before they gets better.

She agreed with Dr Smith that there needed to be national leadership around freshwater policy.

This had been lacking in recent years, but standards needed to be put in place sooner rather than later and have headroom for the environment, she said.

Rolling out the Canterbury Water Management Strategy (CWMS) showed how collaboration could work. There had been a huge increase in capacity with facilitators in zone committees.



However elected councillors should be making key decisions in the planning process.

"If you just have people that are appointed, they are not accountable to anything.

"At least with elected councillors you can biff them out every three years," Ms Sage said.

There also still needed to be an appeals process under the Environment Court.

Dr Smith said he had no difficulty with the court having a role.

But he took issue with every decision around natural resources being continuously litigated.

If you have a collaborative process where all parties agree, such as it is under the CWMS. that should be the end of it.

"If you are going to allow it then to be appealed to the Environment Court, what's the incentive for people to try and agree?"

"In Canterbury the length of time it has taken to make key strategic decisions about fresh water is far too long and far too slow.

"I make no apologies for being part of a government that wants to get on and get some runs on the board for the environment and the

"Balance needed in water allocation", 13/06/2012, online at: <http://www.stuff.co.nz/timaru-herald/central-farmer/7096149/Balance-needed-in-water-allocation>

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

❖ **Portion of global GDP contributed by river basins set to more than double by 2050. Get the data.**

Economic output of the world's ten most populous river basins will exceed that of the US, Japanese and German economies combined by 2050 - but only if water scarcity is addressed

The world's ten most populous river basins will account for almost a quarter of global GDP by 2050, according to research by Frontier Economics laid out in a new study commissioned by HSBC.

The portion of global economic output provided by these regions is projected to more than double between 2010 and 2050, with almost 8% of global GDP to be generated along China's Yangtze River by mid-century.

In 2010 roughly one dollar in ten of global economic output came from one of the ten river basins shown below, but in 2050 this figure is predicted to be 24.7%.

Publication of the report coincides with the launch of the [HSBC Water Programme](#), a \$100m, five year partnership with WWF, WaterAid and Earthwatch aimed at combatting [water](#) risks in river basins and raising awareness of broader global water issues.

The launch of the Water Programme is covered in greater detail on our environment blog [here](#), including the following quote from Barbara Frost, CEO of WaterAid:

This partnership will result in 1.1 million people gaining access to safe water and 1.9 million to improved hygiene and sanitation in Bangladesh, India, Nepal, Pakistan, Nigeria and Ghana.

Most of the [rivers](#) in question are located in emerging economies - the Nile in Egypt, the Ganges in India, the Niger in West Africa - and such surges in economic activity could lift millions out of poverty, but these projections will only be realised if management of these regions' water supplies is improved significantly.

An OECD model of water usage in 2050 shows that the largest increases in consumption are expected to come among the 'BRIICS' group of nations - Brazil, Russia, India, Indonesia, China and South Africa.

Total water consumption across BRIICS nations is projected to increase by 78% between 2000 and 2050, from 1,827 to 3,263 cubic kilometres, whereas the corresponding global figure will rise by a more modest 53%.

According to the UN's latest [World Water Development Report](#), water supplies in several of the ten basins featuring in the Frontier Economics report are being over-exploited. The map below shows water scarcity across the globe, with the darkest regions representing areas where water use exceeds minimum recharge levels.

The Frontier Economics study shows that water use in seven of the ten river basins will be at unsustainable levels (30% or more of natural run-off being consumed) by 2050 if resource management does not improve.

Also included in the report are calculation of the benefits that would arise from meeting the Millennium Development Goals (MDG) targets for water, and from going one step further to achieve universal [access to water](#).

Several Latin American and Central African countries could see annual GDP increases of 5% or more if MDG targets are met, with the economic boost rising to as much as 15% with universal access.

Even China, already a major economic power, could see an annual increase in GDP of almost 1% if its entire population had access to clean water and sanitation.

According to Frontier Economics' calculations, the investments required to achieve such levels of water access could be paid off in as few as fifteen months.

A cost-benefit analysis of implementing the changes required to achieve these targets shows projected returns ratios vary considerable by region.

Assuming a 35 year lifetime for the impacts of initial investments, every dollar spent on achieving universal access in Sub-Saharan Africa would yield \$2.50, compared to a return of over \$16 per dollar spent on equivalent work in Latin America.

“Portion of global GDP contributed by river basins set to more than double by 2050. Get the data.”, 11/06/2012, online at: <http://www.guardian.co.uk/news/datablog/2012/jun/11/water-river-basins-economic-growth?newsfeed=true>

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## ❖ Latin America: Water Politics, Coups And James Bond – Analysis

James Bond, the fictitious British spy created by Ian Fleming, has been the protagonist of more than 50 novels and more than 20 films since 1953, becoming a world-renowned icon in the process. The plot of Quantum of Solace (the 22nd film in the Bond series, released in 2008) revolves around Bond's attempts to prevent a group of powerful individuals from orchestrating a military coup in Bolivia and, with the aid of a corrupt Bolivian army general, taking control of the country's water sources.

While the movie received numerous reviews, it has not, to this point, been analyzed from an academic point of view. This is a mistake as the issue of control of water is certain to increase in importance in the near future. For Bolivia, and most other Latin American countries whose natural resources are increasingly vital sources of power, the message of Quantum of Solace is all too relevant.

### Hollywood and International Relations

#### Latin America

It has become fairly common for scholars to apply international relations theories to TV and film. In 2011, Foreign Policy published an article analyzing the television series Game of Thrones, based on the books written by George R.R. Martin, from the perspective of international relations theory. (1) Dr. Kelly DeVries of Loyola University recently published another article comparing international affairs to Game of Thrones in Foreign Affairs. (2) Over the years, the Bond stories have also been analyzed from an academic point of view. For example, in 2005 a group of academics published a book titled "Ian Fleming and James Bond: the Cultural Politics of 007." (3)

Some James Bond films have been polemical. In Die Another Day (2002), Bond battles against a North Korean army officer who wants to use a powerful satellite to attack the Demilitarized Zone and carry out an invasion of South Korea. When the film premiered, many South Korean citizens called for a boycott of the movie because of its negative portrayal of North Korea. (4)

Similarly, when Quantum of Solace premiered, the Bolivian government protested. Bolivia Deputy Minister for Culture Pablo Groux said the film portrayed Bolivia as "a country of drug traffickers." (5) Moreover, some scenes depicting Bolivia were actually filmed in Chile, which did not sit well with the Bolivian government. The Bolivian deputy minister argued that his country has perfect landscapes for filming a movie, and that the producers should not have hired Chilean citizens to pass as Bolivians. (6) It is important to remember that La Paz and Santiago have had tense relations since the 19th century War of the Pacific, from which Chile emerged victorious and Bolivia lost its coastal territories and become a landlocked country.

## Quantum of Solace in IR Terms

In *Quantum of Solace*, a shadowy organization wants to gain control of massive water resources in Bolivia, putting the country in an ideal position to set prices for access to water for both the Bolivian population and international consumers. In reality, the struggle for control of natural resources throughout Latin America, particularly in Bolivia but also in other countries, has already begun.

Another relevant part of the plot is that Bond has to prevent an exiled, corrupt Bolivian general from staging a military coup—assisted by foreign powers—to overthrow the government in La Paz. Unfortunately, the real Bolivia does indeed have a long and complicated history of military coups. In fact, regime changes have continued to occur in Bolivia and throughout the region over the last decade.

Finally, in the movie, the villains comprise a varied group of powerful individuals, including a rich “environmentalist” who supports the coup because he wants to buy a seemingly barren portion of Bolivian desert from the corrupt military officer. If successful, his company would gain control over Bolivia’s sole water utility. This raises the question of how international companies are regarded in Latin America today.

## Water Politics in Latin America

The most high-profile incidents concerning water in Cochabamba, Bolivia, occurred between 1999 and April 2000. The conflict is commonly known as “Cochabamba Water Wars,” or simply Bolivia’s Water Wars. An April 2006 Inter Press Service article reported on the legacy of those “wars,” characterizing them as protests by locals against the Bolivian subsidiary Aguas del Tunari, which was owned by a consortium of the U.S. transnational company Bechtel, Italy’s Edison, and Spain’s Abengoa. (7) The consortium hiked water rates to local water consumers by as much as 200 percent after winning a 40-year concession in closed-door negotiations. With such price increases, water bills amounted to between 20 percent and 30 percent of the income of poor households. (8)

Expounding on the effects of top-down privatization in his book “Dignity and Defiance: Stories from Bolivia’s Challenge to Globalization”, Jim Shultz, director of the Cochabamba-based Democracy Center, argued:

The contract gave Bechtel and its co-investors control of the city’s water company for forty years and guaranteed them an average profit of 16 percent for each one of those years, to be financed by the families of Cochabamba. No one at the negotiating table could have had any doubt what that would mean for Cochabamba water bills. (9)

In other words, the process of water privatization that transpired in Bolivia in 2000 is eerily similar to the premise of *Quantum of Solace*.

Water-related incidents have also occurred in other countries. For example, in late 2011, Newmont Mining Corporation’s proposed gold and copper mining project in northern Peru provoked major protests due to concerns that it would pollute local waterways vital for both human consumption and

irrigation projects. Newmont's extraction plans, known as the Conga project, could extract as much as 580,000 to 680,000 ounces of gold per year. (10) The project's fate is currently unclear, as new discussions are taking place between the Peruvian government and the company. According to the online news service Marketwatch, "Recently Newmont said in a presentation posted on its website that first potential production for Minas Conga is now scheduled for early 2017. The company had previously said that it expected production to start in late 2014 or early 2015." (11) In early June, the Peruvian government declared that it was awaiting Newmont's decision on whether to continue developing the project or not, after Lima gave the international company new environmental conditions. (12)

Tensions regarding proprietorship of water have also appeared in Colombia. According to the Colombian project of the Interamerican Association for Environmental Defense (AIDA), Greystar Resources Ltd. of Canada had planned to build an open-pit mine (for gold and silver) in Angostura, the heart of Colombia's Santurban wilderness of high-altitude forests and wetlands called paramos. (13) Colombia's Ministry of Environment, however, denied Greystar's environmental license application in May 2011. For the time being, this means that the forests and wetlands are safe.

Meanwhile, in Chile, the Mapuches indigenous to Chile have consistently protested against the construction of a hydropower plant on the Panqui River that would flood several of their communities. (14) Last February, five Mapuche-Pehuenche communities also complained that the municipal government of the southern Lonquimay region had yet to provide them with access to potable water. (15)

## **Coups in Latin America**

In addition, regarding the potential for a military coup in Bolivia in the film, it is true that the Andean nation has a troubled history of civilian and military coups. Indeed, the country has suffered numerous military overthrows since the 1960s. Among some of the most notable coups in Bolivia are those that occurred in 1964, led by Vice President Rene Barrientos; in 1971, led by Colonel Hugo Banzer Suarez; and in 1980, led by General Luis Garcia.

Although the era of military coups in Bolivia seems to have ended, the country continues to be a nation marred by violence and governmental instability. The last row of regime-changing civil unrests occurred in 2003, when, under pressure after more than 80 people were killed during massive protests against natural gas exports to Chile, President Gonzalo Sanchez de Lozada resigned. (17) In the aftermath, Sanchez de Lozada's vice-president, Carlos Mesa, ascended to what would be a short-lived presidency. Mesa submitted his resignation in March 2005 when he was unable to restrict the nationwide protests against fuel prices, and civic and business leaders in the province of Santa Cruz called for greater autonomy. (18) While the Bolivian Congress originally rejected Mesa's resignation, he resubmitted it in June of the same year and was finally permitted to step down in the face of continued popular protests. (19) Finally, in 2008, major protests in the eastern Bolivian provinces of Beni, Chuquisaca, Pando, Tarija, and Santa Cruz threatened to topple Evo Morales' government. (20)

Unfortunately, coups have continued to occur in Latin America in the past decade, though not as violently or as frequently as in previous eras. In 2002, for example, major protests in Venezuela



overthrew the Hugo Chavez-led government and temporarily installed an opposition government, though this Chavez returned to power two days later. (21) It is widely believed that U.S. intelligence services were, at the very least, aware of the potential for a coup in that country. (22) Two years later, in 2004, demonstrations forced President Jean-Bertrand Aristide from power in Haiti. Also, in 2009, Honduran President Manuel Zelaya's push for constitutional reforms were strongly disputed by the Honduran Congress and armed forces, and his persistence ultimately led to his deposition. (23) In June 2009, Zelaya was removed from the presidential palace and exiled by the Honduran military to Costa Rica in the middle of the night, still wearing his pajamas. (24) Most recently, in 2010, police officers and soldiers organized significant protests in Ecuador, during which President Rafael Correa was tear-gassed by his own police. While Correa survived the protests and maintained his position as head of state, he called the protests "an attempted coup, an attempt to destabilize the government, which failed thanks to the Ecuadorean people." (25)

## International Companies

At variance with the corporation portrayed in the Bond film, not all firms pursuing resource extraction projects have dishonorable intentions. However, many of the populations of communities where multinational corporations operate feel that their local resources are being drained for someone else's profit. For example, the 2000 Water Wars in Bolivia saw the population of Cochabamba pitted against Aguas del Tunari, which had hiked up the price of water exponentially after receiving proprietary recognition from La Paz.

Furthermore, there are ongoing concerns regarding resource extraction, such as the threat of pollution—or all-out destruction—of the environment and the way of life of local populations. In order to counter Newmont's bad publicity in Peru, Roque Benavides, the president of a partnering company, has tried to improve the company's image among the inhabitants of Cajamarca where the Conga project is located. He recently said, "A social disaster destroys share price. ... Let's say I have interest in the shares continuing to grow, and we will not get into a project that goes against the company and that goes against my countrymen." (26) Nevertheless, the Conga project remains highly unpopular among the population, and those who speak in favor of it are ostracized. In mid-May, former Peruvian President Alejandro Toledo was scheduled to give a conference in Cajamarca, but was unable to do so because of his declarations in favor of the Conga project, which prompted protesters to throw trash on the streets where the conference was to be held. The former head of state was even impeded from getting out of his car. (27) Toledo eventually returned to his hotel in the northern city and the conference was cancelled.

## Conclusions

Hollywood has become a growing source of inspiration for analyses by IR scholars due to the plausible plots that are being used by screenwriters. Quantum of Solace portrays powerful individuals attempting to carry out a regime change in Bolivia in exchange for control over the country's water resources. While such plans are not as ambitious as those carried out by other Bond villains, they reflect a reality seen in many parts of Latin America.

A number of Latin American nations, Bolivia in particular, have a history of military and civilian coups. While these have not been as common in recent years, Bolivia continues to have historically shaky governments: since the Water Wars in 2000, two presidents have resigned due to resource-related protests, and major protests have threatened to topple the current Morales administration. It is important to mention that in contrast to the South Korean boycott provoked by Die Another Day, the author of this report has not been able to find any indigenous objection regarding how the Bolivian government and military were portrayed in Quantum of Solace. Nevertheless, Bolivian government officials protested how their country was portrayed while Chile protested the use of Chilean territory and people in the film as they were portrayed as Bolivian. (28)

The type of villains in the latest Bond movie may not be as ambitious as the ones in previous films, but both regime change and control (and the protection) of vital natural sources are real issues in Latin America. Undoubtedly, Hollywood will continue to produce big-budget films starring superheroes with marvelous powers, a stretch of the imagination for the time being. But when it comes to the struggle for control, and protection, of profitable natural resources – be they gold, oil, or something as common as water– these plots reflect real social and political tensions, as IR scholars and experts well know.

“Latin America: Water Politics, Coups And James Bond – Analysis”, 16/06/2012, online at:  
<http://www.eurasiareview.com/16062012-latin-america-water-politics-coups-and-james-bond-analysis/>

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