



ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

Events-News-Politics-Projects-Environment-ClimateChange-Neighbourhoods-Cooperation-Disputes-Scarcity and more



ORSAM WATER BULLETIN

18 June –24 June 2012

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❖ Helping Turkish municipality water services to Improve- EBRD

To finance the construction of Mezitli wastewater treatment plant in Mersin, a Mediterranean port city located in the south of Turkey, with a population of close to one million people, the EBRD is continuing to support the modernisation of water and wastewater infrastructure in Turkey with a loan of up to €20 million.

The loan will be extended to Mersin Water and Wastewater Administration (Meski), the water utility company servicing the city and will be the first loan by an international financial institution to a Turkish water utility backed by a municipal guarantee.

The EBRD loan will be used to finance the design and construction of the Mezitli wastewater treatment plant – a second wastewater treatment plant in the city to serve the western part of Mersin. The capacity of the existent Karaduvar wastewater plant, built in 2009, can service 80 per cent of the city's population, and a large amount of wastewater is discharged into the Mediterranean Sea without prior treatment.

As part of the project, Meski will outsource the operation of the new wastewater treatment plant to a private contractor for a period of five years. .

The project will significantly improve the quality and reliability of wastewater treatment services in the city of Mersin, bringing them in line with both European Union and Turkey's standards, and will reduce water pollution in Mersin Bay and the Mediterranean Sea.

The EBRD financing is complemented by technical assistance grants of up to €735,000, which will be used to assist Meski's further commercialisation by introducing key performance indicators, to support the project's implementation and to explore outsourcing of further functions such as meter servicing and maintenance. The grants are provided by the Slovak Republic's bilateral technical cooperation fund with the Bank, and the Austrian Fund for the Municipal Infrastructure.

“Supporting modernisation of municipal infrastructure by increasing private sector participation in this area is one of the EBRD's priorities in Turkey. We are delighted to assist Mersin Water and Wastewater Administration in its efforts to raise the standards of services to international levels, reduce pollution and further improve the quality of life in the city. Moreover the EBRD's participation in the project will help Meski strengthen its operational efficiency,” said Sevki Acuner, EBRD Deputy Director for Turkey.

"We are very pleased to be able to attract financing from such a reputable international financial institutions as the EBRD. This cooperation allows us to build on the positive results achieved so far and to continue to improve the water and wastewater infrastructure in Mersin, to the benefit of city's residents. We also value greatly the technical assistance provided by the EBRD and international donors, which will enable Meski to strengthen its operations," said Kamil Ulgen, the General Manager of Meski.

"Helping Turkish municipality water services to Improve- EBRD", 20/06/2012, online at:
http://www.ecofriendnews.com/environmental_article11069.html

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❖ Skan dam design complete

ERBIL, June 19 (AKnews) - The construction design for Skan dam in the district has been completed and the project will be implemented soon.

Director of Sidakan district Mohammed Ismael announced: "Skan dam project will serve the area in many fields like agriculture and saving water. The district farmers will benefit from it."

The length of the dam is 100 meters and its height is 30 meters.

Ismael added that the government allocated 8bn IQD (\$6.8m) for the project and so far the cost of the dam construction has reached 100m IQD (\$85,000).

An Iranian company is supervising the project.

"Skan dam design complete", 19/06/2012,online at: <http://www.aknews.com/en/aknews/3/313063/>

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❖ **KRG to build \$5.8m dam in Suli**

ERBIL - Ministry of Agriculture and Water Resources today signed a contract to construct a dam in Qaradakh parish of Suli province.

The project of Chami Smora costs 6.960 billion IQD (approx. \$5.872m), said Ministry spokesperson Majid Dabbagh.

Dabbagh said both Birkar and Zhina Gharib companies have undertaken to end the project within 820 days.

Akram Ahmed, general director of dams in Kurdistan, said the project is a strategic one which is meant to rescue the area from the drought it has been suffering from in the recent years.

It is one of the projects by the ministry to develop agriculture in the area.

The dam will be 20meters high and will hold two million cubic meters of water from a brook from Diwana River.

Diwana River sources from Qaradakh and in Darbandikhan it flows into Sirwan River.

Kurdistan to build \$5.8m dam in Suli

“KRG to build \$5.8m dam in Suli”, 20/06/2012, online at:

http://www.zawya.com/story/Kurdistan_to_build_58m_dam_in_Suli-ZAWYA20120621050332/

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❖ **KRG's underground water levels significantly lowered**

Over the past 40 years, the Kurdistan Region has lost 200 meters of its underground water level. According to a new plan by the Kurdistan Regional Government (KRG), the Ifraz IV water treatment plan will be implemented in the near future.

The project needs USD 400 million and by completion, 600 water wells, which are currently supplying 35% of Erbil's water, will be closed down.

Although, many phases of Ifraz project have been completed and are now supplying Erbil with water, the project has still not met the entire water demand of the city.

Erbil Water and Sewage Director General Engineer, Sahand Ibrahim, said in an interview with the Kurdish Globe, that they have a three-year project that will completely eradicate water problems in Erbil until the year 2035.

In some parts of the capital, especially in the eastern and southern neighborhoods, the water shortage is felt due to the lowering of the underground water levels and the drying up of some water wells.

There are a number of projects underway to put an end to the issue in Erbil, including the expansion of Ifraz III plant to reach a capacity of 10,000 cubic meters from the current capacity of 6,000 cubic meters. The budget for the project is allocated by the Japanese International Cooperation Agency (JICA) as a long term loan.

Although, the project was supposed to be implemented by now, due to the amount of detail in the investigation by the Japanese authorities, it took a long time until they made the final decision to fund the project.

Ibrahim says that in the near future, an implementation company will be contracted to start work on the project.

In Duhok there are two large water treatment plants that have almost solved the water issue in the

city, while with the expansion of the Dokan I and II plants, which are currently under implementation, Suleimaniya can also bid farewell to its water shortage.

In Erbil, all the previous water projects were in the form of constructing stations and connecting them to the city by pipes. However the new Ifraz IV project consists of constructing two large rings around the 100 meter and 120 meter ring roads according to the city's master plan.

The purpose of these rings is to be able to accommodate the expansion of the city in any direction. It is expected that the budget for this project is allocated within this year's budget, which means that over three year the project can progress and Erbil can then forget about water shortage for 20 years to come.

Currently there are 600 deep water wells that supply drinking water to part of Erbil and around 2,100 more wells are supplying agricultural and industrial projects in the province.

The Greater Zab is the source of the Ifraz water and passes by an area 30 kilometers west of Erbil. The water is treated and then supplied to the city via a pipeline.

According to the draft work plan of the Ministry of Agriculture and Water Resources of the Seventh Cabinet, the demand for drinking water in Kurdistan was 365 million cubic meters in 2011, and the region could supply the whole amount. According to the same draft the target of the ministry is to increase this amount to 438 million cubic meters by 2018, i.e. to supply enough water for 6 million people. However, currently the region mainly depends on underground water for its needs.

According to Ibrahim, a water-well in the middle of the city of Erbil that was 200 meters deep has now dried up and they now need to dig three hundred meters to reach water in the same place.

Waste of water by the public, decrease in the amounts of rains and the digging of a large number of water-wells without research, permission and strategic planning in all the underground water sources for various purposes including agriculture, industrial projects and drinking has significantly decreased the underground water reserves.

According to a study of the Furat Research Center, the Central Erbil aquifer had a capacity of 2000 wells, but 3000 wells have been dug on this source, a factor that has lowered the quantity and quality of the underground water in this area.

In the 1970s, in the northern parts of Erbil the level of underground water was only 7 meters below surface, but such wells have all dried up now and to reach water one needs to dig 250-300 meters.

A large quantity of drinking water is wasted by consumers. Lack of water meters and low water prices are major factors behind this waste of water.

According to a study of the Water Protection Center there are 50 carwashes in the Erbil city center, each of which spends on average 50,000 liters of water every day. This means that in total 2.5 million liters of water is spent by the carwashes alone. The strange thing is that all this is drinking water.

If a person's daily drinking water consumption is 2 liters, then the drinking water of 1.25 million people, approximately one-third of the whole region's population, is wasted by Erbil's carwashes.

This is a small example of how water is wasted in Kurdistan. If more investigations are done on the households and factories, more mind-blowing conclusions could be reached.

Rashid Jarjees, Chairman of the Water Protection Center, suggests that the carwashes can have tanks to collect the used water and reuse them, and that water meters could be installed for the households to control their consumption.

There is no law to control the way water is consumed, and even if there was a law in the past to govern this, it is certainly not being applied now.

According to the center's studies during the past 14 years the level of underground water has decreased by 200 meters, which, according to Jarjees, is an indication that a national campaign for saving of water is needed.

There are more than 300,000 households using water in across three major cities in the region and regardless of how much water each household consumes, they pay a standard monthly fee of IQD 750 (approximately USD 0.60).

Recently the KRG has allocated USD 50 million for the first phase of a project to install water meters for the households, but after 2 years, still the money is withheld and the meters are yet to be bought and installed.

Engineer Ibrahim explains that the reason behind the delays was that the contracted company for the implementation of this project, a UAE company called BMC, was contracted to supply water meters of a specific standard but it did not follow this condition.

"That is why it is expected that the contract with BMC is terminated and a new contract to be signed with another company to do the job."

During the past few decades the climate changes has created draught threats in a number of countries around the world and a number of lakes have dried up. These global changes have had an impact on the Kurdistan Region, hence developing a suitable policy for the protection and control of the water resources is a must.

Profile

There are 6,730 deep water wells in Erbil Province, 2,500 of which do not have license. The depth of the wells ranges between 40 to 120 meters and they have been dug by piling machines.

In Sulaimaniya Province and Garmian Area there are 5,738 licensed water wells for various purposes, while there are more than 17,000 unlicensed wells , all of which were dug using piling machines. Majority of these wells are inside the city of Sulaimaniya, most of which are dug by individual households. However, 80% of those wells have dried up due to the decrease of the level of underground water.

In Duhok there are 2,074 wells, out of which 30-40 are unlicensed.

According to the official United Nations statistics approximately 884 million people do not have access to clean drinking water worldwide, while more than 2.5 billion people are deprived from a

decent and clean sewage system. Additionally, every year at least 1.5 million children lose their lives due to drinking water pollution and lack of sewage system.

“KRG’s underground water levels significantly lowered”, 18/06/2012, online at: <http://www.kurdishglobe.net/display-article.html?id=6ADDF8BE8FF5D5B0E68625F3E5E40125>

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❖ Erbil Governor Outlines Development & Challenges Ahead

Driving through the city of Erbil, one immediately notices many buildings under construction, dotting the land on almost every city block.

The city boasts four new malls, and new businesses are created every day at an increasing pace. Capital is poured into the growing development and urbanization of Erbil and its surrounding neighborhoods.

The modernization of Erbil is a far cry from the state it was in after the popular Kurdish uprising of 1991 and the subsequent civil war between major Kurdish parties that left the city scarred.

The man many credit for this rapid transformation is Nawzad Hadi, the Governor of Erbil.

“The other capital of Iraq”

“It began when we started in 2004 with a new master plan for the city,” said the governor in his expansive office just opposite the ancient Citadel in the heart of Erbil. “Now, from 2004 till 2011, we have had around \$11 billion in investment from the private sector, in the province of Erbil alone. That’s including electricity, malls, hotels, construction, housing, and tourism. In the same period of time, the government has spent about \$5.5 billion, covering all the same sectors.”

Approximately 70 percent of that money is local investment, according to the governor, showing that most of the growth is from the bottom-up in the Kurdistan region, and providing a feedback loop towards enriching the lives of everyday people.

“So we can see, actually, the effect that changing the city is having for everyone,” Hadi said. “The city is being expanded in every direction; everyone can see the new buildings, the increasing activity of the airport and how it’s developing. Even for the electricity, in 2004 our demands were not more than about 200 megawatts; now it more than 1000 megawatts, for the city of Erbil alone.”

“Now [Erbil] is a center for all of Iraq. Some even call it the other capital of Iraq,” Governor Hadi noted with great satisfaction.

The Office of the Governor recently sponsored “Kurdistan Projects” an event that featured dozens of private infrastructure, housing, tourism, oil and gas, and construction companies from around the world, validating the increasing prominence of the Kurdistan region in the economic future of Iraq.

A popular goal for the province, and the city of Erbil is to become “the next Dubai,” a dream many see as increasingly realistic given the pace of investment. One element of development is mirroring that of Dubai’s path: the influx of foreign workers, primarily in service jobs.

The governor viewed the presence of foreign workers in Erbil as a sign of modernization and development, but he was quick to point out that Erbil’s development benefits Iraq, first and foremost.

“It’s not just foreign workers,” he quickly pointed out. “Even daily there are laborers coming from Mosul, Kirkuk and elsewhere to Erbil, because they can find work. You can find many people here, from Europe, South Asia, Turkey, Iran, and Iraq from different provinces—that is a good thing. That means [Erbil] is open and people have confidence to work here, and that they trust the KRG for security and organization. But of course we need it for the progress and development of the city.”

Challenges ahead

The process is not without difficulties. Major challenges lie ahead. The governor outlined two of the largest, in his opinion: money and water.

“I think the budget is not covering the demand [of development], and the time. We are working literally day and night, and this pace is not being fully funded,” he said.

Governor Hadi maintained that the Kurdistan Region has not managed its water system effectively in the past.

“We have not been effectively managing the water,” he said. “The future policy focus of the KRG is on building dams, irrigation systems, and addressing the water system. The amount of rain and snow is decreasing year by year, unfortunately. This is a global issue, but will effect this area more.”

Corruption remains an issue, but an inevitable one, according to Governor Hadi. “Many things and sectors of the state have changed very rapidly...so there will be some corruption. But you can see what we have on the ground, the results. You can see that large numbers of people have benefited and that many sectors have been developed, and infrastructure is developing.”

Preparing for the future

Investing in social welfare and education is also going to be critical to meet the future economic needs of Erbil, and to sustain the ambitious pace of development the governor envisions. For this, he is turning to the private sector.

“For good education, we now have private schools increasing, and the requests of the people for these schools are increasing yearly,” he said.

“For example, if you visit Isik, the Turkish private school, you can find that thousands of people have sent requests to attend, more than they have seats for. That means not only are people looking for good education, but that they have the capability to pay.”

The health sector is also developing, Hadi said. “You can also see how the health sectors have developed, the most famous and best Iraqi doctors are here.”

Part of the success in the health sector, said Hadi, is the foreign doctors who serve in Erbil.

“The great doctors we have are Turkish, they are Iranian, and they are working here,” he said. “Daily, people from as far away as Basra, and Baghdad are coming here for treatment. So, the people can invest in these two sectors because we have supported their development.”

But there are people who criticize the development strategy and say it is overly reliant on importing goods from Turkey, Iran, and other countries, and not helping local industry. But the governor disputed that, commenting that the KRG is indeed focused on attracting permanent investment from companies, particularly Turkish corporations, in the form of factories based in Erbil.

“The story of success here can be copied to the other provinces, and for that, we always invite other governors and officials to come and participate in workshop and training courses here to change the course of development,” said the governor.

“Erbil Governor Outlines Development & Challenges Ahead”, 18/06/2012, online at:
<http://www.rudaw.net/english/kurds/4850.html>

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❖ KRG Revokes UAE Company's Contract for Installing Water Meters

The Ministry of Municipalities and Tourism demanded the revocation of a contract it signed three years ago with a company from the United Arab Emirates (UAE) to provide water meters for homes in Kurdistan.

The ministry says the sample meters provided by the company, known as DMC, did not pass a quality test.

A \$50 million deal between the Kurdistan Region's Ministry of Municipalities and Tourism and DMC, tasked the UAE company with providing 200,000 water meters for homes in Kurdistan. But not a single meter has been installed yet.

Sahand Sirwan, director general for water and sewage at the ministry, told *Rudaw* that the meters were rejected because of their expensive price and poor quality.

"They set the price for each water meter at \$250, but a German company sells the same meter for \$11 and a Chinese one charges \$18 a meter," said Sirwan.

Layth Askar, DMC representative in Kurdistan, says their meters are of better quality than the ones offered by the German and Chinese companies.

The Ministry sent samples of the meters to Austria for examination where they did not meet standards. Kurdistan's Quality Control also did not approve the meters, saying, "They are not up to standards and will create problems in the future."

But Askar says the meters were checked according to European standards and that "the purpose behind that was to stop our work because the European standards they used are no longer applied."

DMC received \$2.7 million of the contract without installing one water meter. The deadline on the contract passed 15 months ago.

"We want to revoke the contract but senior officials have called us several times and asked for it to not be annulled," said Sirwan.

Askar says his company proposed to change the meters but the government did not accept the idea.

"We will not accept that because we have lost thousands of dollars. If they insist on revoking the contract, we will resort to the courts," says Askar.

For his part, Sirwan acknowledges that "the project has failed" and the contract will not be implemented. He described the saga as "shameful for the government."

Bilal Sulaiman, chairman of Kurdish Parliament's Municipality Commission, said the minister of planning asked that the budget allocated for the water meters be used for another project, but the Ministry of Municipalities did not agree.

As a compromise, Sulaiman suggested the project be given to another company. He urged the office of the public prosecutor to investigate the contract "because I suspect there is corruption in it."

"KRG Revokes UAE Company's Contract for Installing Water Meters", 20/06/2012, online at:
<http://www.rudaw.net/english/kurds/4855.html>

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❖ **Geologists: Mosul Dam might collapse and threat Baghdad drowning in three days**

Shafaq News / Geologists warned Sunday, from the "imminent collapse" of Mosul Dam, indicating that the flowing water from the dam will reach the capital within three days.

The geologist, Walid Satee told "Shafaq News" that, "We had an extraordinary meeting with a number of engineers and geology specialists as they found that Mosul Dam will collapse within a period that doesn't exceed this month."

He stressed "the need to discharge water from the dam to prevent the occurrence of cracks that would lead to explosions inside its structure."

"If the collapse took place , Mosul will sink."

"The flood waters that will result from the collapse of the dam will reach the capital within three days."

"A work team of engineers and specialists have been formed and they will start to empty the water in the dam and guide it to the southern marshes of Iraq," he added.

"A team of American expert geologists have conduct tests on the pillars of the dam and its floor on 2006 – 2007 and found that the floor of the dam is fragile and rapidly eroding, they stressed that the dam will collapse after 2012."

Satee expressed his "surprised from Baghdad's officials who insist to reduce the risks exposed by Mosul Dam."

The Ministry of Water Resources denied on Saturday ,the news that talked about the existence of fears of Mosul Dam collapse during the next three months, the Ministry confirmed in a statement that "the dam situation currently is very safe , well-functioning and the maintenance and perpetuation work of the dam is continuing."

Mosul dam was established in 1983 by a joint German - Italian company, 30 kilometers northwest of Mosul, it is of a height of 113 meters, while the company estimated the age of the dam of about 80 years, it is located on the course of the Tigris River and is considered the largest dam in Iraq and the fourth largest dam in the Middle East.

"Geologists: Mosul Dam might collapse and threat Baghdad drowning in three days", 17/06/2012, online at: <http://www.shafaq.com/en/news/2737-geologists-mosul-dam-might-collapse-and-threat-baghdad-drowning-in-three-days.html>

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❖ **There is initial agreement about Iraq's infrastructure law, says economy committee**

BAGHDAD, June 24 (AKnews) - There is preliminary approval by all parties to enact Iraq's infrastructure law, said the economy and investment committee in the Iraqi Council of Representatives.

The committee added that the meeting of the council presidency and the political blocs yesterday referred to the law and the possibility of its legislation.

Committee chairman Ahmed al-Alwani said: "There is preliminary approval on the enactment of the infrastructure law and giving priority to building schools and compensating the shortfall in Iraq as a whole."

The Council of Representatives last August returned the law to the government after its objection on the value of the project reaching to \$70bn (81.5tr IQD), forcing the government to reduce it to \$37.5bn (43.7tr IQD).

According to the new infrastructure draft law, foreign companies - particularly Korean ones - implement infrastructure projects such as schools, hospitals, water projects, according to post payment.

Iraq is suffering from dilapidated infrastructure in all sectors as a result of years of siege and war.

"There is initial agreement about Iraq's infrastructure law, says economy committee", 24/06/2012, online at: <http://www.aknews.com/en/aknews/2/313917/>

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❖ Tajikistan and Iran signed the “oil-for water” agreement

The governments of Tajikistan and Iran in Dushanbe on the 15th on the “oil-for-drinking” program to reach an agreement. Under the agreement, Iran annually from Tajikistan to import 1 billion cubic meters of drinking [CANON NB-9L Battery](#).

The presidential press service of [CANON LP-E5 Battery](#) issued a statement saying President Rakhmon meeting with visiting Iranian Vice President Faro Zander. According to the “oil-for water” agreement reached by both sides, Iran in exchange for investment in oil and petrochemical enterprises on the tower of drinking water in Tajikistan.

The two leaders also discussed the start Sanggetude the 2nd Phase II Hydropower Project and the construction of the Aini and hydroelectric power plants. Construction by the [CANON NB-5L Battery](#) side, the installed capacity of 220 MW Sanggetude No. 2 Hydropower Project is expected to be completed and put into use before the end of this year.

“Tajikistan and Iran signed the “oil-for water” agreement”, 16/06/2012, online at: <http://battery-pack-adapter.com/tajikistan-and-iran-signed-the-oil-for-water-agreement/>

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❖ **Intelligence experts: Nato has options on Assad**

BRUSSELS - A former Israeli intelligence chief has said EU and Nato countries can do more on Syria than complaining about Russia or imposing sanctions.

The contact, who asked not to be named, spoke to diplomats and press in the EU capital last week.

He said the Sunni Muslim opposition is not going to win by itself.

Assad's generals, secret police chiefs and his diplomatic corps are still loyal, while important minorities - such as Alawite Muslims, Druze Muslims and Christians, as well as businessmen in Damascus and Aleppo - do not want Sunni rule.

Outside the country, Russia, Iran, Shia Muslims in Iraq and Shittes and Christians in Lebanon, also want him to stay.

"When you see a real general, preferably an Alawite general, defect, then you will know he is on his way out ... Unless the Druze clearly change position, he is quite stable," the contact noted.

The West has been saying for the past year it cannot do to Assad what it did to Libya's Colonel Gaddafi because Russia is refusing to give it a UN mandate.

On Friday (15 June) the EU reacted to news that the UN monitoring mission is suspending operations by imposing another embargo on imports of luxury goods to Syria.

But the Israeli contact believes the West does not need UN permission to make Assad loyalists think "a tsunami" is coming to sweep him away.

Potential measures include: moving a Nato aircraft carrier to the eastern Mediterranean; Turkish military exercises on the Syrian border; moving Turkish army divisions to the border; conducting Nato reconnaissance flights in Syrian airspace; sending messages to Assad generals via intelligence contacts that "the world is serious" about regime change.

"Sometimes a stick in the air is better than a stick on the head," the contact said.

If it comes to Libya-type intervention, he noted that Assad's Russian-made anti-aircraft defences are no match for Western air power and that his army will not use its chemical weapons.

"[Assad] knows that if he uses chemical weapons today then the end is tomorrow. Even if he knows the end is tomorrow, he will not use them today. Look at the example of [late Iraqi leader] Saddam Hussein: Israeli citizens were issued with gas masks [during the Gulf War] but nothing happened," he said.

Why not kill Assad?

He added that Assad has become "a legitimate target" for assassination, but the West "still has hesitations about whether to cross the Rubicon."

For his part, Michel Koutouzis, a Paris-based intelligence expert, told EUobserver it would be impossible to kill Assad without tacit Russian approval.

"Intelligence services know each other. They talk to each other. You can kill your own people [such as Russia's poisoning of ex-FSB officer Alexander Litvinenko in London]. But this [Assad] would be outside the rules of the game," he said.

He also said Turkey could remove him "overnight" by closing dams on the Euphrates and Tigris rivers and shutting off Syria's drinking water.

But he warned that if the West or if Saudi Arabia arms the opposition, they would transform the situation from a regime massacre to a sectarian civil war, with no 'innocent victims' for outsiders to help.

A Turkish contact told this website: "I am not sure that it is technically feasible or politically acceptable in any circumstances to cut off the water supply of the innocent Syrian people."

"Intelligence experts: Nato has options on Assad", 18/06/2012, online at: <http://euobserver.com/24/116644>

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❖ Latest health hazard in Gaza: water that's not fit to drink

TOO contaminated to drink and never in continuous supply because of the hours-long daily power shortages, the water in Gaza is causing widespread, chronic health problems and contributing to high rates of child mortality.

One of the most densely populated places in the world - its population of 1.6 million people crowds more than 4545 inhabitants per square kilometre - Gaza is in the grip of a water crisis that will affect the health of its residents for years, a new report warns.

In less than a decade Gaza's already depleted aquifer - its sole water source - will no longer produce water fit for human consumption, Save the Children and Medical Aid for Palestinians write in their report *Gaza's Children: Falling Behind*.

Advertisement: Story continues below

Already, more than 90 per cent of the water supplied through the aquifer does not meet World Health Organisation safety standards, the aid agencies say.

Gazans have been living under an Israel-imposed military blockade for five years, which - as well as severely restricting access to food, employment, health care, electricity and education - prevents or delays repairs to sewage treatment facilities and other water infrastructure.

The rates of sanitation-related diseases such as typhoid fever and watery diarrhoea, both of which can be fatal, have doubled in children since the blockade began, the report found.

Both sea water intrusion into the aquifer as well as contamination from septic tanks means Gaza's water has high levels of nitrates, Ahmed Alyaqoub, the director-general of water resources in the Palestinian Water Authority, said.

Nitrates, found in faeces and fertiliser, are linked to the incidence of watery diarrhoea.

"If you think about the humanitarian issues facing us here, water is the most important," Mr Alyaqoub said. "By 2025 there will be 2.7 million people in Gaza - how will these people eat, drink and work if we do not resolve the water problem?"

"If we continue to use this aquifer as the only source of water in Gaza, by 2016-2017 it will be completely damaged ... We have known about this situation for 20 years but it is critical now."

It is not only the blockade at fault for the crisis, the agencies that work in Gaza say. They also blame war damage from Israel's devastating 23-day military offensive, which ended on January 18, 2009, as well as chronic under-investment in infrastructure and services.

"The blockade has exacerbated political differences between Gaza and West Bank authorities and contributed to a lack of national, co-ordinated strategic planning and delivery of services," the report found.

"At every level where children seek support, that support has been shrinking due to the blockade. Families bear the strains of prolonged poverty and food insecurity, with no end in sight. The community is torn by political disputes, and critical services, including health, have been unable to recover from conflict."

All of this contributes to the water problem, Mr Alyaqoub said from his office in Gaza City, as the power surged and failed several times.

"The economy in Gaza is getting worse and worse and more and more people are turning to agriculture to boost their income - this in turn has shifted more pressure onto the aquifer.

"The system will not survive without an additional water source such as a desalination plant," he said.

Israel says it has eased the blockade during the past year and is now allowing more building supplies and other essentials into Gaza. In the past two weeks, more than 34,000 tonnes of goods were unloaded at the crossings into Gaza, the Israel Defence Force co-ordinator for government activities in the territories reported on its website.

As well, 13 million litres of diesel donated by Qatar to alleviate the fuel and electricity crisis was delivered, it said.

The United Nations considers Israel's land and sea blockade of Gaza to be a denial of basic human rights and a contravention of international law.

But it points the finger at armed groups operating in Gaza, saying their use of civilian-occupied built-up areas "to launch indiscriminate attacks on southern Israel, as well as the methods employed by the Israeli military" results in countless civilian deaths and injuries.

"Latest health hazard in Gaza: water that's not fit to drink", 23/06/2012, online at:

<http://www.brisbanetimes.com.au/world/latest-health-hazard-in-gaza-water-thats-not-fit-to-drink-20120622-20tj0.html>

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❖ **Report: 90% of WB water is under occupation control**

Gaza,(Alresalah.ps)— The water crisis in the West Bank worsens especially in the southern provinces, each year with the beginning of summer, because of the increased water consumption. Many officials and experts said that this water crisis is due to the occupation control over water resources and the local mismanagement in distributing water.

Palestinian water Authority Chief Shaddad Attili held the Israeli occupation responsible for the water crisis because of its disregard to Oslo conventions and its refusal to provide the Palestinian territories with the quantities of water upon which the two sides agreed and to allow drilling wells and setting up projects for water supply.

Attili told Quds Press that the occupation is controlling about 90% of water resources in the West Bank while only the remaining 10% are given to the Palestinians. Yet, the occupation authorities have been refusing to establish transmission lines for water in areas classified as "C", which are under full Israeli control according to Oslo agreement.

He criticized the local bodies in a number of Palestinian municipalities, holding them partly responsible for the water crisis because of the mismanagement of the distribution and the transport of water and the absence of tables that identify the arrival of water to certain areas, in addition to the lack of improvement and maintenance of the water transmission networks, which doubles the amount of lost water.

The Palestinian official stressed that "the water is available in larger quantities than last year and there will be no crisis this year, especially after planning a number of projects to control the water crisis based on drilling four new water wells in the south, in addition to a big project to reduce wastage of water," noting that "the amount of water owned by the citizens in their private wells exceeds the amount of water owned by the government"

For his part; Abdul Hadi Hantash, an expert in settlement affairs, stated that the occupation controls 84% of the amount of water in the West Bank after seizing its three water basins and preventing Palestinians from exploiting them.

He told Quds Press that the occupation authorities transmit 52% of the amount of water in the West Bank to the 1948-occupied Palestine and one-third of the amount water is transferred to the settlements leaving the West Bank with only 16% of the amount of water.

“Report: 90% of WB water is under occupation control”, 21/06/2012, online at:
<http://www.alresalah.ps/en/index.php?act=post&id=767>

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❖ Occupied Palestinian Territories face serious water problem

The water supply in the occupied Palestinian territories is becoming uncertain and unsafe due to the punitive measures adopted by the Israeli occupation authorities, claims a report prepared by Fadel Ka'osh, the ex-chairman of the Palestinian water authority.

The inhumane Israeli policies regarding water have resulted in a huge shortage of water needed by Palestinians for normal daily life, the report says. According to Mr Ka'osh, each Palestinian receives only 62 litres of clean water a day. "This is only 50 per cent of one person's daily requirement according to World Health Organisation (WHO) criteria."

The Israelis control most of the natural water sources in Palestine. They only give licences for Palestinians to dig superficial wells that do not reach the truly fresh underground supplies. Many West Bank districts are deprived of access to the water network and depend on water distribution tanks pulled by tractors. "These are unsafe since they are not subject to regular medical tests and other hygiene problems," the report states. "The price of water from such tanks is another issue, not only in the villages but also in the cities."

More than 50 per cent of the water consumed by Palestinians is bought from the Israelis. If they stop the supply, says the report, the amount available for every Palestinian will reduce to 32 litres a day. "This means that Palestinians are living under a real threat as long as they do not have sovereignty over their own water," added Ka'osh.

The report also suggests that climate change over the past 15 years has reduced natural water supplies in the occupied West Bank by more than 65 per cent. "This puts extra pressure on the natural water resources, with the supply decreasing while the demand is increasing." The report gave the examples of Al Farea, Al Oja and Fasayel water springs where demand exceeds supply.

In the Gaza Strip the situation is deteriorating faster than it is in the West Bank due to the ongoing Israel siege. "The water crisis in the Gaza Strip has resulted in a deteriorating health and environmental situation," the report says. "Most underground water resources have been polluted by fertilisers and are unsafe to use."

The report explained that the people of Gaza are still using the underground water aquifers for their daily needs, but they depend on filtered water sold by commercial companies for drinking.

"Occupied Palestinian Territories face serious water problem", 18/06/2012, online at:

<http://www.middleeastmonitor.com/news/middle-east/3891-occupied-palestinian-territories-face-serious-water-problem>

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❖ **Lebanon, Italy sign deal on sewage, water treatment**

BEIRUT: Lebanon and Italy signed a 13.8 million euro (\$17.4 million) agreement Friday to fund two sewage network and water treatment stations in the Keserouan and Akkar districts. According to a statement issued by the Council for Development and Reconstruction, the project will benefit the vicinities of Hrajel and Meshmesh in the two provinces. The council said the agreement allocates an additional 153,000-euro budget that will cover technical assistance, as well as monitoring and evaluation of the project. The agreement was signed by Nabil Jeser, head of the CDR, and Giuseppe Morabito, ambassador of Italy to Lebanon in a ceremony held at the CDR headquarters in Beirut.

“Lebanon, Italy sign deal on sewage, water treatment”, Daily Star, 18/06/2012, online at:
<http://mideastenvironment.apps01.yorku.ca/?p=5253>

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❖ Israel an important player at RIO+20 UN Conference on Sustainable Development

Israel attaches great importance to this year's Earth Summit, RIO+20, to take place in Rio de Janeiro on 20-22 June. The unprecedented scope of the Israeli delegation signifies the importance Israel assigns to promoting sustainable development in Israel and in the international arena.

Israel is well known in the world for its expertise and vast knowledge in the field of sustainability, in topics such as water, agriculture, food production, forestation, desertification and others. These are some of the topics that will be discussed at the United Nations Conference on Sustainable Development, to be held in Rio de Janeiro on 20-22 June 2012. About 130 world leaders and about 50,000 people are expected to attend from around the globe.

Israel's Minister of Environmental Protection, Gilad Erdan, will lead a large professional Israeli delegation to the UN conference, also known as Rio+20. The delegation will be composed of delegates from government ministries, the Knesset, local authorities, the business community, academia and civil society. Minister Erdan is scheduled to speak at the conference plenum. The Ministry of Environmental Protection is responsible for the subject of sustainability in Israel

The main topic of the conference will be building a "green economy" for the eradication of poverty in developing countries, with an emphasis on energy, water, food, cities, green employment, the oceans and disasters. The conference will also address how to prepare for the era after 2015, the target year for the UN's millennium goals, and how to make the subject of sustainable development an integral part of the international system.

The Israeli pavilion will showcase Israel's achievements in green technology, promotion of sustainability in Israel and Israeli foreign aid. This week, for instance, Israeli Prof. Daniel Hillel won the 2012 World Food prize for his work in developing the micro-irrigation system, thus contributing to food security. Israel shares its expertise with the world in the framework of foreign aid (through MASHAV, Israel's Agency for International Development Cooperation), its economic and professional relations with other states and its activities in the international arena.

For example, the UN General Assembly adopted an Israeli proposal for a resolution in the field of "agricultural development technologies" to provide a solution to global challenges arising from poverty and the food crisis. Furthermore, last year Israel hosted an international preparatory meeting ahead of the conference that addressed green agriculture and sustainable development to eradicate poverty and hunger in the world. Delegates from 28 countries attended.

UN Under secretary Sha Zukang, who visited Israel during this meeting, noted in his speech and at meetings with Israeli leaders Israel's contribution to the world in these areas and asked that Israel participate in the Rio conference and share its experience and expertise.

Two Israeli side events will take place in Rio: one on the subject of environmental agriculture and the eradication of poverty; and the other on solutions for municipal water systems. Israel's Jewish National Fund (JNF-KKL) will manage a study center on forestation and water, and Israeli experts will participate in international panels.

An interministerial professional steering committee was set up by the Ministry of Environmental Protection to coordinate Israel's preparations for the conference.

“Israel an important player at RIO+20 UN Conference on Sustainable Development”, 17/06/2012, online at:
<http://www.mfa.gov.il/MFA/InnovativeIsrael/Israel+an+important+player+at+RIO-20-17-Jun-2012.htm?DisplayMode=print>

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❖ **Russia looks to Israel for water technology**

Israeli water-tech firms note great success in Ecwatech Russia, Eastern Europe's largest industry expo

Israeli [water technology](#) innovations garnered great interest in Ecwatech Russia, Eastern Europe's largest water-tech event, which took place in Moscow in early June.

According to [Israel NewTech](#), over 700 exhibitors from around the world were featured in the expo, and over 12,000 visited it.

The Israeli booth at the event drew the attention of some of [Russia](#)'s most prominent players, including representatives from the Moscow and St. Petersburg's water authorities and the heads of Russia's largest private water utility company Rosvodokanal.

The booth was organized by the Ministry of Industry, Trade and Labor, [Israel](#)'s Economic Mission in Moscow, the Israeli Export Institute and Israel NewTech.

Some 14 Israeli water technology companies were featured in the expo, including: Amiad, Aqwise, Arad, ARI, Bermad, Blue I, Dorot, Hadas, Hakochav, Noga, Ooval and Powercom.

Aqwise, which develops innovative wastewater solutions for the industrial and municipal markets, was able to strike a deal with a local Russian supplier.

Aqwise CEO Elad Frankel said that, "The wastewater treatment market in Russia is growing quickly, and the regulation in this area is becoming more and more demanding, forcing municipalities and industrial plants to meet strict international standards. Aqwise's solutions are proving themselves to be economically viable for a number of sectors and for a variety of client needs."

Oded Distel, head of Israel NewTech, added that, "Despite the fact that Russia is a nation with a lot of water, the country is dealing with complex environmental challenges in water systems' management and urban and industrial wastewater."

"Israeli companies offer a variety of solutions for the challenges facing Russian water utilities."

Eduard Shteinbuk, head of the Israeli Trade and Economic Mission to Moscow said that the Russian market holds great potential for Israeli water-tech companies: "The Russian water sector is going through a modernization process that includes significant involvement of government funds both on federal and on regional levels.

"Israeli companies are able to offer relevant solutions for Russia's needs, and this creates real opportunities for cooperation." 19/06/2012, online at: <http://www.ynetnews.com/articles/0.7340.L-4243927.00.html>

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❖ Regional cooperation to bridge food deficit

Editor's note: The following is the full text of a statement delivered Tuesday by Najib Saab, secretary-general of the AFED, at a roundtable discussion at the Rio+20 conference. The roundtable, entitled "Food Security for Development in a Changing Arab World," was organized by the League of Arab States, ESCWA and the German International Cooperation Agency.

Arab demand on natural resources (footprint) amounts to more than twice what is available locally (biocapacity). This disparity, particularly signified by food deficit, is largely bridged by imports financed by oil exports, a model which is not sustainable, taking into account the increasing prices of biocapacity imports and the eventual depletion of nonrenewable energy resources. In view of the current precarious state of agriculture, the increasing scarcity of water, and the likely impact of climate change, Arab countries face daunting challenges. This demands a new green revolution, capable of establishing and maintaining a balance between agricultural biocapacity and footprint.

Food security is not necessarily synonymous with food self-sufficiency, especially at a country level where any chance of achieving self-sufficiency will be at the cost of depleting nonrenewable resources.

Taking into account that Arab countries have great variables in ecological footprint, biocapacity and income, bridging the deficit between biocapacity and footprint and achieving sustainable well-being demand regional cooperation based on comparative advantage in agricultural resources.

The AFED report on ecological footprint in Arab countries, to be released in November 2012, provides a detailed account of resources and consumption, and prescribes regional cooperation as the prime option for survival.

These are the first results of the Arab region's ecological footprint assessment, which are critical for understanding the region's competitive advantages and disadvantages:

- The average ecological footprint per capita in Arab countries increased by 78 percent from 1.2 to 2.1 global hectares (gha) per capita over the past 50 years.
- The available average biocapacity per capita in Arab countries decreased by 60 percent from 2.2 to 0.9 gha per capita.
- The average resident in Arab countries demands more than twice what is available locally.
- If all humans lived like the average resident of Qatar, 6.6 planets would be required to satisfy this level of consumption and emissions of carbon dioxide. By contrast, if everyone lived like an average Yemeni, humans would demand only half of planet Earth.
- In 2008, only four nations contributed more than 50 percent of the Arab region's ecological footprint: Egypt (19 percent), Saudi Arabia (15 percent), the UAE (10 percent) and Sudan (9 percent).
- Only two nations provided approximately 50 percent of the biocapacity in the Arab region in 2008: Sudan (32 percent) and Egypt (17 percent).
- Since 1979, the region as a whole has been experiencing a biocapacity deficit, with its demand for ecological services increasingly exceeding local supply. In order to bridge this gap, the import of ecological services from outside the region has been necessary.

These findings show that the region has already approached an imbalance between domestic supply and demand for ecological services, placing a limit on future growth in well-being.

However, regional averages of the Arab states mask great internal disparity: The average resident of Qatar had the highest ecological footprint in the world (11.7 gha per capita) – higher than the ecological footprint of the average Yemeni (0.9 gha per capita) by 13-fold.

Additionally, biocapacity availability per person varies greatly, with Sudan (2.3 gha per capita) having nearly 10 times that of Iraq or Jordan (0.2 gha per capita).

The huge gap between biocapacity and footprint is mostly reflected in food deficit, and subsequently food security. The blame cannot be exclusively placed on harsh environment and limited resources. Decades of distortive state policies, negligence and misdirected investments have driven agriculture in the Arab region to its current precarious state.

Agricultural strategies have lacked the integrated approach needed to promote development and alleviate poverty in rural areas, and foreign aid has largely benefited large landholders, estate agents and multinationals, further marginalizing small and poor farmers.

Solutions are at hand, as shown in the Arab Forum for Environment and Development's report on Green Economy in a Changing Arab World.

It found that raising cereal productivity from its low level of 1,700 kg per hectare in six Arab countries (Algeria, Egypt, Iraq, Morocco, Sudan and Syria) to the world average of 3,700 kg per hectare, coupled with an improved irrigation efficiency of about 70 percent would increase the overall cereal production in these countries by 50 million tons. This is enough to offset the current 20 million ton shortage and even generate a surplus of about 30 million tons in 2030.

Research is an indispensable core activity for arriving at the optimal mix of inputs and discovering drought-resistant cultivars and salt-tolerant crops. New eco-agricultural methods, protective of soil, land and water, such as organic and conservation farming methods, should be promoted and supported.

Globally, the market for organic produce has grown from \$15 billion in 1999 to \$55 billion in 2009. Organic agriculture provides more than 30 percent more jobs per hectare than traditional forms of agriculture.

Promoting sustainable agriculture in Arab countries will generate new incomes for rural populations, while creating 10 million new jobs and opening a market niche for Arab agricultural products in international markets.

Given that 76 percent of the poor in the Arab region live in rural areas, the prospect of providing economic and social lift to rural and agricultural communities will contribute to promoting equity and stability.

The AFED report on green economy found that shifting to sustainable agricultural practices is expected to result in savings for Arab countries of between 5-6 percent of gross domestic product as a result of increased water productivity, improved public health, and protected environmental resources, with savings amounting to \$114 billion.

Revitalizing the agricultural sector through adequate investments and research and development should result in at least a 30 percent reduction in imports over the next five years, thus contributing to increased food security. This would result in at least \$45 billion savings for the region over a five-year period.

The Arab region has one of the greatest variations in ecological footprint, biocapacity and income of any region in the world.

In order to pursue sustainable well-being for all residents in the region, attention should be directed to achieving more regional economic integration and cooperation and toward more inter-Arab trade free of barriers, where the free flow of goods, capital and people works to the benefit of all countries. Difficult policy questions regarding population and consumption growth will also need to be addressed in the near future.

“Regional cooperation to bridge food deficit”, 20/06/2012, online at:

<http://www.dailystar.com.lb/Business/Lebanon/2012/Jun-20/177428-regional-cooperation-to-bridge-food-deficit.ashx#axzz1yPyOSqvr>

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❖ Scary water scarcity

No, this is not a random list of Middle East & North African countries, but a global top ten list of countries facing the most acute water shortage.

A new report by Maplecroft, a risk and strategy consultancy, notes that water stress has major implications for global supply chains, especially within the major growth economies. And it is the Middle East that's at greatest risk.

"The MENA region is one of the most water stressed regions in the world," Dr Charlie Beldon, principal environmental analyst at Maplecroft, said in an emailed interview. "Although water management in the region is challenging due to limited renewable water supplies, cooperation and cohesive policies across the region could help to alleviate some of the pressures placed on the water supply."

In 2004, Arab Governments established the Arab Ministerial Water Council, a non-profit organisation that promotes awareness of water issues across the region. This type of cooperative action, and increasing awareness of the issue, are needed to promote water stress as a top priority issue.

"A concerted and cohesive effort to reduce the amount of water wasted as well as to increase water re-use in the region could help relieve water stress," Dr Beldon told alifarabia.com.

Despite efforts at co-operation, the situation remains perilous. For example, over-extraction of ground water has already lead to brackish water in the Dammam aquifer in Bahrain and unless a way is found to reduce water use the risks of water shortages will increase.

Approximately 85% of total water is used for agricultural production in the region; lessening fresh water use for farming could considerably reduce water stress, Dr. Beldon recommends.

Middle East states are already acting to reduce agricultural water use by investing in farm land in less water-stressed countries such as Sudan, the Philippines, Turkey and Kenya.

Saudi Arabia and the UAE are among the top four countries on a massive investment spree to acquire agricultural resources.

A report by the Land Matrix group - an amalgamation of global think-tanks - looked at how rich countries are scouring for land resources in poor but agricultural-rich countries.

"According to the Land Matrix data, investors from Gulf states have acquired land mainly in Africa (113 deals) and South East Asia (53 deals)," the report notes.

Gulf states' investors have acquired agricultural land in developing countries such as Northern Africa and the Horn of Africa, as well as Asian countries with Muslim populations (Pakistan, the Philippines and Indonesia). In some cases, Gulf investors have also invested in developed countries, such as Qatari investments in Australia), Land Matrix noted.

By importing water intensive crops and grain and switching to more drought-tolerant crops, much of the water used in agriculture could be repurposed. However, the practice of 'land-grab' is associated with considerable controversy with some instances of human rights abuses, land ownership or cultural violations being reported, notes Maplecroft's Dr. Beldon.¹

“Scary water scarcity”, 19/06/2012, online at: http://www.zawya.com/story/Scary_water_scarcity-ZAWYA20120619052440/

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❖ **Shortages: Water supplies in crisis**

Over the past 40 years the world's population has doubled. Our use of water has quadrupled. Yet the amount of water on Earth has stayed the same.

Less than 1% of the water on planet blue is for humans to drink.

About 2% is locked up in ice. The rest is for the fish.

Seawater is only good to drink for humans who live near the sea and can afford the cash and the energy to take out the salt.

For most of the population this is not an option.

Desalinated water costs maybe 15 times more than regular water. It burns polluting fossil fuel energy, as solar-powered desalination is in its infancy.

No, most places will have to live with the water they've got.

Many countries are awash; they'll be fine. Others are desperately mining fossil H₂O that seeped into rocks during the last ice age.

And as underground supplies run dry, water shortage sets in.

Large parts of Africa, Asia and Europe, including the south east of Britain are categorised by the UN as facing water stress or scarcity.

And for all the UN's recent boast about hitting drinking water targets, experts estimate that **maybe three billion people worldwide** still lack safe water to drink.

And it might get worse with climate change, although scientists' projections of future rainfall are notoriously cloudy.

The global capital of water shortage is Sana'a in Yemen. It's a city of two million people who fight to get water from tankers by the jerry can. Their boreholes are running dry.

Sana'a in Yemen is one of the most water-stressed cities in the world

But this water crisis like so many others is an act of man not an act of god.

Because, as in most developing countries, 90% of water is used for agriculture, in Yemen, much of it to grow the stimulant qat.

And experts insist that if farmers had used water more carefully there would still have been enough to go round.

If countries like Yemen are to tackle their water shortages they will need more skill in politics than in cloud-seeding.

Sustainable water depends on several factors: establishing with people who owns the water; who will pay for it and how much; and that the water is finite and therefore has to be limited.

In many places, people also have to accept that water is the ultimate recyclable resource and re-using it is the only choice.

Upstream privileges

The politics stretches from macro to micro. Many countries dependent on shared rivers like the Tigris, Euphrates, Nile, Brahmaputra, Ganges, Mekong.

In an ideal world, the mountainous up-river nations where the rain falls would use it for hydro-electric then send it downstream to grow crops on the fertile plains in a neighbouring land.

Desalination is only an option for a small proportion of the world

But this isn't an ideal world and often the up-river nations simply hog it and try to grow crops inefficiently themselves. The UN has proved mostly powerless to intervene.

At a micro level, there's often an intractable unhealthy embrace between land, money and power. In many developing countries farmers grab 90% of water supplies and hold politicians in thrall.

In a future of water security they'll have to pay the proper amount for the water they use.

Australia has led the way with water trading. The water in the rivers of the Murray-Darling basin has been turned into a tradeable commodity.

Paying by the gallon focuses the farmer's mind on water saving technology. But even that isn't enough. The World Bank says if farmers install water-saving drip-feed technology they simply irrigate more land unless politicians find the courage to tell them that water is limited.

Thirsty lawns

Even America is having to deal with the notion that you can't always get everything you want. Las Vegas pays people to dig up their thirsty lawns forever. But water rationing schemes immediately face political flak.

In the UK, civil engineers want to introduce a sliding tariff so people who water their lawns or their cars pay much more than others who just want to shower, cook and drink with their H₂O.

Sometimes it takes a crisis or perception of a crisis to unlock the politics.

Africa is sitting on a large resource of groundwater, but a change in mindset may be required to unlock it

When Japanese troops invaded in Singapore they blew up the pipes bringing water from Malaysia. The Singaporeans have been jumpy about water ever since and have overcome objections to recycling their water - the so-called toilet to tap method long adopted in Europe.

Technology has helped before and will again. Three thousand years ago, India started installing a system of ponds and tanks to capture monsoon rains and allow them to replenish aquifers below. Many are now being repaired.

Future technologies include new forms of osmosis systems for desalination; GM microbes to help turn sewage back into drinking water; and new strains of seeds that don't require so much water in the first place.

Countries may have to run into crisis before the politics unjams for many of these solutions. But the solutions are there. For most places on the planet, a water crisis is eminently avoidable, if we can find the cash and particularly the resolve to do it.

“Shortages: Water supplies in crisis”, 19/06/2012, online at: <http://www.bbc.co.uk/news/science-environment-18353963>

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❖ Millennium Dam: Necessary for Integrating Interests of Nile Basin States

Sudanese Engineering Association in Khartoum held last week a symposium titled: Ethiopian Millennium Dam and Future of Development in Sudan, attended by many experts, consultants in the field of Nile waters and irrigation, namely the Minister of Irrigation and Water Resources and Sadiq Al-Mahdi.

The symposium dealt with analysis and debating the Millennium Dam, being constructed 12kml away east of Sudanese borders with Ethiopia, benefits and economic and environmental effects of the Dam on the states of Nile Basin.

Sudan is aware of the benefits and effects of the Dam

Professor Saifuddine Hamad Abdallah, the Ministry of Irrigation and Water Resources, said his ministry conducted various studies in all fields and the Nile Basin states for 25 years to come and that it has a complete vision for what is going on now in respect of the Millennium Dam and strategy for dealing with the new situation and proposed dams in these countries. The Minister said Sudan would make maximum use of this dam, which would reduce clay, whose removal costs millions of dollars, adding that the dam will provide waters at fixed levels that will help in irrigated agriculture, especially in the wake of shortages of rain across the regions of the country.

The minister said that shortage of electricity power will be compensated from new proposed dams or purchase from Ethiopia which sells power for 50 US cents per kilowatt, which far less than production cost for a kilowatt in Sudan. He stated that the dam will have many benefits for Egypt for it will reduce amount of alluvium in the basin of the High Dam and evaporation, adding that the Ethiopians side always welcomes proposals by Sudan and Egypt in the interest of all parties.

Necessity for Nile Basin States to participate in constructing the Dam

Professor Mohamed Akod Osman, the Dean of Faculty of Engineering, University of Khartoum, stated that the Millennium Dam would have positive impact on Sudan if agreement on how to operate it was reached to achieve development and self-sufficiency because it would supply water at stable rate throughout the year. In his paper, the Professor said the dam would reduce alluvium for Sudan by 100 million meter cubic. He underscored the importance of taking into account international legal legislations to tap on the Nile Basin waters, adding that the Millennium Dam will change the level of Nile waters for the Basin States.

Akod demanded Sudan and Egypt contribute to the cost of construction estimated at \$50billion in US

dollars to ensure common interests, adding that the Dam will provide huge amount of electricity that can be utilized in development for the Nile Basin states.

Dr. Osman Al-Tom Hamad, advisor to the Ministry of Water Resources, explained that the construction of the Millennium Dam was especially aimed at power generation not agricultural production due to the nature of Ethiopian mountainous lands. He added that the Dam is located 12klm from Sudan and would be finalized in 2017 and that construction has now reached 10 per cent. He said the Dam would affect electricity production in Sudan during summer, but would improve during winter because waters would be available during this period. However, Ethiopia offered to Sudan purchasing power at 50 cent per a kilowatt, far cheaper than that produced in Sudan. He said that some sandy island would disappear and annual accumulation of alluvium would reduce, which would increase cost of electricity production due to scarcity of this alluvium. He called for the necessity for Sudan to make use of the available waters in agricultural and working for agricultural integration in the Nile Basin States.

The Nile will suffice all Nile Basin States

Dr. Ahmed Adam Osman, advisor to the Ministry of Water Resources, affirmed that the Nile Basin states can benefit from waters if agreement satisfactory to all parties is reached, adding that Ethiopia has the feeling that it is not benefiting from these waters, adding that Egypt, Sudan and Ethiopia are suffering poverty, climate change and accumulating alluvium along the Nile stream, and that this Dam will block waters above and therefore will reduce alluvium and help in precipitation, which in turn will reduce amount of evaporation. He called for joint work so that Ethiopia may not control the Nile Waters.

Environmental effect

Dr. Merghani Taj Assied added that any heedlessness in political relations will affect the flow of Nile waters in the member states in the coming period and that the constructing of the Dam would affect food security in Egypt and Sudan, fish resources and the Nile level will go below average levels, which require longer pipes and additional cost for farming along the Nile for farmers. However, said the construction of the Dam will reduce soil erosion on the banks.

Integration of Nile Basin states

Sadiq Al-Mahdi said that lack of agreement among the Nile Basin member states will lead to grave political crisis, adding that holding out by any party would encourage others to take more fundamental positions and create cold war among them. he called for the necessity to review the agreement on the Nile waters in such a way to make other members states feel fair distribution of

cottas, adding that any military solution is useless in this issues, but the solutions rests with the recognition of the need of the Basin state and accepting their opinions on the agreement signed during the colonization and taking into account the desire of the Basin states for benefiting from the Nile waters. Al-Mahdi called for a collective conference for all Sudanese so that they have their say and determines their fate regarding the Nile waters; in addition to integrating the interests of the Nile Basin member States because Sudan is blessed with arable lands while Ethiopia has potentials for electricity production and Egypt manufacturing expertise.

“Millennium Dam: Necessary for Integrating Interests of Nile Basin States”, 24/06/2012, online at:
<http://news.sudanvisiondaily.com/details.html?rsnpid=211415>

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❖ **Dehydration deaths: Refugees in S.Sudan need water**

NAIROBI, Kenya—Tens of thousands of refugees fleeing war in Sudan are struggling to find enough water to drink and cook with, leading to the deaths of an unknown number from dehydration and diarrhea, aid officials said Monday.

More than 35,000 people have fled Sudan's Blue Nile state for South Sudan over the last month. The refugees said they fled bombing and ground fighting between Sudan's military and a rebel group historically associated with South Sudan, the SPLM-N, the U.N. said Monday.

Thousands of the new arrivals were forced to walk about 25 kilometers (13 miles) over the last week because there wasn't enough water at their original location, said Tara Newell, an emergency coordinator with the aid group Doctors Without Borders.

"We did see a handful of deaths from that walk from sheer dehydration and exhaustion," Newell said by satellite phone from the Jamam refugee camp in South Sudan's Upper Nile state.

Newell said it was impossible to quantify the number of deaths, but that her aid team saw firsthand the death of a toddler.

"We arrived just as the child was dying and we were unable to reanimate the child," she said.

"Witnessing a child die of dehydration is sad. Dying from a tropical disease is sad, but dying of a lack of water is just outrageous."

Peter Struijf, an aid worker from Oxfam at the Jamam camp, said that the latest influx of refugees began after shelling and bombing in the Blue Nile region of Sudan in May. He said most people had to walk two to three weeks to reach the border with South Sudan.

The majority of the new arrivals are women, the elderly and children, an indication that men stayed behind to participate in the fighting or to tend to the fields, he said.

Some 20,000 people are at a holding camp now but the camp will run out of water in a week, Struijf said.

The new arrivals said that up to 40,000 more people could be en route to South Sudan, UNHCR said.

The rainy season is about to begin in this part of South Sudan, but that will bring additional challenges. Aid workers say they would welcome the additional water, and the chance for reservoirs to refill, but it will make relocating people or bringing in food and medical supplies by the rough dirt roads much more difficult.

"We are certainly not praying for water, which is fairly unusual in Africa. We are praying for another week of dry weather so we can get everyone out," Struijf said.

A UNHCR report released Monday said that more people became refugees in 2011 than at any time since 2000. UNHCR said 2011 was a record year for forced displacements caused principally by crises in Ivory Coast, Libya, Somalia and Sudan.

The Jamam refugees are fleeing from Blue Nile State, while another refugee camp in South Sudan -- Yida -- has seen nearly 50,000 refugees fleeing fighting in Sudan's Southern Kordofan state.

Both internal conflicts between Sudan and the SPLM-N developed after South Sudan peacefully broke away from Sudan last July after an overwhelming vote that was guaranteed in a 2005 peace agreement. The agreement ended more than two decades of civil war between Sudan and the new state of South Sudan.

Struijf said he believes aid workers should be able to handle the situation around the Jamam-area refugee camps, but that if rains arrive early a crisis will develop, particularly because the 20,000 people in the low-water situation won't be able to move. The rainy season can last for six months in South Sudan.

"We are still playing a game of poker with the weather. But we seem to have a slightly better hand of cards now than we had two to three weeks ago," he said. He credited hard work from drilling wells to planning logistics.

Newell said that water remains an urgent priority. "It's very sad that with this number of refugees that simply having something to drink is our biggest challenge."■

"Dehydration deaths: Refugees in S.Sudan need water", 18/06/2012, online at:

http://www.boston.com/news/world/africa/articles/2012/06/18/dehydration_deaths_refugees_in_ssudan_need_water/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=47b436ce08-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Ethiopians 'forced off land' for sugar projects

ADDIS ABABA — Ethiopia is forcing thousands of people from their land in the southern Omo valley to make way for sugar plantations, Human Rights Watch said in a report Monday, a charge denied by the government.

"The Ethiopian government is forcibly displacing indigenous pastoral communities in Ethiopia's Lower Omo valley without adequate consultation or compensation," the New York-based group reported.

Pastoralists are communities whose main livelihood is raising livestock.

An official with the group estimated that between 5,000 and 10,000 people have been displaced.

About 100,000 hectares (250,000 acres) of land has been earmarked for commercial agriculture in the Omo valley, where several state-run sugar plantations and cotton farms are already in operation.

The government denied the accusation and said any relocation in the area is happening voluntarily.

"There is no forcing out of people from their residence, the direction of the government in this regard is to engage the public, if there is any reason to relocate people, then it is based on... open communication," government spokesman Bereket Simon told AFP.

The rights watchdog accused Ethiopian authorities of intimidation, arrest and violence against those who oppose the plans.

"Government officials have carried out arbitrary arrests and detentions, beatings, and other violence against residents of the Lower Omo valley who questioned or resisted the development plans," HRW said.

But Bereket said the sugar plantation schemes in the Omo valley will develop and modernise the region.

"We are concerned with (community) wellbeing, their cultural heritage and this is not a project to dismantle their cultural heritage, it's the opposite actually," he said.

Most of the 200,000 people living in the Omo valley are agro-pastoralists using the land for cultivation and animal grazing.

The Omo river is also a lifeline for the communities in the valley who rely on its annual flooding for growing crops.

Rights groups say the construction of the Gibe III dam upstream -- already half complete -- will regulate the river's flow, threatening the livelihoods of the communities that rely on it.

The government rejects these claims, saying the dam will provide a steady water source and will produce electricity for the 55 percent of the Ethiopian population that does not have access to power.

But HRW's senior Africa researcher Ben Rawlence accused the Ethiopian government of neglecting the needs of local communities.

"Ethiopia's desire to accelerate economic development is laudable, but recent events in the Omo valley are taking an unacceptable toll on the rights and livelihoods of indigenous communities," he said in a statement.

The rights group called on the government to halt construction of the dam and stop the development of sugar plantations.

Bereket accused HRW of trying to "micromanage" Ethiopia and of routinely opposing development schemes.

"They want us to remain poor and I don't know how these people can claim to be humanistic when they just oppose any endeavour that we do to benefit our people," he said.

Ethiopian Prime Minister Meles Zenawi said in May that four million hectares of land have been earmarked for commercial investment throughout the country.

"Ethiopians 'forced off land' for sugar projects", 19/06/2012, online at:

http://www.google.com/hostednews/afp/article/ALEqM5jBNAWTZUzm0SBMuuxPxZJMhNvneg?docId=CNG.2be34c3319a4daee47bc50f8989f305a.1b1&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2b192e3bba-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ King- Jordan aspires to become model in sustainable development

(MENAFN - Jordan Times) Jordan seeks to create a model path of sustainable development that meets national needs, His Majesty King Abdullah said on Thursday.

In a speech delivered by Planning Minister Jafar Hassan on his behalf during the UN Conference on Sustainable Development (Rio+20) in Brazil, the King said sustainable development entails inclusive growth, improved standards of living and the protection of natural resources and the environment.

He said the world now faces complex problems in the areas most basic to human life and welfare: water, energy and food, according to a copy of the speech which was made available to The Jordan Times (see full text).

"We need to reach cooperative, integrated solutions, as we cope with much less to meet much greater needs," the Monarch stressed. Jordan designed a pioneering green-economy scoping study, the first in the region, King Abdullah said, adding that the study identifies six sectors with high potential for transition to green economy: energy, water, transport, agriculture, tourism and waste management.

The King noted that priorities for the next decade include innovative and sustainable options like renewable energy, water treatment and desalination projects, and new, energy-efficient practices in cities and transportation systems.

In the speech, the King described a green economy as a youth economy, noting that economic growth "is not just about the numbers, and it is not an end in itself".

"Real growth is inclusive and sustainable growth, which can build a future for everyone, men and women, and, especially, young people, who are 70 per cent of our population," he said.

A green economy is also a pro-poor economy, the Monarch added, stressing that political and economic reform are ultimately inseparable and public participation builds stake holding in a stable, thriving future, which is vital for the consensual, evolutionary reform path to which Jordan has committed.

The Jordanian delegation participating in the conference comprises Minister of Environment Yaseen Khayyat, Jordan's Ambassador to Brazil Ramez Goussous and a number of officials from the ministries of planning, foreign affairs and energy.

Participants from governments, the private sector, NGOs and other groups are participating in the two-day conference to discuss means to combat poverty, ensure social equity, environmental protection, provide sustainable job opportunities, utilise clean energy and achieve security.

The conference comes 20 years after the 1992 Earth Summit in Rio, where countries adopted Agenda 21 - a blueprint to rethink economic growth, advance social equity and ensure environmental protection.

"King- Jordan aspires to become model in sustainable development", 23/06/2012, online at: <http://www.menafn.com/menafn/1093526113/King-Jordan-aspires-to-become-model-sustainable-development>

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❖ Drought hits Yellow-Huai regions, affects agricultural production

BEIJING, June 21 (Xinhua) -- China's drought relief authority said Thursday the severe drought parching the Yellow River and Huai River regions has affected normal agricultural production.

As of Thursday, 77.61 million mu (5.17 million hectares) of arable land in Henan, Anhui, Shandong and Inner Mongolia have been suffering drought conditions, according to a statement on the website of the State Flood Control and Drought Relief Headquarters.

The drought has also left 4.28 million people and 4.85 million heads of livestock in Yunnan, Hubei and Inner Mongolia short of drinking water, the statement said.

The Yellow River and Huai River regions, including parts of Shandong, Jiangsu, Anhui, Henan and Shaanxi, have received below-average rainfall since the beginning of June, disrupting agricultural production in those areas.

The drought relief authority called on local governments to intensify drought relief efforts and take measures to minimize the extreme weather's effects on the farming industry, according to the statement.

“Drought hits Yellow-Huai regions, affects agricultural production”, 21/06/2012, online at:

http://news.xinhuanet.com/english/china/2012-06/21/c_131668876.htm?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=4fd7aea3b9-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Agriculture key in China premier's Brazil visit

BEIJING (AP) — Ensuring grain and other food supplies for China's booming economy are expected to dominate Chinese Premier Wen Jiabao's trip to four South American countries.

A Foreign Ministry official said Monday that Wen will visit Brazil from Wednesday to Friday to attend the U.N. summit on sustainable development in Rio de Janeiro.

Next will come visits to Uruguay, Argentina, and Chile. Wen will sign a series of agreements in each country, but no details were given.

Rising living standards have made China a major player in global agricultural markets.

Soybean exports to China have helped underpin the Argentine economy's recovery after a world-record debt default and devaluation in 2002 left its economy in ruins.

“Agriculture key in China premier's Brazil visit”, 18/06/2012, online at: http://news.yahoo.com/agriculture-key-china-premiers-brazil-visit-042324518--finance.html;_ylt=AnmScGFkBrE.Zte96gue2.fyWed;_ylu=X3oDMTRvMHNyZzZkBGJb2RIA2dtcHRvcDEwMDBwb29sd2lraXVwcmVzdARtaXQDTmV3cyBmb3IgeW9lBHBzZwMxZDczOGIyNi00MzY5LTM5MzctYWNkMy0zZTQxYjZjYmZhZjAEcG9zAzEEc2VjA25ld3NfZm9yX3lvdQR2ZXIDNzAyZWZkYjEtYjhmZC0xMWUxLWI2ZjYtZWQxODMzMtK0OTM3;_ylg=X3oDMTJvcTl0ZW5yBGludGwDdXMEbGFuZwNlbi1lcwRwc3RhaWQDZjJjMDAwODYtNjc4MC0zZDRiLWJiMzAtYmE1NmE2NTk3NDRhBHBzdGNhdAN3b3JsZARwdANzdG9yeXBhZ2U-;_ylv=3?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2b192e3bba-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Jindal Power To Invest \$7.7 Billion In Hydro: Corporate India

Jindal Power Ltd., a unit of [India](#)'s biggest steelmaker by market value, plans to spend \$7.7 billion on hydroelectric projects over the next decade as a coal shortage forces utilities to cut dependence on fossil fuels.

The generator, which shelved a share sale plan announced in 2009, will invest 427 billion rupees in the northeastern state of Arunachal Pradesh to install 6,100 megawatts of capacity, Jayant Shrinivas Kawale, managing director for hydro and renewables, said in an interview in New Delhi. The company expects to get government approvals for its first water-based electricity project by the end of the year, he said.

“These projects will strengthen our portfolio,” Kawale said. “The biggest positive for us will be that for the next 45 years, we will have plants that run steady without troubles coal-fired ones face.” The company's first unit may start producing power in seven years, he said.

Jindal, [GMR Infrastructure Ltd. \(GMRI\)](#) and [Lanco Infratech Ltd. \(LANCI\)](#) are expanding into hydro projects as a hedge against inadequate fuel supplies in the nation where 56 percent of the power is generated using coal. Apart from the unit of [Jindal Steel & Power Ltd. \(JSP\)](#), at least five companies have announced capacities worth \$16 billion of investments to take advantage of incentives offered by federal and state governments for the clean energy.

Power Outages

A shortage of the fuel used in thermal plants is threatening to worsen blackouts in [Asia](#)'s third-biggest economy, where power is vital for reviving growth from the slowest pace in almost a decade. About one in four Indians lives without electricity, according to the UN. [NTPC Ltd. \(NTPC\)](#), the nation's biggest generator, last week said it scaled back plans to add coal-fired capacity by 42 percent for the five years ending 2017.

Prime Minister [Manmohan Singh](#) is offering concessions to promote cleaner alternatives to counter concerns from environmentalists even as his efforts in February to boost coal supplies to utilities fail. The government allows hydro operators to sell 40 percent of their output at market rates, unconstrained by state-administered price controls faced by thermal plants.

Fossil fuels are blamed for global warming as a [United Nations Environment Program](#) report on June 6 said current trends in carbon output show the Earth may warm by at least 3 degrees Celsius by 2100 from pre-industrial levels.

Hydro projects account for about 20 percent of generation capacity, according to data provided by the Central Electricity Authority. The rest is from gas, wind and solar sources.

Worst Performer

Parent Jindal Steel & Power rose as much as 1.4 percent to 443.65 rupees and traded at 441.9 rupees as of 9:34 a.m. in Mumbai. The stock has [slid](#) 31 percent from this year's high, making it the worst performer in the 11-member [BSE Metal Index. \(BSEMETL\)](#) The company is rated a "buy" by 25 of the 36 analysts who track it, while four [recommend](#) a "sell," according to data compiled by Bloomberg.

Jindal Power's plans to expand into hydro may distract its focus away from its core thermal business as the investments take a long time to yield results, said Niraj Shah, an analyst at Mumbai-based Fortune Equity Brokers (India) Ltd.

"Their core strength is thermal and they shouldn't be and can't be spending on hydro power," said Shah, who has a buy rating on the parent. "They should be spending money to complete thermal projects where work is already going on."

Jindal Power operates a 1,000-megawatt power plant in the central state of Chhattisgarh, and it plans to raise total capacity more than 11-fold to 11,480 megawatts in eight years, according to the company's website. The New Delhi-based company plans 6,100 megawatts of capacity in hydro, with each megawatt costing 70 million rupees, Kawale said, while a coal-fired capacity costs 50 million rupees typically.

Coal Mines

The government is pushing for about 9,204 megawatts of hydro capacity addition in the five years to 2017, or a 24 percent increase, according to a new policy draft on the website of the Central Electricity Authority.

Chairman Naveen Jindal, who is also a lawmaker belonging to the ruling Congress party, has acquired coal mines abroad to feed his thermal and steel plants as the government estimates the fuel shortfall to widen 40 percent to 192 million tons in the year ending March 31.

Jindal owns three fields in [Mozambique](#), [Indonesia](#) and [South Africa](#) with combined reserves of 1.5 billion tons. Profit at the parent company rose 5.6 percent to a record 39.65 billion rupees in the 12 months through March. Earnings have lagged behind analyst estimates in each of the past three years.

Low Costs

Jindal Power has yet to decide on the time for its initial public offering, Deputy Managing Director Sushil Maroo said last year, without elaborating. The company planned to raise 72 billion rupees when it announced the proposal on Dec. 29, 2009. Jindal Steel's shares have since slipped 4 percent. "There's incentive now to push for these hydro projects as access to coal is becoming a bigger problem," said Vijaykumar Bupathy, an analyst at Spark Capital Advisors in the southern city

of [Chennai](#). “The running costs are very low compared to thermal plants after considering the risks and delays involved in building the plants” that include flash floods and rehabilitation of people. Heavy rains, delays with land acquisitions and environmental approvals have crimped coal output in India, with the hurdles exacerbated by inadequate transportation networks. Coal India Ltd., a state-owned company that accounts for about 80 percent of the national output, has failed to sign supply contracts, saying it could meet only 50 percent of the demand even after Singh ordered penalties in February.

Singh is planning to spend \$400 billion in the five years ending March 31, 2017 to add 76 gigawatts of generation capacity to spur growth as government data last month showed gross domestic product expanded 5.3 percent in the quarter through March, the least since 2003.

The hydropower business “is relatively risk free,” said Kawale. “It also makes sense because our carbon footprint is so much smaller.”

“Jindal Power To Invest \$7.7 Billion In Hydro: Corporate India”, 18/06/2012, online at:

http://www.bloomberg.com/news/2012-06-17/jindal-power-to-invest-7-7-billion-in-hydro-corporate-india.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=7fd5e5acb2-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ The dangers of India's water policy

A global water report promotes privatisation narrative which could be disastrous for India [[Images](#)] and the world, says Gopal Krishna.

Ahead of the United Nations Conference on Sustainable Development being held in June 20-22 in Rio de Janeiro [[Images](#)], Brazil [[Images](#)], the United Nations Educational, Scientific and Cultural Organisation published a 909-page report titled 'United Nations World Water Development Report 4: Managing Water under Uncertainty and Risk. It is envisaged as a conference at the highest possible level, including heads of state and government or other representatives. It will result in a focused global political document

Citing a World Bank document of 2009, this three volume report says: "The National Ganga River Basin Authority in India, with the financial support of the World Bank, launched a programme in 2009 to clean the Ganges [[Images](#)], to ensure that 'no untreated municipal sewage or industrial effluents would be discharged into the river by 2020'. Previous action plans did not improve the health of the river, in which almost 95 percent of the pollution is caused by sewers and open drains (World Bank, 2011b). This time the governmental approach has moved from a town centric approach to a broader river basin approach..."

The report's treatment of Ganga Basin, the largest river basin of the country which has catchment in 11 States leaves a lot to be desired. The report fails to enlist any achievement of the authority that was set up in February 2009. It does not scrutinise whether or not the promised 'broader river basin approach' has indeed been adopted. It does not dwell on the split personality of the bank either.

The bank has been undertaking contradictory projects in the Ganga basin without any sense of accountability. It depletes water quality of Ganga by supporting dams upstream and it provides loans for improvement of water quality in its downstream. The second volume of Environmental and Social Management Framework for Bank assisted National Ganga River Basin Project document says, "The Ganga basin (which also extends into parts of Nepal, China and Bangladesh) accounts for about 26 percent of India's landmass, 30 percent of its water resources, and more than 40 percent of its population."

If the bank knew that Ganga basin is an international river basin, how did it choose to refer to it as 'national'? The UNESCO's report like the bank fails to comprehend that both Ganga and Mekong are trans-boundary rivers of the Himalayan watershed.

The UNESCO report states that approximately 1.2 billion people, over half of whom live in India, defecate in the open. This has been snobbishly articulated a billion times. The report's colossal failure lies in not documenting and comparing the water footprint of those who defecate in open and those defecate within their own houses. It shows that the authors are offering platitudes and prejudiced observations and hiding the sins of those who defecate in closed spaces. This dereliction happened perhaps due to class affinity.

The release of the UNESCO report a few months prior to the Rio+20 Earth Summit could indeed have provided a sound basis for discussions on the future of our planet and water's centrality in it, had it not caved in under the influence of international, financial institutions, entities like the World Business Council for Sustainable Development and the World Resources Institute, their The Access Initiative and Coca Cola. It has provided quite an unsound basis to comprehend and initiate steps to protect the ecological space of water. Most importantly, it has failed in ambition.

If one compares the 522 page report of the Western Ghats ecology expert panel of the Union environment & forests ministry for south and western India, one will find the poverty of ecological imagination of authors of the UNESCO's report. The Indian panel advocates a graded or layered approach, with regulatory as well as promotional measures appropriately fine-tuned to local ecological and social contexts within the broad framework by fine-tuning through a participatory process going down to gram sabhas. Now that Ganga River Basin Authority and Mekong River Commission has proven itself to be too weak to act to safeguard the ecological integrity of river basins, the report of the Western Ghats panel creates a compelling logic for a high-powered panel both at national and international level to adopt a similar approach in dealing with ecological and natural resources in order to set matters right in the global eco system outside the 'piped and bottled water framework'.

UNESCO's report refers to India's National Water Mission as a part of the National Action Plan on Climate Change (2008) which is identifying several strategies to tackle climate change and achieve water-related goals. "The main goals are to create a comprehensive water database and proper public awareness and education campaigns, shift focus on overexploited areas, increase water use efficiency by 20 percent and promote IWRM (Integrated Water Resource Management) on a basin level...", observes the report. Such uncritical reproduction of official documents like the mission document ignores the parochial approach of the authors of the report. They have failed to comprehend the stark democracy deficit in the process of creating it.

Citing a Planning Commission document of 2002, it says, "Water supply is a state responsibility, but various ministries share responsibility at central and state levels... Local governments are increasingly turning operating and maintenance responsibilities to private companies." The report is attempting to build a case for privatisation of water by selectively citing bank-influenced documents of the Planning Commission. It fails to record the failure of private water companies who are engaged in direct water trade through pipes and bottles, in tankers and vessels, and indirectly or 'virtually' through products.

Not surprisingly, the authors of UNESCO report are quite impressed with a study titled The Coca-Cola Company and The Nature Conservancy that was done by researchers at the Twente University in the Netherlands in collaboration with Coca-Cola Enterprises Inc and Coca-Cola Europe on the water footprint of a PET bottle of Coca-Cola. It found that the operational water footprint, equates to only about 1 percent of the total water footprint. The supply chain overhead water footprint was calculated and found to be negligible. There could not have been any negative inference of this research. Will companies collaborate in studies which bring negative results and publicity for them? But authors of UNESCO report chose to overlook this manifest conflict of interest ridden study.

If UNESCO's report is looked at in the context of India's Draft National Water Policy of 2012 and the Planning Commission's Draft National Water Framework Act, it becomes clear that both fail to undo the onslaught on the public water across the country by the foreign, national water companies and advocate corporatization and private sector participation.

The UNESCO report is indulgent towards maintaining status quo. It meekly states, "In regions where there are large discrepancies between where the water is and where it is needed, the construction of large inter-basin transfer projects is likely to continue – despite the recognized advantages of moving the products of water rather than the water itself." It does not question the desirability of "water re-allocation" through "agriculture-to-urban water transfers." The draft policy quite like the 2002 version recommends diversion of rivers for interlinking by referring to inter-basin transfer of water although Government of India's National Commission for Integrated Water Resources Development Plan had recommended against it in 1999.

The UNESCO report provides case studies to argue for water banking for surface water and groundwater and water markets and continuous public sector involvement so that "The public intermediary buys water from the willing sellers and then sells it to buyers. With this system, water managers are confident they can find the water they need at a predictable price."

The reflection of this state of mind is visible even in Draft National Water Policy of 2012. The draft policy recommends "The "Service Provider" role of the state should be gradually shifted to that of a regulator of services and facilitator for strengthening the institutions responsible for planning, implementation and management of water resources. The water related services should be transferred to community and / or private sector with appropriate "Public Private Partnership" model."

The meeting dissected the reply of the Union Water Resources Minister, Pawan Kumar Bansal [[Images](#)] given to the Parliament on May 7, 2012. Bansal said, "In the new proposed water policy, we have taken care to emphasize that the State should be encouraged to go in for public private partnership... public private partnership does not mean that you are privatizing the water sector. We are not privatising the water sector." He added that there are many good projects where "the public private partnership model has been found attractive enough by different cities in the country to adopt that."

Bansal mentioned the names of cities like Tirpur, Salt Lake Kolkata [[Images](#)], Chennai, Nagpur, Hyderabad, Hubli, Dharwar, Belgaum, Gulbarga, Latur, Mysore, Haldia, Dewas, Khandwa, Shivpuri, Raipur, Kolhapur, etc. He argued that at "So many places for one purpose or the other public private partnership model has been utilised, and it would be the policy of the Government to encourage that." On May 10-11, at the national meeting of citizens' groups Bansal's reply in the Parliament was analyzed and there was unanimity among the participants that he was misrepresenting facts and misleading the house with impunity. The cities which mentioned by the minister are cases of failed PPP projects. Votaries of privatisation argue that they are not privatizing water, but only involving private parties in managing it. The fact is no private operator undertakes a project unless it is assured of its raw material i.e. water.

The fact is that the basic premise of PPP stands exposed despite this the JNUNURM model for signing PPP is being adopted in several cities. It has been extended from 63 cities to 5, 000 cities.

The water related services are being transferred to a PPP mode, any venture in which the private sector is involved in a manner that it exercises control on some or all parts of the water supply system, from production, transmission, treatment to delivery. There are several PPP projects where more than 90 per cent of the capital expenditure of \$28.8 million comes from public resources. City's water supplies are being handed over to private companies for 25 years. These agreement include a restriction that no parallel competing facility will be allowed.

Arati Tiwari, corporator, Gulbarga shared the elaborate case study at the national meeting about how Karnataka [[Images](#)] Government's plan to extend the 24x7 water supply scheme from a few select wards to entire city corporations of Hubli-Dharwad, Belgaum and Gulbarga has caused massive monetary increase in the rate of water supply. None of the 55 corporators of Gulbarga City Council have given their consent still the plan is unfolding. She narrated how her family has to foot a bill of Rs 3500/month as water charge. She argued that democracy has become a government off the people, to buy the people and forget the people. The fact is that PPP arrangement is privatisation. In some states it was noted how the promise of 24 X 7 water supply turned out to be a 6-hour water supply even this is not mandatory.

A dissenting report annexed to the report of the Planning Commission's Working Group on Urban and Industrial Water Supply and Sanitation expressed disappointment with the fact that Water as Fundamental Human Right has not been articulated strongly enough. Quite like the UNESCO report, Working Group's report too has missed out on highlighting many serious problems of privatisation and PPPs and their serious implications. In such a situation, the recommendations in these reports appear quite weak.

A situation is emerging where instead of providing assured safe drinking water as matter of right, right to purchase bottled water is being pushed. Despite this both national efforts and UN reports do not suggest anything to reverse the trend to save the ecosystem and its fluid for the present and future generations. Wedded to market socialism, China may have forgotten the lessons of free trade in opium, India and Indians cannot afford to allow free trade in water although their government is unconstitutionally declaring the country to be a market democracy.

“The dangers of India's water policy”, 18/06/2012, online at: <http://www.rediff.com/news/column/the-dangers-of-indias-water-policy/20120618.htm>

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❖ Stir in Delhi against Ganga dams

The pro-dam and anti-dam agitation on the Ganga river is hotting up. Activists, along with leading Hindu seers, staged a protest march from Rajghat demanding the Centre to take strong steps to stop the construction of new dams on the upper reaches of the Ganga river.

Magasasay award winner Rajender Singh warned that the aggressive pro-dam policy being pursued by the Uttarakhand state government will push the state towards an environmental catastrophe. Meanwhile, pro-dam activists blocked the national highway near the Alaknanda hydro-project, demanding an assurance from the Central government that the project will not be closed down. These activists, led by Ganesh Bhatt, a member of the Pariyojna Prabhavit Sangharsh Samiti, warned that power demand was escalating in the state of Uttarakhand and already in 2012, the demand was touching 33-35 million units this year.

“The 330 MW Alaknanda hydro project at Srinagar is almost complete and `2000 crore has already been spent on it,” said Mr Bhatt.

Uttarakhand chief minister Vijay Bahuguna came out in favour of the pro-dam lobby announcing that there would be no ban on dams or power projects across the river. He also said that in case of any interference, the Central government would have to compensate for the losses incurred. The pro-dam lobby is also piqued by the fact that despite the state facing an acute power crisis, the state government was not planning to take any legal action to ensure transfer of the 25 per cent UP state government’s share holding in the Tehri dam be transferred to Uttarakhand. The dam built at a cost of `10,000 crore provides peaking power to the states of UP, Uttarakhand, Punjab, Delhi, Haryana, J&K, Rajasthan and Himachal Pradesh. Tehri Dam also provides drinking water facilities to Delhi (300 cusecs) and Uttar Pradesh (200 cusecs). Rajendra Singh reacted sharply to Mr Bahuguna’s criticism, stating, “The Ganga belongs to the entire country and it is our job to help restore its purity and its natural flow.”

“Stir in Delhi against Ganga dams”, 19/06/2012, online at: <http://www.deccanchronicle.com/channels/nation/north/stir-delhi-against-ganga-dams-939>

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❖ Water shortages at Sekondi/Takoradi metropolis?

It is disheartening to read that the Sekondi/Takoradi metropolitan area is experiencing water shortage and this has led to the rationing of water.

The above must not happen in the month of June when Ghana is most likely awash in heavy rains. Even so, with the overall amount of water resources at her disposal, she has no business rationing this stuff at anytime in the year.

Sekondi/Takoradi may be out of water because we utilize and administer our water resources in the same lackadaisical manner as we do most things: Witness the many failures within our infra-structure development processes over the years.

When it comes to supply and distribution, other countries, with scanty water resources do better and it will help to point out two; Morocco and Israel. These are nation states that, in all practical terms, sit in the middle of deserts.

Israel has a mixture of “conventional freshwater and brackish water About 1.1 billion cubic meters are from groundwater and springs, and 0.6 billion from surface water....(and) about 0.3 billion cubic meters of reclaimed water” In all, it has some 2 *billion cubic* meters” available to a population of some 6.5 million people, says [Wikipedia](#).

Morocco “has about 22 billion cubic meter .. However, only up to 20 billion cubic meter per year can be economically captured” for usage by a population of some 32.5 million people," [source, Wikipedia](#).

Ghana is different in that the “total actual renewable water resources (mainly from the Volta and other smaller rivers) are estimated to be 53.2 billion m³ per year” for consumption by a population of some 24.5 million people.

All told, Ghana, comparatively only four times the population size of Israel, has over 26 times the water resource available to it. Morocco on the other hand, with 1.33 times the population size of Ghana, has less than 55% of the water resources available to Ghana.

And with the above calculation, we are not even counting the heavy tropical rains that happen in Ghana four months in a given year.

According to a World Bank report published in 2010, “[The Average precipitation in depth](#)” for Ghana, was 1187.00 mm per year. Israel had 435 mm and Morocco, 346 mm.

Precipitation is defined as any [kind of water that falls from clouds as a liquid or a solid.](#)” A stranger has only to visit Ghana during one of these rainy season to see the amount of water that falls during this period. A greater portion of this settles as runoffs, flooding towns and villages to result in the loss of human lives and other tragedies.

All this water from the skies, enough in volume to fulfill the desires of Israel and Morocco with enough left over, goes to waste yearly.

The world ranks the worth of a country water resource according to size of “total water resources; how available those resources are to the population; how developed the country’s water infrastructure and delivery systems are; how efficiently or wastefully a country uses its water; and how well a country manages any environmental impact to its water,” according to an [International Trade internet publication finding](#).

Israel and Morocco face yearly water problems on levels that are mostly unknown in Ghana: extreme droughts, increases in regional conflicts that put stress on their water supply systems and the uncertainty as to how long the water resource they have may last has its own set of anxieties.

A large number of countries, Australia, South Africa, Spain, India, Cuba, Hong Kong, are ranked as “having a "high" level of water stress .. which means having water demand above 40% of the maximum renewable resource ...” according to an article “Water scarcity in Africa and the Middle” [published in the UK Guardian](#).

Thanks to nature, Ghana has only genuinely to worry mostly about floods during rainy seasons!

What is it about Ghana that in spite of our immense water resources we have to suffer these perennial shortages?

To maintain a safe depth at the Akosombo lake, there is this habitual spilling of water whenever the dam’s depth creeps closer to the maximum height of 278 ft; a waste magnificently accomplished to the accompaniment of deaths and other tragedies yearly.

Where do all this spilled water from the lake, plus the surplus rain water go?

To hear from the Ghana Water Company Limited (GWCL), there have been efforts to correct the problem, not necessary in the area of arresting the spill from the dam nor harvesting the waste from the heavy rainfalls.

There was a “Five-Year Rehabilitation and Development Plan” that resulted in the Water Sector Restructuring Project (WSRP) and \$140 million foreign donors support for the project, starting during the Rawlings era.

More work was done at the cost of some tens of millions of dollars to complete the “East – West interconnections” in 2008 under the Kufuor regime. Places like Cape Coast and Tamale had substantial improvement in water supply as a result of these GWCS projects.

There is no denying that these projects took place and that they helped. But in 2012 we still have water problems in places West like Sekondi/Takoradi, a very major metropolitan area. You would have to wonder if we executed the right projects to assure constant water supply and safety at all times in all places.

And from a layman point of view, you could also not help but ask what engineering feat would be needed to harvest rainwater, recapture spilled water from the dam, and to reconnect and distribute this immense water resource from the East to dry places in the West?

Surely, there are water engineers in Ghana outside government channels who have the right answer and can help. This “dog in the manger” attitude that prevents us from seeking expert help from our own kind abroad must stop. This is the craze that hurts and prevents us from effective use of our resources.

“Water shortages at Sekondi/Takoradi metropolis?”, E. Ablorh-Odjidja, 21/012/2012, online at:
<http://www.ghanadot.com/Commentary.ablorh.watershortages.062112.html>

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❖ **Proposed water law to promote rainwater harvesting: Minister**

Provisions to promote rainwater harvesting have already been included in the draft of 'Bangladesh Water Act, 2012', said Water Resources Minister Ramesh Chandra Sen Friday, reports UNB.

"Already approved by the cabinet, the bill on the proposed law will be placed in parliament very soon," he said while speaking at the inauguration of the Bangladesh Convention on Rainwater Harvesting, 2012 at a city hotel.

The convention was jointly organised by Water Aid, Bangladesh, Institute of Water Modeling (IWM), Bangladesh University of Engineering and Technology (Buet), Rain Forum, Bangladesh, and Centre of Science and Environment (CSE), India to discuss potential alternatives to groundwater in the South Asian region.

"We need to think of alternatives such as rainwater harvesting in order to put up with the future demand as the rapid growth of urban population, industrialisation along with the increase in cultivation of high-yielding crops have created stress on groundwater resources," the minister told the programme.

Minister of the Water Supply and Drainage Ministry of Sri Lanka Dinesh Gunawardena was present at the inaugural programme as a special guest.

Speaking on the occasion, he said capacity building and research on rainwater harvesting has been emphasised in the 15th Saarc declaration that expands the scope of cooperation between the South Asian countries in tackling the issue of ensuring quality water access to the mostly agrarian population in the region.

Lack of access to water in the agriculture-based economies in the region will incur severe socioeconomic problems, he cautioned.

Pointing out that access to water will become a major concern for countries which are considered most vulnerable to the impacts of climate change, Prof Mofizur Rahman of Buet said rainwater harvesting can play a pivotal role in enhancing the adaptive capacity of vulnerable communities in the future.

"Proposed water law to promote rainwater harvesting: Minister", 16/06/2012, online at: http://www.thefinancialexpress-bd.com/more.php?news_id=133192&date=2012-06-16&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2b192e3bba-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Laos to build more hydropower projects but environmentalists are wary

Laos will increase its hydropower output to around 3856 megawatt (MW) by 2015 in its bid to hasten development by providing its people with cheaper electricity rates and earning from exporting excess power, government officials said.

"By 2015 we will attempt to build enough hydropower plants to give Laos an installed capacity of 3856 MW," Lao Deputy Minister of Energy and Mines Khammany Inthirath told local media recently.

At present, Laos has 16 major hydroelectric dams generating 2559.7 MW of energy and 37 small-scale plants with a total capacity of 6.59 MW, according to Vientiane Times.

This is approximately ten percent of the 26000 MW that the government estimates the country could potentially generate.

Much of the energy produced are exported to Vietnam and Thailand.

The Lao government is actively pursuing energy as a major export to help the country, one of the poorest in the region, move out from its Least Developed Nation status.

The energy produced should also help improve the number households able to access electricity, currently at 76.9 percent.

The Lao government hopes that, through hydropower, this will increase to 85 percent by 2015 and 90 percent by 2020.

According to Lao Ministry of Energy and Mines, Laos has 23 more dams in the planning stage, most of which, if completed, by would provide an additional 5931 MW of hydropower.

Another 33 dams are undergoing feasibility studies. Their total expected output is 7376 MW, though it is by no means certain that all will pass through the preliminary studies.

This hydropower policy has not been without its detractors.

Organizations such as the NGO International Rivers have accused Lao government of failing to undertake sufficient environmental impact assessments and failing to adequately support displaced populations.

International Rivers Southeast Asian Program Director Ame Trandem told Xinhua recently that

"Improved transparency and independent oversight is desperately needed to ensure that revenue earned (from dams) would benefit the country."

Thailand, Vietnam and Cambodia, which share the lower Mekong with Laos, have also criticized Laos' plans to build hydroelectric dams on the Mekong River citing insufficient environmental impact assessments.

Presently Laos has eight dams planned for the Mekong River and one already in the construction phase, Xayaburi Dam, but construction was stopped in May due to numerous complaints.

Construction may resume, but only after further environmental studies are undertaken. Trandem said, "Scientific studies to date have shown that the Xayaburi Dam will cause irreversible harm to the Mekong River's fisheries."

Reduced flow of sediment down the Mekong is another concern for the environment of the lower Mekong.

Sediment flow deposits rich soil on the banks of the lower Mekong, creating excellent agricultural land. A dam on the Mekong could affect these flows, impacting the livelihood of millions of people who live on the lower Mekong, detractors said.

Nevertheless there may be some innovations that can be introduced to the design to mitigate these problems.

The Asian Development Bank (ADB) has been involved in some hydropower projects in Laos.

ADB Deputy Country Director for Laos Barend Frielink said during a recent exclusive interview with Xinhua that when the ADB gets involved in the development of a project like that "they would do very strict due diligence on the safeguards and follow them up afterwards."

The ADB supports hydropower within Laos as they believe it is good economic policy "since it is an advantage Laos has compared to other countries, as long as revenue flows are monitored and well-distributed."

The ADB, however, does not support Laos' Mekong dam ambitions. "ADB feels that it is too premature to start building on the mainstream of the Mekong, because not enough is known about the protection effects and the environment and so on," Frielink said.

In 1999 the Lao government passed an Environmental Protection Law that introduced measures on the management, monitoring, restoring and protection of the environment.

According to Frielink, however, the government has failed to release data on its adherence to the provisions of the law in the construction of the hydropower projects.

“Laos to build more hydropower projects but environmentalists are wary”, 21/06/2012, online at:
<http://www.globaltimes.cn/content/716396.shtml>

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❖ Laos optimistic on Xayaburi despite stumbling blocks

The Lao government remains optimistic the construction of the Xayaburi hydroelectric dam on the Mekong River can begin at the end of this year's rainy season and be completed by 2020.

Xaypaseuth Phomsoupha, the director-general of Laos's Energy and Mines Ministry, said two separate reports from independent consultants found the US\$3.8-billion project will cause negligible environmental damage and limited social disruption.

"As such, we do believe Vietnam, Thailand and Cambodia have no reason to block the construction of the project," Mr Phomsoupha said yesterday.

He made the comments at Euromoney's Greater Mekong Investment Forum.

He pointed out that Laos will not proceed with the project without agreement from neighbouring countries.

So far, information regarding the dam has been exchanged between members of Mekong River Commission (MRC), an intergovernmental group that focuses on the management and sustainable development of the river.

"No written agreement is required for the project to go ahead, but we cannot do that without addressing the concerns of the neighbouring countries," he said.

Ch. Karnchang Plc (CK), one of Thailand's largest contractors, has been granted a concession to develop the 1,280-megawatt project, one of 11 planned dams on the Mekong River.

The construction of Xayaburi was halted due to strong opposition from environmentalists and some members of the MRC.

Mr Phomsoupha said construction has not yet started. Only an access road for transporting major equipment has been built to date.

"If the construction starts at the end of this rainy season, it will take 81/2 years to complete," he said.

Xayaburi Power, 30% owned by CK, Thailand's third-largest construction company by market capitalisation, has signed an 85-billion-baht loan agreement with six banks and also a 29-year power purchase agreement with the Electricity Generating Authority of Thailand.

CK executives earlier expressed optimism that the Xayaburi project can be completed as planned by 2020.

Laos hopes to supply a total of 7,000 MW of hydroelectric power to Thailand by 2020.

"Laos optimistic on Xayaburi despite stumbling blocks", 21/06/2012, online at:

<http://www.bangkokpost.com/business/economics/298979/laos-optimistic-on-xayaburi-despite-stumbling-blocks>

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❖ Cash flows into water projects

Countries in the Middle East and North Africa are poised to gain from annual economic benefits of US\$4.9 billion (Dh17.99bn) if they can find a way to raise \$79bn needed to provide full access to drinking water, a new study shows.

The good news is access to funding is getting easier as banks earmark billions of dollars for environmental investments.

Clean water has never been easy to come by in the arid Middle East. Much of it is produced through desalination at significant environmental and economic cost, or effectively imported through purchases of agricultural produce from other countries.

Maplecroft, a risk analysis and mapping firm, rates all six GCC states as having levels of access to water that pose "extreme risk" to populations and business operations.

A study from HSBC estimates providing universal access to potable water in the Bric (Brazil, Russia, India and China) nations alone would cost about \$725bn but would add \$125bn to their combined annual GDP, equivalent to about 1 per cent in additional economic growth.

"We're thinking about climate change as a real factor, not a future threat. The way that climate change is expressed is through changes in water," says Nick Robins, the head of HSBC's climate centre.

"It's not just a project for the future ... that would be challenging enough, but with the disruptive factor of climate change this could be really quite serious for the global economy."

The bank calculates the world economy would receive a boost through the potential reduction in days off work or school lost to illness from water-borne diseases, ultimately leading to higher productivity among workers.

A 2007 report from the World Bank estimated that pollution of the Middle East and North Africa region's already scarce water resources costs between 0.5 to 2.5 per cent of GDP annually. With industrial use of water increasing rapidly in the region as a result of high levels of economic growth, those pressures are likely to intensify.

Access to finance for water-related investments is becoming easier as global lenders announce green initiatives targeting the water sector.

As growth forecasts slide across emerging markets, banks worldwide are pledging billions of dollars for environmental investments - as much a means of bolstering their environmental credentials as ensuring future profitability.

Although the sums represent a small fraction of total lending, banks are keen not to be outdone. Last month, Goldman Sachs earmarked \$40bn over a 10-year period for investment in environmental initiatives. In response, Bank of America Merrill Lynch pledged \$50bn over the same time period soon after.

HSBC launched a \$100m, five-year water programme this month, with a focus on cleaning water supplies in river basins including the Ganges, Nile and Indus rivers.

The programme is part of the bank's philanthropic efforts and does not seek to generate profits, Mr Robins said.

The costs of allowing strains on existing water supplies to intensify present a simple economic rationale for businesses to invest in water, Mr Robins adds.

"In the business world, unless you invest your assets base, they'll depreciate. The same applies to the environmental asset base," he says.

"Water is a key natural resource that's part of our natural capital. In that strategic context we really need to maintain and enhance our water resource base to deliver the growth in incomes."

"Cash flows into water projects", 24/06/2012, online at: <http://www.thenational.ae/thenationalconversation/industry-insights/economics/cash-flows-into-water-projects>

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❖ **Rio+20 deal weakens on energy and water pledges**

Governments are set to weaken pledges on boosting access to water and energy after a new draft negotiating text was issued at the Rio+20 meeting.

The text was issued by the Brazilian host government after it assumed leadership of the talks from the UN.

It affirms that nations must not slide back on prior pledges and names ending poverty as the "greatest challenge".

Brazil wants the text signed off before 130 heads of government and other ministers arrive on Wednesday.

Asad Rehman Friends of the Earth

The new text was not officially distributed to journalists, despite pledges that the meeting here was "accessible".

Preparatory talks were supposed to end on Friday evening, but at that stage only 37% of the UN's draft text had been agreed - which led to Brazil's decision to issue a revamped document.

The 50-page text, obtained by BBC News, gives developing countries much of what they have been asking for in terms of principles without agreeing to their demands for firm pledges of financial and technological assistance from the West.

In response to charges that richer countries were attempting to weaken prior commitments on aid and other issues, the text is explicit: "We emphasise the need to make progress in implementing previous commitments... it is critical that we honour all previous commitments, without regression".

"Faced with the determined efforts by some developed countries, in particular the US, to rip up the Earth Summit agreement of 1992, the text seems to have stopped us moving backwards," said Asad Rehman, head of international climate at Friends of the Earth.

Green economy

An economic system that takes account of natural capital and promotes development that does not destroy or degrade natural resources.

"But it certainly doesn't get close to addressing the concerns of the people or our planet.

"Faced with a triple planetary crisis - climate catastrophe, deepening global inequity and unsustainable consumption driven by a broken economic system - the text is neither ambitious enough nor delivers the required political will needed."

In another move that should please developing countries, the text confirms the principle that developed and developing countries have "common but differentiated responsibilities" in moving towards sustainable development.

No firm numbers

But whereas developing countries have been demanding \$30-\$100bn per year in exchange for "greening" their economies, the draft text gives no firm numbers.

UN Secretary-General Ban Ki-moon's Sustainable Energy for All initiative, which aims to provide everyone on the planet with modern energy by 2030 and increase progress on renewables and energy efficiency, is only "noted" - not endorsed.

And there is no commitment to end fossil fuel subsidies, as some countries have been advocating.

On economic indicators, the text "recognises the need for broader measures of progress to complement GDP in order to better inform policy decisions", and asks UN statisticians to begin work on the issue.

"It's good that the text still recognises that rich and poor countries have different responsibilities," said Erica Carroll, Christian Aid's policy analyst.

"But we'd like to see much stronger support for work to ensure that everyone in the world has sustainable energy, and much more enthusiasm on the need for alternatives to GDP."

Many campaign groups have been urging that this summit should at the least acknowledge everyone's basic right to food and water.

The right to food - to which the US has objected during talks - is enshrined in the draft text, but the language on water is vaguer.

"The right to water and sanitation is essential to the full enjoyment of life and other human rights," said Farooq Ullah, executive director-designate of Stakeholder Forum, a group working to involve all stakeholders in UN sustainable development processes.

"Previous UN resolutions have had hold-outs; and one of the successes of Rio+20 has been that Canada and the UK have for the first time recognised the universal right to water and sanitation respectively - so where the Brazilians have lost this agreement is a mystery."

Groups working on ocean conservation were however pleased that the text contains commitments to end illegal and exploitative fishing, support local small-scale fishers, and set up a process that would eventually regulate fishing and protect life on the high seas.

Health care guarantees

There is implicit criticism of the EU's recent move to charge airlines for their greenhouse gas emissions, with a clause saying that countries or regional blocs should not take "unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country".

Other ingredients of the new text include:

- guarantees of gender equality in employment and health care
- no requirement for corporations to measure and report on the sustainability of their operations, as has been included in earlier versions
- a commitment to tackle youth unemployment
- a limited upgrade for the United Nations Environment Programme (UNEP), without the major elevation in status that many observers have been advocating

The Brazilian hosts say they want negotiators to finish work on the new text by the end of Monday - allowing one day's grace before the three-day summit involving heads of government begins.

Various delegations, especially the US, Canada and the powerful G77/China bloc of 131 developing countries, have previously put red lines through many elements of the new text.

They will have to give ground significantly if a deal is to be concluded.

Even if it is, it will not make the major strides towards a sustainable development path that many scientists and indeed many politicians say are necessary.

“Rio+20 deal weakens on energy and water pledges”, 17/06/2012, online at: http://www.bbc.co.uk/news/science-environment-18475469?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=8a07061f70-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Putting Water in Rio

GENEVA – While the outcome of the upcoming United Nations Conference on Sustainable Development (“Rio+20”) is uncertain, one thing is not: each of the more than 50,000 participants will take a drink of water. Unfortunately, a few drops spilled on participants’ programs could be water’s most meaningful appearance on the summit’s agenda.

Developed-country politicians are merely representing their citizens’ priorities: we, in the developed world, take water for granted. After all, it is cheap and abundant; we never lack enough of it to clean our clothes, manufacture our goods, water our plants, cook our food, or flush our toilets.

But that is not true for the majority of the world’s population. In the developing world, 800 million people have no access to safe drinking water, while 2.5 billion people lack basic sanitation. In Sub-Saharan Africa, daily water consumption averages 10-20 liters, compared to 200-250 liters in Europe and 300 liters in North America and Japan.

Moreover, gastrointestinal diseases contracted from dirty water kill 2.2 million people annually. And countless children – mainly girls in Africa – are unable to get an education because they must fetch water from distant, often unsanitary, sources to meet their family’s needs.

In 2010, the UN General Assembly and the Human Rights Council adopted a resolution explicitly recognizing the human right to water and sanitation, and acknowledging that they are essential to fulfilling other human-rights obligations. The resolution calls upon developed countries and international organizations to offer financial support, capacity-building assistance, and technology transfer to countries in need – especially in the developing world – thereby helping them to provide for their populations clean and affordable drinking water and basic sanitation.

Now, officials must promote further progress by reaffirming their support for the right to safe drinking water and sanitation. Indeed, ignoring this critical issue at Rio+20 would not bode well for the accomplishment of the conference’s environmental and development goals. As [UN](#) High Commissioner for Human Rights Navanethem Pillay reminded delegations, green growth will bring no progress without environmental protection and the realization of fundamental human rights around the world.

Most of the international community is ready to work toward a more sustainable future. But, under the influence of a few countries, the conference’s final declaration could end up being little more than vague statements and lofty language.

To avoid this outcome, the water crisis must not be considered in isolation from other global sustainability challenges. Rather, delegates in Rio must recognize that water is a critical driver in achieving sustainable development – thereby acknowledging the intrinsic link between aquatic ecosystems, food, health, and environmental security – and push for the Right to Water to be enshrined in the summit’s final declaration.

Moreover, countries that have committed to ratifying the 1997 UN Watercourses Convention – which establishes basic standards for the use and conservation of waters that cross international boundaries – must compel their uncommitted counterparts to follow their lead. According to former Soviet President Mikhail Gorbachev – who founded Green Cross International after Rio’s Earth Summit in 1992 – water, if not safeguarded and shared, is more likely than other resources, such as oil, to catalyze future conflict.

Twenty years ago, the first Earth Summit was a major milestone in the struggle for human development and dignity. Rio+20 should be as ambitious. Indeed, the upcoming conference must enshrine this progress by recognizing that clean water and basic sanitation are fundamental human rights. Otherwise, delegates’ crystal water glasses might not be so full next time.

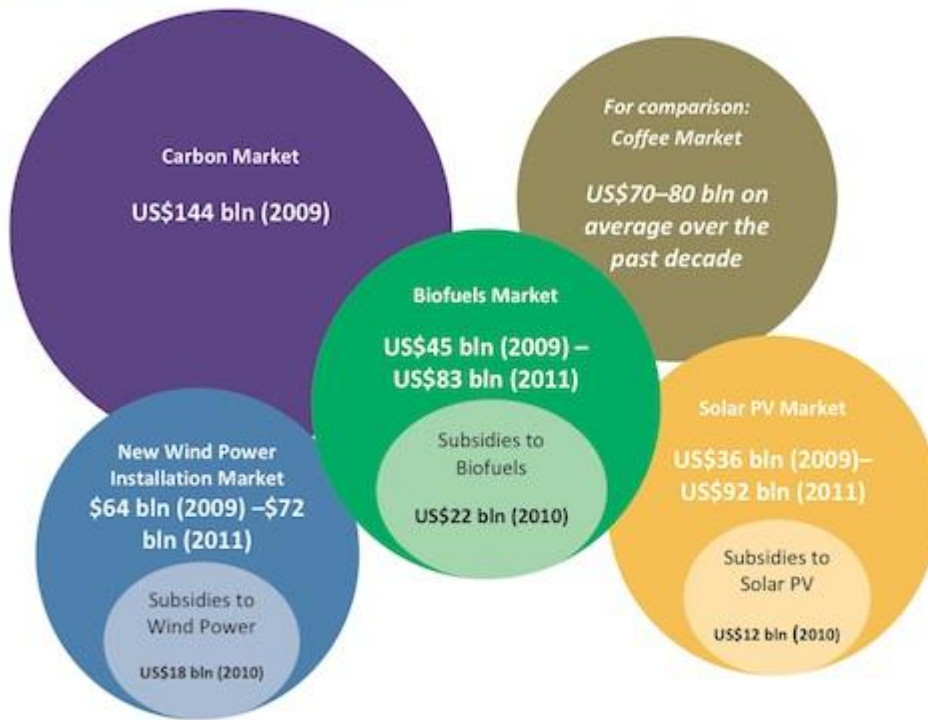
“Putting Water in Rio”, 17/06/2012, online at: <http://www.project-syndicate.org/online-commentary/putting-water-in-rio>

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❖ Countdown To Rio

Canada's International Institute for Sustainable Development's (IISD), along with its Global Subsidies Initiative (GSI), and Nestlé have just published a report titled *State of Play on Biofuel Subsidies: Are policies ready to shift?* The paper is now available, after being presented by Peter Brabeck-Letmathe — chairman of both Nestlé S.A. and the 2030 Water Resources Group — during a discussion panel this morning in Rio de Janeiro, Brazil. It is a reference document for discussions at both the G-20 and Rio+20 Summits.

FIGURE 2. ESTIMATED ANNUAL VALUES OF SELECTED GLOBAL MARKETS AND SUBSIDIES FOR THEIR DEVELOPMENT* (CURRENT PRICES)



*IEA estimates, for IISD-GSI estimates see discussion below. The IEA estimates fossil-fuel consumption subsidies in 37 developing countries at US\$409 billion in 2010.

Source: IISD-GSI analysis based on estimates reported in Pernick, Wilder & Winnie, 2012, p. 4; World Bank, 2011, p. 9; Adley, 2009; IEA, 2011b, pp. 530-532.

The issue of “food vs. fuel” is a major focus of the document. While subsidies are intended to curb climate change, bolster the renewable energy supply, and supplement rural incomes, the production of crops for energy rather than food presents concerns about future food security and the overall sustainability of biofuels.

“The complexity of direct and indirect impacts of biofuels expansion on water use is comparable to those on land use. Some biofuel feedstocks, for instance sugar cane, require significant quantities of water, particularly in hot and changing climates. This means that, in countries already experiencing water stress, particularly China, India, and many African countries, development of biofuels will exert additional pressure on water systems, with feedback into global food markets.” – IISD and GSI, State of Play on Biofuel Subsidies: Are policies ready to shift?

In addition, the report explores the development of advanced biofuels and the impacts of the recent financial crisis on production and subsidization. At present, the United States spends \$US 20 billion in subsidies for global biofuel production and consumption annually, according to the report.

“ Countdown To Rio”, 19/06/2010, online at: http://www.circleofblue.org/waternews/2012/world/countdown-to-rio/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=8a07061f70-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ **Brazil's Belo Monte Dam to Displace Thousands in Amazon**

Belo Monte Dam will be the world's third-largest hydroelectric project and will displace up to 20,000 people while diverting the Xingu River and flooding as much as 230 square miles of rainforest in Brazil. The Brazilian government says residents forced to relocate will be compensated and that most will benefit from the relocation. Opponents of the dam are skeptical of this claim.

While environmentalists and indigenous groups oppose the dam, many Brazilians support the project. The Brazilian Amazon, home to 60 percent of the world's largest forest and 20 percent of the Earth's oxygen, remains threatened by the rapid development of the country. The area is currently populated by over 20 million people and is challenged by deforestation, agriculture, mining, a governmental dam-building spree, illegal land speculation including the occupation of forest reserves and indigenous land and other issues.

Photographer Mario Tama is documenting the residents of Altamira, a town which will soon be underwater.

Construction continues at the Belo Monte dam complex in the Amazon basin on June 15, 2012 near Altamira, Brazil.

The controversial project is one of around 60 hydroelectric projects Brazil has planned in the Amazon to generate electricity for its rapidly expanding economy.

Indigenous men look on during a ceremony honoring the Xingu River before the start of the Xingu +23 event that gathers resisters of the Belo Monte dam project in the Amazon basin, June 13, 2012 in Santo Antonio, near Altamira, Brazil.

Over 100 heads of state and tens of thousands of participants and protesters will descend on Rio de Janeiro, Brazil, later this month for the Rio+20 United Nations Conference on Sustainable Development or 'Earth Summit'. Host Brazil is caught up in its own dilemma between accelerated growth and environmental preservation.

Residents who are being displaced by the Belo Monte dam and supporters stand atop a temporary earthen dam at the Belo Monte construction site after removing a strip of earth to restore the flow of the Xingu River as a protest against the construction on June 15, 2012 near Altamira, Brazil.

Indigenous people from the Kuruaia and Xipaia tribes march during a ceremony honoring the Xingu River before the start of the Xingu +23 event that gathers resisters of the Belo Monte dam project in the Amazon basin on June 13, 2012 in Santo Antonio, near Altamira, Brazil. Santo Antonio is adjacent to where the Belo Monte dam complex is under construction and the entire community will be expropriated for the construction. Around 60 families originally lived in Santo Antonio but now only about ten families remain. Xingu +23 is an event running parallel to the United Nations Rio + 20 event and marks 23 years since the first meeting of indigenous peoples opposed to the dam in 1989.

“Brazil’s Belo Monte Dam to Displace Thousands in Amazon”, 18/06/2012, online at:

<http://abcnews.go.com/blogs/headlines/2012/06/brazils-belo-monte-dam-to-displace-thousands-in-amazon/>

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❖ 'Shock Doctrine' in Action: Vital Freshwater Resources Under Attack by Privatization Capitalists

"I don't consider this an environmentalist point of view; I'm just a human who is scared shitless of the future," says the director of the new film "Patagonia Rising."

Set in South America's breathtaking Andes landscape, the visually sweeping new documentary *Patagonia Rising* bills itself as a frontier story of water and power. But both its frontier and its story nevertheless belong to anyone on the planet that needs water to live.

We are countless compared to the infinitesimal contingency who live to profit off of water. For the purposes of *Patagonia Rising*, screening now in New York and beyond, that includes the privatization capitalists of [HidroAysen](#), which is planning to build five hydroelectric power plants (marketspeak for [dams](#)) to choke off Chile's glacially fed Baker and Pascua rivers, two of the planet's purest. Signed by President [Sebastien Pinera](#), the first billionaire to be sworn into the Chilean presidency, but stalled thanks to vigorous protests, HidroAysen would effectively hand over almost all of Chile's energy market to a duopoly run by Spain's [Endesa](#) and Italy's [Enel](#). And they're not exactly hiding their distaste for environmental impact of five dams cornering the prize jewel of Patagonia's freshwater business.

"This exploits the best use of water," a HidroAysen executive argues in *Patagonia Rising*. "That's sustainability."

"One of the most twisted things I learned while making *Patagonia Rising* is that the companies behind the building of dams in developing countries are mostly from Europe and China," Oakland, Calif.-based director [Brian Lilla](#) told AlterNet. "Ninety percent of Chile's water rights were sold off by [Pinochet](#) and are now controlled by Spanish and Italian energy conglomerates."

Naomi Klein's indispensable *The Shock Doctrine* broke down that rapacious process, wherein so-called First World politicians, economists and other disaster capitalists plundered the resources and sovereignty of the Third World, using puppets like Pinochet as hammers and shovels for development and the disappeared alike. *Patagonia Rising* takes sobering stock of the Chilean aftermath, whose continuing political and economic instability has been exponentially problematized by global warming. A catastrophic equalizer, it will tear down whatever facades remain between

disaster capitalists in America, China and Europe from the just-fine-thanks corners of the world yet to submit, paraphrasing HidroAysen's executive, to the dream of sustainable exploitation.

"Studies by the University of Chile and other experts have found that HidroAysén is not necessary to meet Chile's future energy needs," explains International Rivers regional campaign [Patagonia Sin Represas](#). "Investment in more efficient use of electricity, together with renewable sources such as solar, geothermal and wind, would ensure a sustainable energy future."

And it's not just Chile that would benefit from tearing down its dams before they are built. The destructive [environmental, economic and human impact of dams](#)-- from ecosphere, species and cultural extinction to seismic instability, mass relocations and cost-benefit imbalances -- is precisely why domestic dams are being destroyed as you read this from [Washington](#) to [Maine](#). In Pakistan, citizens who were uprooted in the '70s to make way for the [Bhakra dam](#) are still awaiting rehabilitation, while the nation builds more in [Lahore](#).

Turkey can expect similar headaches after its proposed dams flood thousands of years of cultural history and [spoil the comparatively untouched Tigris](#). International Rivers is further worried about fast-track [megadams in South Africa](#), and Patagonia's neighbor [Brazil](#), which is quickly becoming an emergent superpower in a new century of unsustainable consumption riddled with global warming's last-gasp resource wars.

"The focus on large, centralized projects has benefited energy-intensive industries, but bypassed more than a billion poor people," International Rivers media director Peter Bosshard explained ahead of a recent [report calling on the World Bank](#)'s new president Jim Yong Kim, who takes office in July, to dramatically alter its approach to infrastructure development. "The benefits of centralized mega-projects have not trickled down."

I spoke with *Patagonia Rising* director Brian Lilla about that choked-off trickle in Chile and abroad, and why dams are "slow suicide" for those who cave in to the global water wars.

Scott Thill: What did you think about dams before you made this film, and how do you feel about them now?

Brian Lilla: Before I made this film I had a vague understanding that big dams have a negative impact on rivers. In college, I spent a lot of time kayaking rivers and eventually read the book *Cadillac Desert* by Marc Reisner. Reading that book was like peeking behind the curtain in *The Wizard Of Oz*. I started to realize what was behind all these massive reservoirs in the Western United States, which began my process of unraveling how dams kill rivers. By the time I finished directing *Patagonia Rising*, I had a much clearer understanding of how dams affect the entire hydrologic process all the way into the ocean. It's ironic that 15 years ago I shot my first piece of film while skateboarding the 30-foot overflow tube inside the *Monticello Dam* in Napa County. When I needed footage of dams for *Patagonia Rising*, I went back to that same spot with a very different intention.

ST: Are we fucking with the program by rerouting nature in the names of consumption and energy, given that we're not really keen on sustainability or conservation in either one?

BL: There's no arguing that large-scale hydro-electric dams provide cheap electricity and water storage. But when it comes to the pursuit of development for energy and consumption, humans are completely short-sighted. A century after the first big dams were built in the United States, we have realized the long-term effects of cutting off nutrient flows, loss of habitat and killing fish migration routes. These are just a few of the reasons we stopped building dams 30 years ago. We've fucked up so many rivers and natural water systems that United States is now decommissioning dams and shifting towards habitat restoration.

It took me a long time to realize rivers are the arteries from which humans and thousands of other species are dependent. Dams are a slow suicide going unnoticed. If we want to sustain our place on the planet, we need to reconsider our relationship to water and how we treat it. I don't consider this an environmentalist point of view; I'm just a human who is scared shitless of the future. And *Patagonia Rising* was an opportunity to shed light on the fact that we have a major problem on a global scale. But if developing countries like Chile decide not to build dams in Patagonia, we are steps closer toward shaping a sustainable future.

ST: What is Patagonia's particular role in the planet's freshwater puzzle? And how do you think climate change will make that worse?

BL: Patagonia's ice caps are the third largest freshwater reserve on the planet, and play a critical role in driving biodiversity and contributing to healthy oceans. Its rivers are free-flowing, but their biggest threat has been climate change. Patagonia's glaciers are temperate, and rapidly melting ice is triggering massive flooding. People are losing lives and moving to higher ground. Some of the river valleys we descended while filming are complete death traps, with unexpected glacial lake outburst floods. The scenery was epic, but I was glad to get out of there alive.

ST: Is the multinational race to develop what's left of undeveloped South America just going to make things worse for all of us?

BL: On the northern end of the continent you've got the Amazon River, which is also under threat of dam development. One of the most twisted things I learned while making this film is that the companies behind the building of dams in developing countries are mostly from Europe and China. Ninety percent of Chile's water rights were sold off by Pinochet and are now controlled by Spanish and Italian energy conglomerates. The other piece of the Patagonia dam puzzle is that the needed transmission lines would be built by a Canadian company. HidroAysen hired the American public relations firm Burson Marsteller to greenwash the entire project, the same scumbags that go to work for the tobacco industry. All these multinationals have one objective at the expense of Chile's water and people: profit.

ST: With 7 billion people on Earth, and only increases in population and consumption priced into the dystopian mix, remnants of a more earthly past like Chile's rural gauchos, whose anti-dam efforts you explore in *Patagonia Rising*, seem destined for ancient history. But they're helping stall the project.

BL: While filming in Chile, I met some very informed and intelligent people working within the government, academic and NGO sector. All the information is there for Chile to make the right decision. Unfortunately there are also a lot Chilean people with power who stand to financially benefit from the building of the dams. As an American filmmaker, I had to be very careful not to interject an American point of view on the debate in Chile. The last thing Chileans want is a bunch of Americans telling them what they should or shouldn't do. The last time they we did, they ended up with a 20-year dictatorship.

ST: How will the dam controversy in Patagonia impact South America overall? It's an emergent superpower.

BL: There is a lot at stake. Building the dams in Patagonia would open a Pandora's box of development. A ton of infrastructure -- roads, airports, ports, more -- would need to be put in place in order to build the dams. Once those systems are in place, extractive development would soon follow. Besides environmental hits, the cultural landscape of the gauchos and other Patagonia families would slingshot itself towards boom-town explosion. And there are a lot of people in Patagonia that cherish their cultural history and future. They won't go down without a fight.

ST: How about yourself? How has this struggle impacted you personally?

BL: Three months after I shot an interview with the general manager of HidroAysen I was sent a letter from the company's legal department that stated, "If *Patagonia Rising* somehow negatively impacts the decision to build the dams, Brian Lilla will be held personally liable." I read this as a compliment. I took a lot of personal and professional punches to get this film done. In the end, I'd much rather regret something I have done than something I haven't done.

“‘Shock Doctrine’ in Action: Vital Freshwater Resources Under Attack by Privatization Capitalists”, 19/06/2012, online at:

http://www.alternet.org/water/155878/'shock_doctrine'_in_action%3A_vital_freshwater_resources_under_attack_by_privatization_capitalists?page=entire

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❖ **Rio+20: Agreement reached, say diplomats**

Negotiators have agreed a text to be approved by world leaders meeting this week in Rio in a summit intended to put society on a more sustainable path.

Environment groups and charities working on poverty issues believe the agreement is far too weak.

The Rio+20 gathering comes 20 years after the Earth Summit, also held in the Brazilian city.

The text has yet to be signed off by heads of government and ministers, but it seems that no changes will be made.

"We have reached the best possible equilibrium at this point; I think we have a very good outcome," said Brazilian Foreign Minister Antonio Patriota.

"We consider that the spirit of Rio has been kept alive after 20 years."

However, the European Union was unhappy with the level of ambition in the text, in particular Denmark, which holds the EU presidency.

But Danish Environment Minister Ida Auken told BBC News that she believed it would be signed off.

"The EU would have liked to see a much more concrete and ambitious outcome, so in that respect I'm not happy with it," she said.

"However we managed to get the green economy on the agenda, and so I think we have a strong foundation for this vision that can drive civil society and the private sector to work in the same direction, to understand that environment and the social side must be integrated into the heart of the economy."

For the US, lead negotiator Todd Stern described the deal as "a good step forward", adding that he did not expect heads of state and government to re-open discussions.

"I believe this document is done," he said pointing out that Brazil has "no plan or intention to let the document open up."

Dismay

Environment and development groups are dismayed by many aspects of the agreement.

More than 100 leaders are expected to attend the summit from Wednesday

In large part, it merely "reaffirms" commitments nations have made previously.

Activists mounted a huge Twitter campaign on Monday in an attempt to persuade governments to commit to ending fossil fuel subsidies.

However the final text reaffirms previous commitments to phase them out if they are "harmful and inefficient", without setting a date.

The text calls for "urgent action" on unsustainable production and consumption, but it gives no detail or a timetable on how this can be achieved, and no clear direction as to how the world economy can be put on a greener path.

Developing countries might have agreed to go further if developed countries had offered tangible financial support, but it did not do so.

Several processes will be established leading from the summit. One will eventually establish sustainable development goals (SDGs), but there is nothing in the agreement on what they might promise.

The UK's environment minister, Caroline Spelman, praised the deal on SDGs as a "good outcome".

"We have backed SDGs from the outset and helped drive them from a good idea to a new agreement that will elevate sustainability to the top of the agenda."

The UN Environment Programme will be strengthened, but not fundamentally reshaped, as some governments, in particular the French and Kenyans, wanted.

Another process will eventually lead to new protection for the open oceans, including the establishment of marine protected areas in international waters, and stronger action to prevent illegal fishing.

Corporations will not be obliged to measure their environmental and social performance. They are merely invited to do so.

Missed opportunity?

Overall, observers here, as well as some government delegates, felt the world community has missed an opportunity to change the world's development track.

"This damp squib of a draft negotiating text makes it clear the Rio talks lack the firepower needed to solve the global emergency we're facing," said Friends of the Earth's director of policy and campaigns, Craig Bennett, in Rio.

"Developed countries have repeatedly failed to live safely within our planet's limits. Now they must wake up to the fact that until we fix our broken economic system we're just papering over the ever-widening cracks."

More than 100 world leaders are expected in Rio from Wednesday to attend the summit.

They include presidents and prime ministers from the large emerging economies, including China, India, Indonesia and South Africa.

But US President Barack Obama will not be there, and neither will UK Prime Minister David Cameron or German Chancellor Angela Merkel, who are all sending ministers in their places.

“Rio+20: Agreement reached, say diplomats”, 19/06/2012, online at: http://www.bbc.co.uk/news/science-environment-18507602?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=47b436ce08-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Rio+20 Meeting: UK To Accede to UN Water Convention

At the Rio+20 meeting, Deputy Prime Minister Nick Clegg and the UK government announced that the UK will accede to the UN Watercourses Convention to help ensure that the world's 263 international boundary crossing rivers are protected and peacefully shared.

The announcement, made by Clegg at Rio+20, means the UK will join the growing number of countries agreeing to accede to the convention. The UK's accession will bring the number of Parties to the Convention closer to the 35 required for the Convention to enter into legal force.

The announcement came just weeks after WWF's Living Planet Report showed that globally, biodiversity in tropical rivers has declined 70 percent since 1970 - a steeper fall than for forest or oceans.

"Congratulations to Nick Clegg and the UK government for taking this important step in protecting our world's precious freshwater supplies. Our rivers and lakes are the lifeblood of our planet, vital for much of the world's growing population and a critical resource for our precious wildlife," WWF-UK's CEO David Nussbaum said.

"This UN Convention will encourage countries to work together to share this finite resource and avoid potential water conflicts, brought about by increasing demand, and unavoidable impacts of climate change. We hope other countries will follow the UK's example to make sure the Convention comes into force," Nussbaum further said.

When ratified the UN Watercourses Convention will help to protect rivers such as the Mekong which, with its tributaries, flows through six countries including [China](#), Burma, Lao PDR, Cambodia, [Thailand](#), and Vietnam, supplying a large proportion of the world's freshwater fish catch.

"The UK has done well to support these vital UN principles for fair watersharing between states. Nowhere is this more critical than in the Middle East, where Iraqi farmers now suffer from massive water-diversion projects built upstream on the Euphrates, and decades of denial of access to the Jordan increases the strain for Palestinians and Lebanon," Mark Zeitoun, Director of the UEA Water Security Research centre said.

The UN Watercourses Convention is a flexible and overarching global legal framework that establishes basic standards and rules for cooperation between watercourse states on the use, management, and protection of international watercourses.

"By signing up to the UN watercourses convention the UK has signalled its intention to help countries and people across the globe who need it most take a vital step towards water security, a step that consistent with its firm leadership on global climate governance," Zeitoun said.

"Rio+20 Meeting: UK To Accede to UN Water Convention", 23/06/2012, online at:
<http://www.ibtimes.co.uk/articles/355559/20120623/uk-signs-up-un-water-convention-rio.htm>

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❖ **Farmers must lead environmental sustainability fight – experts**

RIO DE JANEIRO (AlertNet) – From persuading Brazilians to eat less beef and more tilapia fish, to getting Malawi’s farmers to lay down their hoes, agriculture needs to be a major part of a shift towards a more environmentally sustainable future, agricultural experts said on Monday.

Farming uses the largest share of the world’s land and freshwater, and is one of the main producers of climate-changing gases, as well as being a huge employer. So finding ways to make agricultural production more sustainable - and ensuring they are put into widespread practice fast - will be crucial to achieving the aims of the Rio+20 gathering, experts said at an agriculture conference, held as part of the U.N. development summit.

“There’s so much good (research) work going on. The question is speed and scale,” said Rachel Kyte, vice president for sustainable development at the World Bank. “Agricultural research has to be applied. It’s no use when it’s simply in a test plot, in a lab, bound up in rules and red tape and procedures that keep it from being used.”

One of the biggest changes underway in agriculture is efforts to make apparent the connections between agricultural success and the health of natural ecosystems like forests and water supplies, experts said. Without forests to help stabilise rainfall patterns and protect fresh water supplies, “we can’t achieve food security,” Kyte warned.

A key factor in protecting natural systems and agricultural production will be including currently “free” services like rainfall and crop pollination on national balance sheets and in corporations’ accounts through “natural capital accounting”, she said.

So far almost 50 countries and more than 50 companies have agreed to use natural capital accounting alongside their current measures of economic growth such as gross domestic product (GDP), she added.

LESSONS FROM BRAZIL

Brazil has, in many ways, been a leader in improving agricultural production while protecting the environment, some analysts say. The country has, over the past 20 years, seen a 178 percent boost in food production while land for agriculture has expanded only 37 percent, said Roberto Rodrigues, a former Brazilian agriculture minister.

That intensification of farming - just what experts say is needed to feed an expected extra 2 billion people by 2050 - has come about in large part because of investment in agricultural research, and cooperation between research institutes and the country’s strong farming cooperatives, which have quickly taken up new ideas.

Brazil “has shown us lessons on how we can do this elsewhere”, Kyte said.

Just as important for raising production will be finding ways to persuade young people to become farmers when the job - particularly in many developing countries - is increasingly seen as too difficult or too perilous as climate change disrupts weather patterns, experts said.

Young people think “agriculture is a drudgery, and they don’t want to go in (to the field),” said Dyborn Chibonga, head of the National Smallholder Farmers Association of Malawi.

But conservation agriculture – including planting crops in mulch rather than tilling fields with a hand hoe – can make a difference, both to the amount of work and the climate resilience of agriculture, he said.

“In the next five years, we have to declare the hand hoe as a weapon of mass urbanisation” and eliminate it, Chibonga said.

Experts at Monday’s gathering also called for better land tenure for smallholder farmers, and for programmes and government offices on agriculture, water, forest and energy issues to become much more integrated and collaborative, to avoid policies in one area causing problems in another.

“Working in isolation means we will not get the right solutions,” Kyte warned.

CONTROVERSIAL ISSUES

Other issues raised at the meeting were much more controversial.

Brazil’s environment minister, Izabella Veira Texeira, insisted that the country’s much-criticised new forestry code - which environmentalists fear will spur a surge in Amazon deforestation - is a good idea.

“It’s easy to say we are encouraging deforestation (but) it’s not true. I don’t see any other country making the effort Brazil is making today to protect forest and advance agriculture,” she said.

She also defended the expanding production of biofuels as “a solid path”, saying it is a “false idea that we’re replacing food” with fuel by turning agricultural land to biofuel production.

Kyte, in turn, called for limits on large-scale land grabs in places like Africa, saying they might “get out of control”. She also urged a reduction in the use of nitrogen-based fertilisers, which when overused can seep away from farm fields and cause dead zones in oceans, as well as disruption to other natural systems.

Audience members also called for agricultural leaders to push for reduced consumption of meat rather than intensifying production of it, and for efforts to dramatically reduce food waste. They also

warned that one big problem for sustainable agriculture is “big agricultural industries wanting to make profits at the expense of the environment”.

At the meeting, the Consultative Group for International Agricultural Research (CGIAR) - a consortium of 15 major farm research institutes around the world - announced its members would spend \$5 billion over the next five years on research aimed at making agriculture more sustainable.

That will include work on reducing greenhouse gases in farming, making crops less vulnerable to extreme weather and pests, and bringing sustainable irrigation to 12 million households in sub-Saharan Africa by 2020.

Farmers are “the largest group of natural resource managers on Earth”, said Ann Tutwiler, deputy director general of the U.N. Food and Agriculture Organization (FAO). “We will not be able to feed the people we need to feed by 2050 unless we can bring together these issues of food and sustainability.”

“Farmers must lead environmental sustainability fight – experts”, 19/06/2012, online at:
http://www.trust.org/alertnet/news/farmers-must-take-lead-in-environmental-sustainability-fight-experts/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=7fd5e5acb2-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Million-year-old water found under Maryland

Some of the water under Maryland is older than a million years, the first such ancient groundwater found along the Atlantic Coast, the U.S. Geological Survey reports.

The oldest water was found in the deepest parts of the upper Patapsco aquifer, with shallower groundwater tens of thousands to hundreds of thousands of years old, according to a new study by the USGS, the Maryland Geological Survey and the Maryland Department of the Environment. The aquifer provides freshwater for the region east of Washington and Baltimore.

Some highlights:

The analysis shows that water flowed from the land surface into the deep aquifer during cooler periods in earth's history, when glaciers covered much of the northeastern U.S. and sea level was about 125 meters lower than it is today. During warmer periods in earth's history, such as in modern times, higher sea levels slow recharge of fresh water to the aquifer, due to a lower gradient between the recharge and discharge areas.

Modern-day pumping rates have lowered water pressures and changed water chemistry, affecting the aquifer's ability to provide freshwater for drinking and other uses. Concerns over saltwater intrusion in some areas have led water managers to increasingly move groundwater production from shallower aquifers to the deeper upper Patapsco aquifer, which has caused groundwater levels to decline.

A 2007 state report found that the groundwater supply might not meet the future needs of southern Maryland.

Worldwide, there aren't many aquifers containing million-year-old groundwater. Two of them might surprise you: the Nubian aquifer in the Sahara Desert and the Great Artesian Basin in Australia. Another is the Alberta Basin in Canada.

The USGS has a "groundwater watch" database containing records from about 850,000 U.S. wells over the past 100 years.

“Million-year-old water found under Maryland”, 18/06/2012, online at:

http://content.usatoday.com/communities/ondeadline/post/2012/06/million-year-old-water-found-in-aquifer-under-maryland/1?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=7fd5e5acb2-RSS_EMAIL_CAMPAIGN&utm_medium=email#.T-LdyRfHXb6

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❖ U.S. Water Partnership Launched to Address Global Water Challenges

Over 40 American public, private and civil society organizations are dedicating more than \$500 million in financial and in-kind resources to address water problems around the globe

RIO DE JANEIRO, Jun 20, 2012 (BUSINESS WIRE) -- Today, the U.S. public and private sectors announced that they are dedicating over half a billion dollars to address key water challenges around the world through the newly formed U.S. Water Partnership (USWP). U.S. Environmental Protection Agency (EPA) Administrator Lisa Jackson and former U.S. EPA Administrator William K. Reilly keynoted the global launch of the partnership, one of six signature initiatives announced by the U.S. government at the UN Conference on Sustainable Development (Rio + 20).

A joint effort of both public and private sectors in the U.S., the U.S. Water Partnership is supported by 41 members including government agencies, academic organizations, water coalitions, NGOs and the private sector. The partnership was first announced on March 22, 2012 by Secretary of State Hillary Rodham Clinton.

"I am proud to announce that the American people are doing our part by coming together through the U.S. Water Partnership, a public-private partnership that is pooling resources and mobilizing American expertise, knowledge, and ingenuity to address water challenges around the globe, especially in developing countries where needs are the greatest," said U.S. Secretary of State Hillary Rodham Clinton.

To support water security around the world, the USWP provides access to knowledge, technical assistance and training and partnership development services. The Global Environment & Technology Foundation is serving as the USWP's secretariat.

"The U.S. Water Partnership will allow us to bring together the best thinking -- in both the private and public sectors -- to tackle the pressing water challenges the world faces today and will face in the future. Sharing American knowledge and expertise in water protection will allow us to mobilize resources and bring about real progress in the United States and abroad," said EPA Administrator Lisa P. Jackson. "Like all of our sustainability work, this effort is about protecting health and the environment at the same time that we strengthen our economy. The cross-sector partnerships that emerge will also allow us to rapidly scale-up innovative solutions so they can be deployed in places all over the globe -- especially in the developing world, where water needs are greatest."

Highlights of the contributions made by partners include:

-- The Coca-Cola Company pledged \$3.5 million to support sustainable safe water access in five African countries as well as support for operations of the U.S. Water Partnership.

-- World Vision will dedicate \$400 million in project support toward the goals of the partnership, including best practices from Water, Sanitation and Hygiene interventions in Haiti, India and West Africa and support for the USWP.

- Overseas Private Investment Corporation (OPIC) intends to invest at least \$150 million within the next one to two years in critical water issues including desalination and distribution infrastructure.
- National Aeronautics and Space Administration (NASA) will invest \$21 million over the next five years on research and application activities that contribute to the understanding and improved management of our global water resources.
- The Nature Conservancy (TNC) is investing \$30 million over the next five years to advance integrated water resource management, including Securing Water for People and Nature and the Great Rivers Partnership.
- The Rockefeller Foundation -- The Foundation will support a \$100,000 USWP signature initiative on "Multiple Use Services."
- Skoll Global Threats Fund is investing \$100,000 in a USWP signature initiative on water security in South Asia.
- U.S. Environmental Protection Agency (EPA) will provide access to its watershed management tools, its water quality standards, and regulatory and policy support.
- World Resources Institute (WRI) is offering access to Aqueduct -- a global information platform and tool for helping private and public sector decision-makers understand water-related risks.

For a complete listing of members and their contributions, please visit
<http://www.uswaterpartnership.org>

On Monday, June 18, 2012, 45 corporate chiefs attending Rio+20 pledged to make water security a strategic priority and called for decisive action by governments.

In a message to USWP launch participants, Secretary Clinton said, "If you represent a region or a country in need of cross-sector water solutions, please reach out to us as this partnership was formed primarily to serve your needs. If you are an American citizen or organization with water knowledge and resources to share, I invite you to join the effort."

The U.S. Water Partnership (USWP) is a U.S.-based public-private partnership (PPP) established to unite American expertise, knowledge, and resources, and to mobilize those assets to address water challenges around the globe, especially in the developing world. Partners include: Africare; Alliance for Water Stewardship; American Academy of Environmental Engineers; American Society of Civil Engineers Environmental & Water Resources Institute; American Water Resources Association; Blue Planet Network; Clean Water America Alliance; Centers for Disease Control; The Coca-Cola Company; Colorado State University; University of Colorado; Department of Energy; Department of Interior; Environmental Law Institute; Environmental Protection Agency; U.S. Export-Import Bank; Ford Motor Company; Global Water Challenge; International Association of Plumbing and Mechanical Officials; International Boundary and Water Commission (U.S. Section); Millennium Challenge Corporation; National Aeronautics and Space Administration; National Council for Science and the Environment; National Oceanographic and Atmospheric Administration; National

Parks Service; Overseas Private Investment Corporation; Procter & Gamble; Rockefeller Foundation; Skoll Global Threats Fund; The Nature Conservancy; Tufts University Institute for the Environment; U.S. Agency for International Development; U.S. Army Corps of Engineers; U.S. Bureau of Reclamation; U.S. Department of State; U.S. Trade and Development Agency; U.S. Geological Survey, Water Institute at the University of North Carolina, World Resources Institute; and World Vision.

The Global Environment & Technology Foundation (GETF), established in 1988, is a leading 501(c)(3) nonprofit organization with a mission to promote sustainable development through partnerships and targeted action. GETF seeks to shape a brighter future for communities and the environment by developing innovative strategic plans, creating high-impact partnerships, introducing new technologies and managing programs that have a lasting and positive impact on the world.

“U.S. Water Partnership Launched to Address Global Water Challenges”, 20/06/2012, online at:

<http://www.marketwatch.com/story/us-water-partnership-launched-to-address-global-water-challenges-2012-06-20>

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