



ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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



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27 August– 2 September 2012

- ❖ **KRG participates in water conference in Stockholm**
- ❖ **Iraq Blames Iran for Drying of Alwand River, May Turn to UN**
- ❖ **Iraq begins construction on six irrigation dams**
- ❖ **KRG ministry to launch water saving awareness campaign**
- ❖ **The Real Threat: Water**
- ❖ **Building meteorology station in Garmian begins**
- ❖ **Parliament demand Maliki to urge Iran increase Iraqi water share**
- ❖ **Iran Strives to Solve Its Water Shortage by Building New Dams**
- ❖ **Despite Possible Attacks, Gaza Plans Half-Billion-Dollar Desalination Plant**
- ❖ **Palestinian farmers fighting to survive**
- ❖ **Israel to Demolish 13 Water Wells west of Jenin**
- ❖ **UfM presents Gaza Desalination Project at 2012 World Water Week in Stockholm**
- ❖ **Israeli army destroys water cisterns and dwellings in southern West Bank**
- ❖ **Wide carries Israeli-Palestinian 'Water'**
- ❖ **Water crisis will make Gaza strip 'unliveable'**
- ❖ **Palestinians do not use water wisely**
- ❖ **A last ditch effort to rescue the River Jordan**
- ❖ **Jordan Puts Gender At Heart of Climate Change Policies**
- ❖ **Jordanian farmers: Israel is stealing our water**
- ❖ **Gaza not 'liveable' by 2020 barring urgent action : UN**
- ❖ **Greenpeace warns of Lebanon's toxic waters**
- ❖ **Risk of water wars rises with scarcity**
- ❖ **Egypt Government Admits Responsibility for Pollution in Menoufiya**
- ❖ **Egypt to Spend \$120 Million USD for Water, Irrigation in Other Nile Basin Countries**

- ❖ Mekong dams could rob millions of their primary protein source
- ❖ Xayaburi and Subsequent Mekong Dams Could Deprive Millions of Protein
- ❖ Something fishy about proposed dams
- ❖ WWF Warns About the Environmental Impact of Mekong Dams
- ❖ Cholera Outbreak at Malawi's Drying Lake Chilwa
- ❖ China Focus: Saving China's largest freshwater lake
- ❖ Weak Monsoon Raises Specter of Drought in India
- ❖ Strategy urged to save country from water shortage
- ❖ Water wars: Wullar Barrage set to figure in Pak-India talks
- ❖ Dam project cost soared 652%, not 500%
- ❖ Nepal: Riparian Rights issue; B'desh, Pakistan water scarcity due to India
- ❖ Yemen's water woes
- ❖ Malawi, Tanzania Fail to Reach Compromise on Lake Border in Latest Round of Talks
- ❖ Water crisis: Cause for concern
- ❖ Uruguay River Summit Ends With Letter of Intent on Conservation
- ❖ Prosecutors Find Drinking Water Violations in Kazakh City
- ❖ Denmark Looks to Cash in on Chinese Water Technology Investment
- ❖ UN body urges G20 action on food prices, waste
- ❖ Water Innovation Starts with the Farmer: Stockholm World Water Week
- ❖ Stockholm Water Week Focuses On Waste, Water Efficiencies
- ❖ Water Research Thrives as New Report Highlights Spiralling Growth Year on Year
- ❖ Food shortages could force world into vegetarianism, warn scientists
- ❖ OOSKANews, US Water Partnership Collaborate on Sharing Water Knowledge:
Leading Water News Organization Joins US Effort to Address Water Challenges
Around the Globe
- ❖ UNDP Report Calls for Human Rights Approach to Water Management
- ❖ International Aid for Water, Sanitation Must Target the Neediest: WaterAid
- ❖ World Water Week Will Focus on Food Waste
- ❖ EU Vows "Strong Commitment" to WASH Ahead of World Water Week
- ❖ Arctic sea ice at record low, expected to keep on melting
- ❖ Brazil: Court Allows Dam Construction to Resume

-
- ❖ **Singapore experts share water management tips**
 - ❖ **Focus on water conservation: Bengal Chamber**
 - ❖ **Industries must pay ‘water supply cost’**
 - ❖ **The Global Land Grab, The Next Human Rights Challenge For Business**
 - ❖ **Water and Sanitation Socialism in Caracas: Interview with Victor Díaz**
 - ❖ **Going to war over water**
 - ❖ **Water and sanitation still not top priorities for African governments**

❖ KRG participates in water conference in Stockholm

STOCKHOLM, Aug. 29 (AKnews) - The Kurdistan Region is participating in annual World Water Week, organized by the Stockholm International Water Institute.

The conference - which kicked off last Sunday under the slogan "Safe Food and Water" - will last for one week.

The director of water resources at the Ministry of Agriculture and Water Resources Mohamed Amin Fares said: "The goal of the conference is to exchange views between experts and academics in this phase, which is witnessing a group of changes in climate and water disputes.

Fares, the representative of the KRG in the National Water Commission, said the conference will issue decisions or agreements to resolve the water and climate disputes.

"It is possible to come out with recommendations that will maintain water and food security in the world."

Among the issues that will be discussed during the conference are food security, reducing poverty of developing countries and climate impacts on water and environment protection.

Sweden has consistently held the World Water Week conference every year since 1991.

Fares added that there are more than 1,500 participating parties in the conference, including experts, researchers, academics and concerned organizations in environment and water. There are also representatives for the Iraqi government.

"KRG participates in water conference in Stockholm", 29/08/2012, online at:
<http://www.aknews.com/en/aknews/3/323724/>

BACK TO TOP

❖ Iraq Blames Iran for Drying of Alwand River, May Turn to UN

Iraq, BAGHDAD — The Iraqi Ministry of Water Resources is accusing neighboring Iran of using the Alwand River in a way “that harms Iraqi interests.”

Iraqi water officials say Iran has established a number of projects on the river that negatively affect the flow of water into Iraqi lands.

According to Kurdistan media outlet Rudaw (28th August), Iraqi Trade Minister Dr. Khairullah Babekir refused to sign an agreement with Iran last week in protest of their drying of the river.

“Iran has been abusing Alwand River of late, and this is detrimental to Iraqi agricultural lands,” said Minister of Irrigation and Water Resources Mohannad al Saadi.

“Iranian authorities did not tell us the reasons behind cutting the river’s waters. The Iraqi foreign ministry has requested explanations from the Iranian foreign ministry,” he added.

According to Iraqi officials, Iran completely cut off water supply from the river as of last month.

The issue has been raised in vain during joint meetings, al Saadi said.

Alwand River is one of the 30 tributaries of the Tigris originating in Iran. Decreasing water levels in the 50-kilometer-long river have caused destruction of large areas of agricultural land in the city of Khanqin.

Iraqi officials say Iran built many dams on those tributaries and changed their course, thus depriving Iraq of its share of water.

The Iraqi government in May established a higher water council to manage the country’s national and regional water resources. The new council is charged with drafting a national water resources strategy.

It is also expected to adopt policies aimed at pressuring Iran, Syria and Turkey to “respect Iraq’s water rights,” according to officials.

One of the options the new body will consider is bringing Iraq's water disputes to international organizations.

Iraq could turn to the United Nations to get "its fair share of water from upstream countries."

Meanwhile, al Saadi revealed last week that the ministry is studying the possibility of hiring foreign companies to develop a plan for the country's water resources.

"Like many Arab countries, we will seek the expertise of specialized foreign companies," he said.

Prime Minister Nouri al Maliki had also recently suggested hiring a foreign company to help the country with water resources management.

"Iraq Blames Iran for Drying of Alwand River, May Turn to UN", 29/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/iraq-blames-iran-drying-alwand-river-may-turn-un_24077

BACK TO TOP

❖ Iraq begins construction on six irrigation dams

Six irrigation dams will be built in five Iraqi cities, the Ministry of Water Resources announced Thursday (August 30th).

"The new dams are located in Kirkuk, Anbar, Diyala, Wasit and Maysan, which will feature two dams," Water Resources Minister Muhannad al-Saadi told Al-Shorfa.

"Ministry engineers and private companies that specialise in building dams are currently supervising the work," he said.

The intent behind the construction of these dams is to "benefit from storing rain and flood water, regulate ideal water distribution according to each province's needs for agriculture and human consumption, develop animal wealth and tourist investment, improve the environment and feed groundwater levels," he said.

Al-Saadi said it will cost an estimated 11 billion Iraqi dinars (\$9.4 million) to build each dam.

"Iraq begins construction on six irrigation dams", 30/08/2012, online at: http://al-shorfa.com/en_GB/articles/meii/newsbriefs/2012/08/30/newsbrief-07

BACK TO TOP

❖ **KRG ministry to launch water saving awareness campaign**

ERBIL, Aug.25 (AKnews)- A campaign for warning the citizens against the consequences of wasting water and the legal punishments for doing so will be launched soon in the Kurdistan Region, said minister of agriculture and water resources.

Water is a national wealth and it should not be protected, said Sirwan Baban.

Baban said for better controlling the waste of water by the citizens, the Ministry will assign water consumption calculators at houses soon.

As for the issue of lack of water in Kurdistan and the threats on drying out the underground water, the minister said from now on the Ministry plans for construction of more dams and for putting a limit to the artisan wells which deplete the underground water.

13 projects of constructing big and small dams are now underway and plans for constructing 40 more are being laid, according to Baban.

“KRG ministry to launch water saving awareness campaign”, 25/08/2012, online at:

<http://www.aknews.com/en/aknews/3/322930/>

BACK TO TOP

❖ The Real Threat: Water

Among all the political, economic and diplomatic crises of the country, internally and with its neighbors, another serious crisis is looming.

The water shortage has a direct impact on the livelihood of the country, both in the center and south of Iraq and in Kurdistan. It is related to neighboring countries and has internal dimensions at every level, starting from the individual and all the way up to the governments of the day.

The most pressing issue today is relations with neighbors and their control over the water supply into Iraq. Ironically, the countries that Iraq usually has many political dealings and crises with are the same ones that control water resources coming into the country.

Iraqi Trade Minister Dr. Khairullah Babekir refused to sign an agreement with Iran last week in protest of their drying of the Alwand River. This was just about the first real step that demonstrated Iraq's seriousness about water issues. In the past, it was talks, demands, negotiations and protests, but nothing more.

Iran has about 44 tributaries and rivers crossing into Iraq, while Turkey controls the Tigris and the Euphrates with Syria. Over the past 10 years, the three countries have almost felt free in depriving Iraq of water.

The various governments have so far dealt with the issue politically. At one point, Iraqi Vice President Tariq al-Hashimi visited Turkey and said that they promised him to release Iraq's share of water!

One of the difficulties I faced in researching this topic was finding easy, accurate and up-to-date information.

According to Casey Walther, who, until earlier this month, was UNESCO's water projects coordinator in Iraq, accurate data on water isn't available, making water security almost impossible to achieve. Walther says this is a critical failure of the government.

"All the numbers you see are estimates and often outdated," he said. "Iraqi officials cannot negotiate with Turkey or Syria, who control the flow of the Euphrates and Tigris."

This is one of the most striking failures of Maliki's government and the ones before it.

Water shortage is one of the most serious threats facing the country's health and security. A serious approach to the issue must be adopted and a task force should be established to deal with the threat of water shortage as a matter of urgency and in a professional manner.

As for the Kurdistan Region, it is also suffering from the same drought, though not as badly as the rest of Iraq. The KRG will have to decide whether to deal with the issue as part of the Iraqi strategy or alone. Each scenario will have its own political ramifications.

But a starting point for Iraq and Kurdistan would be to involve the public and change many of the inadequate ways we use water through various public awareness campaigns and new efficient technology.

"The Real Threat: Water", 28/08/2012, online at: <http://www.rudaw.net/english/science/columnists/5135.html>

BACK TO TOP

❖ Building meteorology station in Garmian begins

ERBIL, August 27 (AKnews) – The process of building the first meteorology station in Kalar town began today.

The head of the meteorology department in the Ministry of Agriculture and Water Resources said: "Four meteorology stations were bought last year with the ministry's budget. Two of them were allocated for Chamchamal, one for Kalar and the other in Bawashaswar dam in Kfri."

"In the past we only measured rain fall but from now on we can measure humidity and temperature rate, too.

"Citron company gave four meteorology stations to the ministry, which of which was a gift. One of the stations was given to Qoratu district."

The cost of the stations is 30m IQD.

"Building meteorology station in Garmian begins", 27/08/2012, online at: <http://www.aknews.com/en/aknews/3/323275/>

BACK TO TOP

❖ **Parliament demand Maliki to urge Iran increase Iraqi water share**

Baghdad (AIN) –The Agriculture and Water parliamentary Committee called the Iraqi Prime Minister Nouri al-Maliki to negotiate with the Iranian officials, during his visit to Iran now, to increase Iraq's share of water.

MP Etab Al-Dori, the registrar of the Committee said in a statement to All Iraq News Agency (AIN) today "The Iraqi delegation participating in NAM Summit should approach the Iranian side on the issue of reducing share of Iraq from water resources coming from Iran which caused drying most of the Iraqi rivers, particularly Wind river and its consequent effects represented by economic losses."

She added that "The closure of tributaries and water sources entering Iraqi territory from Iran caused great losses for the agricultural sector and animal wealth, as well as its contribution in increasing desertification."

She stressed that "Reducing the share of Iraq from Wind River led to stop a lot of water pumping projects in Khanaqin district, in addition to damaging hundreds of acres of orchards and farmland," noting that "The Iranian side did not respect the treaties and agreements signed with the Iraqi side since the forties and fifties of the last century, in addition to international conventions that guarantee 25% of Wind River water for of Iraq."

She emphasized "Iran should hold the responsibility of its trespassing on waters shared with Iraq and pay compensation as a result of the damage and losses to the agricultural and animal wealth caused for Iraq."

PM Nouri al-Maliki, Foreign Minister Hoshyar Zebari and a number of Iraqi officials are visiting Iran to participate in the NAM Summit that is currently held in Tehran.

The Minister of Trade Khairallah Babekir has announced earlier this month that "The ministry rejected to sign a trade agreement between Iraq and Iran unless Iran increases Iraqi share of waters from Wind River in Diyala province. /End

"Parliament demand Maliki to urge Iran increase Iraqi water share", 31/08/2012, online at:

<http://dinarvets.com/forums/index.php?/topic/127345-parliament-demand-maliki-to-urge-iran-increase-iraqi-water-share/?s=dd8e6d7667acd860d21412abbf5fabcb#ixzz25K22IGVd>

BACK TO TOP

❖ Iran Strives to Solve Its Water Shortage by Building New Dams

Iran, which is under the influence of semi-arid climate of the Middle East, is located in a wide area by covering a total area of about 1.75 million km². Iran is located in one of the most arid areas of the world. The average annual precipitation rate is 252 mm. This figure constitutes one third of the global precipitation rate. Under current climatic conditions; 179 mm (71 per cent) of the rainfall evaporates. The average annual evaporation rate in Iran ranges between 1500 mm and 2000 mm. This figure is 1/3 of the world average. While this figure is 2000 mm/year in northern highlands of the country, it is 20 mm/year in desert area. Two thirds of Iran receives less rainfall than the average precipitation rate.

As the general tendency in the world, the water resources in Iran are also mostly used for irrigation purposes. 92,8% (83,5 billion m³) of the water consumed is used for irrigation purposes. While 50 per cent of water used for agricultural purposes is provided from surface water, the other half is provided from ground water.

In the regions, such as Iran, where water resources are insufficient; it is observed that water cannot be used productively both due to water shortage and due to mismanagement of water resources. In global-scale studies conducted in this area, it is indicated that for the reduction of water loss during irrigation and for productive use of water resources, it is necessary to change the irrigation methods and develop modern irrigation techniques such as drip irrigation and sprinkling.

For many years, Iran has been trying to solve the water shortage in certain areas of the country, caused by the uneven distribution of water resource and demand, through inter-basin water transfer. It is estimated that Iran will have difficulty in meeting the water demand in the forthcoming period due to the factors such as; rapid population growth rate, intense population movements towards cities, food security, decline in precipitation, and drought. Iran has been striving to find a solution to the problem related to the quantity and quality of water by implementing modern irrigation techniques in agriculture, developing inter-basin water transfer projects, building dams and reservoirs for water storage, and by taking steps to cooperate with the eastern neighbors.

On the other hand, the water shortage estimated for the following decade has begun to make itself felt in Iran especially after the dry spell for the last three years. According to the Elburz/Alborz Water Resources Management Department in Iran, as mentioned above, population growth, insufficient investment and mismanagement create problems in sustainable management of water resources. Going through consecutive dry spells in recent years, Iran estimates that the per-capita quantity of water will be 1300 cubic meters in 2020. Besides, the dust storms containing salt which are carried both from Iraq and other neighboring countries create another problem that impairs the quality of water and soil.

Iran has become one of the countries with highest number of dam construction in the world in recent years. Dam constructions in Iran started in 1950s. Only 14 major dams were constructed by investments of foreign banks and companies in pre-Islamic Revolution of 1979. The new political system established after 1988 Iran-Iraq war also affected the water resources management and the construction of dams gained momentum. Today, Iran can build its dams without foreign capital. In Iran, dams play the role for long-term use of water reserves, as well as for the control and coordination of reserves. The dams in Iran are primarily built for drinking water supply, for hydroelectric generation, and storing water in inter-basin water transfer. So far, approximately 541 dams of all sizes have been built in Iran. According to the International Commission on Large Dams (ICOLD), this figure is 501. Construction of 88 dams was launched in 2007. This figure increased to 135 dams in 2011, and 546 dams are planned to be constructed. By the end of 2011, the amount of water stored in dams was 65 billion cubic meters. This figure almost doubles the annual potential of the Euphrates River. Iranian Deputy Minister of Energy stated last week that 130 dams are under construction, and that 700 dams in the country have been in operation despite the numbers mentioned above, and that Iran ranks fourth in the world in terms of the number of dams. And feasibility studies of 170 dams still continue.

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at: <http://www.orsam.org.tr/en/WaterResources/showAnalysisAgenda.aspx?ID=1868>

BACK TO TOP

❖ **Despite Possible Attacks, Gaza Plans Half-Billion-Dollar Desalination Plant**

STOCKHOLM, Aug 30 2012 (IPS) - Last May the European Commission reported that scores of infrastructure projects in the Gaza Strip, financed mostly by the European Union, have been damaged or destroyed, wittingly or unwittingly, by Israeli military forces in the ongoing conflict in the Palestinian Occupied Territories.

Nevertheless, undaunted by this destruction, the Palestinian Authority plans to launch an ambitious half-billion-dollar project for a new seawater desalination plant in water-starved Gaza next year.

When the international community warns of an impending global water crisis in the foreseeable future, it rarely singles out the current plight of the Palestinians in the Israeli-occupied territories.

With more than 90 percent of its water resources unfit for human consumption, the Gaza Strip has no access to safe drinking water. As a result, 1.6 million Palestinians are deprived of one of the most fundamental necessities for human survival, says Dr. Shaddad Attili, minister and head of the Palestinian Water Authority.

Speaking on the sidelines of a weeklong international water conference hosted by the Stockholm International Water Institute (SIWI), he announced plans for the desalination project aimed at providing drinking water to Palestinians.

The project is the first to be unanimously approved by the 43 countries of the Union for the Mediterranean (UfM) and has been described as Gaza's largest infrastructure project to date. The construction, which will be spread over a three-year period, is expected to begin in early 2013 and completed by 2016.

The funding will come mostly from Arab and European donors, based primarily on pledges made during the 2009 Sharm el-Sheikh Conference on the Reconstruction of Gaza.

The European Investment Bank (EIB) is providing technical assistance while the U.N. Environment Programme (UNEP) has endorsed the concept of a desalination facility as the only long-term alternative to supply Gaza with drinking water.

A core group of international financial institutions, including the EIB, the World Bank and the Islamic Development Bank, are designing a Project Fund mechanism to manage the financing of the project.

Rafiq Hussein , UfM's deputy secretary-general for environment and water, told reporters that while the project is not regional or even sub-regional, "it has far reaching regional implications".

"Everyone is aware of the project's humanitarian, developmental and political importance," he added.

But the ambitious project's ultimate survival will depend on Israel, which has been accused of using water as a political weapon against the Palestinians. Between 2001 and 2011, Israel also destroyed about 61 million dollars worth of projects, including airports, schools, homes, orphanages and waste water management facilities.

Of the funding for these projects, about 36 million dollars came from the 27 members of the European Union, including financing from France, the Netherlands, Britain and Ireland.

Asked about a possible Israeli airstrike on such a major infrastructure, Hussein said the risk of doing nothing to alleviate the sufferings of the Palestinians was greater than developing the infrastructure.

In a report released at the United Nations, the Permanent Observer Mission of Palestine in 2010 called the fair allocation of water rights a critical element for future political stability and achieving peace in the region as a whole, noting, "Water is at the heart of the Palestinian-Israeli peace process and it is one of the permanent status issues, along with issues relating to Jerusalem, borders, refugees, settlements and security."

Following the Israeli occupation in 1967, and in violation of international law, Israel took control over all natural freshwater resources, including surface water, underground aquifers located beneath the Occupied Palestinian Territory, including East Jerusalem, and exclusive access to the Jordan River Basin, the report added.

Last month, the U.N.'s Special Committee on Israeli Practices highlighted the appalling living conditions in the Occupied Territories, including the lack of fresh water in Palestinian territories.

After a visit to Gaza, the three-member committee expressed concern over the Israeli practice of demolishing Palestinian homes and over the continued violence by Israeli settlers against Palestinians.

The committee also assessed the economic impact of the Israeli blockade on the Gaza Strip.

“These Israeli practices lead the Special Committee to one overarching and deeply troubling conclusion,” the chair of the committee, Ambassador Palitha Kohona of Sri Lanka said.

“The mass imprisonment of Palestinians; the routine demolition of homes and the displacement of Palestinians; the widespread violence by Israeli settlers against Palestinians; and the blockade and resultant reliance on illegal smuggling to survive; these practices amount to a strategy to either force the Palestinian people off their land or so severely marginalise them as to establish and maintain a system of permanent oppression.”

“Despite Possible Attacks, Gaza Plans Half-Billion-Dollar Desalination Plant”, 31/08/2012, online at:
<http://www.ipsnews.net/2012/08/despite-possible-attacks-gaza-plans-half-billion-dollar-desalination-plant/>

BACK TO TOP

❖ Palestinian farmers fighting to survive

Farmers in the West Bank and Gaza face obstacles to growing and selling crops, increasing their reliance on Israel

Ein Al-Beida, Occupied West Bank - For Palestinian farmer Esam Foqaha, agriculture is more than a profession, it's a way of life. "Farming is not only a job. It's our lifestyle and we will do it forever," Foqaha said.

Foqaha lives in Ein Al-Beida, a Palestinian agricultural village located in the West Bank's northern Jordan Valley area. With his three brothers, he cultivates about 300 dunams (0.3km) of agricultural land. Most of his produce – tomatoes, cucumbers, eggplant and other vegetables – is marketed to Jenin, Nablus and other major Palestinian cities in the West Bank.

A member of the Ein Al-Beida Agricultural Union, which represents 70 farmers in the area, Foqaha said a combination of harsh Israeli restrictions on Palestinian farmers, Israel's near total control of resources, and neglect on the part of Palestinian authorities has made Palestinian agriculture in the West Bank almost impossible.

"Israeli restrictions have a political purpose: to increase the economic reliance of the people on Israel. Some will leave the land and work in settlements instead of farming. They want people to leave," Foqaha said.

Lack of water and land

Foqaha's case isn't unique. Instead, according to human rights groups, it represents a growing inability among Palestinian farmers to engage in sustainable agriculture in the occupied West Bank.

Almost 63 per cent of arable agricultural land in the West Bank is located in Area C, which according to the Oslo Accords agreement is under complete Israeli military control. Israel controls almost all of the West Bank's water reserves, and severely restricts Palestinian access.

The cost of water is at least three times more expensive for Palestinians than for Israelis living in settlements in the Jordan Valley and northern Dead Sea area, according to a [report](#) by Israeli human rights group Btselem, titled "Dispossession and Exploitation".

Palestinian farmers are also prohibited from digging new groundwater wells for agricultural purposes, without first obtaining a permit from the Israeli Civil Administration. These permits are rarely, if ever, given and as a result, the Israeli army demolishes new Palestinian cisterns almost immediately. Confiscation of Palestinian water tanks has also been widely reported.

Israeli settlements in the Jordan Valley control more than 1.46 million dunams (1,460 square kilometres) of land, or about 90 per cent of the total area. This land is entirely off-limits to Palestinians. In contrast, only about one-eighth of the remaining agricultural lands under Palestinian control (50,000 dunams, or 50 sq km) is cultivated by Palestinians in the area, the Btselem report found.

A 2010 [paper](#) cited by a World Bank [report](#) found if Palestinians could access 50,000 more dunams of land (50 sq km) and additional water resources in the Jordan Valley for growing high-value vegetables and flowers, they could earn about \$1bn annually. With access to an additional 100,000 dunams (100 sq km) of land, about 150,000-200,000 jobs could be created both directly and indirectly.

This lack of accessible physical space has forced many Palestinian farmers, including 58-year-old Abdel Karim Zbeidat, to rent land from Israeli settlements for agricultural purposes. "This is the reality. We don't have a choice," said Zbeidat, who has been farming since 1971 in his Jordan Valley village, also named Zbeidat.

He explained that he pays a nearby settlement 15,000 NIS (\$3,732) for water, and 5,000 NIS (\$1,244) for land access, annually. Overall, the village of Zbeidat used to have access to almost 700 dunams (0.7 sq km) of agricultural land. Due to Israeli land confiscations, the village's 1,800 residents can only farm 240 dunams (0.24 sq km) of their own land today.

According to the Btselem report, Zbeidat residents have access to 82 litres of water per capita for household use, compared to 411 litres per capita in Argaman, a nearby Israeli settlement.

Earning between 30-35,000 NIS (\$7,465-8,709) per year, Zbeidat said he often has to borrow money to support his 10 children. "My work is not covering my family's needs. 35,000 NIS is nothing," he said.

Barriers to competition

Israel has imposed a variety of non-trade barriers on Palestinian farmers. For instance, Israel bans certain types of fertilisers in the West Bank on security grounds. Israeli products – which, due to Israeli government subsidies and cheaper production costs, can be sold at lower prices – also flood the West Bank market, making Palestinian goods less competitive.

In turn, Palestinians face a series of hurdles in selling their products in Israel, including most notably having to cross Israeli checkpoints. Often, trucks meet on either side of a checkpoint, and products are exchanged manually.

"The quality of crops decreases because it takes time to transfer the products from the farms to the trucks and to the market. It's the farmer who pays for that," farmer Esam Foqaha explained, adding Palestinian products sold in Israel now total about 20 per cent of what they did 10 years ago.

Some international investments in Palestinian agriculture have also had a negative impact on the sector. In the Gaza Strip, for example, Palestinian farmers produce flowers and strawberries for sale in European markets, instead of planting crops that can meet local consumption needs, such as wheat or corn.

"We have to admit that Palestinian agriculture has been annexed to the Israeli economy and the Israeli agricultural sector," explained Dr Abdellatif Mohammed, Deputy General Director of the Palestinian Agricultural Development Association (PARC).

"They allowed Palestinians to market in Europe, but they did not allow them to market in the West Bank. This represents an important non-trade barrier in front of Palestinian farmers and it is a discriminative one."

Mohammed said as Israel restricted the number of Palestinians that could enter Israel for work after the Second Intifada, many Palestinians returned to agriculture as either a primary or secondary source of income.

Today, he estimated that 60-70 per cent of Palestinians in the occupied territories financially depend in some way on agriculture. "If you look to Palestinians, where they invest, they invest in buying land. It is part of the culture. It is an honour for the Palestinians to have more land. It is not only wealth; it is honour. The solidarity and the voluntary work, which is part of the Palestinian culture, most of it started and nourished in agriculture," he said.

Palestinian Authority neglecting sector

In July 2010, the PA Ministry of Agriculture released its agricultural sector strategy paper for the period 2011-2013. Overall, the PA defined its goal as developing "sustainable and feasible agriculture, that is capable of achieving food security, [that is] competitive in the local and foreign markets" and "[cements] the bonds and sovereignty of Palestinians over their land, there on towards building the state".

However, many have called into question the PA's commitment to developing the agricultural sector. According to a report issued by Palestinian policy network Al Shabaka, titled "Farming Palestine for Freedom", the Palestinian Authority has never allocated more than one per cent of its budget to the agricultural sector. Between 2001 and 2005, more than 85 per cent of the budget went to paying salaries at the PA's Agriculture Ministry.

"The problem with the PA [is that] they avoid any sort of clashes with the [Israeli] occupational power and because of that, they understood the land only as a resource that needs to be farmed, without having this political message behind it," said Alaa Tartir, Al Shabaka policy advisor and co-author of the report.

Agriculture's contribution to the overall Palestinian economy has also dropped, from comprising 13.3 per cent of gross domestic product in 1994 to 5.7 per cent in 2008, the paper found.

"The PA needs to understand the development process differently," Tartir said. "Farming is not only a project that needs to be profitable. It's not a project that follows the economic efficiency model. It's a different sort of investment. It is an investment that is related with identity, it is connected with freedom, with reclaiming land. And you need to understand it in that sense."

Farming as resistance

Palestinians reported a heightened arrest campaign of leading agricultural employees by Israeli authorities this year. In July, the head of the Union of Agricultural Works Committees (UAWC) in Jericho was arrested in the early morning hours at his home, and held without access to a lawyer on unspecified charges.

It was the third in a string of similar arrests that month.

When asked why agricultural activists have seemingly been targeted, UAWC official Dr Taha Rifaie said Palestinians working their land was "a very clear symbol of resistance."

"When you work on the land with farmers, it means giving the Palestinian people a better chance to stay on the land," said Rifaie. "It's not only a piece of land, it's homeland. Without land, we don't have a future."

Al Jazeera contacted the Israeli Civil Administration in the West Bank for comment, but did not receive a response by publication time.

Rifaie said the Palestinian Authority must set aside more financial support for Palestinian agriculture if it wants farmers to remain.

While most Palestinian farmers were hesitant to openly criticise PA policies, Esam Foqaha from the village of Ein Al-Beida said farmers don't expect much from the Ramallah-based government. Still, he urged the PA to help regulate which crops Palestinian farmers are planting, and subsidise them to better meet the needs of the market.

Making trade agreements with Arab Gulf states, Foqaha added, would also help Palestinian farmers to better earn a living.

"If a farmer sees that he is losing money every year, maybe he will leave his land. But we don't have any choice. We can't move anywhere else," Foqaha said. "A farmer in the Jordan Valley is a soldier, a breadwinner, and the main line of defense, but at the same time, the biggest loser. No one is taking care of us."

"Palestinian farmers fighting to survive", 01/09/2012, online at:
<http://www.aljazeera.com/indepth/features/2012/08/201282665450619900.html>

BACK TO TOP

❖ Israel to Demolish 13 Water Wells west of Jenin

JENIN, August 26, 2012 (Wafa) – The Israeli authorities Sunday notified 13 Palestinians of their decision to demolish 13 private-owned artesian water wells in Kufr Dan, a village west of Jenin, under the pretext of “building without permit,” according to the owners.

They told Wafa that Israeli forces along with a staff from the Israeli Water Authority stormed Marj Bin Amer plain in the village, photographed the water wells and assaulted the head of the irrigation committee, Mohammad Mori.

Governor of Jenin, Talal Dwekat, condemned this Israeli measure against the village’s residents.

The owners called upon all local and international organizations and relevant parties to intervene and stop the demolition order.

Meanwhile, Israeli forces notified Mahmood Arqawi, a resident of the village, of their decision to demolish his under construction house under the same pretext.

“Israel to Demolish 13 Water Wells west of Jenin”, 26/08/2012, online at:
<http://english.wafa.ps/index.php?action=detail&id=20516>

BACK TO TOP

❖ UfM presents Gaza Desalination Project at 2012 World Water Week in Stockholm

The Union for the Mediterranean (UfM) and the Palestinian Water Authority (PWA) organised a side event during the World Water Week in Stockholm this week to present the UfM labelled project for a Desalination Facility for the Gaza Strip.

The aim of the project is to build a major desalination plant and distribution system in Gaza that is capable of producing 100 million cubic meters of drinking water a year and that will help to address the major water deficit there for a population of 1.6 million inhabitants.

During the panel debate, the speakers underlined that the importance of this project lies not only in the concrete benefits that it will bring to a population of 1.65 million people but the fact that it gathers a consortium of Arab, European and non-European donors to cooperate together in achieving such a crucial project.

“The deteriorating situation of the aquifer has a clear health impact, noting especially Blue Baby Syndrome due to nitrate poisoning. The United Nations Environment Programme (UNEP) recommends that all young children should be provided only bottled water,” says a UfM press release issued today.

The side-event was held just a day after a report was released by the United Nations offices working in Palestine, entitled ‘[Gaza, A liveable place by 2020?](#)’, which highlights the longer-term effects and implications of current developmental and social trends and challenges affecting the Gaza Strip. Water remains one of the most alarming aspects in this synthesis report.

The reports points out that the aquifer will be unusable by 2016 and irreversibly damaged by 2020. It also stresses the urgent need to advance the project, one of the unique infrastructure solutions identified to bring safe drinking water to the growing 1.65 million population and save the restoration of the damaged aquifer, notwithstanding other vital interventions such as wastewater treatment.

The Palestinian Water Authority and the UfM are working together to raise the €310 million of investment needed. Arab countries, coordinated by the Islamic Development Bank, have committed to provide half of the necessary funds to match the European financial commitment. A further €10 million was pledged by France during the 6th World Water Forum in Marseille. ([EU Neighbourhood Info](#))

“UfM presents Gaza Desalination Project at 2012 World Water Week in Stockholm”, 28/08/2012, online at: http://enpi-info.eu/mainmed.php?id=30011&id_type=1&lang_id=450

BACK TO TOP

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❖ **Israeli army destroys water cisterns and dwellings in southern West Bank**

Israeli bulldozers entered the Palestinian village of Zenuta in the South Hebron Hills Tuesday morning and demolished water cisterns, residential dwellings and sheep stables, devastating the small community of only seven families.

Zenuta, West Bank – At around 10 a.m. on Tuesday, a group of Palestinians from the village of Zenuta watched from across a valley in the South Hebron Hills as two Israeli army bulldozers suddenly appeared and destroyed their village’s water cisterns, cave dwellings and stables. The village, divided by a valley, is just 3 kilometers from the Green Line, at the southern tip of the West Bank.

The bulldozers in Zenuta were accompanied by five army jeeps, three vehicles from the Israeli Civil Administration, and a charter bus of Israeli soldiers, trying to keep activists and members of the press from entering the village. A group of about 20-25 Palestinian men, women, and children who were there at the time sat in front of one of the bulldozers in an effort to stop them. They were quickly removed, however, by the army and the destruction commenced.

In total, four water cisterns, two caves, two houses and six stables were destroyed. Zenuta is a small village of seven families with a herd of 400 sheep. The army destroyed the houses of two families, each with seven children, as well as six stables holding sheep. Perhaps most devastating of all in a region starved for water, the army bulldozed the village’s cisterns, holding water collected from winter rains. The cisterns cost NIS 15,000 each, an incredible toll amounting to about a year and half’s wages for the average Palestinian worker in the area. The cisterns had been filled with water after a winter that brought the best rainfall in at least 10 years, according to residents of the area. Now two young boys walked around with the only two bottles of water left in the village offering it to visitors.

Mohammed Khaled Samamry, the owner of one of the houses destroyed, was indignant. “Can you live without water?” he asked, his hand trembling slightly with frustration. ”What can we do without water? What can we drink? You see what they do to us, the Israelis? They left the kids sitting under the sun, the sheep in the field. Where will we sleep tonight?”

A handful of children sat quietly, shocked and sad, in the midst of twisted metal rods and pots and pans scattered on the ground. The sheep wandered aimlessly in a field, nibbling at the straw.

According to Israeli activists, three tents were also destroyed Tuesday morning in Susya, a nearby village that is [under threat](#) of demolition. The tents were built by the UN's OCHA department, and were destroyed by the army once before, last November.

The destruction comes in the midst of a [wider threat](#) to the villages in this region. In July, [Israel issued orders](#) to wipe out the nearby villages of Jinba, Farkheti, Majaz, Sfai, Khoruba, Tabban, Mirkez, and Halawah. Demolition orders have also been issued for structures in the villages of Mufagara and Tuba. In all, over 1,500 residents are at risk of losing their homes.

Sean O'Neill is a freelance journalist based in Jerusalem. Mairav Zonszein contributed to this report.

"Israeli army destroys water cisterns and dwellings in southern West Bank", 28/08/2012, online at: <http://972mag.com/israeli-army-destroys-water-cisterns-and-dwellings-in-southern-west-bank/54743/>

BACK TO TOP

❖ **Wide carries Israeli-Palestinian 'Water'**

Wide Management has acquired worldwide sales rights outside France and Israel to "Water," which opens the Venice Festival's 27th Critics' Week.

Produced by Tel Aviv U. and France's Tu Vas Voir ("The Motorcycle Diaries"), the seven shorts in the omnibus feature turn on water as a source of life, conflict and fleeting contact between Israelis and Palestinians.

In the run-up to Venice, "Water" has also been selected for Eye on Films, a global network of 34 distributors and 42 fests.

Channeling support from Media Mundus, the EU film-TV support program, Eye on Films supplies 50% funding for first films' theatrical p&a and festival promotion.

Of Eye on Films' 11 first films, eight have been sold to 14-plus countries, said Eye on Films prexy Loic Magneron.

Palestinians are not allowed to enter Israel; Israelis are barred from the Occupied Territories. Bucking this "ideology of separation," in the words of Tel Aviv U.'s Yael Perlov, "Water's" initiator and artistic director, "Water's" shorts were made by mixed crews and casts of Israeli Jews, Israeli-Arabs and Occupied Territory Palestinians, Ramallah's Ahmad Bargouti ("Kareem's Pool") and Bethlehem's Mohammed Fouad ("The Water Seller").

On "Kareem's Pool," whose climax records Jewish settlers invading a Palestinian swimming pool in neo-military fashion, "Water" producers Kobi Mizrahi and Maya de Vries and the cameraman are Israelis, the director, soundman and protag Palestinian.

The mix of directors was one reason Eye on Films picked up "Water." Also, said Magneron, "We're certain some directors will move on to full features."

"Water" is rich in film styles: Social drama, ("Still Waters"), romance ("Now and Forever"), docu portrait ("The Water Seller"), fly-on-the-wall reportage (the climax of "Kareem's Pool"), recreation ("Eye Drops"), flashback ("Drops"), even performance-driven farce ("Raz and Rajda").

The multitude of genres was intended, mirroring "the struggle over water in its multifaceted aspects, and as it really is," Perlov said.

Negotiations for French distribution will begin after the Venice screenings, said Tu Vas Voir founder Edgard Tenenbaum.

"It's important for distributors to discover 'Water' in a big festival. U.S. distribution would help us continue working," he added.

After a first Tel Aviv U. portmanteau pic, "Coffee," Tenenbaum and Perlov are committed to a third Israeli-Palestine themed omnibus for 2014, though the subject has still to be chosen.

For Perlov, "We have created a group of young people full of energy, determined to choose a different step forward."

She added, "Yes, it was a small step, but nevertheless a step full of hope."

"Wide carries Israeli-Palestinian 'Water'", 29/08/2012, online at:

<http://www.variety.com/article/VR1118058439?refCatId=13>

BACK TO TOP

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❖ Water crisis will make Gaza strip 'unliveable'

Banks must approve plans for a \$500m desalination plant that would provide a new water supply, conference hears

The Gaza strip faces a water crisis that will soon make it "unliveable" unless plans for a \$500m desalination plant are approved by banks, delegates at a water conference in Stockholm were told this week.

Water for the 1.6 million people – half of them children and two-thirds refugees – who live in just 365 sq km of land bordering the Mediterranean comes entirely from the shallow coastal aquifer shared between Gaza, Israel and Egypt, which is only partly replenished each year by rainfall. Decades of overpumping and heavy pollution from salts and waste water has left the aquifer highly degraded and in danger of irreparable damage.

UN hydrologists say no more than 55 million cubic metres (mcm) of water should be abstracted a year, but present exploitation rates run at around 160mcm. If this continues, says the UN, it could result in the water table dropping to a point where massive sea water intrusion permanently destroys the source within a few years.

In addition, the little water available is heavily polluted by nitrates from uncontrolled sewage, and fertilisers from farmlands, making 90% of the water unfit for human consumption. With the Gaza population expected to increase by 500,000 within eight years, and nearly 25% of all illnesses in Gaza water-related, the urgency for countries to put aside differences and address the issue is growing.

"The aquifer could become unusable as early as 2016, with the damage irreversible by 2020. UNEP [the UN Environment Programme] recommends ceasing abstraction immediately as it would otherwise take centuries for the aquifer to recover. Even with remedial action now to cease abstraction, the aquifer will take decades to recover," said a UN Relief and Works Agency report published this week.

The Palestinian Water Authority (PWA) expects demand for fresh water to grow to 260mcm per year by 2020, a 60% increase on current levels of abstraction from the aquifer, the UN report says.

"We are facing a crisis. If we do not address it now, then Gaza will become unliveable," said Shaddad Attili, minister and head of the Palestinian water authority in Stockholm to lobby the Swedish and other Nordic governments during World Water week.

Plans for a desalination plant for Gaza have been discussed since 1996, but with water one of the underlying causes of the Israeli-Palestine conflict, political and security issues have always prevented work from starting. Last year the Palestinian water authority submitted new plans to the Union for the Mediterranean.

However, what gives the scheme at least the possibility of success is that the principle of a desalination plant for Gaza is now backed by Israel, all Mediterranean governments, the UN, the EU and key development banks.

Desalination may not be the most environmentally suitable solution, "but it is the only feasible solution of providing a new water supply to meet growing demand," said Rafiq Hussein, a water expert at the Union for the Mediterranean, a grouping of 43 countries which this year approved the scheme.

Palestinian authorities hope that the plant will be the cornerstone of a larger scheme to provide much needed electricity and clean water for everyone in Gaza. But with desalination being energy intensive, the whole scheme would need a 90MW power plant and cost in the region of \$500m.

Finance for the scheme is hoped to come from the Islamic Development Bank, which, says Hussein, has verbally pledged half the money, and Europe, via the European Investment Bank, the financial arm of the European Commission (EC) that invests around €70bn a year in soft, or cheap loans.

"This is not a risk-free project. There are many political and other issues. It cannot be financed through loans, but needs grant funding. It needs political commitment," said a spokesman for the bank, which is advising the Palestinian authority on how to finance the scheme.

The next stage, he said, is for the EC to provide €4m for technical assistance. However, access to water across the region has become highly politicised and regional conflict has stymied all efforts to share it between countries. Water resources have paid a high price as the Middle East region has grown vastly in numbers in the past 50 years.

The Dead Sea has dropped 33m and lost two-thirds of its surface area in a few decades, Jordan and Syria have siphoned most of the water off the Jordan river, and Israel maintains control of the water resources in the Golan heights and the West Bank.

Jordan, one of the world's most water-scarce countries, has plans to transport water from the Disi aquifer in the south of the country to the capital Amman but this is thought to be hydrologically unsustainable with present population growth. The longer term regional solution is seen in an ambitious plan to link the Red and Dead seas with a pipeline.

This, says its advocates, could pump around 2bn m³ a year of seawater from the Red sea over 200km to the Dead Sea where it would be desalinated and then pumped on to Amman in Jordan. Under present plans, around 800mcm of clean water would be produced, of which 150mcm would be pumped on to Israel.

But all water schemes in the Middle East are complex, mostly requiring the elusive consent of several countries – virtually impossible until the Arab-Israeli conflict has been resolved.

The stakes are high, with all major parties now agreed that it makes humanitarian and political sense to build the plant. "We cannot wait until the conflict is resolved. We need to drink .The issue is not just water for food and drink but for the stability and security of the world," said Al Attili.

"Water crisis will make Gaza strip 'unliveable'", 30/08/2012, online at:
<http://www.guardian.co.uk/environment/2012/aug/30/water-crisis-gaza>

BACK TO TOP

WWW.ORSAM.ORG.TR

❖ Palestinians do not use water wisely

Kathleen Peratis's recent visit to Judea and Samaria, that is those communities located in what she calls the West Bank, has only reinforced the perception that Jewish leaders representing the Liberal left wing of American Jewry visiting Israel will always don their one-dimensional sunglasses upon landing at Ben-Gurion airport.

No other reasonable explanation can justify or rationalize the Pavlovian inclination to report on the settlers through the prism of politics exclusively, in which the notion of the "occupation" has become the defining lens through which everything about Israel is explained and justified. Sadly, the settlers' efforts to protect and maintain a precious resource such as water does nothing to dent or balance Kathleen's report of a complex reality.

The portrayal of the settlers entitled "[The Settlement Movement and The Environmental Card](#)" provides little in terms of hard facts and rehashes the same old worn out "invented narrative" by self-declared representatives of the "invented people," the Palestinian Arabs. As a founding member of JStreet, Peratis could have left her stereotypical beliefs about settlers for once on stand-by mode. She could have avoided ostracizing her Jewish brothers and sisters only because they are settlers. She could have presented the personal acquaintances and the heart-to-heart talks with settler leaders, settlers making organic yogurts, settlers fermenting world-class wines and pressing organic olive oil, and settlers who make an honest living and raising their children to live and love Eretz Yisrael, without apologizing.

Peratis could have reported at length about Dr. Yaakov Anker, a Ph.D. environmental researcher at Ariel University. Dr. Anker, whom I know personally, is a long time resident of Tel-Aviv, not religious, and accepted his current position out of a personal conviction that there needed to be a way to provide water solutions to Jews and Arabs equally. Dr. Anker, very much a non-settler, one of Israel's foremost experts on water preservation and sewage maintenance in Judea and Samaria, states unequivocally that "eighty percent of the pollution in the region (Shomron and Ariel) is from Palestinian villages." This assessment is not a political statement but a scientific assessment and most likely represents the overall situation in all of Judea and Samaria. Yet Peratis is unable to highlight the Palestinian Arab's institutionalized and widespread lack of accountability and responsibility concerning protection of the environment and precious water resources.

So let's look at the facts! The Begin-Sadat Center for Strategic Studies has produced an empirical study that deals exactly with the water situation between Israel and the Palestinian Arabs. In the Mideast Security and Policy Studies No. 94, Haim Gvirtzman has produced a monumental report entitled "The Israeli-Palestinian Water Conflict: An Israeli Perspective." Make no mistake: the Israeli perspective does not diminish by one iota the validity and objectivity of the report.

The water arrangements between Israel and the Palestinians emerged from the Oslo Agreement and were based on a simple premise: that saving precious water sources must be based on a joint effort by Israel and the Palestinian Authority (PA). However, the PA and the local Palestinians have not held up their side of the bargain while Israel has not only fulfilled all of its obligations stemming from the 1995 Interim Agreement signed with the PA, but has met all water commitments requisite of a permanent status agreement as well.

As a result, there is almost no difference today in the per capita consumption of natural water between Israelis and Palestinian. The large difference that existed in 1967, when the administration of Judea and Samaria was handed over from Jordan to Israel, has diminished over the last 40 years and is now negligible. Furthermore, the per capita domestic water consumption of Palestinians is significantly higher than the minimum human needs defined by the World Health Organization.

However, while Israel has ensured that nearly all Palestinian Arab villages and towns are connected to running water, the Palestinians have violated their part of the agreement by refusing to build sewage treatment plants (despite available international financing). Moreover, the Palestinians have drilled hundreds of unlicensed wells and set up unauthorized connections to Israeli water supply pipelines.

Furthermore, the Palestinians have little basis for their water demands according to international legal norms. First, the signed water agreement overrules all other parameters. Second, Israel's historical possession of the Mountain Aquifer was established in the 1940s and is unconnected to the Occupation. Third, the Palestinians should not exploit groundwater from the Western Aquifer, which is fully utilized by Israel, before first exploiting groundwater from the non-utilized Eastern Aquifer. Finally, the Palestinians should be working to pay individually for their water consumption, to prevent leaks in domestic pipelines, to implement conservative irrigation techniques, and to reuse sewage water for irrigation. The fact that they have taken none of these steps and have not adopted any sustainable development practices precludes their demands for additional water from Israel.

The Israeli government believes that the water issue could transform from a source of controversy and tension to a source of understanding and cooperation. As with two previously signed water agreements (the permanent one with Jordan in 1994 and the interim one with the Palestinians in 1995), Israel wishes to achieve a practical and fair permanent agreement with the Palestinians. This paper has put forth a plan that can efficiently and quickly solve the current and future water shortages on both sides. The proposed plan would supply the sufficient quantity of water needed at least until 2030 and still leave some reserves.

I would suggest that rather than expending wasted energy in eternalizing the Palestinian Arabs as victims, lack of water being only the latest version of victimhood, Peratis and like minded Jewish leaders should direct their efforts towards transforming the settlers into human beings who fix leaks

in the kitchen faucet, who pay income taxes, tune-up their cars and do a yearly road test. In doing this they will discover the vast similarity between the Jews who live in the Shomron and the Jews who live in on Long Island or even in Tribeca.

The natural inclination to report on the settlers exclusively through the prism of politics will become intellectually unbearable while conveying a reality that is much more complex then what is usually reported. What seems to be an impossible reality for Jews living beyond the green line is in actuality not so different from the towns that they themselves live in; for once they feel more common denominators transcending differences. Peratis and like-minded American Jewish leaders are welcomed to re-evaluate basic assumptions about who's minding the water resources here in Judea and Samaria.

“Palestinians do not use water wisely”, 28/08/2012, online at: <http://cnpublishations.net/2012/08/28/palestinians-do-not-use-water-wisely/>

BACK TO TOP

❖ A last ditch effort to rescue the River Jordan

Once a mighty river, the Jordan is now heavily polluted, reduced to a mere trickle. An NGO working with Israel, Jordan, Syria and the West Bank hopes to create a plan to restore the river back to health. The banks and tributaries of the River Jordan are shared by Israel, Jordan, Syria and the West Bank. But the failure of these governments to cooperate multilaterally has turned the river into a polluted wasteland of contaminated water. Local efforts to rehabilitate the River Jordan have long since dried up. Now the international community is turning to Friends of the Earth Middle East, an independent NGO, in a last ditch effort to save the ecosystem.

The River Jordan starts its life as snow on Mount Hermon and flows into the Dead Sea. It once gushed with more than a billion cubic meters of fresh water every year. Its lush wetland ecosystem was the source of life of agrarian villages and cities within the otherwise barren, brown landscape. Today, it's a mere trickle. Just 20 to 30 million cubic meters splash along here, and the water is filthy. It's full of sewage run-off from Jordanian, Israeli and Palestinian villages that house more than 300,000 people in communities along the River Jordan's banks.

Gidon Bromberg, the Israeli director of Friends of the Earth Middle East, told DW about the power these waters once had. "The River Jordan was able to be harnessed and move turbines to produce electricity. The tragedy today is that the Jordan wouldn't turn a mouse wheel."

Troubled waters

In 1964, Israel began operating a major dam to divert water from the Sea of Galilee. That same year, Jordan constructed a channel to divert water from the Yarmouk River, a main tributary of the River Jordan. Syria also built reservoirs to catch the Yarmouk's waters. Between the three countries, 70 to 90 percent of the River Jordan's resources have been diverted for human use.

Jordanians, Israelis, and Palestinians have the most strategic interest in restoring the river to health, but they have not been able to agree on an action plan due to territorial disputes and an unwillingness to invest in nature. According to Bromberg, the demise of the river is directly connected to the conflict.

"It's very much due to the mindset of conflict, competition, of the enemy, where the mindset has been that everyone wants to capture water for themselves, which is completely understandable, but also to deny the enemy water resources, because that would empower the enemy."

In order to tackle this problem, Friends of the Earth Middle East is partnering with the Stockholm International Water Institute and Global Nature Fund. They are investing three million euros in the development of a plan to restore the lower Jordan river basin to health.

Eighty percent of those funds have been granted by the European Union, which Bromberg says signifies substantial foreign interest in the River Jordan's restoration.

Disputed boundaries

The new restoration plan must balance both political and environmental strategies. The plan must convince the governments of Israel, Jordan, and Syria to release more than 400 million cubic meters of water per year, all while considering future possible borders.

Even though the West Bank borders the River Jordan, Palestinians don't have access to its waters. Dr. Nader Al Khateeb, the Palestinian director of Friends of the Earth Middle East, believes it's crucial that Palestinians participate in the master plan and can give their input into the future of the River Jordan Valley.

"For the River Jordan, I will use the same words as the Palestinian president. He said, look, the Jordan Valley is our land, it's the food basket for the Palestinians. It's the future of our economy, and the River Jordan is the political border between Palestine and Jordan," Khateeb said. "We believe in a better future and that's why we work for the rehabilitation of the River Jordan."

Adel Yassen from the Palestinian Water Authority agrees. "The best solution is that the Israelis admit that we have our rights in the River Jordan Valley and the tributaries, and we are partners for these water resources. Then we can work together."

Israelis, Palestinians and Jordanians will have to cooperate to save the river

Palestinian territory is far downstream from where Jordan diverts the Yarmouk River, so Jordan collects its water share in accordance with the agreement it has with Syria and Israel. But by the time the Jordan River trickles past Palestinian territory it is little more than raw sewage.

Jordan is one of the world's ten most water poor countries, so its leaders are unlikely to reduce their water intake voluntarily. Even taps in its capital, Amman, run dry from time to time.

Instead, Jordan favors a plan to pipe water from its Red Sea port of Aqaba to the Dead Sea in the Jordan Valley, which it shares with Israel. This plan, known as the Red Sea – Dead Sea canal, aims to supply Jordan with up to a billion cubic meters of desalinated water per year, as well as replenish the rapidly decreasing water levels of the Dead Sea.

But Friends of the Earth Middle East isn't convinced that this will work. The group says a canal between the Red Sea and Dead Sea risks destroying the unique make-up of the Dead Sea.

Gidon Bromberg, the group's Israel director, said releasing more water into the River Jordan would also restore the Dead Sea, into which it flows. He thinks Israel should be the first to take the plunge. "We think Israel should lead because Israel is the economic powerhouse of the region."

For the benefit of all

Israel is a world leader in the clean-tech industry and nets more than two billion dollars a year in clean-tech exports. According to Bromberg, Israel should use this technology at home to design a system which reuses shower water to flush toilets. This way Israel could save 220 million cubic meters of water each year, and release more water back into the River Jordan.

However, Israel is also a water poor country and has 45 percent less water than it needs to meet the country's water demands. It makes up for the loss through an expensive desalination program. Bromberg argues that building a healthy ecosystem creates many economic opportunities. "There's a great deal of local communities that are desperate for job opportunities, for income, and therefore, they're partnering with us."

He also highlighted the river's historical importance: "The river is just not important for nature – and it's very important for nature – but it's also perhaps the holiest river on this planet. There are millions of pilgrims that want to visit the River Jordan and are very limited as to where that visit can take place today."

Friends of the Earth Middle East are already making progress in the region. By the end of this year, no Israeli waste will flow into the River Jordan, thanks to a 30 million dollar investment in a new wastewater treatment plant.

Jordan is following suit with a treatment plant planned for its largest communities along the Jordan Valley. The Japanese government has also approved funds for a wastewater treatment plant in the Palestinian city of Jericho.

Bromberg is optimistic about the future of Friends of the Earth Middle East's rehabilitation project. "With the support that we have, the very broad support of the public, we believe that we'll get there





"A last ditch effort to rescue the River Jordan", 27/08/2012, online at: <http://www.dw.de/dw/article/0,,16179528,00.html>

BACK TO TOP

❖ Jordan Puts Gender At Heart of Climate Change Policies

Jordan's environmental record may be patchy but as one of the most climate change-vulnerable nations in the Middle East, it is taking climate change seriously. It has now also become the first Arab nation to include gender considerations as one of the adaptation priorities in the National communication on climate change, which will be submitted to the UNFCCC. The significance of this is hard to gauge as it's all just reports and writings right now, but it does entail the acknowledgment of "women's effective role and allowing women's empowerment to provide a vital springboard for addressing climate resilience."

According to Ahmad Qatarnah, the secretary general of the Ministry of Environment, the department has also engaged the Jordanian National Commission for Women to integrate the environmental sector, with a focus on climate change, in the next Strategic Plan of Jordanian Women for 2011-2015. See the list of proposed actions and also our very own list of female eco-warriors from Jordan after the jump.

Examples of Proposed Actions in Jordan	
Priority Area	Action Involving Women
 Water	Monitor the amount of funding on water made available for gender activities at the local level
 Energy	Encourage families to increase energy efficiency through enforcement of construction codes
 Agriculture and Food Security	Promote women's participation in small-scale enterprises and food processing transformation industries
 Waste Reduction and Management	Conduct "Train the Trainers" sessions for community centre representatives, teachers at schools, and Imams and priests at mosques and churches

To help highlight the role of gender in climate change, I've scoured the archives for some amazing green work coming from the women of Jordan. These include young campaigners such as [Safa Al Jayoussi](#) and [Alisa Ananbeh](#), the [Bedouin solar engineers Rafi'a and Seiha](#) and the [permaculture expert Nadia Lawton](#). The lovely people at [LivingWell Magazine](#) have also recently profiled a recycling entrepreneur called Ghadeer Abed Al Jawad from Jordan.

Safa' Al Jayoussi, who is the outreach officer at the Jordan Green Building Council, also volunteers with IndyACT, Greenpeace Jordan and has supported various 350.org campaigns and green initiatives in Jordan. As part of her work with Greenpeace Jordan, she has been campaigning against the country's plans to go nuclear. "There are huge opportunities in Jordan to invest in renewable clean energy, we don't want a second Fukushima to prove that this project is wrong," she explains. "Nuclear power plants are unsafe and slight incidents can cause huge irreversible damages that Jordan can't handle. Plus Jordan has water scarcity issues and cooling the plant will be impossible."

Alisa Ananbeh took part in a US funded five-week programme to help young people from the Middle East deal with environmental problems. "Jordan's main problem is the lack of acceptance of our environmental issues," she told Green Prophet. "By educating the youth and demonstrating positive ways to protect the environment, I hope we can have a long-term impact. Therefore I believe it's important to raise the awareness amongst people not only in the cities but in the villages too. That way, other issues such as lack of water, waste management and environmental pollutions will be jointly solved by Jordanians."

Nadia Lawton, along with her husband Geoff Lawton, is a permaculture teacher eager to spread the word about the advantages of permaculture in the Middle East. "Permaculture made total common sense to me," she told Green Prophet, "it also fitted with my life ethics as a Muslim." Nadia is optimistic about the future. Over the years, she states she has seen big changes with more people – from locals to royal families- taking permaculture seriously. In fact, Nadia says she is certain that Permaculture "holds all the answers for food, water and sustainable development [problems in the Middle East] and it fits perfectly with the culture."

Solar Engineers Rafia and Seiha

Two Jordanian Bedouin women took part in a six-month course at a unique college in India where they were trained as solar engineers. The two women, who are illiterate and have never been employed, were carefully selected by the elders in the village to attend the course at Barefoot college in India which helps poor rural communities become more sustainable. "We've been taught about solar energy and solar panels and how to generate light," explains Rafi'a Abdul Hamid, a mother of

four who lives in a tent in the deserts of south Jordan. “Hopefully when we return we will be able to teach others and use everything we’ve learnt here in India to improve our village.”

“Jordan Puts Gender At Heart of Climate Change Policies”, 27/08/2012, online at:
<http://www.greenprophet.com/2012/08/jordan-puts-gender-at-heart-of-climate-change-policies/>

BACK TO TOP

❖ **Jordanian farmers: Israel is stealing our water**

Israel rejects claim it is over-pumping, says it is working on a project to improve water quality

Jordanian farmers threatened legal action against Israel, accusing it of over-pumping water from the Jordan River for settlement agriculture in the West Bank. Israel denied that it was doing anything of the kind, and said it was working on a project to improve the water quality.

Adnan Khaddam, head of the Jordan Valley Farmers' Union, told Jordanian daily Al-Arab Al-Youm Thursday that Israel has placed pumps and 10-inch-diameter pipes in the Jordan to draw water to purification plants and from there to fields in the West Bank. The waste water, he claimed, is funneled back into the southern part of the river, polluting the water.

Khaddam said that Israel's excessive pumping contravenes the Israel-Jordan peace treaty signed in 1994, and threatened to take legal action against Israel.

Saad Abu-Hamour, director general of the Jordan Valley Authority, a government development agency, told the daily he had no information about the farmers' allegations, but promised to investigate whether Israel was the water to irrigate fields in the West Bank.

Abu Hamour added that Jordan intends to raise the price of water for irrigation by 30%, considering the price has not been increased since 1994 despite the sharp rise in water prices.

In the peace agreement, Israel and Jordan agreed "to recognize the rightful allocations" of water from the Jordan and Yarmouk rivers.

Uri Schor, a spokesman for Israel's Water Authority, said the farmers' accusations were all false.

"They may have heard about our intention to rehabilitate the southern Jordan River," he told The Times of Israel. "This project will improve the water quality by removing brackish groundwater, unlike what the Jordanians supposedly claim."

"Jordanian farmers: Israel is stealing our water", 31/08/2012, online at: <http://www.timesofisrael.com/jordanian-farmers-israel-is-stealing-our-water/>

BACK TO TOP

❖ **Gaza not ‘liveable’ by 2020 barring urgent action : UN**

GAZA — Gaza will no longer be “liveable” by 2020 unless urgent action is taken to improve water supply, power, health, and schooling, the United Nations’ most comprehensive report on the Palestinian enclave said on Monday.

“Action needs to be taken now if Gaza is to be a liveable place in 2020 and it is already difficult now,” UN humanitarian coordinator Maxwell Gaylard told journalists when the report was released on Monday.

Five years into an Israeli blockade supported by Egypt, and living under one-party rule, Gaza’s population of 1.6 million is set to rise by 500,000 over the next eight years, say the authors of the UN’s most wide-ranging report on the territory.

Gaza has one of the youngest populations in the world, with 51 per cent of people under the age of 18.

“Action needs to be taken right now on fundamental aspects of life: water sanitation, electricity, education, health and other aspects,” Gaylard said.

Since 2007, Gaza has been under the control of the Islamist Hamas organisation, an armed political movement which rejects permanent peace with Israel. They fought a three-week war in January 2009, and Israel is resisting international pressure to lift its blockade, which it says prevents arms reaching Hamas.

Gaza has no airport and no seaport. The border is tense, with frequent clashes over rocket or mortar fire from Gaza and air strikes by Israel. Gaza rockets hit Israeli land on Sunday, damaging a factory in the town of Sderot, east of the enclave.

Israel partly eased restrictions in mid-2010, and Gaza’s crippled economy began to revive from rock bottom. Real GDP is estimated to have risen by 28 per cent in the first half of 2011 as unemployment fell to 28 per cent in 2011 from 37 per cent.

But the report, involving expertise from more UN agencies and making projections further into the future than before, said growth over the next eight years would be slow, since Gaza's current isolation renders its economy essentially non-viable.

Reconstruction but no peace

The people in the narrow coastal strip live mainly on UN aid, foreign funding and a tunnel economy which brings in food, construction materials, electronics and cars from Egypt.

But the smuggling trade is no solution. Robert Turner, director of operations of the United Nations Relief and Works Agency (UNRWA), said Gaza by 2020 will need 440 more schools, 800 more hospital beds and over a 1,000 additional doctors.

Gaylard called on international donors to increase their aid to a population which is 80 per cent aid dependent.

“Despite their best efforts the Palestinians in Gaza still need help,” he said. “They are under blockade. They are under occupation and they need our help both politically and practically on the ground.”

Israel in fact withdrew from Gaza in 2005, removing troops and settlers after 38 years of occupation.

A lack of clean drinking water is the greatest immediate concern, said Jean Gough of the UNICEF. The report projects a 60 per cent increase in the enclave's water needs, while urgent action is already needed to protect existing water resources.

By 2016, Gaza's aquifer may become unusable, she said. Palestinians are already drilling deeper and deeper to reach groundwater and there is a need for more desalination plants. A seawater plant costing about \$350 million is planned.

The UN says only a quarter of Gaza wastewater is treated. The rest, including raw sewage, goes into the Mediterranean Sea.

Gaylard said Gaza needs peace and security to improve the lives of its people. “It will certainly have to mean the end of blockade, the end of isolation and the end of conflict.”

There is as yet no sign of an end to the conflict between Hamas and Israel. The Islamist movement is shunned by the West as a terror organisation and there is no prospect of diplomatic contacts leading to peace talks as long as Hamas rejects Israel’s right to exist.

Analysts say much may depend on the future of relations with the new Egypt, whose Islamist leaders are sympathetic to Hamas but also committed to the 1979 peace treaty with Israel. Hamas is also supported by Iran, which is extremely hostile to Israel.

Aside from its tunnel network, Gaza imports via Israel. UN figures show, for example, that 46,500 tonnes of building materials came into Gaza via the Kerem Shalom crossing from Israel in September 2011, while 90,000 tonnes came via the tunnels.

It also gets electricity and fuel from Israel.

Rebuilding homes and factories smashed in the winter war of 2009 is Gaza’s biggest task, and construction is the source of most of its growth in employment in the past two years.

“Gaza not ‘liveable’ by 2020 barring urgent action : UN”, Jordan Times, 27/08/2012, online at:
<http://mideastenvironment.apps01.yorku.ca/?p=5760>

BACK TO TOP

❖ **Greenpeace warns of Lebanon's toxic waters**

BEIRUT: Greenpeace Lebanon warned Thursday that there are hundreds of dangerous chemicals in the waters off the country, which pose dangers to people and the environment.

A total of 30 samples were collected for the study and the environmental watchdog's new report shows that the pollution is highest in Beirut, Tripoli and Sidon.

Rayan Makarem, a campaigner for the non-governmental organization, presented the report, entitled "Lebanon's Toxic Coast: an overview of threats, problems and solutions," and emphasized that the responsibility for combating this problem lies with both the public and private sectors.

"The situation, as it stands, is very dangerous," Makarem said, adding that Lebanon's waters must be protected. He called for a comprehensive law on waste management in the country, rather than just a series of emergency laws.

He also stressed the need for Lebanon to abide by the Barcelona Convention that the government has ratified, and which was created to reduce pollution in the Mediterranean Sea.

"It is the responsibility of the government to handle the issue of waste-water management through the implementation of current plans to complete the waste-water infrastructure for the country and stop the dumping of raw sewage directly into the Mediterranean," a statement from Greenpeace said.

"In addition, new legislation should be passed to allow for a complete upheaval of the solid waste sector, which is suffering from the absence of modern rules and regulations," Makarem said.

He stressed that there was clear evidence that the byproducts of industrial waste were damaging the environment and added that private companies must work to halt this trend.

"Industries in Lebanon can and should be able to control their emissions in accordance with existing legislation ... as well as investing in improving their industrial process or in the installation of the required filters," he said.

Makarem called on the Environment Ministry to carry out its duties properly by confronting all violations of environmental crimes.

He added that a study commissioned by the ministry in 2005 had discussed the problems facing the Lebanese coast but, “unfortunately, this study had been sitting in a drawer for the last seven years.”

If necessary, Makarem said, the ministry should bypass unnecessary bureaucratic procedures in order to carry out its work.

Mohammad Baalbaki, head of the Press Federation, where Thursday’s launch was held, praised Greenpeace and its role in raising awareness of the issues facing Lebanon’s coast.

“It’s not acceptable that Lebanon’s seas are at risk of this toxicity,” he said.

The study was conducted by Greenpeace in collaboration with the University of Exeter in Britain, and the input of Carol Sukhn, a leading expert in Lebanon on eco-toxicology.

“Greenpeace warns of Lebanon’s toxic waters”, Daily Star, 27/08/2012, online at:

<http://mideastenvironment.apps01.yorku.ca/?p=5758>

BACK TO TOP

❖ Risk of water wars rises with scarcity

Almost half of humanity will face water scarcity by 2030 and strategists from Israel to Central Asia prepare for strife.

The author Mark Twain once remarked that “whisky is for drinking; water is for fighting over” and a series of reports from intelligence agencies and research groups indicate the prospect of a water war is becoming increasingly likely.

In March, a report from the office of the US Director of National Intelligence said the risk of conflict would grow as water demand is set to outstrip sustainable current supplies by 40 per cent by 2030.

“These threats are real and they do raise serious national security concerns,” Hillary Clinton, the US secretary of state, said after the report’s release.

Internationally, 780 million people lack access to safe drinking water, according to the United Nations. By 2030, 47 per cent of the world’s population will be living in areas of high water stress, according to the Organisation for Economic Co-operation and Development’s Environmental Outlook to 2030 report.

Some analysts worry that wars of the future will be fought over blue gold, as thirsty people, opportunistic politicians and powerful corporations battle for dwindling resources.

Dangerous warnings

Governments and military planners around the world are aware of the impending problem; with the US senate issuing reports with names like Avoiding Water Wars: Water Scarcity and Central Asia’s growing Importance for Stability in Afghanistan and Pakistan.

In Depth

Environmental conflicts

Crowded planet

Climate SOS

Anatomy of a Drought

Deep trouble

Food riots predicted over US crop failure

With rapid population growth, and increased industrial demand, water withdrawals have tripled over the last 50 years, according to UN figures.

“Water scarcity is an issue exacerbated by demographic pressures, climate change and pollution,” said Ignacio Saiz, director of Centre for Economic and Social Rights, a social justice group. “The world’s water supplies should guarantee every member of the population to cover their personal and domestic needs.”

“Fundamentally, these are issues of poverty and inequality, man-made problems,” he told Al Jazeera.

Of all the water on earth, 97 per cent is salt water and the remaining three per cent is fresh, with less than one per cent of the planet’s drinkable water readily accessible for direct human uses. Scarcity is defined as each person in an area having access to less than 1,000 cubic meters of water a year.

The areas where water scarcity is the biggest problem are some of the same places where political conflicts are rife, leading to potentially explosive situations.

Some experts believe the only documented case of a “water war” happened about 4,500 years ago, when the city-states of Lagash and Umma went to war in the Tigris-Euphrates basin.

But Adel Darwish, a journalist and co-author of *Water Wars: Coming Conflicts in the Middle East*, says modern history has already seen at least two water wars.

“I have [former Israeli prime minister] Ariel Sharon speaking on record saying the reason for going to war [against Arab armies] in 1967 was for water,” Darwish told Al Jazeera.

Some analysts believe Israel continues to occupy the Golan heights, seized from Syria in 1967, due to issues of water control, while others think the occupation is about maintaining high ground in case of future conflicts.

Senegal and Mauritania also fought a war starting in 1989 over grazing rights on the River Senegal. And Syria and Iraq have fought minor skirmishes over the Euphrates River.

Middle East hit hard

UN studies project that 30 nations will be water scarce in 2025, up from 20 in 1990. Eighteen of them are in the Middle East and North Africa, including Egypt, Israel, Somalia, Libya and Yemen.

“Water too often is treated as a commodity, as an instrument with which one population group can suppress another”

-Ignacio Saiz, Centre for Economic and Social Rights

Darwish bets that a battle between south and north Yemen will probably be the scene of the next water conflict, with other countries in the region following suit if the situation is not improved.

Water shortages could cost the unstable country 750,000 jobs, slashing incomes in the poorest Arab country by as much as 25 per cent over the next decade, according to a report from the consulting firm McKinsey and Company produced for the Yemeni government in 2010.

Commentators frequently blame Yemen’s problems on tribal differences, but environmental scarcity may be underpinning secessionist struggles in the country’s south and some general communal violence.

“My experience in the first gulf war [when Iraq invaded Kuwait] is that natural resources are always at the heart of tribal conflicts,” Darwish told Al Jazeera.

The Nile is another potential flash point. In 1989, former Egyptian president Hosni Mubarak threatened to send demolition squads to a dam project in Ethiopia.

“The Egyptian army still has jungle warfare brigades, even though they have no jungle,” Darwish said.

On the Nile, cooperation would benefit all countries involved, as they could jointly construct dams and lower the amount of water lost to evaporation, says Anton Earle, director of the Stockholm International Water Institute think-tank.

“If you had an agreement between the parties, there would be more water in the system,” he told Al Jazeera. The likelihood of outright war is low, he says, but there is still “a lot of conflict” which “prevents joint infrastructure projects from going ahead”.

Differing views

Water scarcity, and potential conflicts arising from it, is linked to larger issues of population growth, increasing food prices and global warming.

There are two general views about how these problems could unfold. The first dates back to the work of Thomas Malthus, an eighteenth century British clergyman and author who believed that: “The power of population is so superior to the power of the earth to produce subsistence for man, that premature death must in some shape or other visit the human race.”

In other words, more people and scant resources will invariably lead to discord and violence.

View our special coverage of the population milestone

Recent scholars, including Thomas Homer-Dixon, have analysed various case studies on environmental degradation to conclude that there is not a direct link between scarcity and violence. Instead, he believes inequality, social inclusion and other factors determine the nature and ferocity of strife.

“Unequal power relations within states and conflicts between ethnic groups and social classes will be the greatest source of social tensions rising from deprivation,” said Ignacio Saiz from the social justice group. “Water too often is treated as a commodity, as an instrument with which one population group can suppress another.”

Bolivia, South Africa, India, Botswana, Mexico and even parts of the US have seen vigorous water related protests, says Maude Barlow, author of 16 books and a former senior adviser to the UN on water issues.

“The fight over water privatisation in Cochobamba, Bolivia did turn into a bit of a water war and the army was called in,” Barlow told Al Jazeera. “In Botswana, the government smashed bore holes as part of a terrible move to remove [indigenous bushmen] from the Kalahari desert. Mexico City has been forcibly taking water from the countryside, confiscating water sources from other areas and building fortresses around it, like it’s a gold mine. In India, Coke will get contracts and then build fortresses around the water sources,” taking drinking and irrigation water away from local people. “In Detroit 45,000, officially, have already had their water cut off.”

Human rights

Strife over water, like conflicts more generally, will increasingly happen within states, rather than between them, Barlow says, with large scale agribusiness, mining and energy production taking control over resources at the expense of other users.

The IPPC, the UN panel which analyses climate science, concluded that: “Water and its availability and quality will be the main pressures on and issues for, societies and the environment under climate change.”

Dealing with these pressures will require improved technologies, political will and new ideas about how humans view their relationship with the substance that sustains life.

“People have the right to expect access to a basic life resource like water by virtue of being human, regardless of the social situation they are born into,” Saiz said. “Alongside the worrying development of water scarcity, I am hopeful that we will see increasing struggles to see access to water as a right, and not a privilege.”

“Risk of water wars rises with scarcity – Al Jazeera”, 27/08/2012, online at:
<http://mideastenvironment.apps01.yorku.ca/?p=5762>

BACK TO TOP

❖ Egypt Government Admits Responsibility for Pollution in Menoufiya

CAIRO, Egypt — An official investigation into the water pollution incident in Menoufiya governorate last week confirmed that water produced by the treatment plant there was contaminated.

“Analysis showed that potable water produced by the treatment plant was polluted because of lack of chlorine,” Minister of Health Mohamed Hamed said at an August 26 press conference.

“The analysis also proved that other sources of drinking water in the village, like groundwater, were polluted since they were contaminated with microbes,” Hamed said.

Around 5,000 people in Sansaft village were hospitalized with acute diarrhea, and about 80 people are still receiving treatment, according to hospital sources.

In protest, villagers locked visiting Health Minister Mohammed Mustafa and Governor Ashraf Helal in a hospital room on August 21.

The plant serving Sansaft is operated by the Holding Company for Drinking Water and Sanitary Sewers.

Minister of Water, Utilities and Sanitation Abdel Qawi Khalifa said local water authorities would take the necessary steps to avoid more cases of contamination.

“The water pipeline network and reservoirs in the village were purified,” Khalifa said after meeting with Prime Minister Hisham Qandil to discuss the situation.

“A new water pipeline network will be installed within a month to avoid pollution,” he added.

Khalifa noted that a number of villagers consume groundwater, which is contaminated with sewage and agricultural wastewater.

“We called upon people to stop consuming this polluted water to avert another catastrophe,” he said.

“We will increase the amount of chlorine used in the treatment plant to avoid such a situation again,” he added.

There is evidence that the provincial government knew about the problems with local water supply long before the outbreak of sickness.

Tests carried out by the Menoufiya Health Department in early June showed that potable water supplied to the village was unfit for drinking, with high levels of bacteria, fungi, manganese and iron.

The pollution incident in Sansaft is not the first such case in Egypt. In July 2009, hundreds of villagers in Al Baradaa, in Qalioubiya governorate, were hospitalized in a typhoid outbreak.

Water pollution there was blamed on the Arab Contractors Company, which was installing a new pipeline network in the village. The work caused sewage water to seep into the drinking water pipeline network.

The Egyptian government recently created a separate ministry to manage drinking water and sanitation affairs.

The ministry says achieving full nationwide coverage with safe drinking water is its top priority. According to government statistics, around 98 percent of Egyptians have access to safe drinking water.

“Egypt Government Admits Responsibility for Pollution in Menoufiya”, 28/08/2012, online at:

http://www.ooskanews.com/daily-water-briefing/egypt-government-admits-responsibility-pollution-menoufiya_24058

BACK TO TOP

❖ Egypt to Spend \$120 Million USD for Water, Irrigation in Other Nile Basin Countries

CAIRO, Egypt — The Egyptian government will allocate \$120 million USD over the next five years for water and irrigation projects in other Nile Basin countries, the Ministry of Irrigation and Water Resources announced last week.

Most of the funds will be used for projects in Kenya, Uganda, Tanzania, Sudan and South Sudan.

The ministry's Nile Water Sector will be in charge of coordinating these projects with the individual country governments.

"These projects are meant to enhance ties with Nile Basin countries," Minister of Irrigation and Water Resources Mohamed Bahaaeddine explained.

"We currently having positive relationships with Nile Basin countries, in spite of the recent disagreements," he added.

He claimed the next few years would bring a breakthrough in cooperation between Egypt and upstream neighbors in the Nile Basin.

"We will work on building their water resources management capacities," he said.

At the same time, Bahaeddine insisted Egypt would not relinquish any of its "historical rights to Nile water."

"International law protects our rights to Nile water. Therefore, any agreement signed by Nile Basin countries should state these rights," he said.

He said Egypt will continue negotiating with upstream countries over the Entebbe legal framework agreement, signed by six upstream countries and opposed by downstream Egypt and Sudan.

To this end, the Egyptian government is poised to sign a water management framework agreement with the new state of South Sudan.

Under the agreement, Cairo will provide assistance with water resources management throughout South Sudan.

Besides attempting to win support for revisions to the Entebbe agreement -- which does not acknowledge Egypt's historical allocation of 55.5 billion cubic meters of Nile water annually -- observers say the \$120 million USD in funding is also part of an effort to minimize the Israeli presence in Nile Basin countries, in the wake of a cooperation agreement signed last month between Israel and South Sudan.

Bahaaeddine declared earlier this month that "Egypt totally rejects any sort of Israeli presence in any Nile Basin country."

In addition, Egyptian officials are still apprehensive about the Renaissance Dam project that Ethiopia wants to build, saying it could affect the flow of Nile water.

"Egypt to Spend \$120 Million USD for Water, Irrigation in Other Nile Basin Countries", 27/08/2012, online at: http://www.ooskanews.com/daily-water-briefing/egypt-spend-120-million-usd-water-irrigation-other-nile-basin-countries_24040

BACK TO TOP

❖ **Mekong dams could rob millions of their primary protein source**

Stockholm — Hydropower dams planned for the lower mainstem of the Mekong River could decimate fish populations and with them the primary source of protein for 60 million people. The impact of the dams would extend far beyond the river, as people turn to agriculture to replace lost calories, protein and micronutrients, according to a new study by WWF and the Australian National University.

There are 11 planned dam projects on the Mekong mainstem, and another 77 dams planned in the basin by 2030. The study, “Dams on the Mekong River: Lost fish protein and the implications for land and water resources”, looked at two scenarios: replacement of lost fish protein directly attributable to the proposed 11 mainstem dams, and replacement of the net loss in fish protein due to the impact of all 88 proposed dam developments.

If all 11 planned mainstem dams were built, the fish supply would be cut by 16 per cent, with an estimated financial loss of US\$476 million a year, according to the study. If all 88 projects were completed, the fish supply could fall 37.8 per cent.

Study co-author Stuart Orr, freshwater manager at WWF International, says policymakers often fail to recognize the crucial role of inland fisheries in meeting food security. “The Mekong countries are striving for economic growth, and they see hydropower as a driver of that growth. But they must first fully understand and take into account the true economic and social value of a free-flowing Mekong,” says Orr.

The lower Mekong, flowing through Cambodia, Laos, Thailand and Viet Nam, is renowned for its biological diversity, with more than 850 freshwater fish species. These fish are fundamental to diets and economies in the region, with 80 per cent of the 60 million inhabitants relying directly on the river for their food and livelihoods.

The report also looks at the effects on land and water as people are forced to shift to cows, pigs, poultry and other sources to meet their protein requirements. On top of 1,350km² of land lost to dam

reservoirs, the countries would need a minimum of 4,863km² of new pasture land to replace fish protein with livestock. The high end of the estimate if all dams were built is 24,188km² – a 63 per cent increase in land dedicated to livestock.

Water requirements would jump on average between 6 and 17 per cent. But these averages mask the considerably higher figures for Cambodia and Laos. Under scenario one, with 11 dams on the mainstem, Cambodia would need to dedicate an additional 29-64 per cent more water to agriculture and livestock; Laos' water footprint would increase by 12-24 per cent. Under the second scenario, with all 88 dams, these numbers shift dramatically, with an increase of 42-150 per cent for Cambodia and 18-56 per cent for Laos.

“Policymakers in the region need to ask themselves where they are going to find this additional land and water,” says Orr. “The Mekong demonstrates the links between water, food and energy. If governments put the emphasis on energy, there are very real consequences for food and water – and therefore people.”

The report, published in the journal *Global Environmental Change* and presented during World Water Week in Stockholm, comes at a critical time in the debate over hydropower development in the region. Construction work appears to be moving ahead on the controversial Xayaburi dam in Laos, despite a decision by the intergovernmental Mekong River Commission to halt the project pending further studies. It would be the first of the planned dams to span the lower Mekong mainstem.

“We hope this study can help fill some of the knowledge gaps about the effects of the proposed dams,” says co-author Dr Jamie Pittock from the Crawford School of Public Policy in the Australia National University.

WWF urges the lower Mekong countries to defer a decision on the mainstem Mekong dams for 10 years to ensure critical data can be gathered and a decision can be reached using sound science and analysis. WWF further advises lower Mekong countries considering hydropower projects to prioritize

dams on some Mekong tributaries that are easier to assess and are considered to have a much lower impact and risk.

“Mekong dams could rob millions of their primary protein source”, 27/08/2012, online at:
http://wwf.panda.org/wwf_news/?206033/Mekong-dams-could-rob-millions-of-their-primary-protein-source&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6a531ffe9b-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

❖ Xayaburi and Subsequent Mekong Dams Could Deprive Millions of Protein

Sweden, STOCKHOLM — Hydropower dams planned for the lower mainstem of the Mekong River could decimate fish populations and with them the primary source of protein for 60 million people, according to a new study by international conservation organization WWF and the Australian National University.

The report comes at a time when work appears to be moving ahead on the controversial Xayaburi dam in Laos, despite a decision by the intergovernmental Mekong River Commission to halt the project pending further studies.

Study co-author Stuart Orr, freshwater manager at WWF International, told OOSKAnews at World Water Week in Stockholm on August 28 that “Xayaburi will be the first of the planned dams to span the lower Mekong mainstem, unlike the Chinese dams further upstream. There are 11 planned dam projects on the Mekong mainstem, and another 77 dams planned in the basin by 2030. The regional governments worked for suspension of the Xayaburi to give time for assessment of food security concerns. This study is a first effort at assessing the concerns.”

“The Mekong countries are striving for economic growth, and they see hydropower as a driver of that growth. But they must first fully understand and take into account the true economic and social value of a free-flowing Mekong,” according to Orr, who stresses that the report should not be viewed narrowly as being against hydropower.

“There are suitable hydro sites in Laos, for example, that should be fast-tracked.”

The study, “Dams on the Mekong River: Lost fish protein and the implications for land and water resources,” looks at two scenarios: replacement of lost fish protein directly attributable to the proposed 11 mainstem dams, and replacement of the net loss in fish protein due to the impact of all 88 proposed dam developments.

If all 11 planned mainstem dams were built, the fish supply would be cut by 16 percent, with an estimated financial loss of \$476 million USD a year, according to the study. If all 88 projects were completed, the fish supply could fall 37.8 percent.

It is further claimed that the impact of the mainstem Mekong dams would extend far beyond the river, as people turn to agriculture to replace lost calories, protein and micronutrients.

The report studies the effects on both land and water as people are forced to shift to cows, pigs, poultry and other sources to meet their protein requirements. On top of 1,350 square kilometers of land lost to dam reservoirs, the countries would need a minimum of 4,863 square kilometers of new pasture land to replace fish protein with livestock. The high end of the estimate if all dams were built is 24,188 square kilometers -- a 63 percent increase in land dedicated to livestock.

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“Policymakers in the region need to ask themselves where they are going to find this additional land and water,” says Orr. “The Mekong demonstrates the links between water, food and energy. If governments put the emphasis on energy, there are very real consequences for food and water -- and therefore people.”

“Xayaburi and Subsequent Mekong Dams Could Deprive Millions of Protein”, 28/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/xayaburi-and-subsequent-mekong-dams-could-deprive-millions-protein_24075

BACK TO TOP

❖ **Something fishy about proposed dams**

Millions of people are in danger of going hungry if the construction of dams on the lower Mekong River in South-East Asia goes ahead, according to research from The Australian National University.

Dr Jamie Pittock from the Crawford School of Public Policy in the ANU College of Asia and the Pacific, and co-authors, studied the potentially devastating economic, social and environmental consequences of the proposed dams on the lower Mekong states of Laos, Thailand, Cambodia and Vietnam.

“There are around 60 million people who live in these countries whose main source of protein is freshwater fish. Eleven major hydropower dams have been proposed on the main stem of the river, in addition to a further eight that are being constructed in China,” Dr Pittock said.

“These dams will block the migration of freshwater fish, which will reduce the fish breeding and change the water flows. This will dramatically reduce the amount of fish available which will fall somewhere between 16 and 42 per cent, depending on how many dams are built.”

Dr Pittock said a vast area of additional land and a huge increase in water would be needed to replace lost fish protein with livestock products.

“Some 2.8 million people are in danger of going hungry if food prices go up by more than 10 per cent. Primarily from rural areas, they depend on fishing and farming for their livelihoods. If this protein is to be replaced, where would it come from and what would it mean environmentally?” Dr Pittock said.

“Countries like China are increasingly relying on hydropower because it is considered a low carbon source of energy. But if you lose fish and scale up the other sources of protein that people are already eating, such as poultry, pigs, goats and buffalo, how much water and land do you need?

“The answer is an awful lot. The amount of water required to produce this livestock would increase by six to 17 per cent and although this is a water-rich area, there are some places like Bangkok that are water-scarce.

“Converting rainforest to pastureland has implications in terms of carbon emissions, changes in land ownerships and impacts on the environment. Cambodia and Laos would be impacted most, and Vietnam and Thailand are already running out of enough land to grow livestock. There is still time for the Laos Government to delay any decision until there’s better information, or agree not to dam the main stem of the river and maintain the wild fishery.”

The research was carried out with Dr David Dumaesq from the Fenner School of Environment and Society in the ANU College of Medicine, Biology and Environment, and experts from the World Wide Fund for Nature.

“Something fishy about proposed dams”, 27/08/2012, online at: <http://news.anu.edu.au/?p=16851>

BACK TO TOP

❖ **WWF Warns About the Environmental Impact of Mekong Dams**

The World Wildlife Fund (WWF) has recently decided to look into how plans to dam the Mekong River will impact on the biodiversity of the aquatic ecosystems this water source houses. The conclusions reached by this organization are quite troubling.

Thus, should the dams projects held in store for the Mekong River become a reality, about 60 million people living in nearby communities are bound to lose their primary source of protein, as fish populations will experience a rapid and severe decline in their headcounts.

The [organization's official website](#) explains how, for the time being, plans are made to build 11 dams on Mekong's mainstream, and 77 more in the River's basin. The deadline for the implementation of these projects is supposedly represented by the year 2030.

Working on the assumption that all of these dams will eventually be up and running, the World Wildlife Fund discovered that once all of these 88 dam projects are completed, fish supply in these regions will most likely drop by as much as 37.8 per cent.

Moreover, the 11 dams to be erected on the Mekong mainstream will need be held accountable for a drop of 16 per cent in fish supply, which basically means that whatever environmental damage the 77 dams build in the Mekong basin will cause is no match to the negative effects these 11 dams will cause.

Stuart Orr, one of the environmental specialists involved in carrying out this study, explains how, “The Mekong countries are striving for economic growth, and they see hydropower as a driver of that growth. But they must first fully understand and take into account the true economic and social value of a free-flowing Mekong.”

Furthermore, “The Mekong demonstrates the links between water, food and energy. If governments put the emphasis on energy, there are very real consequences for food and water – and therefore people.”

Given the fact that the Mekong river is home to about 850 fresh water fish species, most of which play a major role in providing local communities with a constant food source and income, perhaps it might not be such a bad idea to give due consideration to this study before pushing forward with said damn projects.

“WWF Warns About the Environmental Impact of Mekong Dams”, 27/08/2012, online at:

http://news.softpedia.com/news/WWF-Warns-About-the-Environmental-Impact-of-Mekong-Dams-288413.shtml?utm_source=ForumSoftpedia&utm_medium=ForumSoftpedia&utm_campaign=ForumSoftpedia
[a](#)

BACK TO TOP

❖ Cholera Outbreak at Malawi's Drying Lake Chilwa

Malawi, LILONGWE — Cholera has broken out in the Zomba, Machinga and Phalombe districts on Malawi's second largest lake, Lake Chilwa, due to poor sanitation conditions in the region.

“So far we have recorded 63 cases of cholera and three deaths following the disease's outbreak,” Zomba District Health Officer Medson Semba said on August 25.

He blamed unhygienic practices by residents for the disease's spread.

“The problem is that residents are practicing unhygienic tendencies whereby they are defecating in the lake and drinking water from the same water at the same time,” said Semba.

He said his office has so far managed to control the situation, with help from the Malawi Red Cross Society and other groups that have launched a campaign to sensitize communities around the lake to better hygiene practices.

“We are also distributing chlorine and Water Guard [treatment systems] to the communities and encouraging them to treat the water before drinking,” said Semba.

The disease outbreak comes at a time when the lake's water level is receding. Scientists have already predicted that the lake could dry up completely in 2013 or 2014. They blame fluctuating rainfall patterns and environmental degradation in the catchment area that spans the three districts.

“Accelerated environmental degradation in the catchment area is causing siltation, leading to reduction in the lake level. This is a major threat to the aquatic ecosystem,” said scientist Bruno Chirwa.

Deputy Director of the Malawi government's Environmental Affairs Department Aloysius Kamperewera said if the drying lake is to be saved, the country must implement the management plan developed as part of a Danish-funded project in the late 1990s.

“There is also an urgent need to explore avenues such as rainwater harvesting to help the communities surrounding the lake to access water,” Kamperewera said.

He said residents engaged in agricultural development projects around the lake would have to be persuaded to adhere to the plan.

“Cholera Outbreak at Malawi’s Drying Lake Chilwa”, 29/08/2012, online at: http://www.ooskanews.com/daily-water-briefing/cholera-outbreak-malawi-s-drying-lake-chilwa_24076

BACK TO TOP

WWW.ORSAM.ORG.TR

❖ China Focus: Saving China's largest freshwater lake

NANCHANG, Aug. 27 (Xinhua) -- Fisherman Zhang Qiulin said he has been anxious following the dramatic decrease of water levels on Poyang Lake over the last two weeks, despite the fact that the area is still in its rainy season.

Zhang said he fears a repeat of last year, when a historic drought killed many fish in Poyang, located in central China's Jiangxi Province.

Data from the provincial hydrographic bureau showed that the lake's water level had plummeted to 17.71 meters as of Sunday morning, down from this year's highest level of 19.65 meters on Aug. 13.

"Poyang has been drying up over the past decade, particularly from 2003 to 2008. During that time, its annual runoff was 23.2 billion cubic meters, or 15 percent, less than the average of previous years," said Wang Hao, a water conservancy expert with the China Institute of Water Resources and Hydropower Research.

Wang said the situation is likely to worsen due to the growing threat of climate change, which has been blamed for the lake's decreasing water level alongside human activity.

The average precipitation in Jiangxi in 2011 was 21 percent lower than the annual average for the past several years, the bureau's statistics indicated.

Reduced rainfall, rampant sand dredging and tourism-related exploitation have reduced the lake's size from 4,000 square km to about 200 square km.

The Three Gorges Dam and other projects built in the upstream areas of the Yangtze River caused the lake's dry season to arrive earlier than before, Wang said.

"A water conservancy project is needed at the mouth of Poyang, where water from the lake flows into the Yangtze River. The project could maintain water levels during the dry season and won't disturb water flows during the flood season," Wang said.

The lake's water volume and quality have a significant impact on Yangtze, as the lake's water discharges account for 15.6 percent of the river's annual runoff.

Moreover, the lake is a key water supply source for about 1 million people and an important home for numerous migratory birds and aquatic species.

A decline in the lake's water quality and degeneration of its ecology have worried environmental experts as well. Marion Hammerl, president of the Global Nature Fund, said urgent action by the international community is needed to halt the contamination of freshwater lakes, including the Poyang.

The Jiangxi provincial government has made some efforts to limit the exploitation of the lake, including shutting down construction sites and encouraging the development of a "recycling economy," said Hu Zhenpeng, vice chairperson of the local legislature.

The government has also moved to treat water on the branches of the Yangtze and prevent pollutants from entering the lake, Hu said.

Hammerl said the way water resources are managed should be transformed and existing water facilities should be upgraded.

Obsolete irrigation equipment should be replaced so as to facilitate water-saving agriculture and achieve sustainable development for the lake, she said.

“China Focus: Saving China's largest freshwater lake”, 27/08/2012, online at:
http://news.xinhuanet.com/english/china/2012-08/27/c_131810201.htm?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=4cdf037170-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

WWW.ORSAM.ORG.TR

❖ Weak Monsoon Raises Specter of Drought in India

Monsoon rainfall is 14 percent below average in India, which depends on rainwater to feed more than 50 percent of its agricultural land.

There are more than 12,000 kilometers (7,500 miles) between the Midwest United States corn belt and the bread basket of northwestern India, but droughts afflicting these two agricultural powerhouses have serious implications for world food prices and grain stockpiles.

India's drought — declared by the government on August 2 — is neither as severe nor as lengthy as the one shriveling U.S. crops, but the rains from the summer monsoon, known as the southwest monsoon, are **14 percent below the long-term average**. The southwest monsoon rains typically supply 73 percent of India's annual rainfall and are the primary water source for 55 percent of the non-irrigated portion of India's agricultural lands.

“Continued deficient monsoon rains and reports of impending drought have led to a significant increase in food prices, with prices of most food grains rising by 6 to 14 percent during July.”

—India Grain Report USDA

The southwest monsoon stretches from June through September, but rainfall is unlikely to improve over the second half of this season. In a forecast released August 2, **India's Meteorological Department** said that rainfall in August is “likely to be normal,” but that rainfall over the country as a whole could be below normal later in the season due to developing El Niño conditions that bring dry weather to Southeast Asia. Coupled with a weak and slow start to the monsoon, forecasts expect “deficient” rainfall overall.

India is no stranger to drought, and expects erratic rainfall four out of every 10 years. However, studies show that the monsoon has been getting progressively weaker over the past 50 years, while the rain that does fall comes in more extreme weather events. These trends have negative implications for India's rice yield — the country is currently the world's second-biggest rice producer and its third-biggest rice exporter. The worrying trends also add a concern to the global food outlook at a time when the world's agricultural giants are being repeatedly hit by droughts and the world's population is increasing rapidly.

India's Drought Impacts Crop Yields

The driest region is the northwest, which had received only 80 percent of its long-term average rainfall as of August 23, according to India's Meteorological Department. This region envelopes some of the most productive agricultural states in the country, including Punjab, which produced 27.2 million metric tons (1.3 billion bushels) of food grains in 2010-11, [government statistics](#) show. Other major producers in India's northwestern region include Rajasthan and Haryana, as well as the more north-central Uttar Pradesh.

Planting Less and Planting Later

The decline in crop numbers is primarily a function of farmers planting less and planting later, due to the weak monsoon.

Delayed planting is linked to reduced yields, meaning that each hectare of land produces less food. If farmers feel that rains will be too deficient, they may also reduce the area of land that they plant with water-intensive crops like rice and corn.

The time for planting rice and other kharif — rainy season — crops is quickly coming to a close for 2012, and plantings at the end of July were lagging significantly behind last year.

Crop	Plantings as of July 27, 2012 (million hectares)	Plantings by July 29, 2011 (million hectares)	Plantings by July 29, 2010 (million hectares)
Rice	19.11	20.99	19.98
Corn	5.72	5.93	6.39
Sorghum	1.72	2.23	2.41
Millet	4.31	7.03	7.90
Pulses*	6.30	7.39	8.18

*dry beans, lentils, chickpeas, peas

Source: [USDA](#) / [India's Ministry of Agriculture](#)

The rain deficits prompted the United States Department of Agriculture (USDA) in July to [drop production estimates](#) for India's rice crop by 2.5 million metric tons (121 million bushels). These

numbers were further reduced by 6 million metric tons (291 million bushels) on August 3, bringing this year's forecast to 94 million metric tons (4.5 billion bushels) — a nearly 10 percent drop from last year's record high production.

And crop forecasts could shrink again, if monsoon rains continue to be deficient. But, so far, rains have picked up enough to ward off any further reductions.

Rice growers in the eastern portion of Uttar Pradesh, the southern-most region of Tamil Nadu, and West Bengal in the east depend almost entirely on monsoon rains to successfully transplant their seedlings, so these regions were particularly susceptible to poor monsoon rains, according to the [USDA India Grain and Feed Update](#).

The update added that even irrigated rice fields can be hit by deficient monsoon rains “due to depletion of rechargeable groundwater and surface reservoirs required for irrigation.”

The decrease in India's production will result in [world ending stocks for rice](#) declining 1.7 million metric tons (82.4 million bushels) from the previous year, according to the July USDA World Agriculture Supply and Demand Estimates (WASDE).

Lower Production = Higher Prices

Indian food prices have responded to the drought and lowered crop forecasts, [echoing the spike in corn prices occurring in the United States](#).

“Continued deficient monsoon rains and reports of impending drought have led to a significant increase in food prices, with prices of most food grains rising by 6 to 14 percent during July,” the USDA grain report said of Indian food prices. “The increase in the prices of corn and various pulses has been very strong, raising serious food-inflation concerns among policymakers.”

But following record crops in 2011, India has plenty of food to spare in its government-held food/grain stockpiles — 30.7 million metric tons (1.5 billion bushels) of rice and 49.8 million metric tons (1.8 billion bushels) of wheat — and the nation may use these resources to put downward pressure on prices.

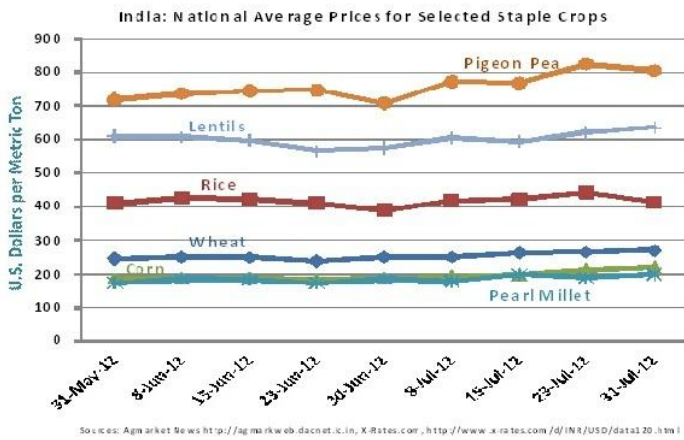


Image courtesy of USDA Foreign Agriculture Service

This chart shows price increases for staple foods in India, where most prices rose by 6 to 14 percent during July. *Click image to enlarge.*

India could also consider export bans on certain crops to further reign in prices, if the monsoon continues to perform poorly, but Indian rice exports are currently expected to be a full 1.8 million metric tons (87.3 million bushels) greater than in 2011, despite the reduced production forecasts.

The poor monsoon performance is expected to hit India's economy in other ways, as well, particularly because agriculture accounted for **12.3 percent** of India's \$US 1.1 trillion national GDP in 2009-10.

"We projected gross domestic product (GDP) growth of 7.3 percent on the assumption of a normal monsoon and improvement in industrial activity. Both these assumptions have not held," the Reserve Bank of India said on July 31. "The monsoon has been deficient and uneven, so far. Also, data on industrial production for April-May suggest that industrial activity remains weak. On the basis of the above considerations, the growth projection for the current year (2012-13) has been **revised downwards from 7.3 percent to 6.5 percent.**"

A Growing Problem?

Even with rain deficits and some crop forecast reductions this year, India's drought will be far from catastrophic for the agricultural sector. This is because India's record harvests in 2011 and expansive grain stockpiles will provide a more than adequate buffer for any drop in production this year.

“...the monsoon has changed in two significant ways during the past half-century: it has weakened and the distribution of rainfall within the monsoon season has become more extreme.”

–Report: Climate Change, the Monsoon, and Rice Yield in India

Relatively healthy rice harvests and reserves in other parts of Asia are also providing one of the few bright spots for the global grain outlook, as other grains — corn, wheat, and soybeans — are being hit by droughts in other parts of the world.

Even so, studies have found disturbing trends in India’s annual monsoons.

“Recent research indicates that the monsoon has changed in two significant ways during the past half-century: it has weakened and the distribution of rainfall within the monsoon season has become more extreme,” wrote the authors of a [2011 report](#), published in the international journal *Climatic Change*. “The all-India mean of total June to September rainfall during 1961–98 was about 5 percent below the mean for the previous 30-year period. This reduction is more than double the overall reduction since the late 1800s, thus suggesting that the weakening of the monsoon has accelerated.”

The report says that these changes “raise concerns about food security,” as yields for kharif crops are correlated to monsoon rainfall — in other words, when monsoon rainfall declines, crop yields decline. For example, the study found that rice yields drop 0.20 percent for every 1 percent decrease in total rainfall during the monsoon months, between June and September.

Moreover, increased nighttime temperatures during the growing season were found to have an even larger impact on yields than changes in monsoon rainfall.

Probably the most interesting finding of the study, however, was that cumulative kharif rice harvests between 1966 and 2002 would have been 5.67 percent larger — a difference of 75 million metric tons (3.6 billion bushels) — in the absence of climate change.

“Climate models predict that the monsoon will continue to weaken and that the global area affected by drought will likely increase in the future, with the frequency of heavy precipitation events very likely to increase over most areas,” the report concluded. “Future impacts of these changes on rice yield in India would thus likely be larger than the historical ones estimated here.”

Blue Water, Green Water, Virtual Water

While rainwater — termed ‘green water’ — is the primary feeder of India’s agricultural land, a decline in monsoon rainfall could force more farmers to turn to ‘blue water,’ which includes surface and groundwater resources.

India already has the largest blue water footprint within its own territory at 243 billion cubic meters (64 trillion gallons) per year, which is 24 percent of the world total, according to [astudy](#) published earlier this year in the Proceedings of the National Academy of Sciences. A water footprint is a measure how of much fresh water a country consumes or requires for agriculture, industry, and waste disposal. Irrigation makes up the majority of India’s blue water footprint — wheat, grown in the dry rabi season, takes a 33 percent share, while rice takes up 24 percent and sugarcane accounts for 16 percent.

India is the third-largest gross virtual water exporter, sending out the equivalent of 125 billion cubic meters of water each year in exports.

–The Water Footprint of Humanity

Proceedings of the National Academy of Sciences

According to the Philippine-based [International Rice Research Institute](#), rice farmers try to keep their fields constantly submerged in 5 to 10 centimeters (2 to 4 inches) of water, meaning that a 1-hectare (2.5-acre) rice field constantly requires 500 to 1,000 cubic meters (132,000 to 264,000 gallons) of water.

A lot of that water gets shipped out of the country in the form of manufactured goods and agricultural exports — ‘virtual water.’

Exports and imports create a global network of these ‘virtual water’ flows, where one country’s water is turned into products that are sent to another country and can have a big impact on the water resources of the producing countries. India is the third-largest gross virtual water exporter, sending out the equivalent of 125 billion cubic meters (33 trillion gallons) of water each year in exports, according to the study.

Blue water exports are especially concerning, because these water sources typically take longer to recharge.

Australia, China, India, Pakistan, Turkey, the United States, and Uzbekistan are the largest blue virtual water exporters, according to the study. Collectively, these six nations account for 49 percent of the global blue virtual water export. The study says, “All of these countries are partially under water stress, which raises the question whether the implicit or explicit choice to consume the limited national blue water resources for export products is sustainable and most efficient.”

**Note: Approximately 48.5 bushels of rice = 1 metric ton. 36.7 bushels of wheat = 1 metric ton. An average of bushel weights for corn, wheat, soybeans, sorghum, rye, barley, oats, and rice was used to calculate an approximate 47.8 bushels of food grains = 1 metric ton.*

“Weak Monsoon Raises Specter of Drought in India”, 29/08/2012, online at:
http://www.circleofblue.org/waternews/2012/world/weak-monsoon-raises-specter-of-drought-in-india/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=82062c817e-Weekly+Water+News+August+30+2012&utm_medium=email

BACK TO TOP

❖ Strategy urged to save country from water shortage

LAHORE: Floods would not be avoidable in Pakistan but there is a need to evolve a comprehensive strategy to save public and the country from water shortages by constructing mega water reservoirs, including Kalabagh dam.

Consensus among the policy makers and the executing authorities is crucial to construct Kalabagh dam otherwise situation would worsen in the coming years. It was discussed in Jang Economic Session on 'How to solve water storage issue' here on Tuesday.

The participants were Punjab Irrigation Department Project Management Unit Chief Habibullah Bodla, Metrological Department Director Sahibzad Khan, Indus Water Treaty former Commissioner Jamat Ali Shah, Punjab Water Council Director Rabia Sultan and Lahore Chamber of Commerce and Industry former President Pervaiz Hanif.

The event was hosted by Sikindar Hameed Lodhi and Intikhab Tariq. Habibullah Bodla said Pakistan had only 5.2 million acre feet water storage capacity in Terbala dam and 3.2 maf in Mangla dam. So due to limited storage capacity, water shortage problem is faced. He said if required rainfall would not occur this year then these dams would not be filled. He said Pakistan had water storage capacity of only 30 days while many countries of the world had 900 days water storage capacities. He said water shortage was faced from April to June 2012 while 50 per cent water requirement was fulfilled by underground water. He opined that only new dams could meet the required water demand and protect the country from floods.

Sahibzad Khan said monsoon started with delay this year while below than average rainfall was recorded in Punjab, Kashmir and Sindh due to which Terbela dam was 66 feet and Mangla dam 25 feet empty. He forecast water shortage in the coming winter season.

Jamat Ali Shah said China and the US made plans to handle floodwater. He said Pakistan had made only two dams under Indus Water Treaty while Kalabagh dam was politicised due to incompetence. He said only 20 per cent hydel generation was possible and consumers were getting Rs 12 per unit electricity which could be available at Rs 4 per unit. He said one flood destroyed five years development plan. He called for national level awareness for construction of dams.

Rabia Sultan said the country could have been saved from 2010 flood destructions if Kalabagh dam had been construction. She said Terbela and Mangla dams were 25 per cent silted. She said if Kalabagh dam would not be made then economic and social issues would aggravate.

Perviaz Hanif said people were well aware of water scarcity and knew that next wars would be fought on water issues. He said Kalabagh dam became controversial while three provincial assemblies had passed resolutions against it. He said both political and army governments failed to construct Kalabagh dam. So it would be wise to set aside debate on this issue and focus on water management issue by constructing new canals and lakes to save extra flood water, he suggested.

“Strategy urged to save country from water shortage”, 29/08/2012, online at: <http://www.thenews.com.pk/Todays-News-2-128889-Strategy-urged-to-save-country-from-water-shortage>

BACK TO TOP

❖ **Water wars: Wullar Barrage set to figure in Pak-India talks**

ISLAMABAD: Locked in a decades-long battle over water flows, Pakistan and India continue to play cat and mouse over the construction of dams and barrages.

India is trying to navigate its way out of a debate with Pakistan over the construction of Wullar Barrage, also known as the Tulbul Project, while Pakistan wants to take the issue up when foreign ministers of both nations meet in Islamabad next month, sources said.

“India is trying to evade the topic of Wullar Barrage which would divert water from River Jhelum so that its construction can begin without intensive deliberations with Pakistan.” The official added Pakistani authorities decided in a recent meeting held at the Foreign Office to raise strong objections during the upcoming bilateral talks.

The two sides have already held secretary-level talks in Islamabad on May 12-13, 2011 with follow-up deliberations held in New Delhi on March 27-28 this year. The secretaries reiterated their commitment to increase cooperation, but no major breakthrough was made over the construction of the barrage.

Some media reports quoted Indian officials as saying they prefer to seek international arbitration to resolve the nearly two-decade long dispute.

When asked to comment on India’s resistance to engage in bilateral talks with Pakistan, an official from the Ministry of Water and Power said “Pakistan will also prefer to go to an international court of arbitration if the two sides fail to reach an amicable settlement and India tries to go ahead with the project.”

Pakistan maintains the barrage is in violation of the Indus Water Treaty (IWT). “India has the Wullar Lake and does not need additional water storage,” said an official.

Under the treaty, Pakistan is entitled to water from the three Western rivers Indus, Jhelum and Chenab. Pakistan maintains the construction of Wullar Barrage will convert the natural lake into a

man-made storage with a capacity of 0.324 million acre feet (MAF) and adversely affect the flow of water into the country.

India, on the other hand, maintains certain amendments in the design and structure of the barrage can address Pakistan's reservations. In the earlier rounds of talks, India has said it has the right to build the barrage under the IWT and that the navigation project will only be used to transport water and not as a storage facility.

"Water wars: Wullar Barrage set to figure in Pak-India talks", 30/08/2012, online at:
<http://tribune.com.pk/story/428198/water-wars-wullar-barrage-set-to-figure-in-pak-india-talks/>

BACK TO TOP

❖ **Dam project cost soared 652%, not 500%**

MUMBAI: The Konkan Irrigation Development Corporation has said that the cost of the Kondhane dam project in Raigad district was increased from Rs 57.85 crore to Rs 435.47 crore last year, a 652% jump.

On April 26, TOI had reported how the KIDC had awarded the project to F A Enterprises for Rs 56.17 crore in July 2011, and a month later raised the cost to Rs 328 crore. The KIDC's reply, submitted to the Bombay high court, shows the cost escalation was, in fact, higher than earlier thought.

Four India Against Corruption activists had moved the HC last April against irregularities in the project.

Interestingly, the KIDC has admitted only "administrative approval" was granted to the contractor, subject to statutory clearances.

However, it is silent on how or why the contractor was allowed to commence work without any of these clearances.

The court is hearing a public interest litigation filed by four activists of India Against Corruption last April against irregularities in the project. The KIDC's affidavit-in-reply was filed by Ramachandra Shinde, superintending engineer of the Thane irrigation circle. In June, the state government terminated the contract awarded to F A Enterprises and proposed action against KIDC officers who had approved the project.

Shinde, in his reply to the court, said, "Administrative approval was conditional (i.e. it should be kept on shelf) and this condition has not been withdrawn by the government so far. Necessary statutory clearances are still under the process of approval. Action to rescind the contract of the Kondhane project has been initiated and work has been stopped with effect from April 11, 2012." He said technical sanction to the plans and estimate of the Kondhane project was for Rs.57.85 crore and it had been approved by the chief engineer (competent authority) on May 27, 2011.

"After administrative approval, local elected representative from Karjat taluka requested the state government to increase the storage of the Kondhane dam to meet future requirements. Accordingly, a proposal to increase the storage capacity from 20.19 Mcum to 105.44 Mcum was prepared. An 'in principle' approval was accorded to this proposal during the governing council meeting of the KIDC on August 12, 2011. Due to the increase in storage, the revised proposed cost of the project is about Rs.435.47 crore," Shinde said. The execution of the increased work was also cancelled by the executive engineer on May 21, 2012.

"Looking at the grave situation of irrigation projects in the Konkan region, such medium and minor dams are the need of the hour. Personal interests or ulterior motives like those of the petitioners should never come in the way of the people's needs at large. The practice of petitioners to block

development works deserves to be deprecated. In view of these circumstances, this PIL is devoid of any merit and substance and deserves to be dismissed," his reply said.

Shinde said some of the petitioners were affected because their private lands would have been acquired. "They have their own vested interests and are least bothered about development of the area in Karjat taluka, which has been asking for irrigation development since almost two decades," he observed.

The PIL had alleged large-scale corruption in construction of dams in Maharashtra. It said the Kondhane tender was issued for a minor dam and after it was accepted, the dam was converted into a medium sized one with a manifold increase in costs without fresh tenders being issued. It added that construction had started without permission from the ministry of environment and forests, the railways and the Archaeological Survey of India though over 261 hectares of forest land was going to be affected. The dam is close to the Mumbai-Pune railway line and the Kondhane caves, a protected monument, are within the catchment area. The KIDC has, however, denied these allegations.

"Dam project cost soared 652%, not 500%", 31/08/2012, online at: http://articles.timesofindia.indiatimes.com/2012-08-31/mumbai/33520638_1_dam-project-cost-escalation-kondhane

BACK TO TOP

❖ **Nepal: Riparian Rights issue; B'desh, Pakistan water scarcity due to India**

Water riparian rights are usually considered as Lower riparian and Upper riparian. While Bangladesh and Pakistan are demanding lower water riparian rights, Nepal, Bhutan and China are in favor of upper riparian rights. India is holding strongly upper riparian rights in case of Pakistan and Bangladesh and on the contrary of it; India is grabbing waters of Nepal, Bhutan and China as the lower riparian right.

There are three riparian theories in practices. They are: # Riparian rights; # Prior appropriation; # Administrative disposition.

According to the first one is recognition of equal rights to the use of water by all ordinary owners as long as there is not resulting interference by the rights of other riparian owners. Ordinary use refers to the use of water for household purposes and for domestic cattle. In other words it is simply water rights to have to come to him in its natural state. 'Water must continue flowing by the law of nature' (Race vs. Ward, 1855 4 e & b 702) has now been changed into proprietorship by registering its source points what is called the liberal economy and privatization. However this principle denies the benefits of modern technological uses of water resources to non-riparian land owners.

According to the prior appropriation theory the water in the natural course is the property of the public and cannot be owned. However, the practice is that the first user establishes the prior right and subsequent users can only appropriate what is left by the first user. India has been building dams close to the boundaries of Nepal to obtain the maximum advantage by increasing the lands under cultivation as much as possible. At the same time, for example, in case of Rapti and Kankai India dismantled the projects by means of bullying / conspiracy. On the other, India is not willing to pay water for irrigation and flood control after constructing high dams such as West Seti, Sapta Koshi and Budhigandaki. Instead it starts claiming as the user water rights for such dams constructed at the Nepali border without the consent of Nepal.

The other theory as passed by the International Law Association held in New York in 1958 that the best way to apportion water of inter country rivers is to treat the entire basin as an integrated whole and not different parts. The Helsinki rules 1966 says- "Each basin state is entitled within its territory,

to reasonable and equitable share in the beneficial use of the waters of an international drainage basin.”

Water storage in the country has assumed alarming proportions following reduced flow in the western rivers from the sources of Indian held Kashmir in case of Indus basin. So is done for the Bangladeshi in case of Brahmaputra basin. Nepal is highly influenced by the uncontrolled use of water by India ignoring the international norms and values. Nepal is lagging behind in the management of its water resources and is in very poor social conditions due to India. *India is not fair and friendly to Nepal in case of water management and proper and justifiable use of water on the basis of humanitarian ground as well.* It is, therefore, in aggravating tensions over sharing of the available water among Nepal, Bangladesh, Pakistan, Bhutan and China. India is currently constructing Chutak Dam with 59 meter height, Nimoo Bazgo with 57 meter height, and Dumkhar with 42 meter height in the west. While at the same time it is trying to construct a canal to connect its Assam states by the water route through Bangladesh and pumping water for irrigation. All the rivers entering India from Nepal are tapped at the borders and used in inundating Nepal.

What also needs to be remembered that building a reservoir not only provides augmented flow to the downstream area but also results in flood control for which the beneficiary of the lower riparian needs to recompensate Nepal. Columbia treaty recognizes that the power benefit due to building of the reservoir is entitled to share one-half of the additional power generated due the reservoir. In Nepal, for example the specific site of West Seti project (and similar others) would have generated 100 MW without the reservoir. Therefore, Nepal is entitled to get its share of 325 MW (not meagerly 75 MW).

In this backdrop, therefore, agreements related to West Seti needs to be revised accordingly. India gets its right as the Upper riparian in case of Pakistan in the Sind River Basin and ignores in case of Nepal, China and Bhutan. *What rights it seeks from Nepal as the upper riparian ignores to give same right to Bangladesh India as the Upper Riparian country. This is what is called the bullying boy right.*

Irrigation and Water Storage:

All major hydro projects contemplated along the Himalayan ranges in Nepal are of a storage type that have regulated water (i.e. monsoon waters that have been stored for release in the dry season) as a major product, at par or even more valuable than electricity. In the semi-arid but very fertile Ganga plains (semi-arid because it suffers from four months of floods and eight months of drought in the monsoon-dominated precipitation regime), electricity can be had from a variety of sources even though they might be more expensive than the cheaper hydro power; but crops develop mutual relationships. Nepal can also benefit from the melting water of the Himalayas, a perennial source of hydropower in Nepal.

Whereas Bangladesh and Pakistan are facing problems as the nations of lower riparian regions and at the same time Bhutan, Nepal and China suffering as the nations of the upper riparian region. Bangladesh and Nepal are primarily facing problems created due to the attitude of India, not due to any shortage of water. Contrary to that Pakistan is facing problems primarily due to shortage of water. For, India, merely Rajasthan and adjoining Pakistani areas do have desert areas and having low rainfall and high demand of water volumes.

On the one hand without building new dams for storing river supplies, we have no future for our agriculture based economy, especially with an ever growing population and on the other hand, without securing consensus among all countries of this region for building new dams, it will be a risk that may bring about conflicts and wars. By not trying to find alternatives and creating ways and means to develop water storage, there is a definite sign in the future there is no alternative but to fight with each other.

Some other points that have to be understood are that the global warming has depleted the flow of water mostly on glacial runoffs; for example like the Koshi river in Nepal, such rivers carry heavy sediments resulting in silting, which damages dams and barrages; there is heavy seepage and there occurs loss of water in the canals for irrigation; optimum crop rotations have not been done to save water; no serious steps are taken for winter Kharif crops; dwindling water flow has reduced the power generation and similar other activities have created more negative impacts than there had to be.

In Europe and elsewhere, water scarcity has promoted trans-boundary water co-operations, but here in South Asia, the regional nations are inciting a virtual war over this issue.

The SAARC transmission lines proposal along with the Asian Highways all tell the same story. The story is of submission to India which is detrimental to the vital national interests of other neighboring nations. India must make compromises in accordance with equity, fair-play and no harm to either party policy not in words only but in practice as well.

The success story of the neighboring countries, Bhutan and China, and on the other hand, is bound to draw myriad questions regarding proper water storage and hydro-power development in Nepal. Can the Nepali leaders in decision making positions since its independence, have any viable reasons to justify the country's failure in hydropower development and thus keeping the country poor? When a smaller Bhutan and big China have succeeded so well, why Nepal, which is in between these two nations, has not been able to do the same? If they, the leaders, were not corrupt and if they had the sense of nationalism, can they justify the reasons for the high costs and delays of hydropower projects in Nepal? Do they have any sense of understanding that as long as cheap power is available, there will always be buyers looking towards Nepal for fulfilling their hydropower needs? Is Nepal doomed to limit its electric generation only to meet domestic consumption and dispense the same to the Nepali consumers at tariffs 6 to 10 times higher than in China and Bhutan? And if the answers to these questions are "NEGATIVE", is it not high time that it be understood (a) that the national policies are wrong and it is necessary to bring drastic changes, (b) that strong action and punishment should be meted out to the nation's politicians, planners, bureaucrats and power pundits. After all did they not make all Nepalis poor just to make their families richer? Even if such people are dead aren't they supposed to be punished just as Cromwell was punished in the history of Great Britain?

"Nepal: Riparian Rights issue; B'desh, Pakistan water scarcity due to India", 02/09/2012, online at:
<http://www.telegraphnepal.com/national/2012-08-30/nepal:-riparian-rights-issue;-bdesh-pakistan-water-scarcity-due-to-india>

BACK TO TOP

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❖ Yemen's water woes

During Yemen's rainy season, which stretches from August to October, the *Silah*, the cobbled road that intersects the capital Sanaa's ancient Old City, often floods becoming, for a few brief hours, a fast-running river. Over the years, the road has been gradually deepened, with steps built up the side and bridges spanning its width so that the rest of the area does not overflow with water from the surrounding mountains.

At such times it is hard for Sanaanis, the residents of the capital, to countenance the idea that their city is rapidly running out of water. But this may happen sooner rather than later: Sanaa province's water aquifers are being exhausted by rapid population growth, demand for the narcotic *qat* leaf, and the growing threat of climate change.

Although the country is probably best known abroad for the uprising that unseated former President Ali Abdullah Saleh in 2011, and as a haven for al Qaeda, it could soon hold the distinction of being one of the hardest places in the world to get a glass of water. In 2011, it looked like social order in Sanaa was on the verge of collapsing. But regardless of politics, it could soon become a ghost town -- a tourist attraction centered around the Old City as the real estate developments that sprouted up around the city's borders before 2011 are left to rot.

In a 2010 report commissioned by the Yemeni government, analysts at U.S. consultancy McKinsey forecast that if water use in the Sanaa basin was not controlled, the area could completely run out of water by about 2020. "Sanaa will almost certainly face a severe water crisis in the coming years," they wrote, "and might even run out of water in the coming decade." If this were allowed to happen, the analysts reckoned, the implications would be dire: "Scarcity of water resources can have staggering consequences on health, property, population migration and ultimately the very fabric of society."

Sanaanis already know what it feels like to run out of water. In 2011, protesters took to the streets across the country, to often brutal and murderous response from troops loyal to Saleh, and fighting broke out in Sanaa between the Republican Guard, run by Saleh's son, Ahmed Ali, and tribal

militiamen associated with his rival, Hamid al-Ahmar. The economy came to a grinding halt. Just as importantly, tribesmen in the southern Marib province blew up a key pipeline connecting the area with the port of Ras Issa in the south, the main source of domestic fuel supplies.

Most potable water in Yemen is produced from a series of deep underground aquifers using electric and diesel-powered pumps. Some of these pumps are run by the government, but many more are run by private companies, most of them unlicensed and unregulated. Because of this, it is nigh on impossible to control the volume of water produced. By some (conservative) estimates, about 250 million cubic meters of water are produced from the Sanaa basin every year, 80 percent of which is non-renewable. In recent years, the businessmen who produce the water have had to drill ever-deeper wells and use increasingly powerful pumps to get the region's dwindling water reserves out of the ground.

When the oil pipeline was cut off, the price for black-market diesel shot up, and with it the price of water. Electricity was cut off across the country. Government water supply -- which is erratic at best, and only covers about 60 percent of urban homes and (at most) 40 percent of rural households -- dried up completely. The price of water on the black market can run up to 5,000 Yemeni Riyals (YR) a truck but peaked at 12,000 YR in 2011.

Businesses were forced to shut down across the country. Factories couldn't get fuel so their owners laid off workers in the hundreds. Constant blackouts made doing business nearly impossible. With growing numbers of people out of work and prices for food and water rapidly increasing, it became harder and harder for average Yemenis to make ends meet, particularly the 10 million plus people living on \$2 a day or less.

Abdullah, a lifelong resident of Sanaa's Old City, finds thinking back to 2011 painful. It was, he says, "the nightmare of my life." During the darkest days of the crisis, he and some of his wealthier neighbors paid for a truck to come and deliver water to the Al-Alami quarter of the Old City where he lives. At first, a handful of people turned up. But as word spread, the queue grew into the hundreds, pushing and shoving to get to the truck. Fights broke out between neighbors who previously had never exchanged a cross word in their lives. And then the truck ran out of water.

"It was the worst day of my life," he says. "After the crisis, my mother told me, Abdullah, we are fine now. But if we don't have fuel, and if we don't have electricity, then we don't have water. I think, where will we be in five, in 10 years' time?"

Sanaanis have long been aware that something is not quite right with their water supply. Every quarter of the Old City has its own walled garden, owned by the state and rented to local residents at a nominal fee. Local families tend to the gardens on behalf of their neighbors, distributing the fruit and vegetables they produce on the basis of need. In the past, each garden had its own well, attached to the local mosque, which also serviced the local community, while most crops were largely rain-fed. Until a new sewage system was built in the 1980s, wastewater from the mosques and houses was also used to irrigate the crops.

When he was a child, Abdullah's mother used to take him to the Al-Alami garden in the afternoons. Today, he surveys an expanse of cracked earth walled off from the bustle of outside world. "We used to have a lot of fruit and vegetables, but not any more," he says. "They planted cactuses, but they didn't take. Now the family that looks after the garden has started building houses. This was all green; there was no earth like this. I loved to come here with my mother in the afternoons. Who would come here now?"

He points to the Al-Alami well, one of the oldest and biggest in the city. It dried up when he was too young understand its importance. The water, maybe 100 feet under ground, had been used up completely. Now, the garden is irrigated using water from new diesel pumps which draw water from wells drilled hundreds of yards underground. Most of the water is now fed to a set of taps built along the side of the local mosque, from which locals who can't afford trucked supplies collect water most mornings.

Bernd Schoenewald, a water expert at KfW, a German development bank, who works with Yemeni technocrats on water issues, says that there are two scenarios for Sanaa over the coming decade.

"The depletion is obvious," he says. "Water pumps have to go deeper and deeper, wells are getting less productive and the Yemeni government is well aware of it. Different studies have tried to come up with short and medium term solutions like reducing irrigation. However, in the long run, 10 to 15

years from now, there are only two options: getting additional water from outside into Sanaa basin, either transferring water from other basins or pumping desalinated water from the Red Sea coast to Sanaa; or moving people from Sanaa to other basins which would result effectively in moving the capital city."

The government needs billions of dollars to make the first option work -- in 2010, the McKinsey analysts reckoned that simply maintaining basic water supplies in Sanaa would cost \$9 to 10 billion over 20 years. However, the second option -- mass migration -- may well occur of its own accord, Schoenewald says. "It would be a natural consequence of inactivity."

Sanaanis do not have a monopoly on suffering. Hodeidah province is one of the poorest parts of Yemen, and according to the United Nations Children's Fund (UNICEF) acute child malnutrition there is as bad as in Somalia and Afghanistan. Once one of the greenest parts of the country, it is drying up after a decade of poor rainfall and rising water prices.

In late February, Yahyan arrived early at a school building in the Mansouria district of Hodeidah to collect a \$50 payment from the British charity Oxfam. It wasn't enough to keep his extended family of 72 going, he said, but was a help. About six miles from the school, Yahyan's home is surrounded by emaciated earth which he says was once fertile land. A neighboring farm, which can afford the diesel for a water pump, stands out on the horizon, an oasis of green in the middle of what resembles an arid desert. Yahyan, who is about 90 years old, says that when Ibrahim al-Hamdi was president he grew watermelons here. "It rained; it was the best time of my life. I was a big farmer," he says. Al-Hamdi was assassinated in 1977.

In the cushioned *mafraj*, or meeting-room, of his spacious home in the Hadda district of Sanaa, Mohamed al-Iryani pauses for thought. He is trying to explain how it came to this. Al-Iryani, Yemen's ambassador to Germany in 2011, was sacked after publicly criticizing the Saleh regime's brutal crackdown on protesters. He is now out of work and considering a return to the development sector. A water resource engineer, he was part of the team that drafted Yemen's first water laws in the 1990s and was appointed the country's first water minister in 2002.

Al-Iryani partly blames the introduction of modern drilling techniques and diesel pumps for the growing scarcity of water in Yemen (Schoenenwald describes it as a "curse for Yemeni water

resources") which arrived shortly after oil was discovered in the country. "The main reason is the uncontrolled use of technology, drilling wells, installing water pumps and not having any control over the quantity being pumped out," he explains. "Yemeni farmers are, by their culture, rain fed farmers, and in the best case they had stream water or streams, and they used to cherish water very highly. The new technology made people think there was a sea under the ground. Pump as much as you can and there will be no limit to the water."

The situation is exacerbated by a lack of regulation and huge government fuel subsidies, which make producing water using pumps relatively cheap, Schoenewald says. If the subsidies weren't in place, people would not be able to turn as much of a profit from irrigating crops, which accounts for 90 percent of all water use in Yemen. In the long term, he says, farming needs to become more efficient.

Even then, the most profitable cash crop for Yemeni farmers would be *qat*, a mildly narcotic leaf chewed at social meetings in mafrajes like al-Iryani's, as it has been for decades. Qat brings with it many other social issues ("traditionally, only wealthier Yemenis chew Qat at weekends, today about half of the population is chewing daily" Schoenewald says), but it also accounts for about 40 to 50 percent of the water used in agriculture, a huge amount for something with no nutritional or social benefits.

"The willingness of qat farmers to pay for water is the highest among the farmers because of the return, which is very high," al-Iryani says, citing revenue of about \$8,000 per hectare for qat farmers, higher than any other crop. Qat only grows in mountainous areas, so is mainly farmed in the country's northern highlands, including Sanaa province.

Efforts have been made to curb the production of qat and to improve the efficiency of farming in Yemen, and in 2011, after a conference on water, the Saleh government signed the "Sanaa declaration," pledging to use "efficiently every single drop of water" resource development and management. But the damage has already been done. "Using water more efficiently would help in the short to medium term but the high population growth means that the demand will inevitably rise," Schoenewald says. Sooner or later Sanaa will run out of water.

Al-Iryani agrees, but points out that neighboring Saudi Arabia, with a more or less identical population size and miniscule water resources, has been able to meet its people's needs. But Saudi Arabia is far richer in another resource -- oil -- and can afford to desalinate seawater. It has also been

able to build an economy that does not depend on water-intensive activities like farming (in fact, Riyadh is overseeing a gradual phasing out of domestic wheat production). The real issue, al-Iryani says, is one of development.

"[The problem] is the failure of our social and economic development to really diversify and to bring people into new economic activities that are less water dependent," he says. Yet it is clear that Saleh's successor, Abed Rabbo Mansour Hadi, and the coalition government headed by Prime Minister Mohamed Basindwah are currently in no position to focus on development issues as they deal with a once-again deteriorating security situation. That will need to change sooner rather than later.

Peter Salisbury is an independent journalist and analyst, and a consultant researcher at Chatham House's Yemen Forum.

** Correction: The article originally inaccurately stated the price of water on the black market peaked at 2,000 YR a truck in June 2011, a fivefold increase from the 800 YR being charged during June the year before.*

"Yemen's water woes", 30/08/2012, online at: http://mideast.foreignpolicy.com/posts/2012/08/30/yemens_water_woes

BACK TO TOP

❖ **Malawi, Tanzania Fail to Reach Compromise on Lake Border in Latest Round of Talks**

Malawi, MZUZU — Malawi and Tanzania failed to reach an agreement on ownership of the waters of Lake Malawi (also known as Lake Nyasa) after five days of negotiations in the northern Malawian town of Mzuzu.

“After our discussions, our differences still remain unresolved and we have agreed to discuss [the issue] further from September 10 to 14 in Tanzania to resolve the conflict,” Tanzanian Foreign Minister Bernard Kamilia Membe told a press conference in the Malawian capital, Lilongwe, on August 25.

He said the two governments had left the matter in the hands of a bilateral technical committee that will handle preparations for next month’s meeting.

According to the Malawian delegation, officials from both countries have agreed to refrain from making provocative statements that could increase tension between them.

Malawi also agreed not to carry out oil exploration activities in the disputed area of the lake until the border issue is resolved.

The attorneys general of both countries will evaluate the 1890 treaty on which Malawi bases its claim to ownership of the entire lake.

Malawian Minister of Foreign Affairs Ephraim Mganga Chiume said Malawi wants to exhaust all diplomatic channels with its northern neighbor before referring the issue to the International Court of Justice at The Hague.

Chiume said the time had come for the border issue to be put to rest, as it has dragged on for 50 years now.

The meeting in Mzuzu followed an earlier round of talks between representatives of the two countries in Tanzania on July 27, which also ended without an agreement.

Malawi claims the entire lake as part of its territory based on an 1890 treaty between former colonial powers Great Britain and Germany. Malawi says this was later reaffirmed by the then-Organization of African Unity (now the African Union) during the period of colonial independence.

Tanzania claims a portion of the lake based on international common law.

Over 10 million people use Lake Malawi for various purposes.

The border dispute has increased tension between the two countries, making residents in both nations reluctant to use the lake.

Residents living in border areas in Malawi have been phoning radio stations to find out the latest on the border issue, in case they need to flee to safety.

Commentators have urged both countries to engage the Southern Africa Development Community and the African Union to help resolve the conflict, rather than resorting to military action

“Malawi, Tanzania Fail to Reach Compromise on Lake Border in Latest Round of Talks”, 27/08/2012, online at: http://www.ooskanews.com/daily-water-briefing/malawi-tanzania-fail-reach-compromise-lake-border-latest-round-talks_24041

BACK TO TOP

❖ Water crisis: Cause for concern

The water crisis that has hit Zimbabwe's major cities, particularly Bulawayo and Harare should be serious cause for concern.

The nonchalant attitude by central and local government in finding a permanent solution is, for want of a better term, disastrous.

The 2008 cholera outbreak that had killed an estimated 4 300 people by January 2010 should be taken as a sign of grim things to come if water and sanitation problems are not addressed.

Currently, the country is battling typhoid as a result of the shortage of potable water in cities.

The water crisis mainly affects the poor who are excluded from the limited and more reliable water infrastructure that is set up mainly for the rich.

The poor are then forced to extract water from unprotected sources and boreholes that draw tainted water from underground.

The World Health Organisation Epidemiological Report of March 5-11 2012 notes that there is a high rise of preventable water diseases such as typhoid in Zimbabwe. The most affected of course are the poor who constitute the majority of urban dwellers.

The water crisis in the country is there for all to see as long queues can be seen at the few boreholes sunk by Unicef in urban areas.

Women bear the greater burden triggered by the water crisis.

Women and girls have to travel long distances and endure long hours in queues to get water. It is fact that most urban dwellers do not stay within a radius of one kilometre to the nearest alternative water source such as a borehole.

The United Nations (UN) estimates that 4 400 children under the age of five die daily due to unclean water and unsanitary conditions. In fact, the UN claims that five times as many children die around the world of diarrhoea as of HIV and Aids.

Impoverished city dwellers in high density areas and slums draw water from water sources — including rivers — where sewage is dumped.

This is not helped by the fact that city councils, due to shortage of funds, are failing to properly treat

water for human consumption. At times the water that runs from taps would be replete with sediment and other impurities.

Cities go for days and other suburbs have gone for years with no single drop coming out of their taps. As if to show the lack of seriousness on the part of local authorities, residents in such suburbs continue to receive water bills.

We have had pronouncements by mayors and other city fathers, that they have no clue as to permanently deal with the water crisis. This is not only frustrating for residents, and if taken in the context of waterborne disease outbreak it spells doom for them.

Corruption and politics also compound the problem. Tenders for fixing water problems are awarded to cronies who fail to perform.

Residents end up with untreated or no clean water as a result. Local authorities are more concerned with their political survival than residents' plight. Some people in local authorities are kept in there not for their competence but for political expediency.

Creative ways of ensuring the availability of potable water, such as reducing waste or investing in infrastructure to harvest rainwater, are needed.

The current signs we see due to the water crisis are symptomatic of worse things to come if the problem is not addressed.

“Water crisis: Cause for concern”, 01/09/2012, online at: <http://www.newsday.co.zw/article/2012-09-01-water-crisis-cause-for-concern/>

BACK TO TOP

❖ Uruguay River Summit Ends With Letter of Intent on Conservation

Brazil, ITA — Following a meeting in Ita, Brazil, representatives from regional trade bloc MERCOSUR, government officials and other stakeholders on August 24 signed a letter of intent on conservation work on the Uruguay River.

The document highlights a number of issues affecting the river basin -- algae bloom, fish death, deforestation, unsustainable growth, dams and waterworks, lack of local sanitation, effluent discharge, poor waste management, dredging works and increasing traffic on the water -- and calls for comprehensive monitoring of the river, which is shared by Argentina, Brazil and Uruguay.

“It is necessary to act before deterioration become irreversible, with the goal of guaranteeing the existence of clean waterways, coasts and protected basins,” the document says, adding that small-scale prevention efforts at the community level would be more important than large-sale responses to degradation of the river basin.

The river “is a shared concerned of the people of the three countries, [where] some of the observable symptoms of the progressive deterioration of its waters, such as the change of coloration and the growing presence of algae, are plain to see,” the document says.

The letter of intent advocates developing an international preservation plan, which should include rational use of water and construction of sewage treatment plants in all cities on the river.

Locals in the Ita region described for meeting participants what they endured 14 years ago when they were forced to relocate because the area where they lived was flooded to make way for construction of the Ita hydropower dam.

The letter of intent highlights the need for water supply for drinking, irrigation, livestock and energy generation for communities along the river.

The regional meeting on the river also called for a Governments’ Summit, to be held in 2013 in the Brazilian city of Porto Alegre, to ratify the letter, analyze proposals and create a permanent entity representing all three riparian countries.

The Uruguay River is almost 1,800 kilometers long, and is a significant source of water for the La Plata watershed.

“Uruguay River Summit Ends With Letter of Intent on Conservation”, 28/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/uruguay-river-summit-ends-letter-intent-conservation_24060

BACK TO TOP

❖ Prosecutors Find Drinking Water Violations in Kazakh City

ASTANA, Kazakhstan — The Prosecutor's Office in Kazakhstan's Kyzylorda province has discovered violations of drinking water use regulations in the city of Kyzylorda.

City residents are facing drinking water shortages, while at the same time the owners of car washes use potable water for their operations.

The use of potable water for non-drinking purposes is prohibited under Kazakhstan's Water Code, but a number of businesses are ignoring these requirements.

These enterprises were told to install water recycling equipment within a year or be shut down.

Local water utility Su Zhuyesi had given the car washes permission to use drinking water for their operations, but said they must recycle water, or reuse treated water after washing cars.

However, the water company did not monitor the situation.

There are 40 car washes, which operate 24 hours a day, in Kyzylorda. None of them have water recycling equipment and the owners are unlikely to install such equipment in the near future, due to the expense.

They were advised to buy water recycling equipment worth about \$5,900 USD produced by an Almaty-based company. The recycling equipment has a capacity of 2,000 liters per hour and saves up to 75 percent of clean tap water.

Other equipment that would enable the businesses to reuse water cost another \$2,700-\$4,000 USD.

The Prosecutors' Office has fined Su Zhuyesi and demanded that the situation be remedied as soon as possible.

Utility chief Muratbek Userbayev agreed with the Prosecutors' Office. Su Zhuyesi supplies 52,000 cubic meters of water to the city every day, of which 20,000 cubic meters go to schools, hospitals and similar facilities.

Households use 32,000 cubic meters of water, but this is not sufficient to meet demand, and residents of multi-story apartment buildings face water shortages, particularly those who live on the upper stories.

“Prosecutors Find Drinking Water Violations in Kazakh City”, 29/08/2012,online at: http://www.ooskanews.com/daily-water-briefing/prosecutors-find-drinking-water-violations-kazakh-city_24084

BACK TO TOP

❖ Denmark Looks to Cash in on Chinese Water Technology Investment

BEIJING, China — The Danish government is looking to benefit from China's plan to invest some \$631 billion USD in water technology and expertise over the next 10 years.

The Ministry of Foreign Affairs of Denmark announced last week that the Trade Council in China is organizing a series of events this fall at which Denmark plans to show and share its competencies with China.

China needs solutions in the fields of groundwater management, water savings, water leakage and water treatment, and the Danish government hopes to leverage its capacity in this regard open up the Chinese water market up for Danish companies.

China is experiencing water shortages of an average of 30-40 billion cubic meters per year. The country has 20 percent of the world's population but only about 7 percent of its water resources.

Additionally, only half of China's wastewater is treated, thereby reducing water quality and the supply of potable drinking water.

China has raised the alarm many times in the last few years over its water shortage problems, most recently in February, when Chinese officials warned that more than two-thirds of the country's cities have a water deficiency and the situation is worsening every day.

"Worsening water shortages and water pollution pose a growing threat to economic and social development," Hu Siyi, vice-minister of water resources, told a press conference on February 15.

"If we don't take strong and firm measures, it will be hard to reverse the severe shortages and daily exacerbation of the water situation," he said.

To try to solve these problems China and the European Union formed the China-Europe Water Platform last spring; the initiative was led by China and Denmark.

"Denmark Looks to Cash in on Chinese Water Technology Investment", 28/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/denmark-looks-cash-chinese-water-technology-investment_24057

BACK TO TOP

❖ **UN body urges G20 action on food prices, waste**

Aug 27 (Reuters) - The world's top farm producers in the Group of 20 countries must agree coordinated action to ease worries about food prices, the head of the United Nations food agency said on Monday, as he and other experts bemoaned a huge global waste of food and water.

The third price surge in four years has come after drought in the United states and poor crops from Russia and the Black Sea bread basket region.

Senior figures from the G20 will discuss the food price rises this week, but any decisions on action are unlikely before a mid-September report on grain supply, officials have said.

U.N. Food and Agriculture Organisation Director-General Jose Graziano Da Silva said he would not characterise the current food price rise as a crisis, but it could reach that level next year if harvests in the southern hemisphere were disappointing.

"We need coordinated action and I believe that the G20 is responsible enough for this action," da Silva told a news conference during a conference on water in the Swedish capital.

The annual World Water Week conference looks at how resources are used and the link between water and food security.

Speaking to Reuters, da Silva said any coordination should involve avoiding unilateral export bans and encouraging substitution of foods, for instance the eating of beans in Latin American and of casava in Africa.

He noted that between 85 and 95 percent of the crops most affected by the price rises, wheat and corn, came from the G20.

He said that even if wheat prices rose 10 to 20 percent that did not mean bread prices would rise by the same amount.

Da Silva noted that the food price rally was not as serious as in 2007/08, when there were violent protests in countries including Egypt, Cameroon and Haiti.

"There is no crisis," he told Reuters. "This kind of panic buying is what we need to avoid at the moment."

Da Silva and other experts at the conference said that there was also a massive waste of food in the world, an issue that needed to be resolved in order better to harness resources.

"Up to half of the food we produce never gets eaten," said Torgny Holmgren, executive director of the Stockholm International Water Institute.

A quarter of the water used worldwide was used to produce more than one billion tonnes of food that nobody eats, he said.

Da Silva told the conference that one third of all food production was lost and that this was due to poor storage in developing countries, or being thrown away in rich countries.

He also said water security was a vital factor for food security and that food needed to be produced in a way that conserved water, used it more sustainably and intelligently, and helped agriculture adapt to climate change.

"We need to produce more with less," he added.

"UN body urges G20 action on food prices, waste", 27/08/2012, online at: http://in.reuters.com/article/2012/08/27/un-food-idINL5E8JRFMW20120827?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6a531ffe9b-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

❖ Water Innovation Starts with the Farmer: Stockholm World Water Week

Editor's Note: This week (August 26-31) is [Stockholm World Water Week](#). The 2012 Stockholm Water Prize is being awarded to the [International Water Management Institute](#) (IWMI) for its work to improve agriculture water management, enhance food security, protect environmental health, and alleviate poverty in developing countries. The IWMI [just released a study](#) estimating that small-scale water management innovations could boost crop yields and household revenue by tens of billions of dollars. Colin Chartres is the Director General of IWMI.

By Colin Chartres

At the forefront of an important agricultural revolution in the developing world is not a leading scientist or a tireless advocate. Instead, the leader is a farmer.

His name is Purushottambhai Patel, from the state of Gujarat in Western India. He is a smallholder farmer with eight cows, three hectares of tobacco, rice, potatoes and sapota, and limited access to water.

Rather than tapping a large-scale water project for his farm, Patel uses the [dung from his cows](#) to generate biogas, which is then fed to a pump that runs partly on diesel. This novel arrangement saves him \$400 a year in fuel costs, and the improved water supply enabled him to double his crop production. He also sells water to adjacent farms, further boosting local food production.

The pace of innovation in water management on small farms across Africa and Asia is remarkable. Using water more effectively, together with improved market access, can transform marginal subsistence agriculture into a thriving business opportunity. At the same time it can have a major impact on local food security and contribute to lasting poverty alleviation.

But, just as remarkably, much of this innovation is farmer driven. It is not institutional donors or governments who are leading the way, but smallholders themselves.

In Nepal, I have seen how tapping spring waters has not only brought piped water to the houses of poor families, but the predominantly women householders (the men were working overseas) are able to use some of the water for a thriving vegetable production system. The profits from selling the vegetables helped the women school their children and buy essential household items.

In Ethiopia, I have seen vital traditional irrigation systems and rainwater harvesting practices that have similarly helped transform households and small communities.

These innovations can increase yields up to 300 percent in some cases, and add billions to household revenues across sub-Saharan Africa and South Asia. In Ghana, where small private irrigation schemes already employ 45 times more individuals and cover 25 times more land than public irrigation schemes, researchers noted that this scale of irrigation adds between USD 175 and USD 840 to annual household income.

Millions of smallholder farmers struggle to grow food with little water. Often this is not because water is scarce, but because they lack the means to harness what is available. Without access to water smallholders are limited to rainy season crop production, which makes it hard for them to earn a living. But smallholder farming can and should be an engine for economic growth, poverty reduction and food security. Better water management can help make this happen at an unrealised scale.

Many of the technologies for smallholder water management are already with us. Cheap pumps and new ways of powering them are transforming farming and boosting incomes all over Africa and Asia. Simple tools for drilling wells and capturing rainwater have enabled many farmers to produce more crops in the dry season, hugely boosting their incomes.

There are risks, however, to unchecked expansion of smallholder water management. The poorest farmers, especially women, still struggle to find the resources needed to access new technologies and that may lead to greater inequities. And a free-for-all over water may raise serious issues of environmental sustainability in some areas.

New institutional arrangements will be needed if these issues are to be overcome. Innovative business models, such as pump-on-a-bike hire schemes, where cycling entrepreneurs tour rural areas renting out pumps strapped to their bicycles, can also help address problems of access.

The time has come to recognize solutions beyond the large one-size-fits-all approach, which often leave out smallholders unable to plug into these formal systems. Innovation on the farm can be both small and successful. Institutional donors, governments, and the private sector have tremendous opportunities to use their investments to further unlock the potential of the smallholder approach. We should follow the examples of Patel, the farmer in India, to turn the tide of global poverty and hunger at last.

“Water Innovation Starts with the Farmer: Stockholm World Water Week”, 28/08/2012, online at:

<http://newswatch.nationalgeographic.com/2012/08/28/water-innovation-starts-with-the-farmer-stockholm-world-water-week/>

BACK TO TOP

❖ Stockholm Water Week Focuses On Waste, Water Efficiencies

World Water Week opened today in Stockholm with industry executives and scientists from at least 100 nations discussing how to reduce **food waste** and use water more efficiently in agriculture and at home.

The Stockholm Industry Water Award will be given tomorrow to **PepsiCo Inc. (PEP)**, the world's largest snack-food maker, for reducing water consumption in production and increasing water efficiency, saving almost 16 billion liters of water last year from a 2006 baseline.

“The numbers show that agriculture is a thirsty activity,” said Jose Graziano da Silva, director-general of the **United Nations' Food and Agriculture Organization**, or FAO. “But that also means that agriculture holds the key to sustainable water use.”

King Carl XVI Gustav of Sweden will award the Stockholm Water Prize to the International Water Management Institute for its agricultural water management work, said the event's organizer, Stockholm International Water Institute.

The annual SIWI event started in 1991. The conference earlier discussed how to improve access to water in water-scarce areas and boost supplies in an urbanizing world. This year's agenda addresses how to curb so much of the world's water being used to grow food that's thrown away.

“Reducing the waste of food is the smartest and most direct route to relieve pressure on water and land resources,” said Torgny Holmgren, SIWI's executive director. “It's an opportunity we cannot afford to overlook.”

“Stockholm Water Week Focuses On Waste, Water Efficiencies”, 27/08/2012, online at:

http://www.bloomberg.com/news/2012-08-27/stockholm-water-week-focuses-on-waste-water-efficiencies.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6a531ffe9b-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

❖ Water Research Thrives as New Report Highlights Spiralling Growth Year on Year

STOCKHOLM, August 27, 2012 /PRNewswire via COMTEX/ -- New analysis on water research highlights the role interdisciplinary and international collaboration plays in the production of high impact research

Research into water is growing faster than the average 4% annual growth rate for all research disciplines, claims a new report presented by Elsevier and Stockholm International Water Institute (SIWI) during the 2012 World Water Week in Stockholm. The report, "The Water and Food Nexus: Trends and Development of the Research Landscape" analysed the major trends in water and food-related article output at international, national and institutional levels. Elsevier and SIWI worked closely together on creating the report, which is based on the analysis of Scopus citation data by Elsevier's SciVal Analytics team.

The growing discrepancy between supply and demand for water is becoming more challenging each year. Developments in water research have the potential to help solve this issue. The report examined the dynamics of global water research between 2007 and 2011, focusing on two strands of research; water resources research, referring to natural and social science studies on water use, and food and water research focusing on the study of water consumption and recycling to produce food. The latter strand is an important theme in this year's World Water Week thematic focus: Water and Food Security.

Key findings from the report include:

Exploding research landscape

There has been a dramatic growth of water research, with both strands of research growing above the 4% average for all research disciplines. Water resources research is growing at a rate of 9.2% per year, while research into food and water is growing by 4.7% each year. Research is also becoming more collaborative and interdisciplinary, with a dramatic rise in publications from the fields of computer science and mathematics in water resource research; while research from fields within the social sciences have become the fastest growing fields in the food and water research strand.

United States leads research output, but for how long?

Research output is the highest in the United States in both water resources and food and water research, but growth between 2007 and 2011 is low. On the other hand, China is experiencing ongoing growth in water research output and, if its trajectory continues, it could be the leading producer of water research within the next few years. Other countries experiencing high growth rates in both water resources and food and water research include Malaysia and Iran.

Collaboration holds the key for high impact research

More than half of all articles published on water research are based on international collaboration. Interestingly, the most impactful research, for this study defined as average citations per paper, did not

come from the countries that produced the most research, nor from those with the highest growth rate. Instead, the most impactful papers were found to come from the Netherlands, Switzerland, Denmark and Belgium for water resource research and Sweden, Switzerland, Great Britain, the Netherlands and Denmark for food and water research. In addition, a strong correlation was found between the level of international and interdisciplinary collaboration and the impact, with greater collaboration leading to higher impact research.

"The aim of this report is to provide a transparent view of the water research landscape and the key players within the field," said Dr. Christiane Barranguet, Executive Publisher of Elsevier Aquatic and Green Sciences. "We found that the research landscape is becoming more dynamic, complex and, in some places, fragmented. We also found that collaboration is a key factor in producing high impact research. As such there is a greater need for collaboration - across borders and even between academia and industry - in order to grow and enhance the field."

Commenting on key trends identified, Per Bertilsson, Acting Executive Director at Stockholm International Water Institute said, "The report clearly shows that water research is growing in new places and becoming increasingly interdisciplinary. The entire water community now has a great opportunity to better leverage the knowledge creation on water research that is emanating from new places and new partnerships."

About the Stockholm International Water Institute

The Stockholm International Water Institute (SIWI) is a policy institute that generates knowledge and informs decision-making towards water wise policy and sustainable development. SIWI performs research, builds institutional capacity and provides advisory services in five thematic areas: water governance, transboundary water management, water and climate change, the water-energy-food nexus, and water economics. SIWI organises the World Water Week in Stockholm - the leading annual global meeting place on water and development issues - and hosts the Stockholm Water Prize, the Stockholm Junior Water Prize and the Stockholm Industry Water Award.

“Water Research Thrives as New Report Highlights Spiralling Growth Year on Year”, 27/08/2012, online at:
http://www.stumbleupon.com/su/AOAydr/www.marketwatch.com/story/water-research-thrives-as-new-report-highlights-spiralling-growth-year-on-year-2012-08-27?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6a531ffe9b-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

❖ **Food shortages could force world into vegetarianism, warn scientists**

Water scarcity's effect on food production means radical steps will be needed to feed population expected to reach 9bn by 2050

Leading water scientists have issued one of the sternest warnings yet about global food supplies, saying that the world's population may have to switch almost completely to a vegetarian diet over the next 40 years to avoid catastrophic shortages.

Humans derive about 20% of their protein from animal-based products now, but this may need to drop to just 5% to feed the extra 2 billion people expected to be alive by 2050, according to research by some of the world's leading water scientists.

"There will not be enough water available on current croplands to produce food for the expected 9 billion population in 2050 if we follow current trends and changes towards diets common in western nations," the report by Malik Falkenmark and colleagues at the Stockholm International Water Institute (SIWI) said.

"There will be just enough water if the proportion of animal-based foods is limited to 5% of total calories and considerable regional water deficits can be met by a ... reliable system of food trade."

Dire warnings of water scarcity limiting food production come as Oxfam and the UN prepare for a possible second global food crisis in five years. Prices for staples such as corn and wheat have risen nearly 50% on international markets since June, triggered by severe droughts in the US and Russia, and weak monsoon rains in Asia. More than 18 million people are already facing serious food shortages across the Sahel.

Oxfam has forecast that the price spike will have a devastating impact in developing countries that rely heavily on food imports, including parts of Latin America, North Africa and the Middle East. Food shortages in 2008 led to civil unrest in 28 countries.

Adopting a vegetarian diet is one option to increase the amount of water available to grow more food in an increasingly climate-erratic world, the scientists said. Animal protein-rich food consumes five

to 10 times more water than a vegetarian diet. One third of the world's arable land is used to grow crops to feed animals. Other options to feed people include eliminating waste and increasing trade between countries in food surplus and those in deficit.

"Nine hundred million people already go hungry and 2 billion people are malnourished in spite of the fact that per capita food production continues to increase," they said. "With 70% of all available water being in agriculture, growing more food to feed an additional 2 billion people by 2050 will place greater pressure on available water and land."

The report is being released at the start of the annual world water conference in Stockholm, Sweden, where 2,500 politicians, UN bodies, non-governmental groups and researchers from 120 countries meet to address global water supply problems.

Competition for water between food production and other uses will intensify pressure on essential resources, the scientists said. "The UN predicts that we must increase food production by 70% by mid-century. This will place additional pressure on our already stressed water resources, at a time when we also need to allocate more water to satisfy global energy demand – which is expected to rise 60% over the coming 30 years – and to generate electricity for the 1.3 billion people currently without it," said the report.

Overeating, undernourishment and waste are all on the rise and increased food production may face future constraints from water scarcity.

"We will need a new recipe to feed the world in the future," said the report's editor, Anders Jägerskog.

A separate report from the International Water Management Institute(IWMI) said the best way for countries to protect millions of farmers from food insecurity in sub-Saharan Africa and south Asia was to help them invest in small pumps and simple technology, rather than to develop expensive, large-scale irrigation projects.

"We've witnessed again and again what happens to the world's poor – the majority of whom depend on agriculture for their livelihoods and already suffer from water scarcity – when they are at the mercy of our fragile global food system," said Dr Colin Chartres, the director general.

"Farmers across the developing world are increasingly relying on and benefiting from small-scale, locally-relevant water solutions. [These] techniques could increase yields up to 300% and add tens of billions of US dollars to household revenues across sub-Saharan Africa and south Asia."

"Food shortages could force world into vegetarianism, warn scientists", 26/08/2012, online at:
http://ht.ly/dhjRk?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=6a531ffe9b-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

❖ **OOSKANews, US Water Partnership Collaborate on Sharing Water Knowledge: Leading Water News Organization Joins US Effort to Address Water Challenges Around the Globe**

Sweden, STOCKHOLM — The US Water Partnership (USWP) and OOSKANews, Inc. announced today (August 29) that leading water information provider OOSKANews will join USWP as a member, providing select news content on topics of interest to the global water community. The announcement was made in Stockholm, Sweden during World Water Week.

“OOSKANews is proud to join the USWP – an innovative effort to bring US expertise and leadership to water issues around the world,” said David Duncan, founder and CEO of OOSKANews. “The partnership offers a great opportunity for us to partner with best in class organizations and make a positive impact on solving water challenges around the world.”

A joint effort of both public and private sectors in the US, the US Water Partnership is supported by leading 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. In June 2012, US Water Partnership members announced over \$500 million USD in commitments to address key water challenges around the world.

In support of a water secure world, the USWP provides access to knowledge, technical assistance and training and partnership development services. The Global Environment & Technology Foundation (GETF) is serving as the USWP’s secretariat.

The collaboration between the OOSKANews and the USWP will include:

- Provision of donated weekly content from OOSKANews for the public and USWP members;
- Creation of content and reports of importance to the global water community, to include special OOSKANews reporting on issues in strategic river basins around the world;
- Creation of a “road map” of US government and other relevant water data available to inform water-risk and water-opportunity decision making; and
- Co-creation of a news database archive of more than 24,000 news stories on water, and water-related news.

“OOSKAnews is a leader in reporting on water news from around the world,” said Monica Ellis, CEO of GETF. “The USWP and its members will benefit greatly from their content and the products that we jointly produce.”

“OOSKAnews, US Water Partnership Collaborate on Sharing Water Knowledge: Leading Water News Organization Joins US Effort to Address Water Challenges Around the Globe”, 29/08/2012, online at:
<http://www.ooskanews.com/daily-water-briefing/ooskanews-us-water-partnership-collaborate-sharing-water-knowledge-leading-wate>

BACK TO TOP

❖ UNDP Report Calls for Human Rights Approach to Water Management

Sweden, STOCKHOLM — A human rights-based approach can be useful in improving equity in water resource management, a new report from the UN Development Program's (UNDP) Water Governance Facility at the Stockholm International Water Institute (SIWI) concludes.

The report, "Human rights-based approaches and managing water resources: exploring the potential for enhancing development outcomes," timed to coincide with Stockholm World Water Week, focuses on water as a resource for development.

It was produced by three disparate groups: water resources management policymakers and practitioners, lawyers specializing in national and international water law and international civil servants specializing in human rights-based approaches.

According to the authors, the convergence of climate change and worldwide economic instability are "almost certain to intensify the water insecurity of poor and marginalized people in low-income countries," and this adds to the urgency for new approaches to allocation of water resources for development.

To allocate water more equitably, a number of issues need to be addressed -- market mechanisms, which can fall short in some circumstances; the need to examine what constitutes "efficiency" and "highest value uses and users;" and the need to ensure that poor people can participate meaningfully and hold officials accountable in water-sharing mechanisms.

The report explores integrated water resources management (IWRM) approaches, but concludes that water sector reforms can be strengthened by more attention and commitment to a human rights-based approach.

Although IWRM approaches "are ostensibly guided by a balanced concern for economic efficiency, environmental sustainability and social equity, in practice, the social equity goal is often given less priority when water allocation decisions are made."

“Development’s purpose is to improve people’s well-being, give them a say in the decisions that affect their lives, and expand their freedoms, choices and opportunities. From this perspective, the way in which water resources are allocated in countries around the world is deeply problematic,” according to the report.

It warns that water resources allocated for a range of productive purposes “are typically inequitable; generally speaking, comparatively powerless groups tend to be shut out not just of access to water resources but also of the processes whereby allocation decisions are made.”

It questions whether the rights embodied in the human rights-based approach can help resolve these issues, and concludes that they “offer potential to strengthen equity in water allocation.”

All low-income countries face challenges in implementing both human rights-based approaches and integrated approaches to water resources management, and most need a long time and significant capacity building for success.

“The process of actually operationalizing this approach in developing countries may have significant implications with regard to resources, capacity, legal and institutional frameworks, governance structures and political will,” it says.

Obstacles to the approach include policies that do not encourage equity; a lack of opportunities for meaningful participation among the poor; widespread corruption and lack of transparency and accountability; lack of resources; lack of capacity for financial management; “siloe” government ministries and departments; hierarchical, centralized government management structures; legal frameworks that do not sufficiently safeguard the interests of the less powerful, and inadequate enforcement of laws and policies.

However, the report says the human rights-based approach can act as a diagnostic tool to identify and address such deficiencies.

“UNDP Report Calls for Human Rights Approach to Water Management”, 28/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/undp-report-calls-human-rights-approach-water-management_24059

BACK TO TOP

❖ International Aid for Water, Sanitation Must Target the Neediest: WaterAid

Sweden, STOCKHOLM — Between 2005 and 2010, most international aid for water and sanitation projects went to middle-income countries, with only seven of the world’s poorest countries making international NGO WaterAid’s list of top aid recipients for each of those years.

A new WaterAid report, “Addressing the Shortfall: The urgent need for increased and better targeted aid to the water and sanitation sector,” released this week at World Water Week in Stockholm, found that less than half of all water and sanitation aid went to the 28 countries where 90 percent of the people who lack basic sanitation live.

The 27 nations that account for 90 percent of all diarrheal deaths only received 39 percent of all water and sanitation aid.

“Least developed countries get 30 percent of total aid. Our message is they have scarce domestic funds, so they need international aid the most,” John Garrett, WaterAid senior policy analyst for development finance and lead author of the report, told OOSKAnews by phone on August 28.

This skewed focus “reflects donors’ decision-making,” which often takes into account several factors, only one of which is impacts on poverty and need, which can often be a lower priority, he said.

The other factors often involve historical issues such as colonial links between donor nations and their aid recipients, and strategic factors like who is more equipped to use the funds because of better capacity and governance.

“Donors need to target funds effectively to where need is the highest,” Garrett said.

The report also found that “aid funds released to developing countries are systematically lower than those committed.”

On average, donors report releasing only 70 percent of their commitments. For example during 2002-2010, donors made commitments of \$54 billion USD but only actually released \$37 billion USD.

The \$17 billion USD difference equates to more than two years of total annual water and sanitation aid, according to the report.

There are a number of reasons for this discrepancy, Garrett said. First, donor nations can do a poor job of reporting what they have committed and what has been released. Also, commitments are often made without considering the capacity to either release these large sums or the capacity of the recipient nation to absorb the sum in a given timeframe.

Perhaps the most frustrating issue, Garrett said, is that donor aid commitments come with conditions that must be met by recipients before the funds are released.

For example, in Ethiopia, African Development Bank funds were to be disbursed to several recipients; most had met the conditions, but because a few had not, none of the committed aid was released.

“What is extremely disappointing is that there are significant amounts of funds that are meant for the sector that are either not being reported or not released,” Garrett said.

The WaterAid report determined that the total annual aid commitment for water and sanitation -- \$7.8 billion USD -- is not sufficient to seriously address water and sanitation problems.

WaterAid is calling for this amount to be more than doubled to \$17.8 billion USD per year.

“International Aid for Water, Sanitation Must Target the Neediest: WaterAid”, 29/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/international-aid-water-sanitation-must-target-neediest-wateraid_24090

BACK TO TOP

❖ World Water Week Will Focus on Food Waste

Sweden, STOCKHOLM — About 2,000 conference attendees assembled in Stockholm on August 26 for the opening plenary session of World Water Week, 2012, heard calls for substantial increases in public and private sector investment to reduce losses of food in the supply chain, enhance water efficiency in agriculture and curb consumer waste.

Stockholm's World Water Week is an annual conference organized by the Stockholm International Water Institute (SIWI), which brings together international water experts, practitioners, decision makers and business innovators to exchange ideas, foster new thinking and develop solutions.

“More than one-fourth of all the water we use worldwide is taken to grow over one billion tons of food that nobody eats. That water, together with the billions of dollars spent to grow, ship, package and purchase the food, is sent down the drain,” said SIWI Executive Director Torgny Holmgren.

“Reducing the waste of food is the smartest and most direct route to relieve pressure on water and land resources. It's an opportunity we cannot afford to overlook,” he added.

“The numbers show that agriculture is a thirsty activity. But that also means that agriculture holds the key to sustainable water use,” said José Graziano da Silva, director general of the UN Food and Agriculture Organization (FAO).

He added that investment in smallholder farmers is critical to achieve food and water security for all people.

Also speaking at the opening session, Dr. Colin Chartres, director general of the International Water Management Institute (IWMI), the 2012 Stockholm Water Prize laureate, said: “Feeding over 9

billion people by 2050 is possible, but we have to reflect on the cost to the environment in terms of water withdrawals and land resources. Furthermore it will put phenomenal pressure on ecosystem services on which our society depends. Saving water by reducing food waste, increasing productivity, plant breeding and waste water recycling are critical to all of us.”

During the week, H.M. King Carl XVI Gustav of Sweden will present the Stockholm Water Prize to the IWMI.

“World Water Week Will Focus on Food Waste”, 27/08/2012, online at: http://www.ooskanews.com/daily-water-briefing/world-water-week-will-focus-food-waste_24050

BACK TO TOP

❖ EU Vows “Strong Commitment” to WASH Ahead of World Water Week

BRUSSELS, Belgium — Europe’s top development official has pledged to strengthen European Union support for water and sanitation investment in developing countries, despite the bloc’s own mounting financial challenges.

Andris Piebalgs, the EU development commissioner, said Europe is backing water and sanitation projects in 60 countries and that annual aid for the sector is now \$2.5 billion USD.

"I want to confirm the EU's strong commitment to making sure that everyone, no matter where they live, has access to clean, safe water and sanitation," Piebalgs said in a statement released last week, ahead of World Water Week which commenced in Stockholm yesterday, August 27th.

“We don't start from scratch and our aid has already triggered good results,” he said, saying that in five years, EU aid provided water to 32 million people and sanitation to 9.5 million.

The 27-nation EU is collectively the world’s largest aid donor, providing some \$68 billion USD annually, or 56 percent of the total in 2010, according to OECD data. The EU provides nearly one-third of the \$8 billion USD in global development assistance for the water, sanitation and hygiene (WASH) sector.

In July, a year after a drought-related famine was declared in East Africa, Piebalgs and the EU’s commissioner for humanitarian aid, Kristalina Georgieva, announced some \$271 million USD in new funding for 2012-2013 for water, agriculture and drought preparedness projects.

The money will be used to finance the Supporting Horn of Africa Resilience, or SHARE project, in Djibouti, Ethiopia, Kenya and Somalia -- the countries hardest hit by the 2011 drought and famine.

But EU leaders came under fire for a recent plan to reshape overseas aid. Piebalgs’ “Agenda for Change” would concentrate more development assistance in the world’s poorest countries by scaling back support in emerging Latin America and South Asia.

Charity groups have also criticized the European Council, which represents EU national governments, for seeking cuts in the 2013 budget for overseas projects as part of an overall effort to pare spending.

Aid advocates say that while the EU's plan to focus on impoverished countries is a positive step, help should be based on need and not a country's economic ranking.

“Whereas this concept seems logical at first sight, it does not take into consideration the fact that 75 percent of the world's poorest live in ... middle-income countries,” says an analysis of the Agenda for Change prepared by Concord, a Brussels-based umbrella group representing European relief and development organizations.

“Consequently, if the international community is serious about reducing and eradicating poverty, it has to make sure that development.”

“EU Vows “Strong Commitment” to WASH Ahead of World Water Week”, 27/08/2012, online at:
http://www.ooskanews.com/daily-water-briefing/eu-vows-strong-commitment-wash-ahead-world-water-week_24038

❖ **Arctic sea ice at record low, expected to keep on melting**

WASHINGTON, Aug 27 (Reuters) - The world's Arctic ice cap has shrunk to a new low, surpassing a record set only five years ago, and is expected to keep retreating for a few more weeks, according to U.S. data released on Monday.

The Arctic sea ice fell to 1.58 million square miles, or 4.10 million square kilometers, down 27,000 square miles from 2007, the lowest since satellites began measuring the ice in 1979, according to the U.S. National Snow and Ice Data Center.

"It's a little surprising to see the 2012 Arctic sea ice extent in August dip below the record low 2007 sea ice extent in September," said Walt Meier, a scientist with the data center.

"It's likely we are going to surpass the record decline by a fair amount this year by the time all is said and done."

The ice is expected to dwindle until mid- to late-September when the summer melting usually ends, according to the center.

Shrinking of the Arctic ices alarms scientists and environmentalists because the Arctic acts as the world's air conditioner, helping to moderate the globe's climate.

As parts of the Arctic melted, this year has been marked by record heat in much of the Northern Hemisphere, especially across the continental United States which has been ravaged by drought.

Most scientists blame global warming for the retreat of the Arctic ice and there is concern that the growing amounts of open water means the Arctic will not be as effective moderating the planet's climate.

"These preliminary figures provide irrefutable evidence that greenhouse gas emissions leading to global warming are damaging one of the planet's critical environments, one that helps maintain the

stability of the global climate for every citizen of the world," said Kumi Naidoo, executive director of Greenpeace.

"Arctic sea ice at record low, expected to keep on melting", 27/08/2012, online at:
http://www.trust.org/alertnet/news/arctic-sea-ice-at-record-low-expected-to-keep-on-melting/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=4cdf037170-RSS_EMAIL_CAMPAIGN&utm_medium=email

BACK TO TOP

❖ Brazil: Court Allows Dam Construction to Resume

Construction on a mammoth hydroelectric dam in the heart of Brazil's Amazon rain forest began again Tuesday, hours after the country's Supreme Court ordered a resumption of work on the project, which has been opposed by Indian groups and environmentalists. The ruling by the Supreme Court president, Carlos Ayres Britto, late Monday overturned an order by a lower court that suspended work on the \$11 billion, 11,000-megawatt Belo Monte hydroelectric dam until indigenous communities living in the area were consulted. The Court's Web site said Tuesday that the ruling could be revised after the court conducts a "more detailed analysis of the merit of the case," and it may also be appealed. The government applauded the ruling, saying it avoids "major and irreparable damage to the economy, to public property and to the country's energy policy."

"Brazil: Court Allows Dam Construction to Resume", 28/08/2012, online at:

http://www.nytimes.com/2012/08/29/world/americas/court-allows-dam-construction-to-resume-in-brazil.html?_r=1,

BACK TO TOP

❖ Singapore experts share water management tips

Officials of the Haryana government on Monday met a team of experts from Singapore to discuss ways to tackle shortage of water supply in industrial areas here. The meeting was intended to introduce Singapore water supply models, including recycle and reuse concepts, and to share the understanding of existing water situation in the DMIC (Delhi Mumbai Industrial Corridor) region.

The two-member visiting delegates discussed the DMIC project, which covers areas of Manesar and Bawal Investment Region (MBIR).

Apart from the visiting team comprising chief executive officer of SCE, Wy Mun Kong, and vice president of construction consultancy CH2M HILL Vinod Singh, representatives of Singapore Public Utility Board also joined the meeting through video conferencing.

The team held separate meetings with officials of HSIIDC (Haryana State Industrial Infrastructure Development Corporation), departments of irrigation, agriculture, and health to collect information to develop a proposal for technical cooperation between Singapore and the Haryana government for potential water sources development.

On Tuesday, the team will meet the managing director of DMIC in Delhi and visit Manesar Bawal Investment Region.

A presentation was also given by the team about sustainable water supply management in Singapore.

SCE was formed by the ministry of trade and industry and the ministry of foreign affairs to cater to the countries willing to implement Singapore's development model.

SCE has carried out several projects in more than 30 countries in different parts of the world, including Asia Pacific, China, Middle East, North America, Latin America and sub-Saharan Africa.

“Singapore experts share water management tips”, 28/08/2012, online at: <http://www.hindustantimes.com/India-news/Haryana/Singapore-experts-share-water-management-tips/Article1-920443.aspx>

BACK TO TOP

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❖ **Focus on water conservation: Bengal Chamber**

Kolkata, Sept 1 (IBNS) The Bengal Chamber, the oldest chamber of commerce in India, urged its members to focus on water conservation.

The Energy and Environment Committee of The Bengal Chamber presented the fifth edition of its signature event, its annual Environment and Energy Conclave on Friday in Kolkata.

The Conclave will continue till Saturday, being the largest forum for environment and energy management and climate change mitigation in the eastern region.

The theme was "Water Forum - Conserving Energy. Preserving Environment. Towards Tomorrow".

The Water Forum presented an educational conference, founded with an emphasis on commercial free discussions on technology.

Some of the speakers included S Narsing Rao, Chairman- cum- Managing Director, Coal India Limited, Pinaky Bhadury, Vice President-Strategy Consulting (South Asia, Middle East & North Africa), Frost and Sullivan, Dr. Sunita Narain, Director General, Centre for Science and Environment (CSE); Director, Society for Environment Communications and Publisher, Down To Earth.

Rao said: "The entire world, a population of around 1 billion people, is affected due to water pollution. Coal India has 40% of energy supplier. We are committed to take better technology for water resources and will improve more for the future generation."

After his speech, Bhadury and Partha Bhattacharya, Senior Vice President, The Bengal Chamber released the conference publication titled "Water for the Future - Challenges for India and its Industry".

Bhaduri said, "Industries are shutting down due to water shortage. People consume excessive amounts of water. Lack of use of modern technologies causes loss of water, in agricultural sector. Indian industries use 15m³ of water every year to give industrial output.

"Domestic sector consumes 56m³ of water every year. India generates 18 billion m³ of waste water every year."

He spoke on the global and Indian scenario. "Developing countries use more water for irrigation while developed nations use water for domestic uses. Water demand is gradually increasing (2800 deficit in 2030). We get water 4500 km³ per year by rain and 1122km³ per year we get fresh water resources."

Narain said: "Whereas water was earlier used primarily for agriculture needs, today it is needed for increasing urbanisation and industrialisation, as well. Therefore, an overhaul and upgradation of the sewage system is required for the efficient use of water."

Regarding water supply in cities - planners are obsessed with water, not with supply, she said.

"Local water resources are drying up and there is no solution. Water demands for food production are increasing, for industrial growth, for urbanization. Fair quality of water is required in urban and the industrial sector. We should increase the pace for water utilization."

"Using modern technologies in industry and domestic sector is suggested. Water supply is growing through which energy costs are growing.

"Most cities don't have underground sewage. Chennai, Gurgaon and Pune and Bangalore have 3610 km of sewage pipes, 14 sewage treatment plants, 781 MLD it now needs to build up 4000 km. to catch up. Systems don't provide cost for water sewage," said Narain.

The agenda ahead includes- Plan for sewage before water, and Plan differently for sewage.

"Focus on water conservation: Bengal Chamber", 01/09/2012, online at:
<http://www.waterworld.com/news/2012/09/01/focus-on-water-conservation-bengal-chamber.html>

BACK TO TOP

❖ Industries must pay ‘water supply cost’

India needs to focus on treating waste water from the industries to meet the rising demand for fresh water.

According to Pinaki Bhadury, Vice-President, Strategy Consulting (South Asia, Middle East, North Africa), Frost and Sullivan, while 30 per cent of industrial waste water in tier-I cities is recycled, the amount of water recycled stands at close to seven per cent in tier-II cities.

“The Indian industrial sector consumes more fresh water than any other country in the world. Industries in India generate 18 billion cubic metres of waste water every year,” Bhadury said while addressing the eighth edition of Environment and Energy Conclave organised by Bengal Chamber of Commerce and Industry here on Friday.

The Government should create a mechanism to ensure industries pay ‘a realistic water supply cost’, he said and added, “water pricing norms should be introduced for all the industries. Currently, they only pay a notional price for fresh water consumption.”

Sunita Narain, Director General of Centre for Science and Environment, said the country would require more fresh water keeping pace with the increasing agricultural productions.

“So, we need to reinvent to be water-prudent,” she said.

According to Narain, inventions were needed to reduce the cost of energy in water supply to help people from across all strata of the society. Setting up sewage water treatment plants will not help, unless a city builds proper pipeline to support such plants.

“According to a study, only Chennai, Pune, Surat and Gurgaon have 70 per cent underground sewage system,” she said.

Narain also urged for water conservation bureau to be implemented in line with Bureau of Energy Efficiency soon in the country.

“Industries must pay ‘water supply cost’”, 31/08/2012, online at: http://www.thehindubusinessline.com/industry-and-economy/economy/article3844586.ece?ref=wl_industry-and-economy

BACK TO TOP

❖ The Global Land Grab, The Next Human Rights Challenge For Business

Since the first huge spike in global food prices back in 2007-2008, companies and foreign governments have acquired or signed long term leases for land in Africa, Latin America and Southeast Asia. Many of these transactions were negotiated quickly and in secrecy. And while many observers would describe much of the land exchanged in these deals as “undeveloped,” the fact is that local communities often depend on it for subsistence farming or pastoral use. Such massive and rapid changes in ownership and title are also about water rights as much as the right to equitable use of pastures and forests. This surge in “land grabbing” could become one of the most socially disruptive trends in history.

The result is a looming human rights problem for businesses, particularly food companies, as companies will struggle to remain viable and feed an increasingly hungry and thirsty world. Labels such “[fair trade](#)” have become more mainstream as more consumers become aware of the [human cost](#) involved in growing coveted food products such as [chocolate](#) and [coffee](#). The controversy over [conflict minerals](#) and [precious metals](#) has nudged some companies to become more transparent about where they source such hard-to-find materials. So in the coming decade, could “land grab free” become a new seal of approval?

Yesterday a panel at [World Water Week](#) discussed how these land acquisitions, or “land grabbing,” tie to food security and water rights. Jamie Skinner of the [International Institute for Environment and Development](#) described this increase in land purchases as occurring under a climate of secrecy. In many of the nations where these land swaps have taken place, according to Skinner, the government had technically owned the land but it had remained open for use to local people who had long depended on it. The customary land and water rights that were not codified under updated legal systems, have now been usurped by contracts that attorneys and bureaucrats negotiated under modern law. Despite descriptions of such land as “empty,” much of this land is under use, and local people are dependent on it for farming, firewood or animal husbandry. Even more distressing for fragile local communities, the rights to water have been signed away for the next several decades.

But are all of these transactions unfair “land swapping” that benefit only large companies? Taysir Al-Ghanem of Qatar’s [National Food Security Program](#) claimed that his country’s leases of agricultural land has been more about benefitting the countries via such transactions. Al-Ghanem pointed to an investment in a poultry producing company in Brazil where production rose from 1 million eggs a year to 20 million. Those eggs are sold in Brazil and are just one example of how proper investment and management can actually boost food security. Sierra Leone’s Ali Badara Mansaray was defensive about the land deals occurring in his country, and claimed that a commercialization program in his country has the potential to benefit up to 3.5 million farmers. Mansaray’s attack on civil societies and the media, however, raised more eyebrows than nods of agreement in the audience.

[Transnational Institute’s](#) Jennifer Franco pointed out the human cost of these land swaps, and her descriptions of the effects on local communities should serve as a warning to businesses involved in these gargantuan land deals. This land, said Franco, is not “empty” or “unusable,” but in fact serves a vital need for the locals who had access to this land for years. The switch to private investors is especially disastrous for women who are then deprived of such land, on which they had depended to provide for their families.

The takeaway for businesses, whether they are in food processing, mining or forestry is that to ignore the human aspect of these transactions will expose them to a bevy of risks. These deals have been completed and most likely there is no going back, but in this age of social media and demands for greater transparency, skeptical consumers will only hear more stories about the effects these land transactions, or land swapping, will impose on local populations as well as the environment and water rights. For companies that already struggle with their supply chains, the added complexity of not only identifying their suppliers but the land they use will present additional challenges. But such disclosure is the only option; to deny that products have their origins in land leased or purchased under dubious circumstances will only push discerning consumers away. The “fair use” or “land grab free” labels could find their way on food and other products in the coming decade.

“The Global Land Grab, The Next Human Rights Challenge For Business”, 28/08/2012, online at: <http://www.triplepundit.com/2012/08/global-land-grab-human-rights-challenge-business/>

BACK TO TOP

WWW.ORSAM.ORG.TR

❖ Water and Sanitation Socialism in Caracas: Interview with Victor Díaz

The *mesas técnicas del agua* (Technical Water Forum, MTAs) are a unique experiment in radical urban planning, whereby beneficiary communities map their own water and sanitation needs and help to plan infrastructure development, which is financed by the state. Thanks to heavy state investment in water and sanitation infrastructure and this participatory methodology, Venezuela now has 96% coverage in potable water, one of the highest rates in the region. Victor Díaz was part of a team of reformers who were working in HIDROCAPITAL (the state-owned and operated water and sanitation that serves the federal district of Caracas) under the mayorship of Aristóbulo Istúriz (1993-1996). Many of the original team members have since gone on to hold major positions in the Chávez government. In this interview, Victor talks about the accomplishments in the water and sanitation sector, including the meaning of socialism, the importance of popular power and political support, as well as the challenges that remain.

Rebecca McMillan and Susan Spronk: Can you tell us about your political history and your role in HIDROCAPITAL?

Victor Díaz: I studied geography in the Universidad Central de Venezuela in the 1980s, a time when the student movement was very active. As a student I met a group of people who believed in popular power and we worked to make it a reality in HIDROCAPITAL. Today, I am the Community Coordinator of HIDROCAPITAL in the Caracas metropolitan area, which is the capital region. I have been with the company for 13 years, and before that I worked in politics, mostly in the parishes Antimano and 23 de Enero [poor neighbourhoods in Caracas].

I think that the secret of our success is that the team of people involved in the reforms have long identified with the idea of transferring power to the people. It isn't just rhetoric. Our commitment began in the universities in the 1980s with the movement to democratize the universities through student participation. And now the same commitment to participation is reflected in all of the government's proposals. The leaders know that if the directors don't have a clear understanding and commitment to participation, then a proposal is not going to last, because you cannot force proposals on people. It never works to do things by decree.

RM and SS: How did the *mesas técnicas de agua* come about, and what has been your involvement?

VD: It all began under the mayorship of Professor Aristóbulo Istúriz in 1993-1996 [1]. Under Aristóbulo, the city was experimenting with new forms of local government, which in some ways gave birth to current urban processes, particularly in Caracas. The administration of Aristóbulo Istúriz formed city-level working groups to look at various issues, both social and technical. It was the first progressive experiment we had had in many years. This was in the midst of the government of the 4th Republic, during the second mandate of President Caldera (1994-1999), which supported a diagnostic study of the city's problems. The diagnoses contributed to policy proposals to address the problems – some of which were solved successfully at that time, and some of which laid dormant until Chávez came to power in 1999.

I was working in public services at this time. As mayor, Aristóbulo created the Municipal Services Corporation (*Corporacion de Servicios Municipales, CSM*), a decentralized entity that coordinated infrastructure planning and development. The CSM worked on expanding infrastructure everywhere in Caracas, until the last barrio. Here we also piloted the participatory methodology that we use today. We went into the barrios and diagnosed their situation – exposure to risk, how public services were being delivered, etc. At that time there was no help for the barrios coming from the government. The diagnoses led to the creation of participatory mechanisms with the people, and to the adoption of some very localized solutions, for example, in the parishes of Antímano and Junquito.

The water situation in these parishes was very critical because of their high altitude. The average altitude in the city is between 800 and 100 meters, but many of the popular neighbourhoods are even higher. This makes it very difficult to supply them with services, particularly drinking water, and it requires considerable community participation.

In Caracas we face considerable challenges providing potable water since the city is located *above* its principal water source. In a logically organized system, the water source should be located above the city so that water can be transported by gravity, and you waste less energy. In Caracas, it's the total opposite. Due to this scarcity, there were serious problems in the surrounding areas, particularly towards the west of the city. From 1990-1994 there were many social conflicts and protests due to the water problems.

Under Aristóbulo, the municipal government created a participatory model in Caracas, called the 'parish government' (*gobierno parroquial*), which involved the participation of all of the sectors of the parish to seek solutions to the city's problems, including water. The government identified four major parishes, which had serious water service problems: Antímano, Junquito, El Valle, and la Vega [poor neighbourhoods in Caracas]. This model of "government of the people," as it was called, led to the formation of the *mesas técnicas de agua*, (Technical Water Fora, MTAs).

Aristóbulo led a team of reformers in implementing the model, including Jacqueline Faría then manager of Caracas's water system for HIDROCAPITAL, as well as other comrades in the company. Despite the considerable ideological differences between the administration of President Caldera and Aristóbulo, Aristóbulo approached the central government to seek their collaboration in solving the water problem. His proposals encountered opposition from the authorities, including many in HIDROCAPITAL, but the 'rapprochement' between the municipal government and some progressive-minded people in the central administration allowed them to overcome this opposition and advance their proposals. Also, Aristóbulo's work with the parish governments and the MTAs took pressure off the central government to solve the problem. In the end, the work went forward with the cooperation of HIDROCAPITAL.

They performed general diagnostic studies of the sectors, especially Antímano and Junquito. At that time, people in these parishes received water 8 times per year at most – that's every two months! It was a serious problem. So they developed a temporary strategy with the participation of the neighbourhood to develop a schedule of water delivery by tanker truck. When the piped water would arrive to one sector, the tanker would deliver water to the other sector, and so on. At first, however, the MTAs were primarily information-sharing sessions [rather than decision-making assemblies, as they are envisioned now]. They then initiated a water main project to improve the piped service.

In 1995, Aristóbulo Istúriz lost the election [in the largest municipality within the Capital District, Libertador de Caracas] to the right wing candidate, Antonio Ledezma (1996-2000). Before the end of his term, they made a push to finish the water main and they succeed in finishing it in early 1995. As a result, there was a significant increase in the supply of water to the communities who went from receiving water every 2 months to receiving it every 10 days. The people were satisfied, but unfortunately this was not reflected in the votes, since the level of political consciousness was low. There were also many conflicts between Aristóbulo's party Causa-R (Radical Cause), and his government [2].

As soon as Ledezma took office, he dismantled the *parroquia* and MTA initiatives. Of course, the right wing doesn't care if the popular sectors improve their situation. Many projects laid dormant until Chavez's election in 1998. Under Chávez, the central government revived Aristóbulo's proposal and the national government took over the management of water mains. Many people from Aristóbulo's team found work in the central government, including in HIDROCAPITAL, and they spearheaded this work. Jacqueline Faría was named president of HIDROCAPITAL and a committee was formed to implement Aristóbulo's MTA model. This time there was much more political support, a coherent strategy, and more emphasis on popular participation.

RM and SS: Can you explain some of the principle achievements in the water and sanitation sector since 1999?

VD: One achievement was surpassing the Millennium Development Goals. Not only did we achieve the MDG before the 2015 deadline but we have also gone above and beyond the MDG standards for water supply. According to the MDGs, a household has 'water access' when there is a water source within 300m of the community. In Venezuela, we have supplied piped water directly to people's homes.

In 1999, the percentage of people with water supply was 85% and now it is 96%, which was very significant. Most of the remaining 4% of people who do not have access to piped water live in rural areas or indigenous communities. There are also a few communities in Caracas who lack access in Carretera Vía de los Teques, between Matadero and La Lomita. Currently, these people use mountain water or get water from tankers. HIDROCAPITAL and the municipal government are digging a well to supply these households with piped water.

Another achievement is the organization of the communities. Right now, we have an estimated 9,000 MTAs across the country. One of our comrades, Francisco Cobral, says that the MTAs are practically a political party. If we estimate 10 people per MTAs, the MTAs have almost 90,000 members! At any given moment there may only be an average of five people attending meetings regularly, but there's an important relationship being developed with the people.

The other achievement is that the MTAs are building capacity to be a planning entity under the *consejos comunales* (Communal Councils, CCs). The MTAs play a role in providing information about the community to the CCs, such as skills in diagnostics, inspections, training of community members, etc. These are the kinds of skills that CCs need.

Another important achievement is the investment in infrastructure through a participatory planning process through the MTAs. We now we have a very important plan for Caracas called Plan Agua, which goes until 2014. They are now building feeder pipes to improve the service in the popular sectors, where there hasn't been investment in years. In some sectors, the two-month water cycles have been reduced to 20 days. In La Vega, for example, where people currently receive water every 8-10 days, people will soon have daily access. The construction of Tuy IV, the new water reservoir, is also part of the plan to improve the city's water service.

RM and SS: Can you clarify the relationship between the municipality, HIDROCAPITAL, the MTAs, and the Communal Councils?

VD: HIDROCAPITAL's relationship with the people has two essential components: the MTAs and the participatory methodology, which consists of a census of the community and a participatory mapping of its water problems. That's the approach we used when we hit the ground running in 1999, and now all of the MTAs have to follow these steps. Chavez later adopted the MTA methodology for the *consejos comunales*. The MTAs fall under the *consejos comunales*, the umbrella organization, which encompasses all of the local participatory structures.

Around 2006-2007, a new structure was created: the *consejo comunitario de agua* (Community Water Councils, CCA). The CCAs were created because it was very difficult to meet with each MTA individually. We meet with them when they are first being formed, but it is difficult in the long run because there are so many. At the time when the CCA was adopted, HIDROCAPITAL only had five community coordinators. Now we have a staff of 10, but this is still not enough. There are 22 parishes in the municipality of Libertador and 32 in the entire metropolitan area. Each coordinator is responsible for as many as 4 or 6 parishes. So we needed to create a structure where various MTAs from the same water supply system or watershed could come together. For example, the same pipes deliver water to both Junquito and the upper part of Antimano so we meet with them together.

With respect to the municipality – the municipalities have never faced up to the problem of water and sanitation. There are very few municipalities in the country that prioritize water. I don't know why. So we, the state, have taken it upon ourselves. Even though it is a constitutional directive, we, the state, basically take responsibility [3].

Aristóbulo was an exception. He threw himself into the question of water, even in a city as complicated as Caracas. Very few of Caracas's mayors have emphasized water, of all of the problems in Caracas. I am probably coming across as an Aristobulista [supporter of Aristóbulo], and I am. Aristóbulo knew everything that was going on in the city. People would tell him everything. There are also things being done now with Jorge [Jorge Rodríguez, the current mayor of the municipality of Libertador, part of Caracas], e.g. the cemetery and the work in Antimano, which were originally Professor Aristóbulo's proposals. Back then the investment that was needed was too big. It wasn't possible when we didn't have the control over our principal source of wealth (oil).

Compañeros in other countries struggling for water do not have the same political support that we do in Venezuela. In Colombia, for example, they had to have a referendum to fight for the human right to water and for the reduction in water tariffs. Our compañeros in Colombia had to go all around the country soliciting signatures and even seek support at the international level [4]. It's the same in other

countries such as Bolivia with the major problems in Cochabamba still ongoing. On the other hand, here, for better or for worse, we've had a [political] response and the oil revenues have allowed us to achieve significant levels of access.

RM and SS: Since 2005, Chavez has been talking about socialism. In your opinion, what does socialism mean with respect to water and sanitation?

VD: As a concept, I think it means equal services for everyone. If there is water in the centre of Caracas 24-hours a day, why isn't there water in the more remote sectors? It should be the same for everyone. If we could do it, then why couldn't those jerks (*carajos*) do it before? It was because they were not interested in doing it. They wanted to turn water supply in to a capitalist means of production. That's why they didn't do it. What we are doing now in HIDROCAPITAL is very difficult, but it is possible. The technical structure here hasn't changed very much, but the politics and the approach to designing the system have.

In the parts of the city where there is urban planning and legal title, it is easy to supply water. All you have to do is install the pipes. All of the middle and upper class neighbourhoods (*urbanizaciones*) in the east of Caracas built their system with petroleum money. They built these big *urbanizaciones* and well organized pipes but it wasn't like that in the west. Obviously it was much easier to supply water in the east. Now we are installing pipes in the west and we are working with the people to replace their networks. The Plan Agua now has 22 community projects, where people participate in improving the infrastructure.

So to answer your question, I think socialism means equal quality of services for everyone, without exclusion. We haven't taken a single drop of water away from the sectors that have always had water.

RM and SS: What major challenges remain in sanitation (water treatment and sewerage)?

VD: Recently we face considerable challenges with climate change. We have had critical climatic periods, including two major droughts. We need to come up with some kind of plan, because if there are people in Junquito who have water every 20 days and you have water every day, then during a drought I should be able to take water away from you to send it to those who don't have any. In the wealthier parts of the city, there are very large water storage tanks on the buildings, which helps them deal with the drought.

In Caracas, we have a project for the clean up of the Rio Guaire – the principal river in Caracas. However, the timeframe that was initially proposed for the project was very ambitious because it is a very complicated endeavour. There are already large sewerage collectors along the Rio Guaire, but many people don't even know they exist. They have mostly fallen into disuse. When we work on sewerage projects, we aim to ensure that the wastewater ends up in collectors and not in the Guaire, but it is difficult, especially collecting wastewater in the highest parts of the barrios. There has been some progress in improving sanitation, but it's a challenge that, in my opinion, will take 20 years.

RM and SS: How do you approach household sanitation? What does HIDROCAPITAL consider to be appropriate sanitation technology?

VD: We only focus on networked, water-borne sewerage connections. Septic tanks haven't worked because they destabilize the soil in communities that are on steep slopes. For example, in Hoyo de la Puerta, where they relied on septic tanks, there was a landslide. The septic system was originally designed for 9 sectors and now there are 25, almost tripling the population. At that time it was and continues to be a sector that is controlled by the opposition. Now, the people want to take on the design and resolution of the problem.

There have also been experiments with dry toilets in La Vega, but they were not successful, mainly for cultural reasons. People are used to getting rid of their waste using water so that they do not have to think about it.

RM and SS: Can you talk about issues of informality? For example, in some countries the state utilities can't enter neighbourhoods where people don't have title to their land.

VD: In Venezuela, it's the same. They are trying to resolve this through the new property laws [5]. In my opinion, it is impossible to tell people who have lived in an area for a number of years that they have to leave their land. This is why we are starting to give people title to their land. I think this is reasonable, no? If the people have always lived there, it's logical for them to have rights over their land.

The proposal suggests that a household might have individual title over their property, but that the community also have some form of collective control. In other words, the plot can belong to an individual family, but the property is collective in the sense that people can't sell their plot, putting their neighbour at risk. This was the plan in Castellano in the barrio of La Pedregada, but when the proposal was put forth, they tried to sell their plots individually. They had an individual, capitalist vision of the development of the land.

RM and SS: Can you talk a little bit about the role of the union in HIDROCAPITAL?

VD: The elements of the union within the water company that identify with the opposition have been 'neutralized' because they do not have support from the other workers. Here in HIDROCAPITAL when we began [referring to the change team led by Victor Díaz and others], many workers, including members of my unit, were affiliated with the union. I, personally, opposed the proposal to affiliate because the job of my unit was to bring proposals to the management and we would come into direct conflict with other unionized workers. Now that things have changed [under Chávez], we have promoted workers' councils. Here we've had some disagreements because water tariffs were frozen for six years, which of course had repercussions for the company's ability to invest. They reduced many of the maintenance personnel. Where the investment hasn't been reduced is in the production of the service. We had to make sure to pay the electricity, because without that you can't pump the water. Sometimes we weren't able to pay the electricity, but since it's also state run it's better not to pay the electricity than other things. There were many discussions with the electric utility and they would agree not to cut off the power because water is also a vital service.

Last year there was a small increase in water tariffs, and now we can pay the electricity. The first priority is to provide service, and then take care of the salaries of the workers. We have always

looked at all of the alternatives. And now things with the workers are improving, there's been a salary adjustment. I think the model has achieved good results.

Notes

[1] Aristóbulo Istúriz was a high school teacher before he entered politics.

[2] Despite its name, Causa-R was never a “radical” party, but rather considered left only in comparison to the governing party at the time, the Christian Democratic *Comité de Organización Política Electoral Independiente* (Political Electoral Independent Organization Committee, COPEI). Causa-R has since shifted further right when progressives from the party split off to form Patria Para Todos (Fatherland for All, PPT) in 1997. Causa-R is now part of the *Mesa de la Unidad Democrática* (Democratic Unity Roundtable, MUD), which is running against the *Partido Socialista Unido de Venezuela* (United Socialist Party, PSUV) in the national elections which will take place on October 7, 2012. Patria Para Todos is part of the Gran Polo Patriótico (GPP), the coalition which supports Hugo Chávez.

[3] Article 156 of the 1999 Constitution designates the Capital District as jurisdiction of the national government. the Federal District as the jurisdiction of the national government. In 2009, the Federal District was renamed the ‘Capital District’ and additional functions were transferred from the municipal government to national government through the creation of the Head of Government for Capital District. Public works in Caracas are the jurisdiction of the latter.

[4] Colombia has one of the highest rates of water privatization in Latin America. There are over 125 private and public-private companies operating water and sanitation services in Colombia. Between 2007 and 2010, Ecofondo – a network of environmental, human rights and indigenous groups – organized a campaign for a referendum to introduce a constitutional right to water and to oppose water privatization in Colombia. The proposed constitutional amendment would have guaranteed a minimum amount of free public water, public management of water resources, and special measures to protect ecosystems critical to the water supply. Ultimately the referendum proposal was defeated by the Colombian congress, despite the fact that the movement had obtained the required number of signatures.

[5] Presidential Decree 1666, passed in February 2002, has made it easier for Venezuelans living in the barrios to acquire legal titles to their homes.

“Water and Sanitation Socialism in Caracas: Interview with Victor Díaz”, 26/08/2012, online at:

<http://upsidedownworld.org/main/venezuela-archives-35/3834-water-and-sanitation-socialism-in-caracas-interview-with-victor-diaz>

BACK TO TOP

❖ Going to war over water

The world rejoiced as the United Nations' general assembly adopted a resolution in July 2010 declaring water and sanitation to be a basic human right. Yet two years on, governments around the world have yet to come up with concrete long-term policies that could help reverse decades- old neglect to water. More importantly, where river systems cross national boundaries the lack of regional cooperation on the sharing of precious water remains on the political backburner. While nations have gone to war over territory, water too soon could become the bone of contention leading to major conflicts in some of the most densely populated regions of the world. Such sentiments have already been voiced. In March, 2012, British Energy Secretary Ed Davey shared his concerns with global policymakers that "water wars could be a real prospect in coming years as states struggle with the effects of climate change, growing demand for water and declining state of energy."

Water remains a finite resource. Over usage due primarily to consumption by an ever exploding global population and dependence on H₂O for agriculture, industry, mining has helped dwindle supply of our reserves for freshwater. Our overindulgence in wasting water for recreation purposes takes a whole new meaning when one considers the alternative uses of the precious resource. For instance, growing a ton of wheat requires 1,000 tons of water; conversely, watering the world's golf courses requires nearly 79 million tons of water a day. Such extravagance seems irrational especially when faced with the stark realities of climate change. Glaciers are melting and lakes, rivers and natural aquifers continue to dwindle. Alarm bells are being sounded everywhere. According to data published by the OECD, nearly half the world's population (47%) will be living in areas of high water stress by 2030.

Little wonder then that conflicts seem imminent in a number of regions in the world. And as we enter into the uncertainty of freshwater supplies, nations have resorted to dam building giving rise to cross-border tension. China undoubtedly leads the pack of dam builders. It has completed some 10 dams on the nearly 3,000 km long Brahmaputra River and is in the process of building another 18. Potential repercussion of such building could prove disastrous for both North-East India and Bangladesh. With plans to damming nearly 10 of the mightiest rivers that flow from the world's largest water tank, the Tibetan plateau, China hopes to replenish some 6,000 lakes that have gone dry. The damming activity in the Upper Mekong for purposes of hydroelectricity is another worrying sign for lower riparian countries of South East Asia including Vietnam, Laos, Thailand and Cambodia.

Indeed China is not alone in diverting precious water away to meet its growing needs. India and Pakistan have long been locked in dispute over water. The Indus Water Treaty (1960), overseen by the World Bank, divided six major river systems between the two nations. Pakistan received the Indus, Jhelum and Chenab, while India got the Sutlej, the Beas and Ravi. With nearly 50% of the population of Pakistan involved in agriculture and more than 90% of the country dependent on water of the Indus, tensions are constantly on the high with allegations that India is diverting away precious water by building an upstream dam. With India suffering from massive electricity crunch, it is little wonder that hydroelectricity looms large on its agenda. Yet, the construction and planned construction of such projects on the Chenam and Jhelum rivers has Pakistan on edge.

Given such high stakes, it is little wonder that "there is definitely potential for conflict based on water, particularly if we are looking to the year 2050, when there could be considerable water

scarcity in India and Pakistan," says Michael Kugelman, South Asia Associate at the Woodrow Wilson International Center for Scholars in Washington. "Populations will continue to grow. There will be more pressure on supply. Factor in climate change and faster glacial melt ... That means much more will be at stake. So you could have a perfect storm which conceivably could be some sort of trigger."

While all indications point to a bleak future, there are ways the threat of a "waterless" world may be mitigated. Communities across the world are already taking action. Bellavista is a remote hillside village located outside Lima, Peru. In winter it is eclipsed by dense fog that rolls in from the Pacific Ocean. Locals with the help of German conservationists have found a unique way to catching all that moisture. Using multilayered nets to capture fog and condense its fine droplets into water. Prior to this programme residents had to spend up to 15% of their earnings to truck their water up from Lima. Now the fog generates tens of thousands of gallons of water a year which helps residents to sustain 700 young trees and ten farm gardens year round. Such practical solutions exist that allow us to meet our freshwater needs today while preserving nature's ability to meet those growing needs. Diplomacy must play a greater role in averting conflicts between nations and communities, while emerging technology such as desalinisation need to be supported by governments that must make access to water a national security priority.

"Going to war over water", 28/08/2012, online at: <http://www.thedailystar.net/newDesign/news-details.php?nid=247288>

BACK TO TOP

❖ Water and sanitation still not top priorities for African governments

It's often not money that prevents leaders focusing on sanitation but legal barriers, and lack of interest and infrastructure

The figures are shocking. According to the UN Environment Programme (Unep), more than 400 million Africans now live in water-scarce countries; 300 million people still do not have reasonable access to safe drinking water and nearly 230 million people defecate in the open.

But the reasons African governments cite for not implementing integrated water management policies or meeting commitments they have made to provide [sanitation](#) are many and varied. A survey of officials by Unep [in 40 African countries](#) suggests they are not mainly constrained by a lack of money.

Congo-Brazzaville, Nigeria and Sierra Leone don't even have a formal water policy, they told the UN and African Union in the report, referred to this week at the [World Water Week in Stockholm](#). São Tomé and Príncipe said it did not have the necessary laws in place; Cameroon said it had no one to champion the cause of water provision, and 25 countries, including Namibia, Swaziland, Rwanda and Mozambique, said they did not have enough human capacity.

Some governments were brutally honest about their failings. Congo-Brazzaville said it could not get the private sector or civil society interested, Burundi that it had experienced too many changes of ministries, and Ghana that it had problems collecting revenue from local sources. Liberia said it had difficulty accessing donor funds, and Libya and Zimbabwe said they did not have the infrastructure.

Only 18 African countries cited money as a constraint to developing water resource management. Ghana and Liberia said they found it hard to access donor funds, and Burkina Faso and Congo-Brazzaville said a big problem was slowness in mobilising financing.

But there is a growing belief that it makes little sense for governments to make more commitments on water and sanitation. Haba Arbu Diallo, former Burkina Faso water minister and chairman of the [Global Water Partnership in west Africa](#), argued for a moratorium on more commitments. "Many African countries [at this rate] will need two or three millennia to meet their MDGs," he said. "If urbanisation continues at this pace in 10 years' time, every African country will be faced with a massive challenge. The time has come to stop making commitments and to implement what we have already agreed to."

On sanitation, says a report by the [African Ministers' Council on Water](#) (AMCW), [Africa](#) is making little progress and is likely to miss its [MDG target](#) by more than 300 million people. Only nine African countries are on track to meet their targets.

A statement from the [third African Conference on Sanitation and Hygiene](#) added: "The poorest 20% are 20 times more likely to defecate in the open than the richest 20%. The impact of this hidden scandal is devastating to health and quality of life."

Rwanda has emerged as the poster child for hygiene and sanitation, largely because of high-level political support. More than 54% of the population has decent sanitation, from fewer than 1.5 million people in 1990 to more than 5.5 million today. "In Rwanda, political prioritisation for sanitation and hygiene has come from the very top. This unprecedented level of support has been critical," said Therese Dooley, of Unicef.

Some progress has been made elsewhere too. "Before we were not even allowed to say toilets or defecation," she said, "but now we see UN secretary general Ban Ki-moon using these words, which greatly increases exposure and awareness of the issue."

But water and sanitation are still not top priorities for governments, despite overwhelming evidence that a country's development and people's wellbeing depends on efficient use of water.

The secretary of the AMCW, Bai Mass Taal, from Nigeria, said the best way to push water and sanitation up the political agenda is to find new ways to measure the contribution of water to development. "It is very important to provide a basis for highlighting the pivotal role of water resources as an essential ingredient in the advent of a green economy in Africa," he said.

"Water and sanitation still not top priorities for African governments", 30/08/2012, online at:
<http://www.guardian.co.uk/global-development/2012/aug/30/water-sanitation-priorities-african-governments?newsfeed=true>

BACK TO TOP