

ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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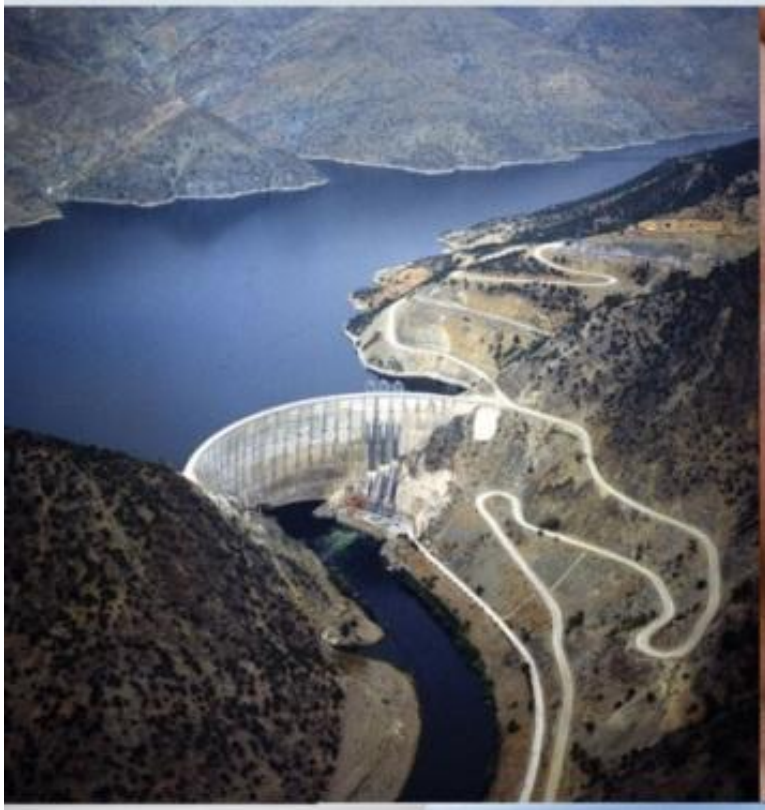



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❖ Urmia recovery plan: water transfer from Aras River

During the summer months of 2011, the fact was brought to the agenda that Lake Urmia, the third largest saltwater lake on Earth and the largest lake in the Middle East, located in northwestern Iran, has been shrinking.

During periods with maximum amounts of water, the surface area of Lake Urmia was 140 kilometers from north to south, and 85 kilometers from east to west. In accordance with the Ramsar Convention it was included in the list of Wetlands of International Importance on June 23 1975, and it was also included in the list of Biosphere Reserves prepared within the framework of UNESCO's Man and the Biosphere (MAB) program in 1976. Lake Urmia and its neighborhood, where endemic species are found, is a seasonal environment also for migratory birds. The lake is home to some 200 bird species and is an agricultural resource for 6.4 million people living in the area in addition to its ecological value. The approximate area of the lake is 6,100 square kilometers. The lake's surface area, which started to shrink in the post-1995 period, is now down to 2,366 square kilometers as of August 2011 data. The water level of the shallow lake declined up to seven meters between the years 1995 and 2011.

According to studies conducted by the United Nations Environment Program (UNEP), 65 percent of the decline was from changes in inflow caused by climate change and diversion of surface water for use upstream, with the remaining balance due to construction of dams (25 percent), decreased precipitation over the lake itself (10 percent) and misuse of water. While the salinity level of the lake is 130-160 grams per liter under normal conditions, this level reached 330 grams per liter after it started to shrink and salt concentration of the lake increased, equal to 8 times the levels of sea water. The rise of salinity began to damage the existing ecosystem in the region.

The drying of the lake, which is located between Tabriz and Urmia with the majority of the country's Azeri population, led to concerns in Iran, neighboring countries and especially in Azerbaijan.

In November 2011, a project launched by Iran in 2010 to direct 600 million cubic meters of water from the Aras River into Lake Urmia, which has been suffering from drought, was again brought to the agenda, with an approximated cost of $1.2 billion.

The Aras River, from which water is planned to be transferred, is a trans-boundary river where Turkey, Armenia, Azerbaijan and Iran are, as adjacent countries to the river, riparians. Iran signed bilateral agreements separately with Armenia and Azerbaijain on the use of the water in this natural border separating it from countries. In accordance with those agreements, water in the Aras is used by riparians at the rate of 50 per cent. Iran must speak with Azerbaijan regarding this agreement in the process of transferring water from the river.

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Jabbar Vatanfada, director general of the Iranian Energy Ministry's Office for Border Rivers and Joint Resources, stated that this plan could be put into practice as a result of talks and agreements with Azerbaijan and that they hope Azerbaijan will be supportive on the water transfer from the Aras River to Lake Urmia in the name of both regional relations and the environment. Azerbaijan, on the other hand, stated that they haven't reached a decision regarding the plan and that Azerbaijan, which is not rich in terms of water resources, would decide in line with the interests of country. In this process, the impact of the Meghri Dam, which is planned to be jointly constructed with Armenia over the Aras River and which would be located on the Iran-Armenia border, on the plan was brought to the agenda. Vatanfada stated that hydropower energy would be generated in the dam and that this would not affect on the amount of water, thus it would not affect the water transfer project to Lake Urmia, either.

The UNDP provided Iran with $135 million for the recovery of Lake Urmia, which is shrinking with each passing day. In addition, Iran provided $900 million to save the lake in September 2011. The salt masses that will appear as a result of the drying of the lake will have to be carried to neighboring basins through clouds of dust, and could damage water and land resources. In addition, the lake's disappearance would upset the economic, ecological and hydrological balance of Iran and neighboring countries. As the suggestions for saving Lake Urmia affect the water resources of riparian countries, the hydrological and ecological issues of the lake will affect the relations between neighboring countries as well.

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"Urmia recovery plan: water transfer from Aras River",27/01/2013, online at: http://www.todayszaman.com/news-305209-urmia-recovery-plan-water-transfer-from-aras-river.html

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❖ Iran May Buy Water From Neighbors to Offset Shortages

Iran may consider buying water from Tajikistan and other neighbors to address shortages, the Iranian Students News Agency said today, citing an official in parliament.

The Iranian parliament's agriculture committee is working on a report on the project, said Ali Iranpour, one of its members, according to ISNA. Water purchases from Tajikistan may address shortages in the east of Iran, ISNA said.

Turkey, which buys oil and gas from Iran, shares a long border with the Islamic Republic of Iran.

"Iran May Buy Water From Neighbors to Offset Shortages",23/01/2013, online at: http://www.bloomberg.com/news/2013-01-23/iran-may-buy-water-from-neighbors-to-offset-shortages.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=43f0acadcb-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Iran negotiating with other countries to import water

Iran has been negotiating with other countries to import water into its provinces, that lack it, Khabar Online reported.

Among those provinces are: North Khorasan, South Khorasan, Khorasan Razavi, Yazd, Kerman, Semnan, Tehran and Qom.

Member of Iranian parliament's Agriculture committee, Ali Iranpour said Iran is considering to import water from Tajikistan, that is looked at as a good source of water for the Islamic Republic.

In May 2012, Iranian Energy Minister Majid Namjou said that Iran considers to import around one billion cubic meters of water from Tajikistan.

He made the remarks on the sidelines of the Iran-Tajikistan 9th Joint Economic Committee meeting, which was held in Tehran.

Iran experiences daily increase of water consumption among population, and the lack of water is felt more and more with each year.

Iran has experienced several droughts in recent years, especially in the south where it gets hit by violent sand storms that engulfed several cities.

Sand storms particularly enter Iran from neighbouring Iraq where desertification has increased over the last two decades due to wars.

"Iran negotiating with other countries to import water", 24/01/2013, online at:
http://en.trend.az/regions/iran/2111562.html

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❖ Evros On Alert

The rapid rise of the Evros River's water levels caused by the heavy rains and severe flooding during the past days in Turkey and Bulgaria, is of particular concern. Due to the heavy rains, large volumes of water were gathered in Ivaylovgrad and Stounten Klantenets, Bulgaria.

On the evening of Jan. 21, at Pythion station the water levels rose above 5.30 meters, which means 10 centimeters higher than the alert threshold. In Kipoi, the level reached 4.75 meters, with a maximum of 4.70 meters, while in Petalo it reached five meters.

The Civil Protection Authority of the Evros Municipality warned neighboring municipalities and their residents not to approach the streams, the river, the embankments, and to remove animals, machinery and tools from the areas around Evros.

The lower course of the river, where it forms the border of Greece and Turkey, is very vulnerable to flooding. For about four months every year the low lands around the river are flooded. This causes significant economic damage, such as loss of agricultural production and damage to infrastructure, which is estimated at several hundred million euros.

The last two times Evros flooded was in 2006 and in 2007. Several causes have been proposed, such as more rainfall due to climate change, deforestation in the Bulgarian part of the catchment area, increased land usage in the flood plains and difficult communication among the three countries.

"Evros On Alert", 22/01/2013, online at: http://greece.greekreporter.com/2013/01/22/evros-on-alert/

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❖ Arab American News: Water shortages in Middle East could shape geo-political future

Middle East leaders in government and industry recently met at the inaugural International Water Summit to discuss the potential impact of future water shortages according to The Arab American News.

The summit highlighted the extreme importance of water for stability in the region, and for some countries water has become even more a commodity than oil. One Kuwaiti official told the summit that whenver they dig for water, "...we strike oil."

"Arab American News: Water shortages in Middle East could shape geo-political future", 24/01/2013, online at: http://www.pressandguide.com/articles/2013/01/24/news/doc51015e55b72bd608868765.txt

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❖ Water Woes in Palestine

Water crisis in the West Bank and Gaza is largely overshadowed by the overall political tension between Palestine and Israel. However, the ever-growing water conflict between the two sides is a major impediment to reaching a just and peaceful resolution to the Palestine-Israel conflict, and an essential component for the creation of an independent Palestinian state. Ever since the Nakbah (Day of Catastrophe) in 1948, Israel has sought to control the main sources of water, and after the 1967 conflict Israel has managed to control all of the major water sources it shares with Palestine and other neighboring countries such as Lebanon, Syria and Jordan. These sources include the Jordan River, Yarmouk River and the underground water reservoirs underneath the West Bank. Let us take a close look at water woes in the West Bank and Gaza Strip.

West Bank

The rampant discrimination in utilization of water resources is evident with Palestinian farms relying on inconsistent rainwater to irrigate their crops, and illegal Israeli settlement farms using state-of-the-art irrigation systems. Despite controlling 100% of the water flowing from the Jordan River, Israel is using 85% of the water from the aquifers within West Bank territory while Palestinians are receiving a pitiful 15%.

Though theoretically Palestinians could drill more wells to help sustain their crops, they are forbidden to do so without acquiring permits from the Israeli occupation forces. These permits are difficult, if not impossible, to obtain forcing Palestinians to rely on Israeli authorities for access to their own water. This has lead to per capita water consumption in the West Bank to be approximately 73 liters, whereas Israel's per capita water consumption is approximately 242 liters. In other words, per capita use in Israel is three and a half times higher than in the West Bank.

Responding to reports reflecting the injustice in water resource distribution, the Israeli government states that it has responded to the needs of the Palestinians and has increased the quantity of water provided to them far beyond that specified in the Interim Agreement. However, what it fails to mention is that 60% of the water it provides is sold to the Palestinians at inflated prices, which most civilians cannot afford.

Of the water available from West Bank aquifers, Israel uses 73%, West Bank Palestinians use 17%, and illegal Jewish settlers use 10%. Another shocking fact is that each Israeli consumes as much water as four Palestinians. Under international law it is illegal for Israel to expropriate the water of

the Occupied Palestinian Territories for use by its own citizens, and doubly illegal to expropriate it for use by illegal Israeli settlers

Gaza Strip

Since the blockade imposed on Gaza in 2006, it has been dealing with constant raids, bombardment, and attacks from the Israeli occupation forces, hindering any kind of development that might be possible. One of the greatest sectors affected by continuous Israeli aggression is water supply and sanitation. Water supply and sewage infrastructure are often damaged leaving the area without proper sanitation and without a reliable water source. This has a large effect on Gaza's only source of water – the coastal aquifer underneath the Mediterranean Sea coast shared by Gaza, Israel and Egypt. Israel's blockade of the Gaza Strip has pushed the already ailing water and sewage system to a "crisis point".

Reports published by the World Health Organization (WHO) suggest that 95% of this water is unfit for consumption due to the lack of proper sanitation, and that Gaza could become unlivable as early as the year 2016. The good news is that World Bank and Islamic Development Bank have recently approved $6.4 million and $11.14 million respectively for the development of the Gaza's water and sewage infrastructure to improve extensively damaged sanitation facilities and highly contaminated water supply.

Major Hurdles

Financial assistance from Arab world and international agencies can provide a big boost to improve living conditions in Palestinian areas but do not represent a sustainable solution to the problems at hand. The first problem requiring immediate attention is the unjust distribution in water resource use. To ensure peaceful resolution to the conflict between Palestine and Israel, there must be an equal distribution of water allowing enough water for development and basic human needs of the Palestinians.

Another major hurdle is the Israeli policy of stifling development activities in Palestinian areas. The inhuman blockade of Gaza and construction of the "separation barrier" around the West Bank give Israel full control over the resources entering and exiting Palestinian territories. Much of the land cut off by the West Bank barrier is land with good access to a major aquifer. This greatly restricts any plans for the development and construction of proper sanitation and water storage/extraction facilities that may allow Palestinian cities and villages to communities to flourish.

A recent report by Amnesty International says that on average Palestinian daily water consumption reaches 70 litres a day, compared with 300 litres for the Israelis. Many Palestinians barely get 20 litres a day – the minimum recommended even in humanitarian emergencies. To conclude, the problem at hand is not the lack of water in the region, but the uneven distribution of water resources between Palestine and Israel.

"Water Woes in Palestine", 23/01/2013, online at: http://www.ecomena.org/water-palestine/

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❖ Israeli Military Demolishes Home, Water Well

HEBRON, January 21, 2013 (WAFA) – The Israeli military government demolished Monday a two-story home and a water well east of the West Bank town of Yatta, south of Hebron, according to a local activist.

Ratib Jbour, from the anti-settlements committee, told WAFA that an Israeli army force with officials from the zoning and planning department in the civil administration, Israel's military arm in the occupied West Bank, demolished the two-story house Hamad Amour was living in with his 16-member household.

The army claimed the house was built in Area C of the West Bank, which is under full Israeli military control.

The Israelis also demolished a water well used by Mousa Makhamreh to irrigate his land and a barn in a different area of Yatta.

"Israeli Military Demolishes Home, Water Well", 21/01/2013, online at:
http://english.wafa.ps/index.php?action=detail&id=21536

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❖ U.S. Provides Additional $20 Million in Assistance to Jordan to address water shortages

Hartha- U.S. Ambassador to Jordan Stuart E. Jones announced today an additional $20 million grant from the United States to assist local communities in the Northern Governorates to better address water scarcity, exacerbated by the influx of Syrian refugees into Jordan.

The grant, announced in the attendance of Secretary General of the Ministry of Water and irrigation Basem Telfah, provides rapid assistance to countries facing fluid situations. This grant will support local communities address water ways to fix water scarcity challenges, including management and improving delivery by fixing community and potable water networks in northern Jordan.

Ambassador Jones highlighted the importance of the grant, saying, "The U.S. Government is standing behind the people of Jordan to help address community level water needs as a result of a system that is increasingly exacerbated in light of the recent crisis in Syria. These funds will help ensure the availability of the necessary water resources for the people of the northern governorates." Secretary General Basem Telfah stressed "The need for ideal utilization of all water resources in Jordan, which suffers from a scarcity in water resources. This grant will help us achieve this goal."

An important component of this project is the active community-based organizations' engagement. The Ambassador and the Secretary General of Water toured the village of Hartha, located on the Syria border, and witnessed first-hand the ways the Hartha Charitable Society, , was able to impact the lives of hundreds of local families thanks to the assistance provided by this grant. They were able to see cisterns built to store water captured from rooftops for use during the drier, a filter system in a school designed to re-use water from hand-washing for agricultural purposes including a garden and olive trees.

Mr. Mahmoud Obeidat (Abu Tarek), Director of the Hartha Charitable Society, noted, "We are very proud of the important water management work we are doing here, and strongly believe the revolving nature of the loans we manage ourselves will mean more people can benefit from this work for a long time."

"U.S. Provides Additional $20 Million in Assistance to Jordan to address water shortages", 22/01/2013, online at: http://en.ammonnews.net/article.aspx?articleNO=19980

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❖ Israel Prize awarded to Tel Aviv University scientist for water research

TAU's Professor Emeritus Gideon Dagan wins Israel's top honor

Prof. Emeritus Gideon Dagan of Tel Aviv University's School of Mechanical Engineering is the recipient of the 2012 Israel Prize for Earth Science. The prize, which will be awarded at a April 2013 ceremony on the eve of Israel's Independence Day, honors his outstanding career and groundbreaking research in the field of hydraulics.

The Israel Prize Committee called Prof. Dagan one of the forefathers of the discipline of Stochastic Hydrology, which uses statistical methods to analyze and predict various field scale processes including groundwater pollution.

Education Minister Gideon Sa'ar praised Prof. Dagan's scientific contributions, saying that his work aids in Israel's understanding of available groundwater resources. Prof. Dagan's research will help scientists develop models to better manager Israel's precious groundwater in the years to come.

The future of water security

Prof. Dagan's stochastic models and analysis aid in the understanding of how groundwater moves across the Earth's topsoil layer. This data can be used to prevent groundwater contamination as well as contribute to water conservation efforts in Israel and across the globe. The situation is especially dire in the Middle East, says Israel's Energy and Water Minister Uzi Landau, who predicts that water in the region will become more valuable than oil considering the rapid population growth.

A prolific author, Prof. Dagan has published over 165 scientific articles over his career and has more than 6,000 citations. He has also lectured at top academic institutions worldwide.

Tel Aviv University is proud to number 73 recipients of the Israel Prize among its faculty. The prizes are given every year by the state of Israel to those who have displayed excellence in their fields of study or made a strong contribution to Israeli culture.

"Israel Prize awarded to Tel Aviv University scientist for water research", 18/01/2013, online at: http://www.eurekalert.org/pub_releases/2013-01/afot-ipa011813.php

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❖ Egypt still undecided on River Nile sharing agreement

Egypt is still undecided about signing the River Nile sharing agreement and will not be a part of it soon, the country's Minister of Water Resources and Irrigation, Dr Mohamed Baha'a El-Din has said.

Contested clauses

During a press briefing in Kampala Friday, Dr El-Din said the Nile sharing agreement also known as the Entebbe Framework, has some clauses that needed revision.

"What we need to focus on here are the bilateral relations between our countries (Uganda and Egypt) not the Nile sharing treaty," he said, noting that, the two countries had a lot to achieve in partnership than focusing on the agreement.

The deal was initiated in 1999 by the Nile Basin countries (Egypt, Sudan, Uganda, Ethiopia, Rwanda, DRC, Eritrea, Tanzania and Kenya) with an attempt to avert the unequal distribution of the Nile waters catapulted by the British in colonial days in favour of Egypt and Sudan.

The agreement was refreshed in April 2010 by all the countries to guarantee amiable redistribution of the Nile waters, but Egypt and Sudan boycotted the talks on grounds that it is non-binding.

Egypt commands over 55 billion square meters of the 84 billion cubic metres annual flow of the Nile waters but is demanding for up to 7 billion square meters, if it is to enter into any agreement with any Nile basin country on the river matters.

However separately, Ahmed Baha'a El-Din, the Egyptian Nile Water sector chairman, told the Sunday Monitor, that despite the 'contested' clauses, there are some unsolved differences with the main Sudan that can't allow agreement."

Early this week, the Egyptian media quoted Dr. El-Din telling a Chinese news agency that, "the Entebbe agreement is useless without Egypt and Sudan's signatures."

Meanwhile, Egypt has injected another $2 million in the last phase of the bilateral treaty to help fight aquatic weeds and hyacinth, improve landing sites and build more human capacity in marine supervision.

Donation

The Egyptian government also donated equipment like bulldozers to upgrade landing sites which

were received by Uganda's Agriculture Minister Tress Bucyanayandi who praised the unwavering relations between the two countries.

"Egypt still undecided on River Nile sharing agreement", 20/01/2013, online at: http://www.monitor.co.ug/News/National/Egypt-still-undecided-on-River-Nile-sharing-agreement/-/688334/1669686/-/h3tjix/-/index.html

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❖ 71% of public wants new Knesset to push green issues

Poll by Society for Protection of Nature in Israel finds that majority of Israelis want new government to promote an environmental agenda

Billie Frenkel
Published: 01.22.13

A new survey by the Society for Protection of Nature in Israel found that an overwhelming majority of the public would like to see the new government promote an environmental agenda alongside its social one.

The poll, which surveyed 500 people ages 18 and over, found that 75.3% of the public thinks that environmental issues are pivotal to their quality of life and 71% believe it is important that Knesset members and minister vie to protect and improve the environment and reduce Israel's carbon footprint.

According to the data, 25.4% of Israelis ages 18-34 rated the environment as a "very important issue"; 40.8% of Israelis ages 35-54 rated it as such and 53.9% of Israelis ages 55 and over concurred.

A geographical segmentation found that 49.1% of Israelis living in the north said the issue was very important; a sentiment echoed by 45.6% of those living in the south, 40.7% of those living in central Israel and 24.2% of those living in Jerusalem.

Some 75% of secular Israelis said that it was very important that the Knesset pursue green legislation. Some 83.6% of observant Jews and a staggering 92.1% of religious Jews agreed.

But it seems the public is relatively unhappy with the outgoing government's green agenda.

According to the poll, only 6.3% of the public was pleased with the government's environmental agenda. Twenty-two percent said they were "fairly satisfied" with government policies; while 32.4% rated them as "barely satisfactory" and 16.9% said they were unhappy with them altogether.

Some 39.4% of those polled said it was very important for them that the minister and Knesset members pursue environmental issues, and only 5.7% said that it did not matter to them.

Asked who they thought would be best suited to serve as the next environmental protection minister, 25% said that current minister Gilad Erdan (Likud) should retain his position; 6.4% said MK Nitzan Horowitz (Meretz) should be named to the office, 4.8% favored MK Benny Begin (Likud) and 4.7% said they would like to see MK Dov Khenin (Hadash) be named the next environmental protection minister.

The Society for Protection of Nature in Israel said that while it was trying to ensure that the various parties make the environment a high priority on their agenda, the majority of them seem to push it aside.

"71% of public wants new Knesset to push green issues", Ynet, 25/01/2013, online at: http://mideastenvironment.apps01.yorku.ca/?p=6747

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❖ From energy to water usage, major parties go green

Labor, Tzipi Livni Party, Meretz slam PM for privatizing public land; 75% of Israelis say environmental issues essential to quality of life.

As the country's leading parties spar over two-state solutions and who must serve in the army, one issue that nearly all have declared crucial to the state's survival is environmental protection.

Whether written words vowing to reduce greenhouse gas emissions and protect biodiversity will translate into action in the next Knesset's policies and legislation, however, remains to be seen.

In anticipation of the election, the Society for the Protection of Nature in Israel conducted a survey through via the Geo-cartography firm gauging the importance of environmental issues to the public as they head to the polls.

Of the approximately 500 people surveyed of all ages and genders throughout Israel, 75 percent deemed environmental issues essential to the quality of their lives and 71% felt that it was critical that Knesset candidates have environmental agendas.

While 31% of those polled said they did not know who should be the next environment ministry, 25% said they believed current Environmental Protection Minister Gilad Erdan (Likud Beytenu) would be best for the job, with the next closest candidate being MK Nitzan Horowitz (Meretz) – at 6.5%.

Looking particularly at the country's water sector, most of the parties supported increased treatment of wastewater for various uses, particularly in agriculture.

In addition to the sewage purification systems, Likud Beytenu advocated building more desalination plants and continuing to restore the nation's streams and rivers.

The Labor Party and Meretz called water a "fundamental human right," while The Tzipi Livni party extended that claim by calling for basic legislation deeming environmental quality every person's right.

The Labor Party said it would be encouraging water conservation, leak prevention, runoff collection, reuse of water and greywater usage, while Meretz advocated stricter supervision of sewage, legislation for greywater and a decrease in power of the municipal water corporations.

In addition to touting most of the above, The Tzipi Livni Party also called for higher taxes on excessive water use and expanded research for water technologies.

Likewise promoting greywater use and increased water technology research, Yesh Atid also called for new pipe infrastructure to convey treated wastewater to agriculture and rivers. While promoting the revival of previous flows in the entire country's streams, Bayit Yehudi said it would also specifically target polluted waters in Judea and Samaria, while building rainwater collection reservoirs and a sewage treatment facility there.

In the energy sector, one hot-button issue among the parties is the export of natural gas. While Likud Beytenu did not provide an official position on this issue in its platform, the Zemach Committee plan supported by the current administration calls for exporting about 57% of the country's natural gas reserves, leaving 450 million cubic meters of gas for the domestic market, enough to supply the country with gas for the next 25 years, according to committee estimations.

Yesh Atid vehemently opposed the committee's conclusions as well as the export of natural gas in general, charging that the committee overestimated the reserves and that a new solid estimation process should occur.

"Yesh Atid recognizes that the natural gas is a one-time gift from nature and a source of national security," a statement from the party said. "It is not infinite, it is not renewable and it is not fully mapped out."

Meretz opposed the export of any natural gas, while The Tzipi Livni Party and Labor called for only a very minimal amount of export.

While Bayit Yehudi did not specifically comment on the export issue, the party said that it would advocate expanded usage of natural gas in transportation and in homes as a means to ensure energy independence.

The major parties nearly unanimously supported the advancement of renewable energy in the electricity market, with most stressing a need to reduce fossil fuel emissions, increase energy efficiency and encourage research of new technologies.

Aiming to move up the government's goals of 10% renewables by 2020, The Tzipi Livni Party said that it hoped to achieve 10% by 2017 and 20% by 2020, and establish an energy master plan for the next 50 years.

While Meretz maintained the 10% by 2020 goal, the party set a slower goal of 20% by 2030 and demanded the termination of the Shfela basin oil shale project.

Yesh Atid stressed a need for decentralized medium-sized solar energy plants, while Labor promoted the integration of electricity smart grids.

Likud Beytenu, Labor, The Tzipi Livni Party, Yesh Atid and Meretz all advocated some form of a "polluter pays" principle in the air pollution sector.

Meretz also called for the deployment of more advanced air monitoring systems, while Yesh Atid suggested growing more plants in urban centers, to naturally absorb more of the air pollution.

The Tzipi Livni Party committed to fully implementing the National Air Pollution Prevention Plan within four years to meet targets of the Clean Air Law, and Labor advocated a similar plan while also favoring criminal charges against noncompliant polluters.

In the garbage sector, Likud Beytenu called for the further treatment of solid waste and hazardous substances and emphasized the success of the current administration initiating "precedent-setting environmental legislation" on waste issues – the Packaging Law, electronic waste legislation, recycling policies and asbestos removal.

Stressing that Israel is still second in the world in per capita garbage production, however, Yesh Atid warned that quantities of trash in landfills must yet be reduced. The Tzipi Livni Party aimed to accelerate the rate of recycling and reduce the concentration of hazardous materials in city centers,

while Meretz pushed for the prohibition of plastic bags from supermarkets and better hazardous waste treatment.

In addition to changing recycling from voluntary to mandatory, Labor called for the passage of a Polluted Lands Rehabilitation Law as well as waste sorting facilities all over every municipality.

Nearly all the major parties said that expanding the public transportation system into a more efficient, user-friendly mode of travel would be a top priority of their platforms.

The Tzipi Livni Party, Meretz and Yesh Atid all specifically vowed to increase cycling paths throughout the country through various initiatives, while Meretz also advocated the development of metropolitan transit authorities and a National Road Safety Authority independent from the Transportation Ministry.

Yesh Atid urged the adoption of alternative fuels like biodiesel and bioethanol as well as investments in new light rails and bus rapid transit (BRT) systems. Bayit Yehudi also called for progressive taxing on vehicles according to pollution rate.

Increased animal rights were particular concerns of the Labor Party, Yesh Atid and Meretz and The Tzipi Livni Party, with the latter demanding the transfer of animal welfare authority from the Agriculture Ministry to the Environment Ministry.

Meretz and Yesh Atid also called for widespread sterilization of street cats, increased shelters for animals and bans on experimentation for cosmetics, while Meretz promoted a prohibition on hunting, fur and chicken battery cages.

As far as the preservation of the country's nature and open spaces goes, most of the parties supported keeping beaches accessible to the public, with Likud Beytenu placing emphasis as well on protecting the coastal cliffs.

Likud Beytenu, Labor, Meretz, Bayit Yehudi and Yesh Atid all specifically promoted increased rehabilitation and decreased exploitation of the Dead Sea.

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The Tzipi Livni Party ordered the declaration of 100,000 hectares of land to become nature reserves, while both this party and Bayit Yehudi also called for an amendment to the Coast Law that prohibits beach building even in previously approved projects.

The Likud Beytenu hailed the Netanyahu administration's successes in bringing an "environmental outlook" to the forefront of the government, particularly noting the passage of green growth policies and programs to curb greenhouse gas emissions.

"There has been no government that has acted for environmental preservation as the current government has," a statement from the party said.

Most of the other parties took a stab at Likud Beytenu, however, with Labor, Meretz and The Tzipi Livni Party all slamming the administration for continually "privatizing" public land and open spaces and pushing forward a faulty planning and building reform that would delegitimize local planning.

Bayit Yehudi agreed that privatization of such land should not occur and that only government authorities should administer natural spaces.

"The Labor Party places a central emphasis on sustainability and environment, which appears widely throughout the party platform," said a statement from the Labor Party for The Jerusalem Post.

"The upcoming Knesset will be active in advancing these major issues, which have been damaged in part due to the privatization of land and natural resources in Israel."

"At the end of the day, in my opinion, looking the past is more important than platforms," Mossi Raz, of Meretz, told the Post.

Examining the environmental platforms of Meretz, Yesh Atid, Labor and The Tzipi Livni Party, Raz agreed that the platforms are, in fact, intrinsically similar.

"I think the differences between us and them are not in the environment issues," he said.

Prof. Alon Tal, chairman of the Green Movement and No. 13 on The Tzipi Livni Party list, told the Post that his party's environmentalism does, however, diverge from that of Meretz, Yesh Atid and Labor.

"Each line in our platform is based in position papers that he have from the Green Movement, from 40 professors and experts on these issues," Tal said. "And [The Tzipi Livni Party] is the only party that brings in someone whose essential purpose in coming to the Knesset is promoting environmental issues."

Lacking a comprehensive environmental platform, another major party, Shas, called on its website for preserving nature and landscapes as a crucial element of maintaining the land's holiness, as well as limiting industries and construction that harm or pollute nature. Shas did not respond to requests from the Post for a more detailed version of its environmental policies.

"From energy to water usage, major parties go green", Jerusalem Post, 25/01/2013, online at: http://mideastenvironment.apps01.yorku.ca/?p=6745

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❖ Gov't to give NIS 8M for rivers' rehabilitation

Environmental Protection Ministry issues several bids with aim of turning neglected bodies of water into prized natural resource

01.23.13

The Environmental Protection Ministry has issued several bids for the rehabilitation of polluted rivers and streams across Israel, Ynet has learned.

The ministry said that is has been able to secure NIS 8 million (roughly $2.14 million) in government funds, with aims of turning neglected bodies of water into natural resources that can be both enjoyable and profitable.

Information
Polluters to be listed on public database / Lior Ben David, Calcalist
Knesset passes law mandating industries with high environmental impact to list annual pollution results on public database
Full story

The funds will go toward projects that encourage educational activities and will also be invested in projects aimed at rehabilitation of indigenous vegetation to the areas; eco-friendly infrastructure projects, and the restoration of the areas' ecological balance.

"Alongside restoration work that has already been carried out on the Kishon and Yarkon rivers, we've expanded the river restoration project to the periphery," Environmental Protection Minister Gilad Erdan said.

"We will clean up rivers that have been polluted for decades. We are returning them to the public as centers of leisure for every Israeli family."

The ministry has already spent some NIS 170 million ($45.5 million) on rehabilitating rivers across Israel, including the Alexander, Taninim, Yarkon, Tavor, and Shikma rivers.

So far, some NIS 220 million ($58.85 million) have been spent on the rehabilitation of the Kishon River alone.

"Gov't to give NIS 8M for rivers' rehabilitation", YNET, 25701/2013, online at:
http://mideastenvironment.apps01.yorku.ca/?p=6741

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❖ Is the Red Sea-Dead Sea canal about to become reality?

The plan, estimated to cost almost $10 billion, has raised concerns among environmentalists in both Jordan and Israel.
By Zafrir Rinat | Jan.16, 2013

After almost a decade of arguments over the feasibility of a proposed pipeline between the Red Sea and the Dead Sea, the World Bank released a series of reports over the weekend that declare the project feasible from an engineering, economic and environmental standpoint.

But while the Regional Development Ministry welcomed the reports as an important step toward implementing the project, the environmental group Friends of the Earth Middle East said the findings ought to definitively bury the idea.

The project's goals are to stabilize the shrinking Dead Sea, supply water and electricity to countries in the area, especially Jordan, and engender regional cooperation that would promote peace. The World Bank concluded that without the pipeline, the Dead Sea would shrink by about 10 percent over the next 50 years, which would do major harm to tourism, local industries and the environment.

A panel of experts from several countries, including Jordan and Israel, then examined several alternative proposals for importing a large amount of water from the Red Sea. The best option, it concluded, was to build a pumping station near Aqaba that would pump the water to a high point, whence it would flow via a system of pipelines and a tunnel to the area south of the Dead Sea.

There, the world's largest desalination plant would be built, with most of the desalinated water – about half a billion cubic meters a year – going to Jordan. The high-salinity water left over after the desalination process would be piped to the Dead Sea, to halt and eventually reverse its shrinkage. A hydroelectric plant would also be built, to supply electricity to Jordan, Israel and the Palestinian Authority.

Altogether, the plan envisions almost two billion cubic meters of water a year being pumped from the Red Sea, most of which would eventually reach the Dead Sea. The World Bank estimated the total cost at almost $10 billion, but said much of this sum could be financed out of the profits from selling the desalinated water and electricity.

The bank acknowledged that the project would have some negative consequences for the environment: For instance, algae would likely start growing in the Dead Sea, and leakage from the pipes could raise the salinity of an important groundwater reservoir in the Arava. But it believes these problems could be dealt with, and recommended starting cautiously, with a small pilot project to bring water from the Red Sea to the Dead Sea. Nevertheless, it acknowledged that such a pilot would be of limited value in assessing the environmental impact.

Gidon Bromberg, Israel director of FOEME, said the negative environmental consequences cited in the reports ought to be enough by themselves to kill the project.

But in addition, he said, despite the bank's finding that the project was economically viable, "it adds in small print that it would require assistance of $5 billion from the international community, and that Jordan would have to invest $2.5 billion in infrastructure that would bring the water to Amman. The bank forgets that there's a global economic crisis, and that Jordan is on the verge of bankruptcy. The project will raise water prices in Jordan and cause riots."

Jordan itself also recently voiced concern about the project's cost, saying it would consider a smaller project that would just bring desalinated water from the Red Sea to Amman.

But the Regional Development Ministry welcomed the reports, even while noting that so far, the World Bank has merely posted them for public comment, and will issue its final recommendations only after reviewing these comments. Only then will Israel make its own decision.

"All the parties would benefit from the cooperation around this project, and it would save the Dead Sea, which is a wonder of the world," explained Regional Development Minister Silvan Shalom. "We'll work to recruit influential parties to get the project implemented in practice."

"Is the Red Sea-Dead Sea canal about to become reality?", Haaretz, 25/01/2013, online at: http://mideastenvironment.apps01.yorku.ca/?p=6728

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❖ Water-stressed Kenyans learn to share to keep the peace

OLO LONGONOT, Kenya (AlertNet) - By the time the violence had died down, more than 80 people lay dead and hundreds were left homeless.

Yet there was scarcely enough water – the resource the Maasai and Kikuyu tribes were fighting over – to wash away the blood that had stained this part of Kenya's Rift Valley.

"The rivers were drying up," shrugs Salau Ole Kilusu, a lanky and sunbeaten Maasai elder, recalling the conflict that erupted in 2005. "The Maasai needed the water for their livestock. The Kikuyus said they needed it for their farms. None was willing to cede way."

More than seven years later, it is still easy to see why water is such a contested asset here at Kijabe escarpment, a scorched lowland terrain that sprouts with cactus and acacia vegetation.

Giant whirlwinds collect on the dusty patches without warning, filling the daylight with swirling reddish-beige clouds.

SHRINKING WATER SUPPLY

Water is in short supply in this arid part of Kenya. The country's Water Resources Management Authority categorises Kenya as a water stressed nation, and the **World Bank** put its annual renewable fresh water supply in 2011 at 497 cubic meters per capita – less than Somalia and about the same as Oman, on the Arabian Peninsula.

But innovative water sharing efforts could help ease tensions between Kenya's ethnic groups, laying the groundwater for cooperation rather than competition, their backers say.

The Kenya Meteorological Department links the country's growing scarcity of water to erratic weather and climate change, noting that the arid and semi-arid parts of the country have recorded a slight rise in temperature.

"The wishful eyes of hungry children and the lengthening footsteps of tired women carrying water fetched from distant places from their homesteads tell the effects of climate change," says Mithika Mwenda, coordinator of the **Pan African Climate Justice Alliance**, a lobby group pushing for restitution for communities affected by climate change in Africa.

In the hardest hit areas, such as the Kijabe escarpment, women now comb the dry riverbeds for water while their donkeys bray hopefully. Seldom is any to be found.

"It is expensive for me to buy water," says Joyce Kerongo, from the village of Satellite, named for a weather outpost that has been established there. "So I have to wake up very early in the morning to join other women in the long search for water. Sometimes I come back home with none."

The mother of five says a 20-litre drum of water can cost as much as 100 Kenyan shillings (about $1.15, enough to buy a kilogramme of maize flour) at one of the nearby shopping centres.

Even so, the price is sometimes put higher if the water vendor is not a Maasai like herself.

"Such is the tension that has fuelled the communities' intolerance against each other," says Rift Valley provincial police officer John Mbijiwe. "It becomes worse when a general election is imminent."

SHORTAGES IGNITE VIOLENCE

But it is longstanding disputes over sharing of community resources that ignite violence as much as electoral politics, according to intelligence sources, and climate-induced water shortages now exacerbate these tensions.

In the Rift Valley, ethnic Kikuyus practice agriculture and trade for a livelihood while the nomadic Maasai are pastoralists. For generations, both of these communities depended on the region's streams and rivers as a source of water, according to elders.

But climate change, they say, has affected the natural weather cycle, leaving a growing number of riverbeds and seasonal rivers dry.

The Maasai claim that huge tracts of land that had been their traditional grazing and watering resources were gifted to the Kikuyus by Kenya's first post-independence government. The Kikuyus, in turn, insist that they purchased the land legitimately through land buying companies.

Regardless of how the land was turned to agriculture, the farms have taken a share of the region's limited water resources.

"The Kikuyus began diverting streams and rivers to irrigate their farms," charges Ole Kilusu, a Maasai elder. "Frequent droughts claimed the rest of the little resources that had been spared."

And so resentment was sown, with Kikuyus counter-claiming that the Maasai have failed to show respect for Kikuyu-owned farms, including allowing their animals to invade fields.

"Tensions are likely to occur if communities fail to agree on how to share resources that spill across counties," said David Kimaiyo, the new inspector general of police, during a press conference on the recent flare-ups of violent in the Tana Delta.

The issue is being watched closely ahead of March 2013 polls, as Kenya prepares to usher in a new administrative system that devolves power to county governments.

SHARING WATER

But though rain clouds are scarce, there is a silver lining. Some communities have decided to give peace a fresh lease of life through the formation of resource sharing groups.

After signing a peace covenant, one group, the TD Jakes Water Project at Maai Mahiu, has sunk a borehole 13 kilometers from the town and built a $350,000 pipeline that brings water.

At Olo Longonot, the communal land where the water point sits, colourfully cloth-clad Maasai herders and Kikuyus sporting trousers and faded tops gather.

The Kikuyus are among the many guiding donkey carts piled with water barrels to and from the storage tanks towering above Olo Longonot's higher grounds.

The Maasai, meanwhile, shepherd their flocks of cattle, goats and sheep along the concrete water troughs placed a few yards from the storage tanks.

"This is where the two communities border each other," explains Josphat Oipoe, the secretary of the water project. "The land has long been a source of conflict, but this water project is reconciling us."

Kagondu Njagi is an environmental writer based in Nairobi.

"Water-stressed Kenyans learn to share to keep the peace", 23/01/2013, online at:
http://www.trust.org/alertnet/news/water-stressed-kenyans-learn-to-share-to-keep-the-peace/

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❖ Maasai herders breed fewer, stronger cattle to tackle climate change

LONDIGO, Tanzania (AlertNet) – The loss of more than half their livestock in the 2009 drought has led Maasai pastoralists in northern Tanzania's Arusha region to breed fewer, stronger cattle and end their traditional focus on numbers alone as symbols of wealth and status.

The impact of that devastating drought, which dealt a blow to the whole nation's economy, is still visible in the small number of cattle in many villages of Engarenaibor in Arusha's Longido district.

The district's cattle breeders and owners lost at least 120,000 cattle, more than half the total herd of 200,000, as a result of the drought, which plunged the region into poverty and threatened the pastoralists' traditional livelihood.

The good news emerging from this blow to their way of life is that breeders have realized that in a time of climate change their wealth lies not in the size of their herd but in its quality.

DROUGHT 'TAUGHT US A LESSON'

"The days of keeping many head of cattle for prestige are gone thanks to the 2009 drought. It has taught us a lesson. A lesson to adapt to climate change," says cattle owner Ngaiyok Legilisho Kipainoi.

For many years, Maasai pastoralists had resisted government pressure to reduce the size of their herds, until the drought made clear the need to adapt to the changing environment.

Reducing their herds has allowed herders to use less water and reduce the degradation of grazing land.

As Kipainoi sees it, his fellow villagers are "graduating from the culture of keeping livestock for fame to increasing the productivity of their animals in a well-managed manner."

"We have started selling our animals and we use the proceeds to build decent homes or pay school fees for our children," says Kipainoi, a 35-year-old who has two wives and six children. All his children attend primary school.

At the onset of the drought Kipainoi boasted a herd of 480 cattle, but he emerged from the catastrophe with less than half as many.

BREEDING FOR RESILIENCE

"After the drought we realised that our local Zebu breed can withstand adverse weather conditions and are well adapted to the environment. So if we are to improve earnings from livestock, without risking another loss to drought, we must practise proper animal husbandry," says Kipainoi, standing beside his new motorcycle at the site of his new house, bought with earnings from his cattle herd.

Other local cattle farmers have also started selective breeding to build up a productive stock that is resilient to climate change, he says.

"This involves selling cattle that are weak and cross-breeding new stock from animals that display strong characteristics of high productivity and resilience. Preferred animals are those that feed selectively on the range, can trek long distances and are resistant to local diseases," he says.

Ongoing experiments concentrate on cross-breeding exotic cattle varieties with local Zebu and Borana cattle and popularisation of the hardy Gabra breed of goats.

"Our plan is to ensure that calving takes place at the start of the short rainy season, when fresh pastures enable cows to yield more milk. In that way calves stay healthy enough to survive their first dry spell and then benefit from the long rains before the long dry season sets in," Kipainoi explains.

To back up the pastoralists' efforts, the Arusha-based Tanzania Natural Resource Forum has come up with a climate change adaptation project that focuses on the drylands of Longido, Monduli and Ngorongoro districts in the Arusha region.

Similar projects are under way in Ethiopia, Kenya and Nepal, according to Ced Hesse, a drylands development researcher with the London-based International Institute for Environment and Development, which is backing the Tanzania adaptation effort.

"Maasai herders breed fewer, stronger cattle to tackle climate change", 25/01/2013, online at: http://www.trust.org/alertnet/news/maasai-herders-breed-fewer-stronger-cattle-to-tackle-climate-change/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=a938252da8-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Mali's famed Timbuktu without water, other services

Bamako, Mali (CNN) -- Mali's historic cultural center, Timbuktu, lacks electricity, water and phone service, because "terrorists" sabotaged the utilities there, a Paris-based spokesman for the ethnic Toureg separatist party MNLA said Thursday.

MNLA spokesman Moussa Ag Assarid said most of the "terrorists" fled Timbuktu for the desert after French planes on Tuesday bombed the militants' headquarters, which was built by former Libyan leader Moammar Gadhafi. However, Assarid warned, some militants remain in the fabled city.

Assarid's choice of the word "terrorists" highlights the ever-shifting alliances as Mali devolves into a wild frontier. MNLA used to be aligned with Ansar Dine, one of the main Islamist groups fighting to take over Mali. But after MNLA ousted the Malian army from Timbuktu last year, Ansar Dine and al Qaeda drove MNLA away.

The head of the United States' African Command, Gen. Carter Ham, spoke at Howard University in Washington on Thursday about the situation. He said his ultimate goal is helping a legitimate Malian government based in the capital of Bamako control the whole country.

U.S. has flown seven cargo missions to Mali

"Territorial integrity of Mali is nonnegotiable. No discussion of a separatist state or something like that. But, it also appears that Mali has asked for, and will need, some help to establish government control in the north," Ham said. "Realistically, we would all like to see the elimination of al Qaeda and others from northern Mali. Realistically, probably the best you can get is containment and disruption, so that al Qaeda is no longer able to control territory as they do today."

"This must be in fact and in perception an African-led endeavor that is done at the request of the Malian government, and I think that is well under way now," Ham added.

But recent allegations against Malian troops have some human rights observers questioning whether the Malian army has right on its side, or just might.

Malian soldiers have carried out a number of summary executions as they seek to drive back Islamist militants who have been advancing from the north, a human rights group claimed Thursday.

Mali's military offensive against the militants has gathered pace in the past two weeks, with backing from France and other international allies.

Refugees tell harrowing stories of life under the Islamist militants who hold northern Mali in an iron grip.

But the French-based International Federation for Human Rights said it was "very alarmed" by reports that Malian soldiers are themselves carrying out extrajudicial killings and abuses as they counterstrike.

FIDH claims the victims of these abuses have been anyone "accused of complicity with the jihadists or infiltrated elements, persons in possession of weapons, people who have no proof of their identity during military patrols or simply people targeted because of their belonging to certain ethnic groups."

The group said it had confirmed that Malian forces have carried out numerous executions in the key conflict area between the north and south, particularly in the towns of Sevare, Mopti and Niono.

"In Sevare, at least 11 individuals were executed in the military camp, near the bus station and near the hospital," the FIDH said. Reliable information indicates "close to 20 other executions in the same area where bodies are said to have been buried very hastily, in particular in the wells. In the Niono region, Malian soldiers killed two Malians of Tuareg origin."

The group says it has also been told of other summary executions in central Mali, and documents the pillaging of Tuareg homes by government soldiers.

What's behind instability in Mali?

A Mali military spokesman declined to comment on the record about the rights group's allegations.

The FIDH called for the immediate establishment of an independent investigation commission "to assess the scope of these abuses and sanction the perpetrators."

Although Malian and French politicians and military officials have repeatedly called for respect of international humanitarian law and human rights, the FIDH says it is concerned by the lack of scrutiny of these alleged violations.

"This series of grave abuses confirms the concerns that we have been expressing for several weeks," said the group's president, Souhayr Belhassent.

"These acts of revenge together with the extreme tensions that exists between the communities constitute an explosive cocktail leading us to fear that the worst could happen, especially in the context of the reconquering the North."

MNLA rebels who returned to Mali well-armed from fighting for thelate Libyan leader Moammar Gadhafi staged a military coup last year against the Malian government.

Islamic extremists capitalized on the chaos, carving out a large haven in Mali's north and imposing a strict interpretation of Sharia law. The Islamists banned music, smoking, drinking and watching sports on television. They also destroyed historic tombs and shrines.

Fellow rights group Amnesty International also has voiced concern over the actions of Mali's army.

"Particularly troubling is that among the Malian forces -- as well as pro-government militia -- are individuals who enjoy impunity for egregious human rights violations," wrote Scott Edwards, managing director of Crisis Prevention and Response at Amnesty International USA last week.

Among other abuses, an Amnesty report last year accused the Malian army of "indiscriminately" bombing the civilian population in response to the rebellion by armed Tuareg groups.

More signs al Qaeda in Mali orchestrated Algeria attack

Corinne Dufka, who heads Human Rights Watch in West Africa, told CNN on Thursday that education could help stem the "worrying number of reprisal killings."

"[It] should be a wake-up call not only to the Malian army to nip this problem in the bud and investigate and hold those responsible, but also to Mali's international partners -- the French, the European Union, the African forces who are coming in -- to acknowledge the weaknesses and problems within the Malian security forces, and then, to properly accompany them, to urgently train them in international humanitarian law and to mentor them so there are no further abuses in the future," Dufka said.

A CNN crew in Mali has heard anecdotal reports of abuses. It has encountered widespread hatred of the Tuareg in Mali, with many in the population blaming them for bringing the current conflict into Mali.

The CNN crew has heard reports that the houses and possessions of Tuareg families have been destroyed by either citizens or Mali's military.

Many Tuareg are in hiding or keeping a low profile for fear of retribution from the public and military. Tuareg in refugee camps have repeatedly said they had to flee Mali because of violence against them.

France's involvement in Mali began the day after militants said January 10 that they had seized the city of Konna, east of Diabaly in central Mali, and were poised to advance south toward Bamako.

Those events stoked fear among global security experts that Mali could become a new hub for terrorism.

The FIDH is a multinational human rights body made up of 164 groups across the world, with delegations at the United Nations in Geneva, the European Union in Brussels and the International Criminal Court in The Hague.

"Mali's famed Timbuktu without water, other services", 26/01/2013, online at: http://edition.cnn.com/2013/01/24/world/africa/mali-military-offensive/index.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=a938252da8-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Yemen threatened by water scarcity, malnutrition

Yemen needs $716 million to meet urgent humanitarian needs, the United Nations said Tuesday (January 22nd).

"The humanitarian situation in Yemen is urgent and people's lives are at stake," AFP reported Trond Jensen, head of the UN Office for the Co-ordination of Humanitarian Affairs in Yemen, as saying.

"We found there are more people that are food insecure than we thought, and we also found that more people are in need of nutrition support than we previously thought," he said.

According to UN statistics, around 10.5 million Yemenis are food insecure, and one fifth of children suffer from acute malnutrition in some areas, a threshold that exceeds emergency rates.

Experts say Sanaa could be the first capital city in the world to be threatened by water scarcity, as the country's current water share per capita is less than 150 cubic metres a year -- among the world's lowest rates.

"Yemen threatened by water scarcity, malnutrition", 24/01/2013, online at: http://al-shorfa.com/en_GB/articles/meii/newsbriefs/2013/01/24/newsbrief-11

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❖ Minister of Finance Announces from Saudi Arabia Sudan Ready to Realize Arab food Security

Khartoum - The Minister of Finance and National Economy Ali Mahmoud has announced consent of the Arab Socio-Economic Summit in Riyadh on the initiative of the President of the Republic on food security.

The Minister revealed that the President of the Republic called, in his address to the summit, for realization of Arab food security from Sudan as it enjoys agricultural resources, vast arable lands and water available from rivers, rains and groundwater, which needs Arab capitals to be exploited. Mahmoud stressed that Sudan is qualified to achieve the President's initiative on realization of food security.

The minister disclosed meeting of the concerned ministers during 2013 to discuss the process of Arab food security accomplishment to come out with clear-cut visions supporting the issue of Arab food security from Sudan, affirming Sudan readiness, representing in his ministry, to achieve the initiative.

"Minister of Finance Announces from Saudi Arabia Sudan Ready to Realize Arab food Security",24/01/2013, online at: http://news.sudanvisiondaily.com/details.html?rsnpid=218638

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❖ Toxic Water: Across Much of China, Huge Harvests Irrigated with Industrial and Agricultural Runoff

JINAN, Shandong — The horizon gleams with a golden hue from the wheat fields that spread in all directions here in Shandong, a prime food-growing province on the lower reaches of the Yellow River. As hundreds of farmers spread the wheat like massive carpets to dry on country roads, combine machines are busy harvesting the grain. The same afternoon that the wheat harvest is finished, farmers will already be planting corn and other crops. This is how China feeds 1.4 billion citizens and millions of livestock.

"There's no water source except for this dirty water. We have to use it."

–Farmer in Shandong Province

The seeds of the economic miracle that have lifted China to the world's second-largest economy are in the farm fields and tumbledown villages that each year grow the nearly 600 million metric tons of food that sustain public trust in the country's dramatic transition.

Yet the ample harvest also comes with significant public health risks, as a farmer here explains.

Damp with sweat, dust, and chaff, he pulls a plastic hose into a water pump that is powered by a truck with a belt-drive. The moment the engines roar, the ingenious makeshift machine fills the hose with turbid water from the nearby canal where a pharmaceutical factory has just dumped its rancid effluent.

"There's no water source except for this dirty water," the farmer says. "We have to use it."

POLLUTION MOVES WEST

Shigong, a 50-year-old farmer from the village of Tizi, has spent his lifetime tilling the craggy desert hills that for centuries have been the only lifeline in dry Gansu Province. In this remote area of western China, the farmer's life is guided by the whims of the seasons, the flow of the nearby Yellow River, and the fruits of the land.

The rice paddies that feed Shigong's home are giving an unmistakable sign of change. Salt and alkaline from a nearby chemical factory, as well as fertilizer overuse, have tainted the land and cut productivity.

Rice is now the only crop that survives here in Tizi, and even that is struggling: one mu (roughly 0.07 hectares, 0.17 acres) produces about half a metric ton of rice annually, which is only half of what the land yielded less than a decade ago.

"Water pollution affects our production very badly," he says, looking at the nearby hills covered with salt. "The salt and alkaline are moving to the land. In two to three years, all the land will be wasted."

Shigong's plight is shared by other local farmers whose lands and lives are roiled by water shortages and pollution. In this arid corner of northwestern China – where rainfall measures in mere millimeters – small plots of maize and wheat squeeze between barren hills that are as dry as desert slopes. Rice paddies dot the banks of the Yellow River and its tributaries. Seen from above, the farms look like little oases surrounded by a barren wasteland.

But the landscape is steadily changing.

Since 2000, when China launched the "Go West" program to encourage industrial development and job growth in 11 of its western provinces and autonomous regions, Gansu's industries and income levels have been rising. The development has turned Gansu and its neighboring provinces from primarily agricultural societies to ones that are putting more attention on developing heavy industry.

In an attempt to expand coal production westward, for example, China plans to open 15 large coal bases by 2015, mostly in Inner Mongolia, Ningxia, Shaanxi, and Shanxi.

Despite better regulation, experts worry that, as China's development moves west, it will transfer its pollution as well.

"Pollution is getting worse and worse here. Many heavy metal companies and plants have moved to Gansu from the east, " Su Yongzhong, an expert at the Gansu Academy of Agricultural Sciences, told Circle of Blue. "These factories are producing dirty products. The trend is already there. We can see it happening."

When the water turned black last month, he adds, most of the crop died after being irrigated with it — and what did not wither was sent to the market.

The farmer's plight underlies a dirty truth about China's fast development: the nation's rivers, lakes, and falling water tables are enduring deficits of clean water that often force farmers to grow food using water that is tainted with heavy metals, organic pollutants, and nitrogen. Much of China's water is so contaminated that it should not even be touched, yet tremendous amounts of the grains, vegetables, and fruits that are served in homes and restaurants, as well as textiles that are sold in markets, are irrigated with untreated industrial wastewater.

Contaminated Food

Crash programs to build highways, railways, airports, modern manufacturing bases, and other equipment have distinguished China for a generation. The country has not, however, launched any similarly comprehensive or sustained programs to clean up its filthy water, though reforms may be on the horizon.

Water and soil pollution in China are so prevalent that the nation's farm productivity, its economy, and the people's health are at risk as modernization, urbanization, and food demand are steadily increasing.

Furthermore, China's Ministry of Land and Resources estimates that heavy metal pollution destroys 10 million metric tons of grain and contaminates another 12 million metric tons annually, incurring billions of dollars in direct economic losses each year as China struggles to satisfy the evermore-sophisticated diets of its growing population. With more and more Chinese moving into the middle and upper classes each year, so increases their ability to afford meat products like beef and pork, which are extremely water intensive as they must be fed substantial amounts of grains.

Meanwhile, as much as 10 percent of China's rice, the country's staple food, may be tainted by poisonous cadmium, a heavy metal that is discharged in mining and industrial sewage, according to scientists at Nanjing Agricultural University.

Food safety is a deep concern among Chinese citizens, a matter of national significance as old as the country itself. After years of high-profile scares — deadly melamine milk, recycled "gutter oil," fake

beef, and exploding watermelons, among others — food safety scandals are producing public ridicule and ire in a political system that has vowed to serve the people. As the public has called for the country to dramatically strengthen its environmental safeguards, authorities have begun setting nationally significant standards for water, soil, and food to curb the grimy side effects of sizzling economic growth.

Water Resources Research Institute

"Crop security is the number one problem in the nation," Fan Mingyuan, an expert at the Water Resources Research Institute of Shandong Province, told Circle of Blue. "It's a national security problem."

Agriculture is a vital industry in China, employing more than 300 million farmers and feeding a rapidly growing nation, still haunted by memories of severe famine and poverty during the 1950s and '60s. And as China ranks among the global firsts in output of rice, wheat, potatoes, tea, cotton, meat, and other crops, the security of its food supplies could have significant global implications as well.

Soil and Water Pollution

While years of food scandals have focused public attention on factories and markets, few have looked at the source of the food chain — soil and water.

For instance, one-fifth of the Yellow River, northern China's lifeline, should not be used for drinking, energy production, or irrigation; about 40 percent of the Hai River, which supports major food-producing areas in the northeast, is considered unusable. In fact, nearly 15 percent of China's major rivers are not fit for any use, and more than half of the groundwater nationwide is categorized as "polluted" or "extremely polluted," according to government statistics.

"Toxic Water: Across Much of China, Huge Harvests Irrigated with Industrial and Agricultural Runoff", 18/01/2013, online at: **http://www.circleofblue.org/waternews/2013/world/toxic-water-across-much-of-china-huge-harvests-irrigated-with-industrial-and-agricultural-runoff/**

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❖ China Leads in Investing in Watersheds to Protect Drinking Water

China may be struggling with air quality, but the world's most populous nation is getting some things right when it comes to safeguarding drinking water, according to a report released this week by Forest Trends' Ecosystem Marketplace.

That report, *State of Watershed Payments 2012*, is the second installment of a survey of efforts around the world to protect, purify, and store freshwater for drinking by paying individuals and communities to preserve forests, wetlands, and streams. Such eco-friendly water-protecting projects have nearly doubled over the past four years, according to the report.

"Whether you need to save water-starved China from economic ruin or protect drinking water for New York City, investing in natural resources is emerging as the most cost-efficient and effective way to secure clean water and recharge our dangerously depleted streams and aquifers," Michael Jenkins, Forest Trends president and CEO, said in a statement.

Jenkins added that 80 percent of the world is now facing significant threats to water security.

Forest Trends' Ecosystem Marketplace tracks projects that provide "payments for environmental services," such as when New York City paid upstate landowners to protect an important watershed. Forest Trends says such investments in watershed services can be cost effective while financing conservation at the same time and providing a new revenue source for rural communities.

Billions Invested

The report cited 205 watershed programs—up from 103 in 2008—that in 2011 generated $8.17 billion in investments, an increase of nearly $2 billion above 2008.

About 91 percent of all watershed investments made in 2011 happened in China, according to the report. As one example, the Chinese government is incentivizing more than 100,000 people who live upstream of the southern coastal city of Zhuhai by rewarding them with new health insurance benefits if they adopt water-friendly land management practices.

Forest Trends pointed out that China has some work yet to do, because "water scarcity and water pollution already cost China 2.3 percent of its gross domestic product. Water insecurity poses probably the single biggest risk to the country's continued economic growth today, and the government has clearly decided that its ecological investments will pay off."

Forest Trends also argued that New York City was able to provide clean, safe drinking water throughout the Hurricane Sandy disaster because officials had opted to preserve the watershed.

A spokesperson for Forest Trends told us via email, "If the New York City metropolitan area had depended on manmade infrastructure to pump and filter its drinking water—like we do in Washington D.C.—Hurricane Sandy's damage would have been even more staggering. But clean, safe drinking water kept flowing during the storm precisely because the city had chosen to pay millions to farmers and communities in upstate New York to reduce pollution in the lakes and streams that provide the city with its drinking water—instead of investing billions in a water treatment plant that likely would not have worked when the lights went out."

Water Around the World

Elsewhere in North America, Forest Trends found 68 watershed payment programs, with the highest number in Oregon, Washington, and Minnesota.

Globally, the report noted that one third of the World Bank's loans involve water projects, yet most still stress traditional treatment plants instead of "green" projects that project the sources of water, while providing secondary benefits to the environment and local people.

As another example of what's possible, in Kenya's Lake Naivasha basin, a group of farmers, ranchers, and hotel operators came together to help protect their water supply. They are helping local smallholder farmers buy high-yield crop varieties in exchange for the farmers reducing runoff and taking other conservation measures.

"China Leads in Investing in Watersheds to Protect Drinking Water",18/01/2013, online at: http://newswatch.nationalgeographic.com/2013/01/18/china-leads-in-investing-in-watersheds-to-protect-drinking-water/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2df4248ae5-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Mekong Countries at Odds Over Xayaburi Dam

Tensions mounted on the final day of the Mekong River Commission (MRC) council meeting as Cambodia and Vietnam challenged Laos' decision to move ahead with building the Xayaburi dam, according to minutes of the meeting obtained on Thursday.
Despite consistent protest from Cambodia and Vietnam about the dam's impact on local fisheries and communities downstream, Laos began construction on the 1,285-megawatt hydropower dam in November.

During Thursday's discussion in Luang Prabang on the Xayaburi dam—a process demanded in the 1995 Mekong Agreement—Lao Vice Minister of Energy and Mines Viraphonh Viravong defended his country's decision to move ahead with construction.

"After six months, all you can do is record the difference of opinions and that is the end of the process," Mr. Viravong said, referring to the consultation process demanded by the 1995 Mekong Agreement, which provides a framework for how development on the mainstream river should be conducted. "We are committed to sustainable hydropower development," he added.

Mr. Viravong also said that Laos did not agree to extend the consultation period—known as the PNPCA process—and that Laos was already "going beyond" what is specified in the Mekong Agreement.

However, Sin Niny, the permanent vice chairman of the Cambodia National Mekong Committee responded by saying that any construction work on the dam could only go ahead once a consensus between Laos, Cambodia, Vietnam and Thailand had been made, as stipulated in the Mekong Agreement.

"It is clear, so please don't say that after six months the PNPCA is completed. No, it is just six months for the Joint Committee to discuss and the Joint Committee can extend for as long as they want," Mr. Niny said.

"I was one of the original negotiators for the formulation of the 1995 Agreement. So I want to inform you to avoid any confusion or misunderstanding," Mr. Niny said.

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Vietnamese Deputy Minister of Natural Resources and Environment Nguyen Thai Lai also urged for more talks before a decision on the dam is taken.

"[E]ach riparian country should show their responsibility by assuring that any future development and management of water resources proposed in the basin should be considered with due care and full precaution based on best scientific understanding of the potential impacts," he said in a statement.

A representative from Thailand, which is responsible for the dam's construction and financing through its banks and Thai company Ch Karnchang, acknowledged that the MRC had encountered difficulties but did not want to "assign blame," according to the minutes.

Environmental groups have charged that Laos has violated the Mekong Agreement by going forward with the Xayaburi dam without all the countries involved agreeing.

Donors to MRC countries— which include Australia, Finland, Belgium and the U.S., as well as the Asian Development Bank and the World Bank—said that six months of consultation was too short.

"We recommend that all ambiguities regarding the application of the PNPCA be resolved before any future mainstream project proceeds," the donors said in a joint statement.

"We encourage the government of Lao PDR…to officially inform the MRC Secretariat about the proposed changes to the design of the Xayaburi dam to make sure that legitimate concerns of the other MRC member states are taken into account," the statement added.

Donors also expressed displeasure over the MRC's decision not to invite environmental group World Wildlife Fund (WWF) to observe the meeting's proceedings.

"In that context, we encourage the member countries to facilitate a transparent process that allows observers to hold official status."

No explanation was provided to WWF about why they were not invited, said Marc Goichot, an expert on sustainable hydropower from WWF's Greater Mekong program.

"We believe our [criticism] has always been science based and solution oriented," Mr. Goichot said in an email. "[We are] saddened because WWF has dedicated a lot of time and resources over the past decade in supporting the MRC in its important and commendable objectives."

Member countries and development partners will be able to visit the dam site today, a trip that will include a briefing by the project's developers, MRC spokesman Surasak Glahan said in an email.

Kirk Herbertson, the Southeast Asia policy coordinator for environmental group International Rivers, praised Cambodia and Vietnam for their frank words to Laos, but said the real challenge now is to turn words into action.

"If this is not resolved, then the countries remain at high risk for making significant mistakes and allowing highly destructive projects to move forward," Mr. Herbertson said.

"Mekong Countries at Odds Over Xayaburi Dam", 27/01/2013, online at: http://www.cambodiadaily.com/news/mekong-countries-at-odds-over-xayaburi-dam-7943/

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❖ Plan to Dredge Sand on Mekong

Cambodian Prime Minister Hun Sen ordered government planners Tuesday to draw up a master plan to dredge sand from the Mekong River, saying it was aimed at restoring shallow areas along the waterway.

Sand that is dredged from Cambodia's portion of the river can also be exported to draw more revenue for the country, he said at an inauguration ceremony for a U.S. $28 million container terminal on the Mekong River in Kien Svay district in Kandal province, about 30 kilometers (nearly 19 miles) east of the capital Phnom Penh.

The terminal was built with a soft loan from the government of China, which is Cambodia's top ally, investor and aid provider.

Hun Sen told the Ministry of Public Works, the Ministry of Water Resources, and the National Mekong Committee to work together to draw up the master plan for dredging sand from the Mekong River, whose lower stretches are shared by Cambodia, Laos, Thailand and Vietnam.

Under the blueprint, private companies will dredge sand from the river and sell it as export to foreign countries, he said.

“We must use the river to save the river,” Hun Sen said.

“We must think about the river as a whole. If we don’t resolve [the issues], we don’t know what could happen in the future.”

Riverbeds

He said the Ministry of Public Works has so far only worked on digging sand along riverbeds to improve navigation but now he wants it to carry out sand dredging activities to rectify areas which are shallow.
He said that shallow parts of the river were causing "movements" that could result in riverbanks collapsing.

It was not clear from Hun Sen’s remarks how the government will implement the new sand dredging strategy or where along the Mekong River will sand be dredged.

Previous efforts to dredge sand from riverbeds in Cambodia have been criticized by environmentalists and villagers.

Digging up sand from the riverbed may allow easier navigation for ships but environmentalists and villagers said it has caused riverbanks to collapse, harming the river's ecosystem.

Extracting sand from riverbeds also affects marine life on the river's floor, as well as the spawning grounds that replenish it.

Villagers have complained their houses have collapsed due to nearby sand mining projects, calling for dredging activities to be regulated by the government.

In 2009, the government banned exports of sand dredged along the Tatai River in southwestern Cambodia's Koh Kong province and sold to Singapore for land reclamation.

Continued dredging after the ban sparked protests later that year among locals concerned about damage to fish stocks and ecotourism projects.

Cambodia's National Mekong Committee, one of the three agencies that will help draw up the dredging master plan, represents the country at the Mekong River Commission.

The commission is an intergovernmental institution among lower Mekong countries Cambodia, Vietnam, Laos and Thailand aimed at overseeing the management and development of the river.

"Plan to Dredge Sand on Mekong", 22/01/2013, online at: http://www.rfa.org/english/news/cambodia/mekong-01222013185357.html

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❖ Laos Finally Called Out over Xayaburi Dam

Vietnam and Cambodia have finally found their voice. After months of obfuscating their position on the Lao government's insistence on constructing the Xayaburi Dam and blocking the main stream of the Mekong River, leaders from both countries have pushed diplomatic niceties to the side and finally tackled Vientiane on the issue. The refreshing shift in political tact came on the final day of a meeting among member countries in the Mekong River Commission (MRC), in which leaders from Vientiane could have been forgiven for thinking they had perhaps outfoxed their counterparts in Hanoi and Phnom Penh.
Laos reached an agreement with Vietnam, Cambodia and Thailand more than a year ago to suspend construction of the U.S.$3.5 billion dam while independent studies were to be made on fish migration patterns and the possible threat posed by the dam to food security.
About 60 million people depend on the Mekong River for their livelihoods through a hand to mouth existence.

However, Vientiane ignored what amounted to a moratorium, Thai construction companies went to work immediately at the site and plans for further dams were released. Meanwhile, the Lao government insisted its citizens will prosper through the sale of electricity to neighboring countries produced by hydropower.

At last week's MRC meeting, Cambodia demanded that all construction be immediately halted and argued that Laos had misinterpreted previous agreements. Meanwhile, Vietnam insisted that no dams be constructed until an agreed upon independent study is completed.

Lao Vice Minister of Energy and Mines Viraphonh Viravong attempted to defend his country's stance, which seems to have the support of Thai construction companies, Chinese lenders and Lao politicians, but few others further afield.

Thai general contracting and infrastructure development group Ch Karnchang — through its 50 percent-owned subsidiary Xayaburi Power Co — has a 29-year concession to operate the dam's 1,285 megawatt power plant, as well as assurances from Thailand that it will purchase about 95 percent of the electricity generated.

Cambodia and Vietnam are demanding a regional consensus before construction can start.

However, both countries have said little over recent months despite a steady flow of independent reports from Laos and comments made by Lao ministers indicating that the Lao government was proceeding with construction of the dam. In fact, building at the site began in November 2011.

Laos has faced unprecedented international scrutiny over the past year, initially with the Xayaburi Dam, then with its massive borrowing program primarily with China to fund an ambitious infrastructure program. Most recently,

the country has come under scrutiny following last month's disappearance of human rights activist Sombath Samphone.

"Laos Finally Called Out over Xayaburi Dam", 23/01/2013, online at: http://thediplomat.com/asean-beat/2013/01/23/laos-finally-called-out-over-xayaburi-dam/

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❖ Laos' neighbors unhappy with Xayaburi dam construction

A number of governments and organizations used the 19th Mekong River Commission (MRC) Council Meeting this past week to again voice their displeasure with Laos' 1,285-MW Xayaburi hydro project.

The US$3.5 Xayaburi billion run-of-river plant is the first of 11 projects proposed for the Lower Mekong River and part of Laos' plan to become the "battery of the region".

And though Poyry Energy Business Group was selected in November 2012 to supervise the complex's construction, some members of the MRC and their international partners have expressed concern that the prior consultation process had not been adequately completed.

"It is our consensus that building dams on the mainstream of the Mekong may irrevocably change the river and hence constitute a challenge for food security, sustainable development and biodiversity conservation," a statement from the MRC's international partners said.

The MRC's international partners -- which include the European Union, the United States, Australia, New Zealand, the World Bank and the Asian Development Bank -- are concerned that Laos has not addressed the concerns of other MRC members.

The MRC was founded in 1995 and consists of Laos, Cambodia, Thailand and Vietnam. The council is intended to provide a forum for cooperative use of the Mekong River, though the Cambodian, Thai and Vietnamese representatives said Laos did not complete its due-diligence before moving forward with the Xayaburi's construction.

"Each riparian country should show their responsibility by assuring that any future development and management of water resources proposed in the basin should be considered with due care and full precaution based on the best scientific understanding of the potential impacts," Vietnam's Deputy Minister of Natural Resources and the Environment Nguyen Thai Lai said.

Sources said divisions between MRC members were increased following a Special Joint Committee Meeting in April 2011 at which Vietnam proposed a 10-year moratorium on decisions over mainstream dams on the Mekong.

The Laotian government appeared to accept Vietnam's proposal and announced it would suspend development of the Xayaburi hydro project during the 18th MRC Council Meeting in December 2011 pending further impact studies.

U.S.-based advocacy group International Rivers reported it had found evidence that Laos was secretly continuing development of the project, however, and in October 2012, the Andritz Group announced it had been awarded a $322 million contract by CH. Karchang Public Co. Ltd. to supply electromechanical equipment for the plant.

Laos now says a coffer dam will be complete in May with construction of the Xayaburi to begin in full shortly after.

"Laos' neighbors unhappy with Xayaburi dam construction", 21/01/2013, online at: http://www.hydroworld.com/articles/2013/january/laos--neighbors-unhappy-with-xayaburi-dam-construction.html

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❖ Experts stress on fair water policy

KATHMANDU: Experts and professionals on water resources have suggested the government to set its national priority agenda while dealing on water resources issues with India.

They have also asked the government to make it clear whether it wants to make electricity or 'use of water' as its priority agenda in dealing with the Indian side.

The suggestion were made at an interaction held in the Capital today, which was just couple of days before the sixth meeting of the Joint Commission on Water Resources (JCWR) between Nepal and India.

The two-day JCWR between Nepal and India meeting is going to be held in Kathmandu on January 24-25. Energy Secretary Hari Ram Koirala is leading the Nepali side, whereas Indian side will be led by its Water Secretary.

"During the earlier JCWR meetings, the Indian side has been water-focused, whereas the Nepali side has been focused on electricity," said Dr YB Thapa, a former member of the National Planning Commission, while presenting his paper "Alternative agenda for Nepal-India JCWR meet". He suggested that Nepal should form its talks-team as per the line of Indian side.

Thapa went on to add, "Given the Indian side's focus on water-related matter, if we be assigned the Irrigation Secretary to lead the talks-team, our case will be more effective in the dealings." He suggested the Nepali side should focus on getting maximum benefits of the water rather than touting the issue of electricity.

Similarly, former water resources minister and water expert Dipak Gyawali, said the Nepali side should be very clear that producing hydro-electricity was never India's priority in Nepal. "The sooner we understand this the better for us to deal with the Indian counterparts on water resources issues," he added.

Regarding the recent cut of electricity by 30MW by Indian Government, Gyawali said it was unnatural even to think that India can provide more electricity to Nepal at a time when India's northern grids are facing more than 15,000 MW deficits. He even drew the attention of the government to consult with the Water and Energy Commission before making the agenda for the JCRW meet.

Professor Madan Dahal said the partial treatment was not enough while dealing on water-related issues to any party including India. "We need to connect it as a theory of economic development." He suggested both sides need to focus in finding problems and addressing it on the non-implementation issues, including the Pancheshwor Multipurpose Project and Naumure Hydroelectricity project.

"Experts stress on fair water policy", 22/01/2013, online at:
http://www.thehimalayantimes.com/fullNews.php?headline=Experts+stress+on+fair+water+policy&NewsID=362993

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❖ Rural Water Projects Depend on Women

POLONNARUWA, Sri Lanka, Jan 17 2013 (IPS) - During the dry season, when dirt roads are cracked from the relentless heat, the sight of women walking miles, balancing pots of water on their heads, is common in rural Sri Lanka.

While the men tend to paddy fields, the women are left with the arduous task of collecting water for household use. They account for every drop of water consumed, utilised or wasted – making them crucial players in rural water projects.

Talpothta is a typical agricultural village in Sri Lanka's dry zone, whose life cycle is completely dependent on the rainfall that has become extremely erratic in the last few years.

In 2006, the village was chosen as one of the beneficiaries of a 263-million-dollar Asian Development Bank (ADB) project that set out to provide safe drinking water to 900,000 people in Sri Lanka's north-central and eastern provinces.

But unlike many other development projects in the country, this is led primarily by women, who comprise an overwhelming majority of the village community.

From the initial planning stages, village women were inducted into the project's long-term implementation plans, which included installing a community-run water storage tank and mapping out a distribution network to link the entire village to the water supply.

The project's community leaders advise the roughly 200 village water users, check metres, collect payments and, most importantly, decide when and how to limit the water supply when the dry season sets in. Members also visit households regularly and keep close tabs on usage.

Sheila Herath, a member of the group of local leaders, says women play a critical role in this project.

"The woman in the household is the person who will know how much water is used for what. So we know how much is needed and how much is excess," she said.

The ADB project planners knew this from experience, not only in Sri Lanka but in other parts of rural South Asia, officials told IPS, adding that 50 percent of participants at planning meetings and at least 25 percent of the officials from the government Water Board were women.

According to Attanayake Mudiyanse Senevirathana, a public official in the north-central town of Polonnaruwa working on improving access to safe water, women have traditionally played the role of 'water bearer'.

"This is still the case," he told IPS, adding, "Women also feel they gain more by the success of such projects."

Thanks to the new water project, women in Talpothta say they find themselves with a lot more free time – something that most rural women can only dream of.

Forty-five-year-old Liyadurige Siriyawathi has returned to a childhood hobby that she gave up when she got married two decades ago – making sketches. She now earns about 100 dollars a month from the sales of these drawings.

Others are engaged in home gardening or say that they now have more time for themselves or for the children.

Kusum Athukorale, who heads the Network of Women Water Professionals in Sri Lanka, told IPS that one sixth of the island's water supply is derived from rural community projects. Their success depends on women's participation at every level, she stressed.

"They are the ones who know where the water sources are, how much is needed. They the ones who walk miles to gather water when drought sets in."

Athukorale calls women the "foot soldiers of climate change adaptation" because of their hands-on knowledge of how natural resources are being used in households.

A recent ADB report entitled 'Gender and Urban Poverty in South Asia' found that women's role in water management was crucial throughout the region.

"Health surveys conducted in 45 developing countries during 2005–2008 showed that globally, women bear the largest burden as primary collectors of water in 64 percent of households, compared with 24 percent of households for men, four percent for boys, and eight percent for girls," the report stated.

The report warned that women, especially those from poor communities, were at risk of suffering more due to lack of access to safe water "as they are the primary users, providers, and managers of water in households and are responsible for household hygiene."

The report detailed projects in Bangladesh, India, the Maldives, and Nepal similar to the Talpothta water scheme, where women played a crucial role in ensuring success.

A women's group in the village of Ramnagara, a town in the central Indian state of Madhya Pradesh, was responsible for lobbying local authorities and a non-governmental group to establish pipes close to their homes. Like in rural Sri Lanka, the new pipes freed up time the women would otherwise have spent searching for water.

"Women now use the time saved to participate in group activities and explore other livelihood options," the ADB report said.

"There is an accumulation of evidence to show that if we are able to (appoint) women as the decision makers for a project on the ground, the success rate goes up almost instantly," Naoko Ishii, chairperson of the Washington-based Global Environment Facility (GEF), a public fund that assists in projects related to sustainable development, told IPS.

Ishii, who served as Japan's deputy finance minister and as country head for the World Bank in Sri Lanka before taking up the GEF top post, credits women's sense of discipline as a key factor in their pivotal role, especially in rural Asia and Africa.

"When women are in charge of a micro finance project, the repayment ratio is much higher," she told IPS.

"Rural Water Projects Depend on Women", 17/01/2013, online at: http://www.ipsnews.net/2013/01/rural-water-projects-depend-on-women/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2df4248ae5-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Apply now: network set up under CIUDAD project organizes meeting on packaging waste and plastic bag management

A network of Mediterranean local authorities on Integrated Waste and Resource management, set up in the framework of the EU-funded CIUDAD project GODEM, is organising a working group meeting onpackaging waste and plastic bagsin Brussels on March 25, 2013.

ACR+MED, the permanent network of local authorities in the Mediterranean on Integrated Waste and Ressource management, is one the major results of the GODEM project, which closed at the end of 2012. This will be its first post-project activity.

The event will be particularly useful for people involved in plastic bag management in their city, who would like to share their experience, or those who think the citizens and other stakeholders should change their behaviour regarding packaging waste.

The submission of applications to participate in the meeting should be sent before the end of January 2013. Based on this call for participation, ACR+MED will select 10 participants from Southern Mediterranean countries, Balkan countries and/ or Turkey (flight and accommodation covered).

ACR+MED is a Mediterranean network of more than 50 members (of which more or less 50% being Local and Regional Authorities) who share the common aim of promoting integrated sustainable waste and resource management with a particular focus on local and cultural context.

The **GODEM** project for the optimisation of waste disposal management, implemented under the CIUDAD programme, was aimed at addressing the issue of waste management in the Mediterranean by putting in place a permanent network for the exchange of information and experience on sustainable waste management between European and South Mediterranean local and regional authorities. It was implemented in Lebanon, Morocco and Tunisia.

CIUDAD ran from 2009 to 2012 and co-financed 21 local grant projects in the Neighbourhood's South and East, focusing on the following themes: Environmental Sustainability and Energy

Efficiency; Sustainable Economic development and reduction of social disparities; and Good governance and sustainable urban development planning. (EU Neighbourhood Info)

"Apply now: network set up under CIUDAD project organizes meeting on packaging waste and plastic bag management", 23/01/2013, online at: http://www.enpi-info.eu/mainmed.php?id_type=1&id=31794&lang_id=450

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❖ Climate Change Is Here. How Companies Are Preparing For It

Climate change has arrived. 2012 is in the books as one of the warmest years on record, and extreme costly weather events are becoming the norm rather than the exception. Against this backdrop, the debate is slowly migrating from partisan wrangling over the existence of climate change to more productive efforts to think creatively about how to prepare for it.

My interest here is not to make the case for climate change – many far more knowledgeable than I have already done so – but to show how some f0rward-thinking companies are taking tangible, constructive steps to anticipate it and mitigate its impact. This new but growing discipline is known as "Climate Resilience."

A diverse group of organizations, working with environmentally oriented consultants, have produced an excellent, comprehensive report titled "Value Chain Climate Resilience: A Guide To Managing Climate Impacts in Companies and Communities." The companies involved in the report includeStarbucks, Swiss Re, Levi Strauss, Calvert Investments, Earth Networks,Entergy and Green Mountain Coffee Roasters. The consulting firms involved include Acclimatise, Oxfam America and BSR.

The 40-page report is too full of valuable information to quickly summarize, but I want to quote generously from it here to give readers – particularly within especially vulnerable business sectors – a flavor of it. Such sectors include (for reasons related to their direct weather exposure) Food and Agriculture, Utilities, and Manufacturers with substantial supply chains. The report begins:

"The climate is changing and impacts on businesses and communities are already being felt. Rising temperatures, changing rainfall patterns, and more severe weather events are being observed. Nine out of ten companies have suffered weather-related impacts in the past three years, and most have seen an intensification of such impacts. Meanwhile, communities on which businesses depend for their supplies, workforce, sales, and more are being affected. A change in climate will lead to a changing business environment and changing community relationships…

"This guide introduces the Business ADAPT (analyze, develop, assess, prioritize and tackle) tool. The tool follows a step-by-step climate resilience framework inspired by existing good practice risk management models. Many businesses will benefit from using the Business ADAPT tool, including businesses with these characteristics:

- Have long-lived fixed assets

- Use utility and infrastructure networks

- Secure natural resources

- Create extensive supply/distribution networks

-Require finance and investment…

"Corporate climate resilience is a relatively new field, yet good examples of multinational and medium-sized companies taking action to minimize the implications of a changing climate do exist. Readers will find many illustrative examples of climate resilience in action in this report."

Among the cases described are Starbucks, Levi Strauss & Co. and Swiss Re – all in very different industries, but all having climate change exposure, and all taking actions to begin to manage their risks. Brief examples:

Starbucks works with Conservation International to "promote environmental leadership" among its coffee growers in countries including Costa Rica and Rwanda. Such leadership can include conservation of water, soil and biological diversity. Simple actions such as building coffee shade canopy covers can help farmers prepare for a future with possibly hotter temperatures and scarcer water.

Levi Strauss & Co., dependent on cotton for its apparel products, is part of a Better Cotton Initiative (BCI), which seeks to improve the way the cotton is grown globally. BCI, for instance, helps cotton farmers with techniques that enable them them to use less pesticides and water, such as increasing the development of border crops and irrigation systems.

Swiss Re, a global provider of reinsurance and insurance, works innovatively with "cash-poor farmers" in Ethiopia. The farmers have an option "to work for their insurance premiums by engaging in community-identified projects to reduce risk and build climate resilience, such as improved irrigation or soil management."

When I was in the corporate world with MassMutual Financial Group, for years I was a member of a team that went by a variety of names (Disaster Recovery, Business Recovery, etc.), but whose purpose was always the same: to mitigate risk by helping the organization prepare for the unexpected

– backing up systems, making arrangements for alternate work sites and so forth… in case these were ever needed. While this preparatory work sometimes seemed repetitive and dull (as it's usually not immediately needed), over time I've come to appreciate just how critically important the function is. As the near-catastrophic financial events of 2008 demonstrated, it's hard to imagine a more important leadership task – *whatever your business* – than managing risk.

Climate change is, among many other things, a vast global business risk.

Were I still in the corporate world, this report, "Value Chain Climate Resilience: A Guide To Managing Climate Impacts in Companies and Communities," would be required reading.

* * *

"Climate Change Is Here. How Companies Are Preparing For It", 22/01/2013, online at: http://www.forbes.com/sites/victorlipman/2013/01/22/climate-change-is-here-how-companies-are-preparing-for-it/

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❖ Maynilad to Double Spending on Philippine Water Projects in 2013

Maynilad Water Services Inc. said it plans to more than double spending on Philippine water projects to 17.2 billion pesos ($423 million) this year, its biggest capital investment since it was privatized in 1997.

The utility, which provides water to half of Manila, said in a statement that it will use internal funds and a loan from the World Bank to finance its infrastructure spending.

"The previous years have been about water service transformation," President Ricky Vargas said in the Jan. 20 statement. "Now that we have improved and expanded our water services in the West Zone, our next challenge is to accelerate our sewerage and septage coverage.''

These projects ''will require a lot of resources,'' said Maynilad, a venture of DMCI Holdings Inc. (DMC) and Metro Pacific Investments Corp.

"Maynilad to Double Spending on Philippine Water Projects in 2013", 23/01/2013, online at: http://www.bloomberg.com/news/2013-01-23/maynilad-to-double-spending-on-philippine-water-projects-in-2013.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=43f0acadcb-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ 'Green' Approaches to Water Gaining Ground Around World

UXBRIDGE, Canada, Jan 18 2013 (IPS) - After Hurricane Sandy swept through the northeast of the United States late October 2012, millions of New Yorkers were left for days without electricity. But they still had access to drinking water, thanks to New York City's reliance on protected watershed areas for potable water.

Instead of using electric-powered water treatment plans, New York City brings its high-quality drinking water through aqueducts connected to protected areas in the nearby Catskill/Delaware forests and wetlands – just one example of how protecting watersheds can provide residential areas with drinking water and flood and pollution protection at bargain basement prices.

New York saved between four and six billion dollars on the cost of water treatment plants by protecting forests and compensating farmers in the Catskills for reducing pollution in lakes and streams.

In 2011, countries around the world invested more than eight billion dollars in similar watershed projects around the world, according to the State of Watershed Payments 2012 report released Thursday. That year, China led the way, accounting for 91 percent of watershed investment.

"Whether you need to save water-starved China from economic ruin or protect drinking water for New York City, investing in natural resources is emerging as the most cost-efficient and effective way to secure clean water and recharge our dangerously depleted streams and aquifers," said Michael Jenkins, president of Forest Trends, a non-governmental organisation (NGO) in the United States, which compiled the report.

Previous studies have shown that pollution, the building of dams, agricultural runoff, conversion of wetlands, and waterworks engineering have severely affected global river systems. The wealthier the country, the bigger the threat to river systems, primarily because of expensive waterworks engineering, according to the first-ever health assessment of river ecosystems around the world, as previously reported by IPS.

Promoting a new approach

Given the water engineering mentality of the 1990s, it wasn't easy to convince health and safety officials that a "green waterworks" approach would work for New York City, said Genevieve

Bennett, lead author of the Watershed Payments report and a research analyst with Ecosystem Marketplace.

But trees, grasses and plants are extremely effective at cleaning and retaining water, as well as reducing sedimentation that clogs water reservoirs, Bennett told IPS. "The benefits from these watershed programs extend far beyond water: they support biodiversity, reduce greenhouse gas emissions, and provide income for the rural poor," she said.

In watershed protection programs such as those in New York, farmers are paid to use soil and water conservation techniques – payment for good stewardship that benefits the public, Bennett added.

Government regulations, however, remain a major constraint to similar projects in many countries. New York's well documented and highly successful strategy has not been emulated by many other cities, including those in China or India, where engineering expertise is highly prized and huge engineering works are a matter of national pride.

Investing in sustaining existing ecosystems is better than destroying them and attempting to engineer solutions, Charles Vörösmarty, an expert on global water resources, previously told IPS. Water management costs will skyrocket if developing countries adopt the approach of developed nations, he added.

China is one country that has begun to change its approach, according to the report. About 108,000 residents in struggling communities upstream of the southern coastal city of Zhuhai are receiving new health insurance benefits in exchange for adopting land management practices to improve drinking water in the region.

"There are lots of different ways watershed investments are being made in China, some good and some bad. There's lots of learning happening," said Bennett.

Beginning of change

In Latin America, the trend in water programs is to offer compensation other than cash for protecting water resources. In Bolivia's Santa Cruz valley, for example, more than 500 families receive beehives, fruit plants and wire, which can be used for fencing to keep livestock away from rivers and stream banks, in return for their water protection efforts.

A Swedish local water authority found it cheaper to pay for a program to establish blue mussel beds in Gullmar Fjord to filter nitrate pollution than to build a new treatment facility on shore. In Uganda, a beer brewer is paying for the protection of wetlands to retain their valuable capacity to maintain a steady and abundant supply of clean water.

The vast majority of investments in watersheds are with public money. The private sector still thinks providing good quality water is up to governments, Bennett said. However, the public sector is unlikely to be able to invest the 17.7 trillion dollars needed for water infrastructure by 2030, according to the Organisation for Economic Cooperation and Development (OECD).

A green infrastructure is by far the cheaper option and provides a host of other benefits, Bennett concluded.

"'Green' Approaches to Water Gaining Ground Around World", 18/01/2013, online at: http://www.ipsnews.net/2013/01/green-approaches-to-water-gaining-ground-around-world/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=2df4248ae5-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ The Water Footprint of Energy Independence

Is there water enough for US to frack its way to energy independence?"

That's the question asked by Jeff Rubin in a special report writing for theGlobe and Mail. It's a question many proponents of US energy independence should be asking.

And the answer is definitely not what hydraulic fracking proponents (like Forbes' David Blackmon—click here for a summary of his views in this week's *Distributed Energy*blog) want to hear.

Because the answer not only evokes the warnings and worries of environmentalists who view hydraulic fracking as the latest in a long line of domestic energy production catastrophes, it implicates water footprints and the intricate relationship between water and energy (aka the water/energy nexus).

We all know it takes energy to collect, treat, and deliver water. Many of us are also painfully aware that, in order to generate power using traditional means (like oil and gas), you must have access to ample water resources. So although there's a lot of excitement regarding the International Energy Agency's claims that domestic natural gas production will catapult the US into a new era of energy independence, that prognostication should be taken with a grain of salt and a healthy dose of skepticism.

For as Rubin points out, in Canada—land of abundance resources, including plenty of thriving rivers and waterways—"Albert's oil-sands mines require more than three barrels of water to produce a barrel of bitumen." And while Alberta has the "mighty Athabasca River," in the US "the industry's growing need for water comes at a time when much of the country is grinding through the worst drought in more than half a century."

It can take up to 65,000–600,000 gallons of water to drill a single shale well (www.hydraulicfracturing.com/Water-Usage/Pages/Information.aspx). At the high end, that's already a breathtaking water footprint. When hydraulic fracking is involved, that number jumps to 4.5 million

gallons per well.

4.5 million gallons per well.

Keep in mind that according to the *Burning Our Rivers* report, drafted by the River Network, the fastest-growing use of freshwater in the US involves electricity production by coal, nuclear, and natural gas power plants, totaling more than ½ of all freshwater withdrawals from US surface waters, which is "more than any other economic sector, including agriculture, and occurs in an era when all other use sectors are reducing water withdrawals."

"We're using a lot of water to keep the lights on and the TV running," warns Wendy Wilson, director of River Network's Rivers, Energy & Climate Program, and chief author of the report.

Adding another energy source with an even larger water footprint merely to keep that TV running and the lights on seems a poor tradeoff. But the allure of an energy-independent US is fueling support of hydraulic fracking—and that's a heady illusion (or delusion) to battle when the alternative includes such staid topics as increased energy efficiency and reduced energy use.

In the end, water scarcity may be the only thing to keep hydraulic natural gas fracking in check. As Rubin points out in his article, "When it comes to achieving energy independence, the ongoing drought in the US Midwest is an unexpected obstacle. Production from North Dakota's Bakken play, already at 700,000 barrels a day, holds the potential to double and even triple, according to the IEA. That forecast, however, is critically contingent on sourcing adequate supplies of water."

"Simply put, without water you can't frack," concludes Rubin.

I'll end with this energy footprint chart from the Water Footprint Network. We've posted this information in previous blogs, but it's always important to add a little perspective. While these totals refer to the amount of water needed to generate 1 GJ of power (rather than the amount of water associated with fuel extraction or manufacturing), it's nevertheless informative to see the various water footprints associated with different power generation sources.

Primary energy carriers		Global average water footprint (m3/GJ)
Non-renewable	Natural gas	0.11
	Coal	0.16
	Crude oil	1.06
	Uranium	0.09
Renewable	Wind energy	0.00
	Solar thermal energy	0.27
	Hydropower	22
	Biomass energy	70 (range: 10-250)

Source: Water Footprint Network (waterfootprint.org)

"The Water Footprint of Energy Independence", 22/01/2013, online at: http://www.waterefficiency.net/WE/Blogs/1571.aspx

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❖ Message from Mexico: U.S. Is Polluting Water It May Someday Need to Drink

Mexico City plans to draw drinking water from a mile-deep aquifer, according to a report in the Los Angeles Times. The Mexican effort challenges a key tenet of U.S. clean water policy: that water far underground can be intentionally polluted because it will never be used.
U.S. environmental regulators have long assumed that reservoirs located thousands of feet underground will be too expensive to tap. So even as population increases, temperatures rise, and traditional water supplies dry up, American scientists and policy-makers often exempt these deep aquifers from clean water protections and allow energy and mining companies to inject pollutants directly into them.

As ProPublica has reported in an ongoing investigation about America's management of its underground water, the U.S. Environmental Protection Agency has issued more than 1,500 permits for companies to pollute such aquifers in some of the driest regions. Frequently, the reason was that the water lies too deep to be worth protecting.
But Mexico City's plans to tap its newly discovered aquifer suggest that America is poisoning wells it might need in the future.

Indeed, by the standard often applied in the U.S., American regulators could have allowed companies to pump pollutants into the aquifer beneath Mexico City.

For example, in eastern Wyoming, an analysis showed that it would cost half a million dollars to construct a water well into deep, but high-quality aquifer reserves. That, plus an untested assumption that all the deep layers below it could only contain poor-quality water, led regulators to allow a uranium mine to inject more than 200,000 gallons of toxic and radioactive waste every day into the underground reservoirs.
But south of the border, worsening water shortages have forced authorities to look ever deeper for drinking water.

Today in Mexico City, the world's third-largest metropolis, the depletion of shallow reservoirs is causing the ground to sink in, iconic buildings to teeter, and underground infrastructure to crumble. The discovery of the previously unmapped deep reservoir could mean that water won't have to be rationed or piped into Mexico City from hundreds of miles away.

According to the Times report, Mexican authorities have already drilled an exploratory well into the aquifer and are working to determine the exact size of the reservoir. They are prepared to spend as much as $40 million to pump and treat the deeper water, which they say could supply some of Mexico City's 20 million people for as long as a century.

Scientists point to what's happening in Mexico City as a harbinger of a world in which people will pay more and dig deeper to tap reserves of the one natural resource human beings simply cannot survive without.

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"Around the world people are increasingly doing things that 50 years ago nobody would have said they'd do," said Mike Wireman, a hydrogeologist with the EPA who also works with the World Bank on global water supply issues.

Wireman points to new research in Europe finding water reservoirs several miles beneath the surface — far deeper than even the aquifer beneath Mexico City — and says U.S. policy has been slow to adapt to this new understanding.

"Depth in and of itself does not guarantee anything — it does not guarantee you won't use it in the future, and it does not guarantee that that it is not" a source of drinking water, he said.

If Mexico City's search for water seems extreme, it is not unusual. In aquifers Denver relies on, drinking water levels have dropped more than 300 feet. Texas rationed some water use last summer in the midst of a record-breaking drought. And Nevada — realizing that the water levels in one of the nation's largest reservoirs may soon drop below the intake pipes — is building a drain hole to sap every last drop from the bottom.

"Water is limited, so they are really hustling to find other types of water," said Mark Williams, a hydrologist at the University of Colorado at Boulder. "It's kind of a grim future, there's no two ways about it."

In a parched world, Mexico City is sending a message: Deep, unknown potential sources of drinking water matter, and the U.S. pollutes them at its peril.

“Message from Mexico: U.S. Is Polluting Water It May Someday Need to Drink”, 25/01/2013, online at: http://www.propublica.org/article/message-from-mexico-u.s.-is-polluting-water-it-may-someday-need-to-drink?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=a938252da8-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ UN Deputy Chief Urges Action on Water Rights

Most of the world's urgent problems boil down to water and sanitation, and global leaders must act to reduce child mortality and urban poverty, the UN's deputy chief said Friday.

There are 783 million people who lack access to clean or relatively safe water and 2.5 billion people, or 37 percent of the world's population, who don't have access to toilets, ," Jan Eliasson told reporters on the sidelines of a European Union-Latin America-Caribbean summit in Santiago.

"This is the main reason why more than 3,000 children under 5 years of age die every day from diarrhea, dysentery, dehydration and cholera," he said.

Eliasson said about 60 percent of the world's population will be living in cities in the next 8 years and he's increasingly worried about water issues related to urbanization as more poor people move to capitals with poor sanitation systems.

The career diplomat and former Swedish foreign minister pointed to examples such as shantytowns outside Nairobi, Kenya where 800,000 people are living without any sanitation system, or Korail, Bangladesh, where slum dwellers pay hundreds of times more per gallon of water from a trader than in developed nations.

"This will be a great challenge for Latin America, with the organization that you're seeing here also, to make sure you have time to catch up to this problem, which can otherwise lead to great health crisis," he said.

Population growth has led to conflicts over water, he said.

Major steps on water and sanitation would lead to a reduction of child mortality, improvement from maternal health and an overall reduction in poverty, Eliasson said. It would also help make gender relations more equal because women usually go after water and take care after sick children suffering from diarrhea and other illnesses.

Progress would also be reached on education as sick children often have to miss schooldays and parents are forced to take days off from their jobs to take care of them.

"If we do water and sanitation right, we can have a great improvement on other goals," Eliasson said. "That's the beauty of this, apart from taking care of a problem, which is undignified for us to have in today's world."

"UN Deputy Chief Urges Action on Water Rights", 25/01/2013, online at: http://abcnews.go.com/International/wireStory/deputy-chief-urges-action-water-rights-18314193?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=a938252da8-RSS_EMAIL_CAMPAIGN&utm_medium=email

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