

ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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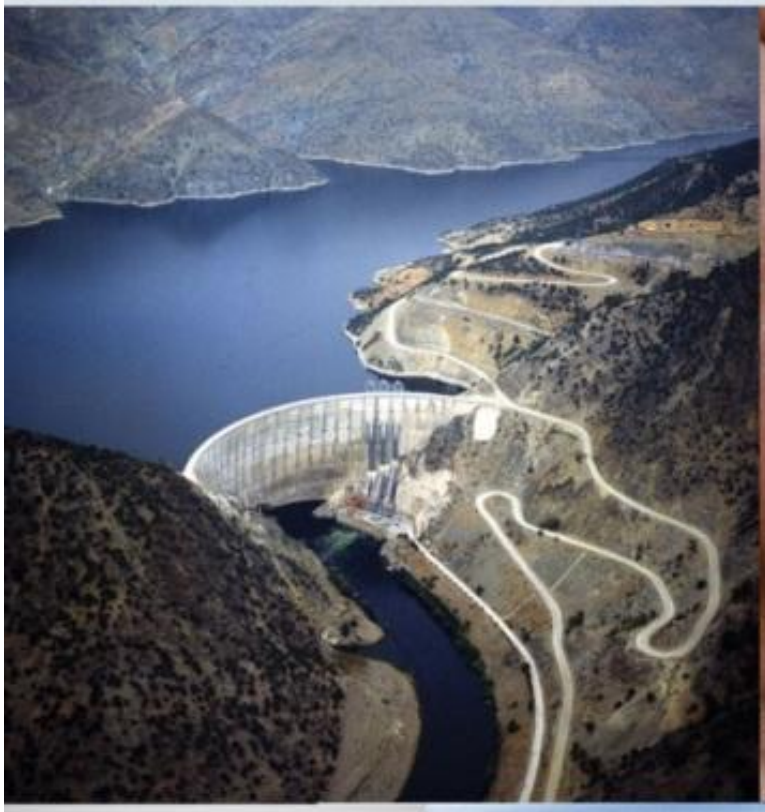



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Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

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❖ Nature Iraq Acts as "Waterkeeper" for Ailing Upper Tigris River

The Upper Tigris River in Iraq could get a new lease on life as an Iraqi conservation group receives support to study its numerous environmental threats.

Western governments are much more interested in Iraq's post-conflict "democracy building" than environmental issues, according to the folks over at Nature Iraq, who are well known for their combat zone conservation work. The small conservation outfit attempted to keep an eye on the country's degraded waterways but had to give up once they ran out of financial resources in 2009.

Their main concern is to monitor the Lesser Zab River, which rises in Iran and eventually runs into the Tigris River. This historically important waterway is threatened by fuel spills from smuggling activities, water diversion and irrigation projects, dam construction, gravel mining operations; and municipal sewage and solid waste impacts among other issues, but Nature Iraq has felt powerless to do anything about it. Until now.

After gaining official acceptance to the International Waterkeeper Alliance this year, Iraq's Waterkeeper Nabil Musa set out to familiarize himself with rivers under his jurisdiction and to conduct a number of clean-up, outreach and educational projects. Even more importantly, the Waterkeeper received a grant from the UK-based Rufford Small Grants Foundation to conduct a threat assessment of the Lesser Zab River in Kurdistan, Northern Iraq and develop action plans for addressing the river's unique threats.

This is a tremendous boon for nature conservation in Iraq in particular and for the Middle East in general.

"Nature Iraq Acts as "Waterkeeper" for Ailing Upper Tigris River", Tafline Laylin, 19/12/2011, online at: http://www.greenprophet.com/2011/12/nature-iraq-upper-tigris-river/

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❖ Iran, Iraq ink electricity contract: report

TEHRAN, Dec. 20 (Xinhua) -- Iran signed contracts with Iraq to cooperate in the latter's electricity sector, the official IRNA news agency reported Tuesday.

Iraqi Ministry of Electricity has signed a 72-million-U.S. dollar contract with Iranian Sanir company, according to an announcement released Tuesday, quoted by IRNA.

Sanir is due to construct two gas-powered units for Dibris power plant in Kirkuk in northeastern Iraq in order to increase the country's electricity capacity by 320 megawatts (MW) within 14 months.

Other electricity contracts worth 69.8 million dollars have been signed between the Iraqi ministry and other Iranian companies to double the power generation capacity of Sadr power plant in Baghdad within 12 months, IRNA said without specifying the date and locus of signing the contracts.

In November, Majid Salehi, managing director of Iran Power Development Company, said that Tehran and Baghdad have agreed to finish an electricity transfer line connecting Iran's Karkheh dam to al-Emara in Iraq, which will take 1,000 MW of electricity to the Iraqi city every year.

The capacity can be further increased to 1,150 MW upon the request of the Iraqi side.

According to the local satellite Press TV, Iran had a total annual electricity generation capacity of 63,403 MW by November.

Iran currently exchanges electricity with countries including Afghanistan, Armenia, Iraq, Pakistan, Turkey and Turkmenistan.

"Iran, Iraq ink electricity contract: report", 21/12/2011, online at: http://news.xinhuanet.com/english/world/2011-12/21/c_122455219.htm

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❖ Water in the Arab Spring

Water scarcity in the Middle East & North Africa is at the root of the region's uprisings. In the coming years, it will also be the source of further social unrest across the region.

Human dignity has been widely acknowledged as the engine for the Arab Spring which has now reached its first anniversary. There is broad consensus that the right to have a voice as well as a more equitable stake in the future of a nation have been significant factors.

Dignity also includes more prosaic notions, such as having access to basic staple foodstuffs and to water, both to drink and for sanitation purposes.

Poor political governance and moribund economic policies have failed to provide adequate protection against increased water scarcity in the Middle East and North Africa. Two-thirds of the region's water supplies originate outside the region. Consequently, Arab nations need to import more than half their food; they are the greatest importers of cereal in the world. This means that when commodity prices surged in the autumn of 2010, largely due to water scarcity issues such as the Russia's disastrous drought, basic foodstuffs were in short supply and, therefore, more expensive.

Even in Egypt, where the government spent close to 7 percent of gross domestic product on food and energy subsidies, commodity hikes led to food price inflation hitting 11 percent last year. The Food & Agricultural Organisation's food price index, a measure of the monthly change in international prices of a basket of food commodities, peaked at the beginning of 2011.

In the run up to the first disturbances in Tunisia, the Arab Forum for Environment and Development cautioned that the region would face severe water scarcity as early as 2015. It warned lack of water would have profound social, political and economic ramifications.

Mohamed Bouazizi, the market stall holder in Sidi Bouzid whose self-immolation in December triggered the Tunisian uprising, made a statement not only about corruption and malfeasance but also about food and water. In the days that followed his action, the town took to the streets in protest chanting 'Water and bread, yes! Ben Ali, no!'

Yemen, considered to be one of the most water-stressed nations in the world, witnessed riots in the port city of Aden in 2009 triggered by water scarcity. The price of water has risen five to tenfold in the country since January. With fuel supplies used to pump water from underground aquifers becoming scarce, Sana could be the world's first capital to run out of water. Increasingly policymakers talk about 'the water, food, energy nexus' with Yemen looking set to become the case study when that relationship collapses.

Bahrain has virtually no freshwater resources and according to a recent report the Gulf kingdom is today the most water-stressed in the world.

The Middle East and North Africa represents 10 percent of the planet's land, but contains less than 1 percent of the world's freshwater resources. Some Arab countries with the lowest renewable fresh

water resources continue to have per capita water consumption rates which are among the highest in the world. The challenge for the region, then, is balancing declining resources with increased consumption borne from rapid population growth.

Surface water supplies will not meet growing demand while groundwater resources have been over-exploited beyond safe yield levels, leading to significant declines in water tables and in the pollution of aquifers. Water pollution is a major challenge with 43 percent of waste water in the region discharged without treatment, while a small fraction not exceeding 20 percent is reused.

So what steps does the region need to take to meet water demands? First, a regional and national strategy needs to be put in place to identify a sustainable strategy for an equitable provision of water in a region equally hard hit. This needs to include a co-ordinated regulatory framework. Without proper regional co-ordination, measures taken that may disadvantage neighbouring countries will lead to water conflicts.

Second, proper management of municipal and industrial water supplies requires the introduction of water pricing schemes. Water pricing is likely to be poorly received in the short term, but it is proven to moderate consumption behaviours and to lead to a more efficient use of water, and helps protect water supplies from overuse and pollution.

Third, with the right political and regulatory framework in place, the poorer nations in the region need technical expertise and aid from wealthier Arab states and OECD nations to help provide technology, such as more efficient irrigation and recycling systems, as well as to build their capacity.

Fourth, raising investment and providing sources of funding is crucial. The region's formidable collection of sovereign wealth funds should pool some resources and launch a regional water investment fund to invest in the huge outlays required for the necessary infrastructure.

The Arab Spring has taken hold for a variety of complex, and interconnected reasons. Given the challenges it faces, a regional water strategy as part of a green economy is no longer just an option for the Middle East & North Africa; with unprecedented levels of water stress, it is a necessity if it is to avoid further social and economic crisis in the coming years.

"Water in the Arab Spring", Andrew Wigley, 20 December 2011, online at: http://www.opendemocracy.net/andrew-wigley/water-in-arab-spring

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❖ Iran, Armenia sign 5 MoU

TEHRAN (ISNA)-Iran and Armenia signed five Memoranda of Understanding (MoU) during Iranian President's trip to Armenia.

The agreements were signed in presence of Iranian President Mahmoud Ahmadinejad and his Armenian counterpart Serzh Sargsyan on Friday.

The two sides agreed to work on mutual social welfare affairs, environment protection and building and running hydropower plant on Aras River.

They also stressed cooperation between national standard institutions of the two countries.

Ahmadinejad and Sargsyan stressed further expansion of mutual, regional and international relations.

Tehran and Yerevan share firmly-established ties and no element can damage or overshadow the relations, Sargsyan said.

Ahmadinejad left for Armenia Friday morning.

"Iran, Armenia sign 5 MoU", 24/12/2011, online at: http://www.isna.ir/ISNA/NewsView.aspx?ID=News-1916396&Lang=E

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❖ British Water signs 'landmark' water agreement with Israel

Water industry trade association British Water and Israeli research and development (R&D) agency MATIMOP have signed a "landmark" water agreement.

As part of the 'Memorandum of Understanding' (MoU), signed today (December 21), a framework enabling companies and research organisations from the two countries to work closely for domestic and international tenders and research projects has been set up. It is hoped this will lead to projects which will boost each country's economies.

It is also anticipated the agreement will facilitate greater joint projects to develop new product applications and processes to be commercialised in the global market, as many of the technologies designed in Israel begin to make headway in the international market.

According to British Water, the partnership also comes as a direct result of Israel's innovative approach to developing water technologies to help it better cope with water scarcity, which is rapidly becoming a worldwide concern, with figures from the United Nations suggesting that by 2030 almost half of the world's population will be living in areas of "high water stress".

Areas of common interest between the two countries, include water management technology, which increasingly uses ICT to aid water monitoring and fault identification; desalination, water reuse and the use of renewable energy sources in water purification, reclamation and desalination.

British Water technical manager, Ian Bernard, said: "The agreement with MATIMOP ensures both parties have access to some of the best technological solutions to implement in both the UK and Israel, and will also enable world leading experts in both countries to cooperate for European and international research, development and technical projects."

Meanwhile, in the UK, the partnership follows the release of the Government's Water White Paper, 'Water for Life', which sets out plans to reform the UK water industry and to meet increasing environmental and water stress demands.

MATIMOP executive director, Israel Shamay, added: "We are pleased to be working closer with British Water than we have worked with any foreign trade organisation before.

"The UK water sector is well respected internationally for its world-leading capabilities, solutions and services, making it the perfect partner to help commercialise and market Israeli innovation and R&D in this sector."

According to industry experts, the global water industry is expected to grow rapidly during the next five years, with capital expenditure on water infrastructure increasing from US$90bn in 2010 to $131bn in 2016.

Minister for trade Israel Oded Distel, said: "This agreement is in line with the overall concept of smarter solutions for the water sector. We want to support the upgrade of water management technology in the UK. We have successfully achieved this in Israel by bringing in technology from other sectors."

"British Water signs 'landmark' water agreement with Israel", 21/12/2011, online at: http://www.edie.net/news/news_story.asp?id=21569&title=British+Water+signs+%27landmark%27+water+agreement+with+Israel+

❖ EU launches 10m.-euro Gaza desalination project

PA water chief: Inequities, blockade amplify Gaza crisis; Erdan says plant unrelated to Israeli actions.

The European Union has launched a 10 million euro project to erect a desalination facility over the next three years in Gaza, to combat what the governing body calls "the humanitarian water crisis" in the territory.

Acting EU representative to the West Bank and Gaza, John Gatt-Rutter, signed a Memorandum of Understanding with Palestinian Water Authority head Shaddad Attili last week, as well as with members of the Coastal Municipalities Water Utility and UNICEF.

The facility, according to the EU, will be a "medium-term intervention" and will provide safe drinking water to approximately 75,000 inhabitants of Khan Yunis and Rafah.

"As the EU has reiterated in the past, the continued policy of closure in Gaza has damaged the natural environment, notably water and other natural resources," Gatt- Rutter said. "I hope that this intervention can bring real change for some Palestinians living under unsustainable conditions in the Strip."

Attili praised the EU's decision to provide these funds.

"The facility is one component of a rolling program of interventions designed to tackle Gaza's acute water problems and save its underground aquifer from imminent collapse," he said Sunday.

Environmental Protection Minister Gilad Erdan likewise praised the EU's decision to fund the plant, saying Monday the Israelis have been saying everywhere they want the Palestinians to build it.

"In my eyes, water should be out of the conflict," Erdan said. "We are not trying to prevent water from the Palestinians. We want them to have all the water that they need to have."According to a statement, the EU has been particularly involved in recent years in improving water supply, sewage connection and wastewater treatment in both the West Bank and Gaza. In the past few years, the EU has supplied 1.3m. euros to Tulkarm and Jenin for water infrastructure, 2m. euros to Hebron for water networks, 6m. euros to emergency sewage treatment in northern Gaza and 3.5m. euros for water sanitation in Rafah and Deir el-Balah in Gaza.

In addition to promoting reforms in the Palestinian Authority water sector and aiming to foster cooperation with the corresponding bodies in Israel and Jordan, the EU is also in the process of preparing an 18m. euro treatment plant in Tubas.

In Attili's eyes, the water situation particularly in Gaza has come to a "crisis point," in which only 10 percent of all available water to residents there is now safe to drink. While the EU's new project is absolutely necessary given the circumstances, however, it is only "an interim measure," rather than a long-term solution, he warned. To achieve far-reaching results, all those involved with tackling Gaza's water situation must combine their efforts for a series of programs and interventions, according to Attili.

"It signals the beginning of a long and difficult road ahead," he said of the project.

"EU launches 10m.-euro Gaza desalination project", Sharon Udasin, 21/12/2011, online at: http://www.jpost.com/Sci-Tech/Article.aspx?id=250171

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❖ Israel to restore clean water to Jordan River

ALUMOT DAM, Israel — Israel has pledged to release about 1 billion cubic feet of water to restore the biblical Jordan River.

Israel, Syria and Jordan have diverted nearly all of the river's fresh water. The trickle that remains is mostly raw sewage.

Last year, Israel began building a $106 million complex to remove the sewage water and treat it for agricultural use. But that would have left the river dry.

In a statement, Environment Minister Gilad Erdan promised to start replacing the sewage with clean water in 2013, saying it will "allow life to return to the river."

Environmentalist Gideon Bromberg said the promised amount is less than a 10th of what is needed to fully restore the river.

"It's a first drop, but it's an important drop," Bromberg said.

"Israel to restore clean water to Jordan River", 20/12/2011, online at: http://www.ajc.com/news/nation-world/israel-to-restore-clean-1265950.html

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❖ Experts: Israel Missing 2 Billion Cubic Meters of Water

While Israel had a good streak of rain in November, December has proven to be nearly bone-dry so far, erasing the "gains" to the water supply last month. According to long-term forecasts, rainfall this year is likely to be lower than average, the Israel Weather Service said.

Water experts said that Israel's water sources are in very poor shape after seven straight years of largely poor rainfall, and the country's water economy was short as many as 2 billion cubic meters of water, taking into account all water sources. The Kinneret is 70 centimeters below the "lower red line," and is 4.9 meters below its maximum capacity. With that, the Water Authority said that it would not be raising prices for water this season.

"Experts: Israel Missing 2 Billion Cubic Meters of Water", 19/12/2011, online at: http://www.israelnationalnews.com/News/Flash.aspx/227351#.TvD-ilbheDQ

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❖ Water Authority on a mission to save Israel's reservoirs

Authority decides 3 million cubic meters of water will be added to 15 million cubic meters already pumped back to nature annually.

The Water Authority will draw up a plan to pump water back to springs and wells in an effort to prevent the drying up of reservoirs and waters in national parks.

The authority's policy-making council has decided that 3 million cubic meters of water will be added to the 15 million cubic meters already pumped back to nature annually - and some springs will be replenished, most of these in the Galilee and the Golan Heights.

The decision will force the authority to find alternatives for some consumers, such as farmers. In some cases farmers will receive water from nearby wells, in others the water may flow from springs through reservoirs and only then be used for agriculture.

In the past few years the Water Authority has had to come to the aid of national parks and streams that were drying up after most of their water sources were used before they reached them, or the groundwater stopped flowing during the several relatively dry years.

The clean part of the Yarkon River, for example, receives water from a national water company pipe, as does the Ein Afek Nature Reserve. New drilling will take place near the Betzet Stream, even though the authorities fear that this might dry up the area further.

In other places, such as the David Stream near Ein Gedi, the nearby kibbutz draws its water only after it has flowed down the stream. In the Hula Valley in the north, the authority pumps water to the reservoir from nearby wells, instead of lower-quality water from fish ponds.

The Society for the Protection of Nature in Israel, which has repeatedly criticized the Water Authority for not enlarging the quotas pumped back to nature, was quick to welcome the recent decision.

It said, however, that "there are still regions such as the Beit She'an Valley and the Harod Valley were well water is used up instead of it flowing to nature. We need a transparent public plan that lists all the wells whose water will be allowed to flow naturally. The plan must include timetables and limits on drilling for groundwater from areas surrounding wells."

"Water Authority on a mission to save Israel's reservoirs", Zafrir Rinat, 21/12/2011, online at:
http://www.haaretz.com/print-edition/news/water-authority-on-a-mission-to-save-israel-s-reservoirs-1.402637

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❖ Israel pledges to pump clean water to restore biblical Jordan River

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"Israel pledges to pump clean water to restore biblical Jordan River", 20/12/2011, online at: http://www.washingtonpost.com/world/middle-east/israel-pledges-to-pump-clean-water-to-restore-biblical-jordan-river/2011/12/20/gIQAckhU7O_story.html

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❖ Despite withdrawal, Israel still controls infrastructure in disputed Lebanon village

State has begun upgrading Ghajar's sewer system, after fears arose that the nearby Snir River had been contaminated by the village's local waste.

A year after the cabinet decided to withdraw from the northern part the village of Ghajar, the state has begun building up the infrastructure in the northern part of the village.

The construction is the first of its kind since 2006, and focuses on upgrading the sewer system, after fears arose that the nearby Snir River (Hasbani) had been contaminated by the village's local waste.

Dr. Doron Merkel, of the Israeli Water Authority, previously told Haaretz that the state must hurry and connect the village to the sewage system in order to "prevent a future situation in which the northern part of the village will not be able to be connected, due to political implications."

Merkel further stated that not connecting the village may lead to a sever sewage overflow into the Snir River, which may endanger the quality of the water in the Sea of Galilee.

Merkel further stated that the fact that Israel decided to withdraw from the northern part of Ghajar creates a situation in which Israel will not be able to connect it to its sewage infrastructure in the future.

According to Gershon Sharon, the head of the company charged with implementing the NIS 4 million project, there are several homes in the village that are not connected to the sewage system, while the project's contractor claimed that some of the existing infrastructure dates back before 1967, and allows for leakage of sewage into ground water.

Like the 18,000 Druze in the Golan Heights, Ghajar residents were Syrians when Israel occupied the region.

But unlike the Druze, the villagers - who are members of the Alawite Islamic minority - accepted Israeli nationality when the Golan was annexed in 1981.

Over the years, the village expanded northward. In 2000, when the UN demarcated the border, Ghajar's northern half came under Lebanese control and the other half remained Israeli territory.

Israel retook the Lebanese part in its 2006 war against Hezbollah militants, and has since built a security fence to prevent militants from entering the enclave.

The strange reality leaves the residents of Ghajar in a bind. Despite the different mechanisms put in place over the past 11 years to provide them security solutions, the residents' lives are difficult and often intolerable.

"Despite withdrawal, Israel still controls infrastructure in disputed Lebanon village", 21/12/2011, online at: http://www.haaretz.com/news/diplomacy-defense/despite-withdrawal-israel-still-controls-infrastructure-in-disputed-lebanon-village-1.402741

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❖ Beit She'an's sewage may end up in Jordan River

Beit She'an municipality, surrounding Emek Mayanot Regional Council owe treatment plant NIS 3 milion.

The wastewater treatment facility in Beit She'an may be forced to close within two weeks, causing hundreds of thousands of cubic meters of raw sewage to flow into the Jordan River, clean water advocacy group Zalul warned this week.

The Beit She'an Municipality and the surrounding Emek Mayanot Regional Council in the North together owe NIS 3 million to the operator of their waste-water treatment facility, the NGO said.

RELATED:
'Israel's rivers could take 100 years to restore'

Continued failure to pay could result in a plant shutdown, Zalul said. Demanding that government officials step in to force the municipalities to pay, the NGO asked that authorities use all administrative and legal means at their disposal to prevent the renewed flow of raw sewage into the river.

"We expect the Water Authority to be much tougher with the municipalities and do something about it," Zalul campaign manager Dalia Tal told The Jerusalem Post. Part of the problem is that Beit She'an lacks a water corporation of its own, something that is illegal in and of itself, Tal said.

Last week, representatives of Zalul asked Environmental Protection Minister Gilad Erdan, Interior Minister Eli Yishai and Water Authority head Alex Kushnir to intervene.

In response, Water Authority sewage infrastructure development director Moshe Garazi confirmed to the NGO that there is a serious problem in the region and that he is working with the Interior Ministry to resolve the issues.

Beit She'an owes NIS 2m. to the operator, and while Emek Mayanot has paid for continuous standard sewage treatment, the regional council owes NIS 1m. for the processing of industrial wastewater – water containing abnormal amounts of oils, fats and sodium chlorides, according to Zalul.

Meanwhile, the nearby Gilboa Regional Council, which is slated to eventually use the facility, has not yet connected or paid for access to the system, and continues to empty its sewage into the Harod Stream.

"It's not just pollution," Tal said. "This water would go to agriculture – so you are losing twice."

An Environmental Protection Ministry spokeswoman said on Thursday that her office had turned to Beit She'an and received a reply that the city is in its final stages of approving a recovery plan.

Under this plan, the municipality said it is supposed to receive money from the state that will be directed to the operator of the Beit She'an wastewater treatment plant.

While the city told the ministry that this would be done within a few weeks, the Environmental Protection Ministry's northern district director asked that the Interior Ministry intervene in the matter.

Attempts by the Post to reach both the Beit She'an Municipality and the Emek Mayanot Regional Council met with no response, but Ma'ariv reported both as saying they are actively working to pay the debt and hope that the controversy will be resolved soon.

"Beit She'an's sewage may end up in Jordan River", Sharon Udasin, 18/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3908

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❖ Refilling the Dead Sea

The Dead Sea water level is dropping at an alarming rate. There was a time "when freshwater flowed into the Dead Sea, mostly from the Jordan River, and this balanced the water volume that evaporated from the lake," explains Dr. Amos Bein. "But the diversion of water sources for agriculture and domestic use by Israel, Syria, Jordan and others has led to a negative water balance, changing the natural order and leading to the lake's declining sea level and shrinking surface area."

Stabilizing and or raising the water level will require a conduit to convey water from the Red Sea or the Mediterranean to the Dead Sea. Bein heads a research team at the Institute's Environmental Policy Center (EPC) that is analyzing and comparing the cost effectiveness and implications of various alternatives for such a conduit and achieving its declared goals.

Several alternative routes for the conduit were examined; each one is outlined according to its pros and cons, and costs, based on a detailed analysis of its component parts. The EPC project, says Bein, does not claim to identify the most appropriate solution. Rather, its findings are intended to provide a factual dimension, perspective, and critique for use when applicable at the national and international decision-making levels on all matters related to addressing the water deficit of the Dead Sea and its implications.

The EPC project was prepared against the background of the preparation of a World Bank (WB) feasibility study for the Dead Sea water conveyance, which was initiated in 2008 and whose findings will be published in the coming weeks. Dubbed there as the "peace canal," it is seen as an opportunity for cooperation and will be subject to a regional political agreement. The WB study only examines alternatives relating to the conveyance of water from the Red Sea, whereas the EPC also includes options for a conduit from the Mediterranean Sea.

In light of the complexity of constructing a water conduit to the Dead Sea, and the many uncertainties it entails, the EPC recommends that "if it is decided to pursue the conduit project, implementation should take place on a modular basis to allow for the effective management of uncertainties and the possibility of unanticipated adverse impacts."

"Refilling the Dead Sea", 18/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3910

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❖ 'Impact of abstracting seawater from Red Sea will be negligible'

AMMAN – The impact of abstracting millions of cubic metres of seawater from the Red Sea will be negligible, according to the results of the Red Sea Modelling Study.

The study assessed effects of the Red Sea-Dead Sea Water Conveyance Project on the environment of the Gulf of Aqaba and Eilat, especially since the mega scheme seeks to pump a maximum of two billion cubic metres of water annually from the Red Sea into the rapidly shrinking Dead Sea.

The assessment of pumping on the marine environment focused on five possible effects: modification of heat flux, changes in water current intensity and circulation, local damage to benthic communities, changes in nutrient fluxes and entrainment of larvae and consequent repercussions to connectivity.

"Our physical and chemical oceanographic study suggests that the effects on heat flux and on nutrient dynamics will be negligible," said the report, posted on the World Bank's website.

The study, however, found that construction of the pumping station will undoubtedly cause substantial damage to local benthic communities over several hundreds of square metres.

"Based on above assessments, our findings are for a "go" decision, as long as the intake configuration, location, and depth are selected properly," the report said.

To minimise the effect on the environment, the report recommended that the pumping intake be located at the eastern candidate site in Jordan.

Regarding the exchange of water between the Gulf of Aqaba and Eilat and the northern Red Sea through the Strait of Tiran, the report indicated that it would likely be imperceptible, while the expected effect of abstraction on the heat budget of the gulf is also expected to be negligible.

"Since the proposed maximum abstraction rate is less than 0.5 per cent of the exchange of water through the strait, the impacts on the gulf-wide scale will be minimal," the report said.

The Red Sea Modelling Study is part of a programme led by the World Bank and was implemented by international consulting companies and panels of experts in various fields.

The Red-Dead project is part of international efforts to save the Dead Sea, which has been shrinking at the rate of one metre per year, largely due to the diversion of water from the Jordan River for agricultural and industrial use.
The project aims to raise water levels in the shrinking lake from 408 metres to 315 metres below sea level. Over the past two decades alone, the Dead Sea level plunged more than 30 metres, with experts warning that it could dry up within the next 50 years.

'Impact of abstracting seawater from Red Sea will be negligible', 18/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3914

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❖ Sewage clogs Jordan River south of baptism site

Just a few kilometers south of the Yardenit baptismal site, plastic soda bottles blanket the southernmost "clean" section of the Jordan River, while below, raw sewage trickles into a saline brook gushing from an adjacent pipe.

A stench overpowers the nostrils of passersby, as the wastewater from nearby communities makes its way into the Jordan River, just south of the Kinneret (Sea of Galilee).

"This used to be a great river that had great environmental benefits for the whole region and has great historical significance and religious significance for people of three religions," US Ambassador Dan Shapiro said.

Shapiro was on a tour on Tuesday led by the multinational Friends of the Earth Middle East of rehabilitation sites along the river as well as the Jordan River Peace Park in Naharayim, which is under Jordanian sovereignty.

At Yardenit, where about 600,000 Christians dunk their heads for baptism annually, the water is still entirely clean, and there is a family of beavers and numerous catfish, according to staff members.

Just to the south, however, is an entirely different story – there, the river has lost 50 percent of its biodiversity, and a willow tree would not be able to survive on the riverbanks due to the extreme salinity, Friends of the Earth Israel director Gidon Bromberg explained.

But not all is grim, he said.

A rocky walk away from Alumot Dam, the river-turned-sewage-pit, is a construction site, where in a year the Bitanya wastewater treatment plant will arise, followed by a desalination facility, Bromberg said.

"The good news is at the end of next year there will be no sewage flowing from the Israeli side," he told *The Jerusalem Post*, in a follow-up interview Wednesday.

The treatment plant will absorb the raw sewage currently flowing into the river, while the desalination plant will take in the brine being extracted from the Kinneret, which is now pumped straight into the Jordan River. The facilities are taking shape from a total investment of NIS 400 million, through the combined budgets of the government and the Jordan Valley Regional Council.

"We will no longer be dependent on expensive drinking water [for irrigation]," council head Yossi Vardi said during the tour.

The two plants will produce a total of about 20 million cubic meters of water for agricultural use annually, Vardi said.

"It's encouraging to know that within a year that dam will be removed, the water will begin to flow again," Shapiro said. "That's a major step in the path toward rehabilitating this river."

The water flow from the Kinneret to the Jordan River, which was once 1.3 billion cubic meters annually, has now dwindled to nothing, according to Bromberg. The Jordanians and Syrians have caused a similar problem by building dams and side tributaries on their stem of the Yarmouk River, which also once flowed into the Jordan.

While the Environmental Protection Ministry and the Water Authority have collectively pledged to restore 30 million cubic meters a year – "a first drop and an important drop" – this is hardly enough to restore a healthy river, which would require about 400 million to 600 million cubic meters, Bromberg said. To accomplish, commitments of 220 million cubic meters from Israel, 100 million cubic meters from Syria and 90 million cubic meters from Jordan would be required, according to a Friends of the Earth report released last year and funded by the United States Agency for International Development.

"We know that this is not going to happen overnight – it's difficult for Jordan and we have no impact on Syria," Bromberg told the *Post*. "We're calling for each country to return a portion of what they took."

As far as sewage is concerned, however, Bromberg said he has gotten word that USAID is helping Jordan move forward with a sewage treatment plant on its side of the river, which is laden with poor communities where "every home has a hole in the ground" to collect personal sewage. In the West Bank, the Japanese government has just committed to build a treatment plant for the Palestinian Authority in the particularly problematic city of Jericho, according to Bromberg.

"There's good progress on all sides," he said. "The fact that Israel is leading reflects [the fact] that Israel is a more economically powerful country, but it also reflects that Israel was the first in the demise of the river."

Standing at the Naharayim viewpoint overlooking Peace Island – where Friends of the Earth hopes to develop a larger Transboundary Peace Park that would not require visas – Shapiro said he was impressed with the work being conducted by all the surrounding states, bolstered by efforts of Friends of the Earth and money from the US government through the Good Water Neighbors program.

All of the collaborators are "working to use these very vexing, very important environmental challenges as a means to also build peaceful relations," the ambassador said. "We're here to support the Israeli government, the local communities and all the Israeli, Palestinian and Jordanian local residents who are trying to solve their joint environmental and water challenges."

A representative of USAID agreed, stressing that there is still, however, much more to be done.

Water, in Shapiro's opinion, has already become a bridge for peace, and he praised the fact that Environmental Protection Minister Gilad Erdan and PA Water Minister Shaddad Attili finally spoke face-toface last week, at a conference in Ashdod.

"That's the kind of direct interaction between the two sides that I think can solve both the water problem and make a contribution toward solving the bigger peace problems," Shapiro said.

While progress has certainly been made on water issues such as the Jordan River's rehabilitation, the work is far from finished.

For example, at perhaps the holiest Christian baptismal site along the Jordan – Kaser el-Yehud, east of Jericho, where many believe John the Baptist baptized Jesus – the water remains dangerously polluted.

"I wouldn't want to be baptized there, I can tell you that," Bromberg said.

To ensure that visitors can once again safely dip themselves there, Israel, the PA and Jordan must mimic the efforts of the countries that partner to protect bodies such as the Rhine River and the Great Lakes, he said.

"This is a river holy to half of humanity," he said.

"Sewage clogs Jordan River south of baptism site", 23/12/2011, online at: http://www.jpost.com/Sci-Tech/Article.aspx?id=250647

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Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Ethnic cleansing of invented people

Forward by Sonja Karkar, Editor of **Australians for Palestine**: *Israeli peace activist and author Miko Peled doesn't need any introduction to our Australian supporters. We brought him out to speak in September this year and his powerful talks about the ethnic cleansing of Palestinians shook the entrenched beliefs of those who had long thought otherwise. His article below brings the same message and exposes the malevolent nonsense spouted by US presidential hopeful Newt Gingrich - that the Palestinians are an invented people.*

Mostafa Tamimi from Nabi Saleh, Bahjat Zaalan and his son Ramdan from Gaza died on my fiftieth birthday and just a few days after Newt Gingrich declared them an invented people. They were murdered by the Israeli terrorist organization, the IDF, an organization that is supported and funded by the US. One Israeli terrorist shot the invented Tamimi in the head with a tear gas canister, and another Israeli terrorist fired a rocket that murdered the invented Zaalan and his boy Ramadan. Both terrorists were educated and trained by Israel, and armed by the US.

The Israeli terrorists are not invented but quite real, and they are safe, protected by the apartheid regime that trained and sent them on their missions, and the Israeli court system will make sure that they are never brought to justice. This is how Israel's well-oiled ethnic cleansing machine operates.

The Zionist ethnic cleansing of Palestine is not a thing of the past but an ongoing campaign that is executed by three arms of the State of Israel: The education system, a dedicated bureaucracy and the security forces. The education system is dedicated to indoctrinating and producing soldiers and bureaucrats who will execute and enforce the ethnic cleansing. The bureaucracy is charged with making rules that make life unliveable for Palestinians. Rules that restrict Palestinian access to their lands, and restrict their ability to travel freely to work and school. This same bureaucracy then demands that Palestinians pay for permits to be allowed do these very same basic things that they were denied. The security forces, the most obvious of which is the IDF, are charged with enforcing the restrictions, fighting off the resistance, armed or peaceful, and terrorizing the "invented" people of Palestine.

Since my father was a general and I served as a soldier in the IDF terrorist organization, people often ask me how is it that Israeli children who are raised in a Western style democracy become such monsters once they are in uniform? The detailed answer can be found in my book, The General's Son due out in February 2012, but the short answer is this: Education – Racism requires a mindset that is fashioned by education. In order to rationalize and justify the ethnic cleansing the Israeli education system portrays Palestinians as culturally inferior, violent and bent on the annihilation of the Jews, and at the same time, void of a true national identity. Palestinian national identity is but a figment of some anti-Semitic imagination.

Israeli children are educated to see the Palestinians as a problem that must be solved and as a threat that must be eliminated. They can go through life, as I did growing up in Jerusalem, without ever meeting a Palestinian child. They know nothing of the life or culture of Palestinians who quite often live only several hundred meters from them.

Palestinians are portrayed as an existential threat through absurd comparisons like that of Yasser Arafat to Hitler, the Palestinians to Nazis, and the Palestinian resistance to Al Qaeda. Since Israeli kids never meet Palestinians what they learn in school, particularly in the school textbooks, is all that they know. In fact it is remarkable that even though they live so close to one another, much if not all of what Israelis know about their Palestinian neighbors comes from high school text books and popular racist stereotypes. Israelis don't know that Palestinians never had an army, that they do not posses a single tank, a single warship or fighter jet, that they don't have a single artillery battery and do not in fact pose a military threat at all. According to a new book by Dr. Nurit Peled-Elhanan, not a single photo of a person who is a Palestinian exists in Israeli textbooks and there are millions of Palestinians in and around Israel. Israelis don't learn about Palestinian doctors and teachers, engineers and writers. They don't learn Palestinian poetry or prose and they don't read the works of Palestinian historians.

At a recent lecture I mentioned the ethnic cleansing of Palestine and someone called out: "What ethnic cleansing?" People are unaware of the ethnic cleansing taking place in Palestine because Israel hides it well and the mainstream media doesn't care enough to ask. In mainstream peace groups and dialogue groups that discuss Palestine/Israel, a basic Israeli condition is not to bring up issues like the ethnic cleansing because Israel doesn't like to talk about it.

But for the past 64 years ethnic cleansing of Palestine is what drives the Zionist policies towards Palestinians. All Zionist governments and all Zionist political parties left right and center support the ethnic cleansing. The Israeli judicial system lets the Israeli authorities get away with abuse, theft and murder as long as they are perpetuated against Palestinians. Had these same crimes been committed against Israeli Jews they would have been prosecuted to the full extent of the law.

Zionist supporters like to bring up the fact that on November 29, 1947 the United Nations voted to partition Palestine into a Jewish sate and an Arab state. What is left out of the Zionist story is that within one year of the vote Israeli forces had managed to capture close to 80% of Palestine, destroy close to 500 Palestinian towns and villages, kill scores of unarmed civilians and force the exile of some 800,000 Palestinians.

Then, when the UN passed resolution194 in December of 1948, calling for the refugees to be allowed to return to their homes, Israel proceeded to build cities and towns, parks and highways for the use of Jewish Israelis on Palestinian land. Then the Knesset began passing laws that prohibit the return of the refugees and allow the new state to confiscate their lands.

After the war was over, the Palestinians who remained within the newly created Jewish state were forced to become citizens of a state that despised them and saw them as a "problem" and a "threat." They were designated as "The Arabs of Israel" a designation that stripped them of a national identity and denied them any rights to the land and provided them very limited rights as citizens. From being the rightful owners of their lands and their country they now existed at the pleasure of the new owner of the land, the state of Israel. Palestinian refugees were forced into concentration camps, conveniently called refugee camps, and those that tried to return were shot. A military unit was created for the purpose of punishing Palestinian refugee who "infiltrated" back into their homeland, now called Israel. It was called Unit 101, the notorious Ariel Sharon led it and it made a name for itself as a murderous gang with a license to kill Palestinians.

So regardless of the myth, now perpetuated by Newt Gingrich among others, that says there was no forced ethnic cleansing, we know today that the creation of Israel was made possible through a systematic campaign of ethnic cleansing, conducted by the Jewish militia, involving massacres, terrorism, and the wholesale looting of an entire nation.

Newt Gingrich, being the history buff that he is, might be interested in a story I mention in my book The General's Son, about my mother. She was born and raised in Jerusalem and she remembers the homes of Palestinians families in neighborhoods in West Jerusalem. She told me that when she was a child, on Saturday afternoons she would go for walks through these neighborhoods, admiring the beauty of the homes, watching families sit together in their beautiful gardens. In 1948 when the Palestinian families were forced out of West Jerusalem, my mother was offered one of those beautiful, spacious homes but she refused. At age 22, the wife of a young army officer with little means and with two small children, she refused a beautiful spacious home, offered to her completely free because she could not bear the thought of living in the home of a family that was forced out and now lives in a refugee camp. "The coffee was still warm on the tables as the soldiers came in and began the looting" she told me. "Can you imagine how much those families, those mothers must miss their homes." She would ask and she continued, "I remember seeing the truckloads of loot, taken by the Israeli soldiers from these homes. How were they not ashamed of themselves?" there are thousands upon thousands of homes in cities all over the country that were taken.

Moving forward now to 1967 and the myth that Israel was fighting for its existence as it was attacked by Arab armies from all directions. Much was written about this but nothing is more revealing than the minutes of the meetings of the IDF general staff from June 1967, just prior to the war. According to the generals, one of whom was my father, Matti Peled, not only was there no existential threat but the generals clearly state that the Egyptian army needed at least a year and a half before it would be ready for war and therefore this was an opportune time to attack and destroy it. The army pressured the cabinet to authorize an attack and indeed the cabinet approved an attack against Egypt. The IDF destroyed the Egyptian army and then went on to attack Jordan and Syria. It took the IDF six days and 700 casualties to kill an estimated 15,000 Arab forces, take the West Bank, the Golan Heights and The Sinai Peninsula. One may like to think this was a miracle but it was a well-planned, well-executed attack against countries that had no viable military force. The Israeli army had thus fulfilled its goal of conquering the entire Land of Israel, and the De-Arabizing of Palestine could now proceed into the West Bank and Gaza.

Since the early days of the State of Israel the IDF made it its mission to be the most brutal bully in the region. Today the IDF has one purpose: to conduct an all out war against Palestinians by terrorizing Palestinian civilians, kidnapping children from their homes and using brutal force against protesters. We are reminded of the intensity of IDF cruelty every so often, the latest major display being the three-week bloodbath in Gaza that began on December 27, 2008. Hundreds of tons of bombs were dropped by Israeli pilots on Gaza, followed by a massive invasion of land forces. All this for the purpose of terrorizing a defenseless civilian population that includes 800,000 children.

Now that Israel has been in control of the West Bank for over four decades it had built and invested there heavily. But all of the investment and construction in the West Bank was made to bring Jews into the West Bank. Palestinian lands are being taken at an alarming pace, their homes are destroyed and thousands are incarcerated, while industry, roads, malls, schools and gated communities with

swimming pools are being built for Jews only. Water, which is the scarcest resource of all, is controlled and distributed by the Israeli water authority, as follows: Per capita, Israelis receive 300 cubic meters of water per year. In comparison, per capita Palestinians in the West Bank and Gaza receive 35-85 cubic meters per year, while the World Health Organization recommends a minimum of 100 cubic meter of water per person per year. But what is even worse is that per capita, Israeli settlers in the West Bank are allocated 1500 cubic meters of water per year. Jews in the West Bank live with green lawns and swimming pools while Palestinians quite often get no water at all. Perhaps invented people have no need for water.

De-Arabizing the history of Palestine is another crucial element of the ethnic cleansing. 1500 years of Arab and Muslim rule and culture in Palestine are trivialized, evidence of its existence is being destroyed and all this is done to make the absurd connection between the ancient Hebrew civilization and today's Israel. The most glaring example of this today is in Silwan, (Wadi Hilwe) a town adjacent to the Old City of Jerusalem with some 50,000 residents. Israel is expelling families from Silwan and destroying their homes because it claims that king David built a city there some 3000 years ago. Thousands of families will be made homeless so that Israel can build a park to commemorate a king that may or may not have lived 3000 years ago. Not a shred of historical evidence exists that can prove King David ever lived yet Palestinian men, women, children and the elderly along with their schools and mosques, churches and ancient cemeteries and any evidence of their existence must be destroyed and then denied so that Zionist claims to exclusive rights to the land may be substantiated.

Once we connect the dots it is not hard to see that the occupation of the West Bank and Gaza is only a small part of the Israeli Palestinian issue.

The greater issue is the ongoing ethnic cleansing of Palestine by the Zionist state. The way forward for Israelis and Palestinians alike is to oppose the ethnic cleansing by opposing all its manifestations. This means supporting the movement to boycott, divest and place sanctions on Israel, or BDS for short, it means actively participating in the popular non-violent struggle in Palestine and it means challenging the racist laws that govern Israel by defying them. There has to be a clear and unequivocal call to recognize that the IDF is a terrorist organization and its officers are war criminals.

Furthermore, the reprehensible discrimination against Palestinians, whether they live in Israel/Palestine or not, practiced by the security officials at Ben Gurion airport and other points of entry to Israel/Palestine must be challenged. The struggle for a democracy in our shared homeland is no different than the struggle at Tahrir square and can in fact be seen as part of the Arab Spring.

"Ethnic cleansing of invented people", 22/12/2011, online at: http://www.salem-news.com/articles/december222011/generals-son-mp.php

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❖ Israel to pump life back into sacred river

Israel has announced plans to begin restoring the sacred river Jordan by pumping about 30 million cubic metres of water into the parched valley.

Up to 98 per cent of the lower river Jordan's historic flow is diverted by Israel, Jordan and Syria for agricultural use, according to environmentalists. The trickle that remains in the river bed is mostly raw sewage.

Despite this, the river – which runs along the border between Israel and Jordan – remains an important religious site for Jews, Christians and Muslims. It attracts hundreds of thousands of tourists every year.

Gidon Bromberg, of Friends of the Earth Middle East (FoEME), said that half of the water promised by Israel will come from the Sea of Galilee.

Israel's pledge is the first step towards revitalising the river and an encouraging sign of diplomatic cooperation between the nations surrounding it, Mr Bromberg said, adding that a lot more must be done to restore the river to its former glory. "This 30 million cubic metres [of water] is clearly insufficient on its own, but what it does signify is a turnaround in attitude," he said.

Water has long been a source of dispute between dry Middle Eastern nations. The late King Hussein of Jordan once said water would be the only reason that might lead him to war with Israel.

FoEME, which unites Jordanian, Palestinian and Israeli environmentalists, said the river would require a minimum of 400 to 600 million cubic metres of water to regenerate a healthy ecosystem.

"Israel to pump life back into sacred river", 22/12/2011, online at: http://www.independent.co.uk/news/world/middle-east/israel-to-pump-life-back-into-sacred-river-6280293.html

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Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Comptroller's Report: Watchdog finds ministry letting rivers stay polluted

The Environmental Protection Ministry has not set stream rehabilitation as a top priority and leaves it to the drainage authorities, the comptroller says.
By Zafrir Rinat

Almost 20 years after the state launched a project to rehabilitate the country's rivers and streams, the State Comptroller recently found that not a single watercourse has been fully rehabilitated. Unless the government investment in the project greatly increases, it will take another 100 years to be completed, the comptroller estimates in his report.

The Environmental Protection Ministry has not set stream rehabilitation as a top priority and leaves it to the drainage authorities, the comptroller says. The ministry denies this and says the project constitutes a major part of its activity.

Half of Israel's 31 rivers and streams flow into the Mediterranean Sea. Over the years, most of them have become badly polluted and still contain sewage in various amounts. Plans to rehabilitate many of them have been drafted, and the pollution in the Kishon and Yarkon rivers has been considerably reduced, but the work is far from complete.

One of the obstacles holding up the rehabilitation is the numerous authorities dealing with it. Another is the fact that the issue is not among the ministry's major five objectives.

For the past three years, the ministry hasn't even appointed an official to head its Water and Streams Department, the report says.

The ministry dismissed the assumption that "stream rehabilitation is not at the center of our activity" and issued a statement saying "Recently, NIS 25 million was allocated for rehabilitating streams nationwide, a significant increase compared to previous years. The ministry is working to build several metropolitan parks along the streams and to increase their natural water supply … the ministry's activity has resulted in reducing the pollutants entering the streams by 50 percent."

"Comptroller's Report: Watchdog finds ministry letting rivers stay polluted", Haaretz, 18/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3903

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❖ Iraqi, Afghani delegates visit JNF at UN convention

Cooperation in desertification may result from collegial contacts; delegates from over 25 countries visit booth.

Representatives of the Jewish National Fund at the United Nations Framework Convention on Climate Change (UNFCCC) forged some unexpected friendships during their two weeks in Durban, South Africa, earlier this month.

At their booth in the exhibition hall – which was the only booth among the Israeli delegates to the conference – JNF officials received over 200 visitors from around 25 countries, including Iraq, South Sudan, Afghanistan and Somalia, according to the director of international relations, Karine Bolton-Laor.

Most of the visitors expressed hopes to continue communications with the JNF, and possibly study from their experiences combating desertification and establishing community forests, Bolton-Laor explained.

"It always amazes us, the variety of people who come to visit and who we would expect to be hostile to us and they're not. They actually want to work with us on some level," she told The Jerusalem Post on Sunday. "It promotes a lot of goodwill."

The Israeli delegation to the UNFCCC was led by the Environmental Protection Ministry, but included participants from several environmental organizations.

The JNF booth in the conference exhibition hall received a return visitor of particular interest to the organization, an Iraqi representative from the country's national infrastructure ministry who also visited the booth at the previous year's convention in Cancun, according to Bolton-Laor.

Accompanying him this year was a young, modern woman from the Iraqi environment ministry, whom Bolton-Laor called the "point person" for climate change in the country's delegation. While last year JNF did not have the proper manpower to follow up with such new interests in partnerships, this week Bolton- Laor said she is already going to be in contact with the Iraqis about potential desertification collaborations.

Similar requests came from Afghani and South Sudanese delegates, and a member of parliament from Somalia also visited the JNF booth and attended an official side event the group held on forestation.

"He said, 'Times are changing, we can do something,'" Bolton-Laor explained, noting that the Somali delegate wants to push the issues of combating desertification and water management forward, and is even considering sending Somali representatives to Israel for training.

The booth also received many visitors from Japan, China, tropical countries concerned with desertification and the United States – including a NASA earth scientist who recommended the institution's groundwater-detecting satellites to the Israeli delegates, according to Bolton-Laor.

Prior to the conference, the JNF group members also discussed potential collaborations with the Catholic Church of South Africa, which owns huge amounts of land that it intends to use for sustainable development, she added.

While Bolton-Laor did acknowledge that there were the occasional snide anti-Israel comments made toward their booth – usually by European delegates – the majority of the group's experiences were overwhelmingly positive.

"It was very interesting that all these African and Arab nations came to us," she said, "and received us very well."

"Iraqi, Afghani delegates visit JNF at UN convention", Sharon Udasin, 19/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3907

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Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Spain lends Jordan 12 million euros to enhance water supply

Projected $250m World Bank loan to support state budget — Hassan
Reported by Omar Obeidat | Dec 23,2011 | 23:38
Spanish Ambassador in Amman Javier Sangro de Liniers, Minister of Planning and International Cooperation Jafar Hassan and Minister of Water and Irrigation Mousa Jamani attend a signing ceremony on Thursday (Photo courtesy of Planning Ministry)

AMMAN – Spain on Thursday agreed to provide Jordan with 12 million euros in soft loans to help develop the water sector in the northern region.

The loan agreement, signed by Minister of Planning and International Cooperation Jafar Hassan and Spanish Ambassador in Amman Javier Sangro de Liniers, seeks to improve water pumping systems in the north by electronically linking pumping stations, wells and dams.

At the signing ceremony, also attended by Minister of Water and Irrigation Mousa Jamani, Hassan said the project will enable workers at water authorities in the north to use advanced pumping and control systems, adding that the system will facilitate operation and maintenance of these systems in addition to reducing water loss in the Kingdom.

Although the government has terminated foreign borrowing this year in order not to expand public debt, the minister said the soft loan provided by Spain was excluded due to its easy repayment terms.

The interest rate of loan, which is part of the 125-million euro financial cooperation programme that was signed between Jordan and Spain two years ago, is 0.01 per cent with a grace period of 21 years and a maturity period of 42 years, according to Hassan, who indicated that the two countries are scheduled to sign another loan agreement early next year to finance projects in the renewable energy sector.

Following the signing ceremony, Hassan told reporters that the government and the World Bank recently concluded negotiations to provide Jordan with a $250-million loan to support the state budget, adding that the international financial institution's board of directors will convene on January 24 to make a decision on the loan, which he said will reduce the cost of financing the budget deficit.

The Kingdom is also in negotiations with Japan and France to obtain other loans, he said.

"Spain lends Jordan 12 million euros to enhance water supply", 23/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3955

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Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Conservationists advocate cultivation of native plants to reduce water use

AMMAN – With gardens and toilets accounting for 45 per cent of domestic water consumption, conservationists on Saturday urged the public to cultivate native plants to reduce water use.

Water supply is very limited in Jordan, which is categorised as one of the water-poorest nations in the world; therefore, saving every drop matters, Friends of the Earth Middle East (FoEME) President Munqeth Mehyar said.

"Jordan's climate is semi-arid and best supports low-water consumption plants. But many people tend to grow plant varieties from outside the region in their gardens that require intensive irrigation, especially in summer," he told The Jordan Times.

A FoEME report estimates that around 30 million cubic metres per year can be saved if households in Jordan switch to drought-tolerant plants and use grey water for irrigation.

Mehyar called for banning the use of fresh water for irrigating gardens, underscoring the importance of raising public awareness about drought-tolerant plants to reduce water demand.

"A law that penalises irrigation with potable water must be enforced… Paying for water doesn't mean that one can abuse it," he said.

FoEME proposed several tips on how to conserve water under its Garden Reform Campaign, which aims at reducing water use in home and public gardens.

"Some examples of lovely garden plants native to Jordan include Ashphodel and Polyanthus Narcissus… Such types of plants are adapted to Jordan's dry climate and are the best choice because they use less water and improve soil quality," according to a FoEME brochure.

FoEME advised people wishing to cultivate non-native plants to look for those that are originally from climates similar to Jordan and need no more than 25-50 cubic metres of water per year.

Such plants include Yucca, Agave, Cholla, Opuntiaa, Claret Cup and Cacti, which all consume less than 24 cubic metres of water annually.

Under the campaign, the public is also urged to employ simple rainwater harvesting techniques to reduce domestic demand for supplementary water, such as placing cisterns on rooftops or driveways to store water and constructing sloping sidewalks and patios leading towards a cultivated area to direct rainwater to plants.

Ministry of Water and Irrigation Spokesperson and Assistant Secretary General Adnan Zu'bi said efficient irrigation of gardens helps reduce water demand.

"Using a hose to irrigate gardens consumes around 15 litres per minute, the majority of which is wasted in evaporation. People can instead use sprinklers and water their plants in the morning or at night to save 60 per cent of used water," he told The Jordan Times yesterday.

The FoEME campaign, carried out under the Jordan River Rehabilitation Project, also urges people to design water-efficient garden landscapes.

Mehyar noted that applying water saving measures can reduce the strain on water resources, such as the Jordan River, which would experience less exploitation.

"Conservationists advocate cultivation of native plants to reduce water use", Hana Namrouqa, Jordan Times, 18/12/2011, online at: http://mideastenvironment.apps01.yorku.ca/?p=3901

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❖ China: Future center for Israeli renewable, water tech?

China may be the ideal hub for transforming Israeli ideas in the renewable energy and water sectors into globally marketable, environmentally sustainable technologies.

As Israeli entrepreneurs and researchers in these fields continue to develop new types of green products, China is becoming an increasingly fitting partner for mass-producing and internationally promoting these innovations, experts say.

For China, where 70 percent of water is used for agriculture and 90% of waterways have become polluted, "energy, water and waste are cornerstones of a sustainable future in China" and are areas in which Israel can be a great asset, according to Peggy Liu, chairwoman of the Joint US-China Collaboration on Clean Energy (JUCCCE), a nonprofit focused on accelerating China's greening process.

"The central and local government are actively seeking international technologies and best practice partnerships to boost their capability on the ground," Liu told *The Jerusalem Post*. "Israel is known to China and the world as a leader in water technologies so it makes common sense for both to partner in piloting new technologies and scale up for commercialization."

Liu's organization recently featured Israel as one of seven countries attending their November China Energy Forum in Chengdu, in which all of the countries involved discussed potential collaboration opportunities in renewable energy.

"Israel has an excellent reputation in China as a 'startup nation' for hi-tech technologies," agreed Dr. Richard Hardiman, a fellow at the Harry S. Truman Research Institute for the Advancement of Peace, visiting scientist at the Weizmann Institute of Science, senior lecturer at the Hebrew University and board member at the Jerusalem-based Israel-Asia Center.

While China is clearly interested in developing Israeli technologies, however, some of the cuttingedge products in Israel's renewable energy sector are still in their early evolutionary stages and could pose challenges to investors, Hardiman cautioned.

"They like to grab new ideas, but whether to take them at that early stage of development is yet to be seen," he said.

Today, within the renewable energy and water sector, water is probably the optimal route for Israeli innovators to take with China, as the solar industry there is nearly bankrupt – despite the fact that it produces the majority of the world's solar panels, according to Hardiman. Hydroelectric power also remains a particularly strong industry in China, as does wind power, which has overtaken the United States in terms of installed capacity, he said.

Much of the improved relations between Israel and China are due to the concerted effort of the Foreign Ministry to open its doors to business in China in recent years, as well as the decision by businesses to look eastward following the 2008 economic crisis, according to Carice Witte, founder and executive director of Sino-Israel Global Network & Academic Leadership (SIGNAL).

"The technology development relationship is similar to the trajectory you've seen in all areas of China's relations in the past year," Witte said. "Relations overall have taken a sharp increase."

Witte also attributes China's increased interest in Israel to the Arab Spring, the resultant investment losses – particularly in Libya – by which the Chinese were "taken aback."

"They're a non-denominational solution-seeker," Witte said.

A joint Israeli and Chinese team is currently in the process of erecting a huge Sino-Israeli International Water Industrial Park in southern China's Guangdong Province. The $200 million facility, which will encompass about 400,000 square meters of research and exhibition space in the manufacturing city of Dangguan, will be managed jointly by Chinese company Dowell Technological & Environment Co. and Ness Ziona-based Shirat Enterprises.

The partners have already signed memorandums of understanding with 10 Israeli companies, and are in discussions with about 30, according to Shirat president Eliezer Manor.

"We are fully aware how hard it can be for Israeli companies to penetrate China market," said Huangeng Pan, chairman of Dowell Technological & Environment Co., in a statement released by his office, after a visit to Israel during which he met with Industry, Trade and Labor Minister Shalom Simhon.

This partnership will help "cut Chinese red tape" and also give Israeli companies the means to get the global exposure necessary for marketing their products, Pan added.

"The fact is that Israel hi-tech companies must go outside of Israel. Israel is not an industrial market," Manor told the *Post*. "China is exactly the opposite of Israel – China has many more industrial capabilities."

Victor Zhao, Shirat's China-based director, agreed that the relationship would certainly be "mutually beneficial."

"China is facing very problematic issues with water shortages and pollution and Israel, on the other side, has great technologies but not a great market," Zhao told the *Post* at November's WATEC water technologies exhibition in Tel Aviv.

At the WATEC convention, China was the most highly represented country, sending 24 groups with more than 200 people representing over 130 firms, research institutes and government offices, according to the Industry, Trade and Labor Ministry.

The large number of Chinese participants coincides with an increase in trade with the Asian partner, which amounted to $6.8 billion in 2010, a jump of 49% from the previous year, said the ministry, which also signed an agreement of cooperation on water issues with the city of Tianjin during WATEC.

As far as the Water Industrial Park goes, the funds will be coming from Chinese governmental grants of $6m. per year, investment funding of $18m. per year and about $36m. in private sector capital raised each year, according to the companies.

Meanwhile, Shirat has also become involved with another project in the central Chinese city Wuhan, where it has partnered with the local investment fund AgriGroup to bring in new agricultural water technologies from Israel.

"The only way for [China] to keep growing their technology is the introduction of new products into their markets," Manor said.

Likewise in the water sector, IsCham Beijing (the Israel Chamber of Commerce in China's Beijing branch) has proposed establishing an Israeli commercial demonstration center either in Beijing or in Tianjin, which would house permanent and revolving exhibitions as well as courses in water technologies, according to IsCham Beijing general manager Fani Gurevich.

Such a demonstration center would target Chinese government officials, field specialists and potential clients, using a model that Israel has already employed in other parts of China and all over the world. The center would "answer challenges" that Israeli water companies face in China, as well as recycle and purify waste and/or seawater from the nearby area, Gurevich said. Among the currently successful Israeli demo centers in China are a dairy farm near Beijing operating since 2001 and agricultural centers in the Xinjiang province and in Beijing, she explained.

"I think we'll start seeing more and more such collaborative projects with innovative structuring, for example where the Chinese government provides funding and other nations contribute expertise to build centers for technology R&D," said Manuela Zoninsein, the China Dream Project Director at JUCCCE and a columnist for IsraelStrategist.com covering cleantech exchange between Israel and China.

"Whatever is produced is jointly owned, with both sides equally contributing and equally gaining: China's government is implicated in protecting the intellectual property it owns and the foreign nation gains funding and, potentially, access to this massive market," she added.

Regarding the Water Industrial Park, however, Zoninsein said she was concerned as to whether both sides would be contributing equally and feared that Israeli companies might be "providing the piece that is of greater value."

In doing so, they could risk losing control of their own innovative technologies due to prevalent intellectual property infringement.

"It is hard to say whether Israeli companies will retain their cutting- edge position in clean technologies," she said.

This is a concern that Hardiman has also voiced, noting that there have been long-time hesitancies, or "cold feet," about cooperating with China in such ways because it is "renowned for copying." He suggested that Israeli renewable energy and water companies follow the footsteps of some American

firms that have had the Chinese National Development and Reform Commission (NRDC) stand in as an official state guarantor when they sign contracts.

For Manor at Shirat, the international property issue is no longer a serious concern and he argued that the Chinese firms "need" the Israeli companies to develop the products and cannot simply embezzle knowledge.

"All our activities in China are somehow related to the local authorities and they do not allow [companies] to easily to steal know-how because they know that if this happened it would hurt their own activities," Manor said. "China is undergoing a process of taking care of this issue much more properly."

While Gurevich from IsCham Beijing stressed that there is, in fact, a substantial risk, she pointed out that many companies are able to operate in China without any issue.

n order to succeed in the Chinese renewable and water sectors, however, Witte from SIGNAL emphasized just how crucial it is for Israelis to better familiarize themselves with Chinese customs.

"If you understand Chinese culture you will know how to address the issues of property rights and will know how to succeed," said Witte, whose organization recently established the Center for Contemporary Sino-Israel Studies (CCSIS), the first-ever Chinese research center addressing China-Israel comparative politics and strategic analysis, at Shanghai Jiao Tong University.

"The Chinese hold the Jewish people as a whole in high esteem and they perceive us as a unique people who have made an unusually – proportionally – large contribution to society," she added.

"China: Future center for Israeli renewable, water tech?", Sharon Udasin, 23/12/2011, online at: http://www.jpost.com/Features/FrontLines/Article.aspx?id=250636

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❖ Will Water Scarcity Increase Tensions Across Asia?

Governments across the underdeveloped regions of the world are already facing the threat of water wars. We believe 2012 will be the year the world starts looking for solutions to its aqua problems

W ater will be one of the defining issues of the next half century. It's a critical issue and this realisation will start from 2012.

There are a number of reasons why water will be so critical. Let's start from Southeast Asia and go all the way to Africa. Vietnam, Cambodia, Thailand, Laos; then there's China, Bangladesh, Nepal, India, Pakistan, Afghanistan, Iran, Iraq, Syria, Turkey; then we go south to Israel, Palestine, Egypt and all the way to Tanzania. It's a mega arc of hydro insecurity.

If water supply drops by 5 percent in 20-25 years in China and India, food production here will also drop, while demand would have gone up substantially. Already there are food crises. The world noticed that in 2008 when prices went up for the first time. Right now, India and China are not in the market in a big way. In another 25 years you have a possibility of these countries entering the food market as buyers. This will wreak huge havoc.

This won't take place 25 years from now; it'll start in the next two years as people start noticing these trends. Speculation in commodities will increase substantially.

Water is already emerging as a global issue in the security debate, not in the global economic or food debate. The initial response is short sighted.

They are constantly engaged in negotiating allocation of respective shares, which actually leads to conflicts between upper and lower riparian countries. You have tensions between Turkey and Syria, Iraq; Israel-Palestine; Egypt-Ethiopia. There's now tension between Vietnam, Thailand, Cambodia and Laos as well.

Water could emerge as a potential source of conflict. But it could also emerge as a potential source of economic growth and co-operation between these countries. It's in this context that water is important in 2012.

The solution lies in looking at water from a different point of view. Due to a number of international developments, in 2012, we will see a substantial impetus to the concept of water efficiency of economies.

Eighty percent of water in most developing economies is used for agriculture. Water for drinking and other biological purposes is 5 percent and for industries is 15 percent. By simply reducing the usage of water in agriculture, you will save a lot of water.

Israel has developed IOD [irrigation on demand] where they use software in a field. The control mechanism gets to know if any plants are over- watered or under-watered. The software will communicate between the plant and control mechanism to influence the flow of water. The Israelis estimate this will save 50 percent of water [in agriculture]. This will be a game changer.

Another technological development tackles the problem of leaking pipes. Water which is lost in leakages varies from 10 to 40 percent across the world. South Africa has developed a new technology where the pipes communicate with a control mechanism to identify leakage and that will alert the supervisors immediately.

In 2012, there are a couple of political developments taking place. The World Water Forum will take place in France. This will lead to a major reassessment of the whole water scene in the world. Second, the Swiss Parliament has specially allocated authority and support to the government to find solutions to the world's water problems. Singapore will also give a big push. They have their annual version of World Water Forum. Third, Israel's technologies will hit the market.

New agreements are being negotiated. What you require to do in different countries is encourage production of certain crops in some countries and other crops in other countries depending on soil, moisture and other factors. In South Asia, some crops can be grown in Pakistan, some in India and some in China. To do that you need strong economic co-operation and a free trade market in agriculture. That means you have to go for new forms of regional co-operation.

There are a lot of political leaders in all these countries who are open to the idea of using water as an instrument to increase economic growth and develop technology. But there is bureaucratic resistance. They still think of water as 'my water versus your water'. 2012-2014 will be a crucial period where the will of politicians will be tested against bureaucratic resistance across the mega arc.

Take the Brahmaputra. China wants to develop its Southwest region and India, its Northeast. Both countries need to generate electricity. From India it is easier to take lines to China's Southwest than to the rest of India. India wants to develop Arunachal Pradesh as a major producer of electricity to develop eastern India. If carefully monitored transit co-operation takes place, India would be doing China a big favour. China doesn't have too many ports in that region. There can be a multi-modal transport via the Brahmaputra. You have to include Bangladesh in this as well.

If a group of countries decide to take a co-operative approach to exploit the full potential of water and sustain environment at the same time and rejuvenate water itself, they will be the beneficiaries.

"Will Water Scarcity Increase Tensions Across Asia?", 24/12/2011, online at: http://business.in.com/article/biggest-questions-of-2012/will-water-scarcity-increase-tensions-across-asia/31462/1

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❖ Nation supports co-operation within Mekong sub-region

NAY PYI TAW — Prime Minister Nguyen Tan Dung has voiced Viet Nam's strong support of co-operation among members in the Greater Mekong Sub-Region.

Speaking at the fourth meeting of the Greater Mekong Sub-region Summit (GMS-4) in Nay Pyi Taw, Myanamar, yesterday, Dung emphasised the necessity to increase capital mobilisation for infrastructure development and the perfection of the institutional co-operation among member states in the sub-region.

"To develop the economic corridor successfully, it is important to improve the capacity building of policymakers and co-ordination between central and local government agencies while creating a network between economic regions within the corridor – a driving force for more exchanges in trade and investment activities," said Dung.

In the context of the severe consequences of natural disasters in countries in the sub-Mekong region recently, Dung asked all countries to use the water in Mekong River in a sustainable manner for common development in the region, both upstream and in the basin.

He said the management and sustainable use of water from the river must be an important part of the co-operation strategy among countries in the sub-region over the next 10 years.

"To ensure sufficient capital resource for co-operation activities in the sub-region, all GMS nations should exert further efforts and adapt effective measures in order to mobilise capital from international organisations and development partners as well as from the private sector," said Dung.

In his opening speech, Myanmar President Thein Sein called on the GMS member states to focus their efforts on coping with climate change, energy efficiency, particularly renewal energy, food security and human resource development.

He said the Strategic Framework over the next 10 years (2012-22) adopted at the summit would help orientate co-operation among countries in the GMS.Under that strategy, all member states agreed to focus their co-operation in the fields of transport, energy, information, trade and investment facilitation, agriculture, tourism and the environment.

Under the theme "Beyond 2012: Towards a New Decade of GMS Strategic Development Partnership", leaders from the six countries discussed openly and frankly about exploring ways to enhance resource mobilisation for the GMS Economic Co-operation Programme, and to promote the participation of all stakeholders to effectively implement the new Strategic Framework, Thein Sein said.

During the two-day meeting, participants adopted the Co-operation Framework for the next five years (2012-16) of the Core Environmental Programme (CEP) – the GMS Biodiversity Conservation Corridor Initiative; New Vision and the Joint Strategy for the Agriculture Support during 2011-15; the Strategy and Road Map of GMS Tourism during 2011-15.

Representatives of the six GMS countries signed a Memorandum of Understanding (MoU) for Joint Action to Reduce HIV Vulnerability Related to Population Movement, an MoU on the Joint Co-operation in Further Accelerating the Construction of the Information Superhighway, and the Article of Association of the GMS Freight Transporters Association.

Adopted

At the end of the summit, leaders from Myanmar, Cambodia, Laos, Thailand, China and Viet Nam adopted a Joint Declaration affirming their countries' commitment to promoting co-operation and to turning the GMS into an integrating region with prosperity, development and sustainability.

The next GMS-5 will be held in Thailand in 2014. The first GMS was held in Phnom Penh, Cambodia, in 2002.

On the sidelines of the GMS-4, a GMS Investment and Business Forum was organised on Monday with the participation of 150 businesses from the six GMS member states.

Earlier on Monday, Prime Minister Nguyen Tan Dung received Chinese State Counsellor Dai Bingguo in Nay Pyi Taw.

During the meeting, Dung reiterated Viet Nam's commitment to the traditional friendship and co-operation between the two nations.

He also said that the two nations should co-operate in the implementation of agreements reached between the leaders of the two countries during a visit to China by Party General Secretary Nguyen Phu Trong, particularly the agreement on basic principles guiding the settlement of issues on the seas in accordance with international law and the UN Convention on the 1982 Law of the Sea, the Declaration of Conducts (DOC) and the Code of Conduct (COC) in the East Sea.

The Chinese State Councillor reiterated Chinese senior leaders' commitment to working together with Viet Nam to settle satisfactorily existing issues on the sea between the two countries.

He also expressed China's wish to work with ASEAN to implement the DOC and start negotiations for the COC. — VNS

"Nation supports co-operation within Mekong sub-region", 21/12/2011, online at: http://vietnamnews.vnagency.com.vn/politics-laws/218913/nation-supports-co-operation-within-mekong-sub-region.html

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❖ Arcadis : Wins Large Water Project in the Middle East

ARCADIS (EURONEXT: ARCAD), the international consultancy, design, engineering and management services company, announced today that it won a large contract to provide consultancy and management services to oversee construction of a new water network for Oman's Public Authority for Electricity and Water (PAEW). When complete, the network will bring clean water directly to the taps of hundreds of thousands of residents in the Al Sharqiyah region. This project will eliminate the need to truck water from filling station outposts to residents, reducing PAEW's carbon footprint as well as noise and traffic pollution. The three-year, multi-million dollar contract is scheduled to begin in January 2012.

The water conveyance system is intended to support the region's growing population and the development of a future planned shipping port in the region that will further bolster Oman's economic growth. ARCADIS will work closely with the PAEW and contractors to safely address the challenges of the region's rugged terrain, meeting the fast-tracked project schedule on time and within budget.

"As one of the top program/construction management firms in the world, ARCADIS will use its global expertise of finding solutions for groundwater depletion to bring clean, reliable drinking water to the region for what will be the first time for many residents, all while maintaining the delicate balance of development requirements and natural resources. We will share ARCADIS' knowledge and skills with PAEW in order to help sustain these projects over the long-term and meet Oman's goals of improving the country's infrastructure," said Bill Dee, director of ARCADIS' Global Water Business line.

For more information, please contact Joost Slooten of ARCADIS at or outside office hours at or e-mail joost.slooten@arcadis.com.

About ARCADIS:
ARCADIS is an international company providing consultancy, design, engineering and management services in infrastructure, water, environment and buildings. We enhance mobility, sustainability and quality of life by creating balance in the built and natural environment. ARCADIS develops, designs, implements, maintains and operates projects for companies and governments. With 19,000 employees and over €2.3 billion in revenues, the company has an extensive international network supported by strong local market positions. ARCADIS supports UN-HABITAT with knowledge and expertise to improve the quality of life in rapidly growing cities around the world. Visit us at: .

"ARCADIS : WINS LARGE WATER PROJECT IN THE MIDDLE EAST", 23/12/2011, online at: http://www.4-traders.com/ARCADIS-6328/news/ARCADIS-WINS-LARGE-WATER-PROJECT-IN-THE-MIDDLE-EAST-13946592/

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❖ EU Water Framework Directive Cooperation Practices Among EU Member and Non-EU Member Countries; The Danube River Example

The Danube River is Europe's second largest river with 2857 km long, after the Volga River. With its 19 (1) riparian countries, it is the river, which covers maximum amount of countries on its basin across the world; and it is also the biggest river flowing into the Black Sea with its rate of 6500 m3/sec. The transboundary and regional aquifers, located on the basin, contain 30 per cent of the renewable water source of riparian countries. On the Danube River Basin having 29 main tributaries in total, there are many surface areas with fresh water, 5 lakes bigger than 100 km2, and 11 transboundary ground water bodies. (2)

Economic, climatic, topographical, and cultural differences of the countries, which are located on the basin, have affected the use of Danube River waters.While Germany and Austria uses the basin waters for industrial, drinking water and hydroelectric purposes; agricultural irrigation in the middle and lower part of the basin is added to this use. Besides, the river waters have also been used for transportation purpose for many years. (3)

Since the beginning of the 19th century, transportation on its tributaries have been provided. Today, this usage is carried out in tributaries of the river, which are suitable for transportation. Artificial watercourses have been built on the river, in order to facilitate the transportation. The Main Danube Canal, which links the Rhine and the North Sea and which is located in Germany; the Danube–Tisa–Danube Canal (DTD), which is located in Serbia and Montenegro; and the Danube–Black Sea Canal, which is located in Romania, are among these structure. Today, more than 80 per cent of the river flow has been regulated. Furthermore, while protecting the recreation areas, these canals also protect against floods. Floods are another major problem of the Danube River Basin. After deteriorating floods between 1830 and 1854, precautions have been taken in order to protect Vienna from floods bigger than 14.000m3/sec. (4) Besides, barriers have been built against floods in Hungary and Hungarian plain, which is possible to be largely damaged due to its location. In Bulgaria and Romania as well, precautions have been taken through barriers. (5) On Danube river, whose other major problem is pollution, water pollution especially in developed industrial countries such as Germany and Austria has been brought under control. However, today, 75 per cent of land borne pollution, which is the major source of pollution, in the Black Sea is originated from the Danube basin. The riparian states of the Danube River have tried to overcome this problem by the action plan conducted by the Commission for the Protection of the Danube River, and also despite the special partnership protocol conducted in cooperation with Commission on the Protection of the Black Sea, the precautions have remained insufficient. (6)

An international commission, responsible for Danube river, was established on March 30th 1856, in order to coordinate and control transportation on Danube river. Conventions were signed between riparian countries upon the establishment of the Commission. The international regime of the Danube River was established with the Convention signed in Paris on July 23rd 1921. With this Convention, the Danube River was divided in two parts as river and sea; and non-riparian States could have the right to navigate only in the sea part between Ulm and the Black Sea. (7)

Another convention is the Belgrade Convention, which was signed on August 18th 1948. The current regime of the Danube River was defined with this Convention. However, some countries, which signed conventions on the Danube River, argue for the validity of the convention dated 1921. And de facto passes are provided with the Convention dated 1948. All States have right to pass through the main tributary of the Danube River, while only riparian countries have right to navigate in the sub-tributaries. Upon the division in Europe after the

World War 2, the cooperation to prevent the pollution in Danube River was interrupted. And in the post-1990 period, the destruction of the USSR and the beginning of EU enlargement process brought the Danube River riparians together again. The "Convention on Cooperation for the Protection and Sustainable Use of the Danube River", which was signed by 11 riparians (8) of the Danube River in Sofia on June 29th 1994, entered into force on October 1998 (9).

In accordance with the Convention, the International Commission for the Protection of the Danube River (ICPDR), which provides and regulates sustainable and fair use of water resources, their protection, improvement and rational water use, was established in 1998.(10) The Commission, which was established in 1991 and has been responsible for conducting the Danube Environmental Program, detected 170 vulnerable points in terms of pollution, located on the basin, in their studies. This Program, which has been supported by EU countries, international financial institutions and many non-governmental organizations, transferred all its authorities and responsibilities to ICPDR.

With its 13 cooperative members (11) and the EU, ICPDR detected developing control mechanisms for water quality, floods and for industrial accidents; deciding on standards for emissions; and forming and implementing legal mechanisms for the aforesaid measures in cooperative countries, as its duty. Flood plain forests, marshes, deltas, flood plain corridors, lakesides, and other wetland areas and rich biodiversity have been threatened by the industrialization, overpopulation and agricultural activities on the basin. (12)

In Article 13 of the EU Water Framework Directive, which was issued in 2000, it is indicated that each member state shall prepare River Basin Management Plans within their own borders. If a water resource goes beyond the borders of the Union, as in the example of Danube River, the member states will cooperate to prepare a single river basin management plan for the aforesaid international river basin. In case it is not possible, a plan will be prepared within the borders of the relevant countries on the aforesaid basin (13). Ten European Union countries within the basin, candidate countries, and non-EU countries have been carrying out works to fulfill the conditions of the Water Framework Directive. At the same time, similar activities have also been carried out by ICPDR member countries. Point sources of pollution and discharge areas will be recorded with these activities. As from December 10th 2009, the Danube River Basin Management Plan started to be put into practice by ICPDR and the member states. (14)

In the Basin, where the water quality is the major problem rather then the quantity of water, the EU countries are at different levels in putting the Water Framework Directive into practice. The other ICPDR countries also carry on their studies on improving the quality of water resources. The fact that countries have economic, sociological, and topographic differences cannot continue the same way in reaching in water framework directive and ICPDR objectives. Each country has been trying to make necessary regulations at national scale (15).

The tributaries, transit waters, lakes, coastal waters, and ground waters of the Danube River compose the Danube River Basin Region. The Danube River Basin Region, which encompasses the Danube River Basin, the Black Sea Coastal Basin within the borders of Romania, a part of Ukraine and the Black Sea coastal waters of Romania, was defined in order to prepare the Danube River Basin Region Management Plan. Upon the fact that the Directive was issued in 2000, signatory countries of the Danube River Protection Convention strived for implementing the Directive on the whole basin. And the non-EU riparians stated that they would implement the Directive within their own borders. Attributing to the Paragraph 3 of the Article 13 of the

Directive, the Danube River countries handled the Danube River Basin Management at sub-basin or national level. The Danube River Protection Convention composes a legal and political framework for the management of the Danube River Basin cooperation, and also for the cooperation for transboundary waters. And the International Commission for the Protection of the Danube River formed a platform coordinating for cooperation (16).

River basin management cycle was prepared in line with the Directive. ICPDR prepared a schedule to implement the Directive. According to this schedule, it was foreseen to describe the river basin by the end of 2004, and to make an analysis of pressures, effects and economic analysis. Monitoring network was established in 2006 in accordance with the Article 8. And in accordance with Article 13, it was foreseen to present the draft river basin management plan in 2008, and to finish the joint program of measures with the river basin management plan in 2009; and they were all implemented. Planning the introduction of pricing policies in 2010, ICPDR will begin to implement joint program of measures in 2012. And the Article 4 planned to reach the environmental objectives in 2015, and envisaged to implement the second management cycle between 2015-2021, and to implement the third management cycle between 2021-2027 (17).

For the issue of floods, which is another problem of the basin, the ICPDR Action Programme for Sustainable Flood Prevention was adopted by the ICPDR members, within the flood prevention policies. Then, they made arrangements in the action plan, in order to comply with the conditions of EU Flood Directive, which was issued in 2007. This action plan, which creates a synergy between the river basin management and flood risk management, has been developed by all levels of the directive (18).

The implementation of the EU Water Framework Directive and Flood Risk Directive in the Danube Basin has been effective at a level that increases sensitivity to environmental issues. ICPDR has played a major role in implementation of environmental standards on the whole basin and on transboundary water managements. Database, which is agreed on water resources, water quality and water use in basins, laid the foundations of rational water management structuring. The possible causes of problems that could be seen on basin in the future are; heterogeneity in economic development, the increase weight of nutrition, climate change and the river morphology (19).

The Danube River Basin sets an example for the water basins exceeding the Union boundaries of the EU Water Framework Directive. As indicated in Paragraph 3, the Article 13 of the Directive, EU member and non-EU member riparian countries have managed the two transboundary basins in cooperation by gathering under a single roof, and they have proceeded in the course of implementing the directive. (20)

Resources

[1]- These countries are; EU countries: Austria, Bulgaria, the Czech Republic, Germany, Hungary, Slovakia, Slovenia, Romania, Italy, Poland. EU Candidate Countries: Croatia. Non-EU Countries: Bosnia Herzogevina, Moldova, Serbia, Ukraine, Montenegro, Albania, Macedonia, Switzerland.

2-UNESCO, Water as a Shared Responsibility; The United Nations World Water Development Report II, Paris, UNESCO, 2006,s.474; Bilen, Ortadoğu Su sorunları.., s. 174.

3- Bilen, Ortadoğu'da Su Sorunları ve Türkiye, Ankara, TESAV, 2009, s.177.

Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

4 -Irene Lyons Murphy, The Danube: A River Basin in Transition, London, Kluwer Academic Publishers, 1997, s.205, Ö.Bilen, Ortadoğu'da Su sorunları…, s.178.

5- a.g.e, s.179.

6-Şule Anlar Güneş, "Gabcikova-Nagymaros Davası", Ankara Üniversitesi Hukuk Fakültesi Dergisi, cilt.5, sayı.2, 2006, s. 94.

7 -Pazarcı, a.g.e., s.280-2; Fitzmaurice, a.g.e., s.3.

8-11 Danube River riparian : Austria, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Romania, Slovakia, Slovenia, EU.

9 - " The Danube River Protection Convention", www.icpdr.org ; Bilen, Ortadoğu'da Su Sorunu.., s.179; Pazarcı, s.280-2.

10 - Bilen, Ortadoğu'da Su sorunları.., s.180.

11-Aforesaid 13 countries; Austria, Bosnia Herzegovina, Crotia, the Czech Republic, Germany, Hungary, Moldova, Serbia and Montenegro, Slovak Republic, Slovenia and Ukraine

12 -www.icpdr.org

13- Directive 2000/60/EC .

14- www.icpdr.org

15 - a.g.e.

16 -ICPDR, s.1.

17-"River Basin Management",www.icpdr.org

18 -ICPDR, a.g.e., s.92.

19- a.g.e

20. Tuğba Evrim MADEN, "EUWFD and Maritza River Basin", Unpublished Phd Thesis, Ankara, 2010.

"EU Water Framework Directive Cooperation Practices Among EU Member and Non-EU Member Countries; The Danube River Example", Tuğba Evrim Maden, ORSAM, 22/12/2011, online at: http://www.orsam.org.tr/en/WaterResources/showAnalysisAgenda.aspx?ID=1499

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Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Sudan breaks up dam demo

December 20, 2011 (KHARTOUM) – Sudanese anti-riot police on Tuesday forcibly dispersed and arrested protestors demonstrating in downtown Khartoum against the construction of a dam upcountry, eye witnesses told Sudan Tribune.

A good number of youths affiliated to Al-Manasir tribal community of northern Sudan on Tuesday thronged the main bus station in central Khartoum and demonstrated against the government's failure to compensate their communities for the damage of their properties due to the construction of the Chinese-built Meroew Dam on the Fourth cataract of the River Nile, 350 kilometers north of Khartoum.

The protest comes one month after thousands of Al-Manasir members began a sit-in around local authorities' office in the town of El Damer in the Nile River State in northern Sudan to protest against the dam. The vigil suffered a similar crackdown when **four students were arrested**.

The protestors, who chanted slogans demanding compensation for Al-Manasir, were later joined by dozens of street vendors and everyone eventually ended up calling for the downfall of president Omer Al-Bashir's government, according to witnesses.

The witnesses further reported that units of anti-riot police swept in and fired teargas on the protestors and arrested around ten of them.

The construction of Merowe dam, which was financed by China, the Arab Fund for Social & Economical Development, the Saudi Fund for Development and other Arab funds at a cost of more than 2 billion US dollars, has displaced more than 100,000 local persons belonging to three riverian communities, Al Hamdab, Amri and Al-Manasir.

According to Al-Manseer community leaders, 90% of the compensation due to those who lost their land to the dam's reservoir has not been paid despite government's promises to do so.

Local opposition to Meroew dam began in 2003 when its construction started. In 2006, a militia linked to the Merowe Dam Implementation Unit (MDIU) attacked a peaceful protest by local communities with live ammunitions, killing three people on the spot and injuring more than forty.

According to Sudanese and International Human Rights Organisations the Merowe Dam project has been marred by massive human rights abuses since its inception. Members of the affected communities have been subjected to detention, torture, injury, and killings.

In a desperate call to the government to resolve the problems caused by the construction of the dam and to stop violence against the population of the affected area, a prominent local leader regretted **in a statement to Manasir Network** that the authorities negotiate only to with those who hold arms against the government.

"Sudan breaks up dam demo", 20/12/2011, online at: http://www.sudantribune.com/Sudan-breaks-up-dam-demo,41049

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❖ Israel to send delegation to assist South Sudan

Netanyahu says delegation will examine ways to help new country; announcement comes after meeting with Sudanese President Salva Kiir in Jerusalem.

Israel will shortly send a delegation to South Sudan to see how to help the new country, Prime Minister Benjamin Netanyahu's office said Tuesday, after the premier met South Sudanese President Salva Kiir in Jerusalem.

The announcement came after Kiir told President Shimon Peres, at a meeting in Jerusalem, that South Sudan wanted to widen cooperation with Israel, especially in the field of technology, agriculture and water development.

Peres promised Israel would help the new country develop. "The first link between Israel and Sudan was created in the 1960s, when then-prime minister Levi Eshkol and I - at the time deputy defense minister - met in Paris with local leaders from South Sudan and we gave you wide-ranging agricultural and infrastructure assistance," he said.

Kiir arrived in Jerusalem Tuesday. His talks with Netanyahu are understood to have also focused on illegal immigrants to Israel, and the Jerusalem Post daily reported that Netanyahu had planned to ask Kiir to accept as many Sudanese nationals as possible, whom Israel would fly to South Sudan. Israel recognized South Sudan a day after it declared independence in July.

Netanyahu is planning to visit sub-Saharan Africa in February. Although his schedule has not been finalized, security considerations make it unlikely he will include South Sudan in his itinerary.

South Sudan, where most people follow Christian and traditional African beliefs, declared independence on July 10 in line with a referendum that was the culmination of a 2005 peace deal ending decades of civil war with the north.

"Israel to send delegation to assist South Sudan", 20/12/2011, online at: http://www.haaretz.com/news/diplomacy-defense/israel-to-send-delegation-to-assist-south-sudan-1.402593

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❖ Water Sharing between India and Bangladesh: Old Confusion and New Realities

Sharing of river waters has been one issue that has always raised strong sentiments in Bangladesh. Even as the resentment over not signing the Teesta Agreement has not yet died down completely, another controversy has erupted over the dam on Barak river; a controversy that has been sparked by the news of the signing of the Agreement between India's state-owned National Hydro Power Corporation and Manipur government in October 2011 to build the Tipaimukh project on the Barak. This has given rise to frenzied protests against the dam in Bangladesh by the government, the opposition as well as different civil society groups. The opposition Bangladesh Nationalist Party (BNP) chief Khaleda Zia wrote a letter to the Indian Prime Minister Manmohan Singh recently in which she raised a number of demands like stopping the Tipaimukh project and conducting a joint survey before India undertakes any activity. General Ershad of the Jatiya Party, a key ally of the ruling Awami League, staged a march from Dhaka to Sylhet against Tipaimukh. In the spirit of the competitive nature of domestic politics, Bangladesh's water resource minister threatened to go to the international court on the dam issue if India did not stop work.

It is true that this is not the first time that controversy over Tipaimukh has arisen. In 2009, the news about the Indian government's plan to build the dam led to strong protests from Bangladesh. The issue became so heated that the Indian government invited members of Bangladesh's Parliament to visit the dam site to assess the situation. But the BNP did not nominate any member to the parliamentary committee that visited Manipur in 2009 although bad weather prevented the helicopter carrying the team from landing at Tipaimukh. Instead, it wanted to send experts arguing that it was a technical matter and called the Parliamentary trip to Manipur a 'picnic'.

During Sheikh Hasina's January 2010 visit to India and again during the Indian prime minister's September 2011 visit to Bangladesh, Dr. Manmohan Singh assured that nothing would be done on Tipaimukh that harm Bangladesh's interests. But these assurances have not been able to inspire confidence among the people as well as political parties of Bangladesh. The BNP's demand to conduct a joint survey to assess the adverse impact of the proposed dam on Bangladesh and further the Jatiya Party president's demand that even if the joint survey findings suggest that "the dam will not affect Bangladesh, India must guarantee through an international treaty that it will not withhold water for irrigation" suggest that politics dominates the issue within Bangladesh. This controversy raises several issues, which need to be taken into account by both countries.

When Mamta Banerjee refused to accompany Manmohan Singh to Bangladesh, it raised the vital issue of the central government far more seriously engaging Paschimbanga. Notwithstanding whether Ms. Banerjee was apprised about the details of the impending agreement or not and the politics involved, the fact of the matter is that the Agreement on the Teesta could not be signed for which the governments of India and Bangladesh had worked for months because of objections raised by Kolkata – the affected party. Unlike earlier, the Indian political scene today is marked by strong regional political parties that not only rule their respective states but are also important partners in the coalition governments at the centre. The central government therefore cannot take state governments for granted.

Another important aspect is the question of proportionality, in the sense of the number of people being dependent on a particular river basin in a country, which needs to be factored into any discussion on the water issue. For example, in percentage terms, out of the total drainage area of the

Ganga, 79 per cent belongs to India, less than five per cent to Bangladesh and almost 14 per cent to Nepal. This clearly demonstrates that the Ganga has a greater flow in India in comparison with the other riparians. In terms of population as well, while almost 500 million Indians are dependent on the river, only 23 million Bangladeshis do so. This is of course not to deny the fact that since Bangladesh is a deltaic country it needs more water per capita than India to keep the problem of salinity under control. A study needs to be carried out to determine what level of water flow has to be maintained for the good health of the people and the land. Both India and Bangladesh should also maintain a regular channel of communication to maintain this level of water flow. Further, India should agree in principle that it will not let water go below this level. In short, India should earnestly try to accommodate and address the legitimate concerns of Bangladesh.

"Water Sharing between India and Bangladesh: Old Confusion and New Realities", 20/12/2011, online at: http://www.idsa.in/idsacomments/WaterSharingbetweenIndiaandBangladesh_ppandey_201211

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❖ Will Vietnam become the second Israel

Technical import

Israel's policy on giving priority to agricultural development was issued in 1948. Thanks to the policy, one million Israeli people who live on the desert were sufficiently supplied with food, even in the wartime. Ten years

later, in 1958, Israel exported agricultural products to Europe and even Africa.

Israel's success was learned by a the authorities of a province in Vietnam. They spent several million US dollars to import two modern glasshouses from Israel. These glasshouses have automatic doors, automatic

watering system, air conditioners, blowers, rain spraying machines, etc.

In 2009, some experts paid a visit to this province and asked managers of the glasshouses there: "The outdoor vegetable garden is very green, with natural wet atmosphere, why do you have to plant vegetable in this

house, with artificial wet atmosphere?" They could not answer why.

After that, these modern glasshouses were left fallow and they planted fruits and vegetable in outdoor gardens around these houses.

Hanoi's one-time concern

Vietnam, with 67 percent of population who are farmers, is known as a big producer and exporter of rice, coffee, rubber and seafood.

Hanoi's suburb used to have developed agriculture. In 1965, Dong Anh district had an irrigational system which was capable to water 9,000 hectares of crops. In five years, 1961-1985, the capital city built 47 pumping

stations, which covered 85 percent of cultivated land. In an extremely difficult circumstance, Hanoi had 40 mechanical enterprises serving agriculture. At that time, Thanh Tri district was known for its tractor enterprise, Tu Liem with its specialty fruit area, Gia Lam district with vegetables, etc.

In the early years of the opening period, Hanoi had its first electronic factory in Gia Lam district. The industrial zone in Tu Liem district was built. The Hoa Lac software park began to take shape…

Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

Hanoi turned its priority into developing hi-tech industry.

In 2003, after thousands of hectares of agricultural land were devoted to golf courses, industrial zones and residential areas, an official initiated the idea of establishing enterprises in villages to create jobs for local farmers but this model failed.

In Soc Son district, a group of young intellectuals developed an organic vegetable garden of several thousand square meters, with the participation of nine farmer families. This garden has stably supplied vegetable to

nearly 400 urban families since 2008. They earn VND20 million ($1,000) per 360sq.m of land per annum. The income of these farmers has exceeded that of workers in nearby industrial zones. Their products have

passed many tests of competent agencies. The small garden has become a destination of students, researchers, etc.

Developing agriculture must be closely connected with land. In 2007, before Ha Tay province was merged into Hanoi, this province had more than 100,000 hectares of cultivated land. In 2008, after the merging, Hanoi's farming area reached 342,000 hectares. In its 2010-2020 land using plan, the city planned to turn nearly 37,000 hectares of farming land into urban land (including nearly 23,000 hectares of wet rice, nearly 2,500 hectares of perennial trees).

It is easy to see that while urban development plans are worked out very quickly, agricultural development plans are very dim. The city does not have a map with clear border for untouched agricultural land, irrigation system, etc.

Many experts said that if Vietnam keeps processing products for export, which is not lucrative and ineffectively, it should rather focus on developing agriculture.

"Will Vietnam become the second Israel",Tran Huy Anh, 23/12/2011, online at: http://english.vietnamnet.vn/en/special-report/16878/will-vietnam-become-the-second-israel-.html

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Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Saving Water

Sunita Narain of the Centre for Science and Environment talks about the how authorities and ordinary people can cut down the wastage of water

The India Infrastructure Report 2011 titled Water: Policy and Performance for Sustainable Development, by IDFC focuses on the issues related to water in rural and urban areas. The report deals with water politics, leakage of water in urban areas as well as the lack of water recycling mechanisms.

The unchecked growth in the demand for water, large variations and inequalities in availability across regions and consumer groups, and the effects of climate change are all likely to exacerbate conflicts over water in the future.

The India Infrastructure Report 2011 highlights the need for an immediate and appropriate policy framework from the perspective of rights, ecological justice, and demand management.

Implementing this framework would require a paradigm shift in the approach to water, with a major reorientation of public irrigation management, more emphasis on localized water resource development and watershed management, better coordination among institutions in the planning and delivery of water and sanitation services, improved demand management strategies and more efforts towards reducing water pollution.

Also Watch

Sunita Narain of the Centre for Science and Environment talks about the how authorities and ordinary people can cut down the wastage of water.

"Saving Water", 20/12/2011, online at: http://www.livemint.com/2011/12/20011745/Saving-Water.html?h=B

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Mithat Paşa Caddesi 46/4 Kızılay-Ankara TURKEY
Tel: +90(312)4302609 Fax: +90(312)4303948 orsam@orsam.org.tr

❖ Andritz receives major order for hydropower plant in Egypt

Austrian firm wins a 107 million Euro ($140 million) contract to supply and install turbines, generators and other equipment in Egypt.

Andritz has won a 107 million Euro ($140 million) order from the Egyptian Ministries of Energy and Water Resources to supply and install turbines, generators and electrical and hydro-mechanical equipment in Assiut, which hosts the oldest dam in the Egyptian section of the River Nile.

The contract is scheduled to become active during the first quarter of 2012.

The Assiut dam rebuild will not only considerably improve irrigation and shipping, but also create the means of generating electricity from renewable hydropower. As of 2017, the four Andritz Hydro units, with a total output of 32 MegaWatts, will provide approximately 75,000 households with environment-friendly electricity.

The Andritz Group is a global market leader in customised plant systems and services for hydropower, pulp and paper, steel and other specialised industries.

The group is headquartered in Graz, Austria, and has a staff of approximately 16,700 employees worldwide. It develops and makes its high-tech systems at production, service and sales sites all around the world.

"Andritz receives major order for hydropower plant in Egypt", 22/12/2011, online at: http://english.ahram.org.eg/~/NewsContent/3/12/29942/Business/Economy/Andritz-receives-major-order-for-hydropower-plant-.aspx

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