

ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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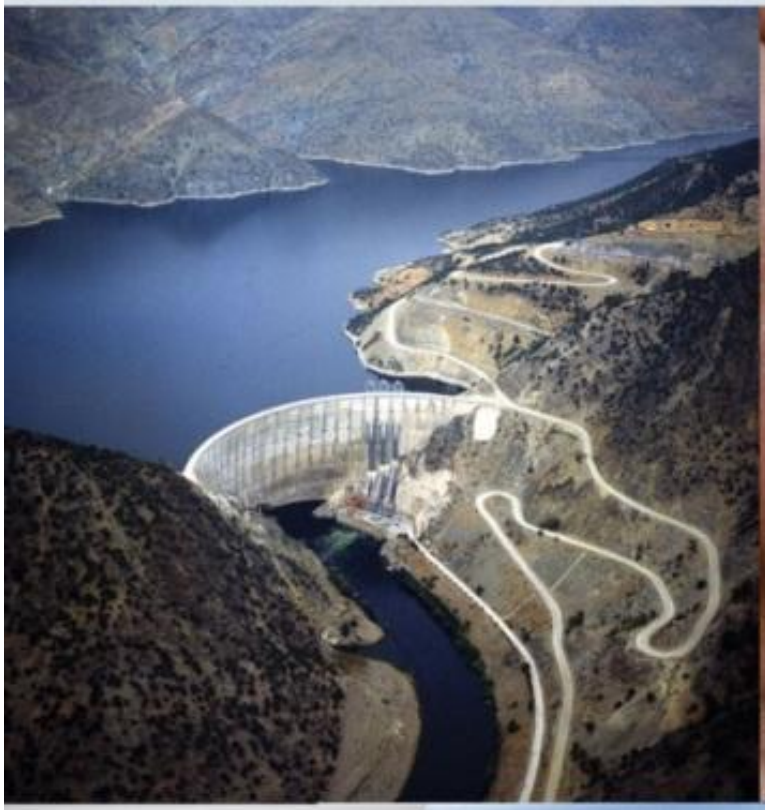



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ORSAM WATER BULLETIN

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❖ Iraqi Agriculture Ministry plans to save 3.6bn cubic meters of water

BAGHDAD, Feb. 7 (AKnews) - The Iraqi Agriculture Ministry has announced plans to save 3.6bn cubic meters of water through the deployment of 35,000 irrigation sprinklers during the next planting season.

Ministry spokesman Karim al-Tamimi said the sprinklers were distributed among all provinces in the country.

Tamimi said the ministry introduced the dripping and fixed and central sprinkler systems to resolve the problems caused by global warming and water projects in neighboring coutries.

Iraq has suffered from drought due to a lack of rainfall as well as low water levels in rivers that enter the country, such as the Tigris and Euphrates. Iraq accuses Turkey, Syria and Iran of being responsible for the low levels of water due to the establishment of projects and dams on these rivers.

The news follows an announcement by authorities in Iraqi Kurdistan to build 12 dams in the semi-autonomous region in an attempt to save about 20bn cubic meters of water per year.

"Iraqi Agriculture Ministry plans to save 3.6bn cubic meters of water", 07/02/2012, online at: http://www.aknews.com/en/aknews/3/288609/

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❖ Damlaj lake to become economic and tourist giant

WASIT, Feb. 6 (AKnews) - Damlaj lake will be transformed into finance and tourism hub, announced Wasit Provincial Council, who are currently assembling a committee to discuss plans.

The panel, who will include representatives from several government departments, will discuss how to increase the 435 sq km lake's capacity of water storage, and to attract and discuss investment opportunities with foreign and domestic companies.

Proposed plans include of a paved road that reaches up to the lake, and will also take advantage of the abundant wildlife in the area such as fish and rare birds.

Salam Mazaal Ekalm, the deputy governor of Wasit's Agriculture and Water Resources Affairs, told AKnews that there is already interest from Iran.

"The Commission accompanied an Iranian delegation that represents a group of companies to the site of the lake and they expressed their willingness to invest the site," he said.

The committee, announced on Thursday, will be comprised of representatives from the executive and legislative powers as well as representatives from the Agriculture and Water Resources, Environment, and Tourism departments of Wasit and the manager of the estuary project.

Eklam said they will be responsible for "making it an important economic and tourist landmark", and is its hoped that the province will benefit from significant financial returns.

Two-thirds of Damlaj Lake lies in the Wasit province and the rest belongs to Diwaniyah.

Local Saeid Mouhammed Rahim, who lives near the lake, said: "The investment of the lake is merely a wish since the two provinces want to manage them. There is also a lack of paved roads that link them it to nearby urban centers".

Fishing in the lake and selling catches in the local markets and in Baghdad has already been contracted out to the private sector. The most popular types are Shabbout, Qatan and Bani.

"Damlaj lake to become economic and tourist giant", 06/02/2012, online at:
http://www.aknews.com/en/aknews/2/288360/

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❖ The French have Called it a 'Water Occupation' Against the Palestinians

Now Britain helps the water thieves.

(LONDON) - There are few crimes more despicable then stealing your neighbour's water and polluting what's left, then watching him and his children suffer thirst, disease and ruin.

Most of us would want nothing to do with the perpetrators of such evil.

British Water describes itself as the voice of the water industry. It talks about best practice and corporate responsibility, and lobbies governments and regulators on behalf of its members. No doubt it does a good job.

It also has international ambitions including in the Middle East. So presumably it knows what's going on water-wise in the Holy Land.

British Water should know, for example, that the 400-miles long structure known worldwide as Israel's Apartheid Wall bites deep into the Palestinian West Bank dividing and isolating communities and stealing their lands and water.

If the Wall was simply for security, as Israel claims, it would have been built along the internationally-recognised 1949 Armistice 'Green Line', although not even this is an official border. The Wall's purpose is plainly to annex plum Palestinian land and water resources for illegal Israeli settlements, and to that end it closely follows the line of the Western Aquifer.

In 2004 the International Court of Justice at The Hague ruled that the construction of the Wall is "contrary to international law" and Israel must dismantle it and make reparation for damage caused. The ICJ also ruled that "all States are under an obligation ***not to recognize the illegal situation resulting from the construction of the wall*** and ***not to render aid or assistance in maintaining the situation*** created by such construction".

But the Wall marches on, aided by American tax dollars and America's protective veto, so that Israel can wield complete control over the water resources it sees as necessary to the regime's present and future needs. This makes the Palestinians, who sit on top of enough water to be self-sufficient, entirely dependent on Israel for God's life-giver. Israel also consumes most of the water from the Jordan River despite only 3% of the river falling within its pre-1967 borders. Palestinians now have no access to it whatsoever due to Israeli closures.

Most of the Coastal Aquifer, on which Gaza's inhabitants rely for water, is contaminated by sewage and nitrates, and is unfit for human consumption. Children particularly are at great risk .The aquifer is depleted and in danger of collapse. The damage could take generations to reverse, say experts.

During Israel's deadly assault on Gaza (Operation Cast Lead) in 2008/9 over 30 km of water networks were damaged or destroyed in addition to 11 wells. A UN Fact Finding Mission (the

Goldstone report) considered the destruction "deliberate and systematic". Proper repairs have been impossible these last 3 years because Israel blocks the import of spare parts.

Palestinians must buy their own water from Israel at inflated prices

"Thirsting for Justice" is an aptly-named campaign by the Emergency Water Sanitation and Hygiene group (EWASH http://www.ewash.org/en/, a coalition of 30 Palestinian and European humanitarian organisations, including Oxfam. It calls on European governments to put pressure on Israel to respect international law and the Palestinians' basic rights to water and sanitation.

Under the warped arrangements of the Interim Agreement on the West Bank and the Gaza Strip (1995) Palestinians are only allowed to abstract 20 percent of the "estimated potential" of the Mountain aquifer beneath the West Bank. Israel not only takes the balance (80 percent) but overdraws its sustainable yield often by more than 50 percent. A Joint Water Committee (JWC) was set up to implement the Agreement but Israel was given veto power and the final say on decisions.

As a result a number of essential projects for Palestinians have been denied or delayed. To make up for part of the supply shortfall, Palestinians are forced to buy water from the Israeli national water company Mekorot, some of which is extracted from wells within the Palestinian West Bank. In other words they are having to buy their own water, and at inflated prices.

Oxfam, which is very active on the ground in Gaza, confirms http://globalministries.org/news/mee/pdfs/OXFAM-The-Big-Uneasy-Gaza-Factsheet-December-2011.pdf that 90-95 percent of water from Gaza's only source, the Coastal Aquifer, is undrinkable. At the current rate the aquifer will be unusable by 2016 and the damage irreversible by 2020.

Gaza residents are restricted to an average of 91 litres of water per day compared to 280 litres used by Israelis. 100-150 litres a day are required meet health needs, says the World Health Organization. Marginalized Palestinian communities in the West Bank survive on less than 20 litres per capita per day, the minimum amount recommended by the WHO to sustain life *in an emergency*.

Palestinians in Gaza and the West Bank are said to have full legal rights to nearly 750 million cubic metres of water but they have to make do with a trickle, or go without, while Israelis fill their swimming pools, sprinkle their lawns and wash their cars. In Bethlehem's Aida refugee camp the water is turned off for days. When the street taps come on again, usually for a few hours, there's a desperate scramble to refill domestic tanks and other containers before the next cut.

Water an apartheid weapon in a brutal occupation

The Israeli newspaper *Haaretz* last month reported on the French parliament's Foreign Affairs Committee findings on the geopolitical impact of water in confrontation zones like Israel-Palestine http://www.haaretz.com/print-edition/news/french-parliament-report-accuses-israel-of-water-apartheid-in-west-bank-1.407685.

According to the report water has become "a weapon serving the new apartheid… Some 450,000 Israeli settlers on the West Bank use more water than the 2.3 million Palestinians that live there. In times of drought, in contravention of international law, the [illegal] settlers get priority for water".

Israel is waging a "water occupation" against the Palestinians, says the report accusing the Israelis of "systematically destroying wells that were dug by Palestinians on the West Bank" as well as deliberately bombing reservoirs in the Gaza Strip in 2008-09. Furthermore "many water purification facilities planned by the Palestinian Water Ministry are being blocked by the Israeli administration."

Head of the Palestinian Water Authority, Dr Shaddad Attili, observed: "Palestinians need to be able to access and control our rightful share of water in accordance with international law. The Oslo Accords did not achieve this… Without water, and without ensuring Palestinian water rights, there can be no viable or sovereign Palestinian state."

And not content with robbing the Palestinians of their water, the Israelis are in the habit of flooding Palestinian fields and villages with untreated sewage from their hilltop settlements.

Under the radar

Against this background British Water has decided to co-operate with MATIMOP, an Israeli government agency that has been ordered to enter into international agreements and "aggressively expand opportunities for Israel's industry".

Always eager to oblige, the UK Trade & Investment Department's briefing on Environment Opportunities in Israel contains this advice: "Israeli companies are keen to form alliances with companies abroad, and this is where the UK can benefit. In addition, growing development and marketing costs compel Israeli environmental companies to seek co-operation with foreign partners....

"The UK are world leaders in many aspects of the environment and so the UK and Israel complement each other and have much to offer each other in this sector. Teaming up with Israeli environment companies will give UK companies access to innovation and entrepreneurial spirit. ***UK companies can also benefit by providing their experience in marketing and management for Israeli companies***."

So British Water signed a Memorandum of Understanding with MATIMOP on 21 December, so close to the Christmas holidays that it went unnoticed here. The event was not even recorded on British Water's website but it was proudly featured on the Embassy of Israel site http://www.embassyofisrael.co.uk/news/in-the-media/british-water-and-israeli-rd-centre-matimop-sign-landmark-water-agreement/ and treated by the Israeli press as a triumph.

MATIMOP calls it "a strategic co-operation agreement". Its Executive Director, Israel Shamay, said: "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."

British Water agreed the text for an announcement by the Embassy of Israel but didn't release it themselves, apparently happy for Tel Aviv's propaganda boys to take care of it. In the press release MATIMOP says: "Israel has been coping with water scarcity since its founding."

Yes, coping my thieving.

The Palestinians have been subjected to the longest and most brutal military occupation in modern times and are held prisoner within the fragmented remnants of their own country, unable to develop its resources or travel freely within it to find work, attend university, visit family, or worship at their holy places in Jerusalem. Is helping Israel to become a water superpower really the right thing for British Water to be doing?

Question: "EU agreements require Israel to show "respect for human rights and democratic principles" and provide for the agreement to be suspended otherwise. Does the MATIMOP agreement include similar good behaviour conditions?"

British Water: "The agreement with MATIMOP is a Memorandum of Understanding. Both parties are professional organisations with admirable aims and objectives."

Question: "British Water will be aware that Israel illegally occupies its neighbour Palestine and has seized control of its water resources. The path of Israel's 400-mile Separation Wall closely follows the line of the Western Aquifer and encloses key supplies. In 2004 the International Court of Justice ruled that the construction of the Wall in the Occupied Territories, including East Jerusalem, is 'contrary to international law' and 'all States are under an obligation not to recognize the illegal situation resulting from the construction of the wall and not to render aid or assistance in maintaining the situation created by such construction'. In the circumstances, should ethically-minded British companies allow themselves to become embroiled?"

British Water: "I'm not sure what you mean by 'embroiled' or 'ethically-minded'. The aim of the MoU is for businesses to work together for the good of the global water industry… It's no part of our role to exchange philosophical concepts with you. The arrangement with MATIMOP is one of commercial intent for the benefit of UK and Israeli companies…".

Question: "Is British Water being evenhanded in this Holy Land confrontation zone? Are you offering help to the Palestinian Water Authority? Have you responded positively to the sea-water desalination project for Gaza and other programmes for West Bank towns and villages?"

British Water: "We notify our member companies of potential commercial opportunities wherever they may arise, leaving them – as they're best-qualified – to weigh the relative attractiveness of different markets."

David Neil-Gallacher is British Water's CEO and also Director-General of Aqua Europa, which does the same sort of job on a Europe-wide basis. This was his parting shot:

"Regions of tension are bound to engender strong views and conflicting principles, and it's usually notoriously difficult to discern unequivocal moral ascendancy on the part of any of those involved…

In my dealings with our companies active in the region, however, I've never seen any evidence that they are lacking in principle or moral locus… British Water's perspective has to be a commercial one… We do our best to conduct our activities in the best interests of our part of British industry and strictly within the requirements of the law…"

How will British Water avoid complicity with Israel's endless oppression of the Palestinians and the deadly strife with its other neighbours in the region? Perhaps Mr Neil-Gallacher should ask one of his own member companies, Veolia, what can happen if caught up in Israeli projects that violate international law. Veolia dumps Israeli waste on Palestinian land and is helping to build and run a tramway connecting Jerusalem with illegal Israeli settlements. The company must rue the day it 'crossed the line' to fall foul of those nice folks at BDS (the Boycott-Divestment-Sanctions movement).

"The French have Called it a 'Water Occupation' Against the Palestinians", 09/02/2012, online at: http://www.salem-news.com/articles/february092012/water-thieves-sl.php

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❖ Israel and Palestine: The Place of Politics In The Mideast's Environment

Do you feel that the politics behind environmental issues in Israel-Palestine are being sidelined?

A couple of weeks ago, Green Prophet reported on the news that Israelis and Palestinians were working together to build a restorative eco-park. It was a relatively feel-good piece showing that despite the political conflict, joint projects could be useful in building bridges between the two nations. One commentator, however, felt that our coverage was politically naïve.

H.Shaka remarked: "I appreciate that GP is trying to report on 'green' in the whole Middle East, including both Israel and the Arab world, and I have come to see this as a step in the right direction. However, given the strong political drivers in the region, I think GP should aim to be much more politically informed and balanced if it wishes to gain the respect of its readers, at least in the Arab world."

From me personally, the comment struck a chord. I can see why the commentator would prefer that politics play a bigger role in the way we see green initiatives in the region. I am the first to admit that green campaigners can be a little idealistic about joint Israeli and Palestinian projects, and tend to ignore their political downsides.

I remember speaking to a green Bedouin organisation about such joint projects and they were eager to point out that they are deeply problematic as the partners are in no way equal. They explained that the Israeli side have more say, more influence and a lot more to gain than Palestinian Bedouins, who are almost token players.

Others add, that joint Israeli-Palestinian projects can be seen as 'normalisation'. That they allow and even encourage greater acceptance of the unfair political situation and distort the oppressor/oppressed relationship between Israel and Palestine. I understand all that. I also understand that not everyone sees the political situation the same way. That the political situation is quite complex and that solutions are not as easy to point out as the problems are.

If you don't think that joint Palestinian-Israeli projects are fair, does that mean that allowing environmental resources to deteriorate further to make a political stand is the solution? I don't think I can accept that. There has to be a better option – what that is, isn't clear right now.

I also have to defend Green Prophet's openness to discussing these political issues. As well as covering these joint projects, we have reported on less 'positive' stories such as Israel's water apartheid, the dire environmental situation in Gaza and the environmental impact of the conflict. Indeed, the Green Prophet writers are quite a varied bunch of writers and I don't always agree with my fellow colleagues on issues such as nuclear power, working with corporations, green gadgets and lots more. I also think we don't *need* to agree.

All writers are given the freedom to talk about every political issue they feel is important. If coverage appears to be apolitical, I can only guess it's because writers may feel that there is nothing to gain

from bringing up these political issues time and time again. The reader will most probably still believe what they believed when they started reading the article. I know that sound cynical but I am being honest. I have seen how political argument blow up on some websites and blogs and they not only achieve very little but are corrosive too.

I don't really know how to end the post other than to say that I speak for myself. This is not some attempt to say 'yes, Green Prophet has it right/wrong' but rather my *personal* perspective on things. Yes, I think we need to include politics more in our coverage of green issues in the Middle East. But I can also understand why many of us choose not to. It's too messy, too complicated and I am not sure that it is what the majority of our readers want.

"Israel and Palestine: The Place of Politics In The Mideast's Environment", 11/02/2012, online at: http://www.greenprophet.com/2012/02/israel-and-palestine-the-place-of-politics-in-the-mideasts-environment/

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❖ The UfM Gaza Desalination Project and the 6th World Water Forum discussed in France

Deputy Secretary General Dr. Rafiq Husseini, and the Minister of Water of the Palestinian Authority Dr. Shaddad Attilli met with the French Minister of International Cooperation Mr. Henri de Raincourt.

PARIS - French Cooperation Minister Henri de Raincourt met with the Palestinian Minister for Water, Shaddad Attili, and with Deputy Secretary-General Rafiq El Husseini at the Ministry of Foreign Affairs of France, to discuss development projects in the water sector and prepare for the forthcoming World Water Forum to be held on 12 March in Marseille, France.

The talks reviewed the progress made to expedite the water projects in the Gaza strip, in particular the Project for Desalination Facility in Gaza labeled by the UfM. Mr. De Raincourt commended the start-up of the desalination water project which will provide 1.6 million Gazans with potable water at a cost of 350 million euros.

This visit aimed to evoke the preparation of the 6th World Water Forum, where the UfM project tin Gaza will be discussed, as well as the needed actions towards the right to water access. Palestine and France also reaffirmed the importance of entry into force of the 1997 UN Convention which encourages the cooperation between countries who share water courses.

On 22 June 2011, the Union for the Mediterranean "labelled" its very first project which consists of the construction of a 100 million cubic meters desalination facility and distribution system in the Gaza strip that would help to address the major water deficit for a population of 1.6 million. The "labeling" of this large-scale project, submitted by the Secretariat's Environment & Water Division in collaboration with the Palestinian Water Authority, by the representatives of the 43 UfM countries was partly based on a unanimous recommendation from the UfM's Water Expert Group. This humanitarian project will contribute to job creation and future economic and sustainable development in that highly populated region of the Mediterranean.

"The UfM Gaza Desalination Project and the 6th World Water Forum discussed in France", 10/02/2012, online at: http://www.ufmsecretariat.org/en/the-ufm-gaza-desalination-project-and-the-6th-world-water-forum-discussed-in-france/

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❖ UNDP Celebrates Launching of Combat Desertification Strategy in Palestine

RAMALLAH, February 9, 2012 (WAFA) – The United Nations Development Program (UNDP) Thursday celebrated, in an official ceremony in Ramallah, the launching of the National Strategy to Combat Desertification in the occupied Palestinian Territory (oPT).

The Palestinian Ministry of agricultural in cooperation and full coordination with all relevant parties prepared the agricultural sector strategy; the 'Shared Vision 2011-2013' which focused on efficiently and sustainably managing the natural resources in Palestine through increasing water availability and supply management as well as through improving the demand for agricultural water.

Minister of Agricultural, Ahmad Majdalani, stressed that there are many difficulties facing agricultural development in Palestine, particularly the Israeli occupation measures and its settlers aggressions, including the continuation of the oppressive siege on Gaza, the establishment of the annexation and expansion wall in the West Bank, which resulted in the isolation of more than 700 thousand dunums, the Israeli continued control over 80% of Palestinian water rights and its control over more than 85% of agricultural land, the confiscation of land and water and the uprooting of trees for the benefit of settlements, Leading to land degradation and depletion of natural resources and increasing desertification.

He said: 'The Ministry of Agriculture is implementing several projects that aim to increase the green areas and control desertification, especially the national program for greening of Palestine."

On his part, UNDP Special Representative of the Administrator, Frode Mauring, in a speech, said "this strategy is an important step ahead on the right way to join the world in fighting desertification as well as fulfilling the requirements of the United Nations Convention to Combat Desertification."

Mauring said that in February 2010, 193 countries have ratified the United Nations Convention to Combat Desertification. The Palestinian Authority was not among them, but now we are very close to the day where the Palestinian Authority will be the country 194.

He added that the natural capital in Palestine provides a significant ecosystem services and support for human activities in agriculture, annual husbandry, traditional and pharmaceutical health products and many other activities.

Therefore, "UNDP/PAPP will continue its supports to the PA institutions, civil society and the private sector to implement the action plan formulated to materialize the objectives of this strategy. Part of that is to improve the awareness of stakeholders and maximizing their participation," he said.

"UNDP will also continue to provide the needed support to enable the PA to access to relevant international windows of funds such as Special Climate Change Fund, the Adaptation Fund for United Nations Frameworks on Climate Change, Clean Development Mechanism and the Global Environment Facility," said Mauring.

He concluded, "I would like to thank the Global Mechanism of the United Nations Conventions to Combat Desertification for funding the formulation of this Strategy and its action plan and would like to thank all our partners present here today and wish you all best of luck in this ceremony."

"UNDP Celebrates Launching of Combat Desertification Strategy in Palestine", 09/02/2012, online at: http://english.wafa.ps/index.php?action=detail&id=18949

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❖ Thousands of Palestinians in the Jordan Valley risk forced displacement, says UN body

Sixty thousand Palestinians live under harsh conditions in the Jordan Valley and the Dead Sea area - one of the most isolated and restricted areas in occupied Palestine. The UN Office for the Coordination of Humanitarian Affairs (OCHA) has summarized their humanitarian situation in its February 2012 fact sheet.

The Jordan Valley and Dead Sea area covers about one third of the West Bank. Eighty-seven percent of the land is designated as Area C, where Israeli exercises full control over security, planning and construction. The area is earmarked for the use of the Israeli military or falls under the jurisdiction of the illegal Israeli settlements. An additional 7% is designated as a nature reserve. In total, Palestinians are prohibited from using 94% of their own land.

Meanwhile, 9,500 Israeli settlers have established 37 settlements in the occupied Jordan Valley in contravention of international law. The Fourth Geneva Convention prohibits Israel from transferring parts of its own civilian population into occupied territory. Supported by Israel, the settlers have developed highly profitable agricultural, tourist, mineral and other businesses, including Ahava cosmetics.

Severe restrictions on Palestinians

One quarter of the Palestinian population of the Jordan Valley and Dead Sea area - around 15,000 – live in Area C, including some 7,900 Bedouins and herders. The Israeli authorities obstruct construction activity by the Palestinian communities by withholding building permits for homes, schools, clinics, roads and water networks.

Palestinians in the area have restricted access to water resources. Water consumption in most herding communities is about 20 liters per person per day. This stands in sharp contrast to the World Health Organization's recommendation of 100 liters per person a day. The settlers in the area consume a shocking 300 liters per person per day.

In addition, Palestinian access to and from the Jordan Valley is highly constrained. Four of the six access routes to the Jordan Valley are controlled by Israeli checkpoints. Non-residents are only allowed to cross these checkpoints as pedestrians or by traveling via registered public transportation. Palestinians who own commercial vehicles have to coordinate the crossing in advance, according to OCHA. Numerous checkpoints, roadblocks and trenches in the area are an obstacle impeding Palestinian access to grazing and agricultural land, services, and markets for agricultural produce. Moreover, the restricted freedom of movement undermines family and social ties. The map printed in OCHA's fact sheet provides a clear overview of the situation.

Israel's full military control of Area C has resulted in food scarcity and water scarcity. A joint survey by UNRWA, Unicef and the World Food Program revealed that 79% of the Bedouin and Palestinian herders in Area C in the West Bank – the Jordan Valley and the Dead Sea area included - are food insecure. The food insecurity in the herding communities in Area C is much higher than among the Palestinian population in the West Bank and the Gaza Strip where respectively 25% and 61% of the households are food insecure.

Forced displacement and evictions

In 2011, the Israeli authorities demolished over 200 Palestinian-owned structures in the area, displacing around 430 people and affecting the livelihoods of another 1,200 Palestinians. According to OCHA, thousands of Palestinians in the area are at risk of forced displacement due to home demolitions, forced evictions from closed military zones and a range of restrictions imposed by Israel.

However, the Palestinians are determined to continue living on their land. For example, Abed Yasin Rashaida, who has lived for 15 years in Fasayil in the occupied Jordan Valley, says on video: "We are Bedouin. Once we were nomads – we used to move from one place to another. Eventually we settled here to let our children study at school." On 20 December 2012, the Israeli army demolished some houses and animal shelters in Fasayil. "They started demolishing at eight in the morning. The bulldozers destroyed everything and covered the mattresses with soil. Flour, sugar, lentils, oil – they destroyed everything," according to Rashaida.

Last June, Israeli forces used bulldozers to demolish seven homes, eighteen animal shelters and four outdoor kitchens in al-Hadidya.

Six months later, Amnesty International issued a call for urgent action against new demolition orders in al-Hadidya:

Many of the structures at risk have been rebuilt following demolitions in June. Fifty people, including at least 25 children, are at risk of permanent displacement. Sixteen of the structures threatened with demolition were donated by the Palestinian Authority (PA) and aid organizations following the demolition of 29 structures on 21 June.

OCHA warns that thousands of Palestinians in the Jordan Valley and the Daed Sea area risk forced displacement under the illegal Israeli occupation. However, the Palestinians are determined to resist and stay on their land. The Boycott, Divestment and Sanctions movement should keep Israel under pressure as long as it violates the rights of the Palestinian people.

"Thousands of Palestinians in the Jordan Valley risk forced displacement, says UN body", 11/02/2012, online at: http://electronicintifada.net/blogs/adri-nieuwhof/thousands-palestinians-jordan-valley-risk-forced-displacement-says-un-body

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❖ Mekorot CEO promises surplus water in 2014

Shimon Ben Hamo told the Knesset Economics Committee: First we will have to make up the shortfall, then we'll begin managing the surplus water economy.

Israel will have surplus water by the beginning of 2014, Mekorot National Water Company CEO Shimon Ben Hamo told the Knesset Economic Affairs Committee today. "First we will have to make up the shortfall, then we'll begin managing the surplus water economy. We'll have to prepare for this," he said.

The assessment is based on Mekorot's two-year development plan, which includes the construction of two more large seawater desalination plants at Ashdod and Soreq, which will boost Israel's desalinated water production capacity to 600 million cubic meters a year.

The Water Authority told the committee that while Israel's water economy has improved, the country should continue water discipline and conservation of resources due to the increased desertification in the Middle East. Both Mekorot and the Water Authority warned that it was premature to fill swimming pools, as there is still a water shortfall of 1.5 billion cubic meters.

The winter rains so far this season have raised the water level in the Kinneret toward the upper red line, but the water level is still 4.18 meters below what it should be. Mekorot is not pumping water from the Kinneret while it carries out maintenance on the National Water Carrier.

The Water Authority says that the seawater desalination plants at Ashkelon, Palmachim, and Hadera are now supplying 40% of Israel's water needs.

"Mekorot CEO promises surplus water in 2014", 07/02/2012, online at:
http://www.globes.co.il/serveen/globes/docview.asp?did=1000722615

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❖ UK helps Israel steal Palestinian water

Britain has decided to help the Israeli regime steal water from Palestinians, while even the Israeli press describe the act as a 'water occupation.' British Water, which represents the UK water industry supply chain, signed an agreement with Israel in December which received no media coverage. The agreement was not even published on British Water's website. However, the Israeli regime's embassy in London proudly reported the agreement.

This comes as Israel's 400-mile apartheid wall illegally encloses key water supplies. The International Court of Justice at The Hague ruled the apartheid wall is 'contrary to international law' and that "all States are under an obligation not to recognize the illegal situation resulting from the construction of the wall and not to render aid or assistance in maintaining the situation created by such construction."

Israel's apartheid wall is not even built along the so-called Green Line which itself is not a legal and official border. It bites deep into the occupied Palestinian West Bank and its construction is aimed at stealing Palestinians' water and selling them their own water at an inflated price.

Palestinians have no access to the Jordan River because of the Israeli regime's closures. Moreover, during the Gaza Massacre in 2008, Israel destroyed more than 30 kilometers of water networks and 11 water wells in a 'deliberate and systematic' manner, as described by a UN Fact Finding Mission.

Despite the establishment of a Joint Water Committee, which was set up to secure water supply to Palestinians, Israel was given veto power.

This way, Palestinians are forced to buy their own water, which is extracted from wells within their own land.

Although between 100 and 150 liters of water per day are necessary to meet health needs, an individual in marginalized Palestinian communities in the Occupied West Bank live on less than 20 liters of water a day. This comes as an average Israeli consumes 280 liters of Palestinians' water each day.

Britain's complicity with Israel in robbing the Palestinians of their water comes as even the Israeli newspaper *Haaretz* admitted that "some 450,000 [illegal] Israeli settlers on the [Occupied] West Bank use more water than the 2.3 million Palestinians that live there."

The newspaper even considered the situation as a 'water occupation' that the Israeli regime has launched against the Palestinian people.

Given the bigger picture of the establishment of the Zionist state which would not be possible without Arthur Balfour, Britain's foreign secretary from 1916 to 1919, and the UK Trade and Investment Department's commitment to benefit Israel such acts on the part of Britain are not unexpected.

"In Palestine we do not propose even to go through the form of consulting the wishes of the present inhabitants of the country. The four powers are committed to Zionism and Zionism, be it right or wrong, good or bad, is rooted in age-long tradition, in present needs, in future hopes, of far profounder import than the desires and prejudices of the 700,000 Arabs who now occupy that land," said Balfour in his Balfour Declaration back in 1917.

Balfour's comments were made as Britain had promised "the 700,000 Arabs" that had "occupied the land" independence in return for their assistance in defeating the Ottoman-German Alliance in World War I.

However, after "Turks were smitten," as described by Stephen Ostrander, the British government gave no thought to its promise as it surrendered Palestine for the establishment of a Zionist state.

"UK helps Israel steal Palestinian water", 10/02/2012, online at: http://presstv.com/detail/225961.html

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❖ No water crisis in Byo — minister

Water Resources Management and Development minister Samuel Sipepa Nkomo has dismissed fears of a water crisis in Bulawayo, arguing the city's supply dams have enough reserves.

This follows reports that Bulawayo City Council (BCC) is set to introduce a tight water-rationing regime citing critical water levels.

"We will not have a water crisis in Matabeleland," Nkomo said. "The water in our dams may not have filled up much because of the little rain received in the region, but the water supply in the dams is still adequate for our residents."

Last week, BCC's director of engineering services, Simela Dube, said the city's five supply dams were collectively holding 54,21% of their capacity at the end of last month.

The latest council report shows the city dams — Insiza, Inyankuni, Lower Ncema, Umzingwane and Upper Ncema — have received a mere 2% inflow of water since the beginning of the rainy season in November.

The dams are reported to have a total of 196 592 234 cubic metres of water, out of a possible 362 631 70.

The city is reportedly pinning its hopes on the completion of the Mtshabezi-Umzingwane pipeline by the middle of the year to avert a water crisis.

"Despite this (assurance of adequate water supplies) I urge the people of Matabeleland, especially the residents of Bulawayo, to work together in conserving the water they have. People should not leave water taps running and they should not flush toilets unnecessarily. These are just a few of the many ways in which residents can save water," the minister said.

Nkomo said his ministry had invited a delegation from Israel to visit Zimbabwe to study the Save River, which has been identified as one of the most heavily silted in the country.

"The Israelis I met last year are going to be looking at the Save River which has high levels of siltation in order to find ways in which its water can be preserved," he said

"No water crisis in Byo — minister", 08/02/2012, online at: http://www.newsday.co.zw/article/2012-02-08-no-water-crisis-in-byo--minister/

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❖ Quality of Israel's drinking water shows clear improvement

Study examines the quality of water Mekorot supplies, only 0.07 percent of the samples were found to contain disease-causing bacteria and parasites.

Less than half a percent of drinking water supplied by the Mekorot water company exceeded allowable pollution limits in 2010, according to a report released on Tuesday. That is a dramatic improvement over the 1991 level when 6.5 percent of the samples in Israel exceeded allowable limits -- and also well below the five percent limit recommended by the World Health Organization.

The report, which was published by Mekorot to mark its 75th anniversary, states that the company checked approximately 27,000 samples for disease-causing bacteria and parasites. Only 0.07 percent of the samples were found to contain such contaminants.

The study examined the quality of the water Mekorot supplies through a national system, which includes the Kinneret, the National Water Carrier, wells, and main pipelines to cities.

Mekorot supplies about half of Israel's water. The other half is provided by water corporations established by municipalities or jointly by communities.

Mekorot also checked some 70,000 samples for chemical pollution, such as the remnants of pesticides and fertilizers. Such contamination was found in 23 samples, which is 0.03 percent of all the tests.

Over the past four years, Mekorot has been using chemical and biological systems to disinfect water in the reservoir to which the Kinneret water is channeled before it is distributed via National Water Carrier pipelines. It also operates a facility to filter water to reduce turbidity.

The main challenge to Mekorot and the water corporations is currently the increasing salination of ground water due to over-pumping. According to the lastest report of the Hydrological Service, issued in 2009, only 39 percent of the coastal aquifer was still of good quality and 11 percent has become unusable. The rest is defined as "satisfactory" in terms of quality.

Four years ago, Mekorot supplied 276 million cubic meters of water from the Kinneret and only 153 million cubic meters of desalinated sea water. Two years ago, that figure was nearly reversed with 277 million cubic meters of desalinated sea water and only 176 million cubit meters from the Kinneret.

Water quality will improve further after the Knesset passes new water regulations shortly, according to Prof. Avner Adin, who headed the Health Ministry committee that set the new standards. "Among other things, the level of bacteria will have to decline to zero and all aboveground water will have to be filtered," Adin said.

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According to Storenext, a firm that gathers statistics on retail food purchases, in 2010 Israelis purchased NIS 420 million worth of bottled water, and in 2011 - NIS 397 million, a decline of 5.5 percent.

A major factor in the decline is the entry into the market in March 2011 of Electra's home filtered water dispenser. Electra's product turned out to be powerful competition for Strauss' Tami 4 filtered water dispenser, and prices of both products fell.

Over the last few years, the Environmental Protection Ministry has strongly endorsed drinking tap water. Minister Gilad Erdan recently announced a campaign to encourage people to drink tap water. From a health perspective tap water is fine, Erdan said, and bottled water is a burden on the environment because it uses natural springs and the plastic bottle it comes in is a source of litter and pollution.

People's desire to save on bottled water can also be seen in their preference, according to Storenext, for water brands that are less expensive brands than the market leaders, Mei Eden and Neviot.

"Quality of Israel's drinking water shows clear improvement", 08/02/2012, online at: http://www.haaretz.com/print-edition/news/quality-of-israel-s-drinking-water-shows-clear-improvement-1.411606

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❖ How much should the polluter pay?

The Environmental Protection Ministry has started imposing stiff fines on companies that contaminate.
By Zafrir Rinat

Last week the Environmental Protection Ministry set a record for issuing environment-related fines: It notified Tnuva that the company would be fined NIS 15 million for violations of the Prevention of Sea Pollution law. An administrative procedure was used to impose a fine that is seven times higher than the previous record and 10 times higher than the highest court-imposed fine to date.

According to the ministry, Tnuva's plant in Be'er Tuvia did not uphold the requirements of the permit it was given to transfer brine to a special facility at the Dan Region Wastewater Treatment Plant ("Shafdan"), and from there to the sea. Tnuva did not invest in the best technology to reduce the contamination, as the ministry required it to do. The large fine is meant to implement the principle of "the polluter pays," an important pillar of environmental protection policy that serves as a major deterrent against pollution. However, it also raises several questions regarding the ministry's use of financial tools.
Wastewater Treatment Plant – Moti Milrod – 26012012

The Dan Region Wastewater Treatment Plant ("Shafdan") near Rishon Letzion.
Photo by: Moti Milrod

Much of the fine was imposed based on violations such as late submission of a report and failure to submit a detailed work plan. As for the most obvious environmentally significant section – deviation from the permissible level of pollutants that can be discharged into the sea – the ministry chose to be lenient and treat two violations as one, and thus spared Tnuva an additional NIS 2.5 million fine. The size of the fine was determined based on Tnuva's overall turnover. The explanation of the financial sanction does not set out or define the environmental damage caused and how serious it is.

Even when reviewing another case of financial sanctions, it is hard to ascertain what damage the polluter is paying for. This involved a fine of NIS 3.6 million imposed around a year and a half ago on Yehuda Steel, which manufactures and recycles metals and discharges waste and sewage into the sea. The sanction, which was eventually reduced to NIS 2.1 million, was imposed because of the failure to submit monthly reports and conduct lab tests. There was also a fine of no less than NIS 1.2 million for "failure to submit a report on a newspaper ad announcing the company's receipt of a permit to discharge waste into the sea."

The Be'er Tuvia plant manufactures savory cheeses, among other things, and therefore its waste contains a high concentration of salts. Professionals in the field argue that the company did not find a proven technology for treating the waste, as the Environmental Protection Ministry demanded. Ministry officials reject this claim.

According to the Water Authority, the plant even indirectly helped prevent sea pollution. "It carried out activities that made it possible to reduce the salinity of the waste, and then treat it and make it

usable for agricultural irrigation, instead of pouring it into the sea," says Danny Greenwald, the supervisor of pollution monitoring at the Water Authority. "This prevented damage to the soil and groundwater that high-salinity waste might have caused."

It is important to note that apart from the waste Greenwald refers to, other waste was sent to the brine treatment facility.

Still remaining, however, is the basic question of how and when the Environmental Protection Ministry should use the powerful financial tool known as "economic sanction." "The idea of a sanction instead of a criminal proceeding is in principle correct," says Arie Neiger, an attorney who represents the Manufacturers Association of Israel. "But it's like a dinosaur that has hatched and is uncontrollable. The sums are frighteningly high and out of proportion to the environmental damage caused. There are plants that caused severe pollution and in court proceedings were fined NIS 800,000. In contrast, a plant that had a minor violation was fined over NIS 1 million. There should be some correlation between the punishment and the environmental damage. This is the right way to manage policy."

The fines are forwarded to a sea pollution prevention fund the ministry oversees, and helps fund its sea protection efforts. The OECD warned in its report on the status of the environment in Israel released around four months ago that transferring the money from fines to the Environmental Protection Ministry, and not to the state budget, may create an inappropriate incentive to impose fines in order to fill the ministry's coffers.

However, it could also be argued that without imposing such high fines, it would not be possible to compel large industrial facilities such as those in Ramat Hovav or Haifa Bay to build state-of-the-art sewage treatment plants or force companies such as Tnuva to prevent sea pollution.

Environmental Protection Ministry officials explained that the brines contained organic substances that pollute the sea and can also cause phenomena such as the spread of seaweeds that affect water quality. "The amount of the sanction is based on the company's turnover in order to deter companies from ignoring environmental requirements," the ministry noted this week. "We will continue to verify that companies invest in plant upgrades to protect the environment and water sources."

According to ministry experts, if a plant does not report on is operations, it is not possible to monitor it and ensure that it is indeed working to reducing the pollutants it discharges into the sea. Therefore it should be aware that it will be handed a stiff financial penalty. Often this effects an almost immediate change in its operations.

"How much should the polluter pay?", Hareetz, 05/02/2012, online at:
http://mideastenvironment.apps01.yorku.ca/?p=4248

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❖ India, Israel to collaborate on urban renewal, water treatment

India and Israel are expected to sign an agreement on collaboration in the field of water treatment technologies in urban areas during the forthcoming visit of Minister of Urban Development Kamal Nath.

With India and Israel commemorating 20 years of establishment of diplomatic relations, the new year has seen a flurry of activities and further diversification in areas of cooperation to include many new fields.

Earlier this year, Minister for External Affairs S M Krishna dubbed the two countries as "natural allies in all frontiers of sciences" during his visit to Israel.

The two sides are now set to sign a joint declaration for cooperation in the field of technologies for treatment and purification of water in India's urban areas during Nath's visit, officials here said.

India is looking for collaboration with Israel in such vital areas like urban renewal, solid waste management, drainage, desalination technology, recycle and re-use of waste water, technology for water use and metering, financial sustainability of urban water supply, sanitation and sewerage services, preparation of city master plans including efficient use of land, land economics, transport corridors.

Among other related areas, the two sides will also discuss possible cooperation in use of geographical information system for urban planning, heritage monuments and their conservation, housing for economically weaker sections of society including use of pre-fabricated technology, capacity building for urban planning, and mass rapid urban transport planning.

Nath is scheduled to visit Israel between February 12 and 14 on the invitation of Israel's Minister of Industry, Trade and Labour, Shalom Simhon, and will also call upon Transport Minister Yisrael Katz and Minister of Energy and Water Resources, Uzi Landau during his three day visit.

The Indian mission will also be organising a business seminar in cooperation with Israel Export and International Cooperation Institute in which Nath and Landau are expected to participate.

Nath will be the second senior cabinet minister to visit Israel this year after Krishna. Landau will also be travelling to India later this month.

The two countries are also working on signing a Free Trade Agreement (FTA), which Israel's Finance Minister Yuval Steinitz said is likely to treble bilateral trade between the two countries.

Bilateral trade between India and Israel stood at a modest USD 200 million mark in 1992 when diplomatic relations were established between the two countries, but has made impressive gains during the last 20 years and is likely to hit USD 5 billion this year.

"India, Israel to collaborate on urban renewal, water treatment", 07/02/2012, online at: http://www.waterworld.com/index/display/news_display/1599821353.html

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❖ 'Israel to have water surplus within decade'

National water company predicts that increase desalination will create substantial surplus of water within eight years

Israel may face a happy predicament within a decade – a water surplus. Mekorot, the national water company, said Wednesday that the increased desalination of seawater will eventually enable Israel to rehabilitate all of its fresh water reservoirs.

The heads of Mekorot briefed the Knesset's Economics Committee on the situation of Israel's water market, in a meeting marking the company's 75th anniversary.

Currently, Israel is missing 2B cubic meters of water, but Mekorot's data suggests that by 2013, 75% of Israeli households would be using desalinated water.

Israel has six desalination facilities, which produce 600 million cubic meters of water a year. Existing fresh water reservoirs would remain a pivotal source for the water market and stand to enjoy the reduced production, the company said; adding that reduced pumping would also help rehabilitate the Coastal Aquifer – one of the most important sources of groundwater in Israel.

Mekorot also said that one of its long-term goals is to create a second, desalinated water-designated carrier to funnel the water, which are currently used mostly for irrigation.

Israel's agricultural irrigation is slated to be based completely on desalinated and brackish water by 2030.

Mekorot Chairman Alex Wiznitzer added that the company was also exploring the possibility of building its own power plant, adjacent to the desalination facility in Ashdod.

Mekorot stands to receive government funds amounting to NIS 6 billion (roughly $1.61 billion) over the next five years in favor of its desalination projects.

'Israel to have water surplus within decade', 09/02/2012, online at: http://www.ynetnews.com/articles/0,7340,L-4186794,00.html

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❖ Tel Aviv Water Wells Polluted from Contamination

A recent study discovered that many Tel Aviv wells are polluted beyond suitability as drinking water sources. Data collected by the Health Ministry and Water Authority showed that 96 of a total 166 wells in the Tel Aviv area were closed due to contamination. Nearly two-thirds of the wells have been shuttered since 1980, when all 166 were in full operation. The pollution has been caused by two types of activities. First, contaminants from armament manufacturing, agricultural runoff and sewage systems seep into the groundwater table.

Second, seawater intrusion has caused salinity levels to rise. Coastal aquifers have built-in brackish water barriers that create a line between seawater and freshwater. When wells are overpumped, that barrier weakens and seawater flows into the aquifer. The subsequent spike in salinity is pervasive and difficult to remediate.

The Israel Military Industries site in Ramat Hasharon is the source of perchlorate leakage. Perchlorate is a rocket propellant used in several types of military equipment. It affects human health by interfering with thyroid function. It may also be a carcinogen, though studies have been inconclusive.

When perchlorate was discovered in Ramat HaSharon, residents immediately began receiving water from the National Water Company. Now the town has filed suit against the government for additional costs incurred due to the contamination.

The perchlorate must be remediated. That includes pumping the water out and purifying it. The plan will take 20 years and cost Israeli taxpayers half a billion shekels. But the cleanup is essential to ensure wells are fully restored and the perchlorate does not continue to spread.

Runoff from agricultural areas has been pervasive in the Tel Aviv area. Chemical pesticides and fertilizers used on most large-scale farms have leached into groundwater. This causes unacceptable levels of nitrates, which are a danger for both human health and the environment. 32 of the abandoned wells showed nitrate levels exceeding water quality standards. Additionally, several wells contain toxic metals.

Unfortunately, the problems with these wells started long ago. As Dr. Alon Tal notes in his book Pollution in a Promised Land, "it was not just overpumping and salinity that forced Tel Aviv to close its wells during the early 1950s. The city's ubiquitous septic tanks leaked into the wellheads…[and] when Tel Aviv's wells became too salty for drinking in the mid-1950s, it was a harbinger of things to come."

These problems started long ago. They are symptoms of Israel's water woes. An increasingly burdened distribution system, rampant sewage leaks, and agricultural runoff have been part of the country's water narrative for decades.

And the crisis is not limited to the Tel Aviv area. Seawater intrusion has reached epidemic levels in the south of Israel. Mekorot, the National Water Company, is developing a plan to restore aquifers near Sderot.

The proposal involves building two brackish groundwater desalination plants at a cost of $150 million. These facilities will eventually produce thousands of cubic meters of fresh water that will be pumped to towns throughout the country. And the added benefit will be to ease seawater pressure on the aquifer. Moreover, brackish groundwater desalination has fewer impacts on the environment than other types of desalination.

Prof. Dan Zaslavsky of the Technion University has said that desalination's ability to prevent seawater intrusion makes its development a necessity. He argues that in the past, when experts considered the economics of desalination, they did not factor in the costs of remediating aquifers in the absence of desalination.

But what about the perchlorate, toxic metals, sewage and agricultural runoff? Certainly Mr. Zaslavsky or others can make a convincing argument for instituting controls on those contaminants before they reach our aquifers. Because once they are in the water, only a prohibitively expensive remediation project will get them out.

"Tel Aviv Water Wells Polluted from Contamination", 07/02/2012, online at: http://www.greenprophet.com/2012/02/tel-aviv-wells-abandoned/

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❖ The 'Water Occupation' Of Palestine – OpEd

There are few crimes more despicable then stealing your neighbor's water, and polluting what's left, then watching him and his children suffer thirst, disease and ruin.

Most of us would want nothing to do with the perpetrators of such evil.

British Water describes itself as the voice of the water industry. It talks about best practice and corporate responsibility, and lobbies governments and regulators on behalf of its members. No doubt it does a good job.

It also has international ambitions including in the Middle East. So presumably it knows what's going on water-wise in the Holy Land.

British Water should know, for example, that the 400-miles long structure known worldwide as Israel's Apartheid Wall bites deep into the Palestinian West Bank dividing and isolating communities and stealing their lands and water.

If the Wall was simply for security, as Israel claims, it would have been built along the internationally-recognized 1949 Armistice 'Green Line', although not even this is an official border. The Wall's purpose is plainly to annex plum Palestinian land and water resources for illegal Israeli settlements, and to that end it closely follows the line of the Western Aquifer.

In 2004 the International Court of Justice at The Hague ruled that the construction of the Wall is "contrary to international law" and Israel must dismantle it and make reparation for damage caused. The ICJ also ruled that "all States are under an obligation not to recognize the illegal situation resulting from the construction of the wall and not to render aid or assistance in maintaining the situation created by such construction".

But the Wall marches on, aided by American tax dollars and America's protective veto, so that Israel can wield complete control over the water resources it sees as necessary to the regime's present and future needs. This makes the Palestinians, who sit on top of enough water to be self-sufficient, entirely dependent on Israel for God's life-giver. Israel also consumes most of the water from the Jordan River despite only 3% of the river falling within its pre-1967 borders. Palestinians now have no access to it whatsoever due to Israeli closures.

Most of the Coastal Aquifer, on which Gaza's inhabitants rely for water, is contaminated by sewage and nitrates, and is unfit for human consumption. Children particularly are at great risk .The aquifer is depleted and in danger of collapse. The damage could take generations to reverse, say experts.

During Israel's deadly assault on Gaza (Operation Cast Lead) in 2008/9 over 30 km of water networks were damaged or destroyed in addition to 11 wells. A UN Fact Finding Mission (the Goldstone report) considered the destruction "deliberate and systematic". Proper repairs have been impossible these last 3 years because Israel blocks the import of spare parts.

Buying Water

"Thirsting for Justice" is an aptly-named campaign by the Emergency Water Sanitation and Hygiene group (EWASH http://www.ewash.org/en/), a coalition of 30 Palestinian and European humanitarian organisations, including Oxfam. It calls on European governments to put pressure on Israel to respect international law and the Palestinians' basic rights to water and sanitation.

Under the warped arrangements of the Interim Agreement on the West Bank and the Gaza Strip (1995) Palestinians are only allowed to abstract 20 percent of the "estimated potential" of the Mountain aquifer beneath the West Bank. Israel not only takes the balance (80 percent) but overdraws its sustainable yield often by more than 50 percent. A Joint Water Committee (JWC) was set up to implement the Agreement but Israel was given veto power and the final say on decisions. As a result a number of essential projects for Palestinians have been denied or delayed. To make up for part of the supply shortfall, Palestinians are forced to buy water from the Israeli national water company Mekorot, some of which is extracted from wells within the Palestinian West Bank. In other words they are having to buy their own water, and at inflated prices.

Oxfam, which is very active on the ground in Gaza, confirms that 90-95 percent of water from Gaza's only source, the Coastal Aquifer, is undrinkable. At the current rate the aquifer will be unusable by 2016 and the damage irreversible by 2020.

Gaza residents are restricted to an average of 91 litres of water per day compared to 280 litres used by Israelis. 100-150 litres a day are required meet health needs, says the World Health Organization. Marginalized Palestinian communities in the West Bank survive on less than 20 litres per capita per day, the minimum amount recommended by the WHO to sustain life in an emergency.

Palestinians in Gaza and the West Bank are said to have full legal rights to nearly 750 million cubic metres of water but they have to make do with a trickle, or go without, while Israelis fill their swimming pools, sprinkle their lawns and wash their cars. In Bethlehem's Aida refugee camp the water is turned off for days. When the street taps come on again, usually for a few hours, there's a desperate scramble to refill domestic tanks and other containers before the next cut.

Water an Apartheid Weapon

The Israeli newspaper Haaretz last month reported on the French parliament's Foreign Affairs Committee findings on the geopolitical impact of water in confrontation zones like Israel-Palestine.

According to the report water has become "a weapon serving the new apartheid… Some 450,000 Israeli settlers on the West Bank use more water than the 2.3 million Palestinians that live there. In times of drought, in contravention of international law, the [illegal] settlers get priority for water".

Israel is waging a "water occupation" against the Palestinians, says the report accusing the Israelis of "systematically destroying wells that were dug by Palestinians on the West Bank" as well as deliberately bombing reservoirs in the Gaza Strip in 2008-09. Furthermore "many water purification facilities planned by the Palestinian Water Ministry are being blocked by the Israeli administration."

Head of the Palestinian Water Authority, Dr Shaddad Attili, observed: "Palestinians need to be able to access and control our rightful share of water in accordance with international law. The Oslo Accords did not achieve this… Without water, and without ensuring Palestinian water rights, there can be no viable or sovereign Palestinian state."

And not content with robbing the Palestinians of their water, the Israelis are in the habit of flooding Palestinian fields and villages with untreated sewage from their hilltop settlements.

Under the Radar

Against this background British Water has decided to co-operate with MATIMOP, an Israeli government agency that has been ordered to enter into international agreements and "aggressively expand opportunities for Israel's industry".

Always eager to oblige, the UK Trade & Investment Department's briefing on Environment Opportunities in Israel contains this advice: "Israeli companies are keen to form alliances with companies abroad, and this is where the UK can benefit. In addition, growing development and marketing costs compel Israeli environmental companies to seek co-operation with foreign partners….

"The UK are world leaders in many aspects of the environment and so the UK and Israel complement each other and have much to offer each other in this sector. Teaming up with Israeli environment companies will give UK companies access to innovation and entrepreneurial spirit. UK companies can also benefit by providing their experience in marketing and management for Israeli companies."

So British Water signed a Memorandum of Understanding with MATIMOP on 21 December, so close to the Christmas holidays that it went unnoticed here. The event was not even recorded on British Water's website but it was proudly featured on the Embassy of Israel site and treated by the Israeli press as a triumph.

MATIMOP calls it "a strategic co-operation agreement". Its Executive Director, Israel Shamay, said: "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."

British Water agreed the text for an announcement by the Embassy of Israel but didn't release it themselves, apparently happy for Tel Aviv's propaganda boys to take care of it. In the press release MATIMOP says: "Israel has been coping with water scarcity since its founding." Yes, coping my thieving.

The Palestinians have been subjected to the longest and most brutal military occupation in modern times and are held prisoner within the fragmented remnants of their own country, unable to develop its resources or travel freely within it to find work, attend university, visit family, or worship at their

holy places in Jerusalem. Is helping Israel to become a water superpower really the right thing for British Water to be doing?

Question: "EU agreements require Israel to show "respect for human rights and democratic principles" and provide for the agreement to be suspended otherwise. Does the MATIMOP agreement include similar good behaviour conditions?"

British Water: "The agreement with MATIMOP is a Memorandum of Understanding. Both parties are professional organisations with admirable aims and objectives."

Question: "British Water will be aware that Israel illegally occupies its neighbour Palestine and has seized control of its water resources. The path of Israel's 400-mile Separation Wall closely follows the line of the Western Aquifer and encloses key supplies. In 2004 the International Court of Justice ruled that the construction of the Wall in the Occupied Territories, including East Jerusalem, is 'contrary to international law' and 'all States are under an obligation not to recognize the illegal situation resulting from the construction of the wall and not to render aid or assistance in maintaining the situation created by such construction'. In the circumstances, should ethically-minded British companies allow themselves to become embroiled?"

British Water: "I'm not sure what you mean by 'embroiled' or 'ethically-minded'. The aim of the MoU is for businesses to work together for the good of the global water industry… It's no part of our role to exchange philosophical concepts with you. The arrangement with MATIMOP is one of commercial intent for the benefit of UK and Israeli companies…"

Question: "Is British Water being evenhanded in this Holy Land confrontation zone? Are you offering help to the Palestinian Water Authority? Have you responded positively to the sea-water desalination project for Gaza and other programmes for West Bank towns and villages?"

British Water: "We notify our member companies of potential commercial opportunities wherever they may arise, leaving them – as they're best-qualified – to weigh the relative attractiveness of different markets."

David Neil-Gallacher is British Water's CEO and also Director-General of Aqua Europa, which does the same sort of job on a Europe-wide basis. This was his parting shot:

"Regions of tension are bound to engender strong views and conflicting principles, and it's usually notoriously difficult to discern unequivocal moral ascendancy on the part of any of those involved… In my dealings with our companies active in the region, however, I've never seen any evidence that they are lacking in principle or moral locus… British Water's perspective has to be a commercial one… We do our best to conduct our activities in the best interests of our part of British industry and strictly within the requirements of the law…"

How will British Water avoid complicity with Israel's endless oppression of the Palestinians and the deadly strife with its other neighbours in the region? Perhaps Mr Neil-Gallacher should ask one of his own member companies, Veolia, what can happen if caught up in Israeli projects that violate international law. Veolia dumps Israeli waste on Palestinian land and is helping to build and run a

tramway connecting Jerusalem with illegal Israeli settlements. The company must rue the day it 'crossed the line' to fall foul of those nice folks at BDS (the Boycott-Divestment-Sanctions movement).

"The 'Water Occupation' Of Palestine – OpEd", 10/02/2012, online at: http://www.eurasiareview.com/10022012-the-water-occupation-of-palestine-oped/

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❖ World Bank lends Lebanon $200 million for water project

BEIRUT: The Lebanese government signed Wednesday a $200 million World Bank loan to finance a $370 million project aiming to supply Beirut with water from the Awali River.

The step had been delayed from December 2010, when the World Bank board of directors approved the loan for the project, which the bank calls the Greater Beirut Water Supply Project.

The government was due to sign the agreement months ago after the Cabinet finally approved it last October.

"The project will provide 40 million cubic meters from the Awali River and will provide areas in Beirut lying bellow 300 meters all the way from Khalde to Nahr al-Mot. We are talking about providing [better access to] water for up to 1.6 million people," Energy and Water Minister Gebran Bassil said during the signing ceremony in Beirut.

Lebanon representative of the World Bank Hadi al-Arabi sounded optimistic about the prospects of the project. He said it would vitalize the country's economy, in need of some 10,000 jobs expected to be created by the project, within the next 3 to 4 years.

"I call on the Lebanese Parliament to quickly ratify [the decree authorizing the government to take the loan] to allow the World Bank to start financing the project and launch its implementation," Arabi added.

Bassil said the project would rehabilitate the capital's current water infrastructure all the way from "the source to the households."

"The project consists of two main segments. The first will transport water through a canal from the Awali River to Khalde. The second includes building distribution networks and water tanks," he said, adding: "16 medium water tanks, two big water reservoirs and 200 km of water networks will be built."

But Bassil highlighted that the project would fall short of catering for the capital's full demand for water unless it was coupled with the construction of more dams.

"We hope the project is completed soon but this alone is not sufficient to cover all the water needs of the city. It is fundamental that this step would be followed by the completion of the Bassari dam which can provide up to 130 million cubic meters of water," Bassil said adding "otherwise we would have invested in infrastructure that we will not utilize."

The World Bank said earlier deliberations toward realizing the project had started 15 years ago, but had faced numerous obstacles.

According to the World Bank, the project is designed to strengthen the capacity of the Beirut and Mount Lebanon Water Establishment, which is the utility responsible for the operation of the urban water supply in the project area.

"World Bank lends Lebanon $200 million for water Project", 09/02/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=4290

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❖ Green Economy and Climate Change

Keynote speech delivered by Dr. Andrew Steer, Special Envoy of the World Bank on Climate Change, at the opening ceremony of the annual conference of the Arab Forum of Environment and Development (AFED), on 27 October 2011 in Beirut

It is a great joy for me to be here. It is hard to imagine a more important conference on a more important subject at a more important time than this. And I commend you Adnan Badran for your Chairmanship. Commend you Najib Saab for your leadership of this great organization AFED. I have seen many environmental organizations in my time and I think the combination that you bring is absolutely best practice. You bring a sharp pencil of analysis, together with the right mix of people: private sector, government. academic, civil society, financiers; because we need all hands on deck if we are going to solve this problem. Let me say what an honor it is also to share this platform with Jose Maria Figueres who has demonstrated that leadership matters in this field, and an entire nation can change its development path and indeed can develop an international reputation which leads to a positive virtuous cycle with the right kind of leadership. Let me also say how nice it is to see Mohammed Al-Ashry my old friend and vice chair of AFED. Mohammed used to be my boss 20 years ago and so has taught me a great deal of what I know. So if you disagree with what I say blame him.

The title of this conference is "Green Economy in a Changing Arab World", which is also the title of the annual report of the Arab Forum for Environment and Development (AFED). What a great title that is, and I encourage everybody here to read this document. I've read almost all of it and I could hardly put it down on the plane. It's not something that you can just be casual about. This requires you to think hard, it's worth several hours of hard work. Let's just disentangle the title of the conference.

First "a changing Arab world". I'm not going to talk about the changing political context in the Arab world because you know much more about that than I do. Suffice it to say that with openness comes opportunities. We have discovered that the voice of citizens, and often the voice of female citizens, has been a game changer in many countries as they have improved their environmental management. Let me instead say a word about the changing context within which the Arab world operates.

Climate Change

Last year in Cancun the world agreed to try to limit the increase in average temperatures to 2 degrees. And that was very good. Ninety countries have now informally given their statements of intent as to what they plan to do with their greenhouse gas emissions by 2020. And if you go to the UNFCCC website, you will find 90 countries stating what they plan to do. And that's never happened before. It's great progress.

The problem is, if you add all of those up, and you go to the very most optimistic end of the range, you'll find that we're nowhere close to getting towards a 2 degree Celsius world. We are heading for an increase in global temperatures, of 3-5 degrees and that is very serious especially for the Arab world. 2010 tied with 2005 for the hottest year on record in the Arab world. Nineteen countries in the

world had record temperatures last year. Five of them were in the Arab world: Kuwait, Iraq, both over 53 degrees; Saudi Arabia, Qatar, Sudan. It's not only temperature of course, sea level rise is another challenge. Did you know that a half a meter rise of sea level could flood 30% of Alexandria, in Egypt causing displacement of 1.5 million people and the loss of 200,000 work places, and that's half a meter! Experts expect today that sea level rise will be over 1 meter. We have to redo our calculations. And of course extreme weather events are becoming more common, and shifts in the hydrological cycle. Last year's AFED report on water documents this quite brilliantly. More than 45 million people in the Arab world lack access to clean water and sanitation and that's going to be more difficult to achieve. Food security is obviously a major threat in many parts of the world, but Arab countries have a special challenge because they're so dependent on imports. Agricultural yields in Arab countries in the absence of major efforts for adaptation will decline. Estimates vary, but some estimates suggest that as much as a 50% drop in some wheat yields could occur by 2050 in Arab countries.

In addition, food prices globally will likely rise, because of the astonishing arithmetic. Population will rise globally by almost 50% to 9-10 billion by 2050. Food production, because of rising incomes, will need to rise by 70% by 2050, at a time when average global yields in the absence of real action will be falling, because of climate change, by perhaps something like 10-15%. In Africa food consumption will need to triple. In the Arab world, as you know, population may double to as much as 700 million. This is a challenge of startling proportions.

During this conference, the World Bank will be having a discussion of a report that we have prepared and is close to finalizing but we want to have discussions on it first, on the issue of the need for adaptation. Now within the Arab world there are some signs of great hope even in countries experiencing challenges. For example, Yemen, has submitted this week a plan for adaptation to a programme that we manage called The Pilot Programme for Climate Resilience, which is a 1 billion dollar programme for adaptation. Yemen is one of the first countries to come with a very serious plan of integrating the issue of adaptation throughout its entire planning process. So there are some very encouraging signs.

Now, with this great challenge, can we expect a breakthrough in global negotiations, so that the problem can be solved? Unfortunately, the current context is not conducive to that. Economic conditions in Western countries are such that it's unlikely that the sums of money that will be required will come forward quickly, and at the same time the global politics of climate change suggest that it's unlikely to make a breakthrough. We are all going next month to Durban and working very hard to try and make progress, but we need to be realistic. There are two large political issues hanging over that event, both of which will be difficult to solve. First, what is the shape of the future regime for climate change? What's the future of the Kyoto protocol? What sort of legal form? How do we anchor the commitments that are out there legally? It's striking that almost nobody is talking about the need for deeper commitments to cut emissions in Durban. It's a matter of how do we agree to make them slightly more legally binding than they are already. The second big issue is climate finance. We hope very much a green fund will be launched at Durban. But last week in Cape Town, when we had the final meeting of the design committee, we unfortunately couldn't get a unanimous international agreement from the 40 members of the committee to make a unanimous recommendation to Durban. So, the chances are that it will be difficult to achieve what we need to achieve in Durban. Now there will be some positive deliverables that could be very helpful to Arab

countries: we hope to reach agreement on new technology centers around the world, we hope to make progress on adaptation, we hope that agriculture will be firmly and for the first time embedded in the way the UNFCCC does its business because, sadly, agriculture has been left out.

Green Economy

Let's come to the subject of the green economy, or green growth. What is it? What was wrong with the old notion of sustainable development? People seem to be a little confused nowadays. What is it that we really believe in? I believe the green economy and green growth do mark a step forward from what we understood at the time of the original Rio. Remember in 1992 the world actually was not growing. Africa had just had a decade of negative real growth. Eastern Europe, in the form of Soviet Union, was declining in its economy. And a lot of people actually believed the economy and the environment were enemies. We've come a long way since that time in our understanding. The world is more than twice as large economically as it was at the time of the Rio meeting. Real per capita incomes in developing countries are over 70% higher.

We've also learned that actually a bad environment hurts the economy. We've done lots of assessments in Arab countries, ranging from Tunisia where environmental damage accounts for about 2.1% of GDP, way up to much much higher numbers. And as AFED report said, the average is possibly of as high as 5% in Arab countries. But we've also learned that actually smart environmental policies can lead to higher investment, higher innovation and more jobs. And that is a very important conclusion, because jobs are the driver of why so many countries today are interested in green growth and the green economy. More than 150 developing countries have said they're interested in moving forward on ideas of the green economy, but they don't really understand it, they are seeking help. Go to Jakarta and talk to the minister of planning, she will say I'm interested in jobs and if you can generate jobs, count me in on a green economy. Talk to the minister of finance of South Africa as I did last week, he said I have three priorities and that's why I'm interested in the green economy: jobs, jobs and jobs. Go to the United States, 9.2% unemployment. And come especially of course to the Arab world where nearly 15% are looking for jobs and as high as 27% among the youth. So there is huge interest.

We are now working in 130 countries on climate change issues, we never would have dreamt of that 10 years ago. But there's a lot we don't know. We're, if you like, learning to build the racing car as we're driving around the track. We've just established something called a "Green Growth Knowledge Platform", and I'd love it if we could do this jointly with AFED. We already got a number of organizations working with us simply to make sure that we learn from each other. We're also bringing out a major report for Rio on green growth, trying to disentangle what it really means. We're looking at the issue of whether really there are more jobs out there? We're looking at the numbers in renewable energy: is it more job intensive than traditional energy? Yes, it is. Energy efficiency is quite intensive in jobs, as much as recycling. There are a lot of jobs there. And so on and so forth.

What I like about AFED's report is that it doesn't just stay in the field of theory, it actually comes down to earth and asks the Monday morning question: What about agriculture? What happens in water supply? What happens in the energy industry? In manufacturing, in transport, in city planning, in buildings, in solid waste, in tourism and so on? Now by necessity, the Arab countries are going to

need to innovate. And the real exciting thing is that is happening. This document here, the AFED report, shows in a number of places where that's happening. Let me just give you two that we're working on, we find that it's very exciting the rest of the world is watching. One on city management, for example, go to Amman today. Amman, Jordan is the first and only city in the world that has a city-wide plan for receiving carbon finance, measuring greenhouse emissions at the city level. So it has a plan that includes waste landfills, recycling, transportation, bus rapid transit, street lighting, CFLs, an urban strategy which includes building codes, and the important thing is that it adds that all together, and says look, watch us as a unit, and support us as we as a city go forward. And this was a big battle we and the city of Amman and others fought hard to get the rules of carbon markets changed. So this is an example of where the Arab world has become a real leader.

Arab Leadership in Renewable Energy

The area in which the Arab world will become, I believe, a dominant leader will be in renewable energy, and in particular the technology that uses thermal energy. What we're seeing now is that throughout North Africa and the Middle East estimates have been done of the potential, and money is beginning to be put in. Under the clean technology fund which the World Bank together with the African Development Bank are managing in that region, we are just putting in 750 million dollars to help 5 Arab countries invest in over a gegawatt of renewable energy. And that in turn will be part of a 5 gegawatt plan, which in turn will make North Africa and the Arab world a real leader. This month we will be approving the first project, which will be in Morocco, and Morocco currently imports 97% of its energy sources. That project in and on itself would not be justifiable. It is only justifiable because it will be part of a programme that will pull down costs. Costs at the moment are not economical. But with the right policies bringing together ministries of finance, ministries of technology and trade, even foreign ministries because the Arab world will become a big exporter in net terms to Europe of renewable energy, bringing those all together one will find that this will be one of the most important strategic investments that will ever be made, and the Arab world will become known throughout the world potentially as a great supplier of renewable energy, just as it has been a supplier of traditional energy.

Historical Turning Point

Let me just make two concluding remarks. It is extremely important to seize opportunities when they arise, because they may not come again, at least for a long time. Copenhagen taught us that. We came so close but we failed, and we may have lost a decade as a result. We must be looking for opportunities in those countries where there is leadership, in those sectors where there's leadership, and we must invest in it and seize it, and bring together all of the persuasion and expertise that we can, and move on it because things happen very quickly. Urban historians tell us that the United States chose its suburban planning system and changed as a nation in just 14 years. Between 1956 and 1970. Imagine if they'd followed a different path during that brief window of 14 years. France changed its entire energy strategy in just 7 years, between 1980 and 1987, when 42 nuclear plants were built out of the 58 that exist today in France, and the entire mix of energy was altered in just 7 years. China's housing will double between 2000 and 2015. What's the point? The point is there are such historical turning points and they must be seized, because the kinds of houses that China chooses to build will have a huge impact on the future, not only of China, but the future of the world, and we must seize opportunities as we see them.

And, finally, let me make a point that I made at the beginning. We need to bring all hands on deck. We have seen in the environmental movements that sometimes when success happens that the environmentalists, the environmental ministries, almost don't want the others to join in, they're nervous about ministries of finance and planning and agriculture taking over, because after all isn't this the territory that we have been fighting for. One sees that at negotiations all the time. Negotiators could achieve so much more if they could bring other ministries and powerful ministries. And what we find is that every 6 months we host a meeting of finance ministers and we have to bring them the story of climate change, why? Because it is very important we get everybody involved. What's the point here? An organization like AFED, and friends of AFED, people like the World Bank, have got to be smart politically. We've got to bring all of the elements together so that the whole adds up to much more than the sum of the parts.

Let me commit to you the full support of the World Bank group in your vital journey that you're on. I bring you the greetings of Bob Zoellick the president of the World Bank, also our new Vice President for Middle East, North Africa and Arab countries Inger Andersen, who used to lead the entire sustainable development programme at the World Bank and believes passionately in this issue. And let me commit to you our support as we go forward, and also to wish you the best wishes as we together struggle with these fascinating and crucial issues.

"Green Economy and Climate Change", Al-Bia Wal-Tanmia, 09/02/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=4299

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❖ A Green Economy for Arab Future

Dr. Mohamed El-Ashry is vice-chairman of AFED board of trustees and former CEO of the Global Environment Facility (GEF)

The conventional wisdom that "markets know best" has been undermined by reality, and skepticism is growing about continuing a business-as-usual strategy where GDP growth is the overwhelming priority. Economic growth in the 20th Century was based on amassing physical, financial, and human capital at the expense of natural capital and social risks. Recently there has been serious efforts and discussions around the world about green economy which entail changing development paradigms and reshaping economies to deliver improved human well-being and social equity.

Green economy can simply be defined as economy that can generate economic growth and improvements in people's lives without harming the environment. Some, however, seem to fear that green economy only addresses two of the three pillars of sustainable development. We certainly need to pay increased attention to setting our economies on a green path but we should not lose focus on the social dimensions of sustainable development. Social equity and investment in people's health and education are crucial to building more resilient and sustainable societies.

As the AFED report argues, green economy is characterized by attention to the vast potential to maximize resource productivity, especially energy and water, and reduce waste generation. In a green economy, investments are directed to the sustainable management of natural resources to maximize their economic and environmental productivity, and their capacity to create jobs and support the poor. In a green economy, participatory governance of natural resources is practiced with representation of key stakeholders, particularly those groups with weak institutional power.

Public policy will play a key role in enabling green economy goals and objectives. Making progress towards an Arab green economy will require a fundamental realignment of current public policies. In this regard, environmental and social goals must be accorded a level of priority similar to that for economic goals. The new approach should ensure that short-term economic benefits are not pursued at the expense of long-term social and environmental goals.

Although Arab countries have experienced rapid rates of economic growth over the past decade, those at the bottom of the pyramid have not shared in the benefits of the economic boon. Arab economies continue to be structurally weak. This is attributed to the lack of economic diversification, dependency on low value-added commodity products, and vulnerability to global market volatility. In that regard, the AFED report states: poverty remains persistent, unemployment is alarmingly high, water and food insecurity are a threat, and environmental degradation of the region's natural resources is rampant.

These shortfalls undermine human development which is the stated priority of governments in the region. Due to high rates of population growth, fast industrialization, and urbanization, the pressures on Arab economies will mount as the demand for food, water, housing, electricity, municipal services, and transport escalates. Addressing these short falls will require a fundamental change in

Arab economic development models and reforms of public policies to stimulate shifts in production, consumption, and investment patterns.

In the context of green economy, I believe that several transitions essential to the region's sustainable development are needed. I would single out the following four:
1. An energy transition where energy is produced cleanly and used efficiently without aggravating regional and global environmental problems;
2. An economic transition to sustainable growth and a broader sharing of its benefits;
3. A resource transition to reliance on nature's "income" and not depletion of its "capital;" and
4. A demographic transition to a stable population in the region.

Diligent and concerted efforts by governments, corporations, and professionals will be necessary to promote these and other transitions to a green economy. The AFED report describes clearly what is at stake for the region and its people, and calls attention to the economic, environmental, social, and political benefits of action. Such action will require leadership at the highest levels of government and business. Great visions and speeches alone are not what really matters the most. Vision without plans, and plans without action do not achieve much.

As earlier AFED reports have shown, the slow progress in improving environmental quality and pursuing sustainable development in the majority of the Arab countries is rooted in policy and institutional failures coupled with lack of public awareness and a poor knowledge base.

The need for building knowledge, sharing knowledge, and acting upon its implications is a key priority for all countries. Arab countries, as a group, lag other world regions in building a knowledge society. In the areas of education and training, scientific research, technological innovation, and knowledge driven business, the region falls short of countries at similar levels of development. Other regions continue to pull ahead. Yet, the Arab region must create, according to the World Bank, more than 80 million jobs over the next 15 years just to keep pace with population growth, let alone address chronic underdevelopment. To compete effectively in the global economy, and head off major social disruptions, the region must strengthen its science and technology capability and enhance the knowledge and creative potential of its people. In this regard, the business community has an important role to play as a key component of its social responsibility.

Finally, Arab economies today face a number of challenges and a choice between two futures. The brown economy future promises short-term growth in GDP while continuing to diminish the stocks of social and environmental capital. The green economy future on the other hand offers the prospect of stimulating economic development while ensuring improved social and environmental conditions. The AFED report lays the arguments for why Arab governments should want to invest in a green economy future. All things being equal, a green economy future offers the conditions for social stability, environmental sustainability, and economic prosperity.

"A Green Economy for Arab Future", 02/09/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=4301

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❖ GCC States "to invest $100bn in water sector within five years

GCC states would invest close to $100bn for infrastructure development and explore new ways to ensure uninterrupted supply of drinking water to its residents in the next five years, Qatar's Minister of Energy and Industry HE Dr Mohamed Saleh al-Sada said yesterday.

The Qatar minister said this while delivering the keynote address at the opening of the Power-Gen Middle East Conference at the Qatar National Convention Centre. The exhibition and conference is being held in Qatar for the second time.

Calling upon entrepreneurs to avail of the investment opportunities in strengthening the region's utilities sector, Dr al-Sada said since the region doesn't have any natural source of fresh water supply, the member states have to bear huge costs in the desalination of water.

"So there is immense scope for investing in cost effective but high quality technologies which would reduce generation costs along with ensuring uninterrupted supply of fresh water for the region's residents."

Even while exploring the scope of solar energy and nuclear power in Qatar, more initiatives would continue to be made in the desalination segment in the coming years, said the minister.

Al-Sada also disclosed that the country would seriously explore the effective treatment of waste water as part of its efforts to ensure adequate drinking water to its people in the coming years.

Acknowledging that the region faced mounting challenges in the water and power sectors, the minister however said each member state is committed to ensure fair and uninterrupted supply of water and electricity to its populace through the adoption of the latest technologies.

"The consumption of electricity at the global level has doubled since 1980 and at the prevailing rate there is every reason to believe the consumption would double from the present levels by 2030. The growth in consumption levels could be even higher in countries such as Qatar," added Dr al-Sada.

The minister said investments worth at least $14tn needs to made in water and power sectors to support a global economy worth $130tn by 2030. "Along with this, nations need to cope with issues such as the types of power plants to meet their requirements, fuel of choice and physical safety of mankind."

While lauding the reforms made in the power and water sectors in the country in the last two decades, which saw the setting up of a number of new plants and capacity strengthening of the earlier plants, the minister said such initiatives came though the vision and farsightedness of HH the Emir Sheikh Hamad bin Khalifa al-Thani, which has left Qatar with the largest power reserve margin in the whole of the region. It could thus effectively supply power to its GCC neighbours in the event of an emergency.

However, Qatar would not rest on its achievements and would continue to make more investments in the coming years to meet its own increasing industrial and other requirements through more power generation and water desalination, said al-Sada.

"All this shows there are unlimited opportunities for investors in the water and power

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sectors," he added.

Later, the minister, accompanied by officials made an inspection tour of the exhibition being held along with the conference. Representatives from more than 160 companies from 23 countries are taking part in the event and many leading firms have set up their pavilion at the exhibition.

"GCC States "to invest $100bn in water sector within five years", 07/02/2012, online at: http://www.menafn.com/qn_news_story_s.asp?storyid=1093480871

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❖ POWER-GEN Middle East and WaterWorld Middle East 2012 launches with keynote ceremony

OWER-GEN Middle East and WaterWorld Middle East 2012 began in style with the Opening Keynote Ceremony attended by dignitaries, delegates and the media. The Ceremony was led by H.E. Dr. Mohammed bin Saleh Al-Sada, Minister of Energy and Industry, with further speeches given by H.E. Eng. Essa Bin Hilal Al-Kuwari, President of Qatar General Electricity and Water Corporation "KAHRAMAA", Mr Fahad Hamad Al Mohannadi, General Manager, Qatar Electricity & Water Company (QEWC), Mr Timm Dower, WWME Event Director, PenWell Corporation and Mr Glenn Ensor, Director of Events, PenWell Corporation. Following the speeches, H.E. Dr Al-Sada conducted an official Ribbon Cutting Ceremony and opened the exhibition floor.

Organised by PennWell in partnership with KAHRAMAA and QEWC as Co-Host and Platinum Sponsor, POWER-GEN Middle East and WaterWorld Middle East 2012 hosts an impressive line up of more than 120 eminent international chairs and speakers and nearly 140 exhibitors from 23 countries. Regional and international perspectives about topical power and water issues and opportunities for future growth and development will be presented along with new and innovative solutions using pioneering technology to overcome the financial, resource and environmental challenges facing today's power and water industry.

H.E. Dr. Mohammed bin Saleh Al-Sada, Minister of Energy and Industry in his keynote speech said: "We are happy to host POWER-GEN Middle East and WaterWorld Middle East for the second time. It is a testimony of confidence the organizers have in the State of Qatar as a place of choice for holding such prominent events. This status was not achieved in a day. It is the result of the focused, unwavering dedication to the all-round development of Qatar, achieved through hard work, inspired and supported by the wise vision of His Highness Sheikh Hamad Bin Khalifa Al-Thani, The Emir of Qatar."

"We will continue to invest in the coming decade, in power generation and water desalination in addition to expanding transmission and distribution of electricity and water networks. We are humbled by the endowment of natural resources available to us for the development of energy industries, including power generation. This will help us achieve sustainable development while not compromising on the protection of our environment and preserving it for future generations. In the context of the GCC's consumption of water, this aspect is of paramount importance. With no fresh natural water supplies, this region is dependent on the energy-intensive desalination process."

H.E. Eng. Essa Bin Hilal Al-Kuwari, President of KAHRAMAA, in his keynote speech said: "In the last five years, KAHRAMAA has spent more than 60 billion Qatari Riyals on its capital projects for the upgrade and expansion of existing electricity and water networks. KAHRAMAA will continue this trend by investing in transmission and distribution infrastructure capital projects in the coming five years."

Mr Fahad Hamad Al Mohannadi, General Manager, QEWC in his keynote speech said: "Here in the Middle East, as well as the need for electricity to power our homes, offices, industries and our infrastructures, we also need energy to produce potable water, which means that our water and electricity industries are closely integrated. The organizer PennWell has recognized this by establishing a parallel conference and exhibition for the water industry - WaterWorld Middle East. These two events combine to provide a unique concentration of expertise and technologies across these two strategically important industry sectors."

The POWER-GEN Middle East and WaterWorld Middle East 2012 conference and exhibition is located at the Qatar National Convention Centre from 6-8 February. Admission to the exhibition is free to all visitors of the event.

"POWER-GEN Middle East and WaterWorld Middle East 2012 launches with keynote ceremony", 07/02/2012, online at: http://www.zawya.com/story.cfm/sidZAWYA20120207114529

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❖ FCC wins water management contract in Abu Dhabi

A consortium led by aqualia (FCC's water management subsidiary) and local company Mace has been awarded a contract to manage the sewage and water treatment system in Abu Dhabi. The seven-year contract, worth 76.3m euro was awarded by Abu Dhabi Sewerage Services Company.

This is the first water management contract to go to a Spanish company in the United Arab Emirates. It includes the operation and maintenance of more than 2,400 km of sewers, 68 wastewater-pumping stations and 19 wastewater treatment plants in the city of Al Ain (eastern Abu Dhabi, on the border with Oman) and the surrounding areas.

This contract strengthens FCC's presence (through aqualia) in the Middle East, which is a strategic area for the company's global expansion. aqualia has been operating since 2011 in Saudi Arabia, where it is implementing an innovative project to search for and repair leaks in Riyadh's water network in order to increase the network's efficiency.

Also in 2011, FCC (through its construction subsidiary) signed another strategic alliance with the company Abu Dhabi Commodore to bid jointly for infrastructure development projects in the UAE. Separately, in 2008, FCC's Austrian subsidiary, Alpine completed the construction of the Dubai Cricket Stadium.

In January 2011, Alpine won a $111m contract for the Borouge 3 expansion project in Ruwais, Abu Dhabi.

"FCC wins water management contract in Abu Dhabi", 09/02/2012, online at: **http://www.ameinfo.com/289643.html**

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❖ Food Security in Arab World Needs Attention, Says IFPRI

Poverty and income inequality rates in the Arab world are higher than official numbers have suggested, says International Food Policy Research Institute's (IFPRI) new report, calling for actions to tackle the food and nutrition insecurity in the region.

Food security and poverty are particularly closely linked in Arab countries due to high vulnerability to food-related external shocks, including food price volatility, natural disasters, increasing water scarcity, and conflicts.

The report entitled: "Beyond the Arab Awakening: Policies and Investments for Poverty Reduction and Food Security," used innovative research methods and diverse sources of data to show a more realistic picture of the food security situation in the region and to prioritize policy areas for reducing poverty.

Food security poses a serious challenge for the Arab region due to high dependency on food imports exacerbated by global price volatility, diminished capacity for generating foreign exchange to pay for imported food, rising food demand driven by continued high population growth, and limited potential for agricultural growth due to severe water constraints and water resource management challenges.

Officially, less than 20 percent of the population in the Arab region lives under the $2/day poverty line, but income-only measures can be misleading. Child under nutrition rates, an alternate and arguably more comprehensive measure of food security, are high and have not decreased with GDP growth to the same extent as other regions in the world.

In some cases, such as Egypt, undernourishment of children has increased over the past eight years. Child under nutrition is measured by the percentage of children younger than five years of age who are stunted. In the Arab region, one in five children is stunted, and the prevalence of child under nutrition in countries like Sudan, Comoros, Somalia, and Yemen is considerably higher, with rates around 40 percent or greater.

"As food security was one of the triggers of the Arab Awakening, finding policy responses to food insecurity is particularly important for policymakers in Arab countries," said Clemens Breisinger, IFPRI research fellow and lead author of the report. "Given the high levels of growing dissatisfaction of people in the region, urgent actions should be taken."

The report offers three key policy recommendations: 1) improve data and capacity for evidence-based decision-making, 2) foster growth that enhances food security, and 3) revisit the allocation and efficiency of public spending.

Improve Data, Capacity for Evidence-based Decision-making
The region's food-security progress is significantly slowed by a lack of reliable data. Poverty estimates only exist in half of the Arab countries and there is no common food security indicator in the region. The report proposes that countries should develop and improve the availability,

accessibility, and quality of data to allow for accurate, evidence-based decisions for the wellbeing of the region's economies and people.

It also suggests that existing data, such as household surveys, social indicators, national accounts, and consumer prices should be made available in a timely fashion.
Fostering economic growth is fundamental to enhance enhancing food security. Governments must encourage export-led growth to improve food security at the national level and generate foreign exchange revenues that allow food imports. Improving food security at the household level requires inclusive growth that generates income and jobs for the poor in both rural and urban areas.

Revisit Allocation, Efficiency of Public Spending
Even though governments in the Arab region spend more (as a share of GDP) on their citizens than anywhere else in the developing world, the efficiency of this spending should be assessed. "Public investments in agriculture, education, health, infrastructure, and social protection are most critical for reducing poverty and improving food security," said Shenggen Fan, IFPRI's director general.

Because education spending is much less effective at reducing poverty in the Arab region compared to the rest of the world, countries should institute education system reforms to address relevant job market needs and skill gaps.

During this time, when the level of dissatisfaction among the region's people is high and growing higher, there is an urgent need for strategic policies that address constraints to food security. Successful design and implementation of these strategies will require visionary leadership, sound laws and institutions, politicians who are accountable and listen to the voices of the people, and a civil society that is patient and accepts the tenants of democracy.

"Food Security in Arab World Needs Attention, Says IFPRI", 06/02/2012, online at:
http://www.newbusinessethiopia.com/index.php?option=com_content&view=article&id=681:food-security-in-arab-world-needs-attention-says-ifpri&catid=44:poverty-reduction&Itemid=55

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❖ Middle East injects US$180 billion into 113 new power, water, energy projects

Middle East Electricity shines spotlight on booming energy sector; UAE forges ahead with power, water, energy projects worth US$34.2 billion

Dubai, UAE, 2 February 2012: New power, water, and energy projects valued at US$180 billion are underway or at the planning stages in the Middle East, as the UAE forges ahead with 20 projects worth US$34.2 billion.

Spearheaded by the US$20 billion Nuclear Power Plant in Abu Dhabi, which began construction late in 2011, the UAE will be one of the most active markets in the power, water and energy sectors over the next two years, at a time when power demand across all GCC countries is expected to grow 8 to10 per cent annually.

Saudi Arabia holds the lion's share of investment value in the region, due to the US$100 billion King Abdullah City of Atomic and Renewable Energy, which begins construction in 2013. The Kingdom also has a further 15 projects worth nearly US$9 billion currently underway, or due to begin in 2012.

Underlining huge opportunities for energy sector manufacturers and service providers within the region and worldwide, the scale of development in the Middle East is highlighted by figures collated by market research specialist Ventures Middle East ahead of Middle East Electricity, taking place from 7-9 February at the Dubai International Convention & Exhibition Centre.

Featuring more than 1,000 exhibitors, Middle East Electricity is the world's leading energy event that focuses on power, lighting, renewable, nuclear and water sectors.

Qatar recently announced plans to build at least eight power and water facilities worth US$4.8 billion in the next three years, including the US$3 billion Qatar Facility D power project, which is slated have construction started on in 2012.

Meanwhile Bahrain has four projects currently ongoing worth US$4.2 billion; Kuwait has 17 projects valued at US$4 billion, while Oman has put aside US$2.9 billion for 13 new power, water and energy projects which will begin construction in 2012.

Anita Mathews, Middle East Electricity Exhibition Director said in the build up to the event: "According to the World Energy Council, the GCC will require 100 GW of additional power over the next 10 years to meet growing demand. The power sector will require US$50 billion worth of investments in new power generating capacity and US$20 billion in desalination.

"In response, new contractor awards in the power, water and renewable energy sectors are being announced every month in the Middle East, as seen in December last year, when six new contractor awards were announced in Kuwait, Qatar and Iraq, valued at US$1.5 billion, while in January this year, five new contractor awards worth US$130 million were announced in UAE, Kuwait, and Oman."This too is reflected in exhibitor space occupied at Middle East Electricity 2012, which has exceeded last year's occupied space by 15 per cent. We have also seen growth in exhibitor numbers and expect more than 15,000 unique visitors to attend the three-day event."

Value of power, water, energy projects in Middle East

Country	Number of projects	Project value (US$)

Saudi Arabia	16	108.9 billion
UAE	20	34.2 billion
Jordan	9	6.1 billion
Egypt	10	5.3 billion
Iraq	8	5.3 billion
Qatar	9	4.8 billion
Bahrain	4	4.2 billion
Kuwait	17	4 billion
Morocco	5	3.8 billion
Oman	13	2.9 billion
Algeria	1	500 million
Syria	1	419 million
Total	113	180.4 billion

Elsewhere in the Middle East, Jordan has nine projects predominantly in the water sector worth US$6.1 billion set to begin construction in 2012, while Morocco looks to make the most of its natural abundance of wind resources, earmarking US$3.8 billion worth of renewable energy projects over the next two years.

At the same time, Egypt and Iraq continue to move forward with power infrastructure plans as both countries commit US$5.3 billion each to new projects over the next two years.

Organised by Informa Exhibitions, Middle East Electricity is under the patronage of His Highness Sheikh Maktoum bin Mohammed bin Rashid Al Maktoum, Deputy Ruler of Dubai.

A new feature for the 37th edition of the event is the Middle East Electricity Awards, established to recognize outstanding achievements of individuals, departments, teams or organisations that have contributed to the growth and development of the energy industry in the Middle East.

Other highlights of the event include the free-to-attend technical seminars, where a selection of exhibitors will present latest innovations and products to visitors on the over the three days on the show floor.

Middle East Electricity 2012 is the partner event to Power + Water Middle East in Abu Dhabi and Africa Electricity in Johannesburg. To become an exhibitor, sponsor, or delegate, contact the Middle East Electricity team at +971 4 336 5161 or email: info@meelectricity.com

"Middle East injects US$180 billion into 113 new power, water, energy projects", 06/02/2012, online at: http://arabiangazette.com/middle-east-injects-us180-billion-113-power-water-energy-projects/

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❖ Commercial Traffic Resumes on Shatt al-Arab

Commercial traffic has resumed on the strategic Shatt al-Arab waterway after 31 years, with the official opening of a port for oil giant Shell, an Iraqi official said on Tuesday.

Part of the 200 kilometer (120 mile) long waterway forms a section of the border with Iran. An unresolved boundary dispute was a major reason cited by now-executed dictator Saddam Hussein for the 1980-88 war with Iran, which resulted in the waterway's closing.

"The Shatt al-Arab is reborn again after being closed for 31 years," Mehdi Badah Hussein, the head of the joint committee to develop Majnoon oil field, told Agence France Presse at a ceremony to open the port.

"There are other harbors on the Shatt al-Arab, but commercially, this is the first time Iraq succeeded in turning the Shatt al-Arab into a maritime passage which will help in transporting heavy equipment," Hussein said.

Dia Khalil, an Iraqi engineer and member of the joint committee, told AFP the journey up the Shatt al-Arab to the new port is about 80 kilometers (about 50 miles), and that ships will pay customs fees in Umm Qasr to the south before heading to the new harbor.

A consortium of Anglo-Dutch oil giant Shell and Malaysia's Petronas signed a contract with Iraq in January 2010 to operate the enormous Majnoon field.

"We believe this is the first jetty harbor to bring in ships that can come from all over the world back off the river with heavy equipment in 31 years," Shell Majnoon general manager Ole Myklestad told AFP.

"This is very important," Myklestad said during the ceremony, as it is the first time in decades that a commercial harbour was opened here.

"I hope that ships leaving this harbor in the future will also be carrying goods," he said.

Myklestad said the first ship arrived to the harbor on January 5.

"This is a happy day," said Khalaf Wadi, deputy manager of Iraq's Southern Oil Co, which is partnered with Shell and Petronas.

"We are officially opening the first commercial jetty in the Shatt al-Arab since the start of the war with Iran."

The port's main function is to facilitate the transportation of equipment to the massive Majnoon oil field.

Iraq's income from oil sales jumped by nearly 60 percent in 2011 on the back of higher crude prices and increased exports, according to the oil ministry.

Oil sales account for the vast majority of Iraqi government income and around two-thirds of gross domestic product. The country exported an average of 2.1 million bpd in 2011, according to Oil Minister Abdelkarim al-Luaybi.

"Commercial Traffic Resumes on Shatt al-Arab", 09/02/2012, online at: http://www.naharnet.com/stories/en/29233-commercial-traffic-resumes-on-shatt-al-arab

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❖ Zambia: Rain Water Harvesting Key to Farming

WATER is essential to all life - human, animal and vegetation, therefore it is imperative that adequate supply of the commodity is developed to sustain such life.

The development of water supply should, however, be under-taken in such a way as to preserve the hydrological balance and the biological functions of all ecosystems.

This is crucial for marginal lands.

Human endeavour in the development of water sources must be within the capacity of nature so as to replenish and to sustain it.

If this is not done, costly mistakes can occur with serious consequences.

Harvesting rain water can work out well for instance in Zambia where a lot of water goes to waste especially during the rain season.

The country is endowed with massive water bodies and rivers which run all year round but water management is still a problem in the country and has continued to affect agriculture whose sole survival is water.

The country also receives favourable rainfall which equally goes to waste instead of being harvested for future use.

Rain water harvesting could be the answer especially in situations where it is allowed to go to waste. Even though rain water harvesting is a new concept in Zambia and it is practiced by a handful of farmers in rural areas.

Traditionally, rain water is harvested either directly in an open bucket or indirectly through shallow wells dug along river banks mainly for domestic use.

Rain water harvesting is defined as inducing, collecting, storing and conserving local surface run-off water for agriculture in arid and semi-arid regions.

Rainfall has four facets. Rainfall induces surface flow on the run-off area. At the lower end of the slope, run-off water collects in the basin area, where a major portion infiltrates and is stored in the root zone.

After infiltration has ceased, then follows the conservation of the stored soil water.

A successful integrated water resource management should call for a cross sectional approach to the planning, development use and protection of water resources.

There is need for training in rainwater management which should take into consideration the gender differences and inequalities, if development interventions are to be effective.

Rain water harvesting is a technology which is traditionally practiced in some parts of Zambia.

It is done on an ad hoc, very low technic basis usually by placing buckets under the roof space to catch the dripping rain water during heavy storms and this could mainly be stored in containers such as old 210 litre drums.

Apart from this, very few rain water harvesting systems had been installed, mainly at schools, and even then, not so widespread.

These were roof harvesting systems comprising of a roof catchement, gutters and tank.

Normally the water was drawn through a tap from the tank. It is the same water which was used for drinking and washing by pupils, teachers and the near-by communities.

The Ministry of Agriculture had constructed a number of different rain water harvesting systems for rural areas especially in the Eastern Province.

Some of the installations were at schools while others were at individual houses.

The Livingstone Sustainable Food Programme had also worked with the rural communities in establishing projects in harvesting rain water.

The structures constructed were mainly dams, weirs, and boreholes. The local government, with the support from UNICEF was planning to start pilot projects in 10 districts of the two provinces.

Rain water harvesting systems are also found at Batoka Basic School in Choma district of the Southern province.

As land pressure rises, more and more marginal areas in the world are being used for agriculture.

Much of this land is located in the arid or semi-arid belts where rainfall is irregular and much of the precious water is soon lost as it runs off the surface.

Recent droughts have highlighted the risks to human beings and livestock, which occur when rains falter or fail.

While irrigation may be the most obvious response to drought, it has proved costly and can only benefit a fortunate few.

There is now increasing interest in the low cost alternative generally referred to as 'water harvesting'.

Various forms of rain water harvesting have been used traditionally throughout the centuries.

Some of the earliest agriculture, in the Middle East, was based on techniques such as diversion of "Wadi" flow (spate flow from normally dry water courses) onto agricultural fields.

Other examples include the Negev Desert, the desert areas of Arizona and Northwest Mexico and Southern Tunisia.

The potential of water harvesting for improved crop production received great attention in the 1970s and 1980s.

This was due to the widespread droughts in Africa which left a trail of crop failures and a serious threat to human and livestock life.

Consequently a number of water harvesting projects were set up in sub-Sahara Africa.

The main objectives were to combat the effects of drought by improving plant production and in some areas rehabilitating abandoned and degraded land

However, few of the projects have succeeded in combining technical efficiency with low cost and acceptability to the local farmers or agro pastoralists.

This was partly due to lack of technical know-how but also often due to the selection of an inappropriate approach with regard to the prevailing socio-economic conditions.

There are several types of systems to harvest rainwater, ranging from very simple home systems to complex industrial systems. The rate at which water can be collected from either system is dependent on the plan area of the system, its efficiency, and the intensity of rainfall.

Rainwater harvesting creates synergies by improving rain fed agriculture and enhancing productive landscapes Farms are indisputably the most important ecosystems for human welfare.

Rain fed agriculture provides nearly 60 per cent of global food value on 72 per cent of harvested land. Rainfall variability is an inherent challenge for farming in tropical and sub-tropical agricultural systems.

These areas also coincide with many rural small-holder (semi-)subsistence farming systems, with high incidence of poverty and limited opportunities to cope with ecosystem changes.

Water for domestic supply and livestock is irregular through temporary water flows and lowering ground water in the landscape.

Variable rainfall also results in poor crop water availability, reducing rain fed yields to 25-50 per cent of potential, often less than one tonne of cereal per hectare in South Asia and sub-Sahara Africa.

The low agricultural productivity often aggravates a negative spiral in landscape productivity.

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Some small -scale farmers in Muchinga province who are affected by lack of investments in irrigation, however, said the concept of rain water harvesting is an alien to them.

Chief Mpepo of the Bisa people of Mpika said the area is near Chambeshi and its tributaries but we got affected because of lack of know how on water sustainable management.

He said the rainfall pattern is equally good but did not understand the benefits of rain water harvesting.

"We have the resources but if there is no one to tell us about them like you are talking , we will remain behind," Chief Mpepo said.

He claimed that extension services are non existences despite some extension officers being in the area.

Godfrey Kaseya of Chalabesa turn off in Mpika and Goodness Mubanga of Chikwanda area echoed similar sentiments that lack of latest information on some agriculture developments had affected the farming activities.

The duo said they were stuck to the traditional way of farming which was proving to be costly due to lack of latest information on agriculture development such as rain water harvesting and conservation farming.

"There is need to help us with the necessary tools such new information and innovation in agriculture so that we can improve but as long as the status quo remains the same, then our farming will starting going down," Mr Mubanga said.

Rain water harvesting should be an adaptation strategy for people living with high rainfall variability, both for domestic supply and to enhance crop, livestock and other forms of agriculture.

To enable full benefits of rainwater harvesting, rainwater used by crops and natural vegetation in many cases should pass through integrated water resource management, which primarily focuses on stream flow or groundwater resources.

And extension officers, where are you?

Crop weather Forecast

The agro-meteorological conditions in southern province have indicated that most crops are in the advanced vegetative and tasselling (flowering) stages and performing well.

Application of top dressing fertilizer by farmers and planting of sweet potatoes has continued in most places.

Expected reduction of rainfall in the next the ten days is likely to improve the status of well managed crops.

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No harmful effect had so far been reported in the province.

Meanwhile, the Department of Meteorology Weather Monitor has indicated that relative moist easterly airflow prevailed over Southern Province during the period from January 2 to 31 this year, enhancing moderate to heavy and widespread rainfall over most parts.

Rain days ranged from two to eight.

Hot temperature values ranged from 34 to 38 degrees Celsius at Livingstone Met and Maamba Colliery respectively.

Heavy ten day rainfall was received over most districts where Masasabi in Itezhi tezhi, Siameja in Sinazongwe and Namwala had 136 milimeters (mm), 109mm and 104mm respectively.

Others were Chipepo Met. 94mm, Sinazeze, and Mambova 81mm each, as well as Moorings farm with 59mm.

Moderate rainfall was however reported in Kalomo, Siavonga and Mazabuka districts where Luyaba, Lusitu, and Magoye had 33mm, 23mm and 44mm respectively.

Masasabi in Itezhi tezhi comparatively, had the highest ten day rainfall of 209mm in the previous season during similar ten day period.

The highest cumulative rainfall from the July 1 2011 to January 31 this year was recorded at Maamba Colliery in Sinazongwe while Magoye Meteorology received the lowest reported figure of 200mm.

The seasonal rainfall departure from July 1 2011 on the other hand, indicates that below normal rainfall was observed over much of Kazungula, Livingstone, Namwala, Siavonga and parts of Monze and Sinazongwe districts. Magoye Met, Kanchele, and Simango had highest deficit of 65 per cent, 58 per cent and 45 per cent respectively.

Itezhi-tezhi, Sinazongwe, Monze and Choma districts received normal rainfall where Maamba, Chaanga and Chipepo Met., had 16 per cent, four per cent and one per cent respectively.

Damages to road and agricultural fields were minimal across the province, compared to the previous season during similar ten day rain period.

Weather forecast from 4 to 11 February 2012

The general situation indicates that relative moist south easterly airflow is expected to persist from today until February 7 thereby reducing rainfall activity over much of Southern Province.

Moist northwesterly airflow is expected to prevail from February 8 to the end of the forecast period and likely to induce rainfall over most places.

Meanwhile, all areas would be partly cloudy to cloudy with afternoon showers and thunderstorms in few places during the afternoon.

Thereafter cloudy to overcast conditions with showers and thunderstorms in places during the day would be followed by night rains up to the end of the forecast period.

"Zambia: Rain Water Harvesting Key to Farming", 04/02/2012, online at: http://allafrica.com/stories/201202060236.html

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❖ Massive water diversion project nears completion in China

Project will bring waters from the Yangtze river to the Yellow river

China's ambitious $80-billion project to divert waters of southern rivers to the arid north is nearing completion and will begin supplying water next year, officials have said.

The project's eastern and central routes, which will bring waters from the Yangtze river to the Yellow river, will be fully constructed in the next two years, planners told a review of the project conducted over the weekend in eastern Shandong province.

Reports of the meeting were silent about long-pending proposals for a controversial western route, which has so far been stalled over environmental and technical concerns. The western route includes a plan to divert the Brahmaputra's waters to northern China.

The south-to-north water diversion plan is one of the most ambitious construction projects embarked on by Chinese engineers, estimated to cost more than 500 billion yuan (around $80 billion). It envisages diverting 44.8 billion cubic metres of water every year from Yangtze by 2050. The water-deprived and drought-affected north, home to 35 per cent of the population, has only seven per cent of the country's water resources.

Time frame

The project will be partially completed this year and "will start supplying water in 2013", water conservancy officials at Saturday's meeting were quoted as saying by the State-run Xinhua news agency.

Sun Yifu, deputy water resources chief in Shandong, through which much of the eastern route runs, said the entire route would become operational in the first half of 2013, with 18 water supply units coming online next year and 23 others before 2015.

Construction of the eastern route began in 2002, when the whole project was given approval after decades of planning. The project was first proposed in the 1950s and backed by Mao Zedong. The central route began to be built the following year. It will be completed in 2014. Officials said last year more than 440,000 people would be relocated for the eastern and central routes, bringing criticism of project's costs. Around 100,000 people will be displaced every year until 2014. The project has also been delayed by a number of environmental problems.

Construction has not yet begun on the western route, which plans to divert water from the upper reaches of the Yangtze as well as a number of rivers on the Qinghai-Tibet plateau, including the Brahmaputra and Mekong.

This plan has triggered concern among many of China's neighbours, including India, which lie downstream of these rivers and depend on their waters. Of the western route, the Xinhua report of Saturday's meeting only said construction had not begun. It, however, remains unclear whether the

central government has given the green light to any of the proposed diversions, amid environmental concerns of the project's impact on the ecologically sensitive Tibetan plateau.

Chinese officials have recently ruled out diverting the Brahmaputra, or Yarlung Tsangpo as it is known in Tibet. In October, Jiao Yong, Vice Minister of Water Resources, said China had no plans to divert the river considering "technical difficulties, environmental impacts and state relations".

The central government has, however, come under increasing pressure from hydropower lobby groups to allow the construction of run-of-the-river power generation projects on the middle and upper reaches, with proposals from hydropower companies for as many as 27 dams, including a massive 38-gigawatt plant on the river's "Great Bend", where it begins its course towards India.

"Massive water diversion project nears completion in China", 06/02/2012, online at: http://www.thehindu.com/news/international/article2866492.ece

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❖ China-Water project nears launch

A massive project to divert water from the south to the drought-prone north - which has seen hundreds of thousands of people relocated - will become partly operational next year.

Called the South-North Water Diversion Project, it is one of the mainland's largest infrastructure programs since the building of the Three Gorges Dam, which involved the relocation of more than one million people.

Sun Yifu, deputy water resources chief in eastern Shandong, said his province's part of the project will be completed at the end of the year.

He added that "the entire project" will become operational in the first half of next year, and start supplying water to arid parts of the north.

The project consists of three routes - eastern, middle and western - and Sun was referring to the eastern portion of the project, which is a 1,890-kilometer canal.

Construction on the 1,430km central route began in 2003 and will only be operational in 2014.

The western section, meanwhile, has yet to see the light of day.

The late chairman Mao Zedong is credited with coming up with the idea for the massive diversion program, which will feature a tunnel dug beneath the Yellow River - the second-largest in China.

But the project - which will cost an estimated 500 billion yuan (HK$614.78 billion) - was only approved in 2002.

Critics said it could be a huge waste of resources that risks creating new water shortages and sparking environmental disasters.

They also point to the human cost of mass relocations to make way for the canals. AGENCE FRANCE-PRESSE

"China-Water project nears launch", 06/02/2012, online at:
http://www.thestandard.com.hk/news_detail.asp?we_cat=3&art_id=119379&sid=35309434&con_type=1&d_str=20120206&fc=10

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❖ China water project to 'begin operating in 2013'

A farmer is seen following her flock of sheep near a fenced-off canal that is part of China's hugely ambitious South-North Water Diversion Project, in Yixian, in 2009, in northern China's Hebei province. The massive project to divert water from China's south to its drought-prone north will become partly operational in 2013, according to state media.

A massive project to divert water from China's south to its drought-prone north -- which has seen hundreds of thousands of people relocated -- will become partly operational next year, state media reported.

The South-North Water Diversion Project is one of the country's largest infrastructure projects since the building of the Three Gorges Dam, which involved the relocation of more than one million people.

Sun Yifu, deputy water resources chief in the eastern province of Shandong -- who is also involved in the programme -- said his province's part of the project would be completed at the end of the year, the Xinhua news agency said.

He added that "the entire project" would become operational in the first half of 2013, and start supplying water to arid parts of the north, the report said late Saturday.

China's South-North Water Diversion project consists of three routes -- the eastern, middle and western routes -- and Sun was referring to the eastern portion of the project, or a 1,890-kilometre (1,170-mile) canal.

Construction on the 1,430-kilometre central route began in 2003 and will only be operational in 2014. The western section, meanwhile, has yet to see the light of day.

Chinese revolutionary leader Mao Zedong is credited with coming up with the idea for the massive diversion programme, which will feature a tunnel dug beneath the Yellow River -- the second-largest in China.

But the project -- which will cost an estimated 500 billion yuan ($79 billion) -- was only approved in 2002.

Critics say it could be a huge waste of resources that risks creating new water shortages and sparking environmental disasters. They also point to the human cost of mass relocations to make way for the canals.

"China water project to 'begin operating in 2013'", 05/02/2012, online at: http://www.physorg.com/news/2012-02-china.html

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❖ Draft National Water Policy strongly opposed

COIMBATORE: The Draft National Water Policy 2012, recently released by the Ministry of Water Resources, which favours privatisation of water services and tariff hike, is being strongly opposed by farmers and consumer activists.

The draft policy favours the privatisation of water delivery services and also suggests that water be priced. This has drawn strong opposition from the public.

"Farmers will be affected a lot, if privatisation of water services is enforced. This could lead to private companies swindling money from the farmers. They will determine, which crop a farmer should cultivate in his land and farmers will be forced to work under the instructions of these companies," Valukkuparai Balu, President of 'Vivasayikal Sangam', said.

In Israel, the government controls entire supply and usage of water. Drip irrigation is followed in entire Israel, he noted. "But, the same system will not suit our country. Rather, the government should nationalise the water sources of the country and distribute water to all without any discrimination."

The draft policy further proposed, reversal of heavy under-pricing of electricity, which leads to wasteful use of both power and water.

P Kandasamy, General Secretary of 'Vivasayikal Sangam' said, "Already, the youth are not interested in farming. If this policy is implemented, the entire agricultural sector will collapse."

K Kathirmathiyon, Secretary of the Coimbatore Consumer Cause also objected this draft policy. "This is not at all a good idea. If the government decides to fix a price for water and hand over the water related services to the private sector, public will strongly oppose this," he said, adding that the government will be forced to face consequences.

Kathirmathiyon, further said that there are places, where people have to walk 5-6 kms to fetch water.

The government is bound to provide good drinking water facility to its citizen. Ordinary public will suffer, if water is priced.

"The reason behind governments coming up with budgets was to get additional revenue and provide various services which are essential to the public. If commodities like water was priced, then there is no need for governments to prepare budgets," Kathirmathiyon said.

The draft policy has been uploaded on the ministry's website 'http://wrmin.nic.in' for comments and suggestions.

It will remain open for comments till February 29 and after carrying necessary modifications, the policy would be placed before National Water Commission and National Water Resources Council for finalisation and adoption.

"Draft National Water Policy strongly opposed", 11/02/2012, online at: http://ibnlive.in.com/news/draft-national-water-policy-strongly-opposed/229250-60-118.html

❖ Serbia to improve agriculture cooperation with African countries

Minister of Agriculture, Trade, Forestry and Water Management Dusan Petrovic said today that Serbia could achieve a good cooperation in agriculture and food industry with African and Middle Eastern countries.

Minister of Agriculture, Trade, Forestry and Water Management Dusan Petrovic said today that Serbia could achieve a good cooperation in agriculture and food industry with African and Middle Eastern countries.

Opening the first international fair of food and beverages FOODREX, Petrovic pointed out that this is an opportunity for Serbia to show to professional buyers from more than 15 countries around the world that it has good food and drinks.

The Minister said that Serbia currently exports the greatest part of its agricultural products to EU countries and underlined that it is necessary to conquer new markets.

The fair brought together more than 120 professional buyers from 15 countries to whom more than 70 Serbian companies with approximately 100 local food brands are presented.

Special attention will be paid to the markets in which Serbian producers are not represented or are represented to a lesser extent, and these are primarily the markets of Africa and the Middle East.

"Serbia to improve agriculture cooperation with African countries", 10/02/2012, online at: http://www.emg.rs/en/news/serbia/174397.html

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❖ Resurrecting an Old Desalination Technology to Test Desert Agriculture

At a U.S. desalination research facility this month, a 2,500-year-old technology will be put to the test. The company in charge of the project hopes to increase productivity, reduce the energy needed to purify water and maybe even make desert agriculture viable.

Brett Walton
Circle of Blue

Back when Athens was the center of the world, Aristotle wrote in *Meteorologica*, his examination of the natural sciences, that the processes of evaporation and condensation, when applied to salt water, turned the foul liquid into sweet. "This I know by experiment," he wrote.

Since then, those same processes have been incorporated in the solar still, a device that uses sunlight to produce freshwater. For centuries, the water-purifying apparatus has been used to supply drinking water to small communities around the world.

But now, crafty engineers both in the U.S. and abroad who recognize global constraints on land, food production and water resources are laying out bigger plans. Besides producing fresh drinking water, they envision using evaporation and condensation to resurrect the solar greenhouse, an idea that, according to Hill Kemp — the CEO of the desalination start-up Suns River — has been "tossed in the boneyard of technology" but could turn tracts of coastal desert into productive land.

Last September, his company received one of nine grants for water purification research handed out by the U.S. Bureau of Reclamation. This month, Suns River will begin testing one of its solar stills at the bureau's Brackish Groundwater National Desalination Research Facility in Alamogordo, N.M.

Solar stills remove most contaminants from water — all salts, heavy metals, bacteria and microbes — by passing a thin film of feed water across a dark surface tilted toward the sun. As the water evaporates, it condenses into droplets on a clear plate above the black floor and rolls downward to a collection trough. A carbon filter then removes any remaining organic compounds.

A still's productivity increases with the amount of incoming solar energy, or insolation. With the solar conditions in the U.S. Southwest, an average still could produce about 0.8 liters (0.2 gallons) per sun hour per square meter, according to a demonstration project funded by the U.S. Environmental Protection Agency (EPA). Larger surface areas generate higher output.

The stills have been a blessing in regions that don't have easy access to freshwater. The EPA-funded project tested hundreds of solar stills in the unincorporated communities, or *colonias*, along the U.S.-Mexico border.

The *colonias* often are not connected to a public water supply system and are located in areas without clean groundwater. They rely on bottled water or supplies that are trucked in — expensive options compared to the stills. Surveys taken as part of the project found widespread satisfaction with the units.

Vipin Gupta, a Reno, Nev.-based physicist with Sandia National Laboratories who was involved with the *colonias* project, told Circle of Blue that the decentralized nature of the solar still makes it an attractive technology for communities in similar environmental and economic circumstances.

But for the stills to be more widely adopted, Gupta said, designers need to find more durable and affordable materials. "The device has to withstand sunlight, water, salt and wide temperature differences," he said. "It's a demanding environment for any material. That's the biggest technological challenge today."

From Water to Food

A former chemical engineer and Texas state legislator, Kemp decided to focus on the solar still while looking for solutions to climate change. After reading books and articles describing the technology, he set out to improve the standard still's efficiency.

He has made enough progress to receive federal grant money, but his proposal also came along at the right time.

The Bureau of Reclamation considers the technical merit of all projects, said Kevin Price, the desalination research program coordinator, but some years certain attributes are placed higher in the pecking order. During the last funding cycle, the bureau looked for projects that incorporated renewable energy.

"We want to see something innovative with renewables because we have not seen a lot of proposals coming in," Price said. "We've focused on small rural systems recently."

In January, Kemp was awarded a U.S. patent for his design, which, he said, increases both the evaporation rate and the condensation rate. For at least the next four months those claims will be tested in New Mexico, but the still could potentially produce three to five times the water per square meter that a typical still device does, at comparable cost.

According to Kemp, improving the still's efficiency is a first step in a longer journey toward a new agriculture in which evaporation and condensation are harnessed to turn coastal deserts into suitable sites for greenhouses.

Several organizations working in the world's driest regions have similar goals. In Qatar and Jordan, the leaders of the Sahara Forest Project plan to grow crops in desert greenhouses and turn sandy swathes green — but by using salt water instead of scarce freshwater supplies.

Taking advantage of the desert heat and a seaside location, cold ocean water would be circulated through the greenhouses, creating a humid environment and nurturing the crops through condensation. The facilities would generate power from concentrated solar plants located on-site and cooled by the easily accessible seawater. But most of the energy produced would go toward reverse osmosis desalination units that would irrigate forests to store carbon.

Though the project has the support of two of the world's largest fertilizer and nutrient companies — Yara and Qafco — and the Norwegian government, it is still years away from a commercial roll out.

The project's chief executive Joakim Hauge told Circle of Blue in an email that there are several scientific and technical studies underway, as well as materials testing and computer modeling. Once those are completed, a demonstration project will begin, possibly in 2012, on 0.2 square kilometers (20 hectares) of land near Aqaba on Jordan's Red Sea coast.

The largest commercial project of this sort is already running in Australia. Sundrop Farms, in the state of South Australia, grows high-value crops such as tomatoes, lettuce and flowers using seawater greenhouses.

"Resurrecting an Old Desalination Technology to Test Desert Agriculture", 10/02/2012, online at: http://www.circleofblue.org/waternews/2012/world/resurrecting-an-old-desalination-technology-to-test-desert-agriculture/

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❖ PasTechGroup's Green Double Play: Make Renewable Energy While Cleaning Wastewater

A start-up aiming to make wastewater treatment more energy-efficient has raised some cash as its market grows ever more lucrative.

The Pasteurization Technology Group closed a $1 million seed investment to help cities and companies disinfect, reuse and generate power from their wastewater.

The company's earlier angel investor, EIC Ventures (the investment arm of Canada-based Concorde Group) led the round.

Chief executive and co-founder of PTG, Greg Ryan, said his company's patented technology was inspired by his father's methods for handling wastewater on the family farm.

Those systems would have processed a few gallons a minute. PTG's systems can, according to Ryan, process millions of gallons of wastewater a day in a highly energy-efficient way.

The company's customers will include municipalities, oil and gas companies, food and beverage producers, manufacturers and agricultural businesses of any kind.

PTG is not yet able to discuss its existing clients by name, but it is currently generating revenue, and working with two municipalities in California, a fruit-and-nut agricultural business, and a snack food producer.

Common approaches to disinfecting wastewater have involved the use of chlorine, other chemical additives, or ultraviolet light treatments to make water clean enough to be released safely back into oceans, streams, or the ground, or to be used for agricultural purposes.

PTG's systems do not use lamps or chemical additives. They heat water to clean it. And they actually generate electricity while they work.

In a PTG system, biogas, a byproduct of wastewater treatment, powers turbines that generate renewable electricity on-site. Any excess electricity can be stored or sold to the grid. The turbines also give off hot air, which passes through a system of exchangers and cooks the wastewater, ridding it of impurities so that it can be reused, sold, or released back into the environment.

This method, Ryan says, is 90% energy-efficient and saves customers on the cost of electricity and water both.

"Typically, wastewater treatment plants are the largest energy bills for municipalities. We can lower that cost for them. Additionally, wastewater treatment plants don't know it yet but their wastewater can be sold. They'll get money for it. It is happening in Texas right now, and everywhere water is scarce."

According to research by Siemens, Water Technologies and the U.S. Conference of Mayors, energy costs are about 30% of the operations costs at wastewater facilities in the United States, and 36 states anticipate water shortages by 2013.

Scott Bryan, chief operating officer at ImagineH2O, a competition that funds promising water tech start-ups from around the world, sees high demand beyond Texas and municipalities.

"Any industrial player who wants to set up shop in China will find that recycling wastewater is critical in terms of their ability to conduct business there," Bryan notes. He also points to water scarcity in Australia, Israel and Singapore as market drivers.

Investor David Dubé, CEO of Concorde Group, believes PTG will see a tremendous amount of new business in 2012 just focusing on North America. He expects the start-up to use its seed round to primarily "dense up" their engineering, R&D and customer service staff, more than their sales team.

"Frankly, the inquiries are coming to us without marketing," he says.

"PasTechGroup's Green Double Play: Make Renewable Energy While Cleaning Wastewater", 07/02/2012, online at: http://blogs.wsj.com/venturecapital/2012/02/07/pastechgroups-green-double-play-make-renewable-energy-while-cleaning-wastewater/

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❖ Environment Agency warns of summer water restrictions

Farmers in East Anglia are likely to face severe water restrictions for irrigating crops this summer, according to the Environment Agency.

The latest drought report from the agency said prospects for water availability for spray irrigation in the region were poor this summer.

This winter is the driest on record within the Anglian region as a whole, covering the five-month period up to January. As a result, water levels are well below average in many rivers and aquifers.

Groundwater levels are "exceptionally low" in the region, which is an indicator for severe groundwater drought. Levels across many southern and eastern regions are "notably low".

If the dry weather continues, the agency said groundwater was likely to show little or no recovery - and levels will be either notably low or exceptionally low during the irrigation period, unless there is significantly higher rainfall.

The report said: "Without above average rainfall for the remaining winter and early spring period, significant restrictions on abstraction for spray irrigation from surface water are probable and we may have to restrict abstraction from groundwater.

"However, abstraction from reservoirs will not be affected."

In addition, there is still an "exceptionally high soil moisture deficit across East Anglia from the continuing dry weather".

December saw average rainfall, but because of the high soil-moisture deficits there was generally little response in either the rivers or groundwater.

With the exception of Suffolk and Essex, which had average totals, January's rainfall was below average throughout East Anglia at around 75%.

However, the agency said there has been slightly more response to January's rainfall particularly in the Essex area.

Andrew Alston, CEO of the Broadlands Agricultural Water Abstraction Group (BAWAG), said the situation was "very worrying" and he urged farmers to review their commitments in respect of their irrigation licences.

"As farmers, we rely on a clean and reliable source of water. But what affect is this going to have on our ability to supply factories?" he asked.

"The factories use potatoes, carrots, onions, parsnips and salad crops - but how are these factories going to survive if we cannot produce the crops?

"We will become unreliable producers if we're not careful and someone else will supply our markets."

"There's nothing that the Environment Agency can do, but we have got to lobby our MPs and change the way the legislation is implemented."

Dry weather is set to generally continue into the middle of February with the longer term prediction for the next three months to have a higher probability of experiencing below average rainfall, said the report.

"Environment Agency warns of summer water restrictions", 10/02/2012, online at: http://www.fwi.co.uk/Articles/10/02/2012/131420/Environment-Agency-warns-of-summer-water-restrictions.htm

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