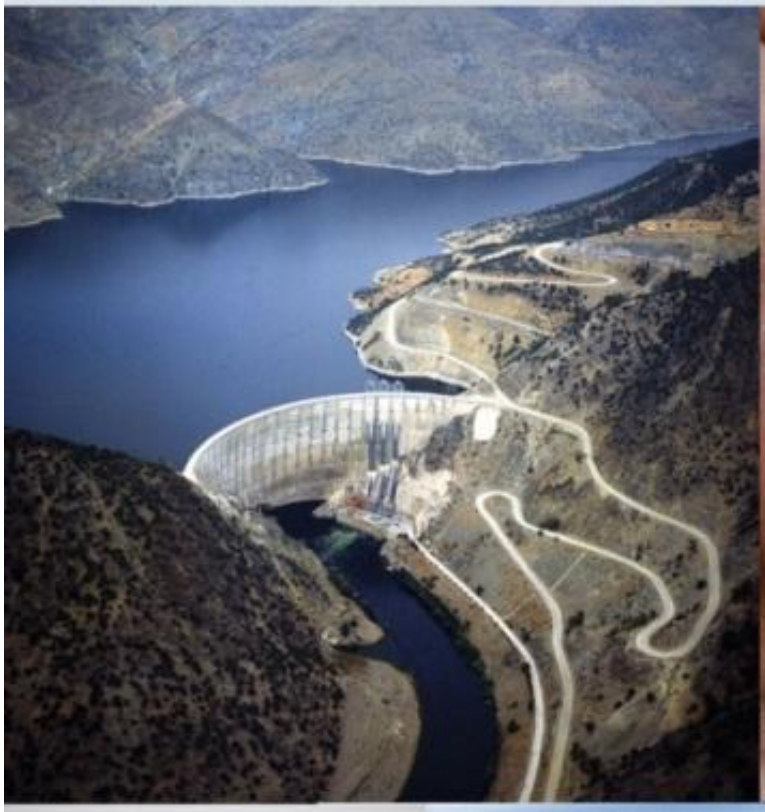


ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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





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❖ Turkey's Water Policy in Crisis Periods and Turkey-Syria Relations

In the regions, where surface waters are limited, as the Middle East; the use of water which is especially used by more than a country also shapes the inter-state relations. Water resources, one of the most important issues in the relations among the states, might lead to conflicts and also it might become a weapon or a target that could be used in case of a conflict-crisis-war from time to time; and it might be one of the first targets to be attacked in order to weaken the other side during this process.

As we have seen the precedents; destroying especially dams, desalination plants and water pipelines is one of these methods. As an example of using water resource as a weapon or a target, the dams generating hydroelectricity were bombed during the World War II. In 1960's, the U.S. bombed irrigation water supply system of North Vietnam. During the 1991 Gulf War, both sides targeted dams, water transmission systems and desalination plants of each others. We can see another example in the news reflected on newspapers and analyses in Libya on September 2011. It was reported that the pipeline carrying water to Tripoli was under the control of pro-Gaddafi groups, and the water flow was cut off by the sabotage of these groups. The allegation that this project, of which the total cost is stated to have been around 20 billion dollars, was damaged in this process is worrying both in terms of the right to access to water and also in terms of the damage to this big project. This project, which is successful in technical terms with every detail, is very important for the Libyan people to have an access to water and for their development. Destruction of water resources and structures further worsens living conditions of the people, who are already going through hard times because of conflict and war.

Another method is the upper riparian's cutting off the water of lower riparian especially in transboundary water basins. Especially in certain resources related to the Gulf crisis period, which affected the region and the whole world, it is mentioned that United Nations discusses cutting off the waters of Euphrates river, which originates in Turkey and is one of the important rivers meeting the water need of Iraq; and it is also stated in the same resources that Turkey does not use water as a weapon. (1) As is known, the Arab Spring that emerged in the Middle East in early 2011 has also

penetrated into Syria, the neighbor of Turkey, as of March. The events taking place in Syria negatively affected the relations between the two countries which had been quite good for the last decade. The fact that the Turkish jet was shot down by the Syrian air defense systems in international waters in Mediterranean last week maximized the current tension between Turkey and Syria. Last week, articles on Turkey's closing dams on the Euphrates and Tigris rivers and shutting off Syria's drinking water last week and applying pressure on Bashar Assad appeared in analyses in the external media. (2) As already stated, the fact that water is a major source for human life has always been a priority for Turkey. While Turkey stated on November 2011 that she could impose economic sanctions on Syria; Turkish Foreign Minister Ahmet Davutoğlu indicated that there would not be any water limitation on transboundary waters, which are important for both Syria and Iraq and originate in Turkey and flow to Syria and then to Iraq. Water resources have never been used as a threat risk or weapon in water policies Turkey has pursued so far. Turkey, who has always wanted equitable, reasonable and optimum allocation of transboundary waters especially in cooperation with Iraq and Syria that are the Euphrates-Tigris basin riparians, will not act contrary to its water policy that has been pursued for years in this current situation that the tension with Syria has further increased in the recent period.

(1) Peter Gleick, "Water and Conflict; Fresh Water Resources and International Security", International Security, vol.18, no.1, 1993, s.85.; Matthew McDonald, "The Environment and Security: The Euphrates River", Department of Goverment University of Queensland, s.1.

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

"Turkey's Water Policy in Crisis Periods and Turkey-Syria Relations", Tuğba Evrim Maden, ORSAM, 28/06/2012, online at: http://www.orsam.org.tr/en/WaterResources/showAnalysisAgenda.aspx?ID=1788

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❖ Iraq: the challenge of providing clean water and rebuilding infrastructure

With the impact of Iraq's long years of war and insecurity still marring the future, older problems, such as water scarcity and weak infrastructure, are also harming prospects for development and stability. The ICRC is striving to improve the situation in the areas hardest hit.

The ICRC has been working in Iraq for the past 30 years, attending to the mounting humanitarian needs. During this period, the challenges relating to water and basic public infrastructure have taken various shapes. The fall in the water levels of the Tigris and Euphrates rivers, which provide the bulk of Iraq's water supply, is not new. The ICRC has long been warning of the serious consequences of a dwindling water supply. But present-day Iraq faces challenges that are even more daunting.

"Access to clean water is not the only problem faced by Iraqis today, though it is one of the major ones. There are areas in Iraq where entire water systems are in need of repair," said Alexandre Farine, the ICRC delegate in charge of water and habitat activities in the country. "We are focusing on the areas that have been hardest hit, where such problems have posed the greatest challenges to the population. People's daily lives are affected by the scarcity of clean water, which in turn causes health and hygiene problems."

The ICRC carries out the partial or complete renovation of infrastructure in areas where no alternative support is available and the needs are acute. It also provides Iraqi technical staff with training so that they can maintain the facilities over the long term.

"I'm so happy to see the Red Cross in this area again," said a policeman on duty at a checkpoint in Missan governorate, when he saw the ICRC vehicle approaching. ICRC staff were on their way to work on a water pumping station. The policeman was reminded of the work carried out by the ICRC on the water supply system in his home village in 1998. At the time, Iraq was under international sanctions and people lacked even the most basic amenities of life.

In some rural areas, rapid population growth has resulted in successive extensions of the drinking water networks. This has not only reduced the water pressure but also caused a drastic drop in the quantity of water reaching people's taps. Thousands are left without ready access to clean water,

which causes much further hardship. This is precisely what happened to the 12,000 inhabitants of the Sarajic area in Diyala, in central Iraq, where the ICRC installed a compact water purification unit in May to restore their supply of drinking water.

Like other public infrastructure, many health-care facilities in Iraq have suffered varying degrees of damage. This has resulted in a lack of capacity. The public health-care centre in Al Talea area of Babil governorate, for example – a facility built in 1947 – cannot provide enough medical services to meet the needs of the population of over 32,000 in the area. According to an ICRC assessment, the existing facility, which includes emergency rooms, a pharmacy, a maternity and paediatrics ward, a vaccination room, a female consultation room as well as the main waiting area, is structurally irreparable. At peak times it is overcrowded, and its structural condition is having an effect on the health-care services provided. The ICRC is therefore going to support the construction of a new building to improve the quality of services available. It is also repairing and renovating several other facilities elsewhere in Iraq.

The ICRC's overarching objective remains to provide clean water for victims of armed conflict, other violence and natural disasters and to improve health-care and irrigation facilities, which form the foundation for a brighter future.

Bringing aid and support to people facing hardship

In a number of places in Iraq, people continue to struggle to meet their families' basic needs. Between March and May, the ICRC:

- supported the upgrade of more than 100 kilometres of irrigation schemes in Rabea and Qaratapa, in Dohuk and Diyala governorates respectively, which will help increase agricultural production and income for more than 1,500 families;
- enrolled 437 needy community members in cash-for-work activities in connection with the irrigation works, enabling those taking part to temporarily increase their household income;
- awarded 183 grants to disabled people and to women heading households in Kirkuk, Diyala, Ninewa, Suleymaniyah, Basra and Missan and Erbil, enabling them to start small businesses and regain economic self-sufficiency;

- distributed essential hygiene and household items to over 17,300 displaced people in Salah Al-Din, Anbar, Sulaimaniyah, Kirkuk, Dohuq and Mosul; 527 of the beneficiaries also received basic food items for one month for their families;
- provided aid for 1,092 women heading households in Baghdad and Anbar governorates, and helped them register with the State welfare allowance system.

"Iraq: the challenge of providing clean water and rebuilding infrastructure", 25/06/2012, online at: http://www.icrc.org/eng/resources/documents/update/2012/iraq-update-2012-06-25.htm

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❖ Liberating Iraq's agriculture for multinational corporations

In my early teens in Iraq, in the late fifties and early sixties, I used to accompany my father to farms to buy wheat grain for our own consumption, and a few sacks more to sell in the village to make some profit. I remember the discussions between my father and the small farmers regarding the quality of the grain, and whether the dough would stick (hounta khabbaza) to the walls of the clay oven (tennor) in which my mother baked the bread. This particular quality is essential to prevent it falling into the hot embers at the bottom of the oven. The farmers used to assure us of the quality, giving a little history of how the grain had been improved by knowledge sharing between farmers, with the best quality seed being adopted. The system had an inbuilt informal ability to improve the quality of the wheat grain. This method of sharing expertise, and the use of knowledge passed down through the generations were applied to every aspect of farming and fruit orchards to improve the quality and quantity of the produce.

An article on GRAIN website entitled “Iraq's new patent law: a declaration of war against farmers” gives the origin of this law and its detrimental effect on agriculture in Iraq thus:

“When former Coalition Provisional Authority (CPA) administrator L. Paul Bremer III left Baghdad after the so-called "transfer of sovereignty" in June 2004, he left behind the 100 orders he enacted as chief of the occupation authority in Iraq. Among them was Order 81 on "Patent, Industrial Design, Undisclosed Information, Integrated Circuits and Plant Variety." This order amends Iraq's original patent law of 1970 and unless and until it is revised or repealed by a new Iraqi government, it now has the status and force of a binding law. With important implications for farmers and the future of agriculture in Iraq... The purpose of the law is to facilitate the establishment of a new seed market in Iraq, where transnational corporations can sell their seeds-genetically modified or not, which farmers would have to purchase afresh every single cropping season”. For generations, small farmers in Iraq operated in an essentially unregulated, informal seed supply system. Farm-saved seed and the free innovation with an exchange of planting materials among farming communities has long been the basis of agricultural practice. This is now history. The CPA has made it illegal for Iraqi farmers to re-use seeds harvested from new varieties registered under the law.”

Iraq, lest we forget, is ancient Mesopotamia, the land between the two rivers, the Tigris and Euphrates; this is the land where organized agriculture was invented around 5000 BC. The Sumerians, Assyrians and Babylonians are the ancestors of the people of Iraq and through their work and ingenuity they went on to establish the great cities of Ur and Babylon. .....(more)

The complete piece is at: http://www.commondreams.org/view/2012/06/24

"Liberating Iraq's agriculture for multinational corporations", 25/06/2012, online at: http://www.democraticunderground.com/1002850883

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❖ We work for guarantying food security in KRG, says deputy PM

ERBIL, June 28 (AKnews) – Deputy Prime Minister of the Kurdistan Region Imad Ahmed said the government wants to guarantee food security in the region through enacting a strategic program.

Ahmed's announcement came in a meeting with Minister of Agriculture and Water Resources Sirwan Baban and a number of directors, according to a statement from the Kurdistan Regional Government.

Ahmed talked about the importance of agriculture in rebuilding economic infrastructure and food security in the region.

Cabinet five and six provided the security of fuel, electricity and water. From now on we want to produce a program providing food security, said Ahmed.

"We work for guarantying food security in KRG, says deputy PM", 28/06/2012, online at: http://www.aknews.com/en/aknews/3/314528/

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❖ 18 villages in Diyala evacuated due to drought

DIYALA, June 26 (AKnews)- Due to the drought that has hit the area, the entire residents of 18 villages of the disputed Mandali parish in Diyala have resorted to the nearby Baladruz town.

Out of the 20 villages in Tahmaya area of Mandali only two are currently inhabited, said Mandali Administrator Abdul-Hussein Qaralusi.

Qaralusi said the residents of the rest of the villages have left for Baladruz, seeking for jobs.

He added Mandali and its rural areas are now suffering from severe lack of drinking and irrigation water as a result of low raining rates and the lack of necessary water resources in the area.

The official expected that more villages will be evacuated as the agriculture sector is weakening more and more in the area.

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 building of dams.

"18 villages in Diyala evacuated due to drought", 26/06/2012, online at: http://www.aknews.com/en/aknews/3/314291/

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❖ Aras Publishers to host signing ceremony book exploring Iraq's natural resources

ERBIL, June 24 (AKnews) - A signing ceremony will be held at Erbil-based Aras Publishers on Wednesday for The Treasures of Iraq (Kunuz al-Iraq), which explores the theme of natural resources in the country.

Supervisor for the preparation of the book Khaled Suleiman said: The Treasures of Iraq is the product of three workshops that were held during 2011 and 2012, under the supervision of the independent media center with the participation of Misalla organization and the journalists of Kirkuk, funded by the IPA organization.

"The book discusses several issues, including oil, water, gas, and ways to access to the information about these natural resources, along with the issue of transparency, the role of natural resources in sustainable development and human development, in addition to addressing the issues of preservation of the environment, especially that the process of extracting oil can damage the environment and can be avoided by following a policy that can preserve the environment."

Some 23 journalists from all Iraqi cities participated in the essays published in the book in both Kurdish and Arabic.

The book also discussed the issue of natural resources in the Kurdistan Region and there are stories and essays about natural resources in Kurdistan.

About the issue of water, Suleiman said: "There was a focus on the water issue which is one of the important sources in Iraq."

The Treasures of Iraq was recently released by Aras Publishers within its 2012 publications and includes stories and press reports about the natural resources in Iraq. It was edited and supervised by Suleiman.

"Aras Publishers to host signing ceremony book exploring Iraq's natural resources", 24/06/2012, online at: http://www.aknews.com/en/aknews/1/313954/

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❖ Tycoons vs Consumers: The battle over water

WE said this before and we will say it again: After oil and energy, the next battle will be over water. We have witnessed and continue to witness this in the Middle East and Africa where the first wars of the 21st century were carryovers from the unfinished ones in last two decades of the twentieth. All of these revolved around control over the world's vast oil, gas and energy reserves as well as the billions of dollars worth of development projects and, yes, arms and security arrangements in most of the "battle zones" culminating in the US-led "Global War on Terror."

The Iran-Iraq war and the two Gulf Wars, for example, which led to the fall of Saddam Hussein and the Baath Party in Iraq and the further radicalization of the Iranian theocracy, were for control over oil and gas and billions of dollars of arms and military hardware all over the place. Iran and Iraq—both already with ethnic and religious conflicts aplenty within and outside of their borders—went to war provoked by control over the Shatt Al Arab and rekindled enmity carried over through the years. In a sense, they were also proxy battles between the "Big Powers."

On the other hand, the first Gulf War was triggered by Iraq's invasion of Kuwait, also over oil and hurt pride, which was used as a pretext for the US and its allies to get back at Saddam Hussein and cut him at his knees. The second Gulf War simply finished off that regime and set the stage for what the US-led alliance called a "global war on terror" and, of course, control over known vast reserves of oil and gas. It was also meant to reinstate the influence of the US-led alliance in what remains a very volatile but resource—rich and development—challenged area of the world with huge potentials for arms and security requirements.

Afghanistan and other wars

Then, of course, we have the remaining war in Afghanistan that, as many experts now concede, is also rooted in oil and other resources as well as security considerations. Which is exactly the same construct, over the simmering problems in the South China Sea and now in Myanmar and parts of the Asian mainland. What is not being advised—but will shoot up pretty soon—is that a number of the conflicts that are already evident in these areas and will probably escalate in the years ahead is about water. The battle over the waters of the Nile River from Sudan down to Egypt and all the other countries dependent on this huge river system had been off and on for years.

Even Libya under Qaddafi's rule had its own "water work out," so to speak, as the then strongman wanted to free his desert nation from the vagaries of the weather. Before Saddam's fall, Turkey, Syria and Iraq's other neighbors were squabbling over a huge hydroelectric project being readied in the upper reaches of the Tigris Euphrates rivers. In the South Asian continent, water had long been an irritant among the neighbors. Lots of wailing also greeted China's decision to put up the huge Three Gorges Power Project. Of course, countries along the Mekong have had their own share of squabbling over that resource which have been calmed down for now but is likely to ignite again in the years ahead.

MWSS, Manila Water and Maynilad under fire

Indeed, the battle over water may well be the main propellant of deadly wars in the 21st century. Not only between and among states but also among sectors and classes within countries as well as this resource gets even scarcer and the need for it becomes even more pronounced. This is now getting to be the case in the Philippines and other countries, where governments have ceded or are ceding their traditional role as harnessers, providers and distributors of this much-sought after resource to the private sector. A case in point is the privatization of the water and sewerage systems of Metro Manila and environs under the old Metropolitan Waterworks and Sewerage System (MWSS). This experiment, which came in tandem with the privatization of the country's power sector, is now under fire.

Like the power sector under the increasingly controversial Epira law, the MWSS privatization scheme is now drawing fire for what its critics insist are anti-people and anti-consumer malpractices.

In behalf of the consumers within the MWSS and environs "concession areas," the NGO Water For All Refund Movement (WARM) through its convenors Gloria Dalida and Rodolfo Javellana Jr., filed cases of syndicated estafa as defined under PD 1689 and Article 315 (b) of the Revised Penal Code before the Quezon City Prosecutor's Office against the principal shareholders and officers of the two concessionaires, Manila Water Co. and Maynilad Water Services. We are informed that a separate charge of plunder is also being contemplated against the same officials, as well as the officers of the MWSS and the MWSS Regulatory Office (MWSS-RO).

The complainants claim the two concessionaires have not refunded, up to this date, their allegedly illegal and unlawful collections from consumers that have reached as much as P6 billion as of December 31, 2011, and which were later declared as "refundable" by the MWSS board of trustees and even by the Regulatory Office.

The complainants alleged that these illegal collections were done to finance a number of critical projects including the Laiban Dam Resource Project and Angat Dam Reliability Project both of which have either been abandoned or consigned to the semi-archives sections in the meantime.

Charged were Maynilad Water Serviceshonchos Manuel V. Pangilinan (who is also Meralco chairman/CEO), Jose Ma. K. Lim, Victorico Vargas, Isidro Consunji, Herbert Consunji, Jorge Consunji, Randolph Estrellado, Augusto Palisoc Jr. and Lourdes Marivic Punzalan K. Espiritu and Manila Water Co. officials Jaime Zobel de Ayala, Fernando Zobel de Ayala, Gerardo Ablaza, Delfin Lazaro, Keichi Asai, John Eric Francia, Simon Gardiner, Ricardo Nicanor Jacinto and Loida Dino (formerly deputy MWSS administrator).

To bolster their complaint, the complainants attached documents from the MWSS and its regulatory body purporting to show that indeed the companies and their officers have failed to adhere to the orders and, worse, continue to disregard them by collecting and even increasing the set rates for the same abandoned projects.

We will soon see how this case develops but this early we are informed that similar charges—this time involving collections for the concession areas' sewerage systems—are also in the works. In fact,

the very concession agreements entered into between the MWSS and the concessionaires are now being scrutinized with the view to revising the same in response to mounting consumer complaints. The battle between the water tycoons, if we may call them such, and the consumers has just begun. Abangan.

We join the family, friends and constituents of Ilocos Norte Rep. and former rirst lady Imelda Romualdez-Marcos in wishing her a happy birthday and in praying for her to have more years of peace and service to God and our people.

"Tycoons vs Consumers: The battle over water ", 01/07/2012, online at:
http://businessmirror.com.ph/home/opinion/29318-tycoons-vs-consumers-the-battle-over-water

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❖ Global Insider: Cooperation on Middle East Water Remains Stagnant

Iraqi Prime Minister Nouri al-Maliki recently convened a meeting of Arab leaders in Baghdad to discuss cooperation on water issues. In an email interview, Annika Kramer, a senior project manager at the German think tank Adelphi, discussed the state of cooperation on water in the Middle East.

WPR: What is the current state of water management cooperation in the Middle East?

Annika Kramer: Cooperation in water resources management only takes place to a very limited extent in the Middle East. None of the main transboundary river basins in the region -- the Euphrates-Tigris, the Jordan and the Nile basin -- is governed by an agreement that includes all riparian countries, let alone by cooperation that follows the principles of international water law, especially the principle of equitable utilization. Instead, cooperation is often characterized by asymmetric power relationships and indeed very unequal allocation of water resources between riparians. In the Lower Jordan basin, for instance, Israel uses the bulk of the water, while Palestinians and Jordanians have to struggle with what is left; and in the Nile basin, the two downstream states, Egypt and Sudan, claim the right to use almost all of the Nile flows.

WPR: What initiatives are under consideration to improve water management cooperation?

Kramer: Several government-level initiatives exist in all of the three basins named above, but none of them have yet been successful in establishing comprehensive cooperation agreements or sustainable management of the basins' water resources. These initiatives often take the approach of starting cooperation through technical collaboration, exchange of know-how and data, and implementation of joint projects. The revitalized tripartite Joint Technical Committee between Iraq, Syria and Turkey, for example, plans joint training programs and exchange of hydrological information.

Cooperation initiatives also exist on the nongovernmental level, for instance, among experts, professionals and local communities. One example from the Lower Jordan basin is the Good Water Neighbors project that involves local communities in transboundary environmental projects. In the Euphrates-Tigris, a group of scholars and professionals from the three major riparian countries established the Euphrates-Tigris Initiative for Cooperation network, which prepares and implements joint capacity-building programs and research projects.

WPR: What factors are preventing greater regional cooperation on water issues?

Kramer: The above-mentioned initiatives have contributed, though to varying extents, to building trust and better understanding between people and sometimes government representatives from the riparian states. However, lifting technical cooperation and expert exchange to higher political levels to achieve substantive cooperation in crucial aspects of water resources management has proved difficult. One of the reasons for this is that governments often respond more to national agricultural lobbies -- with agriculture being by far the largest user of water in the region -- than to international demands for water. Another reason is that cooperation in water resources management is often determined by the overall political relationship between the riparian states. Given the current political developments following the Arab Spring, it is not likely that water cooperation in the Jordan basin or between Turkey and Syria will improve in the near future.

"Global Insider: Cooperation on Middle East Water Remains Stagnant", 29/06/2012, online at: http://www.worldpoliticsreview.com/trend-lines/12112/global-insider-cooperation-on-middle-east-water-remains-stagnant

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❖ Israel uses water as a weapon against the indigenous population

A local Palestinian official in the Negev desert, south of Palestine occupied in 1948, accused the occupation of using water as a weapon in order to displace people of Negev aiming to take control of their lands.

(**A**hlul **B**ayt **N**ews **A**gency) -A local Palestinian official in the Negev desert, south of Palestine occupied in 1948, accused the occupation of using water as a weapon in order to displace people of Negev aiming to take control of their lands.

The head of Regional Council for Unrecognized Villages (RCUV), Ibrahim Alwakili, said that Israel deliberately denies water supply to the Arab Bedouins in the Negev causing daily suffering for more than 70 thousand people.

Hundreds of unrecognized Palestinian villagers in the Negev, demonstrated, on Sunday, outside the Israeli water company "Mekorot" in Beersheba protesting against the raising of water prices in these villages, and for not providing a regular supply of water.

Alwakili told Quds press that only one or two out of one hundred requests filed by Arab citizens in the Negev to get water are accepted for racial reasons.

He also pointed out that the occupation authorities "sell water to the Jewish citizen at prices much lower compared with the high prices they sell it to the Palestinian people in the Negev."
He also confirmed that denying water to Arabs is not due to the water shortage but due to the Israeli racist measures because water mains pass under those Arab villages and next to them, for the benefit of Israeli settlements, but Arab villages are deprived regular water supply even when mains pass meters away from Arab homes.

"Israel uses water as a weapon against the indigenous population", 26/06/2012, online at: http://abna.ir/data.asp?lang=3&Id=324834

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❖ Landau: Israel's water crisis almost over

Water and Energy minister says Israel will overcome its water shortage over next decade; says 'by end of decade the water we'll all drink will be desalinated'

Water and Energy Minister Uzi Landau said Tuesday that the State of Israel will get through its water crisis in the upclong decade.

Speaking at the third annual convention for green economy, Landau said "water is an expensive commodity in our area, which is constantly at a state of a political-economic earthquake."
The minister said that Israel will soon get through the crisis, noting that the world's largest desalination facilities are being used by Israel, producing 300 million cubic meter of water per year.

"In two years, the State of Israel will produce 600 million cubic meters of water, while Israel uses some 1.2 billion cubic meters per year.

"By the end of the decade, desalinated water will flow from the western Mediterranean Sea to almost every house in Israel. By the end of the decade the water we'll all drink will be desalinated. We have yet to emerge from the water crisis, but we are on our way," Landau said
Commenting on the treatment of waste water, the minister stressed that Israel is devoting resources to deal with the issue and has managed to convince the Palestinians to treat their sewage.

"Donor states are collaborating on projects related to water purification and preventing contamination of underground water that is within the territory of the Palestinian Authority. I hope these will yield results soon," Landau said.

" Landau: Israel's water crisis almost over", 28/06/2012, online at: http://www.ynetnews.com/articles/0,7340,L-4247665,00.html

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❖ Palestine: Israeli army demolishes sheds, confiscates water tanks, in Wadi al-Maleh

On Monday afternoon Israeli soldiers demolished several sheds used by Bedouins in Wadi al-Maleh in the northern plains of the West Bank. They confiscated several water tanks used by the residents, in an attempt to force them to relocate and leave the area.

Local sources reported the several Israeli military Caterpillar bulldozers removed tents, sheds and tin houses in the area without allowing the residents to remove their belongings from the sheds, and told them that they should leave the area.

Furthermore, the soldiers confiscated several water tanks and took them to a nearby military base; the water tanks are used for drinking and for fulfilling the daily needs of the residents.

This most recent attack is part of systematic violations targeting the Palestinian Plains area for the benefit of settlement construction and expansion.

On Sunday, the army handed two residents in al-Aqaba, in the northern plains area, military orders informing them that their homes will be demolished under the pretext of being built ﷺwithout construction permitsﷺ.

In related news, soldiers destroyed electricity and phone poles in al-Aqrabaniyya, near the northern West Bank city of Nablus. The poles were destroyed as the army was conducting military drills in the area.

The head of the al-Aqrabaniyya village council, Ibrahim Daﷺabes, stated that several Israeli military vehicles were conducting training in the hills and valleys of the area, and that, besides destroying the poles, the army also bulldozed large areas of farmlands.

Daﷺabes added that this attack is one of dozens of attacks carried out in the area, and that the soldiers are deliberately destroying Palestinian property and lands in an attempt to push the

Palestinians out. The void created by their eviction would benefit of Israeli settlements and the military by giving them space to expand.

"Palestine: Israeli army demolishes sheds, confiscates water tanks, in Wadi al-Maleh", 27/06/2012, online at: http://www.muslimnews.co.uk/news/news.php?article=22701

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❖ PA says in talks with Israel over water shortages

BETHLEHEM (Ma'an) -- The head of the Palestinian water authority said Wednesday that discussions with the Israeli side were ongoing to increase quantities of drinking water without raising prices.

Israel seeks to increase the price of one cubic liter of water from 2.60 shekels to 3.70 shekels, which will cost the Palestinian treasury around 700 million shekels, Shadad al-Ateli said.

Al-Ateli told Voice of Palestine radio that Israel was not committed to water agreements under the Oslo Accords and the quantity of water the Palestinian side received this year was less than it received in 1995.

However he conceded that there were additional water problems being caused by poor management in Bethlehem. Officials are considering instituting a schedule for distribution to deal with shortages, he said.

In early June seven rural villages near Bethlehem endured about 15 days without running water. Local officials said the problem originated due to outdated agreements that do not account for population growth.

The Palestinian Authority is only able to use about 20 percent of West Bank water resources under the agreement with Israel. It is forced to buy extra supplies from Israel's Mekorot company.

Earlier this year the Palestinian water authority accused Israel of systematically destroying water infrastructure in areas under the control of Israeli armed forces in the occupied territories.

Water is one of the six final status issues to be resolved in any future peace agreement.

"PA says in talks with Israel over water shortages", 28/07/2012, online at:
http://www.maannews.net/eng/ViewDetails.aspx?ID=499287

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❖ Online agricultural network to link Israel, India

New initiative marks further step in program overseen by MASHAV.

Israeli and Indian government institutions will jointly launch an online communications network on Tuesday to provide instant contact between Indian farmers and Israeli agricultural technology experts.

The launch will occur simultaneously at the Agriculture Ministry, the Foreign Ministry's MASHAV program, the already existing Israeli-Indian centers of agricultural excellence in India, the Indian Agriculture Ministry and the Israeli Embassy in New Delhi.

"We are looking for more ways to communicate with the Indian teams," Efraim Ben Matityahu, MASHAV's director for international projects and public private partnerships, told The Jerusalem Post on Sunday night.

The online communications system is the latest development in an ongoing program between Israel and India, which Matityahu helped spearhead a few years ago, when he signed an agreement to establish centers for excellence to transfer technological know-how and agricultural skills to Indian farmers.

The first such center was launched in early 2011, in the state of Haryana near New Delhi, and is helping to catalyze the "transformation of Indian horticulture," according to Matityahu.

"This center actually represented the range of abilities in tech and know-how that is applicable to the Indian farmer," he said. "That was really a very successful launch."

Quickly, the Haryana center became a hub for training demonstrations and exhibitions for more than nine Israeli companies and has become "a magnet for many Israeli items of know-how and technology," Matityahu added.

"What is very interesting about the center in Haryana is that it really became a showcase for the whole region," he said.

More than 70 farmers living and working nearby the center have already emulated what they saw there, and have started revamping their agriculture based on the Israeli models – using tools like greenhouses, open field growth strategies and irrigation systems.

"It's a major coup because farmers are very traditional," Matityahu said.

The initial Haryana center not only contains a visitors and training area, but also has a farm of its own on around 10 hectares of land, he explained.

All in all 28 such agricultural centers of excellence have been planned in eight states across India, and four centers, including the original, are already active in Haryana and Maharashtra, where they host thousands of farmers and visitors, according to MASHAV. The two in Haryana showcase vegetables and fruits, while the two in Maharashtra focus specifically on "cluster" fruits – mangos and oranges – explained Uri Rubinstein, counselor for international cooperation for MASHAV at the Israeli Embassy in New Delhi. In mid-July a nursery workshop at a new center in the state of Rajasthan will also open, he said.

The Indian government has invested 90 percent of the funding in the excellence centers while the Israeli government has invested 10%, Rubinstein said.

"The Indians have a lot of knowledge by themselves," he said. "What we are now doing is fine-tuning."

Since Rubinstein is the sole on-theground emissary in India and the rest of the Israeli representatives fly back and forth frequently, a more ideal way of facilitating communication among all parties was through an Internet-based platform, according to Matityahu. The online network will be part of a permanent management platform that will eventually include an e-learning system for the farmers, he said.

"They will have a constant communication which will be visualized," Rubinstein added. "The experts will be obliged for three years."

The online communications will occur in clusters – in different agricultural categories – an idea for which Rubinstein is responsible. All of the Israeli government experts that participate as cluster advisers will be obliged to serve for three years in the online community, he explained. Meanwhile, the Indian agriculturalists will also be able to communicate among themselves through the forum.

Rubinstein emphasized just how important the cooperation on Indian agriculture is not only to the rural farmers there, but also to Israel's image. During a three-day open house at the center in Haryana, for example, he noted that 15,000 visitors came and were exposed to Israeli technology.

"Israel will not only be mentioned because of the army and religious problems that we have," Rubinstein said, stressing that Israel is contributing greatly to Indian agriculture and food security.

"This is a very nice showcase of the Israeli capacity and therefore we are cooperating very strongly with the Israel Export Institute in order to promote the Israeli brand in a sense, the Israeli image of agriculture," Matityahu added.

So successful have the Israel-Indian centers of excellence been thus far that during a visit to India last year, Rwanda's agriculture minister stopped at the Haryana center, after which she sent a letter to the Israeli government requesting a similar center in her country, Matityahu explained.

"Next month we are going to be in Rwanda building the center for excellence," he said.

"Online agricultural network to link Israel, India",Jerusalem Post, 28/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5313

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❖ Landau launches plan to restore Israel's streams

"If the Kinneret is the heart of the water sector, the rivers are its arteries," Landau says. "We want to see them flowing."

Energy and Water Minister Uzi Landau unveiled an extensive project by his ministry to rehabilitate Israel's rivers and streams at a Green Growth conference in Ramat Gan on Tuesday.

"If the Kinneret is the heart of the water sector, the rivers are its arteries," Landau said. "We want to see them flowing. And we will do what we can in order to make that happen."

As Israel has begun to depart from its water shortage crisis – with desalination and recycled water activities taking a stronghold – now is the time to repair the country's natural aquifers, Landau explained. The ministry is therefore working on a plan to significantly advance the rehabilitation process in a practical fashion. In the past two years, authorities have already begun to allocate both fresh and brackish (water with a salinity between fresh and seawater) water to Israel's streams, with 15 million cubic meters of fresh water added in 2011, as well as 8 million cubic meters of fresh water and 6 million cubic meters of brackish water already this year, Landau said.

A good model to work off of is the Yarkon River rehabilitation, and the Mekorot National Water Company is already leading several stream rehabilitation projects as is the the Sewage Infrastructure Administration in the Water Authority, according to Landau.

"The State of Israel owes nature between 1.5 and 2 billion cubic meters of water, which we pumped during dry years," Landau said.

Starting in two years, if all goes as planned, Landau said, Israel will return about 150 million cubic meters of water per year to its streams, so that in 10 years the debt can be eliminated.

The Society for the Protection of Nature, which has long been leading a campaign to return water to the country's rivers and streams, praised Landau's announcement.

"Today, in light of the growing quantities of desalinated water, the Society for the Protection of Nature believes that conditions have ripened for a national plan for the restoration of water to streams

and for their rehabilitation, with an emphasis on cooperation among the relevant ministries," a statement from SPNI said.

This cooperation will contribution to the "important and worthy goal of rehabilitating the streams after 60 years of neglect and drying, which caused fatal and sometimes irreversible damage to the rivers," according to SPNI.

Acknowledging that he had met with representatives of SPNI two weeks ago, Landau said that he intends to adopt their proposals as part of the ministry's plant to clear Israel's debt with nature, and he said he is open to hearing the suggestions of other organizations.

"I call upon all bodies and organizations to whom Israel's rivers are important, to join hands under our patronage for the huge undertaking of rehabilitating the rivers," he said.

On the same day as Landau's announcements, MK Amnon Cohen (Shas), likewise stressed the importance of "restoring the rivers for future generations," in a Knesset Internal Affairs and Environment Committee meeting. Cohen called on the government to establish an interministerial committee in order to promote a national program toward the rehabilitation streams.

Gidon Bromberg, Israel director of Friends of the Earth Middle East, praised Landau's intention to restore the water to Israel's streams and called the move "a positive step."

However, rather than just relying on the ever-increasing supply of desalinated water to fulfill Israel's needs, the government also must adopt a policy of water conservation and demand management, according to Bromberg.

In addition to discussing his plan to rehabilitate streams, the minister also emphasized the importance of advancing periphery sewage projects, with a special focus on communities in the Arab sector, to create proper sewage infrastructure for all communities and thereby help remediate the country's groundwater.

The Finance Ministry had assigned the Energy and Water Ministry a budget of about NIS 480 million for this enterprise, and in 2011, 81 projects were already budgeted for a total of NIS 355 million, according to Landau.

"This is environmental, this is equality, this is green, and this is advancing green industry," he said.

"Landau launches plan to restore Israel's streams", Jerusalem Post, 28/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5315

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❖ Israel to invest NIS 355m to improve sewers in Arab towns

Energy and Water Resources Minister Uzi Landau announced the allocation, but not before an environmental group warns that without regular budgets the systems will collapse again.

After years of neglect that has frequently led to the collapse of the sewerage infrastructure in Arab towns and the pollution of local streams, the government is allocating NIS 355 million for improvements to sewerage systems in Arab locales.

Energy and Water Resources Minister Uzi Landau announced the allocation on Wednesday. But environmental group Zalul warned that without regular budgets to maintain these systems they will simply collapse again.

In recent years the collapse of sewer infrastructure in Arab towns has caused serious pollution of streams and nature reserves, including Nahal Kziv and Nahal Beit Hakerem in the Galilee.

"The sewage project in outlying areas is important and we must stress the towns in the Arab sector," Landau told the Economic Conference on Green Growth in Tel Aviv. "The way we've neglected this leaves us with a bad feeling."

Landau said his ministry had reached an agreement with the treasury to increase budgets and grants for sewer systems and waste treatment plants in Arab towns.

Zalul, meanwhile, appeared Wednesday before the Knesset Interior and Environment Committee and suggested the creation of a fund that would be used to repair sewage problems in poorer cities that do not belong to any water or sewage corporation – mainly Arab towns in outlying areas.

According to the group, in recent years the state has spent NIS 7 billion on sewage pipes and treatment facilities, but because small cities don't have the budgets to maintain them, they collapse and some 20% of the wastewater ends up in local streams.

Some 400 sewerage malfunctions occur every year, resulting in the pollution of 71 streams. Often repairs aren't even expensive, Zalul said. The serious pollution of Nahal Beit Hakerem, for example, could have been prevented with a budget of NIS 8,000 a month, the group said.

Under Zalul's plan, the fund, to be financed from the budget of several government ministries, would maintain a list of contractors who would be obligated to fix and help maintain pipes and pumping stations.

Many Arab towns also have difficulty with garbage collection because they lack the funds. At a conference on waste recycling held Monday, Environmental Protection Minister Gilad Erdan said he was considering the transfer of a portion of the fees paid by local authorities for waste burial to Arab and ultra-Orthodox towns so that these could set up and maintain basic systems for collecting and sorting waste.

"Israel to invest NIS 355m to improve sewers in Arab towns", Haaretz, 28/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5325

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❖ Uprooting olive trees: Nature or politics?

Palestinian farmers say discrimination, not a concern for the land, are at the root of an order to uproot olive trees in a northern nature reserve.

One of the most complex challenges facing the Israel Nature and Parks Authority is finding the balance between protecting the nature in its reserves and allowing agriculture to flourish. This has become a particularly complicated issue in the Wadi Kana nature reserve in the northern West Bank, where the debate is not only focused on land, nature and the environment, but as is often the case in this country, it has become a question of politics.

Last week, residents of the Palestinian village of Deir Istya, including village council head Nazmi Salman, asked the High Court of Justice to halt an order to remove 1,400 olive trees from the nature reserve. In response to their petition, submitted through Attorney Alaa Mahajna, the court ordered that the removal be put on hold until justices have a chance to discuss the petition.

The Wadi Kana Nature Reserve, one of the largest reserves in the region, features typical Mediterranean woodlands, unique habitats centered on natural pools and privately-owned Palestinian farmland on which Palestinians have worked for generations. According to the bylaws of the reserve, the Israel Nature and Parks Authority must allow the continuation of all farming that was practiced on the site before it was declared a nature reserve in 1983.

Despite this, two months ago, the INPA and the Civil Administration ordered the Palestinians to remove their trees, because the authority said the trees represent a creeping expansion of cultivation at the expense of natural growth, which is being destroyed. In addition, the authority claimed that the Palestinians have built farming terraces and water diverting ditches.

“This type of damage, to the tune of millions of shekels, is being financed by special interest groups in the area,” wrote Yossi Wurtzberger, an aide to the director general of the INPA, in a letter addressed to Mahajna. He did not specify which interest groups were funding the work, but it seems he was likely referring to the Palestinian Authority.

The Civil Administration, in its response to Mahajna's request to halt the removal order, claimed that the planting of the olive trees caused heavy damage to the reserve, as it entailed clearing the ground for farming and installing irrigation systems. "The rules of conduct for nature reserves state that one cannot bring any plant into reserves that is likely to propagate, in order to protect existing natural values." The director general also said that INPA inspectors do not keep owners of agricultural land from farming species that existed in the reserve prior to 1983. "This arrangement is not unique to Judea and Samaria. It is the law of every nature reserve in Israel where there is privately owned land," he added.

In the petition he submitted to the High Court after receiving these official responses, Mahajna notes that the INPA failed to provide any factual basis that proved the olive trees had caused environmental damage. According to him, installing irrigation systems and constructing terraces have nothing to do with planting olive trees.

"Throughout the reserve there are dozens, perhaps hundreds, of acres of orchards and cultivated land preserving the authentic landscape of the wadi and the natural values of this place," Mahajna wrote in the petition. "The only reason that the olive trees were ordered removed and other cultivated species were not is that these are relatively new and their owners decided to reassign usage of their farmland from one species to another. "In other words, the heavy damage to the reserve is not the least bit heavy." On the other hand, according to Mahajna, uprooting the trees represents unwarranted harm to private Palestinian property.

The High Court of Justice will have to address the political aspect of managing the reserve, since it was brought up by both sides. The INPA referred to it when it hinted that special interest groups connected to the Palestinian Authority were funding the planting, whereas Mahajna's petition accused the Civil Administration and the INPA of discriminating against Palestinians.

"Within the Wadi Kana Nature Reserve there are dozens of permanent structures built without permits, not to mention other encroachments on reserve land perpetrated by settlers on a daily basis, and no steps are taken against them," the petition stated. "The order issued represents illegitimate discrimination on the grounds of nationality. When compared to the Jewish settlers living in the

settlements and outposts near the reserve, there is no equality in the application of various means of enforcement against Palestinians."

In addition to the olive tree issue, there is a seemingly symbolic matter that has yet to be addressed by the Civil Administration and the INPA, which prompts questions about their claim that the Wadi Kana Nature Reserve is meant to be "a meeting place in the midst of nature for the whole population, both Jews and Arabs." The sign at the entrance to the reserve is written in Hebrew and English, but not in Arabic.

In response to a query about the sign posed by Haaretz about six months ago, the Civil Administration promised that Arabic would be added. Since then, administration personnel and INPA inspectors have found plenty of time to monitor Palestinian plantings closely, but they still have not managed to keep their pledge to add Arabic to the sign.

"This was a mistake, and we will fix it," promised Moti Shefer of the INPA this week. "All the nature reserves in Judea and Samaria having signs in all three languages."

"Uprooting olive trees: Nature or politics?", Haaretz, 28/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5327

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❖ Gov't publishes int'l bid for Kishon River mud cleanup

Tender involves excavating contaminated bottom layer of riverbed and then purifying the contents.

Cleaning the murky mud of what was once the nation's most polluted riverbed is now up for international auction, the Environmental Protection Ministry announced on Sunday.

As part of a three-year Kishon River cleaning project being overseen by the joint forces of the Environmental Protection Ministry, the Kishon River Authority and the Kishon Drainage Authority, the organizations involved published an international tender on Saturday in The Economist magazine calling for the excavation and cleaning of the river's floor. The tender, which was also published in the Israeli press on Sunday, involves excavating the entire contaminated bottom layer of the riverbed that accumulated over the course of decades, and then purifying the contents, the ministry said.

Excavation will be occurring over a length of seven kilometers and a depth of two-and-a-half meters, with workers sucking the contaminated sediments into a sealed pipe that will relay the materials to a special site for biological treatment delivered in an eco-friendly manner, according to the ministry. After the treatment, the soil will be carefully monitored to ensure it is indeed free of pollutants before it is returned to the Kishon region to be used as soil for a future metropolitan park.

This will be the first time that the Jezreel Valley's Kishon River will have faced such a rigorous cleaning since the 1930s, the ministry said.

The weekend's international tender follows another bid for the Kishon River published last week, which involves earthworks, as well as sealing and diverting the current path of the stream.

Prior to publishing the two bids, the organizations arranged an informational conference open to the public in the presence of Environmental Protection Minister Gilad Erdan, who detailed the procedures to the community, according to the ministry.

The Kishon River Authority emphasized that the newest tender was part of an expansive, advanced rehabilitation process for the stream. "The floor-cleaning project of the Kishon from pollution is part of the process, which also includes a stoppage and treatment of pollution sources, a supply of water

to the stream, conservation and restoration of habitats along the stream and the establishment of parks and river trails – subjects that the Kishon River Authority promotes," the authority said in a statement.

The Kishon River was once considered the most polluted river in Israel, but through advanced rehabilitation processes in recent years, the body of water has seen the return of fish, river turtles, birds and rare plants, the ministry said. The stream's dangerously high pollution levels were attributed to nearby chemical plants, and beginning about a decade ago, doctors discovered an unusually high presence of cancer in IDF veterans that had trained in the river.

"This is a historical project after whose conclusion the public can enjoy a clean river and an expansive park," Erdan said. "We are repairing the injustice of the past that caused river pollution for decades."

At the end of the process, the public will enjoy a clean and reconstructed stream that will be available for water sport activities, including boating, the ministry explained. "One of the main goals of the project is to enable the use of the stream and its waters for recreational activities, and at its completion, an ecological restoration of the treatment site will be implemented," the Kishon Authority said.

"Gov't publishes int'l bid for Kishon River mud cleanup – Jerusalem Post", 25/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5298

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❖ UN cites Israeli wastewater treatment plant as global model

Dan Region Wastewater Treatment Plant, or Shafdan, praised by UN for its unique method of using sand to naturally filter treated sewage.

The Dan Region Wastewater Treatment Plant is among 30 projects from around the world chosen by the United Nations, to demonstrate the ability of local authorities to deal with environmental problems.

The plant, known to Israelis as Shafdan, was included on the list thanks to its unique method of using the natural filtration qualities of sand in order to improve the quality of sewage. After wastewater is purified in an ordinary facility, it is recharged into the ground, where it undergoes an additional, natural filtration in the sands of Rishon Letzion and Yavne. This improves the quality of the water such that it can ultimately be used safely for all forms of irrigation.

The list of projects was published in a special report of the UN Environment Programme and ICLEI, an international association of local governments that have made a commitment to sustainable development.

The report, which deals with the environmental challenges facing cities, was published last week, ahead of the UN Conference on Sustainable Development that was held in Rio de Janeiro.

Urban areas comprise only 1-2 percent of the area of the earth's surface, but they cause the emission of almost 80 percent of greenhouse gases. Today about half of the world's population lives in urban areas, and the forecast is that this figure will increase to over 60 percent within a decade.

According to the authors of the UN report, local authorities have the ability to get organized and to deal with a variety of environmental problems without being dependent on federal assistance. The 30 examples they provide are from from all over the world, including developing and poor countries.

The Shafdan plant that was named on the list belongs to the local authorities in the Dan region, but Mekorot, the national water company, is responsible for administering and carrying out the purification process.

Recently the company began to develop even more advanced methods of purifying the sewage before recharging it into the sand. This is necessary because despite the benefits of the current purification process, it was discovered that when the wastewater is recharged into the ground after undergoing only primary purification, it damages the soil that it reaches before it hits the sand.

As a result of that damage, experts have been forced to seek new areas where they can purify the wastewater, which are not easy to find in such a densely populated area.

The new method is designed to enable more efficient use of areas where the purified sewage is already being recharged into the soil. Today Mekorot pumps 130 million cubic meters of purified sewage water into the area of the sands. The water is almost equal in quality to drinking water, and is used for irrigation in the Negev.

The company points out that the new method of purification and filtration will also make it possible to remove polluters such as remnants of medicines, that until now were not removed in the purification process.

Among other notable projects in the report were: Water Smart Parks in the city of Stirling, Australia, where park planners used advanced irrigation methods to reduce water consumption by more 80 percent.

In Pangkal Pinang, Indonesia, the municipality and a private firm created a cooperative venture that turned an area that had been used as a zinc mine into a botanical garden.

An interesting innovation in the city of Portland, Oregon set an "urban growth boundary" beyond which building is forbidden. In order to meet this restriction the municipality developed more efficient methods for utilizing existing construction areas.

"UN cites Israeli wastewater treatment plant as global model – Haaretz", 25/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5303

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❖ Israeli Forces Shut Down Agriculturally Used Water Spring

NABLUS, June 24, 2012 (WAFA) – Israeli forces Sunday destroyed a water spring, which residents of Ein Shalabi, a village in central Jordan Valley, depend on to irrigate their crops and land, according to a local activist.

Ghassan Douglas, in charge of settlements file at the Palestinian Authority in the northern part of the West Bank, said forces shut down the spring, preventing the flow of water.

Douglas warned of the danger of these measures, as they deprive a number of communities in the Jordan Valley from water supply.

This is the second time Israeli forces destroy the spring.

"Israeli Forces Shut Down Agriculturally Used Water Spring – WAFA", 25/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5305

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❖ Theft, vandalism depriving citizens of water

AMMAN — Water theft and vandalism of water sources are rising alarmingly and becoming the main obstacles to supplying the public with sufficient water, Minister of Water and Irrigation Mohammad Najjar said on Saturday.

"Violators now not only steal pumping equipment, but are also stealing water from main water networks and carrying out deliberate vandalism by setting pipes made from inflammable materials on fire," Najjar said at a press conference.

A total of 28 violations on the Kingdom's main water networks were recorded by mid-May this year, the minister noted, underscoring that water theft and vandalism of water networks leave scores of households without water for weeks and cause the ministry to incur huge financial losses.

The ministry registered 52 violations in 2010 and 50 last year; if the current trend continues, he added, the number is set to rise this year.

"Fixing violations to the networks and water resources this year has cost the ministry JD105,300. Pumping from 50 resources remains suspended because additional funds, around JD300,000, are required to fix them," Najjar highlighted.

If violations continue, he warned, more water will be lost, while the ministry will lose between JD700,000 and JD800,000.

"The ministry cannot afford to continue spending funds on fixing vandalised resources because of its critical financial situation. The ministry is going to borrow JD50 million to pay for its obligations," Najjar said.

The money will be borrowed from the Social Security Corporation and will go towards paying the ministry's debts to the National Electric Power Company, the Jordan Petroleum Refinery Company, contractors, suppliers and consultants, he explained.

The ministry is deploying more guards to protect its water resources, he said, but it cannot completely prevent violations unless the public cooperates.

"We call on people to report any infringements. By doing so, they will be protecting their own right to access sufficient amounts of water," Najjar stressed.

Disi Project

Meanwhile, implementation of the Disi Water Conveyance Project is progressing, with 83 per cent of the project completed, the minister told reporters.

"We are certain that the Disi project will be completed on time mid-next year to provide the capital with around 100 million cubic metres of water annually," Najjar noted.

The Disi project, which started in 2007, entails drilling 64 wells, 55 of which will be used for the generation of water, while nine will serve as piezometer wells to measure the elevation of water.

Being carried out on a build-operate-transfer basis and implemented by Turkish company GAMA, the Disi project seeks to provide the capital with 110 million cubic metres of water annually via pipeline, which starts at the ancient Disi aquifer in southern Jordan and ends in Amman, passing through several water stations in Maan, Tafileh, Karak and Madaba.

"Once completed, water supply in Amman and Zarqa will be improved. People will start receiving continuous water supply instead of once every week under the water distribution programme," Najjar said.

Under the distribution programme, households in Jordan receive water once during a set period, usually a week to 10 days, on a rotating basis.

Scarce water resources in the country compelled the Kingdom to initiate the programme in the early 1980s to conserve limited resources and ensure a sustainable water supply for subscribers.

He noted that the ministry is replacing several dilapidated water networks in Amman in preparation for receiving water from the Disi project.

"In addition, a meeting will be held soon with government and security agencies to protect the Disi conveyor from violations because it is a costly and a precious project," Najjar highlighted.

Water tankers

Also yesterday, Najjar called on the public to verify the source of water purchased from water tankers.

"To ensure the water you buy from tankers is clean and safe, ask the owner of the tanker to provide you with a receipt that shows the source of the water," the minister said.

If the owner of the tanker provides customers with a receipt, it indicates that the water is from a Jordan Water Authority well or another source certified and approved by the authority.

"If people purchase water without being sure about the source, I urge them to boil the water before using it," Najjar noted.

Since the start of the year, the Rangers have recorded 140 instances of tanker owners selling water that was unfit for human consumption, according to the minister.

"Theft, vandalism depriving citizens of water — Najjar – Jordan Times", 25/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5307

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❖ Amal, Hezbollah to form subcommittees to follow up water, electricity crises in South

BEIRUT: Officials from Hezbollah and Amal agreed Monday to form subcommittees to follow up on the deteriorating electricity and water situations in various areas of south Lebanon.

At a meeting in the southern city of Tyre, which included State Minister Mohammad Fneish, MPs Ali Khreis, Ali Bazzi, Hasan Fadlallah and Ali Fayyad, participants agreed to form subcommittees in the area and facilitate the contribution of municipalities in reducing the extent of the crises for two months by turning on available power generators, according to a statement from Hezbollah.

Southern residents have protested for several weeks over the harsh power rationing in the region along with water shortages as a result of the long hours of electricity cuts.

During the meeting in Tyre, the attendees assessed the problems facing both the electricity and water sectors put forward by southern municipalities.

They also agreed to benefit from available resources and prevent violations and problems facing the state-run water and electricity companies that obstruct their operations.

The participants also called for the establishment of a committee of municipality members to implement what was agreed upon during the meeting within 10 days

"Amal, Hezbollah to form subcommittees to follow up water, electricity crises in south – Daily Star", 25/06/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5292

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❖ Desalinated water could help quench a thirsty Egypt

Desalinated water could offer Egypt a secure source of potable water, as concerns over future access to water increase, experts say. Countries in arid regions facing scarce water supplies have increasingly turned to desalination, which can turn seawater into drinkable water.

In Egypt, dozens of desalination plants are already used by tourism resorts with limited access to water and the industrial sector. Despite currently making up less than one percent of Egypt's total water production, experts say desalinated water should be a vital component to Egypt's future water security.

"Water desalination is one of the important technologies we need to think about because there is an increasing water deficit, and with all that is going on in Africa, desalination could be one of the most important aspects [for water security]," said Abeer Shakweer, an adviser for the Ministry of Communications and Information Technology who has been researching water desalination.

Egypt relies mainly on water from the Nile to support its population, but experts warn that factors like growing population, economic development in Egypt and the Nile Basin countries, increased pollution and climate change are likely to drastically reduce Nile resources.

With increasing pressure from upstream countries to change the water sharing treaty that provides Egypt with the bulk of water usage rights, the government is already looking to alternative sources of water, including recycled water, non-renewable groundwater reservoirs and desalination.

Water desalination plants have long been utilized by tourist resorts in the Red Sea, where little fresh water is available. More recently, desalination plants have sprung up in the North Coast catering to resorts and industries. Over 40 percent of Egypt's desalinated water is used by the tourism sector, and roughly 20 percent is utilized by the industrial sector, according to a 2010 report by the Center for Future Studies (CSF), a think-tank at the Cabinet's Information Decision Support Center.

In Egypt, most desalination plants rely on a technology called reverse osmosis to produce potable water or a second process known as multi-stage flash distillation. In reverse osmosis, seawater is

pressurized and put through a series of membranes which remove the minerals dissolved in the water. In multi-stage flash distillation, plants boil the seawater and collect the steam as potable water, or water fit for municipal uses.

Though the energy demands of these processes previously kept costs high, new technology is quickly reducing the price tag. According to the Ministry of Water Resources and Irrigation, it costs between LE4.50 to LE9 per unit of desalinated water, higher than the global average.

"The energy needed to produce the water factors into the expense heavily," said Salah Rashad, the sales manager for Egypt at Metito, a water management and water desalination company that has been working in Egypt for over two decades.

Costs are higher because instead of relying on large-scale operations, most desalination plants are small-scale, producing water only for surrounding areas. "Before desalinated water was very expensive, but with new technology, the costs should continue to be reduced," he added.

For desalinated water to be a feasible source of water in Egypt, its costs must be reduced by 20 percent in the short term and 50 percent by 2030, according to a 2010 report by the CFS.

To reduce costs Shakweer says more attention must be paid to manufacturing the technology in country. Presently, all of the equipment is imported from manufacturers abroad.

"We need to try to localize different technology, which would reduce the cost, allow us to enhance the Egyptian industry, and have complete control over water resources [in terms of producing water]," said Shakweer.

Indeed, experts urge the Egyptian government to focus on utilizing renewable energy such as solar or wind power to help reduce the energy costs alongside creating a manufacturing industry.

"Given that both renewable and desalination technology is abundant, and getting cheaper all the time, it has huge potential," said Reham Mohamed Yousef, an economic researcher at the CFS, adding, "So why not use an abundant energy like solar to help solve a problem like access to water? Solar energy remains a largely untapped technology in Egypt."

But, there are drawbacks: seawater desalination creates a harmful brine byproduct. Classified as "industrial waste" by the US Environmental Protection Agency, the brine is commonly flushed back into the sea. In large amounts, the brine damages marine life and the surrounding ecosystem.

According to Rashad, it will be important to recycle the byproduct for industrial purposes to reduce overall water consumption and lessen the environmental impact. To negate the risk to sea life, Metito stores the brine in reservoirs, Rashad added. But, future technologies may be able to reduce the amount of byproduct the desalination process produces.

There are no specific regulations monitoring the desalination process, though the plants are subject to the country's environmental laws. As the industry grows, however, Shakweer says, legislation should focus on localizing the technology, development and easing the path for investors.

"Desalinated water could help quench a thirsty Egypt", 26/06/2012, online at: http://www.egyptindependent.com/news/desalinated-water-could-help-quench-thirsty-egypt?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=0ceb2e9dcf-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Managing the Water-Land-Energy Nexus for Sustainable Development

We live in the Anthropocene[1] in which humans have become a major force shaping the environment. Rising incomes and reduced poverty have coincided with the growing demand for goods and services, such as food and energy, which in turn has increased the pressure on natural resources and ecosystems leading to their over-exploitation and degradation. Climate change adds to this predicament, as several climate adaptation and mitigation measures such as irrigation, desalination, or biofuels, are also resource intensive.

In a recent attempt to quantify the limits of global resources, the Planetary Boundaries framework,[2] a critical environmental threshold beyond which rapid and unexpected systemic or "regime" shifts may be triggered, was developed. This framework tries to establish global limits for water, land, and energy use (atmospheric carbon dioxide concentration as a proxy), and for other natural resources, such as nutrients or biodiversity.

Current demand and resource use trajectories are threatening to undermine the inclusiveness and sustainability of development. For example, by 2050, the Food and Agriculture Organization (FAO) projects a 70 per cent increase in food production,[3] and the World Energy Council (WEC) projects a 100 per cent increase in energy supply.[4] These trajectories must be curbed by more efficient use of resources and reduced wastage, as well as demand management.

The priority must be to address current water, energy, and food insecurity in particular, of the world's poorest, to provide a healthy diet, safe water, and access to modern energy for all, going beyond the Millennium Development Goals (MDGs). However, this goal should not only be pursued at the household level, but also at the industrial development level to enable economic development for all countries. Meeting these additional demands in closing these gaps poses even stronger resource challenges.

It is likely that the Rio+20 Conference will launch a process to identify Sustainable Development Goals (SDGs)[5] which would meet both these social and environmental challenges: staying within the

environmental "ceiling", or planetary boundaries, and the socio-economic "floor",[6] which, combined, define a safe and more equal operating space for humanity. When developing these SDGs, it will be important to recognize the interactions and feedback among planetary boundaries and among SDGs, and also between planetary boundaries and SDGs. For example, efforts to attain food security need to be water, land, and energy smart, which is not generally the case for agricultural intensification; efforts to achieve energy and climate protection goals need to be water and land smart, which is often not the case for renewable or non-conventional energy; and efforts to reach water goals need to be energy and climate smart, which is not the case for desalination or water transfers.

This nexus angle is particularly important given the strong links between sectors, i.e., agriculture, water, energy, environment, which are likely to get even stronger so that externalities across resources become co-constraints of sustainable development. For example, in Jordan, 25 per cent of all electricity is consumed for the supply of water, primarily the pumping of water. In the United States, power generation accounts for about 40 per cent of all water withdrawals. Large scale water transfers in China intended to mitigate water scarcity are energy intensive, partially depending on hydropower which, due to evaporative losses from reservoirs, contributes to water scarcity.

Hence, systemic thinking and integrated solutions—the nexus approach—need to guide the development and implementation of SDGs. In fact, the real innovation of SDGs may be in exactly that—their conjunctive development—given that most of the individual goals were already formulated in the past in one way or another. The nexus approach also needs to inform the emerging national green economy roadmaps, so that the resulting efficiency gains can help keep the cumulative effect of all national development agendas within the planet's safe operating space.

Understanding the Nexus: How to Take a Nexus Approach

The importance of cross-sectoral links for increasing overall resource use efficiency applies at all levels, from local to national and even global.[7] The scientific community is beginning to further refine and map planetary boundaries, and it is also looking at how they are interlinked. Recent work that addresses bilateral links includes the global mapping of:

• water availability and productivity constraints in food production, by LPJmL/WaterSim, which reveals that water productivity, expressed in kilo calories produced per cubic metre of water consumption, varies between countries by an order of magnitude depending on crop mix, agricultural management, and climate;[8]

• combined water and land constraints in food and bio-energy production by the State of the World's Land and Water Resources for Food and Agriculture project of FAO,[9] which shows that the most severe co-constraints are in parts of China and India; and

• water constraints in power generation by World Resources Institute (WRI), which reveals, for example, that 17 per cent of global power plant design capacity is located in areas of high water stress.[10]

By consistently integrating these existing assessments, we can develop global scenarios for a new nexus approach, which will complement and advance the work of previous outlooks, such as those of the United Nations Environment Programme, the Organisation for Economic Co-operation and Development, FAO, and the World Energy Outlook. This will enable us to map current and future hot spots of available resources and resource productivity across sectors. From such "nexus maps" we can identify the potential to reduce overall resource use by improving the configuration of production patterns and sourcing of inputs, including opportunities associated with trade and foreign direct investment. For example, electricity trade schemes can promote hydropower generation in locations with low water loss and/or high water availability, as in the Nile Basin Initiative, and foreign direct investment can provide knowledge and technologies for co-production of biofuel and food/feed for improved water and land productivity.[11]

Such a model-based, top-down approach to the nexus needs to be developed alongside a bottom-up approach, in order to build a knowledge base on best practice, policies, and solutions.[12] Because these nexus solutions have to be driven by individual institutions, additional incentives and mechanisms need to be established to bridge institutional and sectoral silos. This will reduce negative externalities of short-term sectoral optimization and instead build long-term systemic resilience,[13] reduce total demand for resources, and decouple development from resource use. Only then can we meet the

challenges of the "great acceleration" and achieve a transition to sustainability that delivers for the poor.

Nexus Solutions

While the nexus principles outlined above are universal, solutions need to be context-specific, and SDGs need to be interpreted to suit the local situation. Developing, transitional, and industrialized countries each require different nexus approaches, including addressing large differences between and within countries in terms of consumption patterns and resource use intensity, leading to new solutions.

For low income countries, the highest priority is to simultaneously close the large water, energy, and food security gaps, which are related to low resource productivity, in particular, to yield gaps in agriculture. These gaps often increase by natural resource degradation, in combination with rapid population growth and weak institutions. Hence, integrated knowledge and technologies are key for sustainable intensification. Green growth in developing countries will continue to depend largely on agriculture. For example, a nexus approach to water, land, ecosystems and energy in the Naivasha basin in Kenya has led to new solutions, including payments for ecosystem services which provide economic incentives for improved resource management.[14]

Emerging powers, with their rapidly growing economies, a doubling of gross domestic product (GDP) over a 10 to 15 year period, and rapidly growing population and per capita demands, have to embark on more resource efficient development trajectories. The trend in China, India, the Middle East, and North African countries to increasingly solve their resource constraints through better endowed regions, in particular South America and sub-Saharan Africa, must not slow down local nexus solutions within those countries. For example, in Gujarat, India, which is severely constrained in per capita availability of water and land, the so-called Jyotirgam scheme for improved energy access for households and irrigation (water pumping) has significantly reduced groundwater over-exploitation. Through an integrated approach, this scheme has increased energy and food security and has raised Gujarat's GDP growth above that of the rest of India.[15]

Industrialized countries with their high per-capita resource demands and large external resource footprints (also externalizing resource degradation) will have to reduce consumption levels and wastage. They will also need to mainstream nexus approaches into economic and development cooperation, share innovative technologies, for example on modern renewable energies, and link nexus-conscious institutions with other countries. For instance, Australia's Carbon Credits Act, which provides incentives for afforestation to sequester carbon, and its National Water Initiative, which restricts water intensive afforestations, can be integrated through landscape zoning according to water availability.[16]

The private and public sectors and civil society have different but complementary responsibilities when implementing nexus principles (ERD 2012). The public sector coordinates, sets the regulatory and incentive framework, and spends public funds. It also needs to make policy more coherent across institutions and sectors—policy on agriculture, environment, land use, energy, and climate—while maintaining strong sectoral capacity. Meanwhile, the private sector should drive innovation for more efficient resource use and for sustainably increasing resource supply. If, for example, wind energy can be used to desalinate seawater or brackish water, some drylands may become highly productive in irrigated food production, and/or become carbon sinks. Supply chains, which are largely in the hands of the private sector, need to be managed as "supply nets", in which cross-resource optimization takes place, from production to consumption. Such a supply-net approach, which is facilitated by the generation of more comprehensive nexus knowledge and also appropriate pricing of inputs, can further reduce total resource use through smart sourcing of inputs according to the availability and productivity of resources.

Green agriculture, agro-forestry, and other multi-functional production systems apply a nexus approach for sustainable intensification by reducing external inputs, reusing waste products, and generating co-benefits. In doing so, biomass production can become a central element of a bio or green economy. The co-benefits of such an ecosystem approach can go even further when land is rehabilitated to simultaneously increase productivity and resilience.

While additional capacity would be required for a nexus approach that integrates sectors and enhances cooperation among institutions, we expect that in many cases the resulting transaction costs

would be lower than the benefits gained from the reduced trade-offs and additional synergies that the nexus approach would generate.

There is now a strong momentum behind the nexus concept, which combines various sustainability principles that have been developed since the 1972 Stockholm Conference on the Human Environment. The international community, policymakers, practitioners, and scientists can jointly build on the concept in their search for tangible Rio+20 outcomes. As expressed in the MDGs, we suggest that integrated SDGs can align the need for human security with the need to remain within planetary boundaries.

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❖ Ensuring the security of water, 'a strategic commodity on par with oil'

The creation of a strategic reserve of 26 million cubic metres of fresh water in the Empty Quarter is part of a major drive to ensure that the UAE always has enough to meet its needs.

Of all the grand schemes intended to secure Abu Dhabi's future, the one that is just coming to fruition now is also the least likely to be noticed.

It doesn't promise a spectacular perforated roof like the Louvre Abu Dhabi, or the futuristic profile of the Louvre's Saadiyat stablemate, the Guggenheim. Instead the only outward sign of this $500 million (Dh1.83bn) project is a network of more than 300 pipes emerging from the desert in the Empty Quarter.

And, instead of the familiar prospect of pipes being used to pump a valuable commodity out of the ground, here something potentially even more valuable has been put into the ground: 26 million cubic metres of desalinated water.

While refilling an ancient aquifer to create a strategic 90-day reserve of drinkable water might not be a headline grabber, it reflects the assessment that the UAE's heavy reliance on desalinated water has also created a national security issue.

By this summer, the aquifer will be full once more. It ends a scenario where if something had happened to Abu Dhabi's desalination plants - through either natural or malicious causes - the emirate would have run out of water within days.

The scheme reflects just one facet of the difficult balancing act played by the UAE on water issues. Decades of desalination has slightly exacerbated the natural process by which the Arabian Gulf off the UAE's west coast has become up to one and a half times as saline as average seawater.

The UAE also faces tough choices about whether the food security provided by the agriculture industry outweighs the cost to the environment, since the sector is the overwhelming cause of the increasing degradation of the nation's natural groundwater - both through increased salinity caused by

overuse and through contaminants leaching into the water table - but contributes little to GDP or to the employment of Emiratis.

An equally difficult decision is how much to charge for water. The failure to reflect the true cost, either financially or environmentally, helps explain why water consumption in the UAE - and Abu Dhabi in particular - is among the highest in the world.

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"Water is a strategic commodity on a par with oil - maybe even more important," according to Mohammed Tayie, a hydropolitical expert from the University of Cairo who spoke at a water and food security conference in Abu Dhabi earlier this year.

It was a theme repeated by most of the experts at the event: a secure supply of water is essential to the smooth functioning of all GCC countries.

It's a lesson also appreciated far beyond the shores of the Arabian Gulf. In 2007, the United States decided to assess whether it faced national security issues through threats to its allies' infrastructure.

There was a special focus on the Middle East and particularly on Saudi Arabia.

The US embassy in Riyadh described the vulnerability of the eastern Saudi oil production facilities as "an Achilles heel for US strategic interests in the Kingdom ... not to mention US economic security in general" because even partial disruption would have "a devastating impact on the US national economy".

But after the Abqaiq oil and gas separation plant ("the world's most important petroleum facility"), the Saudi installation deemed the next most important to US interests was the desalination plant at Jubail.

"The Jubail desalinisation plant provides Riyadh with over 90 per cent of its drinking water," the embassy reported. "Riyadh would have to evacuate within a week if the plant, its pipelines, or associated power infrastructure were seriously damaged or destroyed."

The US diplomats' assessment of the risk to the Saudi desalination plant cite potential attacks by either Iran or Al Qaeda.

The threats are far from hypothetical. An Al Qaeda group unsuccessfully attacked Abqaiq in 2006, and during the invasion of Kuwait, Iraqi forces unleashed an oil slick with the intention of closing down the Jubail desalination plant. The oil slick was prevented from reaching the intakes by US army engineers.

The US embassy in Abu Dhabi conducted a similar study, which cited the fact that Abu Dhabi sourced 40 per cent of its water - and effectively all its drinking water - via desalination, at a cost at the time of about $1 per cubic metre. The balance, sourced by treating wastewater or drawing from aquifers, is mostly used for landscaping and agricultural use.

The UAE has also faced serious impacts on its desalination capacity, including four oil spills between 1994 and 2001. The red tide algal bloom on the east coast in 2007 and 2008 also affected water production.

The Water and Food Security in the Arabian Gulf conference, hosted by the Emirates Centre for Strategic Studies and Research, was told the potential risks to the UAE's desalination plants are complex.

Hussein Amery, a Middle East water management expert at the Colorado School of Mines, said there was a lack of feasible options for the southern Arabian Gulf nations.

"You don't need a highly paid consultant to tell you that desalination is the destiny for the GCC countries," he said.

The only other alternative was to import water from nearby countries, such as Turkey and Pakistan, but the option was rejected in part because it created a reliance on foreign governments. He said Kuwait and Qatar had also looked at importing water from Iran but dropped the idea.

"Water imports are somewhat risky. Desalination is significantly safer [because] it maximises a state's autonomy. It's an issue, trying to fight critical dependency on other countries. That's what the

Gulf states are doing. By and large, they have been moving in the last two to three decades towards greater reliance on desalination.

"It comes with its own risks. It's definitely an issue but what options do you have?"

Tayie, the hydropolitical expert, said national security meant taking a wider view of the threats.

Among the risks of conflict with Iran over its nuclear development programme is that one of its facilities is located near the Arabian Gulf and has the potential to impact on the UAE's desalination capacity, Tayie said.

"We look at Iran and the plant sited on the other side of the Gulf. We're talking about the potential attacks, in certain pessimistic scenarios how much it will lead to contamination of water because of nuclear particles. This raises the bar of concern." Professor Seetharam Kallidaikurichi, director of National University of Singapore's Global Asia Institute, described the UAE as being in a unique position.

"Unlike other countries which don't have the finances to solve the problems, here money isn't a problem," he said. "They have a physical scarcity which they can solve by an expensive solution. Looking at the bigger picture, food and water security are important."

He said Singapore, which shared the UAE's traits of being small and prosperous, had faced similar issues. It had contracts to import water from neighbouring Malaysia but had moved to become entirely self-generating, through a mix of desalination and a drive to recycle waste water.

"There's a huge opportunity to show leadership and to solve the water and food problem," he said.

Waleed Al Zubari, professor of water resource management at Bahrain's Arabian Gulf University, said water security extended beyond the boundaries of the GCC nations because disputes in the Nile, Jordan and Euphrates catchments - including the possible failure of states - will affect the region.

"Any imbalance in the Arab world will affect us. We should take this issue into account," he said. "The management of water resources in the GCC in the last three decades has been one of when there is increased demand, a new [de]salination plant is built."

Climate change is likely to exacerbate the issue, Dr Al Zubari said. "Maps show 15 models of what might happen in the world in the future and the 15 agree that the region will become more arid, with a reduction of rainfall by 20 per cent.

"We don't know [for certain] what will happen but all these models have ended up with the same result: drier with higher temperatures."

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With no rivers of any kind in the southern Arabian Gulf states and with restricted inflow from the over-extracted Euphrates and the rivers of Iran, for every litre of fresh water that flows into the Arabian Gulf, seven are lost to evaporation.

That is the primary reason why the Arabian Gulf is naturally more saline than the Indian Ocean, but in the 60 years since the region's first desalination plant was built in Kuwait, salt levels have increased. Although the rise in salinity due to evaporation is still several orders of magnitude greater than that due to desalination, the latter exacerbates the natural process.

The UAE now has more than 25 plants and a new one was commissioned last month at Mirfa, nearly doubling the capacity of the town's existing plant to approximately 225,000 cubic metres of water per day.

In the open ocean, seawater is generally 35 parts per thousand (ppt) of salt but in the Arabian Gulf that figure is frequently 50 ppt near the desalination plants, which return a strong brine after extracting fresh water.

As well as brine, anti-scaling chemicals such as phosphonates or polycarboxylic and polymaleic acids (used to prevent buildup on the heat-transfer surfaces), are also ejected.

The salinity level is not the only impact, although the higher the salt level, the more effort is needed to produce drinkable water.

The proposed solutions to the UAE's water issues are broad-based, including decreasing the water demand by being more efficient with what is already used, encouraging users to change to less water-intensive lives and by treating and reusing more wastewater.

An equally important factor in making water use more sustainable, according to American University of Beirut environmental hydrologist Nadim Farajalla, is to ensure the cost of water is passed on to all users in the UAE.

"We have to structure tariffs to get the full cost of recovery. There is heavy subsidy of the water sector - 10 per cent of GDP goes to subsidising it," he said. "That's too much. It allows people to waste it. Tariffs are very low. Our children and our grandchildren will pay for this."

The actual cost of desalination has been dropping. A decade ago, a cubic metre of water would cost $3 (Dh11) but improved technology has brought the cost down to 50 cents per cubic metre. However not all the UAE plants were using the latest technology, Farajalla said. Al Zubari supported that view, saying the price of water remained too low.

"The current price isn't conducive to reducing consumption of water," he said.

Harvard University professor of environmental engineering Peter Rogers said charging the real cost for water would improve the way it was used.

"In this region, water has been hopelessly underpriced and has been for a long time," he said. "In Boston, we made a one-third saving by increasing the price over 10 years."

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It would be difficult to imagine Arabia without envisaging pockets of date palms amid the dunes. But by far the biggest consumer of water in the UAE is agriculture.

Agriculture in the UAE contributes just three per cent of the nation's GDP but consumes more than half of the water supply, almost all of which is sourced from groundwater. It also is the source of about three per cent of the jobs, but almost all of those are low-skilled migrant labourers. But how do

you balance that against intangibles like food security and the continuation of traditional ways of life?

In most places in the world, groundwater is a resource that is replenished naturally but the aridity of most of the Arabian peninsula means that doesn't happen here.

The United Nations defines water scarcity as 1,000 cubic metres per person per year but the UAE's natural water supply is around half that.

More importantly, most of the UAE's groundwater dates back to an era when the climate in the region was much wetter, so the contents of most of the aquifers are often described as "fossil water" or "paleo water", making it nearly as finite as the region's oil reserves.

There is some natural recharge, usually in the form of downpours every few years, but for every litre of water that goes back into the groundwater reserves, 25 litres is used in the UAE. The rest comes partly from desalination but also by extraction - and further degradation - of the groundwater.

One reaction has been for the UAE to increase the number of dams on its wadis, partly to prevent flash flooding in towns downstream but also to temporarily hold water so it can percolate into the ground and boost the aquifers rather than flowing out to sea.

Amery said the UAE had the opportunity to learn from the example of Saudi Arabia, which had tried to bolster its food security by giving farmers access to inexpensive water to grow crops that would normally be unsuited to the region's hydrography. The end result was the kingdom briefly became the world's sixth-biggest wheat exporter but at the cost of degrading its groundwater for a commodity that was cheap to buy internationally.

The grand scheme came at a colossal cost: Toby Craig Jones' 2010 book Desert Kingdom, states that nearly one fifth of Saudi's GDP was used to subsidise unsustainable agriculture for a quarter of a century before beginning to phase out the scheme. The lesson for the UAE, Amery says, would be to use its water supplies to grow high-value crops rather than wheat.

"Agriculture contributes about three per cent to the national GDP and employs about three per cent of the labour force so it contributes next to nothing to the economy and employs next to no one. Those who are employed tend to be immigrant labour," he said.

"The philosophical and sentimental question is: can you have a country with no agriculture?"

That conundrum is just part of the balancing act facing the UAE and other Arabian nations.

The mammoth projects to recharge the aquifer of the Empty Quarter and another at Shwaib, north of Al Ain, show the willingness to invest the nation's considerable financial resources to lessen the risks posed by relying on desalination.

Other challenges - such as whether to charge for water at a rate that encourages conservation when access to abundant water has long been seen as a permanent feature of life - show that some problems can't be solved with a simple budget allocation.

How the nation resolves those questions will be judged by the next generation, who will bear the ramifications of the stewardship decisions being made today.

“Ensuring the security of water, 'a strategic commodity on par with oil”, *John Henzell*, 30/06/2012, online at: http://www.thenational.ae/news/uae-news/environment/ensuring-the-security-of-water-a-strategic-commodity-on-par-with-oil#page1

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❖ War-torn Yemen faces a new crisis: famine

Yemen, torn by a major conflict with al-Qaida and other serious security problems, now faces a new crisis: a potentially crippling food shortage.

SANAA, Yemen, June 27 (UPI) -- U.S.-backed Yemen, torn by a major conflict with al-Qaida and other serious security problems, now faces a new crisis: a potentially crippling food shortage that's threatening the economic survival of the Arab world's poorest state.

UNICEF says malnutrition and food shortages, largely the result of chronic under-development and a worsening water crisis, is acute.

"It's an emergency very much comparable to the Horn of Africa and the Sahel in North Africa, but it's not getting as much attention," said Geert Cappelaere, the UNICEF chief in Yemen.

He urged donors to make the fight against malnutrition the top priority in the development agenda for Yemen, where for years economic projects have been overwhelmed by the fight against al-Qaida and more recently the political turmoil triggered by the Arab Spring of 2011.

Both crises were sharpened by the February fall from power of President Ali Abdullah Saleh, who ruled for 33 years, and a major escalation of the U.S.-backed war to crush al-Qaida.

With the army divided between supporters of Saleh and his family, who still hold senior posts, and Saleh's successor as president, his longtime deputy Gen. Abdu Rabbo Mansour Hadi, Cappelaere said the food crisis is worsening.

With 58 percent of children under the age of 5 stunted by malnutrition, Yemen has the second highest rate of chronic malnutrition in the world, behind Afghanistan, he noted.

Acute malnutrition has hit up to 30 percent of children in those areas hit most by the fighting, he said.

That's close to levels in nearby southern Somalia, another battleground between Western-backed forces and Islamist militants of al-Shabaab, which is also aligned with al-Qaida.

Cappelaere called on the international community to focus its resources as much on Yemen's development as it does on the security emergency because unless development moves forward the security battle will be lost.

The lack of access to water is a key factor in the growing food crisis, he said.

"Close to 60 percent of Yemenis have difficulty in getting drinking water," he said.

"Last year's conflict was about politics but what will be the next source of conflict? It may well be the struggle for water."

Yemen's oil reserves, pegged at 4 billion barrels in the 1990s, a meager total by Middle East standards, are dwindling rapidly. That's critical because oil is responsible for 75 percent of state revenues and 90 percent of exports.

With Yemen expected to become a net oil importer by 2016, the country needs to diversify its economy fast -- an unlikely prospect right now.

What's worse is the country's water is running out.

At current rates, Sanaa, Yemen's ancient capital with a population of 2 million, looks like being dry by 2025, the first metropolis in the world to run out of water.

By all accounts, Yemen is facing economic collapse, a crisis that's probably more dangerous that al-Qaida's growing power or the escalating secret war against the jihadists being waged by U.S. President Barack Obama and could act in al-Qaida's favor.

"Unless urgent humanitarian action is taken, Yemen will be plunged into a hunger crisis of catastrophic proportions," Jerry Farrell, Save the Children's country director for Yemen, observed in May.

Much of the problem can be laid at the door of Saleh, whose long rule was notorious for its culture of corruption and inept governance. He failed to build infrastructure that would have averted the

looming calamity and it was possibly for this as much as his repression of Yemen's 23 million people that the country now faces a humanitarian crisis.

Growing water scarcity, with highland aquifers shrinking 10-20 feet a year, is threatening agriculture in Yemen whose population, the World Bank says, is exploding at an estimated 8 percent a year.

The water problem, hidden by the security crises, was worsened because Yemenis use 40 percent of their available water to grow qat, a mildly narcotic plant that's the country's largest cash crop and highly prized across the Arabian Peninsula. That's far more than they allocate to grow food.

The World Food Program says one-fifth of the population, around 5 million people, is in need of emergency food aid.

The United Nations warned that 500,000 children may die in 2012 from malnutrition or famine, with around 750,000 children under 5 malnourished.

"War-torn Yemen faces a new crisis: famine", 27/06/2012, online at: http://www.upi.com/Business_News/Energy-Resources/2012/06/27/War-torn-Yemen-faces-a-new-crisis-famine/UPI-76451340822888/

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❖ Reports about further environmental damage along the Mekong River

Irreversible damage seems to go unabated at Xayaburi Dam on the Mekong River according to a report from NGO International Rivers and is likely to rise tensions between countries present at a meeting of the Mekong River Commission (MRC) in Vientiane.

BANGKOK/PHNOM PENH- **NGO International Rivers** reported in its yesterday edition that controversial construction work goes unabated along the **Mekong River** with possible irremediable damage for the environment and the ecosystem. And this time the blame is put on Thailand and not on China. The latter is already in the midst of polemics due to a dam construction in the Upper Mekong mainstream which already causes serious environmental problems on downstream Myanmar, northern Thailand and northern Lao. Declining fish stocks and unpredictable water levels made already life more difficult for downstream communities, pointing towards the damage that mainstream dams will inflict.

Now, International Rivers' recent investigations at **Xayaburi Dam** site in Laos points out that Thai company Ch. Karnchang already started significant resettlement and construction activities, contrary to official statement that claims "only" preliminary work is underway.

Despite Ch. Karnchang's recent statements that it will comply with the Lao government's commitment to postpone construction until there is regional agreement, International Rivers found construction activities going on during a visit on June 21 to the dam site and to 15 affected villages. Recent activities include dredging to deepen and widen the riverbed at the dam site, the construction of a large concrete retaining wall, and an increase in the company's local labor force. One village, **Houay Souy**, was already resettled from the dam's planned spillway to near **Xayaboury town** in January 2012.

Ame Trandem, Southeast Asia Program Director for International Rivers, said, *"By proceeding with resettlement and construction on the Xayaburi Dam, Ch. Karnchang has blatantly defied the*

diplomatic process underway to decide on the future of the Mekong River. The company has violated the trust of the governments of Cambodia, Laos, Thailand, and Vietnam, with apparent impunity."

On June 2, Mr. **Aswin Kongsiri**, Chairperson of the Ch. Karnchang Board of Directors told the Bangkok Post that *"the Lao government will ultimately make the final decision on whether the project will go ahead, but we want to wait for all stakeholders in the Greater Mekong Sub-region to agree with it."* Mr. Aswin indicated that the company had not yet started construction, stating *"we have thus focused on project preparation, mainly financing and the environmental impact report."* These claims came weeks after the Lao government publicly announced that dam construction had been postponed and only *"preliminary construction"* such as building access roads had taken place.

"So far, Ch Karnchang claims that they are only going forward with 'preliminary construction' on the project, but the definition of 'preliminary' keeps expanding," said **Kirk Herbertson**, Mekong Campaigner for International Rivers. *"Ripping up the riverbed and resettling entire villages cannot be considered a preliminary activity."*

Interviews with resettled families from Houay Souy revealed a series of broken promises made by the Thai firm. Resettled households have yet to receive new agricultural land and have been required to spend much of their own compensation money to finish building the houses that were provided to them. Ch. Karnchang also reneged on a promise to provide one year of free electricity and water. The company has informed other villages that they will be moved as soon as December 2012, but said they will not provide compensation to the villagers for the loss of resources such as fisheries or agricultural land, gold panning and consequently for the loss of income. This would then come in complete violation with the Laotian Low.

Teerapong Pomun, Director of Thai NGO Living River Siam, who joined the trip to the dam site, declared that *"the Xayaburi Dam is causing harm to local people and the environment. Ch. Karnchang needs to be held accountable for its irresponsible and illegal behavior. It's only a matter of time before the damage to the river's ecosystem and fisheries begins to impact downstream countries like Thailand, something the company has failed to even take into account."*

On June 28-29, Governments of the **Mekong River Commission** (MRC) are meeting with development partners in Vientiane, Laos. The issue of the Mekong mainstream dams is expected to be on the agenda. *"Ch. Karnchang's ongoing construction activities are creating conflict among the Mekong countries,"* said Mr. Herbertson. *"No construction should be allowed that places future cooperation along the Mekong River in jeopardy. It's time for the Thai and Lao governments to hold firm to their commitments and require Ch. Karnchang to respect the diplomatic process."*

Cambodian daily "Phnom Penh Post" mentioned about Cambodia's rising concerns. **Te Navuth**, secretary-general of the Cambodian National Mekong Committee, explained to the newspaper that if photos provided by International Rivers were genuine, the construction was a breach of agreements to halt construction until downstream impacts had been examined. *"In April, we sent a letter to them already asking them to stop construction, so we are surprised at seeing these photos. It is not in line with what we agreed,"* he said.

Money plays naturally a prominent role in breaching laws and Thailand seems to be at the front of it. The Xayaburi Dam is being financed by Thai commercial banks as an estimated 95% of the dam's electricity would be sold to Thailand. In July, communities from eight Thai provinces along the Mekong River are expected to bring a lawsuit against the Thai government for signing an agreement to purchase the dam's electricity in violation of their constitutional rights.

Since 1985, International Rivers has been at the heart of the global struggle to protect rivers and the rights of communities that depend on them. The NGO works with an international network of dam-affected people, grassroots organizations, environmentalists, human rights advocates and others who are committed to stopping destructive river projects and promoting better options.

There is no way to blame countries looking to develop. But we can blame them for the mediocraty of the development.

"Reports about further environmental damage along the Mekong River", 29/06/2012, online at: http://traveldailynews.asia/news/article/49864/reports-about-further-environmental-damage

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❖ Fecal Talking Points: Does Sanitation as a Human Right = Free Toilets?

Earlier this month, the World Bank's Water and Sanitation Program (WSP), Nordic Human Rights Trust Fund, and the World Bank's Sanitation Thematic Group hosted Catarina de Albuquerque, the first UN Special Rapporteur on the human right to sanitation and safe drinking water. She discussed the human right to sanitation with sector and human rights experts, and what it means in practice. One of the most notable questions she addressed was--- if something is a human right, does that mean it has to be free?

Human rights such as education, health, food, or in this case, sanitation, means many things, but free is not one of them. That said, UN resolutions or conventions that declare something a human right mean that the state is obligated to create the conditions to ensure that these rights are affordable to rich and poor alike. Ms. Albuquerque confirmed that while sanitation is a universal and inalienable human right, it does not mean it is free.

Why would we be concerned whether the right to sanitation could be misconstrued to mean free toilets? To clarify, in this post when I talk about sanitation, I exclusively mean the management of human feces. The concern among sector professionals (including myself) is that we still have 1.8 billion people in rural areas without access to sanitation, and over 700 million people in urban areas. For decades, governments, donors, and NGOs have given toilets out for free, yet we still have 2.5 billion without access.

In part, the problem is ineffective supply driven sanitation programming – particularly on-site facilities (e.g. latrines) in rural areas. This outdated model is still practiced in many places, which means toilets are handed out for free without stimulating household demand for sanitation or understanding what households want or need in a toilet. This results in 1.) toilets getting constructed but not used as intended; 2.) communities that could afford toilets wait for free ones since sanitation is not a priority (there are more cells phones than toilets in India); and 3.) ineffective targeting mechanisms often result in wealthier households capturing subsidies, leaving the poor behind without any access. This is exemplified in South Asia where there has been virtually no progress in gaining

access to sanitation among households in the poorest wealth quintiles over the last twenty years unlike their rich counterparts in the wealthiest quintiles.

In spite of this lack of progress, many sector professionals are still fighting the head winds of supply driven approaches, and struggling to get buy in for evidence-based best practices that are demand–responsive and community- led, resulting in sustainable sanitation solutions. So there is good reason to be concerned about whether the human right to sanitation could provide new arguments for those who continue to support supply driven approaches and continue with the distribution of free toilets.

But if we ignore or downplay the human right to sanitation because we are worried that local political leaders or organizations will use the concept to promote their agenda, are we missing the bigger political issue among national level decision makers? The bigger issue is that governments are not paying enough attention to sanitation and are not investing adequate human or financial resources to reach the Millennium Development Goal (MDG) targets let alone universal access.

As sector professionals, I think we need to ask ourselves, can we use the legality of the resolution on human rights to sanitation to help shift the political economy, and the enabling environment in countries to provide a mechanism to give the poor a voice in the political process? Can this help redistribute scarce public resources from better off households who receive subsidized services (but can afford full payment for services) to targeted market based subsidies to those who actually need it? Can it help ensure equal rights for land tenancy legitimizing the ability of utilities to extend water and sanitation networks to densely populated urban and peri-urban unplanned settlements?

I believe the human rights to sanitation can play a part in addressing these questions, and sector professionals need to take a gamble and embrace the UN resolution. The resolution has been adopted so lets not worry about how others will use, but rather lets take advantage and use it ourselves as a tool to force a shift in the political economy of sanitation. With sanitation declared as a human right, governments are accountable to distribute their scarce resources in a more equitable manner, and we just might be able to make a difference among those who need it the most.

Who knows, perhaps if sanitation were declared a human right long ago, we would not be in the predicament that we are today.

"Fecal Talking Points: Does Sanitation as a Human Right = Free Toilets?", 28/06/2012, online at: http://blogs.worldbank.org/water/fecal-talking-points-does-sanitation-as-a-human-right-free-toilets

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❖ UK signs up to UN water convention

We were delighted to hear Nick Clegg announce last week that the UK government will sign up to the UN Watercourses Convention. It's an important treaty that aims to make sure the 263 rivers in the world that cross international boundaries are protected and peacefully shared. We've been working hard behind the scenes for several years, including with DFID and DEFRA, to encourage the UK government to sign up to the Watercourses Convention.

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

Better management of rivers, lakes and aquifers can help to ensure water security for poor people; can help to ensure food and energy security and economic development for many countries, water for cultivation of globally-traded 'thirsty' crops, and, where watercourses cross national boundaries, it can help to reduce chances of geopolitical tensions.

"This UN Convention will encourage countries to work together to share this finite resource and avoid potential water conflicts, brought about by increasing demand, and unavoidable impacts of climate change.

"We hope other countries will follow the UK's example to make sure the Convention comes into force."

The announcement, made by Mr Clegg last week at the Rio+20 conference, means the UK will join the growing number of countries agreeing to accede to the convention - it needs 35 to sign up for it to be ratified and become law.

The announcement came just weeks after our Living Planet Report showed that biodiversity in tropical rivers around the world has declined 70% since 1970 - a steeper fall than for forest or oceans.

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

The UN Watercourses Convention is the only global convention setting out good practice for managing these watercourses. It includes provisions which encourage countries to share information and agree conflict resolution measures. Importantly, it also emphasises the need to take account of freshwater ecosystems.

Mark Zeitoun, director of the Water Security Research centre at the University of East Anglia, says: "The UK has done well to support these vital UN principles for fair water-sharing between states.

"Nowhere is this more critical than in the Middle East, where Iraqi farmers now suffer from massive water-diversion projects built upstream on the Euphrates, and where decades of denial of access to the river Jordan increases the strain for Palestinians and Lebanon.

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

"UK signs up to UN water convention", 25/06/2012, online at: http://www.wwf.org.uk/news_feed.cfm?6071/UK-signs-up-to-UN-water-convention

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❖ After Rio, we know. Governments have given up on the planet

The post-summit pledge was an admission of defeat against consumer capitalism. But we can still salvage the natural world

It is, perhaps, the greatest failure of collective leadership since the first world war. The Earth's living systems are collapsing, and the leaders of some of the most powerful nations – the United States, the UK, Germany, Russia – could not even be bothered to turn up and discuss it. Those who did attend the Earth summit in Rio last week solemnly agreed to keep stoking the destructive fires: sixteen times in their text they pledged to pursue "sustained growth", the primary cause of the biosphere's losses. The efforts of governments are concentrated not on defending the living Earth from destruction, but on defending the machine that is destroying it. Whenever consumer capitalism becomes snarled up by its own contradictions, governments scramble to mend the machine, to ensure – though it consumes the conditions that sustain our lives – that it runs faster than ever before.

The thought that it might be the wrong machine, pursuing the wrong task, cannot even be voiced in mainstream politics. The machine greatly enriches the economic elite, while insulating the political elite from the mass movements it might otherwise confront. We have our bread; now we are wandering, in spellbound reverie, among the circuses.

We have used our unprecedented freedoms – secured at such cost by our forebears – not to agitate for justice, for redistribution, for the defence of our common interests, but to pursue the dopamine hits triggered by the purchase of products we do not need. The world's most inventive minds are deployed not to improve the lot of humankind but to devise ever more effective means of stimulation, to counteract the diminishing satisfactions of consumption. The mutual dependencies of consumer capitalism ensure that we all unwittingly conspire in the trashing of what may be the only living planet. The failure at Rio de Janeiro belongs to us all.

It marks, more or less, the end of the multilateral effort to protect the biosphere. The only successful global instrument – the Montreal Protocolon substances that deplete the ozone layer – was agreed and implemented years before the first Earth Summit in 1992. It was one of the last fruits of a different political era, in which intervention in the market for the sake of the greater good was not considered

anathema, even by the Thatcher and Reagan governments. Everything of value discussed since then has led to weak, unenforceable agreements, or to no agreements at all.
This is not to suggest that the global system and its increasingly pointless annual meetings will disappear, or even change. The governments which allowed the Earth Summit and all such meetings to fail evince no sense of responsibility for this outcome, and appear untroubled by the thought that if a system hasn't worked for 20 years, there's something wrong with the system. They walk away, aware that there are no political penalties; that the media is as absorbed with consumerist trivia as the rest of us; that, when future generations have to struggle with the mess they have left behind, their contribution will have been forgotten. (And then they lecture the rest of us on responsibility.)

Nor is it to suggest that multilateralism should be abandoned. Agreements on biodiversity, the oceans and the trade in endangered species may achieve some marginal mitigation of the full-spectrum assault on the biosphere that the consumption machine has unleashed. But that's about it.

The action – if action there is – will mostly be elsewhere. Those governments which retain an interest in planet Earth will have to work alone, or in agreement with like-minded nations. There will be no means of restraining free riders, no means of persuading voters that their actions will be matched by those of other countries.

That we have missed the chance of preventing two degrees of global warming now seems obvious. That most of the other planetary boundaries will be crossed, equally so. So what do we do now?

Some people will respond by giving up, or at least withdrawing from political action. Why, they will ask, should we bother, if the inevitable destination is the loss of so much of what we hold dear: the forests, the brooks, the wetlands, the coral reefs, the sea ice, the glaciers, the birdsong and the night chorus, the soft and steady climate which has treated us kindly for so long? It seems to me that there are at least three reasons.

The first is to draw out the losses over as long a period as possible, in order to allow our children and grandchildren to experience something of the wonder and delight in the natural world and of the peaceful, unharried lives with which we have been blessed. Is that not a worthy aim, even if there were no other?

The second is to preserve what we can in the hope that conditions might change. I do not believe that the planet-eating machine, maintained by an army of mechanics, oiled by constant injections of public money, will collapse before the living systems on which it feeds. But I might be wrong. Would it not be a terrible waste to allow the tiger, the rhinoceros, the bluefin tuna, the queen's executioner beetle and the scabious cuckoo bee, the hotlips fungus and the fountain anenome to disappear without a fight if this period of intense exploitation turns out to be a brief one?

The third is that, while we may have no influence over decisions made elsewhere, there is plenty that can be done within our own borders. Rewilding – the mass restoration of ecosystems – offers the best hope we have of creating refuges for the natural world, which is why I've decided to spend much of the next few years promoting it here and abroad.

Giving up on global agreements or, more accurately, on the prospect that they will substantially alter our relationship with the natural world, is almost a relief. It means walking away from decades of anger and frustration. It means turning away from a place in which we have no agency to one in which we have, at least, a chance of being heard. But it also invokes a great sadness, as it means giving up on so much else.

Was it too much to have asked of the world's governments, which performed such miracles in developing stealth bombers and drone warfare, global markets and trillion-dollar bailouts, that they might spend a tenth of the energy and resources they devoted to these projects on defending our living planet? It seems, sadly, that it was.

"After Rio, we know. Governments have given up on the planet", 25/06/2012, online at: http://www.guardian.co.uk/commentisfree/2012/jun/25/rio-governments-will-not-save-planet?CMP=twt_gu&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=c120d43c93-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Mumbai, Delhi Lead in Need for Water, McKinsey Reports

Mumbai and New Delhi, India's most populous cities, may experience the biggest increase in demand for water among the world's largest cities from 2010 to 2025, the McKinsey Global Institute said today.

Water demand in large cities is expected to rise by almost 80 billion cubic meters, or 40 percent more than current urban global levels and at least 20 times what New York consumes today, McKinsey's report on urbanization said. India, second only to China in population, will account for 15.8 percent of the municipal water demand growth, it said.

Meeting drinking, industrial and municipal demand as more people move to cities will require investments in water supplies and sewage treatment of about $480 billion by 2025, with $200 billion of that from emerging markets, McKinsey said. The 440 emerging market cities cited include 36 from India, where the urban population is expected to climb by about three-quarters by 2030, according to a 2010 McKinsey report.

Mumbai, Delhi, India's third-largest Kolkata, Chennai, Bangalore and Hyderabad are swelling as more villagers among its 1.2 billion population migrate in search of better jobs. The nation, where 93 million reside in urban slums, needs to spend $2.2 trillion improving infrastructure by 2030, McKinsey said.

Fouled Water

A lack of toilets among infrastructure needs costs India at least $50 billion a year, mostly through premature deaths and hygiene-related diseases, a World Bank study found. Lost productivity, illness and other consequences of fouled water and inadequate wastewater treatment trimmed 6.4 percent from India's gross domestic product in 2006, according to the World Bank's Water and Sanitation Program.

Providing basic services such as water and housing can be as much as 50 percent cheaper for large Indian cities than in rural areas, according to the report.

The nation is among those in east and south Asia expected to account for more than half of the increase in the world's urban water consumption. These countries may focus almost 75 percent of their infrastructure spending on improving water supply to cities by 2025, the report said.

The study suggests that companies looking to market products in India as well as China consider local city clusters instead of country-specific investments.

The study of what McKinsey calls the biggest growth of urbanization ever said governments across 600 cities in the world will need to invest more rapidly in infrastructure to support growth. Of these, 440 cities in the emerging markets may add 1 billion new consumers to world growth by 2025, it said.

"Mumbai, Delhi Lead in Need for Water, McKinsey Reports", 28/06/2012, online at: http://www.businessweek.com/news/2012-06-28/mumbai-delhi-to-lead-in-needing-more-water-mckinsey-says?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=549eb1b53b-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Indonesia's Sanitation Issues Causing a Stink

The Public Works Ministry is aiming to revamp Indonesia's appalling sanitation system, which was recently listed as one of the worst among member states of the Association of Southeast Asian Nations.

"Within the last few years the government has shifted its priorities and invested in sanitation with a relatively huge budget," Public Works Minister Djoko Kirmanto said on Monday, adding that Indonesia was ranked the third worst in the region, although he did not say by whom.

"Right now [the budget] is no less than Rp 3 trillion [$318 million] per year."

The sanitation problem, the minister said, has contributed to high levels of contamination in Indonesia's rivers.

Citing data from the ministry, Djoko said that 76 percent of the rivers in Indonesia's most populated islands of Java, Sumatra, Bali and Sulawesi were contaminated with ammonium originating from people's urine and feces.

The ministry is aiming to build more public toilets and sanitation systems but other public institutions could help solve the problem by advocating for a shift in people's attitude toward sanitation problems, he said.

The minister cited a study carried out last year by Unicef that suggested that 26 percent of Indonesians still urinated and defecated openly instead of using toilets.

"Such behavior must be abolished. From now on there must be an awareness to stop defecating openly and littering publicly, including in rivers, by people in both urban and rural areas," Djoko said.

The minister was speaking at the opening of the 2012 Sanitation Jamboree, an event that aims to promote awareness about sanitation from an early age.

The jamboree has been held annually since it was established in 2008, and attracts junior high school students who undergo training and take part in competitions on sanitation. This year, the jamboree staged writing and design competitions that will be used for feedback at the national sanitation level.

Budi Yuwono, the ministry's director general for innovation, said he hoped such events would inspire local

authorities to take their sanitation problems seriously.

“We are deeply concerned by the fact that there are still provincial and district governments in Indonesia that do not earmark any funding for sanitation programs,” he said.

“Indonesia's Sanitation Issues Causing a Stink”, 27/06/2012, online at: http://www.thejakartaglobe.com/news/indonesias-sanitation-issues-causing-a-stink/526753?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=0ceb2e9dcf-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Water Shortage May End, With Israel's Help

PHUKET: Israel's Consul in Thailand, Eli Gil, visited Phuket last week and offered to help with the island's water problem.

What puzzled the consul is what puzzles many people about Phuket.

"How come you have so much rain on Phuket and you still have a problem with your water supply?" the consul asked Vice Governor Dr Sommai Preechasin when the two met at Provincial Hall in Phuket City.

Then the consul answered his own question: "There's plenty of water. It should be possible to store enough to meet all of your needs on Phuket, all year round."

Israel, of course, dry and dusty at times, would love to have Phuket's monsoon downpours.

And the consul believes that with a little help, Phuket's chronic feast or famine, flood or drought mentality could be swiflty converted to year-round running taps.

Coincidentally, a meeting of Phuket water authorities and local council administrations a few days earlier made the point that next high, dry season is likely to leave Phuket with insufficient water to meet demand.

This is despite the massive amounts of water that were dumped on Phuket by one of the longest, most persistent monsoon storm seasons anyone could remember.

Canals were filled to overflowing . . . and most of that pure, clear rainwater flowed straight to the sea. Come February, though, and resorts will be importing water and paying a premium price for tanker loads.

Crazy? Yes.

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The meeting of officials is even considering a pipeline coming from the mainland to boost supplies. What the consul could have told them with a bit more time is that the rain that falls on Phuket can be contained will less expense.

Dry parts of the world know how to trap water effectively and ensure a regular supply. There are even some resorts on Phuket where good examples have been set.

And why, for example, are rainwater tanks or lagoons not an essential part of every new property development on Phuket? We are sure that is a question the consul would have asked if the conversation had been specifically about water.

As it was, Dr Sommai also admitted Phuket had a garbage disposal problem. We can't speak for Israel, but most places have a "Reduce, Reuse, Recycle" program in place.

Water desalination plants and Incinerators are high-tech, high cost ways of addressing the issues of water supply and garbage oversupply, but the real answers are always simpler and more effective.

We hope when consul Eli Gil sends his advice about water, he adds something about garbage as well.

The meeting heard that Thailand had 45,000 visitors from Israel last year, that numbers are rising at 10 percent a year, and that most of them spend some time on Phuket.

"Water Shortage May End, With Israel's Help", 25/06/2012, online at: http://phuketwan.com/tourism/phukets-water-shortage-israels-help-16217/

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❖ Korea Tackles Record Drought

Sizzling hot summer weather has arrived in South Korea, but the early summer rains have yet to come. According to the Korea Metrological Administration, rainfall since the beginning of May has been the lowest since 1908.

The prolonged dry spell has prompted the government to set up a disaster relief center to coordinate responses and set aside 7 billion won for drought-relief efforts.

Provincial governments in many parts of the country have been drilling wells and supplying residents with drinking and agricultural water. As of Tuesday, about 80% of the country was rated at the most extreme drought level.

"Since May, the worst drought in a century has persisted and heat wave warnings have been sent out as well. Many people, including farmers, are having difficulties" said Prime Minister Kim Hwang-sik during a cabinet meeting on Tuesday, "The government is worried about possible fallout, such as price hikes for produce and reduced water supply."

After the meeting, Mr. Kim visited one of the hardest hit regions in his second such visit less than a week. Last Thursday he visited Hongseong, a mid-western farming city, where rainfall since May is only about 11% that of last year. Reservoirs have also dried up – the city's water reserves are less than 15%, causing concern for the region's farmers.

Seoul's rainfall from May 1 to June 24 was 10.6 mm, only around 7% of the total in the same period last year. The national average was 68.3 mm, compared to 233.8 mm last year.

The weather agency attributes the severe drought to a persistent high pressure system over the eastern part of the country. It forecasts rain this weekend, but not enough to fully soak parched lands.

The northern part of the peninsula is also suffering from extreme conditions.

North Korea's state media has issued a series of reports about water shortages. In a recent dispatch, the Korea Central News Agency reported: "Crops have withered in the country's west coastal area

and the water level has lowered in rivers and reservoirs," adding that rice paddies have been affected by "the devastating drought.

"Korea Tackles Record Drought", 26/06/2012, online at: http://blogs.wsj.com/korearealtime/2012/06/26/korea-tackles-record-drought/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=c120d43c93-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Peru's Humala says water guaranteed near Newmont mine

LIMA - Peruvian president **Ollanta Humala** said on Saturday Newmont Mining would ensure ample water for towns near its proposed Conga gold mine, and that his government would not allow new mines to open if they hurt water supplies.

US-based Newmont on Friday accepted a stricter environmental mitigation plan for its mine, which will now require total investments of $5-billion, making it the most expensive mine in Peruvian history.

Newmont said that before the mine is built it will first build larger reservoirs that will guarantee year-round water supplies in towns currently suffering shortages. The bigger reservoirs are expected to add up to $200-million to the project's original $4.8-billion price tag and take up to two years to build.

"We can and will make sure the company guarantees water supplies. This is my promise to Cajamarca," Humala said on Saturday. "My government won't permit the development of any mining project that exposes the local population to water shortages or to water that doesn't meet quality standards for human consumption."

The larger-capacity reservoirs were recommended by outside experts hired to improve upon Newmont's own environmental impact plan in an attempt by the government to quell protests that have stalled work on the mine since November. The water project would replace two or more in a string of alpine lakes.

"We have ratified our decision to implement the recommendations international auditors made to the environmental impact study for the Conga project," Newmont's head of South America, **Carlos Santa Cruz**, said on Friday.

"We share the government's call for dialogue, for the vast majority of civil society in Peru," Santa Cruz said in reference to local political leaders in the northern Andean region of Cajamarca who are leading protests to halt the mine.

Gregorio Santos, the president of Cajamarca, criticized Humala on Saturday and reiterated that Conga "isn't viable." Santos' term ends in 2014.

Conga, which is partly owned by local mining company Buenaventura , would produce between 580 000 oz/y and 680 000 oz/y of gold.

Humala also said he would lift emergency rules that several weeks ago banned freedom of assembly in the southern region of Cusco over protests against Xstrata's Tintaya copper mine. All sides in that dispute over voluntary contributions to the municipality of Espinar are now in settlement negotiations.

Peru, which has vast mineral resources, is the second-largest producer of copper and sixth-largest of gold, but many mining communities are poor and complain Peru's decade-long economic boom has passed them by.

"Peru's Humala says water guaranteed near Newmont mine", 25/06/2012, online at: http://www.miningweekly.com/article/perus-humala-says-water-guaranteed-near-newmont-mine-2012-06-25?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=c26ae8f94c-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Europe's cities plan to combat mounting climate risk

(Reuters) - European cities are planning to adapt to climate change as the risks become more severe, a report by UK-based emissions measurement organization the Carbon Disclosure Project (CDP) and consultancy Accenture showed on Thursday.

Cities increasingly have to plan flood defenses, ways to manage water in times of drought, ensure new buildings provide natural cooling to occupants and adapt old buildings and infrastructure to become more energy efficient.

The report surveyed 22 European cities - including Amsterdam, Berlin, Istanbul, London, Manchester, Moscow, Paris and Rome - about their greenhouse gas emissions and climate change strategies.

The report comes less than a week after a United Nations' summit in Rio de Janeiro failed to define clear sustainable development goals and left many convinced that local governments and businesses will have to lead efforts to improve the environment.

The survey found that 17 European cities out of the 22 surveyed, or 77 percent, have completed or almost completed risk assessments to understand how climate change will affect them.

Eighteen of the 22 European cities said they face "significant risks" arising from climate change and 54 percent of them see these risks as "severe" or "very severe".

Due to these risks, cities are increasingly looking at developing adaptation plans. Fourteen European cities, or 64 percent of the 22 surveyed, already have an adaptation plan in place while two more are currently developing them.

"European cities are demonstrating leadership and best practice in managing climate change at the local level," said Conor Riffle, head of CDP's cities program.

"The report shows that other cities can benefit by implementing similar strategies, like annual measurement and reporting of greenhouse gas emissions."

EMISSIONS

Global carbon dioxide emissions, one of the main greenhouse gases blamed for global warming, hit a record high last year, according to the International Energy Agency.

Eighty-six percent of the European cities surveyed have set a city-wide emissions reduction target, compared to a global average of 70 percent of cities, CDP said.

Based on the latest data given by four cities to CDP, London's emissions fell 3.6 percent to 43.4 million metric tons (47.8 million tons) of carbon dioxide equivalent in 2010 from 2008 and Copenhagen's dropped 5.2 percent to around 2.5 million metric tons in 2010 from 2009.

Berlin's emissions rose 4.1 percent to over 20.7 million metric tons of carbon dioxide emissions in 2008 from 2007 and Rotterdam's grew by 6 percent in 2010 to 29.6 million metric tons from 2009.

"Population growth, economic activity, weather patterns, and other factors that are outside the city government's direct control can make it difficult, if not impossible, to show steady reductions in emissions," the report said.

European cities are also becoming more aware of the economic opportunities from climate change. Thirteen of the cities surveyed, or 59 percent, think that tackling climate change will develop new business industries in their cities.

Some cities - like Helsinki and Berlin - are using voluntary agreements with the private sector to strengthen their cities' climate protection goals.

"Europe's cities plan to combat mounting climate risk",28/06/2012, online at: http://www.reuters.com/article/2012/06/28/us-europe-emissions-cities-idUSBRE85R0S820120628?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=549eb1b53b-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Fracking moratorium advances in California Legislature

A key Senate panel on Tuesday supported legislation that would ban the use of hydraulic fracturing in California until regulators write rules governing the controversial procedure.

In testimony before the state Senate Natural Resources Committee, Assemblywoman Betsy Butler (D-Marina del Rey) pushed a moratorium on "fracking," echoing the concerns of environmentalists and community activists who fear the potential environmental and public health hazards of a procedure that involves injecting chemical-laced water and sand deep into the ground to tap oil.

Representatives from the energy industry told lawmakers that oil companies have used hydraulic fracturing in California for decades without incident.

Much of the anxiety stems from the fact that, unlike other oil-producing states, California does not require oil companies to disclose where they use the procedure or what chemicals they inject into the ground. State regulators asked firms to volunteer that information in March and are now soliciting public comment on fracking, the first step in what is expected to be a lengthy rule-making process.

“Far too much remains unknown today as it relates to fracking in California,” Butler said. “The very entity tasked with overseeing the drilling of oil wells in the state has been unable to produce information as to the extent of fracking taking place today.”

Regulators have conceded the gap in knowledge but contend that hydraulic fracturing poses less of an environmental threat here, in part because of the state's geology.

State Sen. Fran Pavley (D-Agoura Hills), chairwoman of the committee, called on environmentalists and the oil industry to work on a compromise. Her own legislation, which would have required energy firms to notify property owners before using hydraulic fracturing on or near their land, was rejected in the state Senate last month.

"Neither side should overreach. We should figure this out and make sure it works," she said, citing standing-room-only crowds at state-sponsored fracking workshops in Ventura and Culver City. "The public expects and will be demanding that we do something."

“Fracking moratorium advances in California Legislature”, 26/06/2012, online at: http://latimesblogs.latimes.com/california-politics/2012/06/fracking-moratorium-advances-in-california-legislature.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=0ceb2e9dcf-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Nutrient pollution is a growing problem all along the Mississippi

SOUTH-EAST of New Orleans, where the Mississippi empties into the Gulf of Mexico, the North American land mass does not end so much as gently give up. Land subsides to welts of green poking up through the water, and the river grows wider and flatter until it meets the ocean, where a solid line divides the Mississippi's brown water from the gulf's blue.

On its long journey south the water has scooped up nutrients such as nitrogen and phosphorus, mainly from the fields of the Midwest. So much so that agriculture's gift to the gulf is a "dead zone". The excess nutrients cause algae to bloom, consuming all the available oxygen in the sea, making it hostile to other forms of marine life. Creatures that can swim away, such as shrimp and fish, do so; those that cannot, die. In the four decades since the dead zone was discovered it has grown steadily. Today it covers 6,700 square miles, an area larger than Connecticut.

This ecological disaster area imperils the region's commercial and recreational fisheries, worth around $2.8 billion a year. One study suggests yearly shrimp-fishery losses of nearly 13%. The dead zone drives shrimp farther out to sea, making it costlier and more time-consuming to catch them. It also makes them smaller.

Nancy Rabalais, who heads the Louisiana Universities Marine Consortium and has mapped the dead zone each year for nearly three decades, claims that the amount of nitrates flowing into the Gulf of Mexico has increased by up to 300% over that time. Most of this comes from agriculture in the "I"-states (Illinois, Iowa and Indiana) and some from the city of Chicago.

It would be a mistake, though, to think that the problem is confined to the Gulf. The effects of nutrient pollution are increasingly apparent throughout the Mississippi River basin. Environmentalists say that half the streams in the upper Mississippi have too much nitrogen and a quarter have too much phosphorus. This nutrient enrichment damages aquatic life there too, and degrades drinking water. It also causes blooms of toxic algae that have closed beaches, made people ill and killed fish and pets. Nasty green lakes have also damaged tourism, property values and fisheries.

For years green groups have been trying to persuade the Environmental Protection Agency (EPA) to set a limit for the amount of nitrogen and phosphorus allowed in the states whose rivers feed the Mississippi. Little has happened. So in March members of the Mississippi River Collaborative, an environmental group, filed a lawsuit designed to force all those involved to think about ways to solve the problem.

The EPA refuses to comment while the matter is in litigation. But the Federal Water Quality Coalition, a group composed of industrial and metropolitan water users, has launched its own lawsuit in opposition to the first. It argues that the federal government should play no role in setting limits, and furthermore that the very idea of limits is too simplistic.

Yet it is not just green groups that think limits are helpful. Wisconsin is one of the few states to introduce, in 2010, statewide numerical limits for phosphorus. Joe Parisi, who runs Dane County, says these have spurred the county into working on new measures with the Madison metropolitan

sewerage district. The idea is to experiment with projects that pay farmers to reduce nutrient pollution, using money that would otherwise have been spent on expensive technology for use by institutions such as municipal water authorities. One scheme is an innovative community biodigester that generates power from cattle manure. Another idea is a low-tech effort to extract phosphorus by using crops which are then harvested.

Whatever the outcome of the nutrient-pollution lawsuits many people seem to believe that strict limits will come anyway, one way or another. One interesting pilot scheme being tried out in Minnesota allows farmers who reduce fertiliser run-off and soil erosion to enjoy an exemption from future state and federal water-quality standards. Elsewhere, the Electric Power Research Institute, an industry think-tank, is creating a programme that would allow the trading of nutrient credits between states. Its Ohio River basin water-quality trading project will allow those facing high pollution-control costs to buy reduction credits from those whose costs are lower. The first pilot trading will begin at the end of 2012, and again will allow those involved to use any credits against expected obligations in the future.

If that project takes off it could become the world's largest water-quality trading programme, spanning as many as eight states and allowing trading between 46 power plants, thousands of wastewater facilities and about 230,000 farmers. But those involved say numerical limits are needed to really push trading forward.

If the upper Mississippi must await progress with limits, what hope is there further down the river? Along the lower Mississippi some have proposed diversions through wetlands as a way to mitigate oxygen starvation. But a network of levees has held the Mississippi back for decades, so it is doubtful how much the river could feasibly be moved; the process of changing the course of America's greatest river is more glacial than alluvial. Those Mississippi shrimpers had better cross their fingers and hope that the wheels of justice turn a bit faster.

"Nutrient pollution is a growing problem all along the Mississippi", 23/06/2012, online at: http://www.economist.com/node/21557365?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=0ceb2e9dcf-RSS_EMAIL_CAMPAIGN&utm_medium=email

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❖ Water Coalition Hands Over Petition to State Officials

The petition with more than 24,000 signatures is in opposition to a desalination plant.

More than 40 people gathered on the steps of the Rockland County Courthouse Monday afternoon to speak out against United Water's proposed desalination plant in Haverstraw.

At the press conference, the Rockland Water Coalition handed over petitions with more than 24,000 signatures from Rockland residents opposed to the plant to State Senator David Carlucci. Carlucci is going to take the petitions with him to Albany.

"We have to put people first and make sure the water that we're drinking is safe and something we feel confident that our children can have, and future generations can feel confident and safe in drinking," he said.

The coalition formed in direct response to the proposed plant, according to George Potanovic, a member of the group. The plan was first proposed in 2007 with intent on producing drinking water for Rockland residents by treating Hudson River water to supplement the county's potable water supply. The following year, the coalition formed and is made up of 23 local and regional environmental and civic organizations, such as Riverkeeper, Clearwater, Scenic Hudson, Rockland AARP and New York State Sierra Club.

"For the last four years, the Water Coalition has carefully watched the progress of this proposal through environmental review process, through the SEQR environmental review process, and we've fully participated in that review. There's been a number of issues that we've raised, both economic [and] environment issues that we think are very significant and issues that were not evident to many people when the proposal was first made," Potanovic said Monday. "We have submitted these comments through the environmental review process in response to the DEIS, or the Draft Environmental Impact Statement. And that comment period ended on April 20th. So we have participated as much as we can in the environmental review process, and what we want to know now is that our legislators and the governor in Albany are aware there are 24,000 people that are standing with us in Rockland County who have signed petitions saying that they oppose the desalination plant."

The coalition has a few issues with the proposed plant, including they feel it would discourage water conservation and add to unsustainable overdevelopment. Rockland County Legislature Chairwoman Harriet Cornell talked about the legislature's comprehensive county plan from 2010, which she would like to see taken into account.

"Haverstraw Bay has to be protected for future generations and that it should become an estuary learning sector," she said. "Also in our comprehensive plan, we listed a whole litany of water supply recommendations and the first major recommendation is to develop a county water policy and the second is to promote conservation."

Another issue the coalition has with the plant is they don't think the added jobs will be worth it when factoring in the costs of improving the infrastructure, expanded sewer treatment. Uniter Water's

impact statement says it will create 10 permanent jobs and temporary positions to construct the plant.

She said she'd like to see more of an effort for water conservation opposed to simply looking to get more water into the county.

Assemblywoman Ellen Jaffee said she'd like to see a conference to provide more information to Rockland residents about the proposed plant. She also congratulated the group for getting so many signatures.

"A group that didn't have any financial resources did this in a way that really is the basis of our democracy and I'm very impressed with this," she said. "We should all be impressed with the community involvement and the voice of the community that we have here today."

There was a small one-person counter-protest going on while the coalition met on Monday. Haverstraw resident John Taggart stood on the courthouse steps about 15 people away from the group holding up signs that read "build the desal plant now" and "a drought proof consistent water supply."

"I am very much in favor of the plant," he said. "I don't think there's enough people speaking out in favor, so I decided to come out today in support of it."

While Taggart said it was a bit lonely out on the steps by himself, he added he thinks the plant will do more good than harm for the county, and it will bring in jobs and generate real estate tax revenues. He also thinks it can have a positive impact on the Hudson River.

"It people are drinking from it, maybe they'd be more inclined to take care of it too," he said.

The only speaker to acknowledge Taggart was Pomona Deputy Mayor Rita Louie.

"This is a better example than I could've hoped for," she said. "There's 40 of us here and just one person over there. This represents clearly how Rockland feels about this issue."

"Water Coalition Hands Over Petition to State Officials", 26/06/2012, online at: http://nanuet.patch.com/articles/water-coalition-hands-over-petition-to-state-officials

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