

ORSAM

ORSAM WATER BULLETIN

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ORSAM WATER BULLETIN

17 September – 23 September 2012

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* The Stream, September 19: A \$700 Million Water Pipeline to Cyprus

Turkey is building a \$US 700 million pipeline to <u>transfer water from a dam on its Mediterranean</u> <u>coast to Cyprus</u>, *Bloomberg News* reported. The pipeline will run 107 kilometers (66 miles) under the sea to bring 75 million cubic meters (19.8 billion gallons) of water to the northern part of the island, which is controlled by Turkey.

Developing countries should improve their water management by <u>calculating a "water balance,"</u> according to the manager of the World Bank's Water and Sanitation Program, *Xinhua* reported. A water balance takes into account the water demand from agricultural, industrial and municipal uses, as well as the total supply of clean water.

Health

Hunger and malnutrition will likely be the <u>largest health impacts of a changing global climate</u>, said a top health expert at a World Health Organization (WHO) briefing. Unpredictable weather patterns could make it difficult for farmers to produce enough food, *AlertNet* reported.

Rapid urbanization and growing slums in Bangladesh are <u>forcing thousands into a healthcare "black</u><u>hole,"</u> the *Guardian* reported. Problems like staff shortages at hospitals are compounded by a lack of basic services, such as access to clean water.

Biofuels and Drought

The European Commission has proposed <u>limiting the amount of crop-based biofuels</u> used in transport fuels to 5 percent, responding to accusations that EU biofuel policy contributes to high global food prices*Reuters* reported. A drought in the United States, which pushed grain prices to record highs, has intensified debate about biofuels.

One positive outcome of a drought in eastern Europe was the <u>discovery of 400-year-old marble</u> <u>treasures in Poland</u>, revealed after the Vistula River dropped to its lowest level in 200 years, *Reuters* reported.

"The Stream, September 19: A \$700 Million Water Pipeline to Cyprus", 19/09/2012, online at: <u>http://www.circleofblue.org/waternews/2012/the-stream/the-stream-september-19-a-700-million-turkey-to-cyprus-water-pipeline/</u>

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Decades-old project gets new deadline

The Southeastern Anatolia Project (GAP), Turkey's decades-long multi-sector integrated sustainable regional development project, has been revised to end in 2017 as the deadline for the Ilisu and Silvan dams is 2015, according to the head of the project.

The Cizre dam, also in the region, will be completed in 2017 as well as a part of a build-operatetransfer model undertaken by a private company, GAP Regional Development Directorate President Sadrettin Karahocagil told Anatolia news agency.

The revised plan also includes irrigation canals that will carry water to fields from the main lines, he added.

The region is attracting great interest from investors, and industrial zones there are failing to meet the rising demand, he said.

The GAP was originally planned in the 1970s, consisting of irrigation and energy projects on the Euphrates and Tigris, and has been reshaped multiple times.

Archaeologists are working to protect the areas in and around the Ilisu River that would otherwise be submerged after the construction of the controversial Ilisu Dam.

"Decades-old project gets new deadline",21/09/2012, online at: <u>http://www.hurriyetdailynews.com/decades-old-project-gets-new-deadline.aspx?pageID=238&nID=30635&NewsCatID=345</u>

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* KRG needs four giant dams, says minister

ERBIL, Sept.21 (AKnews)- The Kurdistan Region is in need of four gigantic dams for construction of which it should obtain the approval and support of the Iraqi government, said Kurdistan minister of agriculture and water resources.

Sirwan Baban said Kurdistan can benefit from these dams for generating electricity and reserve water for times of drought.

The minister added the agricultural plans in Kurdistan do not qualify agriculture to be an alternative for oil and hence the sector cannot be given priority in the development of the economic infrastructure of the Region.

Yet, Baban expanded on the efforts by the Ministry of Agriculture and Water Resources for promoting agriculture in the Kurdistan Region by boosting the local products to an extent of self-sufficiency.

"KRG needs four giant dams, says minister", 21/09/2012, online at: http://www.aknews.com/en/aknews/3/327254/

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✤ Palestinians blame Israeli settlements for deadlocked Joint Water Committee

Israel, JERUSALEM — Palestinians say that the Joint Water Committee (JWC) is at an impasse, and that international funders of Palestinian water projects are now starting to shift their funds to other missions.

The claim was made by Palestinian Water Minister and head of the Palestinian Water Authority Dr. Shaddid Attili at the Good Water Neighbors conference in Jericho, which included representatives from Jordan, the Palestinian Territories, and Israel.

Attili placed the blame for the JWC's failure squarely on Israel's settlements in the West Bank. "I can't approve something for the settlements, so they won't approve our projects," he said of the JWC, which only approves projects in Israeli-governed Palestinian areas through the consensus of both Israeli and Palestinian representatives.

"We are fed up. I have to face the people in the Jordan Valley. Our people in Gaza don't have water to drink today."

Israel's Water Authority declined to send a representative to attend the conference last week, and could not be reached for comment. NGO Friends of Earth Middle East Israeli director Gidon Bromberg said that the Israeli Water Authority was reluctant to discuss the business of the JWC in a public forum since the JWC's meetings are private. Bromberg encouraged a greater transparency for the committee.

The Palestinian Water Authority's director of wastewater and chief representative at the JWC Adel Yasin accused Israel of deadlocking the committee by submitting settlement water projects for approval, which were actually under the jurisdiction of Israel's Civil Administration.

"We don't approve the settlement outside, so why would we approve the pipeline for the settlement? It's a Civil Administration issue.

"Every month they are submitting one or two projects to us. They're selected projects — sensitive projects, while they do 100 other projects without consulting the JWC. They select something just to make you stuck."



Yasin said the delays were causing international aid donors to shift their interest from projects in water and wastewater to easier projects that did not require JWC approval, such as the construction of schools, hospitals, and roads.

The JWC was established under Article 40 of the Oslo Accords in 1995.

"Palestinians blame Israeli settlements for deadlocked Joint Water Committee", 20/09/2012, online at: <u>http://mideastenvironment.apps01.yorku.ca/?p=5922</u>

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Waste and water in focus as Palestinian officials and professionals meet in three-day workshop

Twenty decision makers from more than a dozen Palestinian municipalities and central government recently took part in a three-day workshop in Ramallah on "Developing Sustainable Pro-poor Financing Strategies for Municipalities", organised in the framework of the Horizon 2020 Capacity Building/ Mediterranean Environment Programme (H2020 CB/MEP).

The course, also attended by professionals from water and sewerage associations and water authorities, focused on identifying the situation on the ground, as well as the actual role of an institutional framework within which municipalities operate in the fields of solid waste, water, wastewater and sanitation. Participants were introduced to a number of local case studies, to illustrate the situation on the ground, as well as to the concept of objective oriented planning, as a tool for better wastewater management.

Conventional and new technologies for wastewater treatment and the emerging opportunities regarding the synergies between solid waste and wastewater treatment, etc. were also presented. The agricultural use of treated wastewater, and the concept of re-use and cost effectiveness were also among the issues addressed, taking into consideration EU and international standards and guidelines. The final day was devoted to the financial management for wastewater, with a special focus on financing instruments, tariff policies for cost recovery, pro-poor financing and the introduction of the "polluter-pays" principle.

By bringing together professionals with a variety of backgrounds, the course provided an opportunity to share experiences and challenges between different areas and contributed to a lasting pool of expertise.

"Waste and water in focus as Palestinian officials and professionals meet in three-day workshop", 19/09/2012, online at: <u>http://mideastenvironment.apps01.yorku.ca/?p=5935</u>

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✤ 95% of Gaza groundwater 'not fit for human use'

GAZA CITY (Ma'an) -- The Gaza Strip is undergoing a real water crisis which threatens people's lives, the Hamas government's agriculture minister said Thursday.

"About 95 percent of the groundwater in the Gaza Strip is not fit for human use in general, and may cause a number of diseases and health problems," Mohammad al-Agha said.

In al-Agha's interview, published by the Palestine Center for Strategic Studies, he said the population in Gaza needed to be aware of the crisis affecting Gaza's water.

"The Arab world in general and the Gaza Strip in particular are classified as dry regions. The main reason for this crisis in the Gaza Strip is the occupation and its policies," he said.

"We call on all specialized and concerned organizations to take necessary measures that will help finding solutions to this crisis."

In August, a UN report warned that Gaza could soon lose its main source of fresh water, the underground coastal aquifer, which could become unusable by 2016 and irreversibly damaged by 2020.

The World Health Organization says Gazans have an average of 70-90 liters per person per day, compared to a minimum of of 100 liters a day recommended by WHO.

"We have respiratory diseases, skin diseases, eye diseases, gastroenteritis, which can all be linked to polluted water," said Mohamed al-Kashef, director of the international cooperation department in the Gaza health ministry, in an August interview with a UN news agency.

"95% of Gaza groundwater 'not fit for human use", 19/09/2012, online at: http://www.maannews.net/eng/ViewDetails.aspx?ID=520133

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***** Water in Palestine: Not a Scarcity but a Distribution Problem

On Tuesday 18th September 2012 at 8 PM AICafé holds a discussion about "Water in Palestine: not a scarcity but a distribution problem" with Marta Fortunato, Advocacy campaigner at EWASH (Emergency Water Sanitation & Hygiene).

Even though there is enough water to go around in the Occupied Palestinian Territories, the discriminatory laws implemented on the ground by Israel mean that Palestinians are left with a trickle. According to the report "Troubled Waters: Palestinians denied fair access to water" published by Amnesty International in 2009, Israel uses more than 80 per cent of the water from the Mountain Aquifer, the main source of underground water in Israel and the OPT, while restricting Palestinian access to a mere 20 per cent. While average Palestinian daily water consumption barely reaches 70 litres a day per person, Israeli daily consumption is more than 300 litres per day. In some rural communities, like in the Jordan Valley, Palestinians survive on barely 20 litres per day and don't have access to the water that flows in the pipes leading to Israeli settlements which are illegal under international law.

EWASH stands for Emergency Water Sanitation and Hygiene and it is a coalition of almost 30 organizations working in the water and sanitation section in the Occupied Palestinian Territories. This group was established in 2002 and its members include international NGOs like Oxfam, GVC and others, local NGOs like Ma'an Development and ARIJ, UN agencies like OCHA and UNICEF, and Palestinian Authoritiy counterparts like the Palestinian Water Authority (PWA) and the West Bank Water Department (WBWD).

Join for the event

The AIC is a joint Palestinian-Israeli activist organization engaged in dissemination of information, political advocacy and grassroots activism. The AICafè is a political and cultural café open on Tuesday and Saturday night from 7pm until 10pm. It is located in the Alternative Information Center in Beit Sahour, close to Suq Sha3ab (follow the sign to Jadal Center). We have a small library with novels, political books and magazines. We also have a number of Films in DVD copies and the AIC



WATER RESEARCH PROGRAMME -Weekly Bulletin-

publications which are aimed to critically analyze both the Palestinian and Israeli societies as well as the conflict itself.

"Water in Palestine: Not a Scarcity but a Distribution Problem", 18/09/2012, online at: http://english.pnn.ps/index.php/culture/2674-water-in-palestine-not-a-scarcity-but-a-distribution-problem

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***** Inspection of dams under way in preparation for wet season

AMMAN — The Jordan Valley Authority (JVA) has started examining the country's major dams in preparation for storing rainwater as winter approaches, a government official said on Monday.

A committee is currently examining the storage conditions and equipment of each dam and will soon issue a report recommending renovation and maintenance where needed, JVA Secretary General Saad Abu Hammour said.

"The committee, which started inspecting the reservoirs earlier this month, will also recommend clearing out dirt from the streams in the catchment area that supply the dams with water to ensure they are not polluted or blocked with soil," Abu Hammour told The Jordan Times over the phone.

Teams remove sediment from the dams to increase their capacity and prevent water salinity, and also clean up their shorelines, according to the Ministry of Water and Irrigation.

After dams are renovated ahead of the wet season, the committee declares them ready for storing rainwater, Abu Hammour added.

"The country's dams currently hold 63.5 million cubic metres (mcm) of their 327mcm capacity, which is a fairly good amount given the fact that summer is ending," he noted.

The Kingdom's 10 major dams are: King Talal, Wadi Al Arab, Sharhabil, Kafrein, Wadi Shuaib, Karameh, Tannour, Waleh, Mujib and Wihdeh.

Dams, though expensive to construct, are one of the main ways the country relies on to secure its water needs.

The Kingdom relies mainly on rainwater, but only 1.1 per cent of its total area receives an average of 400-600 millimetres of rain, according to the ministry.

Approximately 91 per cent of Jordan's total area of 97,000 square kilometres is situated in arid areas with an annual rainfall average of 50-200 millimetres, while 2.9 per cent of the country's land is categorised as semi-arid.

The first rainfall is witnessed in mid-September or early October, while the wet season usually continues until February, according to the Jordan Meteorological Department.

"Inspection of dams under way in preparation for wet season", 17/09/2012, online at: <u>http://jordantimes.com/inspection-of-dams-under-way-in-preparation-for-wet-season</u>

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★ Egypt: €10 million in new EU support for improving access to clean water and sanitation

The European Commission has approved new funding of €10 million to improve access to drinking water and sanitation for over 15 million people in Egypt. This comes as a first contribution from the €303 million European Water Initiative led by top European Financial Institutions to support Egypt's water supply and sanitation sector for the benefit of the population.

The new support will go towards improving construction and rehabilitation of the infrastructure needed to supply water (e.g. mechanical equipment and pipelines), as well as technical assistance such as financial planning and project management.

"Providing Egyptian citizens with universal access to drinking water supply and environmentallyfriendly sanitation service was amongst the crucial demands for social justice made during the Arab Spring last year. As a result, we have transformed it in one of the key priorities of our support to Egypt," said EU Enlargement Commissioner, Štefan Füle.

With the support of the Improved Water and Wastewater Services – Phase II project, the percentage of coverage of good quality drinking water supply will reach 95% and 40% for environmentally-friendly wastewater and sanitation services in both urban and rural areas in the four governorates of Assuit, Minia, Qena and Sohag.

The new $\notin 10$ million funding is part of the second phase of the European Water Initiative with a total budget of $\notin 303$ million. A second funding contribution of $\notin 13$ million will be provided by the European Commission for the same purpose from the Neighbourhood Investment Facility.

"Egypt: €10 million in new EU support for improving access to clean water and sanitation [EU info centre]",20/09/2012, online at: <u>http://mideastenvironment.apps01.yorku.ca/?p=5931</u>

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Egypt, Ethiopia can build new Nile River water relationship

CAIRO: Despite a Wikileaks report that claimed Egypt was looking to attack Ethiopia's Renaissance Dam project along the Nile River, with Sudan approval, there is still hope that the two countries can rebuild a relationship based on compromise on Nile water issues.

With the ascension of new Ethiopian Prime Minister Hailemariam Desalegn to the country's top position, the time is now for both Cairo and Addis Ababa to forge ahead with new strategies that will benefit both countries' peoples along the world's longest river.

In early August ahead of Ethiopia's PM Meles Zenawi's death, hope for change was already being felt. An Egyptian ministry of water and irrigation told Bikyamasr.com that with the combination of Egypt's new President Mohamed Morsi and the potential of seeing a new leader in Ethiopia, they hoped the tension over Nile River water could be resolved.

"While this can in no way be official policy at this point, I believe that there would be more maneuvering with a new leadership in Ethiopia because there would be the ability to communicate and not be seen as antagonistic," the official said, adding that they were not authorized to speak to the media.

"Let us be frank about the situation between Egypt and other Nile countries," the official continued. "We in Egypt have not been the best at compromise so I think overall, there is so much that can be done to help bring countries together, and Ethiopia has been a leader in its criticism of Egypt so starting there would be good."

With the Nile comes a new set of issues, and with Egypt holding onto a lion's share of water from the world's largest river, upstream countries such as Ethiopia have taken it on their own to begin building dams and other water related endeavors, much to the anger of Cairo.

However, officials hope that solutions can be had in the new post-revolution Egypt that could see the growing tension between countries along the Nile reduce.



"While Egypt never wants to mingle in another country's affairs, a new leadership in Ethiopia would go a long way to changing how things are run, just like it has in Egypt," the official added.

Now that both countries have new leadership, it is time to end the infighting and revamp Colonial treaties brokered during British rule of the region. Those treaties deliver the lion's share of water to Egypt and Sudan, which has led to consternation and frustration by many of the upstream countries, who need more water to promote better agricultural reform and fend off famine and drought.

Together, through new policies such as desalination in Egypt, funding could go to the development of the Nile River in a manner that is beneficial to both Egypt and Ethiopia, which could avoid any potential conflict that is brewing in the region.

"Egypt, Ethiopia can build new Nile River water relationship", 22/09/2012, online at: http://www.bikyamasr.com/78184/egypt-ethiopia-can-build-new-nile-river-water-relationship/

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***** The Nile River: Egypt and Sudan firm up water alliance

They are not ordinary neighbours; they have a shared history and continue to drink from one well, the vital River Nile. They also speak the same language and sit in the same meetings as members of the Arab League, and both are non-signatories to the Rome Statute. This is the law that paved way for the formation of the International Criminal Court.

In a way, the similar interests of Sudan and Egypt seem to keep them close to each other.

When President Omar al-Bashir arrived in Cairo for a brief official visit last weekend, activists predictably, but in vain, came out with their demands for his arrest. For three years, Mr Bashir has been wanted by the International Criminal Court on charges of genocide and war crimes allegedly committed in his country's region of Darfur. So far, he has managed to escape the court's net.

Despite the trials and tribulations that Sudan and Egypt are currently going through, both have managed to maintain a strong alliance of sorts, and now with an Islamist president in either country, it looks only natural that kinship will be further cemented and enhanced.

Mr Bashir, also a member of the Muslim Brotherhood, was one of the first presidents to officially visit Egypt following the revolt that brought an end to Hosni Mubarak's regime. Both he and Egyptian President Mohammed Morsy emphasised the importance of bilateral partnership, dialogue, trade, cooperation and most importantly, an agreement on the Nile water.

Undoubtedly, one of the core issues that a number of African countries are grappling with is that of the River Nile, with disputes over water rights with neighbouring Nile Basin countries remaining unresolved.

A warning shot

In what must be construed as a warning to the other Nile waters sharing countries, both President Bashir and his Egyptian counterpart reaffirmed their countries "identical position" in regards to the water dispute.



Mr Morsy's spokesperson did not hide the fact that the issue of the Nile Water is "an Egyptian national security issue". The two countries receive 55 billion (Egypt) and 18.5 billion (Sudan) cubic meters of water annually thanks to a series of agreements that date back to 1929 and drawn by Britain when it was the main colonising power over much of the continent.

The upstream countries maintain that these agreements, which also give the two countries veto powers over projects deemed as "harmful' to their interests, where signed during the "colonial era, and should be rewritten to allow countries to equally share in the river's economic potential."

One of Egypt long standing objectives over the body of water is that it would never consider the calls for a decrease in its annual share, in fact it would actively seek to increase it – already both Egypt and Sudan control approximately 87 per cent of the water resources of the Nile.

Back in 2010 then Prime Minister Ahmed Nazif, following the signing of the the Cooperative Framework Agreement water treaty by Uganda, Rwanda, Ethiopia and Tanzania, flatly stated Egypt's annual share would not be affected.

That view has pretty much remained unchanged in the eyes of the newly elected government and whilst it also seeks to increase that share, it has been at pains to add that this is "through cooperation and coordination with the Nile Basin countries", not unilaterally.

Marked change

This signals a marked change to the policies adopted by Mubarak regime especially as African nations ambitions have been recognised and followed through as in the case of Ethiopia and the development of its hydroelectric resources such as the Grand Ethiopian Renaissance Dam, Africa's largest hydroelectricity project.

Egypt's disregard to African politics and refusal to further build bi-lateral agreements in the past few decades has been to its detriment as countries such as Burundi, Ethiopia, Tanzania, Kenya, Uganda *et al* have all taken concrete steps to protect their access to the water resource as well as seeking to redress the colonial-era agreements heavily in favour of Cairo that give it the bulk of the continent's longest river.



Moreover, the Nile Basin Initiative, the multilateral organisation comprising all upstream and downstream countries in the Nile Basin region set up to "achieve sustainable socioeconomic development through the equitable utilisation of, and benefit from, the common Nile Basin water resources", now has ten members following the admittance of South Sudan which could potentially be a spanner in the works for both Sudan and Egypt.

The 1959 water treaty did not consider the possibility of South Sudan seceding from it's northern neighbour, so legal rights to the Nile by Africa's newest nation is another factor that undoubtedly must also be considered.

This fear was illustrated in the Wikileaks leaked diplomatic cables which revealed that back in 2009 "Cairo was uncomfortable with a divided Sudan, fearing an independent South would threaten its stranglehold on the River Nile waters. A former foreign ministry official had even asked the US government to help postpone the January 2011 referendum by four to six years.

Charm offensive

The official said the creation of a "non-viable state" could threaten Egypt's access to Nile waters and so to the country's agriculture. Khartoum could also be affected by the South's independence with one analysis arguing it has "been weakened by the secession of the South and with many observers almost certain that Juba will work with the upstream states to force the North and Egypt to agree to a new treaty.

It is noticeable that President Morsy's government has gone on a charm offensive with its African counterparts, with the newly elected head of state visiting Addis Ababa during the African Union summit meeting – something which his predecessor refused to do following the attempted assassination on his life in the Ethiopian capital back in 1995.

President Morsy emphasised the need for stronger ties saying: "I would like to officially announce that Egypt has a desire to work towards a common African market. Egypt will use its human and financial resources to ensure that. We stress our concern with education, health, construction and development."



That the Egyptians are worried in regards to the Nile is not in doubt, especially with Ethiopia's grand dam plans further hinting at the Nile Basin countries determination to move ahead with their water development plans.

This view was emphasised by Mohamed Nasr El Din Allam, the former Egyptian Minister of water and irrigation from 2009 until early 2011 when he stated in an interview that the Grand Ethiopian Renaissance Dam would cause "political, economic and social instability," in the North African country.

Forced hand

What steps Khartoum and Cairo will take is still unclear, but the signs do point to a more conciliatory tone though not to the extent where they will agree nor accept the demands of the other Nile Basin countries unconditionally.

It's also fair to say both countries will work in tandem with each other and to the benefit of themselves. Matters could come to a head and force all the countries involved to take much needed pragmatic steps in resolving the issue with Egypt and Sudan forced to re-consider their past positions as it is clear their Nile Basin counterparts have moved to rectify what they view as one-sided agreements as seen in the signing of the Entebbe Agreement by Ethiopia, Uganda, Tanzania, Rwanda and Kenya which Cairo called a "national security" threat.

Back in 2005 Boutros Boutros Ghali, the former UN Secretary General and Egyptian foreign minister, famously stated that future conflicts and military confrontations would be over water rights, one hopes in regards to the Nile it will not reach that stage.

"The Nile River: Egypt and Sudan firm up water alliance", 18/09/2012, online at: http://www.africareview.com/Special+Reports/Khartoum+and+Cairo+Nile+River+ties/-/979182/1510906/-/yttq5qz/-/index.html

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Sudan Reaffirms Support for Egypt's Nile Water Rights

CAIRO, Egypt — Sudanese President Omer Al-Bashir, despite demands from the International Criminal Court for his arrest for war crimes, traveled to Cairo on September 16 to meet with Egyptian President Mohammed Morsi, where he reaffirmed Sudan's support for Egypt on Nile water rights.

The Sudan Tribune quoted Egyptian presidency spokesman Yasir Ali as saying the meeting confirmed the two nations had a "position" regarding the Nile basin that was "identical."

Ali said the Nile River dispute is "an Egyptian national security issue."

In particular, both Egypt and Sudan oppose upstream attempts to harness the river's waters, especially Ethiopia's hydropower projects.

Ethiopia is currently constructing what would be the largest hydropower plant in Africa -- the Grand Ethiopian Renaissance Dam on the Blue Nile near Ethiopia's border with Sudan.

The project is expected to cost \$4.5 billion USD, produce 6,000 megawatts of electricity and create a reservoir that holds 65 billion cubic meters of water, which Sudan and Egypt say will decrease the flow downstream. The dam is scheduled for completion in 2018.

Last week, the International Monetary Fund (IMF) urged Ethiopia to slow down construction and not devote so many funds to the dam that the rest of the nation's economy suffers.

"I think there's a need to rethink some of those projects a little bit to make sure that they don't absorb all domestic financing just for that project," IMF country representative Jan Mikkelsen told reporters on September 13.

"If you suck in all domestic financing to just a few projects that money will be used for this and not for normal trade and normal business."

However, the Ethiopian government said it would not take this advice.

"It was a well-considered plan and it's one of the mega projects for which the government commits itself unconditionally," Bloomberg quoted Communications Minister Bereket Simon as saying.

The sole reason Ethiopia is left to fund the project by itself is because of Egypt's refusal to sanction not only this project but any development on the river, according to the Ethiopian government.

However, Egypt and Ethiopia did agree last week to further discussions about Nile River rights.



Egypt points to its population as a reason for it to have an even larger allotment of the Nile's waters, but Ethiopian officials pointed out that Ethiopia now has a population of 85 million, slightly larger than Egypt's 83 million.

As OOSKAnews previously reported, Wikileaks recently published emails from intelligence firm Stratfor that date back to 2010, in which the Egyptian ambassador to Lebanon and a high-level Egyptian security official based in Cairo describe the Egyptian government's contingency plan to deal with the Ethiopian dam construction along the Blue Nile.

The plan included taking military action that could involve sending in ground troops or aerial attacks to destroy any structures the Ethiopians built.

However, the Egyptian government quickly denied these claims.

"The claims made by Stratfor intelligence firm about a contingency plan to bomb or sabotage the Ethiopian Dam are unfounded," former Commander of the Air Forces and current Minister of Military Production Reda Hafez told reporters last week.

He said that the information was meant to "drive a wedge between Egypt and Ethiopia."

"There are some countries that do not like to see a thaw in Egyptian-Ethiopian relations. They don't want to see a diplomatic settlement of the Ethiopian dams issue," he warned.

"Sudan Reaffirms Support for Egypt's Nile Water Rights",17/09/2012, online at: <u>http://www.ooskanews.com/daily-water-briefing/sudan-reaffirms-support-egypt-s-nile-water-rights</u> 24365

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***** Eritrea: Micro-Dams Capture Ample Amount of Water – Govt

Augaro — The Administration of Laelai-Gash sub-zone indicated that the micro-dams there have impounded ample amount of water in line with the commendable rainfall registered. It further pointed out that the micro-dams have visibly enriched water resources in the area.

Mr. Sahle Girmatsion from the sub-zonal Administration explained that such water reserve would ensure sustained supply of potable water for domestic and farming purposes, and called on the inhabitants to practice judicious utilization of water resources.

Among the inhabitants, Mr. Mohammed Adem, Mr. Ibrahim Abdalla and Teklit Debesai expressed satisfaction with the micro-dams, and indicated that their livelihood has visibly improved in the wake of their construction.

"Eritrea: Micro-Dams Capture Ample Amount of Water – Govt", 18/09/2012, online at: <u>http://allafrica.com/stories/201209190210.html</u>

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***** Tanzania: Water Resources Management Stakeholders Meet

WATER resources management and development dominated a water stakeholders' meeting.

The water stakeholders were meeting to receive and discuss presentation on a study on 'Water Resources Management and Development in Wami/Ruvu Basin', conducted by the Japan International Cooperation Agency (JICA).

The Permanent Secretary in Ministry of Water, Mr Bashir Mrindoko, said the study will equip water experts with knowledge on how to manage water resources in the country. "The study by JICA will ensure our local water experts are able to come up with plans to ensure sustainability of the resource for socio-economic development," Mr Mrindoko explained.

During discussions, it emerged that some people living around river basins, invade water sources and misuse the water for irrigation and industrial use. Professor Henry Mahoro from Sokoine University of Agriculture (SUA) argued that Tanzania is a blessed country, full of water resources, but people don't know how to conserve and use it properly in their economic activities.

"Look at a country like Israel, it doesn't have a lot of water bodies like Tanzania, however, the little water available, is recycled and used again, while we are not able to tap rain and once the rainy seasons are gone we start looking for it," he lamented. In addressing problems raised, the Wami Basin Water Management Officer, Mrs Praxeda Kalugendo, said they have started to involve a number of different stakeholders in order to identify the quantity of water available in every basin and how water should be used in industrial and agricultural sectors.

Mrs Kalugendo further explained that when they meet with different water experts, such as JICA, they dialogue to come up with different solutions on how to use water as a developmental resource. "Through discussing different studies done by organizations like JICA we get knowledge on how to ensure implementation of actual situation and evaluation of our water resources potential," she said.



WATER RESEARCH PROGRAMME -Weekly Bulletin-

Wami/Ruvu basin hydro geologist, Mr Mshuda Wilson said water needs in the country are exceeding the availability. Mr Wilson called upon the public to use water properly, especially farmers, with the knowledge that other people need it as well.

"Tanzania: Water Resources Management Stakeholders Meet", 21/09/2012, online at: <u>http://allafrica.com/stories/201209210487.html</u>

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* Africa: Land, Water and Resource-Grabbing and Its Impact on Food Security

Text of an address to the 1st Africa Congress on Effective Cooperation for a Green Africa in Bremerhaven, Germany

Thank you for inviting me to address the 1st Africa Congress on Effective Cooperation for a Green Africa (ECOGA).

It is a great honor for me to be here with you and I am humbled to be one of the keynote speakers on a topic of such great importance to Africa and the world beyond. Before I start, I would like to thank Mr. Arne Dunker, the Executive Director of Klimahaus, (Climate House), a brilliant way of letting others experience the different climates of the world within one building without going anywhere. It is a unique way to educate the people about preserving our environment. Even the rooms used at this conference are named as significant symbols of concerns regarding global warming raised at the Kyoto Accord and Montreal Accord. I would also like to thanks the Society for Threatened Peoples, Jens Tanneberg, Dr. Eva Quante?Brandt, Dr. Auma Obama, Ken Nyauncho Osinde, Dr. Nkechi Madubuko and other dignitaries here.

As I speak about the relationship between land, water and resource use related to food insecurity; particularly related to what I have called the "Second Scramble for African Land, Water and Resources," I will not only be speaking of Africa as a whole, but I will be speaking as an insider—as someone who comes from this land and soil called Africa; in particular, from the Gambella region of Ethiopia in East Africa, which enables me to use my own experience as a microcosm of what is most at risk on the continent. Yet, the issues of Africa are also global issues that will positively or negatively impact our global society. As global citizens, we will best flourish when we respect the rights of others for "no one will be free until all are free." This is a fundamental principle of the Solidarity Movement for a New Ethiopia (SMNE), the social justice movement of which I am the executive director.

We are all connected together not only by living our lives together on this planet, but by the Godgiven humanity within each of us, which should be a bridge to valuing "others" – including those unlike us—putting "humanity before ethnicity" or any other differences. This is another fundamental



principle of the SMNE for our humanity has no ethnic, religious, political or national boundaries while the dehumanization of "others" has repeatedly led to genocide, injustice, exploitation, corruption, poverty and deadly violence. When I speak, I am talking not only about my life and the future of my children and grandchildren but also of yours. It is that same inter-connectedness that brought me here today to address this audience made up of some of the top thinkers and decisionmakers related to a "Green Africa," even though I grew up in one of the most remote and marginalized regions of Ethiopia, on the border of South Sudan.

I come from a tiny, previously unknown, and now what some consider to be an endangered people group called Anuak, which means, "people who eat together, who laugh together and who share." Anuak indigenous land stretches between eastern South Sudan and western Ethiopia, dividing the Anuak between two separate countries. When the civil war was going on in Southern Sudan, tens of thousands of refugees from every ethnicity, passed through our land, seeking refuge and peace. The Anuak of Gambella, Ethiopia would often supplies food and water to the weary refugees as they fled war-torn Sudan.

Sadly, right now, the Anuak, nearly all small subsistence farmers, are becoming refugees in their own land as they are internally displaced from indigenous land their ancestors have possessed for centuries. They have become "discardable" people by a regime that wants their land, but not them, in order to lease it to foreigners and regime-cronies for commercial farms. They are not alone; millions of other Ethiopians and Africans from countries all over the continent are facing the same plight.

One of the greatest threats Africa has ever faced is the impact from this new phenomenon of landgrabbing. In many places, these land grabs are going on without any input from stakeholders and without any compensation for lost lands, homes, crops and livelihoods. Small farmers are ill-prepared for the sudden dispossession of their land and with it, the means to their livelihood. Lacking education or training for other jobs, some have become a source of cheap labor as they are left without alternative means for survival. These foreign investors, countries and regime cronies are often making secretive leasing agreements with authoritarian regimes that give them millions of hectares of land for next to nothing for periods of time as long as 99 years in some cases.



With the current concerns for food security, especially in a changing climate where our soaring world population is expected to reach nine billion inhabitants by 2050—only 38 years from now, unused and underutilized land, with access to water for irrigation, has become the new "precious commodity" sometimes called "green gold." Add to that the ever-increasing global need for resources like minerals, oil, natural gas and commodities in general and where do eyes turn but towards Africa, a continent with great reserves of rich, untapped resources. This is what is driving the second scramble for Africa.

During the first scramble for Africa, foreign slave-traders trafficked African human beings with assistance from partners on the inside, Africans themselves, who were wanting to profit from the betrayal of their fellow African brothers and sisters, especially those from competing tribes. Divide and conquer policies made it easier for outsiders to align with some African opportunists, the powerful among them, who then became complicit with these outsiders in the exploitation of other Africans. Colonialism, while making some genuine contributions to Africa, is still broadly considered one of the darkest of times in the history of humanity, marked by the ruthless, exploitive and dehumanizing pursuit of slave labor, economic profit and power from Africans and Africa.

This pursuit of Africa's people as marketable commodities and of Africa's many resources led to foreign-led minority rule, which was maintained through divide and conquer strategies, later adopted by African strongmen. The continent has not recovered. These African strongmen, with their "tribalbased groups" continue today. Even in Ethiopia, where colonial efforts failed, feudalism succeeded with similar results. Whether colonialism or feudalism, both systems fed off of the manipulation of tribalism or its weaknesses. Now, "one-tribe-take-all" politics, with its "colonial" or "feudal" strongmen, has infected much of Africa and can be seen in the ethnic-based, one-party regimes typical of most dictatorships on the continent. Conflict never resolves as one group thrives—usually a minority of the population—while everyone else struggles. If another group comes into power; the pattern is oftentimes repeated. Strong institutions for checks and balances do not exist or when they do, they are pseudo-institutions, controlled by those in power. These non-representative governments continue to epitomize what happened at the Berlin conference of 1885, held only a short distance from where we are today, when Europeans met to divvy up the continent of Africa based on their self-interests. No Africans were present. Now, modern-day African dictators are doing the same.



Thirsty for power, material wealth and privilege, and empowered by foreign and crony partners and heavy-handed militaries, they are divvying up the indigenous land and resources of the African people, without consulting the people or providing compensation for losses, as required under international law and many national constitutions. The people are disempowered, intimidated or "bought off." The environment has never been at greater risk as short-term interests and quick gain trumps the political will to give oversight to ecological concerns surrounding development projects.

From 2008 until now, some 204 million acres of land (approximately 80 million hectares) have been leased worldwide. The majority of it is in Africa. Within the African continent, Ethiopia is at the forefront of these land-grab deals. Within Ethiopia, no place has been more affected than my own home region of Gambella, which has now become the epicenter of land-grabs in the world. Let me share with you how it happened and how these land-grabs are contributing to food insecurity in a place where people have not had to rely on outsiders to feed them until now.

In 2008, the authoritarian regime, led by the recently deceased Prime Minister Meles Zenawi, made a secretive deal with Karuturi Global LTD, an Indian-run commercial agricultural operation. In that deal, they leased 100,000 hectares for fifty years, with the promise of 200,000 more hectares when they developed the first section; making it the largest commercial farm in the world.

Most of the produce is destined for export to India or other commodity markets. Some of the local Anuak have been employed by Karuturi, but wages are mostly below the World Bank's established poverty level. In one year, from 2009 to 2010, the number of private investors in the Gambella region—mostly companies from India, Saudi Arabia, China and regime cronies— mushroomed from close to zero to nearly 900. They include Saudi Star, owned by Sheik Mohammed al Amoudi, a half Ethiopian-half Saudi billionaire, who allegedly will be exporting the food to Saudi Arabia. This past year, armed insurgents, opposed to the land grabs, broke into their headquarters and killed a number of Saudi Star employees, an indication of potential for violence in some of these communities opposed to the expropriation of land from the local people.

A land study completed for the Ethiopian government in 1995 highlighted the value of the Gambella region as being a potential breadbasket of Ethiopia because of its fertile land and plentiful water in the lowlands of the Upper Nile headwaters. It was an undeveloped region of great bio-diversity,



abundant wildlife and virgin forests. Around the same time, oil was found. Finding resources on your land is like finding cancer in your body—it threatens your life and future—especially in a country where the people are seen as impediments rather than valued; even more so if these people demand their rights under their own constitution and international law.

In 2003, the regime went after the oil. The first step was to silence those Anuak leaders who were most outspoken regarding having a say—a right within the Ethiopian Constitution—in the development of the oil reserves on Anuak indigenous land. Starting on December 13, 2003, armed Ethiopian Defense Forces, accompanied by civilian militias equipped by the regime with machetes, attacked and brutally murdered 424 Anuak leaders within a span of three days. The bodies were buried in mass graves. Women were raped and homes, clinics and schools destroyed; followed by over two more years of widespread perpetration of human rights crimes and destruction. I personally knew over 300 of those killed during this 3-day massacre; among them were relatives, classmates and colleagues in the development work I was doing in the area. The regime covered it all up and attributed it to ethnic conflict between the Anuak and another indigenous ethnic group. A Chinese company, under the auspices of Petronas of Malaysia, began drilling for oil at the very same time. As long as they were there, the human rights crimes continued.

Genocide Watch completed two reports, classifying it as genocide targeting a specific people group, the Anuak, and determining that those in the highest offices of the country were involved in its planning and execution. Human Rights Watch did two reports and found widespread crimes against humanity related to the oil drilling.

In 2007, when the drilling only produced dry wells, the troops were moved to southeastern Ethiopia and Somalia where many similar crimes were committed against civilians of the Ogaden region. Now, the Ethiopian government has announced that they will be partnering in the extraction of oil from the Ogaden region.

If you fast-forward to the present time in Gambella, it is now the grabbing of land, the forced eviction of the local people and the renewed human rights crimes perpetrated by the military against any resistance to the above that threatens the Anuak and other indigenous people. In 2011, we in the SMNE partnered with the Oakland Institute (OI) to complete a comprehensive study on the nature



of these land grabs, "Understanding Land Investment Deals in Ethiopia." It was part of a larger study done by OI and other partners of a number of other African countries.

Earlier this year, Human Rights Watch completed an investigation of the impact of these land grabs on the local people. They reported on the forced eviction of 70,000 indigenous people from their homes and farms in Gambella, with plans to eventually move a total of 245,000 people—threequarters of the total population in the region. (See Human Rights Watch Report) The regime has alleged that the resettlement moves were voluntary and motivated by the regime's intention to better provide services such as clean water, medical care and schools; but in actuality, the people were forced to move to "villagization centers" where many people ended up living under trees and to areas where services, fertile land and access to water were far inferior, less accessible or non-existent.

Some of those who have been displaced are people I personally know, so when I am talking about the impact, I know many of their stories. I know that those forced off their land are now struggling to eat. I know about the huge areas of virgin forests that have been cut down to clear vast fields for planting. I know how vulnerable the rivers are to pollution from chemicals and fertilizers. These are rivers from which I used to drink or fish. I know how the wildlife will be jeopardized. I know how those who resist are beaten, killed, disappeared or arrested. This is not only happening in Gambella and in Ethiopia but wherever people have no rights and where others covet their resources or land. This is confirmed by the PBS documentary http://cironline.org/reports/ethiopia-battle-land-and-water entitled: The latest battleground in the global race to secure prized farmland and water and another video done by the Guardian http://www.youtube.com/watch?v=nt22chvx_yQ&feature=related

Land-grabs Undermine Food Security in Places Previously Independent of Food Aid

When we talk about food shortages in 2008 and food insecurity in general, we are not talking about the people in the rural areas of Africa where these land grabs are going on because these people, under normal conditions, have nearly always been able to feed themselves. These people will now be the ones to go hungry because their land is being used to feed the world, but not themselves.

Here are some facts on food security in Africa:

According to the UN's Food and Agricultural Organization (FAO):



One out of three persons in Sub-Saharan Africa is undernourished.

According to the African Human Development Report of 2012 that focuses on improving food security:

Over 41% of children, under the age of five in Sub-Saharan Africa, had stunted growth. Their projection for 2020 only went down by 1%.

• Hunger in Africa is the highest in the world.

In the June, 2011 quarterly issue of the African Food Security Brief , they report:

• Sub-Saharan African countries reported an increase in cereal production in 2010 from 2009, but it failed to result in increased food security in many of the countries studied.

Modern-day dictatorships set the foundation for the second scramble for African resources.

Where there is no freedom, no voice or no justice, the rights and interests of the people are ignored, forgotten or abused. Let's look at some recent statistics that link poor African governance and the lack of freedom to food insecurity and the threat of land and resource grabbing.

• Africans are among the least free people on earth.

• According to a 2012 report from Freedom House, five of the ten countries in the world suffering the greatest aggregate declines in freedom from 2007 to 2011, were in Africa.

• Topping the list of those countries experiencing the greatest declines in freedom over the past two years were: The Gambia, Ethiopia, Burundi, Rwanda and Djibouti.

• In Sub-Saharan Africa, 82% of the countries studied were only partly free or not free; contrasted with Europe, where 96% of the countries are free, with only 4% being partly free and none being not free.

• In terms of the population, 88% of Sub-Saharan Africans are only partly free or not free whereas 13% of Europeans are partly free and no country within Europe is considered "not free."



• Interestingly, two African countries made the list of countries that have seen the greatest net gains in freedom. They are Tunisia and Egypt, both of whom overthrew their authoritarian leaders in the Arab Spring, following decades of repressive rule; hopefully, they will continue in this direction.

Freedom House saw the greatest declines in freedom in these countries in respect to the rule of law and freedom of association with other noted declines related to flawed elections, suppression of the political opposition, the media, journalists and civil society; and in my own country, Ethiopia, the use of anti-terrorism laws to target political opponents and journalists.

I was recently charged by the current government of Ethiopia, and convicted in absentia, of terrorism, without ever receiving a single document regarding it. I received hundreds of calls and emails of congratulations from Ethiopians complimenting me for making the list as it meant the government saw our work as a threat to their authoritarian rule. Sadly, some of Ethiopia's most democratic and valiant voices for freedom have been locked up and tortured within Ethiopia.

Dictatorships, crony-capitalism and corruption will block food security despite efforts.

Meles Zenawi, the architect of the Ethiopian system of increasing authoritarianism, has died. Under his leadership, Ethiopia had plans to lease 4 million hectares of land to foreign and crony investor. Accompanying these secretive land deals are record amounts of illicit capital leakage from the country. Preceding the release of a more comprehensive study by Global Financial Integrity on Illicit Financial Outflows from Developing Countries Over the Decade Ending in 2009, they chose to highlight Ethiopia.

They reported \$11.7 billion (USD) leaving the country in the period of 2000- 2009 and a shocking \$3.26 billion USD in 2009 alone—the first year of record land acquisitions. They stated: "The people of Ethiopia are being bled dry. No matter how hard they try to fight their way out of absolute destitution and poverty, they will be swimming upstream against the current of illicit capital leakage."

Not only is money from investment, foreign aid and funds for development blocked from reaching the people, but an atmosphere of corruption prevents better models of investment from materializing. Corruption deters ethical investors from doing business in Africa—decreasing good economic



opportunities for Africans and instead increasing their food insecurity. In the second scramble for Africa, it is no longer the people who are sought after, but instead it is their land, water and resources. In Ethiopia, anyone who stands against these land-grabs is called "anti-development," "anti-investment" or "anti-economic growth" and becomes a target of the regime while investors and companies willing to give bribes and kickbacks, while ignoring the violation of rights on the ground, are becoming complicit with Africa's corrupt governments in its abuse of the people.

No one will argue with the fact that Africa desperately needs development, investment and economic growth, but what is needed is the right kind of investor and development. In western countries, laws protect the people, but in most of Africa, those laws are absent or not enforced. The people of Africa seek investors who will partner with the people in mutually beneficial and sustainable economic opportunities; however, most of these kinds of investors, developers and partners shy away from much of Africa because of the very real risks of doing business there.

Those ethical foreign and local investors and developers, who do take the risk, usually do so with caution and on a limited basis; however, many simply refuse to even attempt to do business in Africa—or within most countries of Africa—because of its corruption, its lack of infrastructure, its insecurity and the unreliability of the forever changing whims and politics of its authoritarian political leaders.

A representative from a major agricultural company shared recently that they were only willing to do business in five African countries at this time because of the expectation of bribes by public officials and because their company had strict policies against bribery.

This decision is confirmed in a soon-to-be-released survey of eight East African countries by Transparency International and its East African Chapters. In their preview of it, they report that "more than half of all those who deal with public service providers are forced to pay bribes." Despite the 37 signatories to the Organization for Economic Cooperation and Development (OECD), against bribery and corruption and its mission to improve the economic and social well being of the people of the world, bribery is still rampant, with many countries still not signatories or where signatories, many still have shown a lack of political will to enforce compliance. Germany is the second greatest enforcer of this act, only exceeded by the United States, with a higher population.



Unfortunately, where impunity exists, corrupt practices give unfair advantage to corrupt partners and undermine opportunity for principled economic partners who comply voluntarily or because of antibribery laws in their own countries. Such ethical partners should be rewarded once these countries are freed from the hands of their strongmen, but until then, Africans depend on these foreign partners to uphold honest and fair business practice. If Africa is not going to fall victim to the next scramble, it cannot be done alone without such international cooperation. Additionally, the people of Africa must press their countries for needed reforms, transparency, accountability, and improved regional and continental cooperation. Africa has 54 countries and 1.2 billion people who must take charge of their future.

As long as Africans are denied land tenure; food insecurity will continue.

Mohammed Ibrahim, Africa's billionaire who is offering rich payoff's to African leaders who do not take kickbacks says there is no justification for Africa being poor due to its immense wealth. He blames Africans for the way they govern themselves. He believes if African leaders were not so corrupt, that many more investors would be interested in investing. Every year he publishes a report, the Ibrahim Index of African Governance, looking at 86 indicators in Africa's 54 states; ranking them accordingly. Accountability is one factor he believes is missing from most. In 2011 he gives Sierra Leone and Liberia some of the best marks for improvement even though they are not at the top. In regards to Sudan and South Sudan, he states in a recent interview by the Wall Street Journal, "In the absence of security, who can talk about development?" Sudan is his homeland.

However, he voices concern for most of Africa regarding a total disregard for property rights. He says, "The glaring issue here is the land title. Almost without exception, states hold title to everything... this means the 70% of Africans who farm for a living can't monetize their profits, they have no collateral—if you don't have title, how can you raise money, how can you borrow money? It's a major issue in agricultural development, and it needs to be faced head-on."

Like he says, land tenure is a major problem in ensuring food security and gives the legal justification for land-grabs. These unfair laws should be challenged and changed. Until Africans can own land, these problems will continue. Africans must demand the right to own land.



The SMNE will be publishing a study on the relationship of food insecurity to the lack of land tenure in Ethiopia. It was done in partnership with the Humphrey Institute at the University of Minnesota. It affirms all that Mr. Ibriham has said. This one factor, land tenure, would help the small farmers to multiply their productivity; yet, it goes back to the overwhelming need on the continent for freedom.

The rule of law is a weapon against hunger; where it exists, the people are more food secure.

No foreign country would ever come to Germany and kick the people out from their homes and land with no benefit to the people. No outside country could go to Canada to exploit the forests for its lumber; chopping down the trees and not caring about the effect on the ecology and the people; it would never be accepted. It is like someone going to Saudi Arabia and taking all the oil and not caring that the Saudi people did not have any oil to heat their homes or to run their cars. It is like depleting the fish on the coast off of Japan, and leaving none for the locals. Every well-functioning country has laws to protect the rights of the local people. This kind of exploitation only happens in those places where there are no strong regulatory mechanisms or where there is a government who does not care about the people. Unless there are ethics or laws, the privileged and the powerful will take all the advantages; leaving the most vulnerable out.

We live in a world where the balance between the advantaged and disadvantaged is large; like in the case of the exploitation of minerals in the Congo. If those minerals were found in West London or in New York State, the people of that place would benefit, but in the Congo, it is the African strongmen and their partners in many forms—other strongmen, opportunistic nations, corporations or even donor nations. If you are not strong, you are on your own. In some cases, those who are benefiting do not want the people empowered or awakened because if the people knew their rights; the daylight robbery of the people would stop and fairer competition and the rule of law would inhibit exploitation.

In Africa, the people often do not know their rights because they are intentionally denied knowledge and information. Ethiopia is the fourth least prepared country in the world for technological expansion. The reason is because the dictatorial government has been so effective in using imported technology from China to limit the free-flow of information to their own people. Ethiopia should be embarrassed to have one of the lowest percentages of people with cell phones, Internet service or


telephone landlines on the entire African continent. All of these blocks to information hold the people back and keep the country hostage to poverty, hunger and starvation.

For many Africans, their land is the only thing they have. They are uneducated and ill-prepared for jobs beyond farming if suddenly forced from making their livelihoods in this way. For example, in the Omo Valley of Ethiopia live some of the most isolated and neglected of people on earth. Left alone, they have survived because of their land and water. Now, the Ethiopian government plans on taking their land and water away from them without giving them any benefits in order to make way for government-controlled sugar plantations. Who will speak for the people of the Omo Valley? Their government, who should be setting the regulations to protect them, is instead complicit. As a result, they become the victims. They will struggle and some, if not many, will die of hunger or related health issues. Who will benefit? Regime cronies will if the status quo continues under the newly appointed prime minister and his government.

God has given us a beautiful earth with abundant resources and we have toiled to feed ourselves. Whether we are human beings or another living creature, we share the land and the water. We still have enough land to share, but in this global society, that sharing requires that we think not only about ourselves and our groups, but also about others who may be weaker and more vulnerable. We must also consider preserving the conditions for life for other living creatures; creating a balance within our ecosystem to sustain ourselves and our resources. It cannot be done by rhetoric from the powerful, which only serves to cover up the exploitation of those on the ground for there are those who know the law and how to use laws to their own advantage. They pass laws to criminalize dissent and to guarantee their own access to the land of others. They use their power to justify what is wrong, rather than to act fairly. They use their power to exclude. It is immoral and unconscionable. It should not be accepted.

If we are genuinely honest, we know that this land was given to us by God; in no place is that more affirmed than in Africa by the African people. We should not settle for anything less than what is right and it should apply to everyone. Knowing what is right is part of what makes us human. Whether educated or not, what is right is embedded in all of us. Everyone knows it—whether rich or poor, educated or illiterate, powerful or weak. For example, everyone knows that it is wrong to kill another person. The same applies to recognizing the need of other human beings for shelter, food,



family and the necessities to sustain life and that what belongs to them should not be robbed from another person because they are weaker.

As global resources are becoming increasingly precious, we must follow righteousness in these decisions. If we do not, we will lose our humanity, our soul, our peace and our security. We will shirk our responsibility to care and protect others as we would want done to us.

This land-grabbing is life-grabbing. It should not be allowed and should not be accepted by decent human beings. We live on this globe called earth. It may look huge to us here, but from space, it is like a tiny ball that can fit into a hand. We are all in this together and we have to maintain it. We have a stake in it. When dealing with a human life, we should value it, putting "humanity before ethnicity" or any other distinctions that divide us from each other.

For a better world, it requires all of us to remember that "none of us will be free until our brother and sister—our fellow human beings in this world—are free." Our humanity does not have boundaries. We have to preserve it, protect it and be part of it. Do not be bystanders. We have to reach out, take action, love our global neighbors and be the ones to do your share from wherever you are.

"Africa: Land, Water and Resource-Grabbing and Its Impact on Food Security", 21/09/2012, online at: http://allafrica.com/stories/201209211130.html

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* Water could spark future conflicts, leaders warn

Water conflicts are bubbling in many parts of the world, from China and India to the Middle East and southern Africa. A group of former world leaders is calling on the UN to make water a top security concern.

As the world's population continues to grow, so does its thirst. But not every nation is equally able to quench it.

The looming water crisis threatens political stability and economic development in a number of developing and emerging markets, with implications for global peace, warns a group of prominent former government leaders, including Bill Clinton and Nelson Mandela.

The leaders are part of the 40-member-strong InterAction Council (IAC). The organization teamed up with the United Nations University's Institute for Water, Environment and Health, and Canada's Walter and Duncan Gordon Foundation to draft a report on water and world security ahead of a special UN meeting on the topic on September 25 to coincide with high-level meetings of the United Nations General Assembly. UN-Water, a coordinating body for water-related efforts by all UN groups, is organizing the Sept. 25 meeting.

Critical water shortages

In the report "The Global Water Crisis: Addressing an Urgent Security Issue," former Norwegian Prime Minister Gro Harlm Brundtland warns of danger in countries already battling critical water shortages. "As some of these nations are already politically unstable, such crises may have repercussions that extend well beyond their political boundaries," she writes in the foreword. Fabrice Renaund, with the Institute for Environment and Human Security at the United Nations University in Bonn, agrees.

"Water resources worldwide are under increasing pressure through a combination of factors that include population growth, pollution and the consequences of climate change," he told DW. "In some regions of the world, acute stresses could be magnified or become the norm, and many in academic, political and media circles predict that this will inevitably lead to violent conflicts." In a world with more people to feed, more water will clearly be required to grow crops. Currently, 70 percent of the world's fresh water is used for agriculture, according to the World Bank, noting that it takes one liter of water to grow one calorie of food.



Approximately 3,800 cubic kilometers of fresh water are drawn from lakes, rivers and wells globally every year, according to IAC. With about one billion more mouths to feed worldwide by 2025, agriculture will require another 1,000 cubic kilometeres of water per year, equivalent to the annual flow of 20 Nile Rivers.

Although agriculture is the largest user of water by far, it is just one of many. As populations and economies grow, more water will also be required by energy, industrial and urban systems, to name a few.

Indispensible for life

But unlike energy, water has no substitutes. And as the indispensible ingredient for life, it becomes a source of power in its own right.

"With water conflicts, it's not always about scarcity; it's often about power," said Ziyaad Lunat, a Jerusalem-based coordinator with the Emergency Water, Sanitation and Hygiene (EWASH) non-governmental organization and an expert on water issues in Palestine.

The country, he told DW, "has used water for political gain" on the West Bank and with neighboring countries. "Water is a hot topic here," he said.

Securing water is a prickly issue in other parts of the Middle East as well. Iraq, for instance, is at the mercy of its neighbors for supplying much of its water and has accused them of tightening their flows of water into the country more than once in recent years.

'Pushing everything over the edge'

Iran has more than 40 tributaries and rivers crossing into Iraq, while Turkey exerts huge control over the Tigris-Euphrates basin.

"There is so much happening in the Middle East that a conflict over water could push everything over the edge," said Patricia Wouters, professor of international water law at the University of Dundee in Scotland and founding director of the Dundee UNESCO IHP-HELP Centre for Water Law, Policy and Science.

Demand for water in the emerging markets of China and India, the world's two most populous countries with fast-growing economies, is expected to exceed supplies in less than 20 years. Though possessing the fourth largest fresh water reserves in the world, China, by virtue of its population, has the second lowest per capita water holdings of any nation. That could pose a huge problem to the country's economic development, experts agree.



Cooperation rather than conflict

"Water security is on the global agenda," Wouters told DW, noting that it is now a focus of the World Economic Forum and numerous reports from banks and consultancies assessing risk strategies. "You have corporations worrying about investing and national governments trying to protect economic interests."

Research, however, shows no evidence of water being the principle cause of two states going to war, according to the UN University's Renaud. "Given that 145 states and 40 percent of the global population fall within 263 international river basins that account for 60 percent of global river flow, this is not an insignificant finding," he said, adding that tensions over water "seem to stimulate cooperation rather than promote conflict."

"Water could spark future conflicts, leaders warn", 18/09/2012, online at: <u>http://www.dw.de/dw/article/0,,16231369,00.html</u>

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* Water Solutions: An Interview With Arik Dayan

Arik Dayan, CEO of Amiad Water Systems Ltd, talks to Gary Thomas regarding the need for clean, sustainable water supplies in the latest AZoCleantech 'insights from industry article'.

GT: Could you please provide a brief introduction to the industry that Amiad works within and outline the key drivers?

AD: Amiad operates in the global market for water treatment and filtration solutions. We service the industrial, municipal, irrigation, oil & gas and ballast water segments.

There are several key drivers for these markets. Climate change is rendering water an ever scarcer resource. At the same time, population growth puts added pressure on the finite amount of water for drinking, but also for food production as well as a myriad of other uses. This is particularly significant in developing countries where modernization generates additional demand for using water for industrial purposes. Equally, there is increasing regulation worldwide, and especially in developing countries which previously lacked such standards, to manage the quality of water, including waste water being released into the environment. In particular, regulation brought in by the International Maritime Organization is a significant driver for solutions and services in the ballast water industry.

GT: Could you please give a brief overview of Amiad Ltd?

AD: Amiad is a producer of water treatment and filtration solutions. Established in 1962, the headquarters are in Israel and we have grown to include nine subsidiaries worldwide, with 690 employees in total, as well as a network of 170 distributors. We provide solutions to a broad range of clients, spanning 70 countries, including established end-users such as Air Liquide, Bayer AG, Ondeo, Veolia and BHEL.

GT: Amiad is one of the few water filtration manufacturers to offer suction-scanning technology-could you explain how this works and the benefits of this?



AD: Suction-scanning technology enables the automatic, efficient self-cleaning of the filter – to optimise the filtration process. The suction-scanning filters incorporate a multi-layer stainless steel screen. As the suspended solids accumulate on the screens during the filtration process, the pressure differential triggers the self-cleaning mechanism whereby a focused flush rapidly and totally removes the filter cake.

Amiad's suction-scanning technology uses less than 1% of the total process water for cleaning. Cleaning only 'as needed', results in minimal water and energy waste. Equally, suction-scanning technology eliminates the need for isolating the filter during the cleaning cycle, which, along with the minimal exhaust requirement, enables an uninterrupted process flow.

GT: What are some of the key advantages to your filtration systems and how are these unique in the field?

AD: Amiad's solutions have several key advantages with unique features and patented technologies. We are one of the largest water filtration companies with a variety of technological water filtration solutions based on our 3 brands – Amiad, Arkal and Filtomat.

Our solutions don't use chemicals or polymers; use a bare minimum of back flush water with less than 1% of the total flow being used during cleaning; and many of the systems don't even require electricity. In addition, with very few moving parts, they are low maintenance, and their small size saves valuable installation space. As such, they are environmentally sound, and have a low investment and operating cost per cubic meter of water.

GT: In what situations are you instruments commonly used?

AD: Amiad's solutions are used in many different situations as we service a broad range of industries and clients. What these situations have in common, however, is that they all want to produce clean water using efficient, reliable and environmentally-friendly solutions. On some occasions, our solutions might be used in isolation – such as for recycling water on a golf course or providing clean water for farming – and on other occasions, our systems will form part of a larger solution, such as at a desalination plant where Amiad's technology will protect the ultra filtration membranes to ensure a more efficient overall cleaning process.



GT: Could you tell us about a successful case study involving Amiad?

AD: Traditionally, South Australia has always relied on the River Murray for about 40% of its water supply in regular years while in drought years up to 90% may come from this one finite source. With a growing population, this situation is worsening. To ensure a secure water supply and reduce the area's dependence on the River Murray, the government decided to build a desalination plant at Adelaide to supply 13,000 m3 per hour of desalinated water. The plant required the installation of a pre-treatment system with a capacity of 26,000 m3 per hour, which would be supplied by water from the sea. The plant was also required to be efficient, and have a reduced energy use and need for chemicals.

Amiad met these demands by deploying our Arkal disc filtration technology for the preliminary filtration stage for protecting the UF membranes. The solution also included polymeric constructed manifolds so that all the system components were seawater-resistant. To save energy, the filters were rinsed by an external water source at a pressure of 3.5 bar.

GT: Amiad is currently celebrating its 50th anniversary: how has the water purification industry changed in this time?

AD: Over the past 50 years the world's population has increased tremendously, industrial and technological growth has significantly raised pollution levels, and social awareness of the greenhouse effects on the earth and its resources have resulted in a higher demand for clean water. This has caused the industry to search for new technologies, solutions and products that will provide satisfy this need.

GT: Your pledge is to deliver clean water using clean technology: How do you strive to achieve this?

AD: Amiad's solutions are chemical-free, use a minimum amount of back wash water to avoid waste and use a minimal amount – if any – of electricity.

GT: How can the water filtration systems benefit the environment?



AD: Amiad's solutions enable the recycling and reclamation of water – one of the world's most precious resources. They also do this in a manner that is most beneficial for the environment by being efficient, chemical-free and using a minimal amount of electricity.

GT: Amiad has recently signed a contract with Mekorot Group's Ashdod Desalination Plant, Israel-could you tell us more about this please?

AD: The contract is for the provision of an Arkal Super Galaxy automatic self-cleaning disc filtration system (SpinKlin R) for the protection of ultra-filtration membranes at the Mekorot Group's Ashdod Desalination Plant. Amiad's system will have a filtration degree of 100 micron and will be required to withstand a flow rate of 40,000 cubic metres per hour. The Ashdod Desalination Plant, which is due to commence operation in early 2013, will be one of the largest such facilities in Israel, producing 100 million cubic metres of water per year and accounting for approximately 15% of Israeli domestic water consumption.

GT: How do you see the future of water filtration progressing over the next 10 years?

AD: There are several growing and emerging trends in the filtration and water treatment industry.

As the countries of the emerging markets continue to develop, there'll be an increasing need for infrastructure. Similarly, as they adopt environmental regulations, clean solutions such as Amiad's are increasingly in demand.

The shipping industry and its ballast water requirements is a growing segment within the water treatment and filtration market. This is due to the recent Conventions of the International Maritime Organization that impose certain criteria not only on new builds but also existing ships.

The key industry trend, however, is the shift from municipal to private investment in infrastructure as demand declines from the municipal segment and grows from the industrial segment. While public sources of finance remain under especial pressure, much of the private sector – particularly mining and natural resources – remains robust. Equally, rather than investing in a solution for its environmental benefits, now the key driver is commercial output. Water intensive industries, for example, will invest in water technologies that will enable them to use water more efficiently, and



recovering value from brine will become more important than reducing energy consumption. These trends are already visible, which is why we have expanded our target segments to include the oil & gas industry.

"Water Solutions: An Interview With Arik Dayan", 18/09/2012, online at: <u>http://www.azocleantech.com/article.aspx?ArticleID=289</u>

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***** Water - The Threat and the Challenge

ANALYSIS - It is nothing new, global water resources are becoming scarcer and there is increasing competition between agriculture and other industries. However a new report, The Global Water Crisis: Addressing an Urgent Security Issue, calls on government and policy makers to radically reform attitudes towards water and how it is managed globally, writes Charlotte Johnston, TheCattleSite editor.

Agriculture currently accounts for about 71 per cent of global water withdrawals and more than 80 per cent of total withdrawals in the developing world.

It is also estimated that as much as an additional 5,200 cubic kilometres may be needed annually for agriculture alone by 2050.

The report states that this will put enormous pressure on existing water supplies in many parts of the world.

How can we move forward?

Global agriculture must achieve, what some may call an impossible goal, of doubling food production whilst at the same time reducing total water use by 10 per cent by 2050.

Increasing water productivity in agriculture will be a fundamental part of the solution, says the report.

The ability to measure, standardise and report metrics is key to sound management. Knowing, for example, the probability of rainfall and the soil moisture of a region and the water and fertiliser requirements of specific crops will enable precision agriculture, which will yield 'more crop per drop'.

Since the early 1950s, research and investment in agriculture and water management have been high



WATER RESEARCH PROGRAMME -Weekly Bulletin-

on the political agenda of many new nations in Asia and Africa. Major advances in agricultural productivity, driven by Green Revolution breakthroughs that introduced more resistant crop varieties, together with an increase in fertiliser use and the development of irrigation infrastructure, made it possible to end famine in Asia and relieve a vast number of people from hunger.

Water control is key to increasing agricultural productivity with the same or less water input. It also means investing in new institutions and solutions for demand management, says the report.

Investment in innovative water and land management practices that encourage better water use more sustainably would also help to increase agricultural productivity.

Israel - a leader in precision farming

Israel is an example of a country with scarce water supplies that has turned a vulnerability into a major asset.

Despite the Israeli population nearly tripling since 1964, Israeli farmers have succeeded in producing nine times the amount of food with a mere three per cent increase in water consumption.

This has been made possible by placing proper valuation on water, investing in advanced education, creating platforms for new business ventures, and developing programmes to attract private funds.

A real change needed

The report recognises that whilst it is easy to propose improved policies, implementation is often not as simple. Political constraints must be recognised in creating new models.

On top of this, the uncertainty of climate change must not be overlooked. This summer we have seen severe wet weather affect many producers in Northern Europe, whilst Russia and the US suffer from severe droughts.



WATER RESEARCH PROGRAMME -Weekly Bulletin-

There is little doubt that putting water on the global agenda is critical not just in order to feed nine billion people in 2050 with less agricultural water than available today, but also to address the critical development challenge of doing this in a safe, sustainable way while protecting the livelihoods of the vast number of rural poor.

"Water - The Threat and the Challenge", 17/09/2012, online at: <u>http://www.thepigsite.com/swinenews/30916/water-the-threat-and-the-challenge</u>

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Solution Serman loan, grant to fund water security projects

(MENAFN - Khaleej Times) Jordan and Germany on Tuesday signed a 30 million euro soft loan agreement to finance the second phase of the Water Resources Management Programme and an 8.5 million euro grant to help meet the water needs of Syrian refugees.

The funds, to be extended by the German Development Bank (KfW), will go towards the construction of a pipeline between Khaou and Zaatari, which is part of the Disi Water Conveyance Project, to supply Zarqa and the northern governorates with water.

Minister of Planning and International Cooperation Jafar Hassan indicated that the soft loan carries a 2.5 per cent interest rate, a grace period of four years and a maturity period of 15 years.

Hassan and Minister of Water and Irrigation Mohammad Najjar signed the agreement with KfW Director for North Africa and the Middle East Wolfgang Reuss in the presence of German Ambassador to Jordan Ralph Tarraf.

The grant signed on Tuesday, meanwhile, will go towards supplying Syrian refugees in Jordan with water and reducing pressure on the water supply in the northern governorates.

Another 1.5 million euro grant will also be extended to Jordan to support planning and management units at the water ministry.

"Germany is one of only a few countries that responded quickly by providing urgent aid to Jordan to help the country in hosting large numbers of Syrian refugees," Hassan said during the signing ceremony.

According to Najjar, part of the grants will be used to reduce energy consumption in the water sector, which consumes nearly 14 per cent of all electricity generated in Jordan.

He noted that the French government will finance the construction of a pipeline between Abu Alanda



in south Amman and Khaou in Zarqa, which is the first phase of supplying Zarqa and the northern region with water through the Disi project.

Najjar expected the projects to be concluded in two years.

As Jordan suffers severe water scarcity, it is important for Germany to support the water sector, Tarraf said, adding that the German relief agency has built water networks inside the Zaatari Refugee Camp near Mafraq.

What Germany is offering is small compared to the burden Jordan is bearing by hosting Syrian refugees, he added.

The KfW director noted that more cooperation projects between Amman and the bank are in the pipeline, with some to be concluded in the coming months.

"Jordan- German loan, grant to fund water security projects", 19/09/2012, online at: http://www.menafn.com/menafn/1093560687/Jordan-German-loan-grant-to-fund-water-security-projects

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* Asia's Water Crisis Needs Urgent Fixing

Asia's water crisis is at the heart of the world's water challenges, where the degradation of surface and subterranean water resources threatens the ecosystem.

With Asia facing the world's lowest per capita access to fresh water, the continent's ever-deeper search for water is sucking groundwater reserves dry with millions of pump-operated wells even as it confronts river depletion.

Groundwater is recklessly exploited because it is not visible to the human eye. What is out of sight tends to be out of mind, as people drill ever deeper into the receding water table.

At least seven factors have contributed to the rising economic and security risks linked with the Asian water crisis.

One is Asia's dramatic economic rise. With economic activity such as industry and food production consuming 92 percent of the world's annual water use, Asia's rapid economic growth has been the key driver of its growing water stress.

Asia already has the world's largest number of people without basic or adequate access to water. Asians are experiencing very high water-distribution losses, a lack of 24/7 supply in many cities, and drinking water contamination due to unregulated industrial and agricultural practices.

A second factor is consumption growth from rising prosperity. While Asia's population growth has slowed, its consumption growth has taken off as Asians consume more resources like water, food and energy.

A growing Asian middle class, for example, uses water-guzzling, energy-hogging comforts such as washing machines and dishwashers. What were once luxuries have become necessities today. In China, daily household water use increased 21/2 times between 1980 and 2000 alone.



The broader consumption growth is best illustrated by changing Asian diets, especially the greater intake of meat, which is notoriously water-intensive to produce.

Asia actually accounts for the world's fastest growth in meat consumption. China, Vietnam and Thailand almost doubled their production of pigs and poultry during the 1990s alone.

Growing biomass to feed animals takes far more water, energy and land than growing biomass for direct human consumption. Much of the world's corn and soya bean production and a growing share of wheat now go to feed cattle, pigs and chickens.

Third is the role of irrigation. Irrigation has proven both a boon and a curse in Asia. Once a continent of serious food shortages and recurrent famines, Asia's dramatic economic rise as a net food exporter came on the back of an unparalleled irrigation expansion. Between 1961 and 2003, Asia doubled its total irrigated acreage.

Extending agriculture to semi-arid and arid areas that stretch from northern China to Uzbekistan and beyond has required intensive irrigation. But this has created serious water-logging and soil salinity problems, and undercut crop-yield growth.

Even in Asia's fertile valleys drained by major rivers, irrigation is often necessary in the dry season because the rains are usually restricted to the three- or four-month monsoon season. This is in stark contrast to Europe's rain-fed crops producing most of its food.

With its vast irrigation systems, Asia now boasts most of the world's land under irrigation, where 70.2 percent of the world's 301 million hectares is irrigated.

Asia's channelling of 82 percent of its water for food production is not the only startling statistic. Consider another astonishing figure: almost 74 per cent of the total global fresh water used for agriculture is in Asia alone. With so much water diverted to agriculture, water literally is food in Asia. Yet in the long term, such water use by Asia's agricultural sector is simply unsustainable.



A fourth factor is the fast-rising water demand from Asian industry and urban households, as this continent becomes the world's fastest industrialization and urbanization region.

With the international shift of manufacturing to Asia continuing, this continent's industry water usage is merely 9 percent of the total, with another 9 percent used for municipal supply. However, in East Asia - where Asia's heavy manufacturing is concentrated - industrial water use already accounts for 22 percent of total supply, with municipal supply making up another 14 percent.

However, water shortages are looming as industrial activities rapidly expand, even as the fast pace of urbanization has left many cities struggling to meet the household water demands.

A fifth factor in Asia's water crisis is the large-scale sequestration of river resources through dams, barrages, reservoirs and other human-made structures. This has been done without factoring in long-term environmental considerations and, in a number of cases, even the interests of countries downstream.

Projects designed to offer structural solutions in the form of dams, reservoirs, irrigation canals and levees are often at the root of intrastate and interstate disputes.

Asia is the world's most dam-dotted continent, yet such over-damming has only compounded its water challenges. China alone boasts slightly more than half of the approximately 50,000 large dams on the planet.

Yet another factor is the environmental impact of Asia's economic growth story, including on watersheds, riparian ecology and water quality. Rising prosperity in Asia, by aggravating the environmental impact of human activities, is deepening the water crisis.

State policies have unwittingly contributed to environmental degradation. State subsidies, for example, have helped weaken price signals, encouraging farmers to over-pump groundwater. Provision of subsidized electricity and diesel fuel to farmers in several Asian countries has promoted the uncontrolled exploitation of groundwater.



Water abstraction in excess of the natural hydrological cycle's renewable capacity is affecting ecosystems and degrading water quality in large parts of Asia.

The over-exploitation of groundwater, for example, results not only in the depletion of a vital resource. It also leads to the drying up of wetlands, lakes and streams that depend on the same source. The human alteration of ecosystems is an invitation to accelerated global warming.

A final factor is the lack of institutionalized cooperation over most of Asia's transnational river basins. This reality has to be seen in the context of strained relations between states sharing river basins and the broader absence of an Asian security architecture.

Asia is the only continent other than Africa where regional integration has yet to take hold, largely because Asian political and cultural diversity has hindered institution building. As a result, managing the water competition in Asia has become increasingly challenging.

"Asia's Water Crisis Needs Urgent Fixing", 17/09/2012, online at: <u>http://www.thejakartaglobe.com/opinion/asias-water-</u> <u>crisis-needs-urgent-fixing/544890?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=8682b2f1f5-</u> <u>RSS_EMAIL_CAMPAIGN&utm_medium=email</u>

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How will climate change affect food production?

<u>Food</u> is one of society's key sensitivities to climate. A year of not enough or too much rainfall, a hot spell or cold snap at the wrong time, or extremes, like <u>flooding</u> and storms, can have a significant effect on local crop yields and livestock production. While modern farming technologies and techniques have helped to reduce this vulnerability and boost production, the impact of recent droughts in the <u>USA</u>, <u>China</u> and <u>Russia</u> on global cereal production highlight a glaring potential future vulnerability.

There is some evidence that <u>climate change</u> is already having a measurable affect on the quality and quantity of food produced globally. But this is small when compared with the significant increase in global food production that has been achieved over the past few decades. Isolating the influence of climatic change from all the other trends is difficult, but one recent <u>Stanford University study</u> found that increases in global production of maize and wheat since 1980 would have been about 5% higher were it not for <u>climate change</u>.

All else being equal, rising carbon dioxide concentrations – the main driver of climate change – could increase production of some crops, such as rice, soybean and wheat. However, the changing climate would affect the length and quality of the growing season and farmers could experience increasing damage to their crops, caused by a rising intensity of droughts, flooding or fires.

The <u>latest IPCC report</u> predicted improving conditions for food production in the mid to high latitudes over the next few decades, including in the northern USA, Canada, northern Europe and Russia. Conversely, parts of the subtropics, such as the Mediterranean region and parts of Australia, and the low latitudes, could experience declining conditions. For example, across Africa, yields from rain-fed agriculture could decline by as much as 50% by 2020. Beyond this, if global temperatures rise by more than about 1–3°C, declining conditions could be experienced over a much larger area. The future course of global food production will depend on how well societies can adapt to such climatic changes, as well as the influence of other pressures, such as the competition for land from biofuel production. The IPCC <u>concluded</u> that in the poorer, low-latitude countries, climate change could seriously challenge the capacity to adapt for a warming of more than 3°C. The richer, higher latitude countries are likely to have a greater capacity to adapt and exploit changing climatic conditions.



But we can't ignore the potential for "surprises" down the line. There are many uncertainties in such predictions. The world has not seen such changes in climate for millennia, and so it is impossible to know how our agricultural systems will react in the real world. For example, the complex interlinkages with the impacts of climate change on pests, diseases and pollinators, like bees, are largely unknown. Also, climate models have difficulty in accurately predicting the detailed local environmental changes that are important for food production, particularly weather extremes.

A looming vulnerability is the world's <u>fisheries</u>, which provide an important source of protein for at least half the world's population. Fisheries are already stressed by overexploitation and pollution. Warming surface waters in the oceans, rivers and lakes, as well as sea level rise and melting ice, will adversely affect many fish species. Some marine fish species are already adapting by migrating to the high latitudes, but others, such as Arctic and freshwater species, have nowhere to go. The absorption of carbon dioxide emissions by the oceans also has a direct impact on marine ecosystems through ocean acidification.

But what does this mean for food security – the price and availability of food for the world's seven billion people? A <u>2011 Foresight report</u>concluded that climate change is a relatively small factor here, at least in the short term, when compared with the rapid increases in global food demand expected in the next decade. On <u>current projections</u>, by 2050 there will be between one and three billion additional mouths to feed. As people become wealthier, they also demand more food and disproportionally more meat, which requires far more land and water resources per calorie consumed. When these factors are combined, it points toward a future of increasing and more volatile food prices.

As was seen during the 2007–08 food price spikes, the poorest countries and communities will be hit first and hardest. The <u>Foresight report</u>concluded that international policy has an important role to play here – today, despite plentiful supplies of food globally, almost one billion people are undernourished.

Finally, food production itself is a significant emitter of greenhouse gases, as well as a cause of environmental degradation in many parts of the world. Agriculture contributes <u>about 15% of all</u> <u>emissions</u>, on a par with transport. When land conversion and the wider food system are taken into account the total contribution of food may be as high as 30%. This means that to limit the long-run



impacts of climate change, food production must become not only more resilient to climate but also more sustainable and low-carbon itself.

"How will climate change affect food production?", 19/09/2012, online at: <u>http://www.guardian.co.uk/environment/2012/sep/19/climate-change-affect-food-production?CMP=twt_fd</u>

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<u>India</u>, the second-biggest producer of rice, wheat and sugar, is the most vulnerable among the world's leading industrial and emerging economies to future water stress, according to HSBC Holdings Plc.

India exhibits the most worrying trends among the Group of 20 nations with the resource "hovering dangerously near extreme scarcity levels" by 2030, HSBC said in a <u>report</u> today that forecast the group's water consumption against supply.

The worst U.S. drought in a half-century drove corn and soybeans to records in August. Agriculture is the biggest consumer of water and India, the most dependent on farming among the G-20 nations, uses 25 percent of all water consumed globally by the industry, HSBC found.

Companies are unlikely today to disclose information on local water scarcity that can affect farms, plants and operations, it said. Investors will increasingly demand more disclosure to assess potential disruption to earnings, it said.

According to United Nation definitions, India is already officially water-stressed while <u>Saudi Arabia</u>, <u>South Africa</u> and <u>South Korea</u> are water-scarce, the report said.

Historical trends are no longer a reliable way to assess future availability as <u>climate change</u> affects rain patterns and glacial melt, it said. Changing water patterns have already forced the closure of power, oil and gas and textile facilities in India this year, the report said.

Dry regions are getting more arid and wet areas wetter as the water cycle that circulates across the oceans, atmosphere and land intensifies at twice the rate predicted by global climate models, HSBC said.

"India Most Vulnerable G-20 Nation to Water Stress: HSBC", 19/09/2012, online at: <u>http://www.bloomberg.com/news/2012-09-19/india-most-vulnerable-g-20-nation-to-water-stress-hsbc.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=73d8cb7cbd-RSS_EMAIL_CAMPAIGN&utm_medium=email</u>

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> No water will be released to Tamil Nadu: Jagadish Shettar

BANGALORE: Totally rejecting the formula suggested by Cauvery River Authority (CRA) headed by Prime minister <u>Manmohan Singh</u> on water sharing, Karnataka has said the distress in the state and <u>Tamil Nadu</u> can be confirmed only through field visit by an expert team and not through any ad hoc decision.

In a bid to resolve the row over Cauvery river water-sharing between two states, Singh on Wednesday asked Karnataka to release 9,000 cusecs every day between Sep 20 and Oct 15 to Tamil Nadu. However, the meeting miserably failed after both states expressing unhappiness over the decision.

While chief minister Jagadish Shettar walked out of the meeting after registering a protest over the ruling, while Tamil Nadu Chief Minister J Jayalalithaa said her state would approach the Supreme Court to get its due. "The obligation to release 10,000 cusecs per day upto 20.09.2012 will be adhered to," he said.

Following are the arguments of Karnataka expressing why water cannot be released:

*Further releases beyond Sept 20 will sacrifice the basic drinking water requirements and protection of standing crops of farmers of Karnataka. This will cause irreparable injury to the State of Karnataka

*Subsequent to the failure of the rainfall to an extent of 43% in the basin, the inflows into our reservoirs have drastically dwindled resulting in a shortage of 48% till the end of August 2012. *Against the normal flow of about 217 tmc, the flow into our reservoirs is only 102 tmc till the end of August.

*Flows into KRS (Krishna Raja Sagar) stem is curtailed to about 55% and that in Kabini stem to 34% of the normal at the end of August, 2012 which reflects the severity of the deficit monsoon. This year is the worst affected year in the last 40 years in terms of rainfall.

*The total inflow into Karnataka reservoirs upto 19.09.2012 is about 144 tmc as against 242 tmc in a normal year, representing a shortage of about 40%. As of now, the live storage in the reservoirs of Karnataka is about 76.07 tmc.



* Further water requirement for drinking water and irrigated crops in the Cauvery basin in Karnataka is estimated to be about 157 tmc after effecting severe <u>economy</u> measures in water uses.

*The total requirement of Bangalore city in 2025 is estimated to be 30 tmc. Presently, the supply is only about 19 tmc, which has caused severe shortage in many parts of Bangalore city. Any further shortages due to release from Cauvery will create severe water crisis in Bangalore city.

* As on Sept 10, 2012 the storage at Mettur reservoir was 41.70 tmc. As on Sept 19, 2012 the storage at Mettur reservoir is about 47 tmc. This clearly shows that TN has built up the storage. Hence, TN is in a better position today.

*Total storages in Karnataka as on Sept 10, 2012 was 80 tmc and the total storage as on Sept 20 is 76.07 tmc. Therefore, the distress in Karnataka is turning out to be severe compared to Sept 10. Any further releases would worsen the situation in the state. The injury would be of permanent nature.

*Inflow into Karnataka reservoirs as on Sept 10 was in the range of 22,000 cusecs to 29,000 cusecs. However, the inflow has dwindled to 11,300 cusecs today (Sept 20) and it is dwindling day by day.

* The interim order was passed on June 25, 1991 without any investigation and before the pleadings were completed. The interim order survived only "till the final adjudication of the dispute".

*The foremost task before the present CRA is to resolve sharing of distress based on acceptable and equitable procedure based on ground realities instead of the rigid mathematical system which is not scientific and equitable.

*The CRA should send an Expert Team to gather fact and data on the water requirement for crops, drinking water requirement and total water available in the basin.

*All other contentious issues including the orders of the Tribunal are yet to be adjudicated by the Supreme Court.

"No water will be released to Tamil Nadu: Jagadish Shettar", 20/09/2012, online at: http://articles.timesofindia.indiatimes.com/2012-09-20/bangalore/33976188_1_kabini-reservoirs-severe-water-crisis

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WATER RESEARCH PROGRAMME -Weekly Bulletin-

* Pakistan issues water projects plea to donors

* Poor water, sanitation quality costing kitty Rs 343bn annually

ISLAMABAD: Pakistan on Thursday issued a fresh plea to donors to help it execute water and sanitation projects to meet Millennium Development Goals (MDGs) as experts told a briefing contaminated water and insufficient sanitation facilities cost the nation Rs 343 billion annually in terms of ailment and environmental degradation.

Addressing the donors debriefing session, organised by Ministry of Climate Change, the experts said that in 2006 the losses from poor water quality and insufficient sanitation were only Rs 112 billion. The increase makes the total losses at four percent of the GDP.

Opening the session for discussion, Secretary Climate Change Mahmood Aalam mentioned the worrisome situation and called upon the donors to help Pakistan execute water and sanitation-related projects to meet millennium development goals. He said, according to a World Bank Study of 2006 annual total environmental losses were recorded at Rs 365 billion with Rs 112 billion losses due to poor water quality and sanitation facilities.

"But, these losses have now rose to Rs 343 billion that incur on curing the water-borne diseases like diarrhoea, hepatitis, malaria and infant mortality caused by lack of proper water and sanitation system." Mentioning various commitment and measures by the government, the secretary said, "The government is embarking on implementation of national and provincial sanitation and drinking water policies. We have been successful in undertaking UN initiative on Global Analysis and Assessment of Sanitation and Drinking Water (GLAAS)."

Aalam said Pakistan remains committed to enhancing sectoral allocation by one percent of the overall PRSP by 2015 to meet 2013-15 resource gap of \$750 million and mobilise external assistance for an additional \$200 million annually to meet the millennium development goals. Regarding the commitments, he mentioned to developing National Sector Action Plan to implement policies and constituting task forces on upscaling rural sanitation as well as on Wash Programme for Disaster Preparedness and response to urban challenges in the present climatic changes scenario. He said informed the representatives of the donors like World Bank, UN agencies and private sector organisations that debriefing was meant for soliciting support from the donors in follow-up of their commitments made at high-level meeting to facilitate Pakistan achieve the MDGs on water and



sanitation by 2015.

Representatives from the provinces and AJK and Gilgit-Baltistan briefed the session about the situation of projects and the funds they needed to execute the schemes related to clean drinking water and improved sanitation. They urged that donors should understand the ground realities and prefer to reach out to poor in remote areas instead of formulating policies by sitting at federal and provincial headquarters.

They also called for evolving workable strategies and policies that benefit the poor villagers for whom the clean water and sanitation facilities are still a dream.

In his concluding remarks, Ministry of Climate Change Director General (Environment) Jawaid Ali Khan reiterated the government's commitment to pursue the water and sanitation agenda at global and regional level. "The challenge is serious and we need to pool efforts to achieve MDGs targets. This needs continued and concerted efforts," he said. The government, he added, values its partners and will continue playing the role of a facilitator and accommodate them in their projects as much as possible. Khan hoped the way forward of debriefing session is that how to proceed for mobilising more resources as well as putting in place self-monitoring and reporting tools. app

"Pakistan issues water projects plea to donors", 21/09/2012, online at: http://www.dailytimes.com.pk/default.asp?page=2012%5C09%5C21%5Cstory 21-9-2012 pg11 1

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Plans for construction of 23 water projects costing Rs 6.07b in KP

PESHAWAR – The provincial government has planned construction of 23 new big and small water projects costing Rs 6070 million with main focus on building of 100 irrigation tube-wells, a small dam at Kiyala Abbottabad, flood protection and improvement of small ponds works in Khyber Pakthunkhwa to bolster its agriculture, water and energy sectors.

Official sources told APP on Sunday that the Government has included 23 new schemes for uplift of water sector in the current Annual Development Programme (ADP) with a total allocation of Rs.6070 million against which Rs.1097.673 million would be utilized in current fiscal year (CFY).

As many as 100 irrigation tubewells/lift irrigation-small natures schemes would be constructed with an estimated cost of Rs.400 million against which Rs.150 million were set aside for CFY, adding focus would be made on establishment of these schemes in those areas where this facility lacked or was not available in the past.

The 2010 floods had badly affected irrigation channels in Khyber Pakthunkhwa that need quick repair and improvement, he said, adding the government has planned to bring improvement in existing irrigation facilities by providing small ponds/repair canals in KP and construct small irrigation schemes in Hazara division with an estimated cost of

Rs.200 million against which Rs. 100 would be spent on these two schemes in current fiscal year.

To provide quick excess and travelling facilities to farmers and agriculture growers in Khyber Pakthunkhwa, the official said, crossing facilities and small bridges would be constructed on canals with an estimated cost of Rs. 100 million, which would save their time and money at large. He said the floods had badly affected the Budni Nullah Peshawar that needs immediate repair works in order to save lives and properties of people in future. To revamp Budni Nullah, the government will spend

Rs. 400 million on this major project to offset the prominent threats of floods in Peshawar suburban areas, adding Rs. 131. 453 would be spent in current fiscal year.



Similarly, the government would spend Rs. 75 million on restoration of flood protection works from Amandara to Totakan in Mardan district while Rs. 6 million would be spent on construction of flood protection works on Tarako Nullah near Nogram area of Buner district to make these areas safe from floods whereas improvement of Shamozai in

Mardan will cost Rs. 40 million. Referring to the Millennium Development Goals Report 2012, he said 783 million people, or 11 per cent of the global population, remain without access to an improved source of drinking water. He said the world has met the MDG drinking water target five years ahead of schedule but work is not yet completely done and we must not forget that since it is not yet possible to measure water quality globally, dimensions of safety, reliability and sustainability may actually be slowing progress.

To provide clean drinking water facility to people of

Abbottabad, he said, a dam at Kiyala would be constructed with a cost of Rs.940 million in addition to raising Bara dam costing Rs. 2500 million. These projects would soon be tabled before Provincial Development Working Party for approval.

Construction of Escape Channelon 12 Chesma Right Bank Canal (CRBC) in DI Khan worth Rs. 5million besides rehabilitation of lift irrigation scheme near Gomal, Dera Ismail Khan costing Rs. 20million and improvement of lift irrigation supplies of Shah Kot are also in pipeline.

Similarly, Rs. 100 million have been earmarked for pre-feasibility study, feasibility study and detail design of small dams in KP (Phase-II) against which Rs. 20 million would be spent in CFY.

The government has planned construction of bridge in Peshawar and Flood Management of Bara River by setting aside Rs. 300 million against which Rs. 40 million would be utilized in CFY.

Floods in Bara River in 2010 had brought havoc toAmankot,

Mohib Banda, Akbarpura, Tarnab, Nasir Kalley, Choki Darab, Nasirpur, Babi Jadeed, Kush Makam and Qadeem villages etc and the government has taken principle decision for its flood management



by constructing a bridge onBara river at Tarnab for smooth water flow and ensure smooth traffic flowon GT road as well.

He said the province's economy is mainly agrarian and it predominantly depends on an effective irrigation system. This year, he said maximum resources have been earmarked for timely completion of on-going projects including Bazai Irrigation scheme in Malakand and

Mardan districts, Khandan Jonali Koch irrigation scheme in Chitral district, Hero Shah minor and remodelling of link channel in upper Swat canal. These projects upon completion will irrigate 26840 acres of land besides an allocation of Rs.2858.289 million for the implementation of

91 schemes, out of which, 68 are ongoing and 23 are new in existing ADP.

He said focus would be made on completion of Bazai, irrigation scheme under which 25000 acres of land will be brought under cultivation while Khandan Jonali Koch irrigation scheme upon completion will irrigate more than 1200 acres of land.Similarly, Hero Shah minor in upper Swaland will be irrigated.

Metalling of Canal Patrol Road along Joe Sheikh Canal Road in

Peshawar will cost Rs.30 million and work on this project would likely to be completed in existing financial year. As many as Rs. 50 million would be spent on re-construction and improvement of Fatehpur Irrigation scheme in Swat while Rs.70 million would be utilized on feasibility study for alternate alignment/proposal for construction of Trichan to Attah Irrigation scheme tehsil Mulkoh in Chitral.

Protection structures at vulnerable locations in KP costing

Rs. 625 million, construction of Ganoorai irrigation channel Dir Upper costing Rs. 65 million and building of flood structures at Khaili Swat river in Charssadda district are also planned.

Rehabilitation of canal patrol road along Jamal Ghari and



Muhammad Khan will be completed at a cost of Rs. 9 million this year whereas Rs. 105 million are the estimated cost of Rangmala Irrigation

scheme in Malakand Agency.

He said feasibility studies of some of these projects are

completed, few underway and some will begin very soon and would be tabled before competent authorities for approval. These projects upon completion would bring very positive changes in peoples' life style, he added.

"Plans for construction of 23 water projects costing Rs 6.07b in KP", 17/09/2012, online at: <u>http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/business/17-Sep-2012/plans-for-construction-of-23-water-projects-costing-rs-6-07b-in-kp</u>

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WAPDA to start construction of four more dams

LAHORE - The construction work on Naulong, Nai Gaj, Ghabir and Kurram Tangi dams - one each in Balochistan, Sindh, Punjab and Khyber Pakhtunkhwa/FATA respectively – is being started on fast track basis, as the consultants and the contractors are being mobilised to the sites for the purpose. This was stated by the Pakistan Water and Power Development Authority (WAPDA) Chairman Syed Raghib Abbas Shah in a meeting with WAPDA senior officers here at WAPDA House. The Chairman, while speaking of his priorities, said that in addition to initiating new schemes in water and hydropower sectors, completion of the under-construction projects in shortest possible time is the foremost priority of the present management of WAPDA. He said that on-time completion of the projects is vital in view of the increasing needs of water and electricity in the country. He directed the project authorities to expedite their efforts in completing the projects, so that their benefits could be accrued to mitigate water and power shortfall. Dilating upon his organisation's chartered of duties, he said that WAPDA should come up to the expectations of the people, as it deals with the two vital sectors in the country i.e. water and hydropower. He vowed that the present management will leave no stone unturned to make WAPDA an engineering organisation par excellence, adding that any suggestion for improvement in functioning of WAPDA will be highly valued. WAPDA Member (Power) Muhammad Qasim Khan, Member (Finance) Syed Nazakat Ali Shah, Secretary Muhammad Imtiaz Tajwar, General Managers, Chief Engineers and Director Generals of various formations attended the meeting.

"WAPDA to start construction of four more dams", 22/09/2012, online at: http://www.pakistantoday.com.pk/2012/09/22/news/profit/wapda-to-start-construction-of-four-more-dams/

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China's water diversion project carries risks

As government officials hailed the success of relocating 340,000 people in China's south-north water diversion project Tuesday, they are also aware of the social and environmental challenges the project may bring.

The relocation in central China's provinces of Hubei and Henan is part of the project to transfer clear water from the Han River, a major tributary of the Yangtze River, to the drought-prone north including the capital city of Beijing.

At the start of the route, the height of the Danjiangkou Dam on the Han River has been raised, and the reservoir behind the dam will begin to rise in 2014 so that water will flow all the way to the north.

The project forced 180,000 people in Hubei and 160,000 in Henan to leave their homes around the reservoir. It is China's second largest relocation program after the Three Gorges project, which involved the relocation of 1.27 million people over a period of 17 years.

The immigrants, mostly poor farmers, have moved in to more than 600 government-designed villages across the two provinces within the past three years.

The Hubei provincial government said that the relocation is a miracle in the history of reservoir immigration in China.

Tens of thousands of officials were employed in the relocation program. Among them, 21 -including nine in Hubei and 12 in Henan -- died from fatigue and illness caused by constant work.

However, the relocation is just the first step of the immigration, said E Jingping, director of the South-North Water Diversion Office of the State Council, China's cabinet. "The goal for the coming years is to keep the immigrants stable, enable them to develop and become rich."

However, discontent exists among immigrants who have found life harder in the new locations, where locals have different dialects and cultures. Added to this, living costs are higher with some houses having defects. Some immigrants are given low-grade farmland to work on and those who grew fruits in hilly regions do not know how to grow rice on a plain.



Living standards are likely to go down for more than a third of the immigrants, Peng Chengbo, vice director of the Hubei Reservoir Immigration Bureau, told Xinhua.

Thousands of immigrants have travelled back to their hometowns to seek redress from governments. Some have barricaded highways, besieged government buildings and beaten immigration officials.

Peng said that local governments were under pressure in maintaining stability in Hubei, where various water projects including the Three Gorges and the water diversion forced a total of three million people to move over the past five decades.

Hubei has plans to help the immigrants to raise their living standards to average levels in the new locations within three years, and in a further two years surpass the average, he added.

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"China's water diversion project carries risks", 19/09/2012, online at: <u>http://www.china.org.cn/china/2012-09/19/content_26566828.htm</u>

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China Overtakes U.S. as Largest Crop Importer, WTO Data Show

China passed the U.S. last year for the first time to become the biggest importer of agricultural products and also increased its exports, according to <u>data</u> by the <u>World Trade Organization</u>.

Imports, including food and beverages, rose 34 percent to \$144.7 billion in 2011 from \$108.3 billion in 2010, according to Bloomberg calculations based on data released by the Geneva- based trade body. Exports gained 25 percent to \$64.6 billion, beating Canada to become the sixth largest, the data show.

Growth in the second-biggest <u>economy</u> and largest population has boosted demand from soybeans and corn to feed livestock to powdered milk and sugar to make beverages. Urbanization widened China's water and land shortages, further fueling a global rally in crops amplified by drought-reduced supply.

"Whether it's rice, wheat or soybeans, China's needs are huge and they are only going to get bigger, because it can't produce enough while urbanization is still progressing," said <u>Li Qiang</u>, the Shanghaibased chairman of commodity researcher Shanghai JC Intelligence Co. The country generally favors importing unprocessed crops to raise animals rather than processed products, he said.

The U.S. has long been a net exporter of crops, while China's shipments, while growing, are smaller than its imports, Li said. China's had a net-import bill last year of \$80.1 billion, while the U.S. recorded \$31 billion in net exports, according to Bloomberg calculations based on WTO data.

China will more than double soybean <u>imports</u> since 2005 to 58 million tons in the marketing year ending Sept. 30, taking about 60 percent of total global trade, according to data by the <u>U.S.</u> <u>Department of Agriculture</u>. Last year, imports of rice jumped 58 percent from 2010 while sugar purchases gained 65 percent, according to <u>China</u> customs data.

Soybeans on the Chicago Board of Trade have gained 38 percent this year while corn has advanced 16 percent amid the worst drought affecting the Midwest since 1936. Soybeans reached a record \$17.89 a bushel on Sept. 4, while corn touched an all- time high of \$8.49 on Aug. 10.

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[&]quot;China Overtakes U.S. as Largest Crop Importer, WTO Data Show", 20/09/2012, online at: http://www.bloomberg.com/news/2012-09-20/china-overtakes-u-s-as-largest-crop-importer-wto-datashow.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=73d8cb7cbd-RSS_EMAIL_CAMPAIGN&utm_medium=email


* Mekong river dam will kill us : protesters tell PM

A conservation group submitted a petition with more than 9,000 signatures from people opposed to a controversial dam on the Mekong River to Prime Minister Yingluck Shinawatra yesterday, demanding the Thai government cease support for the Xayaburi Dam.

Representatives of the Thai People's Network gathered at Government House with posters that said "We, people from the Northeast, will not support PM Yingluck anymore", and the "Dam is killing us".

They called for Yingluck to come out to receive their petition and hear their demands, but she did not appear.

The group, together with a coalition of Towards Ecological Recovery and Regional Alliance (TERRA) and Save the Mekong, held an exhibition at the Bangkok Art and Culture Centre last week called 'Disaster on the Mekong: The Push for Xayaburi Dam', which pictures by top photographer Suthep Kritsanavarin.

Each photo shows aspects of life along the Mekong would be lost forever because of the dam.

Laos proposed building the dam on the Mekong at Thahouy district in Xayaburi province, to generate more than 1,000 MW of power to sell to Thailand. Thai construction firm Ch Karnchang is building the dam - the first on the mainstream of the river below China.

According to the International Rivers conservation group, the Xayaburi dam will, if completed, block critical fish migration routes for dozens of species to upper stretches of the Mekong as far as Chiang Saen in northern Thailand - an important spawning ground for the critically endangered Mekong giant catfish.

They said the dam would destroy the river's complex ecosystem, which serves as a significant fish habitat for local and migratory species. The dam would also block sediment flows, affecting agriculture, especially Thai eight provinces and far down to the Mekong Delta in Vietnam.



WATER RESEARCH PROGRAMME -Weekly Bulletin-

Cambodia and Vietnam have called on Vientiane to reconsider the project, saying it is a major threat to millions who depend on the river for food and livelihoods. The Mekong River Commission, which Thailand and Laos are also members of, agrees the dam should be delayed for proper studies of environmental impacts. But ministers in Laos say studies have already been done, and consultants they hired said there were no major negative impacts for the river.

These claims are disputed by representatives from Cambodia and Vietnam, plus fishing communities and the conservationists who rallied in Bangkok yesterday.

"Mekong river dam will kill us : protesters tell PM", 18/09/2012, online at: <u>http://www.nationmultimedia.com/national/Mekong-river-dam-will-kill-us-protesters-tell-PM-30190576.html</u>

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* Cambodia to Buy Power From Laos' Xayaburi Dam

Vientiane, laos — Laos' energy minister announced last week that the country will sell energy supplied by the controversial Xayaburi Dam to Cambodia. It is already planning to sell power to Thailand, where last month a lawsuit was lodged to stop the country from buying electricity produced at the dam because of environmental and other concerns.

The Lao minister, Soulivong Daravong, also denied claims that Vietnam and Cambodia oppose construction of the dam. He insisted that the project will not be shelved.

His comments to journalists on the sidelines of a meeting of the Association of Southeast Asian Nations (ASEAN) in Phnom Penh on September 12 created confusion about the future of the \$3.5 billion USD project, the first of 11 planned dams on the Lower Mekong River's main stream.

Two months ago, at an ASEAN ministerial meeting, Laos' Foreign Minister Thongloun Sisoulith declared that the dam project was shelved pending further studies, winning praise from many delegates.

But the official Vientiane media told another story, saying the government will still let Thai developer Ch. Karnchang pursue "scheduled" building site action, including resettlement of villagers.

Independent analysts who assessed the development site confirmed that construction continues.

On September 9, speaking at a Xayaburi Dam workshop in Bangkok, Montree Chantawong of Thaibased NGO Towards Ecological Recovery and Regional Alliance (TERRA) said his estimates of those impacted by the dam are much higher than the Laotian government's. His explanation: The dam will cause flooding both downstream and 150 kilometers upstream towards Luang Prabang.

"The Lao government has talked about only the 2,000 people in 10 villages that will be relocated, but there are more than 20,000 people in about 30 villages from the dam site all the way to Luang Prabang who will also be affected," Radio Free Asia quoted him as saying.

The downstream flooding looks set to raise the river's water level by at least 3 meters, he said.



The Xayaburi is just one of a series of hydropower dams planned for the Mekong. There are 11 planned dam projects on the Mekong mainstem, and another 77 dams planned in the basin by 2030.

Hydropower dams planned for the lower main stream of the Mekong River could devastate fish populations and with them the main protein source for 60 million people, according to a study by international conservation organization WWF and the Australian National University.

"Cambodia to Buy Power From Laos' Xayaburi Dam", 17/09/2012, online at: <u>http://www.ooskanews.com/daily-water-briefing/cambodia-buy-power-laos-xayaburi-dam_24348</u>

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Floods Dampen Thai Adaptation Plans

BANGKOK, Sep 16 2012 (IPS) - Thailand's flood-management blueprint received a jolt when the dykes in Sukhothai were breached by the rain-swollen Yom river last week, submerging large stretches of the former royal capital.Prime Minister Yingluck Shinawatra toured the flood-damaged historic city 430 km north of Bangkok, reliving relief operations that were mounted last year when the central plains, including the capital, were hit by the worst floods in the country's history. The barriers designed to prevent the river overflowing were in need of repair, but this "wasn't done after last year's flood," science and technology minister Plodprasop Suraswadi told a local radio station.

While the scale of the damage from last week's floods is marginal when compared with last year's historic disaster, the timing of this latest threat – which could also affect other towns and cities downstream from Sukhothai - puts the one-year-old Yingluck administration in a spot.

After all, it comes barely two weeks after the government unveiled plans about its flood management strategy for the country that conveyed a "new attitude towards coping with floods in urban areas."

The 11.5-billion-dollar flood management plans were conceived to avoid the mistakes from the past, aiming to "go beyond just defending urban centres from floods," says Anond Snidvongs, a Thai flood expert. "The main principle in the plan is to include the need to live with the impacts of climate change."

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• ENVIRONMENT-THAILAND: 'Bangkok Ignored Warnings'

Factored into these calculations is the new use for the network of rivers and canals that have served as waterways for central regions in this kingdom.

"Water management in the past was geared to make sure that rice farmers got a steady supply of water during the dry season," said Anond, director of the Southeast Asia regional centre for the Global Change System for Analysis, Research and Training, based in Bangkok. "Now the policy has



changed to approach water management to have dual purposes - to deal with flood management also."

Such a progressive step is in keeping with the "long-term climate change adaptation strategies" that countries must explore, the Thai expert told IPS. "This is the future of water-management infrastructure."

The tentative steps Thailand is taking following last year's natural disaster — which claimed 815 lives, affected over 13 million people and dealt an economic blow worth 45 billion dollars – helps to amplify a message being drummed up by the Asian Development Bank (AsDB).

In August, the Manila-based AsDB released a report that sounded a warning: "Rising urban populations mean that over 400 million people in Asian cities may be at risk of coastal flooding and roughly 350 million at risk of inland flooding by 2025." "Unless managed properly, these trends could lead to widespread environmental degradation and declining standards of living."

Cities like Bangkok, Dhaka, Ho Chi Minh City and Tianjin are at high risks of both inland and coastal flooding, revealed 'Green Urbanisation in Asia: Key Indicators for Asia and the Pacific 2012'. "Urbanisation increases vulnerability because life and assets losses are much larger in cities than in the countryside when a disaster strikes."

Many Asian cities have been built on the deltas of major rivers, so "it is not surprising that many Asian cities are flood prone," it noted. "But increased flooding induced by climate change may well push these cities' infrastructure beyond their current capacities, as occurred in Bangkok in late 2011."

Thailand's experience with last year's floods and its flood-management plans are being scrutinised in the region for the lessons it offers.

"It will be difficult if not impossible to disaster-proof cities," says Jerry Velasquez, senior regional coordinator at the United Nations International Strategy for Disaster Reduction for Asia and the Pacific (UNISDR). "However, reducing the impacts of disasters in cities would be possible," Velasquez told IPS.

Asian cities are more vulnerable to greater damage from floods due to the pattern of economic growth, Velasquez said, pointing to the Chao Phraya river's basin, which drains in Bangkok, but covers 30 percent of Thailand's land areas and is where 40 percent of the population live.



"It is also where 66 percent of the total GDP is generated and where 78 percent of the people work," Velasquez said. "This means that development patterns have set up Bangkok to be extremely exposed economically to flood disaster."

The picture across Asia is no different when it comes to highly exposed cities, states UNISDR, given the economic loss suffered across the region from disasters that struck in 2011 - 294 billion dollars.

But, despite threats posed by extreme and erratic weather patterns, drafting and implementing a flood-management programme remains a journey through uncharted waters – as the Thai government discovered last week.

"Floods Dampen Thai Adaptation Plans", 19/09/2012, online at: <u>http://www.ipsnews.net/2012/09/floods-dampen-thai-adaptation-plans/?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=8682b2f1f5-RSS_EMAIL_CAMPAIGN&utm_medium=email</u>

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* Little Consolation for Central Java's Rain-Starved Farmers

Central Bengkulu/Solo. "The rain hasn't fallen here in three months," says Sofyan Ansori, sweeping his arm over a vast expanse of dried-out rice fields.

"The irrigation canals have been dry for almost as long, and the rice crops aren't getting enough water. Even the rivers have gone dry."

Sofyan, the head of Tabah Terunjam village in Central Bengkulu district, says the crop is already two months old and just a few weeks away from harvest.

But that won't happen this year.

"The drought has killed nearly the entire crop, so most of the farmers have just abandoned their fields," he says.

Forty-five hectares of rice paddies across the village have been destroyed by the long dry season. A few patches continue to grow, but will yield a negligible amount of the grain — assuming the rains begin sometime in the next few days, Sofyan points out.

Nasron, a farmer, has already begun clearing the dead rice stalks from his fields in preparation for sowing a new crop with the advent of the rainy season.

"There would be no point in planting anything now because there's still no water in the irrigation canal," he says.

The district agriculture office has promised to give the farmers free seed crop to plant once the rains begin, and is currently gauging their losses to determine how much to distribute to each farmer.

The offer is small consolation for the farmers in Tabah Terunjam, whose livelihoods depend on a successful harvest.



But they are not the only ones affected by the unusually intense dry season this year. Farmers all over the country have seen their crops die before they can be harvested, as the aquifers and rivers feeding the irrigation canals run dry amid the lack of rain.

In Sragen, Central Java, officials are calling on the central government to seed rain clouds to prevent the failure of at least 405 hectares of rice paddies.

"We hope that the plan to induce artificial rain to fill up the empty reservoirs will be done soon because this is currently a crucial stage for the rice, which is 70 to 80 days old," says Budiharjo, the head of the district agriculture office.

"At this stage the crops need a lot of water, but there's virtually no supply."

He warns that without any rains in the next two weeks, the amount of failed farmland in the area will expand rapidly.

In neighboring Sukoharjo district, farmers are urging the company managing water supplies from the Bengawan Solo River not to cut off supplies for their irrigation network.

Subari, one of the farmers calling on the district legislature to support their cause, says the water company is planning to shut down the water supply next month because of the dwindling water level in the river.

He says that in Sukoharjo's Weru subdistrict alone, 907 hectares of rice crop are dependent on the irrigation network. Some fields have already failed because of the decreasing amount of water.

"Sixty hectares of rice paddies there have failed," Subari says.

The situation has become so dire that some farmers have taken extreme measures to highlight their plight. On Tuesday, farmers in Weru held three river water management officials hostage for two



hours to demand answers on why their area was not getting any water.

"We just want clarity on the issue," said Sugeng Darmawan, the head of the local farmers' association.

"Will Weru get any water, yes or no? The farmers are really worked up about this because they stand to lose their crops if there's still no water."

The standoff was resolved after district legislators got the water company to promise to increase their supply to the farmers from the Colo Barat Dam.

However, the solution may be too little, too late. The company said it could only provide water at a rate of 5 cubic meters per second, less than the 7 cubic meters per second that the farmers wanted.

In addition, the supply will only be available until the end of the month, after which it will be throttled down again.

"Little Consolation for Central Java's Rain-Starved Farmers", 20/09/2012, online at: <u>http://www.thejakartaglobe.com/news/little-consolation-for-central-javas-rain-starved-farmers/545402?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=73d8cb7cbd-RSS_EMAIL_CAMPAIGN&utm_medium=email</u>

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* Kyrgyz Parliament Discusses Possible Water Wars Over Dams

BISHKEK, Kyrgyzstan — Kyrgyzstan's Parliament on September 17 discussed the possibility of water wars in Central Asia and the country's willingness to get involved in possible conflicts.

The discussions came in response to statements made earlier this month by Uzbek President Islam Karimov, who predicted that the region would face wars over water.

Parliament member Kamchibek Tashiyev, who heads the Ata-Zhurt party supporting ousted former President Kurmanbek Bakiyev, asked current Kyrgyz President Almazbek Atambayev if the country is ready for war.

Atambayev replied that he does not think there is actually a risk of wars over water.

"I believe that the Uzbek president wanted to say that neighbors must come to an understanding," Atambayev said.

Leader of the Ata-Meken socialist party MPOmurbek Tekebayev told an international forum this week that Karimov's statement shows that hydropower development has become not only an economic issue but also a political one.

According to Zhumakadyr Akeneev, president of Kyrgyzstan's Association of Oil Traders, "there will be no war" as "there are no grounds for it despite the fact that water problems exist."

Kyrgyzstan continues to supply its downstream neighbor with water, Akeneev said.

"Uzbeks could be displeased if we do not give them water at all," he said. "They receive enough water. Statements made by Islam Karimov are groundless."

Security expert Miroslav Niyazov added: "Water can be a source of peace or war. If it is used and distributed irrationally, that can result in a military conflict."

He emphasized that Uzbekistan should use modern water-saving technologies for agriculture, which would leave enough water for everyone.



"It does not make sense to threaten countries which have water resources."

According to the director of the National Academy of Sciences' Institute for Water Problems and Hydropower Engineering, Duyshen Mamatkanov, Karimov's statements are "biased."

"The economy of Uzbekistan is stronger than ours," Mamatkanov said. "His policy is based on force... Construction of hydroelectric power plants will neither cause damage to the environment nor poses a threat to Uzbeks."

On his trip to Kazakhstan, the Uzbek president predicted the outbreak water wars in the region and reproached Kyrgyzstan and Tajikistan, which are located in the upstream portion of the Amu Darya and Syr Darya rivers, for their plans to dam trans-boundary waterways for hydropower projects.

"Kyrgyz Parliament Discusses Possible Water Wars Over Dams", 19/09/2012, online at: http://www.ooskanews.com/daily-water-briefing/kyrgyz-parliament-discusses-possible-water-wars-over-dams 24390

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Water management solutions: how industries are embracing efficiency

Limited water resources threaten the survival rate of even the largest industries. Intel is among those engaging with efficient water management

Deprive your body of <u>water</u> and you'll be dead within a week. The survival rate is similar for some of the largest industries equally dependent on water to grow food and make goods such as jeans, beverages, electric power, homes, chemicals and even computer chips.

While many people depend on these products, at the same time, many local communities are competing with manufacturers for limited water resources. For example, the computer chip maker Intel estimates it takes 16 gallons of water to produce a single chip, which explains its huge appetite for water in 2011: some 8.3bn gallons from local water systems. Comparatively, the average American uses about 100 gallons of water each day; the average African just five gallons.

Competition for water is only expected to increase, as highlighted recently at the World Water Week conference. For companies in these water intensive industries, addressing these competing demands and implementing an effective water management <u>strategy</u> has become essential.

At Intel, an increased focus on environmental issues came in the 1990s, as the computer industry grew rapidly. Since then, while their consumption of water has increased each year, so have their efforts to reduce the impact to local communities, according to Todd Brady, the company's global environmental manager.

For these efforts, in 2007, the US Environmental Protection Agency recognised the company as a water efficiency leader. And by 2011, some 80% of the water it used was recycled and sent back to local water systems, where it was used for irrigation, in other industrial purposes, or for drinking water. This journey, according to Brady, was a process of engaging employees, local communities and industry partners.

"The semi-conductor manufacturing process goes through hundreds of steps," Brady explained, "and in between those steps we have to rinse off the surface of the wafer with ultra-pure water." When



searching for ways to reduce and reuse the water used in this process, one of the first places Intel looks is inside, soliciting ideas from the engineers who are closest to the manufacturing process.

Intel encourages employees to come forward with ideas on conserving resources, and then matches the best ideas with a grant to develop them. "We thought we would eventually run out of ideas, but the programme is still going strong," says Brady. Most of these innovations, he adds, not only save on resources but also money, providing a payback in three years or less.

Among environmental impacts, water use is a particularly local challenge, more so than greenhouse gas emissions, the impact of which may be several states away, says Brady. To compound this challenge, Intel has located several of its largest fabrication plants in areas that are particularly water-constrained, such as Arizona and Israel.

Rather than offer a one-size-fits-all approach, Intel attempts to tailor its water management solutions for each municipality in which it operates. "We engage with the community and the water districts early on to understand their needs, discuss our needs and find solutions that work for both of us," he says.

At the Israel location, for example, working with the local government, Intel was able to change some of the chemicals used in its manufacturing so the water from this process could be treated and reused for irrigation on local farms.

The company has also learned to be as transparent as possible. "By opening your books to what you are doing, you build trust. Otherwise there is suspicion and mistrust," says Brady.

Disclosing environmental data in annual CSR reports is good, but offering real-time information is better. The company is now building up its <u>exploreintel.com</u> website offering real-time breakdowns of emissions, water usage, and other environment impacts on a site-by-site basis.

Intel works closely with its competitors through the Semiconductor Industry Association, benchmarking its performance with other companies, sharing best practices, and developing tools to better measure water use. As Brady puts it, "we look at environmental issues as non-competitive".



Earlier this year, Intel collaborated with engineering firm CH2M Hill and Arizona State University to help develop the website <u>WaterMatch</u>. The idea is to maximise the reuse of so-called "greywater". This is wastewater that can be treated and reused for industrial or agricultural purposes, but not for drinking water.

The website, which is free to use, will match entities that have excess wastewater, like water treatment plants, with those that can use it in lieu of taking fresh water from local supplies. CH2M Hill showcased the website at World Water Week.

Intel has made steady progress to conserve the amount of water used in its manufacturing. Still, the company failed to meet its most recent goal to cut the water required per chip below 2008 levels by year-end 2011. The challenge, says Brady, is the pace of technical innovation and the increasing complexity of the products each year. As you pack more transistors on the chip, you increase the number of steps that use water to rinse and clean the chip, he explains.

The takeaway here for Intel and others, he says: "You must be proactive, be strategic in your thinking. You can't just look at issues year-to-year. You must consider where your business and products are going over the next decade and how you can intercept that to achieve the goals you've set."

"Water management solutions: how industries are embracing efficiency", 20/09/2012, online at: <u>http://www.guardian.co.uk/sustainable-business/water-management-solutions-industry-efficiency-intel?newsfeed=true</u>

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Saudi water sector set for huge near-term growth

New research by Frost & Sullivan has found that market earned revenues from Saudi Arabia's water and wastewater sector were US \$1.94 billion in 2011, and have forecast that this will grow to \$3.66 billion by 2015. Saudi Arabia is currently considering substantial investments to meet rising demand on its networks, pushed up by population growth and increased urbanisation.

The report authors state that "The National Water Company (NWC) is planning to invest USD 23.00 billion in Saudi Arabia's sewage collection and treatment infrastructure over the next 20 years. This investment aims to increase wastewater network coverage to 100.00 per cent from the current 45 per cent."

The government in the Kingdom is currently charging around 25 cents per cubic metre of water, despite cost of water production per cubic metre of around 2.6 - 4. The report suggests that this low cost naturally leads to higher water consumption.

"Reliability and efficiency are the other key factors considered by end users while choosing water and wastewater equipment suppliers. Further, a company that provides complete solutions and lowers the operational cost to the end user will occupy the central position in the market."

"Saudi water sector set for huge near-term growth [utilities-me]", 20/09/2012, online at: http://mideastenvironment.apps01.yorku.ca/?p=5927

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Collecting water – a child's burden: DRC refugees in Uganda

As conflict in eastern DRC has worsened in the past few months, people continue to flee across the border to Uganda. Oxfam is delivering clean water and sanitation in the <u>Rwamwanja</u> camp, now home to upwards of 25,000 refugees.

In the heat of the midday sun, 5-year-old Innocent wobbled along the road under the weight of his full jerry can.

He and his group of young friends had set out to collect water at 7am that morning. Five hours later, the little water gang was returning back to their tents with the precious water their families will use for all their cooking, bathing, washing and cleaning that day.

Francise, six, said she doesn't mindwalking the four kilometer journey, nor carrying the heavy jerry can home: "If I collect water, it means my mother will be able to cook me food, so I don't mind, but I wish the water tap was here," pointing to the ground near her tent.

Rwamwanja settlement camp, now home to more than 25,000 Congolese refugees, is spread over 80 square kilometers of hilly terrain, and many refugee families are being settled far from existing water sources. Innocent and his friends have had no alternative but to collect water from the water pump that belongs to the host community in Rwamwanja.

Tensions about access to water have been growing

Oxfam's water and sanitation engineer, Evarest Ochola, said tensions have been growing as more and more people are having to share the limited access to clean, safe drinking water.

Nyirahabimana, 47, said she has been shouted at when collecting water from the same water pump, and told to wait until all the members of the host community have filled up their jerry cans.

Despite this, Nyirahabimana said her biggest concern is sanitation. She points to a hole in the ground just a few meters from the tent she shares with her husband and 11-year-old son.

"Our latrine is unsafe – I know it's unsanitary, but we don't have anything else yet."



What Oxfam is doing

- **Oxfam is drilling new boreholes** and constructing water pumps within the settlement camp, so fresh, safe water will soon be flowing just a short distance away from where refugee families have settled.
- In the meantime, 90,000 water purification tablets and bars of soap are being distributed

 to help keep water-borne diseases at bay. Water will be constantly tested to make sure it is safe for drinking.
- **Oxfam is also training members of the refugee community** in health promotion and maintenance of the water points, as well as providing job opportunities for refugees to help build much-needed latrines.

Bringing the water closer to the refugee community cuts off the time women and children spend walking to collect water. And increasing the number of boreholes on the edge of the camp will act to resolve any conflict over shared water resources – when it is safe for the refugees to return home, the host community will still be able to use the new water sources.

"Collecting water – a child's burden: DRC refugees in Uganda", 17/09/2012, online at: http://blogs.oxfam.org/en/blogs/12-09-17-collecting-water-childs-burden-drc-refugeesuganda?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=9cb9caf8f3-RSS_EMAIL_CAMPAIGN&utm_medium=email

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Depletion of Fresh Water Sources Prompts Investments in Water Infrastructure in Saudi Arabia, Finds Frost & Sullivan

Saudi Arabia is one of the most arid countries in the Middle East and North Africa (MENA) region and its freshwater resources are rapidly depleting. The country has a population of 26.1 million and continues to grow at a rate of 1.53 per cent. Urban centres account for approximately 82 per cent of the total population and the rate of urbanisation is approximately 2.5 per cent (2005-2010). To meet the water demands of this escalating population and improve water connectivity, the government is looking at viable options such as desalination and infrastructure development.

New analysis from Frost & Sullivan(<u>http://www.environmental.frost.com</u>), **Assessment of the Water and Wastewater Sector in Saudi Arabia**, finds that the market earned revenues of USD 1.94 billion in 2011 and estimates this to reach USD 3.66 billion in 2015.

The frenetic pace of development has attracted participation and investments from the private sector. Despite the political unrest in the Middle East, the government's allocation of substantial funds towards water and wastewater projects has assuaged foreign and private investors' concerns to some extent.

The water infrastructure in Saudi Arabia is better than in other MENA countries, but the government still needs to adopt best practices to better manage water resources and meet international standards.

The government charges only about only 25 cents (10 halalas) per cubic meter of water, even though the cost of water production per cubic meter is around USD 2.6- USD 4.0 (SR10 to SR 15). This translates to higher per capita consumption.

With a proper water ministry in place, the legislation or regulations are expected to become stringent. The authorities hope to achieve complete water coverage throughout the country with the enforcement of the National Water Law and by-laws and further investments as part of its Ninth Development Plan.



"The National Water Company (NWC) is planning to invest USD 23.00 billion in Saudi Arabia's sewage collection and treatment infrastructure over the next 20 years," said Frost & Sullivan Environment and Building Technologies Analyst. "This investment aims to increase wastewater network coverage to 100.0 per cent from the current 45 per cent."

Large industries and municipalities mostly outsource the water and wastewater treatment plant services as they can afford the high capital and operational costs. Due to low product differentiation, market participants tend to resort to competitive pricing to standout in the market.

Customers in Saudi Arabia are highly price sensitive but expect treatment systems to be fully compliant to their needs. They also look for prompt after-sales service and technical support.

"Reliability and efficiency are the other key factors considered by end users while choosing water and wastewater equipment suppliers," noted Frost & Sullivan Analyst. "Further, a company that provides complete solution and lowers the operational cost to the end user will occupy the central position in the market."

If you are interested in more information on this research, please send an email to Tanu Chopra/ Deepshri Iyer, Corporate Communications, at tanu.chopra@frost.com/deepshrii@frost.com, with your full name, company name, title, telephone number, company email address, company Web site, city, state and country.

Assessment of the Water and Wastewater Sector in Saudi Arabia is part of the Environmental Growth Partnership Services program, which also includes research in the following markets: Water and Wastewater Treatment Equipment Market and Water and Wastewater Distribution Network Market. All research services included in subscriptions provide detailed market opportunities and industry trends that have been evaluated following extensive interviews with market participants.

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, works in collaboration with clients to leverage



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-- *The Integrated Value Proposition* provides support to our clients throughout all phases of their journey to visionary innovation including research, analysis, strategy, vision, innovation and implementation.

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"Depletion of Fresh Water Sources Prompts Investments in Water Infrastructure in Saudi Arabia, Finds Frost & Sullivan", 18/09/2012, online at: <u>http://www.moneylife.in/business-wire-news/depletion-of-fresh-water-sources-prompts-investments-in-water-infrastructure-in-saudi-arabia-finds-frost-sullivan/32678.html</u>

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Major dam to benefit Seeb

By Conrad Prabhu — MUSCAT — An ambitious plan to secure populous Wilayat of Seeb from the ravages of flash flooding is set to go ahead as planned, according to officials of the Ministry of Regional Municipalities and Water Resources. The plan centres on the construction of a major flood protection dam upstream of Wadi Samayil which, in the wake of unpleasant weather in June 2007, had deluged large swaths of the capital region's suburbs.

As a result, infrastructure and property damage had been significant in and around Seeb and Al Khoudh, with some loss of life as well. Earlier this week, the Tender Board launched a competitive process for the selection of a competent contractor for the construction of the Al Khoudh Flood Protection Dam at a cost of several tens of millions of rials. A total of eight local and international construction firms have been prequalified to participate in the competitive bid.

The Al Khoudh Flood Protection Dam is the first of a series of major retention structures that are proposed to be built in the upper catchment of Wadi Samayil before its cuts through the northern districts of Muscat Governorate en route to the sea. Collectively called the Wadi Samayil Flood Protection Dams Project, this massive scheme consists of a total of four upstream dams that will be built in stages over the next several years.

Phase 1 of this elaborate protection system will focus on the construction of the Al Khoudh Flood Protection Dam about 7-km upstream of the existing Al Khoudh recharge dam, not far from the existing Al Khoudh Village. Designed to serve as the bulwark of the flood protection system, the Al Khoudh Dam will consist of two key components: a 550-metre-long roller compacted concrete main dam rising some 60 metres above the foundation level; and a 500-metre-long embankment rockfill dam. The latter structure, a combination of lateral and saddle dams, will feature an asphaltic core, and will rise to a maximum height of 46 metres above the ground level.

In addition to building the main, lateral and saddle dams, the selected contractor will also be required to construct a 300-metre wide spillway and appurtenant spilling basin to channel overflows into the existing downstream wadi channel. Also as part of its brief, the contractor will be required to install middle level and bottom outlet valves for the controlled release of reservoir water into the wadi



downstream of the dam. Aside from its role as a protection barrier, the new Al Khoudh Dam will also serve as a recharge facility. The existing dam, built in 1985 at the far downstream end of Wadi Samayil, is currently being reinforced under a separate contract.

The government, represented by the Ministry of Regional Municipalities and Water Resources, is investing significant sums of money in the construction of flood protection schemes in a number of flood prone areas of the country. Flood protection projects are under various stages of design and implementation in parts of the North Batinah and South Sharqiya Governorates.

In Muscat Governorate, the first phase of a gigantic flood protection scheme upstream of Wadi Adai was commissioned in April this year. Dubbed the Al Amerat Heights Flood Protection Dam, the structure is designed to hold back flood waters that in past years have caused significant devastation in Al Amerat and Qurum.

"Major dam to benefit Seeb", 18/09/2012, online at: http://main.omanobserver.om/node/109975

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Bridging the gap between water and economics

I was in Washington on Tuesday for the Growing Blue meeting, which was surprisingly successful. The idea behind Growing Blue is to make the link between water and economics. It is the brainchild of Laurent Auguste, CEO of Veolia Water North America. It is now supported by a number of organisations and companies including Xylem, IBM, and the Nature Conservancy.

Auguste wanted to encourage decision-makers in the water sector and the public in general to make the link between water and economic growth. So far, most of the effort has gone into a website (www.growingblue.com), which has a stack of data and related tools, as well as a blog.

This week's event in Washington aimed to answer the question: "Just how important is the nexus between water and the economy?" What was most inspiring about it was not so much that the event nailed the connection between water and the economy, but that the organisation is bringing together an interesting coalition of people who care about the environment with those who care about the economics of water.

Previously, the assumption has prevailed that environmentalism and economics were opposed to each other, for the simple reason that economics represents big business, and big business doesn't care for the environment. What is changing is that big business is becoming more friendly towards the environment, and environmentalists are beginning to realise that unless they engage with the economics of environmental protection, their cause is lost. Growing Blue is engaging both of these groups to make the point to policy-makers at the municipal level that good water stewardship is good for business, and good for the environment, so why don't they make a bigger commitment to improving the way their cities manage water issues? Alexandra Cousteau, the grand-daughter of the famous marine biologist and film-maker, attended the meeting, and voiced her support for the Growing Blue idea, as did representatives of the World Business Council for Sustainable Development and the UN Global Compact's CEO Water Mandate.

It is an important new direction for the American water dialogue, which has historically revolved around the ever growing amount of money required to fix America's water infrastructure, and the ever diminishing amount of federal money available for that purpose. The industry needs someone to



make a fresh case for engaging with the water sector, and this coalition of environmentalists and businesses could be the group which makes mayors ask themselves why they have allowed their water management to slip so badly.

GWI is supporting Growing Blue, and will host a "Growing Blue" award at its American Water Summit in Chicago on 14 November. The idea is to honour the individual or organisation which has done the most to engage the public in understanding the economics and value of water. We want to see who is most successful at getting this message out, so we can learn what works best. I would appreciate any nominations by the beginning of next week (please send them to cg@globalwaterintel.com).

"Bridging the gap between water and economics", 20/09/2012, online at: <u>http://www.globalwaterintel.com/insight/bridging-gap-between-water-and-economics.html?source=email</u>

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* Argentina to seek dam funding in China, Russia

BUENOS AIRES--Argentine officials plan to visit China and Russia this month to seek financing for a pair of hydroelectric dams in the southern province of Santa Cruz. Argentina's planning minister Julio De Vido will set off for China on Wednesday to meet with officials and businessmen. From there it is off to Russia for an Oct. 1 meeting with Russia's energy minister Alexander Novak, Mr. De Vido said in a press conference Friday.

The government estimates the two dams will cost just under \$4 billion to build and provide 5.2 gigawatts per year when built, or 4.7% of the country's electricity use.

The government is going to open the bidding process for construction on Dec. 12 and expects construction to start during the first half of 2013, Mr. De Vido said.

Following the trip to Russia, De Vido said he will head to Brazil to meet with officials from that country's national development bank, or BNDES, a financial behemoth that lends more each year than the World Bank.

Mr. De Vido said that he expects a government guarantee to buy the energy from the dams for 15 years to stoke interest in investing in the projects.

"Argentina to seek dam funding in China, Russia", 22/09/2012, online at: <u>http://www.marketwatch.com/story/argentina-to-seek-dam-funding-in-china-russia-2012-09-22?link=MW_latest_news</u>

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