



ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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



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15 July 2013 – 21 July 2013

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❖ **Water problem in Iran reaching dangerous levels**

With Iran's population growing each passing day and dry spells in the country in recent years, projections indicate that a water problem will prevail in Iran and the country will have problems meeting its demand for water in the coming years.

After former Iranian Minister of Agriculture Issa KSalantari's statement last week, the gravity of the water-resource problem Iran will confront was brought to the fore. Kalantari said that Iran could turn into a desert in the next 30 years. Excessive use of groundwater has led to a decline in groundwater levels, and groundwater won't be able to recharge due to a lack of precipitation. Along with Lake Urmia, which is frequently on the agenda because it is drying up, the drying of lakes Bakhtegan, Tashak, Parishan and other small lakes indicates the severity of the situation.

Iran is located in one of the most arid regions of the world and has an area of 1.64 million square kilometers. Its annual average precipitation is 252 millimeters. This is about a third of the global precipitation rate. Under current climatic circumstances, 179 millimeters of that -- some 71 percent -- of rainfall evaporates in Iran. The average annual evaporation rate in Iran ranges between 1,500 and 2,000 millimeters. Differences of both latitude and altitude in the country's geography and major climatic differences affect the current situation. Also, precipitation rates differ across the country.

The amount of renewable water in Iran is about 130 billion cubic meters. In addition to worsening drought, population growth has led to a decline in the country's water per capita. Total water consumption in Iran in 1963 was 4.44 billion cubic meters. Water consumption hit 83 billion cubic meters in 1993 and 93.36 billion in 2006. While available water per capita was 7,000 cubic meters in 1956, it dropped to 2,160 cubic meters in 1996 and to 1,900 in the last decade. One of the most important sectors of the national economy is agriculture, and the water scarcity restricts the development of this sector. Due to efforts toward self-sufficiency in food production, Iran allocates 90 percent of its water resources to agriculture.

Iran has striven to solve its water problem, which is more prevalent in certain parts of the country due to the unequal distribution of water resources through interbasin transfers and the unequal distribution of water demand. Besides, Iran has been building a great number of dams to meet

country's water needs. Iran has become a world leader in dam construction in recent years. Iran started building dams in the 1950s.

According to ICOLD (International Commission on Large Dams), 501 dams have been built so far since 1950 in Iran. Since 2011, 135 dams have been built, and 546 dams are planned to be constructed.

According to information obtained from Iran's Energy Ministry, the country's dams held 61 billion cubic meters in late 2011. This is twice the annual potential flow of the Euphrates River. Last summer, the Iranian deputy minister of energy said that 130 dams were under construction, 700 dams were in operation and -- despite the figures above -- that Iran ranked fourth in the world for total dams. Feasibility studies for 170 dams are underway.

According to statements from the Alborz Integrated Land and Water Management Project in Iran, population growth, insufficient investment and mismanagement are creating problems for the sustainable management of water resources. According to the calculations of the Iranian government, which witnessed several dry spells in a row in recent years, available water per capita will be 1,300 cubic meters in 2020. Furthermore, salt-carrying dust storms that originate in both Iran and neighboring countries harm the quality of the country's water and soil.

In regions where water resources are lacking, water scarcity and excessive water loss are caused by the mismanagement of water resources. Global studies point out the need for changes to irrigation methods and the development of modern irrigation techniques like drip irrigation and sprinkling to mitigate water loss and make irrigation more efficient and productive. Moreover, the Global Trends 2030 report estimates that precipitation rates in Iran will drop at a rate of 15.6 percent by 2050. Dam construction, interbasin water transfer and other measures are insufficient to eliminate Iran's water problem. Reforms in water-resource management in accordance with new climatic conditions must be made.

“Water problem in Iran reaching dangerous levels”, Tuğba Evrim Maden, Today’s Zaman, 21/07/2013, online at: <http://www.todayszaman.com/news-321273-water-problem-in-iran-reaching-dangerous-levels.html>

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❖ Largest Lake in Mideast May Dry Up, Iran Lawmaker Says

Urmia, the [Middle East](#)'s largest lake, is in danger of drying up as [Iran](#)'s Energy Ministry and local officials failed to ensure critical water transfers, [Aftab News](#) said, citing a lawmaker.

The energy ministry is not standing by its commitment regarding Urmia Lake, Nader Ghazipour, who represents the city of the same name in the Iranian parliament, was quoted as saying on Aftab's website. No funds have been allocated for the lake and "efforts to remedy its critical condition are leading nowhere," he said.

Urmia in northwestern Iran, one of the largest hyper-saline lakes in the world, is a UNESCO biosphere reserve, according to a United Nations [report](#). The lake's surface area has declined since the mid-1990s due to drought, increased water diversion for agriculture and mismanagement, it said. Urmia Lake is now only a third full of water, Ghazipour said. Thousands of protesters took to the streets in Tabriz and Urmia in 2011, criticizing authorities for minimal actions to save the lake, the UN said. A plan to transfer water from nearby Aras River wasn't followed through on, Ghazipour said.

"Largest Lake in Mideast May Dry Up, Iran Lawmaker Says", 18/07/2013, online at:

<http://www.bloomberg.com/news/2013-07-18/largest-lake-in-mideast-may-dry-up-iran-lawmaker-says.html>

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❖ Iran's Energy Ministry accused of disregard towards Lake Urmia

Criticizing the officials for disregarding the critical state of Lake Urmia, Iranian MP Nader Ghazipour said that the Energy Ministry has not fulfilled its obligations to restore the lake, Mehr news agency reported.

He added that, no funds were allocated for lake's restoration.

"Officials of the East Azerbaijan province just get credits from administration under the cover of the project of transferring water from the Araz River to Lake Urmia and it looks like they have not decided to save lake," he said.

The project for transfer of 600 million cubic meters of water from the Araz River to Lake Urmia was approved in 2010, during a visit of Iranian President Mahmoud Ahmadinejad and members of the government to Tabriz. Some \$1.2 billion will be allocated for this project.

Lake Urmia in northwest Iran, is experiencing its worst drought condition for many years, where over 70 per cent of its water has dried up. The level of the water has been declining since 1995.

Officials say if the current restoration efforts are not effective, the lake will be turned into a swamp within four years.

In October 2012, Environment Protection Organisation director Mohammad Javad Mohammadizadeh said during the Iranian calendar year which ended on March 19, 2012, about two billion cubic meters of water were transferred to the lake.

Currently, only a third of the lake is filled with water and the rest is dry.

Lake Urmia needs 3.1 billion cubic meters of water per year to survive. The Iranian government allocated \$900 million for this purpose in September 2011, but the rescue plans have not begun.

Lake Urmia is the third largest salt water lake on earth with a surface area of approximately 5200 square kilometers.

"Iran's Energy Ministry accused of disregard towards Lake Urmia", 17/07/2013, online at:

<http://www.azernews.az/region/56993.html>

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❖ Iraqi Kurdistan Struggles to Cope with Syrian Refugees

DUHOK, IRAQI KURDISTAN — After years of violence and instability, the Kurdistan region of Iraq has become a safe haven for roughly 150,000 Syrian refugees who have fled civil war in their home country. Kurdish authorities say the influx of asylum seekers is becoming increasingly difficult to manage, and there are fears a humanitarian crisis may ensue unless outside assistance is stepped up.

At the Domiz refugee camp, about 20 kilometers from the city of Duhok, resources are at the breaking point and aid workers say conditions are deteriorating by the day.

Afternoon temperatures in the summer exceed 40 degrees Celsius and water supplies are insufficient.

The site, set up last year to accommodate 25,000 people, is now hosting about twice that number, with many families doubling up in tents. The sewage system cannot cope with the demand; the air is malodorous and dry.

Mohamed Hussein, head of the UNHCR office in Duhok, said congestion is a pressing concern.

"It is a worrying factor for health," he explained. "At the moment, we do not see a disaster or any catastrophe like a cholera outbreak, but when such things take place then the impact will be really terrible. It is just maybe a matter of time."

In addition to those living at Domiz, tens of thousands of Syrians are also residing in Iraqi Kurdistan's main cities.

A report released last month by the Norwegian Refugee Council suggests some of these urban refugees are living in unsafe buildings and have resorted to begging or prostitution.

"We are doing our best, but we need the help of the international community to reduce the suffering of the refugees," said Hameed Salih, a spokesperson for the Duhok Governorate.

Iraqi Kurdish authorities have repeatedly voiced frustration at the lack of outside support for the displaced Syrians within their territory.

Observers, such as Mohammed Makki, the head of Islamic Relief's Iraq mission, accuse many global players of overlooking the refugee response in this part of the world.

"I feel there is a lot of support in Jordan and Lebanon and Turkey, but in Iraq it is not the same," Makki said. "Really there is a big difference." Most of the displaced people entering Iraq from Syria are ethnic Kurds.

Despite limited funds, the Kurdistan Regional Government in northern Iraq was quick to allocate \$10 million to assist the new arrivals and give them permission to work legally with temporary residence cards.

Ghodar Mohammed Said, who has been living at the Domiz camp for nine months, says despite the difficult conditions, he feels "very welcome."

But how long this sentiment will last remains unclear.

Some Iraqi Kurds have started to express frustration that foreigners are securing jobs while unemployment among the local population remains relatively high.

With the number of refugees expected to double in northern Iraq by the end of the year, tensions are likely to rise.

Authorities say three new refugee camps are being built, but experts say even these facilities may not be able to cope with rising demand.

Makki, of Islamic Relief, said the problems facing Iraqi Kurdistan and other refugee-hosting areas in

the region can be solved only with a solution to end the bloodshed in Syria.

"I encourage the politicians who are in Syria and around the region and around the world to solve this problem and make all the Syrian refugees return back to their country," he said. "Otherwise this issue will affect all the region, especially as the countries around Syria are not very rich countries. Iraq already has a lot of problems."

In May, the border between Iraqi Kurdistan and Syria was closed. Authorities say it will reopen soon and insist the move was not aimed at curbing refugee numbers.

"Iraqi Kurdistan Struggles to Cope with Syrian Refugees", 16/07/2013, online at: <http://www.voanews.com/content/iraqi-kurdistan-struggles-to-cope-with-syrian-refugees/1702938.html>

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❖ King launches Disi Water Conveyance Project

AMMAN (Petra) – His Majesty King Abdullah II launched on Wednesday the \$1billion Disi Water Conveyance Project that will provide water to the capital Amman and a number of governorates across the Kingdom.

The project will also support economic and social development in Jordan with an integrated system to improve the water availability in Jordan.

The Disi project, which was implemented with the help of local and international investment, is considered as one of the vital ventures in managing water resources, addressing the problem of water scarcity and resolving it across all the governorates of the Kingdom as it will raise the per capita availability of water from 145 litres to 190 litres a day.

Minister of Water and Irrigation and Minister of Agriculture Hazem Nasser said in remarks during the launch ceremony attended by His Royal Highness Prince Faisal Bin Al Hussein, the Chairman of the Royal Water Commission, that the project will provide the Kingdom with 100 million cubic metres of high quality water annually.

He said water will be pumped to Amman, Zarqa, Mafraq and Irbid governorates at the beginning and will later include the governorates of Jerash, Ajloun, Madaba, Karak, Tafileh and Maan.

“King launches Disi Water Conveyance Project”, 17/07/2013, online at:
http://en.ammonnews.net/article.aspx?articleno=22346#.UerX6NKe_PY

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❖ State Department Outlines U.S. Policy on Jordan River Waters Issue

The United States Government has pledged definitely that it would oppose Arab projects for “counter-diversion” of the Jordan River waters “if it appeared that the Arab riparian states combined were off taking waters in excess of the combined allocations to the Arab states specified in the 1955 plan,” it was revealed here today by the office of U.S. Senator Kenneth B. Keating, New York Republican. Mr. Keating made public the Government’s pledge, contained in a letter to him from Assistant Secretary of State Frederick G. Dutton.

The Dutton letter was in response to an inquiry made by the Senator, asking for clarification of the Government’s stand on the Jordan River waters issue. “I would appreciate knowing,” Sen. Keating had written, “whether the Government of the United States regards Israel’s present water diversion program as consistent with the 1955 unified plan for the Jordan River Valley; whether the Government of the United States approves and supports Israel’s current efforts for utilization of the Jordan waters; and whether the Government of the United States would take action to prevent other Middle Eastern states from frustrating this plan, either militarily or by other diversion efforts.”

The Senator recalled that the unified water plan of 1955 had been worked out by the late Eric Johnston, as a special Ambassador for President Eisenhower. The technical aspects of that plan had been agreed to by the riparian states involved — Israel, Lebanon, Jordan and Syria — but had later been rejected by the Arab states for political reasons.

In his reply, Mr. Dutton wrote to Sen. Keating:

“You asked specifically whether we regard Israel’s present water diversion program as consistent with the 1955 unified plan. At a news briefing on May 6, a Department of State spokesman who was asked this question, replied publicly: ‘We have been informed by the Government of Israel that its use of the waters from the Jordan Valley will be within the allocations of the 1955 unified plan.’ We have every reason to believe that this statement is true as regards the present Israel project, and we therefore support Israel’s current efforts.

REFERS TO PRESIDENT JOHNSON'S STATEMENT DURING ESHKOL'S VISIT

“In addition, as the President stated in the joint communique of June 2 on the occasion of Israel Prime Minister Eshkol's visit, the United States and Israel will undertake joint studies on problems of desalting water, as part of the effort being undertaken to solve the problem of scarcity of water, and hope for rapid progress toward large-scale desalting in Israel,” Assistant Secretary Dutton emphasized. He continued:

“With regard to your question as to whether the United States would take action to prevent other Middle Eastern states from frustrating this plan militarily, a long-standing principle of U.S. policy in the Near East is our opposition to aggression. This policy was expressed in the late President Kennedy's statement of May 8, 1963, in which he made it unmistakably clear that we oppose the use or threat of force. He also said that, ‘In the event of direct or indirect aggression, we would support appropriate courses of action in the United Nations or on our own to put a stop to such aggression.’

“As stated in the joint communique during Prime Minister Eshkol's visit, President Johnson specifically reiterated this statement of U.S. policy. In the event that other Middle Eastern states attempt to frustrate the Israeli plan by other counter-diversion projects, the United States would oppose such projects if it appeared that the Arab riparian States combined were off taking waters in excess of the combined allocations to the Arab States specified in the 1955 plan. The form of any such U.S. opposition would of course depend upon the circumstances prevailing at that time.”

“State Department Outlines U.S. Policy on Jordan River Waters Issue”, 15/07/2013, online at:
<http://www.jta.org/1964/07/15/archive/state-department-outlines-u-s-policy-on-jordan-river-waters-issue>

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❖ Oslo Agreements: Impact on Israeli Water Confiscation, Palestinian Water Consumption

AICafe invite you on Tuesday 16 July, 2013, from 7:30 PM, for Oslo agreements: impact on Israeli water confiscation and Palestinian water consumption with Nadi Farraj.

Water is a human right and a prerequisite for economic, social and cultural development. It played a major role in the Palestinian-Israeli peace process, although the 1995 Interim Agreement failed to define Palestinian water rights, instead leaving them to be negotiated in the permanent status talks. As outlined in the Oslo Accords, Israel retained control over 80% of the potential yield of the West Bank's Mountain Aquifer, leaving Palestinians with just 20%. As a result, Palestinians are forced to buy 52 percent of their water from Israel. These policies and practices have led to a huge disparity in water consumption between Israelis and Palestinians: the average daily per capita water consumption rate for Palestinians is between 50 and 70 litres, compared to around 300 litres in Israel.

What is the impact on Palestinian communities of the Oslo accord's impact on water control? What can Palestinians do in such a situation and what are the future possibilities in negotiations on this highly sensitive issue? These questions and more will be answered in this important evening.

Nadi Farraj is an agriculture expert and consultant with the YMCA - East Jerusalem

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 Sha'ab (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 AIC publications which critically analyze both the Palestinian and Israeli societies as well as the conflict itself.

“Oslo Agreements: Impact on Israeli Water Confiscation, Palestinian Water Consumption”, 15/07/2013, online at: <http://english.pnn.ps/index.php/culture/5170-oslo-agreements-impact-on-israeli-water-confiscation,-palestinian-water-consumption>

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❖ Water pumping to Zarqa resumes

AMMAN — Pumping from the main pipeline supplying Zarqa with water resumed on Thursday, after authorities fixed the damage inflicted by unknown persons, a government official said.

The perpetrators severely damaged the pipeline while trying to divert water to irrigate their farms, according to Ministry of Water and Irrigation Spokesperson Omar Salameh.

“Maintenance teams from the Water Authority of Jordan started fixing the pipe on Tuesday afternoon and finished earlier today. Pumping has now resumed at full force,” Salameh told The Jordan Times over the phone.

The pipeline conveys water from the Azraq wells to Zarqa, where the majority of residents were left without water on Tuesday and Wednesday, according to WAJ Secretary General Tawfiq Habashneh, who described the damage to the pipe as “the largest by far on a main water pipe”.

The 800-millimetre wide pipeline pumps 500 cubic metres of water per hour from the Azraq wells.

Minister of Water and Irrigation, Hazem Nasser told reporters on Wednesday that the amount of water lost from the broken pipeline was enough to meet the demand of 26,000 subscribers.

Due to the sabotage, which occurred near the Jordan Armed Forces training centre in Zarqa’s Khaw area, water pumping was suspended in vast areas of Zarqa, according to WAJ.

Security forces are investigating the incident to track down the perpetrators, who caused a huge disruption in the water distribution programme and the loss of much-needed water, in addition to placing extra financial burdens on the authority, Habashneh said in a previous statement on Tuesday.

He urged the public to cooperate with the authority and to report violators, who are denying people their share of water.

Over one million people live in Zarqa Governorate, 22km east of Amman, which hosts over 50 per cent of the country’s industries.

Ministry officials say that theft and vandalism of water resources are rising alarmingly and becoming the main obstacle to supplying the public with sufficient water.

Over 55 violations on the Kingdom's main water networks were recorded last year, according to the ministry's figures, which also indicated that 50 violations were registered in 2011 and 52 in 2010.

"Water pumping to Zarqa resumes", Jordan Times, 18/07/2013, online at:
<http://mideastenvironment.apps01.yorku.ca/?p=7409>

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❖ Can Palestinians and Israelis unite over the environment?

Germany's well-intentioned waste disposal plan for the City of Ramallah has Palestinians, Bedouins and Settlers up in arms. The growing regional campaign to thwart the short-sighted and environmentally unsound project is driven by those who prefer the long-term sustainability of their shared living space over petty politics and quick fixes.

Abed of the Kaabneh Bedouin tribe hosted a clandestine meeting in his home near the Rimonim intersection, between the Palestinian Rammun village and the Israeli Kohav HaShahar settlement. Although some journalists made their way in, it was the residents of the nearby communities who aligned forces with Israeli environmental groups for the petition signing summit.

Their motivations were many, but their objective was unified; to reject the efforts of Germany, the Palestinian Authority and Israel's Civil Administration to build a large garbage dump near the Israeli community of Rimonim, not far from Abed's home. Indeed, Abed and his family aren't the only ones who would suffer from the pollution.

Today, at this critical juncture, the environment has spoken. The patchwork of closely positioned though socially fragmented Israeli and Palestinian communities across the West Bank has long been the topic of monotonous political discourse. But while the diplomats get stuck at impenetrable impasses, life goes on. If left to their own devices, Palestinians and Israelis will inevitably find ways to improve the quality of their lives. Unless, of course, the powers that be continue to insist that their government plans supersede community generated solutions.

On the surface, Germany's forthcoming and generous offer should be warmly welcomed. They have allotted 15 million Euros towards the construction and maintenance of the waste disposal center, which will service the Palestinian communities in the greater Ramallah region. Needless to say, the Palestinian Authority, which sits in Ramallah and assumes responsibility for the local populace, is very pleased with the plan. The Civil Administration, run by Israel's Ministry of Defense, is similarly optimistic, as it believes the new site will replace numerous pirate waste disposal locations, normally characterized by hazardous private garbage burning. But while Israeli and Palestinian government agencies see systematic benefit in putting German funding to regional use, no one wants the new

dump in their backyard. And when that backyard is shared by so many, an initial outcry has the potential to snowball into a powerful campaign.

Abed, the Kaabneh tribe, the Palestinian villages of Rammun and Nu'eima, Settler communities from Rimonim, Ofra and Ma'aleh Mihmash and green environmentalist groups are all on board. The green activists point to the fact that landfill sites are a thing of the past, a substandard solution which would be illegal to implement in Germany yet strangely acceptable in a land that is not theirs. They also note the inescapable danger to the mountain aquifer which sits beneath the designated location and, once contaminated due to archaic and nature-unfriendly garbage dumping methods, will affect drinking water that reaches a predominantly Palestinian population. The Palestinians, for their part, do not want their agriculture and livestock to be harmed, let alone their obvious aversion to an ever-growing mound of garbage in their otherwise organic proximity. The Settlers, who share the same concerns, are also dismayed at the discriminatory nature of the German plan. As is commonplace with German environmental initiatives in the West Bank, the Germans and the Palestinian Authority share a mutual policy of ensuring that their programs serve Palestinians only, no Jews allowed.

Though familiar with the party line that refuses to allow normalization between the communities, the Settlers remain puzzled; the Rimonim garbage plant is to be built exclusively in Israeli administered Area C, yet it is designed to serve only residents of Areas A and B which are under Palestinian civil control. Although the plan is a clear political win for the Palestinian Authority, which has an opportunity to deposit its waste in Israeli controlled areas, the Palestinian communities themselves have a different vision for the way things should look. And that vision includes their Jewish Settler comrades.

Local initiatives between the Palestinians and the Settlers are nothing new. Just down the road from Rimonim the two populations disposed of their waste jointly at the Psagot garbage dump, thanks to creative thinking and person to person relationships between the Israeli Benjamin Regional Council and the Palestinian al Bira Municipality. But the site was closed in advance of the anticipated German project. In an attempt to buy time as they develop alternative plans, the Palestinian and Israeli activists reached an initial milestone in March, 2012, when the Supreme Court of Israel ruled to reopen the Psagot garbage dump until August 2013. Perhaps more importantly than their verdict

was their insight. Justice Esther Hayut, who was dually impressed to see the two groups working hand in hand, expressed her thoughts concisely: “Peace is in the dumps”.

Maybe she’s right. Maybe it takes garbage to bring people together. Maybe the environment is the noble cause that can help people see beyond themselves. And even if she’s wrong, there’s still an important lesson to be learned here. Even if this partnered campaign is only a drop in the bucket, it speaks to a deeper truth about people in general and the residents of the West Bank in particular. It’s an insight into what makes people tick, and what motivators have the potential to turn those people – separate and disparate as they may be – into a community.

It’s interesting to note that no matter how you slice it, this issue cannot possibly be resolved without cooperation between groups that are generally perceived to be at odds with each other. The German-Palestinian Authority plan will only work if Israel’s Civil Administration agrees to allot lands from Area C to care for the waste generated in Areas A and B. The alternative green-residential plans, which the Settlers, Bedouins and Palestinians are currently presenting, suggest a more natural grass-roots alliance, while sharing the same principles that the government bodies have employed. One way or another, like it or not, the West Bank’s environment will be shaped by an Israeli – Palestinian partnership.

Garbage and pollution, drinking water and aquifers don’t distinguish between race, religion and politics. Time will tell whether people, who are far more complex than their naturally unbiased habitats, will choose to build their societies in a similar manner. But today, at this critical juncture, the environment has spoken. In search of a sustainable future, Palestinians and Israelis are willing to stand up for each other to achieve a greater good.

“Can Palestinians and Israelis unite over the environment? [Your Middle East]”, 15/07/2013, online at:
<http://mideastenvironment.apps01.yorku.ca/?p=7395>

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❖ **Thirsty Jordan inaugurates huge water project**

Parched Jordan on Wednesday officially inaugurated a near-billion-dollar project to supply the capital with water from an ancient southern aquifer to help meet a chronic shortage.

King Abdullah II pushed the start button to begin pumping water from the 300,000-year-old Disi aquifer, 325 kilometres (200 miles) south of Amman.

"The Disi project will provide the capital and other governorates with 100 million cubic metres (3.5 billion cubic feet) of high quality drinking water every year," water minister Hazem Nasser told a ceremony.

"This amount covers 20 to 25 percent of Jordan's drinking water needs."

He said Turkey's GAMA Energy firm built the water system in 48 months.

The water ministry started an experimental pumping of water from wells of the Disi aquifer last Wednesday.

Officials say the much-awaited \$990 million project required 250,000 tonnes of steel and the digging of 55 wells to pump water from Disi to Amman, where the per capita daily consumption of its 2.2 million population is 160 litres (42 gallons).

The water ministry says Jordan, where 92 percent of the land is desert, will need 1.6 billion cubic metres of water a year to meet its requirements by 2015, while the population of 6.8 million is growing by almost 3.5 percent a year.

The demand for water is constantly rising in Jordan, which mainly depends on rainfall and is currently home to more than 500,000 Syrian refugees.

A 2008 study by Duke University, in the United States, shows that Disi's water has 20 times more radiation than is considered safe, with radium content that could trigger cancers.

But the government and some independent experts have brushed aside such concerns, stressing that Disi water can be treated by diluting it with an equal amount of water from other sources.

"Thirsty Jordan inaugurates huge water project", 17/07/2013, online at: <http://www.foxnews.com/world/2013/07/17/thirsty-jordan-inaugurates-huge-water-project/>

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❖ Jordan readies the taps on controversial water project

*A Middle Eastern scheme to tap groundwater highlights a regional problem with radioactivity, reveals **Nehal Lasheen**.*

[CAIRO] A controversial [water](#) project in Jordan that is due to begin operation this month has highlighted an issue of concern to many countries in the Middle East and North Africa.

Because of the region's lack of rain, the millions of cubic metres of water pumped daily from ancient aquifers are of crucial importance, but studies have revealed that some of the groundwater contains potentially hazardous radioactive elements.

Groundwater constitutes about 15 per cent of available water resources in the Arab world, but the overall average conceals big differences.

"Libya, Tunisia, and Saudi Arabia are 100 per cent dependent on groundwater reservoirs. Kuwait, Bahrain, Yemen and the United Arab Emirates are 90 per cent dependent, while Jordan and Egypt are 60 per cent and 20 per cent dependent respectively," Fatma Abd El-Rahman Attia, professor emeritus in the Egyptian National Water Research Center, tells *SciDev.Net*.

Aquifers are either renewable or non-renewable depending on whether they are still recharged by rainwater. Attia says that water in the non-renewable aquifers has been exposed far longer to the natural phenomenon of radioactivity caused by particles of elements in the sedimentary rocks.

"The level of contamination by these radioactive elements depends on many factors, such as the thickness of the layer of sedimentary rocks and the radioisotope concentration, which can differ from place to place, even in the same aquifer," she explains.

WHO guidelines on drinking-water quality note that such water may contain radioactive substances, or radionuclides, that could cause health risks, including bone cancer and leukaemia.

However, the guidelines point out that "these risks are normally small compared with the risks from micro-organisms and chemicals that may be present in drinking water. Except in extreme circumstances, the radiation dose resulting from the ingestion of radionuclides in drinking water is much lower than that received from other sources of radiation." [1]

Hamed Bakir, adviser on health and environment at the WHO's Eastern Mediterranean Office, emphasises that radioactivity guidance levels are conservative and not mandatory: "Exceeding a guidance level should be taken as a trigger for further investigation, but not necessarily as an indication that the drinking water is unsafe."

This is not a new debate, but it has been given fresh impetus by the Disi Water Conveyance Project, a US\$1 billion scheme to pump up to 100 million cubic metres of water a year from 55 wells in the

largest of Jordan's two non-renewable aquifers. A 325-kilometre pipeline will carry the water to the capital, Amman.

Demand for water in Jordan — which has one of the lowest levels of water resource availability per capita in the world, according to the WHO — increased six per cent last year and the Ministry of Water and Irrigation expects demand to increase further this year. The Disi aquifer, which lies 500 metres under the desert in southern Jordan and north-west Saudi Arabia, will help meet this demand.

The increase in demand caused by development is being further boosted by the flow of Syrian refugees to Jordan, according to Tawfiq Al Habashneh, the secretary-general of the Water Authority of Jordan.

The European Investment Bank has approved loans totalling US\$225 million for the Disi scheme. Construction is by a subsidiary of the Turkish company GAMA Energy.

Work began in 2009 "and will be completed in July 2013", says Anwar Battikhi, president of the Jordan Society for Scientific Research and professor of soil physics at the University of Jordan.

Controversy erupted in 2009 when a study led by Avner Vengosh of Duke University in the United States found that the water the scheme would tap was highly radioactive. The study tested 37 existing wells in the aquifer and found that all but one had concentrations of radioactive radium isotopes that exceeded international standards for drinking water. [2]

Battikhi confirms that further tests last year in 55 wells found radioactivity levels of one millisievert (mSv) a year, compared with the WHO guidelines of 0.1mSv. But he says it is up to each country to set its own guidelines and look for appropriate solutions.

Similarly, Mohammad Najjar, a former minister of water and irrigation in Jordan, says that the WHO guidelines are "only guidance indicators and any country can adopt these indicators or adopt stronger or weaker indicators according to the data and expertise".

Australia, he says, puts the upper limit of human exposure to radiation at 1mSv a year, while Jordan has set the level at 0.5mSv.

Hamed Bakir says it is essential that the judgement of what is an acceptable level of risk takes costs and benefits into account. That is, water supplies of generally safe quality but with characteristics that are slightly different from the guidelines' minimum requirement should be weighed against the health cost of not having water supplies.

Another option is to treat the radioactivity — but this is costly. "The water could be purified of the radioactive isotopes in many ways but it is very expensive and so not affordable for developing countries," says Mohamed Gad, a hydrology professor at the Desert Research Center in Egypt.

One method is to force the water through a membrane that prevents the passage of radium, a process

called reverse osmosis. Another option is ion-exchange purification, in which water is fed through columns of porous materials that capture the radium.

Nadia Sharara, professor of mineralogy at Assiut University, Egypt, says that purification is complex and costly "and the biggest challenge is how to get rid of the radioactive elements resulting from purification".

Battikhi says that Jordan's Ministry of Water and Irrigation plans to dilute the Disi aquifer water with non-radioactive contaminated water from other sources. But the difficulty of obtaining enough water to do so has forced the authorities to reduce their planned extraction rate from 100 million cubic metres a year to about 70 million cubic metres.

Nevertheless, the water authority's Tawfiq Al Habashneh is confident that the country's water situation will improve significantly when Disi starts pumping

"Jordan readies the taps on controversial water project", 19/07/2013, online at:
<http://www.trust.org/item/20130719102614-qm4xk/?source=hppartner>

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❖ Op-Ed: The Contamination of Israel's Aquifers

The polio virus has been found in Israel's water. Its source is not hard to find

Israel gave up Gaza, and the Hamas genocidally rocketed pre-1967 Israel-Sderot and Ashkelon. Israel gave up the civil administration of the Palestinian Authority; the Palestinians Arabs responded with the Intifada.

Today, there is a more insidious attack at play. On 3 June 2013, the World Health Organization (WHO) reported:

“In Israel, wild poliovirus type 1 (WPV1) was isolated from sewage samples collected on 9 April 2013 in Rahat, southern Israel. . . . Genetic sequencing and epidemiological investigations are ongoing to determine its origin. Preliminary analyses indicate the strain is not related to the virus currently affecting the Horn of Africa.”

Wikipedia [states that](#):

“Three serotypes of poliovirus have been identified-poliovirus type 1 (PV1), type 2, (PV2), and type 3 (PV3) - each with a slightly different capsid protein. All three are extremely virulent and produce the same disease symptoms. PV1 [the type found in Israel] is the most commonly encountered form, and the one most closely associated with paralysis.”

Medical News Today [explains](#):

“What causes polio? Polio is caused by the poliovirus, a highly contagious virus specific to humans. The virus usually enters the environment in the feces of someone who is infected. In areas with poor sanitation, the virus easily spreads through the fecal-oral route, via contaminated water or food. In addition, direct contact with a person infected with the virus can cause polio.”

On 3 July 2013, Israel's newspaper *Haaretz* [reported](#):

"Almost 90 percent of sewage from Palestinian towns in the West Bank flows into the environment untreated, contaminating the groundwater and 162 kilometers of streams, according to a report prepared by the Israel Parks and Nature Authority.

"The report, prepared for the Environmental Protection Ministry and the Civil Administration in the West Bank, is based on water samples taken from various locales in 2012. It found that some 50 million cubic meters of sewage flow into the environment from Palestinian towns every year. Only 5 million cubic meters go to treatment plants, some of which are substandard. This affects Israel as well as the West Bank, since the polluted streams flow into Israel.. .

Israel has tried to cope with the problem by building treatment plants near the Green Line separating Israel from the West Bank and treating the contaminated water once it enters Israel. But the facility built to treat the Hebron Stream – the most polluted of all – can't handle the volume of waste it receives. Contaminated water reaches nearby communities, emitting a stench and attracting mosquitoes."

On 11 July 2013, *Arutz Sheva* [reported](#):

"Traces of the poliomyelitis (Polio) virus are continuing to appear in sewage treatment facilities in southern and central Israel according to the (Israeli) Health Ministry." The central areas where the virus has been detected include the Lev Hasharon (Tulkaran-Tel Aviv) area, Modi'in (Green Line), Ramle (Green Line), Tel Aviv, Ashdod (south of Tel Aviv). The southern areas are Rahat, Be'er Sheva.

None of this Palestinian contamination of Israel should come as a surprise because in February 2012, the State of Israel Water Authority, in a report entitled "The Water Issue Between Israel and the Palestinians," (see http://mfa.gov.il/MFA_Graphics/MFA%20Gallery/Powerpoint/Water-IsraelPA.pps) stated:

"The Palestinians constantly breach the [Olso Water] agreement, as shown in the following:

1. [Omitted not relevant to this immediate issue.]
2. The Palestinians do not treat their sewage which flows freely in the [West Bank] streams and into [pre-1967] Israel, contaminating the [pre-1967 Israel] environment and the [pre-1967 Israel coastal] aquifer en route.
3. The Palestinians are not developing any new water source, either through sewage treatment, or desalination (also in contradiction of the [Olso] Water Agreement, M.L.)."

The key topographic/geologic fact is that what is termed the 'West Bank' is the mountains of Judea and Samaria. And any Palestinian untreated sewage water introduced into the aquifers of the Western salient of the mountains of Judea and Samaria gravitationally migrates underground westward into the aquifers of pre-1967 Israel. Geologically, there is no functional impermeable dividing line between the political pre- and post- 1967 Israel. Hence, it is impossible to stop Palestinian Authority untreated sewage water from contaminating pre-1967 Israel.

All the contaminated polio clusters in central Israel are in line with the general westward flow of the contaminated sewage water from the PA. This makes it very probable that the polio now being discovered in these areas and in southern Israel is from the northern and southern lobes of the area. And the ceding of Israeli civilian jurisdiction over Palestinian Authority sewage is a direct result of the Oslo Accords.

Is the Palestinian Authority purposefully and knowingly contaminating Israel's aquifers with sewage? Israel has begged the Palestinian Arabs for years to install sewage treatment plants at no cost to them and with funds from abroad. But the Palestinian Authority has refused to build anything except one small sewage treatment plant. Given that Palestinian Arab sewage is gravitationally bound to migrate westward into the pre-1967 Israel coastal plain, Palestinians (and Israelis!) could easily have predicted the biological diseases that this untreated sewage water would cause to pre-1967 Israel: Polio, for one.

Israel could define this as a possible instance of what the Geneva Convention terms Genocidal War Crimes. Israel and its civilians are being attacked with a form of biological warfare.

The Israeli cabinet debates destroying future Iranian genocidal nuclear warfare a thousand miles away. Somehow the same Israeli cabinet is impotent to stop current Palestinian Authority bio-warfare only 3 kilometers away. In fact, Israel may yet reward the Palestinian Authority's bio-warfare with more land! .

Can anyone imagine the cries of “Zionist Biogenocide” against Israel if it were to contaminate the Palestinian Authority aquifers the way the Palestinian Arabs are doing so to Israeli aquifers? .”

The Iranians see Israel's total impotence and appeasement of the Palestinian bio-warfare, and calculate that Israel will be just as impotent and appeasing when they gain their long sought-after nuclear weapon capacity..

“Op-Ed: The Contamination of Israel's Aquifers”, 17/07/2013, online at:
http://www.israelnationalnews.com/Articles/Article.aspx/13563#.UewsN9Ke_PZ

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❖ UPDATE 1-Egypt "deeply worried" by Nile water row with Ethiopia

(Reuters) - [Egypt](#) said on Saturday it was highly concerned that Ethiopia had not responded to an invitation to discuss a dispute over a giant dam that Ethiopia plans to build on the river Nile.

"[Egypt](#) is deeply worried that Ethiopia has not yet reacted to the invitation Egypt's minister of water and irrigation made to conduct a meeting in Cairo on the consequences of the dam," a statement issued by the foreign ministry said.

Egypt fears the dam will reduce water flows vital for its 84 million people.

Recently ousted Egyptian President Mohamed Mursi said last month that "all options" were open in dealing with the issue, prompting Ethiopia to say it was ready to defend its \$4.7 billion dam, set to be built near its border with Sudan.

The foreign ministry statement, issued just days after an interim cabinet was sworn into office in Cairo, shows the dam issue is a major priority for the new government.

Ethiopia summoned the Egyptian ambassador last month after politicians in Cairo were shown on television suggesting military action or supporting Ethiopian rebels.

Egypt also last month hosted an experts' meeting to study the impact of the dam on Egypt and Sudan, the two downstream Nile states. The foreign ministry said Cairo's proposed meeting was going to discuss that study, but gave no further details.

Egypt, whose population of 84 million uses almost all of the Nile water available to it, cites a 1929 pact which entitled Cairo to 55.5 billion [cubic](#)metres a year of the Nile's flow of around 84 billion cubic metres.

Ethiopia and five other upstream Nile states, such as Kenya and Uganda, say Egypt's claims are outdated and have signed a deal effectively stripping Cairo of its veto based on colonial-era treaties over dam projects on the river. (Reporting by Ayman Samir, Writing by Yasmine Saleh; editing by Crispian Balmer)

"UPDATE 1-Egypt "deeply worried" by Nile water row with Ethiopia", 20/07/2013, online at:
<http://www.reuters.com/article/2013/07/20/egypt-nile-ethiopia-idUSL6N0FQ0AA20130720>

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❖ Nile Power Shifts Away From Egypt

Before the Muslim Brotherhood's Mohamed Morsi was ousted as president earlier this month, his government was planning to catch up on overdue negotiations with nine upstream neighbors in the Nile River Basin to salvage the country's historic stake in the Nile River waters.

Morsi's government had planned to talk with Ethiopia and Sudan over the future management of the Grand Ethiopian Renaissance Dam (GERD), a massive hydro-electric project on Ethiopia's Abai River, and to re-start talks on what promised to be very tough a new agreement with Ethiopia and its other upstream partners.

The upriver countries have been busy in recent years signing papers that could have serious consequences for Egypt's almost total dependence on the Nile waters.

But when the Morsi government began objecting to Ethiopia's upstream dam project a few months ago, it quickly discovered that it did not have control over the Abai River – whose basin provides 75 percent of the Nile waters. The Morsi government also found it was going to have trouble with at least eight other countries that were interested in acquiring their own share of Nile waters.

Two previous Nile access treaties were based on river rights the British had guaranteed to colonial-era Egypt and Sudan. But countries at the Nile's several sources upstream were kept out of those agreements.

That may soon change as the other Nile nations seek to ratify a new agreement, the [Nile Basin Initiative](#) (NBI). And here again, Egypt could be a loser in the world's latest water conflict.

Equal rights on the Nile

“What's going on in the Nile Basin is to some degree what's been going on in the Nile basin for many years,” said [Peter Gleick](#), president of the Pacific Institute for Studies in Development, Environment, and Security. “And that is growing competition over the limited resources of the Nile River, increasingly by the upstream nations.”

The era of Egyptian dominance is being replaced by an era “when many more countries, and especially Ethiopia, want to have a say in the ways it's managed. The potential new agreement and the Abai dam could affect the amount, timing and quality of the water Egypt gets in the future,” said Gleick.

Six upstream countries have signed the new Nile Basin Initiative accord: Ethiopia, Kenya, Rwanda, Tanzania, Uganda, and Burundi. Newly independent South Sudan and the Democratic Republic of Congo are also expected to sign.

Each country must also ratify the agreement. Ethiopia's parliament did so in June and Uganda's may soon follow.

Sudan stands to be a key beneficiary of a new Nile basin agreement. A completed Abbai dam just across its border would offer Sudan much-needed cheap electrical power and put the country first in line for regulated flows of water from a friendly ally, Ethiopia.

The World Bank encouraged such regional cooperation when it created and funded the NBI process. But a western government official who monitors cross-border water rights issues says reaching an accord on the Nile has been more difficult than achieving similar water management agreements for the Tigris and Euphrates, the Mekong and the Indus rivers.

"At the national and regional level, many have done better," the official said of the Nile talks.

Power shifts on the Nile

And regional experts say Egypt has been slow and ineffective in protecting its water rights to the Nile compared to other nations in the river basin.

[Richard Tutwiler](#), director of the Desert Development Center at the American University in Cairo, says Egyptian politicians were so consumed with maintaining or winning political power during the recent upheavals that they didn't pay enough attention to the Nile water negotiations.

"Water was not part of the revolutionary conversation," said Tutwiler.

According to [Eric Trager](#) of the Washington Institute for Near East Policy, this lack of attention could cost Egypt dearly.

"Egypt's eye was not on the ball when it came to these negotiations over the Nile Basin Initiative and [it] was completely caught off guard by the construction of the [Ethiopian] dam," Trager said.

The problem started well before Morsi took office last year, Trager added, noting that the Mubarak regime had balked at collective ongoing water rights negotiations with its upstream neighbors on the Nile.

At one point, Cairo even suspended its negotiations on an overall accord and tried to negotiate separate deals with some of its upstream neighbors.

“There is not much they can do about it” now, said [Harry VerHoeven](#), a political scientist of the University of Oxford specializing in Nile basin issues. He said Egyptian efforts to block World Bank support of Ethiopia’s water initiatives and dam construction projects got Cairo nowhere.

“The world has changed very much and it is no longer the world of 20 or 30 years ago when Egypt could have veto [on] this sort of thing,” said VerHoeven.

And when Morsi finally realized how serious the situation was becoming for Egypt, he and other politicians began hinting or talking openly about possible military action to halt Ethiopia’s dam construction. But Trager noted that “the military gave a very clear signal it would not tolerate that.”

The generals, he said, were “not prepared to fight a war right now.”

Taking the Nile to court

One possible way to resolving Nile water issues peacefully is the International Court of Justice (ICJ) in The Hague, according to [Tom Campbell](#), dean of the Chapman University School of Law and a former Congressman who served on the House of Representatives' Foreign Affairs subcommittee for African Affairs.

Campbell encouraged Ethiopia to take its case to the ICJ early so it could preempt any military conflict over the water rights. This is important, he added, because the court would not intervene in an on-going war.

And Ethiopia is on good legal ground, Campbell said, because legal precedent on trans-border water rights favors existing population needs. Egypt previously sought to expand its water rights on the Nile “to serve new settlements in the Sinai, he said, while Ethiopia was seeking to preserve existing life and livelihood” following severe periodic droughts.

In addition to its legal arguments in favor of Grand Ethiopian Renaissance Dam project, experts say Addis Ababa can make a good political case as well.

First, Ethiopia’s population is now estimated to be slightly larger than that of Egypt. Ethiopia’s economy has grown by 6 percent or more in recent years and its future economic progress now depends heavily on dams for irrigation and for energy production.

The nation's 12 existing dams are designed to irrigate lands once subject to drought and famine, provide electricity to the majority of Ethiopians who live in rural poverty, boost foreign investment in agriculture and earn needed foreign currency by selling hydroelectric power to its neighbors in the Nile basin at a low price.

“Nile Power Shifts Away From Egypt”, 15/07/2013, online at: <http://www.voanews.com/content/nile-power-shifts-away-from-egypt/1702289.html>

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❖ **The Nile River is African and Ethiopia is its hub: rightful governance for rightful ownership** By Aklog Birara, PhD

Part one of this series presented the Egyptian position on the Nile in a manner suggesting that, on its part, Ethiopian society must, equally, overcome its internal governance gridlock that emanates from a cruel and repressive government leadership. This dictatorial governance refuses to reform itself or to allow other stakeholders to offer alternatives. I start with the premise based on conversations with a cross section of Ethiopians within and outside the country and from various documents and writings that the overwhelming majority of Ethiopians defend Ethiopians rightful ownership and use of the Abay River and other rivers within national boundaries and those shared with riparian states. Here there is no ambiguity. On the other hand and as a Gallop Poll suggests, the vast majority of Ethiopians reject the current ethnic-coalition based and elite run socioeconomic and political system that denies them a semblance of freedom and legitimate demand for the rule of law, a level playing field and fair play.

For Ethiopian society to win, it must achieve unfettered political and socioeconomic pluralism. Participatory governance will usher a nationalist leaning spirit and advance and protect national and societal interests for generations to come. Among the hurdles that are apparent is narrow ethnic elite governance that has made ethnic thinking and ethnic geopolitical configuration central tenets in managing the country, its national resources and its diverse society. If people begin to give primacy to ethnic and religious affiliation over national affiliation, the seeds of vulnerability are sown, with the unintended consequence of external powers exploiting these vulnerabilities for their own end games. This narrowly and emotionally tilted thinking and management system may seem attractive in the political theater of the day. Observers tell us that the thinking has undermined the fabric of Ethiopian society and must be reversed before it is too late. The governing party's ideology of ethnic divide seems to have worked successfully for political ends. We react to it and are governed by its agenda rather than by ours. For example, it is now more fashionable to think of identity as a member of a tribe or a religious group rather than a country. The regime has forced youth and others to think as disconnected individuals and groups that belong to ethnic and religious enclaves rather than to Ethiopia as Ethiopians who need to advance a foundation for the formation of a stronger, fair, just and equitable society in which none is left behind. This gives the sense that each group must fend for itself and not for the common good.

Simply put, Ethiopia's primary dilemma is not size, lack of resources or potential. It is repression and oppression by ethnic elites. It is the governing party's inability to advance genuine multiethnic cohesion, access to opportunities and genuine democracy based on the equality of individuals as Ethiopian citizens, on inclusion and equal treatment of Ethiopians under the law. The system is not open to fair and merit based social, economic and political competition. Anyone who stands for justice and fair play is accused of 'terrorism.' I suggest that the overarching principle that lacks is freedom and political and socioeconomic justice. This hurdle incapacitates the productive capacity of the entire system and undermines national determination to survive and thrive. In light of this hurdle, Ethiopia's vulnerability is much more internal than external. This leads us to the critical point that

Ethiopians support the country's right to build dams and other major infrastructure. However, it is self-evident that those left out from the development process resent and abhor repression and oppression. They want their voices to be heard and their rights respected. Accordingly, if Ethiopia wishes to defend its national interests in a sustainable manner, it must, by any criteria, be internally fair, inclusive, prosperous and unified. It must be perceived as fair and equitable. This is the reason for the sub-title "rightful ownership with rightful governance."

In a July 11, 2013 video, Al-Jazeera—that has been barred from reporting on Ethiopian political and religious issues—and that reports only with the permission of the Ethiopian government, presented a graphic video of the agonizing life of most of Ethiopia's youth. In June and early July, Ethiopian youth in Addis Ababa, Dessie and Gondar showed their dissatisfaction with the current government and protested peacefully. This is an indicator of things to come. I had suggested in my new book, *Organized Plunder* (Dirjitawi mizbera) that youth unemployment is one of the greatest threats to stability. More than 70 percent of Ethiopian youth are unemployed. In its recent budget submission, the Ethiopian government said that unemployment and inflation have gone down significantly. This is utterly and blatantly false. Such rhetoric is purely political and does not converge with the reality on the ground. The Al-Jazeera article, "Ethiopia's 50 percent unemployment pushes youth to desperation," is a sharp critique of a failed economic and social policy that serves the financial and political interests of a narrow band of ethnic elites and their families and leaves out millions from the development process entirely.

The pyramid like concentration of wealth and assets at the top has cornered youth, the poor and the middle class. It has barred or restricted them from participating fully in the development process. In turn, this reduces Ethiopia's capacity to generate employment opportunities, to create wealth, expand the middle class at a pace that befits a large population and restore dignity and to produce and become self-reliant. This July video and the demonstrations that took place are indicators of things to come. These demands would not stop until and unless fundamental reforms take place.

The Ethiopian governing party is its own worst enemy

The search for social justice and equity is a universal phenomenon that cannot be stopped. Whether in Brazil, Egypt or Turkey where democratic leaning governments allow citizens and especially youth to protest and demand accountability from their governments, the future is most likely to be bleak for societies that do not allow the establishment of enabling environments and empowering institutions so that people achieve their dreams for themselves and for their families.

Glitter does not do this. The complexities that trigger unrest and rebellion differ from county to country. Differences aside, Ethiopian society will not remain static. We witness this in the growing demand for the rule of law, justice and accountability from those who wield political power and amass illegitimate wealth via various instruments including rent. The bottom line is that a stronger, inclusive, just and pluralist system of governance will enable Ethiopia to negotiate with Egypt and others from a position of internal strength and cohesion. These attributes are practically non-existent today. In light of this, I contend that no amount of investment in infrastructure, including dams, will ease the pain youth and others feel each and every day. For this reason, justice and freedom are essential for Ethiopians as much as they are for Brazilians, Egyptians, Syrians, Turks and others. Demands for fundamental rights will play prominent roles in the years ahead. On the positive side, Ethiopia has enormous potential to grow and prosper. Harnessing full productive potential that is now suffocated by repressive governance has relevance for Ethiopia's capacity to respond to the war-like push from Egyptian authorities.

Constructive options exist

Of all the recommendations Egyptian scholars, technical experts and others have made that make sense, staggering the fill of the GERD reservoir over a longer period of time is the most reasonable. However, what seems reasonable to me, to a number of Ethiopians and fair minded foreign experts may not be equally shared by Egyptian authorities and civil society. Egyptian authorities are not used to fair play with regard to the Nile. In my estimation, staggering the fill will be fair as long as it does not undermine the value of Ethiopia's investment and as long as it does not dilute the country's sovereignty. It is highly likely that upstream riparian countries would support staggering but not Egyptian demand for the status quo (continued hegemony). President Yoweri Museveni of Uganda's sentiment is shared by other black African nations who support the Ethiopian position. In his own words, "Egypt cannot continue to hurt black Africa and the countries of the tropics." He was responding to the war-like rhetoric of the former President of Egypt, Morsi, now in detention. By comparison to his vitriolic and boastful pronouncement that "all options are open," the Ethiopian government reaction and position has been relatively calm and measured. When Morsi said this, he had in mind specific opposition groups within Ethiopia, sabotage and support using North Sudan, Eritrea and Al-Shabab in Somalia as proxies. Similar to his predecessors, Morsi did not offer negotiated settlement that all black African countries including Ethiopia would accept. On the other hand, the option some Egyptian scholars and experts identified of staggering the fill may, in the long-run, allow a win-win solution.

Organizing principles to anchor Ethiopian policy

Whatever option is entertained, Ethiopian government policy must be anchored in fundamental principles, most notably, what serves Ethiopia's national interests and the aspirations of its huge population. For this reason, I present four intertwined principles. First and foremost building a massive dam will not serve as a substitute for a free; fair; just; inclusive and democratic Ethiopian society. Nothing is more worthwhile for Ethiopian society, especially youth, than to feel that they enjoy freedom of expression, thought, association, movement, work, ownership and security to life and property, equal treatment under the law etc. Ethnic cleansing and displacement of indigenous people from their lands and property defies this fundamental principle of solidarity, fair play and national cohesion. It undermines the country's capacity to withstand external pressures. Second, in the long-term, an all-inclusive, stable, unified, prosperous, diverse, independent and well-respected Ethiopia is in the interest of all Ethiopians and all African countries including Egypt. Third, Egypt should not see a prosperous Ethiopia as inimical to its vital interests; and a weak, conflict-ridden, divided and poor Ethiopia as critical for its survival. For example, Egyptian government policy to encircle Ethiopia via North Sudan, Eritrea and Somalia and to finance and arm opposition groups is no longer acceptable. It is a disservice to Ethiopians and Egyptians alike. Fourth, in my estimation, a weak, conflict-ridden, non-cohesive, famine prone, fragile, dependent, undemocratic, ethnically, ideologically and religiously divided Ethiopia that is governed by any form of dictatorship will not guarantee a good and meaningful future for its population. On the contrary, this form of governance diminishes national strength and productive capacity. In short, the dam will not serve as a substitute to the void in good governance. Ethiopia is repressed and divided. It is not because Ethiopians choose to be divided; but because the system is designed to "divide and rule."

As the saying goes, "divided we (all) fall." A poverty and conflict ridden Ethiopia will not be a bulwark against all forms of extremism and terrorism in Africa. For this reason alone, Egyptian encouragement of and intervention and support to so-called liberation groups, dissidents, secessionists and others goes against the interests of a growing, emerging and influential Africa. This

interventionist approach by Egypt will, on the contrary, strengthen authoritarian measures and gives ammunition to the repressive regime in Addis. The regime will divert limited resources from development to defense. While understandable in light of Egyptian declarations, a 15 percent increase in the defense budget is ominous. Continued dictatorship in Ethiopia will make it unbearable for Ethiopians and for Egypt. In other words, a call for war and a destabilization strategy against Ethiopia is most likely to strengthen dictatorships in both countries by mobilizing nationalist sentiment. As I write this article, Egypt is in turmoil and there is no end in sight. Morsi's followers have declared their intentions to restore his presidency. One wonders whether or not another military dictatorship in Egypt won't ensue to avert a civil war and or to restore public order and or to wage war against Ethiopia. We do not really know where things would end. What we know is this. Egyptians believe that, at the end of the day, the military establishment plays a 'national guardian role,' and this notion includes Egypt's hegemony over the Nile. On the other side of the equation, it is not at all clear how an ethnicized Ethiopian military command would ultimately respond to the Egyptian threat without the benefit of changing its ethnic composition at the top of the leadership. What we can say is this. In any scenario; dictatorships thrive on chaos whether in Egypt or in Ethiopia. Both countries will arm themselves to the teeth to defend their interests regardless of costs.

As a Washington Post editorial put it on June 28, 2013, under the title, Egypt on the Brink, "After a year of misrule by its democratically elected government, Egypt is hurtling toward a potentially catastrophic political conflictBreaking promises to seek consensus with secular and opposition forces, it (the Morsi led-government) forced through a new constitution and has been trying to impose its control over the judiciary, media and civil society." In a similar vein, anti-terrorism laws are used to suffocate dissent and to jail justice and freedom seeking Ethiopians. Ironically, these are parallels the governing parties and or government leaders in Ethiopia and Egypt share. Neither one is trusted by the vast majority of its respective populations. The distinction is that, Egyptian dissidents, opposition parties, government employees, academics, professionals and civil society are unified with regard to the Nile; and against the interests of Ethiopia and the Ethiopian people. For them, Egypt's national interests are primary and political struggle and religious differences are secondary. The same cannot be said about Ethiopian elites and opposition groups. There is no indication whatsoever that they speak with one voice and for one national purpose on any substantive national policy issue including Abay. This void in consensus entails future costs for the country. While I acknowledge the solid arguments opponents suggest, I suggest that we all need to explore why this is the case; and dig deeper of the unintended consequences that may ensue.

Despite this, I suggest that Egyptian government leaders, the opposition and civil society begin to appreciate the notion that Ethiopians have the right to create and sustain a prosperous and strong Ethiopia using their natural resources as they choose. Such a society is most likely to be amenable to sustainable and equitable use of the Nile than a conflict and poverty ridden Ethiopia ruled by a dictatorship. Equally, they need to recognize the emerging reality in Sub-Saharan Africa that Egypt can no longer exercise its hegemony over the Nile on the back of poor black Africans. Despite chronic poverty, Ethiopian society is in the process of evolving faster than Egyptians and others realize. Assuming good, inclusive, just and equitable governance (a bold and plausibly unrealistic assumption), I estimate that Ethiopia's economy will be one of the largest in Africa in the next 20 years; and will exceed Egypt's in the next 50. I say this on the basis of natural resources endowments. Ethiopia has enormous and diverse natural resources, a huge bulging youthful population and a growing middle class that resides mostly abroad. However, Ethiopia's Diaspora is among the most well connected with its home base. Given good governance, a large pool of the

Diaspora will return and invest and enlarge the productive capacity of the economy. Despite repression and oppression, most Ethiopians are firm in their beliefs that the country has been sidelined with regard to the Abay River and its potential contribution. In other words, the Ethiopian people feel strongly that they have as much right to aspire a better life for themselves and for future generations as Egyptians and others do. This aspiration is directly linked to using the country's natural resources to improve lives. This does not mean that the TPLF led government is dedicated to a fair distribution of incomes and wealth. The argument is one based on fundamental national interest and the possibilities that exist for the future. In this connection, I suggest that Emperor Haile Selassie was right when he noted that the waters of the Abay River or Blue Nile are Ethiopian endowments and must serve Ethiopia's increasing population and its growing economy. He reiterated over and over again that Ethiopia will harness its waters for its own modernization. The obstacle his government and the Dergue faced was not lack of a national zeal and commitment to develop the Abay River. The limitation was lack of the financial means to do it; and the military strength to defend it. Today, international conventions and laws support this vision and legitimacy.

Historical claim by successive Ethiopian governments and international conventions suggest that changes in favor of Ethiopia and the rest of SSA stakeholders are inevitable. Egypt must recognize International Conventions adopted by the majority of UN member countries; and respect the fundamental principles that govern equitable use of the waters of the Nile River articulated under the Nile Basin Cooperative Framework that a majority of Sub-Saharan African riparian states have signed. These conventions and principles suggest that Ethiopia has a legitimate right to use its watercourses in support of its modernization and to secure food self-sufficiency for its growing population. Accordingly, Ethiopia's potential economic and social rise from its slumber of thousands of years is inevitable. This should not frighten Egypt or any other country.

This leads me to a self or governance made constraint Ethiopia faces. Regardless of massive investment in the Renaissance Dam, Ethiopian public trust and confidence in the current Ethiopian political leadership is unlikely to change for the better. The reason is because of the governing party's inability to carry-out meaningful political, social and economic reform that would empower the vast majority of the population, especially youth; and that would make the country strong. It is generally true that the majority of Ethiopians support the new dam. It is equally true according to sources that most are weary and suspicious of the governing party's motives and the ultimate social benefits of producing and exporting hydroelectric. The reason for mistrust and lack of confidence in the governing party is this. The current regime is an ethnic elite dictatorship that discriminates on the basis of ethnic affiliation. For example, in the past, hydroelectric power was transported to the Tigray region bypassing villages, towns and communities in between as if these did not deserve to come out of the 'dark ages.' Therefore, there is little evidence to show that indigenous people and Ethiopian citizens that have no access to electricity would benefit from power generated by the GERD. There is no evidence to suggest that the foreign exchange earned from export and sale of power would be ploughed back to improve the lives of the population and or to expand irrigated farming. Ethiopia's ability to feed itself or to become food secure and self-sufficient would depend to a large extent on its ability to expand irrigated farming for millions of smallholders. Whatever foreign exchange is earned from the GERD should be ploughed back to communities and to change the structure of the economy at a fast rate. The governing party operates in a non-transparent manner. It has not offered Ethiopians with a clear picture of how the GERD and earnings from the GERD would be used. On the contrary, suspicion is strong that foreign exchange would provide additional means to strengthen the

dictatorship and to enrich ethnic elites, families, friends and their allies, including the military establishment. This is not hearsay.

There is overwhelming evidence that the governing party has amassed enormous political power, financial and other resources assets. The perception is that, given the history of nepotism, corruption and illicit outflow of funds, the Dam would result in the same phenomenon. This is reinforced by the fact that the governing party continues to violate fundamental rights and freedoms. It does not take public sentiment into account. It does not respond to immediate social and humanitarian needs. All told, in the absence of accountability on the part of the governing party, the cost for Ethiopia is huge. In addition, repressive governance diminishes solidarity among the country's diverse population and provides a basis for resentment and penetration. This is why Egyptian authorities talked openly and freely about arming opposition groups and dissenters. They know the political weaknesses and the fissures that exist in Ethiopia. The logical policy response for this crisis in governance is therefore to open up the system; to encourage debate, dialogue and national reconciliation and peace; to allow competition, to move from ethnic politics to Pan-Ethiopian solidarity etc. etc.

Dictatorships are efficient in multiple ways

Dictatorships are well known for suppressing dissent and participation. The TPLF led government has institutionalized the choking of an entire country to an art form. The administrative cost of paying for a network of spies is alarming. For this reason, Ethiopians support the Dam and oppose the regime for a valid reason. The lead point is that dictatorships are super-efficient in suffocating dissent. Equally, they are competent and efficient in mobilizing resources and in building massive infrastructure that serves them and serves the public good in the long-run. Ethiopia is not an exception. Nasser built the Aswan High Dam; he was not Jimmy Carter. Stalin built the Soviet Union's massive industrial and infrastructural foundation. Other dictatorships across the globe built national roads, rails, dams, parks etc. in Brazil, Chile, China, Ghana, Korea, Singapore, Indonesia and others. They were able to do these projects by exploiting nationalist sentiments and by mobilizing resources from ordinary people to do extraordinary stuff. The human costs in these countries were enormous. The dictatorship in Ethiopia has done similar projects while crushing dissent, imprisoning thousands and 'killing' an untold numbers of innocent people. Donors keep telling us how fast Ethiopia has grown over the past few years without the benefit of demonstrating the impact of this growth on the population. The human toll of growth "without freedom," to use a phrase from Human Rights Watch is enormous. At the same time, it is generally true that, the single most important contribution of the current government is infrastructure, especially dams, roads, bridges, schools. We can disagree on social relevance and on quality. However, we cannot dismiss the developmental impact of infrastructure on the country and in shaping the future. My point is this. The more this happens, the more it is likely that ethnic walls will be broken; the private sector boosted and social cohesion strengthened. It is not 'black and white.'

Evidence suggests that infrastructural projects have singular value in advancing growth and development. However, I suggest that infrastructural projects without justice, equity and social meaning are not sufficient in terms even development, fairness, sustainability and even development. What is reasonable to say is this. Ultimately, these infrastructural investments are implanted like national monuments; they belong to Ethiopia and to the Ethiopian people. At some future point, they will serve as triggers of sustainable development. In the long-term and as Ethiopians begin to assert their fundamental human rights and freedoms; and as the private sector expands and deepens, these investments will contribute to integrated and sustainable development. Wealth will be created.

Ethiopian youth would not have to leave their homeland to achieve their dreams. Over time, lives in the rural areas will improve dramatically. So, Ethiopians have a dual task facing them. On the one hand, they have a responsibility to support projects of national interest and importance and make a clear distinction between the party in power and the country's national interests. On the other hand, they have singular responsibility to demand justice, equity and accountability from their government. However, I acknowledge that, in the immediate future, the social impact, security and viability of the Renaissance Dam on the national economy, on indigenous people and on society will be limited by dictatorial political governance. By this, I mean lack of freedom, the ability to demand services and the provision of information technology, including a free press. The reason for this is because of the fact that people who do not have freedom cannot negotiate ultimate value and use. This is why one can contend that it is poor, exclusionary, repressive and brutal governance that makes the regime untrustworthy even when the dam has singular national importance and Ethiopian character.

The Ethiopian government would be wise to open up political space

By its own deeds—violation of human rights and human dignity, suppression of political opposition, degradation of a semblance of civic engagement and freedom of the press, the total absence of the rule of law, the persistence of nepotism, favoritism and corruption, the enormous cost of administering the bureaucracy etc. etc. —the Tigray People's Liberation Front (TPLF) dominated and led government has lost legitimacy to govern. It is not trusted by the vast majority of the population (Gallop Poll). More than at any time in its long, difficult, tumultuous and glorious history, Ethiopia needs a genuine and concerted effort toward national reconciliation and peace involving all stakeholders. A better governance alternative that gives all Ethiopians a voice in the affairs of their society would strengthen the country's claim to harness its natural resources and defend investments from external threat. The Heritage Foundation the Fund for Peace, the US Department of State, the Mo-Ibrahim Index of African governance and others present recurring findings and themes that show degradation of justice and human dignity rather than progress in Ethiopia. It is incontestable that, so far, growth has benefitted a narrow band of elites and marginalized the vast majority of the population, especially youth. The GERD should not be used to bolster inequity.

Egypt is going through another popular revolt involving a cross section of its large middle class, this time against an elected government leadership and president. On the Ethiopian side, the 'remarkable double digit growth' that the Ethiopian government reports and donors applaud has done very little to ease the pain of the population. Egyptian society faces similar impediments—no jobs, high cost of living, corruption and lack of confidence in the future. The Ethiopian human development situation is even worse than Egypt's. The best example is continuous and massive human capital outflow to the rest of the world, including to poor African countries. If we take a minute and review the tragedy, we will find that Africa's youth do not move to Ethiopia to find jobs. On the other hand, Ethiopians move to a poor country such as Malawi to find work. They serve as domestic servants in numerous countries. I can find no African country where Ethiopians, most of them young, do not live and work. Each month, hundreds of young Ethiopians take enormous risks to escape poverty and repression. Many of them pay thousands of dollars to travel to the US via Kenya, Zimbabwe, South Africa, Brazil and Mexico for a good reason, sheer survival. Human trafficking of children and girls is widespread. The country's largest export is human capital. The condition of Ethiopian girls, women and others in the Middle East is among the most abominable and degrading in the world. All of these and more emanate from poor and disempowering governance and politicized and ethnicized access to opportunities.

At the same time, Ethiopia has millionaires and billionaires mostly earned through government offices and connections. Each year, billions of dollars are stolen and taken out of the country illicitly, with no higher government or party official held accountable. Muslim Ethiopians have been protesting against repression and in defense of religious freedom. Meeting their demands for freedom of religion will mitigate one of the avenues Egypt and other wish to use to destabilize the country. Lack of freedom and participation has adverse consequences.

Other Africans who enjoy freedom, dignity and better lives—Ghana, Mauritius, Namibia, Tanzania, South Africa, etc. often ask how Ethiopians go on tolerating the intolerable for so long. They are right. The rest of Africa is moving forward at a faster rate in terms higher incomes and overall wellbeing than Ethiopia. In light of this, I suggest that justice and legitimacy to govern do not necessarily occur because the TPLF core leadership that dominates the Ethiopian Peoples' Revolutionary Democratic Front (EPRDF) decided to mobilize funds and invest more than \$4.7 billion precious resources in the Renaissance Dam. I suggest that a) enduring and genuine nationalist public support and b) trust in the government for the dam and others national efforts will only occur when and if the rule of law is respected and the fundamentals of good, just and inclusive governance are institutionalized in Ethiopia. Ethiopia's future security and ability to defend its interests will depend on an empowered, cohesive and free populace that feels that it is the master of its own destiny. I am totally convinced that a free and well to do society will serve as a bulwark of popular support against any contingency. Such a society will safeguard the national interest better than a society that is fractured and repressed. For this reason, I suggest that building GERD must not be devoid of social meaning and relevance. A dam anchored in a meaningful social purpose (improving ordinary lives in visible and real ways) is most likely to make enormous developmental impacts over time. Void of this social purpose, it will end up serving the economic and social interests of ethnic elites rather than the population at large.

While I accept the values of mega dams, past experience suggests that multibillion dollar investments in mega infrastructure without accountability to the public through an independent and verifiable institutional oversight offer substantial windows of opportunity for repression, corruption, graft, kickbacks, exclusion, discrimination, quick riches and illicit outflows. The reason for this is because there are no checks and balances to make contractors and officials accountable. All these and more are true and must be exposed without let-up.

Keep the bigger picture in mind

At the same time, the bigger picture of national and societal interest should not be lost in the frenzy of "political correctness" and rejection of the governing party. Instead, there should be a healthy and civilized debate in advancing Ethiopia's long-term interests while applying sustained and coordinated pressure on the governing party to open-up political, social and economic space for all Ethiopians. It is understandable that many Ethiopians are skeptical concerning motives and ultimate value. I understand fully this skepticism, especially the motive of the governing party and its ability and capacity to complete the dam and to use it for the betterment of the Ethiopian people and to transform the structure of the country's backward economy, especially the irrigation and agro-industry sectors. My contention is that the tensions between Egypt and Ethiopia and the other external threats that Ethiopia faces are real and should not be underestimated. Although there are no simple and clear cut answers, the question of how these tensions would be resolved for the benefit of both societies is one of the most urgent both governments will ever face. Regardless of their ideological, political, religious and ethnic orientation; and not withstanding animosity toward the TPLF dominated

government headed by Prime Minister Haile Mariam Dessalegn, opposition groups and dissidents need to make a distinction between Ethiopia's strategic interests and the transient government's abominable record on vital governance issues highlighted earlier. I am not naïve to assume that the TPLF dominated government appreciates and defends Ethiopia's national interests. It abandoned Ethiopia's legitimate access to the sea. It transferred millions of hectares of farmlands to foreign investors and to Tigrean elites (Gambella). It negotiated and "gave" Ethiopian lands to the Sudan, etc. It created one of the most corrupt systems of government in the world. It degraded religious freedom. It allowed illicit outflow to match net foreign aid receipts.

Nevertheless, I suggest that we recognize the fact that governments come and go; countries and societies remain more or less permanent unless people choose to destabilize them. For this reason, I opine that opponents should not provide Ethiopia's traditional enemies fodder to serve their own interests as has happened over and over again. It goes without saying that the TPLF dominated EPRDF government has done zero to open-up political, social and economic space for the vast majority of the population. It closed press freedom because it does not want the Ethiopian people and the world to know the truth. Access to unrestricted, unedited and uncensored information is the single most important right Ethiopians demand. The regime must be held accountable for denying it. It must be held accountable for the ethnic and religious divisions it created intentionally. It must be held accountable for ethnic cleansing and for forced displacement of millions from their ancestral homes and lands. Those who wish to see a better future for the Ethiopian people have the right to show that disempowerment, displacement, disengagement, ethnic cleansing, religious and civil repression and the pitying of ethnic and religious groups against one another offer the country's traditional enemies entry points to destabilize and disintegrate Ethiopia. They have the right to persuade Prime Minister Hailemariam to have the courage and advance political reform while defending Ethiopia's right to complete the Renaissance Dam and others. On his part, the Prime Minister must recognize that Ethiopia needs a political leadership that is an integrator and not a divider. These are hurdles that must be overcome in order to secure Ethiopia's future and to develop all its natural resources endowments for the betterment of its people. The bottom line is this. The ruling party and the opposition—both—must recognize that a unified, inclusive, just, prosperous and democratic Ethiopia will guarantee all its citizens a better and meaningful life. With a better life comes the capacity to defend the country's vital national interests from any threat. Good governance is therefore in everyone's interest. At the same time, I suggest that Ethiopia's long-term interests must have primacy. I say this because national interests are not tradable commodities. One does not sell this interest to gain something else including financial reward. If national interest is tradable, I ask myself for what fundamental permanent principle and policy we stand for despite our ethnic, religious and political differences and despite opposition to a dictatorial regime. We do not need to go to any other country to accept this primacy.

I should like to close this piece with Emperor Haile Selassie's world view and his government's position on the Abay River, for a strategic reason. Ethiopia's internal weaknesses and the backwardness of its national economy—due, in part, to constant internal wars, threats and invasions from outside—were among the key ingredients for the lack of exploitation of its rivers for hydroelectric power and for irrigation purposes. At the time, this condition suited Ethiopia's traditional "enemies," especially Egypt and the Sudan. Things have changed dramatically. My sense is that we should accept this positive change while strengthening our determination to establish a just, inclusive, fair and democratic Ethiopia. I again reiterate the fundamental principle that it is only the

formation and establishment of pluralist Ethiopia that accepts diversity as a source of its strength that will secure the benefits of the Abay and other rivers for succeeding generations.

“The Nile River is African and Ethiopia is its hub: rightful governance for rightful ownership By Aklog Birara, PhD”, 19/07/2013, online at: <http://www.abugidainfo.com/index.php/21488/>

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❖ Egypt Calls on Ethiopia to Seek Solution on Nile Water Sharing

[Egypt](#) will try reach a solution for its conflict with Ethiopia about a dam on the Nile river, Egyptian Foreign Minister Nabil Fahmy said.

“We will take action to guarantee the water security of Egypt and preserve our rights in the waters of the Nile,” he told a televised press conference in Cairo today. “We call on the Ethiopian side to respond.”

Ethiopia this year decided to proceed with the construction of the Grand Ethiopian Renaissance Dam, planned as [Africa](#)’s largest hydropower plant, ignoring Egypt’s concern that its water supply would be reduced.

Mohammed Mursi, the Egyptian president who was ousted in an army coup this month, had been accused by his opponents of having no plan for dealing with the Ethiopian dam project.

“Egypt Calls on Ethiopia to Seek Solution on Nile Water Sharing”, 20/07/2013, online at:

<http://www.bloomberg.com/news/2013-07-20/egypt-calls-on-ethiopia-to-seek-solution-on-nile-water-sharing.html>

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❖ Ethiopia to secure equitable sharing of Nile waters: Parliament

Ethiopia lower house speaker Aba Dula Gemada reminds Egypt that treaty removing colonial-era water rights now ratified into Ethiopian law

Ethiopia is committed to guaranteeing the water interests of both Nile basin states and Egypt, said Aba Dula Gameda, Ethiopia's lower house speaker, according to Egypt's state-run news agency MENA on Wednesday.

"Some elements on the Egyptian side publish inaccurate information about the Renaissance Dam, but Ethiopia is gaining the international community's support," Gameda said.

Gameda emphasised Addis Ababa's eagerness to achieve economic cooperation with Egypt along with an "equitable sharing of water resources," pointing out that the Cooperative Framework Agreement (CFA) has been signed into Ethiopian law.

The CFA replaces a colonial-era agreement that granted Egypt and Sudan the majority of water rights, preventing upstream countries from implementing irrigation and hydropower projects without first seeking Egypt's approval.

On 30 June, Ethiopian foreign minister Tedros Adhanom said that Ethiopia hopes talks with Egypt will ease the row over sharing the Nile's waters.

Egypt and Sudan have not signed the CFA – which was developed by the Nile Basin Initiative – but six upstream nations have, AFP reported.

Signatory countries include Burundi, Kenya, Rwanda, Tanzania and Uganda. The Democratic Republic of Congo and the newly independent South Sudan have said that they also intend to join.

For decades, Egypt held veto rights over all upstream projects, following powers granted by a 1929 colonial-era treaty with Britain.

Egypt's subsequent 1959 deal with Sudan gave the two downstream countries more than 90 percent control of Nile waters.

Ethiopia signed the CFA in May 2010, and its June ratification in parliament comes amid rising tensions between Addis Ababa and Cairo over Ethiopia's construction of the Grand Renaissance Dam on the Blue Nile.

Ethiopia began diverting the Blue Nile in May, paving the way for its \$4.2 billion (3.2 billion euro) hydroelectric dam that is set to become Africa's largest once completed.

The Horn of Africa country has pledged to press ahead with the dam, despite Egypt's reservations.

“Ethiopia to secure equitable sharing of Nile waters: Parliament”, 17/07/2013, online at:

<http://english.ahram.org.eg/NewsContent/2/9/76678/World/International/Ethiopia-to-secure-equitable-sharing-of-Nile-water.aspx>

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❖ Egypt has more water

When the Egyptian company, Kato Aromatic was trying to set up shop in Mukono-Uganda in mid-nineties, I wrote an article for New Vision, explaining the Nile 'creation' and welcoming our downstream brothers to the headwaters of the famous river.

One point made then and worth repeating today is that: Egyptians needed to invest more in upstream economies for both food and water security.

Yet, 20 years down the line, there is developing military unease in Cairo, Addis, and Kampala about upstream energy projects. Over the last two weeks - both on the 30 hour Cape Town – Denver (US) flights and at our American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE) meeting, I had time to research, reflect and discuss with an Ethiopian driver and an Egyptian Engineering Professor about the Nile waters problem. In a series of articles, I summarise Egypt's and upstream countries' cases. Possible action scenarios and their effects are surveyed. Some recommendations are finally made.

Egypt has three sources of water: The Sea, Ground water and the Nile. Contrary to common belief, of all the Nile basin peoples, it is Egyptians that have the biggest water resource. And it is them that are assured of an inexhaustible source of water were the entire basin to dry up.

With the Red and Mediterranean seas, these people are sure to have water up to the time the entire planet - as we know it - dries up! Moreover, as the globe warms up and the sea level rises, they get more of the resource from melting polar glaciers and mountainous snow caps.

To drive the point closer home, most of the Rwenzori snow-caps we used to see and marvel at from as far as present day Kyegegwa district in my 1970s childhood, have since disappeared to Egypt! The only issue is that this infinite source is salty and has - for ages been more costly to reclaim and distribute. But this is changing rapidly now.

While sea water desalination used to cost an average of \$3.70 to 4.00 per cubic metre (cu.m) in the 1980s, it has now dropped by a factor of 10 to well below 0.37. In fact, in Egypt today adoption of reverse osmosis technology has dropped costs to just under \$0.20 per cu.m. This is about twice that from the Nile

– and the gap is narrowing because of increasing pollution and start of integration of direct solar energy in desalination.

Ground water, otherwise called brackish water (slightly salted water) is abundant below most of Egypt. This resource easily surpasses the 200 Bn cu.m. per year mark – or four times that from the Nile. Almost the entire country is covered with intersecting ground aquifers. For example, while the Nubian sandstone aquifer is reported to cover 90% of the country, the Fissured carbonate one covers over 50%.

This ground water is mainly due to remnants of previous lakes in the pre Sahara days and partly to seepage from the river, irrigation canals and occasional desert rains. Late Colonel Gadaffi had exploited similar resources to address water poverty among his people in Libya.

Egyptians are also exploiting the resource and up to nearly 17 Bn cu.m. were officially being harvested annually by 2011. But this is under 9% of the resource capacity. Desalination costs vary but are less than those of sea water. Distribution costs are even less than those of the Nile waters because abstraction is largely at point of use.

In fact, the ‘problem’ now is that many informal boreholes are reported to be mushrooming in areas quite far off from the Nile valley. Depths vary between 0 and 500 m but the rocks are easier to drill than those in upstream countries because of volcanic/igneous nature of the latter.

In the Sinai and regions near the delta, depths are as low as 0 - 2 m below the surface. Environmentally, abstraction in this region is not as harmful as in upstream countries because lowering the water table in the latter would kill many plants - thus affecting the Nile waters themselves and exterminating dependent animals – none of which exist in the Egyptian desert.

The most convenient source of water in Egypt is the Nile flowing at an average 84 Bn cu.m. per year. It is convenient because it gives fresh water from the greater East Africa. From Uganda through South Sudan, there is an all year round steady flow of 11.8 Bn. cu.m. controlled by storage lakes Victoria, Kioga and Albert and thermal-regulated by the massive suds of South Sudan.

The suds expand in wet seasons, increasing evaporation losses and contract in dry seasons reducing the losses. They assure Egyptians of fresh drinking water all year round. From Ethiopia, the Blue Nile and Atbara flow unsteadily. Flow rates are maximum between August and October and minimal at all other times.

This unsteady flow gave the Nile in Egypt its demi god status. For - while similar rivers in adjoining Europe and Asia were drying up at that time, the Nile was preparing to flood Egypt with most nutritious volcanic debris from the Ethiopian highlands.

Colonial agreements first with imperial Britain, and then with Sudan - at times when desalination technology was still ‘primitive’ - reassured Egyptians of a minimum 55.5 Bn cu.m. annual flow. It is this value they are taking as an omnipotent figure, perhaps written on stone – and will be willing to go to war for if not achieved.

To be fair, in 1959 when the figure was decided, today’s Reverse Osmosis technology was not yet even in the labs. Salty water ionisation technology for irrigation was in infancy. From an energy source point of view, efficient harnessing of solar energy – of which Egypt has aplenty – was unknown.

Add to this the facts that Egypt was the most populous, most advanced and most strategic (to Britain) country in the basin and that issues of climate change were not clearly understood at the time: it is then easier to appreciate the biased allocation. But almost all these have since changed. In the next article, we examine the changes.

“Egypt has more water “, 15/07/2013, online at: <http://www.newvision.co.ug/news/645077-egypt-has-more-water.html>

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❖ **Brian Stewart: Egypt's other existential crisis — the Nile**

Ethiopia's construction of a giant hydro dam near the headwaters of the Nile has Egypt's leaders talking military action

Today's Egyptians are facing two overriding crises that threaten their national wellbeing.

The one that is getting all the world headlines involves the domestic unrest over the now former Islamist government; the other is a foreign threat to alter the flow of the country's essential life force, the Nile River.

For millennia, Egypt, which gets very little rainfall, has been totally dependent on the water and the silt of the Nile to survive and feed a now fast-growing population of 85 million.

So critical is this flow of the Nile that any diminution upstream is seen as a threat to the country's very existence. That's why Cairo has long vowed some form of direct military action, if necessary, to stop Ethiopia building a giant hydroelectric dam along the headwaters of the Nile that flows through its northern highlands.

This conflict has now shifted from the theoretical to the practical. Refusing to be cowed, Ethiopia has now started work, with China's help, on the Grand Ethiopian Renaissance Dam, the largest in Africa.

Ethiopia feels it has as much right to the Nile water, and an equal need, to escape its crippling poverty. The dam's future hydroelectric capacity, Ethiopia insists, will allow it to grow economically.

That argument does not appease Egypt one iota. It insists the massive reservoir that will be created will reduce the downstream flow of water to Egypt by a catastrophic 20 per cent. Vast farming regions will be lost; millions will lose already fragile livelihoods.

What's more, Ethiopia's actions, if allowed to succeed, will surely encourage others to follow suit.

The Blue and the White Niles, which meet before flowing to Egypt, cross many other nations as well, all of which are desperate for hydroelectricity and irrigation.

Increasingly strident threats

So serious is the concern that, before the anti-government demonstrations and the Egyptian army's coup earlier this month, it was the Nile conflict that dominated news coverage in Egypt, fed by increasingly strident threats from officials and politicians.

"If we lose one drop, our blood is the alternative," then-president Mohammed Morsi vowed, shortly before his overthrow, a barely veiled threat of war echoed by, among others, the country's foreign minister.

The idea sounds incredible. But not to diplomats in the region who noted in early June a live television broadcast from Morsi's office that inadvertently picked up the president and senior political leaders discussing a possible pre-emptive attack on Ethiopia.

The military alternatives ranged from an Egyptian air attack on the dam construction sites to guerrilla sabotage and even moves to destabilize the Addis Ababa government.

When Ethiopia demanded an explanation of the broadcast, Morsi was unapologetic, vowing that "all options are open."

For its part, Ethiopia appears to doubt that Egypt has the capability to launch a direct attack against its own capable military, especially as the two countries are separated by the vast, harsh terrain of Northern Sudan.

However, Northern Sudan, along with Eritrea to Ethiopia's north, both side with Egypt in this dispute, so the Ethiopian government can't ignore Egypt's ability to at least stir up the kind of guerrilla activity that could dramatically escalate the crisis.

A military diversion?

Taking no chances Ethiopia has just rushed through a 15 per cent increase in its defence budget.

It is also discussing with Russia the purchase of 18 modernized SU-30 jet fighters to further beef up an air force that is regarded as one of the most capable on the continent. (Ethiopian pilots now train South Africa's.)

Most analysts doubt this so-called "river conflict" will lead to actual war. However, we do live in exceptionally unpredictable times as the upheavals across North Africa and the civil war in Syria clearly show.

What is particularly worrisome right now is that the new military-backed government in Cairo may be strongly tempted to use such a dangerous foreign crisis to try to cool off demonstrations at home and unite its deeply divided population.

The pro-army elements in Cairo may well conclude that a period of sabre-rattling over so vital a resource would also allow Egypt's currently hard-pressed military to again parade itself in a "national guardian" role.

Beyond all the political posturing, however, there's no doubt that each side feels itself to be absolutely in the right, with no room to retreat. Either government would be weakened domestically by any hint of surrender.

Egypt appears to feel as deeply about a future decline in Nile water flow as Israel does about Iran getting nuclear weapons. In Egypt, it's seen as an existential threat, non-negotiable.

"This is a red line for Egypt's existence," Hussam Swailam, a prominent Egyptian military analyst has declared. This dam "would threaten us with thirst and death."

Power shift

Apart from outright threats, Egypt has always relied on dubious treaties, dating back to colonial times, to keep its lion's share of the Nile constant.

A 1929 Nile waters agreement, enforced by Britain gave Egypt up to 90 per cent of the annual flow plus a right to veto upstream dams that threaten that supply.

Although Ethiopia's tributary, the Blue Nile, generates 75 to 80 per cent of the Nile's total annual flow, Ethiopia was never consulted when this agreement was drawn up.

It dismisses the veto as preposterous and unenforceable today.

So do a half-dozen other nearby nations. Uganda's long-serving President Yoweri Museveni recently insisted that the time when Egypt can dictate terms over the Nile is over. "Egypt cannot continue to hurt black Africa and the countries of the tropics of Africa," he declared.

Ethiopia, capable of being heavy-handed itself, is far from blameless in this crisis.

It has generally failed to consult Egypt over its plans and has been brusque in dismissing Cairo's concerns.

In a larger sense, the dispute is compounded by a perceived power shift in the whole region.

Egypt, the long-time kingpin in North and Eastern Africa, and a powerhouse in the Arab world, appears in decline at the very time that Ethiopia, the second largest country in Africa and with an equally large population, is on the rise.

Though still desperately poor, Ethiopia has surprised the world over the past decade with the highest economic growth rate on the continent (close to 10 per cent annually on average for most of the past decade). It has a newly assertive middle class and a strong modernization program in the works.

The dam, which is estimated to cost close to \$5 billion, will make Ethiopia a net exporter of electricity in the region, and could potentially power Asian-style industrialization (with a big boost from close friend China).

Diplomats seem to feel the Nile conflict can still be defused if only Ethiopia can reassure Egypt over the water flow by limiting the size of its dam, and perhaps offer up a share of the power to be produced.

So far agreement seems unlikely, and the ongoing threat of chaos in Egypt is not expected to smooth the road to a solution, nor calm the rhetoric on either side.

“Brian Stewart: Egypt's other existential crisis — the Nile”, 15/07/2013, online at:
<http://www.cbc.ca/news/world/story/2013/07/12/f-vp-stewart-egypt-nile.html>

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❖ **Head of flood-hit India state plans new development approach**

DEHRADUN, India (Thomson Reuters Foundation) – India’s devastated Himalayan state of Uttarakhand has to adopt a new approach to development after the floods and landslides that killed almost 6,000 people and wrecked buildings, roads and bridges last month, the state’s chief minister said.

The heaviest rainfall on record caused swollen rivers and glacier lakes to burst their banks and triggered huge landslides across the Himalayas, geologically a relatively young and unstable mountain range.

Chief Minister Vijay Bahuguna has come under a barrage of criticism from some environmentalists who say the disaster was “man-made.”

They say the construction of hydro-electric dams, involving blasting tunnels through mountains to carry diverted flows of water, illegal yet rampant deforestation and the spread of unregulated buildings along river banks worsened the impact of the unprecedentedly heavy monsoon rains.

"We have to do development differently," said Bahuguna, when asked in an interview by the Thomson Reuters Foundation whether he planned to change his development policy, given the fragile ecosystem of the Himalayas.

"We have to have planned and sustainable development where we respect the environment but also improve our economic growth. The two have to go hand in hand."

"The construction we carry out will have to be of a different class now. We have to have long-term planning, not patchwork – keeping in mind the interests of the state for the next 100 to 200 years. It has to be sustainable development."

ENVIRONMENTAL IMPACT

Bahuguna dismissed the figure of 500 dams, given by some environmentalists as the number built or planned in the mountainous state, as a “myth” but did not give a total himself.

According to [Uttarakhand Jal Vidhut Nigam Ltd](#), the state-run hydropower company, there are 45 dams of varying size in operation and a further 199 under construction in the state – most of which are used to provide electricity to other regions of power-deficient northern India.

Environmentalists say that blasting tunnels through the Himalayas makes them more prone to landslides, and dumping waste materials during construction into rivers like the Alaknanda and Bhagirathi and Yamuna is raising the river beds, which will make them flood more easily in future.

The chief minister said he had established a body called the “Uttarakhand Relief and Reconstruction Authority” where scientists, environmentalists, geologists and other experts would oversee the planning and execution of infrastructure, including hydropower, projects.

“Let people who are experts decide what sort of dam is built – whether we should have run of the river projects, how many dams,” he said. “I am not rigid that I require so many dams but I do require some dams. If you don’t have hydro-energy, then we will go back to the 15th Century and light lamps.”

Responding to criticism for allowing unregulated buildings to spread along the riverbanks, the chief minister said that while some construction might be illegal, the devastation had occurred mainly because rivers had changed their course and now flowed in areas that had never before been considered flood-prone.

He said that as a result of the floods, he was enforcing a law banning all construction on dried-up river beds.

HIGH PRICE

Bahuguna now faces the daunting task of reconstruction and while the cost of this is now being assessed, he said he expected it to run to hundreds of millions of dollars – some of which is likely to be funded by the World Bank and the Asian Development Bank.

Floodwaters swept away thousands of homes, schools, hotels and other buildings built too close to collapsing river banks, while landslides sent mud and boulders hurtling down steep mountainsides, burying buildings and breaking up roads.

“Around 200 of my bridges have been washed away, nearly 5,000 roads damaged, connectivity to 4,300 villages snapped -- electricity and water supplies disrupted, telephone lines collapsed,” Bahuguna said.

The biggest expense will be flood-control measures to try to reduce the impact of such a disaster in the future, he said.

“If I cannot prevent the rivers from changing course, all my highly populated cities which are on riverbanks will be threatened. We will build permanent embankments.”

“Head of flood-hit India state plans new development approach”, 16/07/2013,online at:

http://www.trust.org/item/20130716164351-qvyse/?source=hptop&utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=5113507334-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-5113507334-250657169

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❖ India Floods Spark Hydropower Debate

The recent deadly floods and landslides in northern India have sparked a debate about hydroelectric power projects in the ecologically fragile Himalayas.

The recent deadly floods and landslides in northern India have sparked a debate about hydroelectric power projects in the ecologically fragile Himalayas.

Green activists say blasting has loosened soil and made mountains more susceptible to landslides, while power companies argue that dams have cushioned the impact of flash floods and protected areas downstream.

At least 1,000 people were killed and more than 5,700 are still missing following floods and landslides triggered by heavy rain in northern India last month.

“A disaster of this magnitude is bound to open up new approaches. We need power, of course, but at the end of the day you are building on a fragile ecosystem,” said Nirmalya Choudhury, a senior research associate with the New Delhi-based Council on Energy, Environment and Water.

He said Indian agencies contracted by state and private companies don’t assess the impact of hydroelectric projects while they are being constructed, contrary to widely-followed global practice. Instead they rely on assessments made before projects are built.

But government officials and companies complain that hydroelectric projects are already held up for long periods while clearances are obtained. In India, clearance for hydro projects can take as long as eight years.

India plans to add 88,537 megawatts of power generation capacity by March 31, 2017. The Planning Commission, the country’s main policy think tank, has projected that about 12% of this will come from water sources. Himalayan rivers will play a big role.

D.P Bhargava, technical director of state-run NHPC Ltd. , India’s biggest hydropower company, said power projects are adequately planned and not anti-environment. He suggested the construction of hotels and other buildings on the edge of rivers was more damaging.

ActionAid said Uttarakhand courted disaster through rapid construction and aggressive construction work along river banks. The construction of more than 245 hydroelectric dams and mining projects along the 14 river valleys in the state within the last decade has posed an enormous ecological threat, it said in a statement.

“Rivers have been diverted, hills blasted and forests destroyed, causing large-scale soil erosion and landslides. Debris from the construction has raised water levels, which contributed to flash flooding,” it said.

Debabrat Patra, Uttarakhand regional manager for ActionAid’s India office, said diversion of water had affected villages as hillside farms have dried up and trees have stopped bearing fruit.

“Although their houses exist, they are as good as displaced,” he told India Real Time. “They have to look for other livelihoods.”

India’s Power Secretary P.K. Sinha and Uttarakhand Chief Minister Vijay Bahuguna weren’t available for comment.

Prodipto Ghosh, director at the New Delhi-based Energy and Resources Institute, said India should continue with hydropower projects but better implementation is necessary. He pointed to Austria and Switzerland as examples to follow.

“India Floods Spark Hydropower Debate”, 19/07/2013, online at: <http://stream.wsj.com/story/latest-headlines/SS-2-63399/SS-2-277676/>

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WWW.ORSAM.ORG.TR

❖ Gulf Arab states eye Arabian Sea for safer water supplies

(Reuters) - Gulf Cooperation Council countries (GCC) are planning a joint water supply system that takes seawater from outside the Gulf and distributes drinkable water across member states, an official at the GCC Secretariat General said.

Scarce fresh water supply is the biggest challenge for Gulf Arab desert countries, forcing them to build energy-intensive seawater desalination plants to meet rising demand.

[Saudi Arabia](#) is building the world's largest desalination plant in Ras al-Khair on the Gulf coast, but the GCC is increasingly concerned that the waters of the Gulf may become undrinkable if there are any leaks from energy installations into the water lying between the Arabian Peninsula and [Iran](#).

"The water link is to build a line from the Arabian Sea or Gulf of Oman to Kuwait passing through the GCC countries," GCC assistant economic secretary Abdullah J. al-Shibli said.

"With the Iranian nuclear plant in Bushehr, if something goes wrong the water in the Gulf will be polluted."

Arab Gulf countries sought reassurances from [Iran](#) at a U.N. nuclear agency meeting last month over the safety of Bushehr, built on the earthquake-prone coast of Iran.

The Gulf is also home to dozens of offshore oil rigs and loading facilities which could pose a threat to drinkable water supplies in the event of a large leak like the Deepwater Horizon oil spill in the Gulf of [Mexico](#) in 2010.

"This is a vital and strategic project to provide water under all circumstances... for the water security, the idea is to build desalination plants in all the countries, to produce the water," Shibli said.

The project, which Shibli said may cost around \$7 billion, will include storage facilities to stock up on potable water.

"Gulf Arab states eye Arabian Sea for safer water supplies", 18/07/2013, online at:

http://www.reuters.com/article/2013/07/18/us-water-gcc-link-idUSBRE96H0BZ20130718?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=ceb29ed511-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-ceb29ed511-250657169

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❖ PetroChina, Yanchang Pipelines Shut After Landslide Damage

[PetroChina Co. \(857\)](#) and Shaanxi Yanchang Petroleum Group Co.'s units in Yanan city, Shaanxi Province, have been shut by the local government after landslides damaged oil pipelines and polluted drinking water.

Both companies' oil and gas pipelines, [oil wells](#) and storage facilities near Wangyao Reservoir in Yanan's Zhidan county have been shut after crude oil leaked into the water supply, the Yanan government said on its website today. The reservoir provides drinking water for more than 200,000 residents in the city, it said.

The companies "must carefully inspect their pipelines, making sure no oil leak will happen again," Yanan Mayor Liang Hongxian said yesterday, according to the website.

[China](#)'s authorities are becoming more responsive to environmental and health concerns, as the new leadership under President Xi Jinping and Premier [Li Keqiang](#) try to establish an image of a government for the people, said Willy Wo-Lap Lam, an adjunct professor for history at the [Chinese University of Hong Kong](#).

"They want to react to environmental and health issues more swiftly, so people don't have to take to the streets to have their voices heard," Lam said. "This is a more of a conciliatory approach compared with what they did in the last government."

Protests in the southern city of Heshan last week forced local government to abandon plans for a uranium-processing facility, while demonstrations in [Shanghai](#) in May forced battery maker Shanghai Guoxuan New Energy Co. to ditch plans for a factory there.

Water Tested

Water from the Wangyao Reservoir is safe to drink, Yanan environmental officials said after testing its quality on July 14, Shaanxi-based Hua Shang News reported today, without providing details.

Yanan, a major natural gas and crude oil production area for PetroChina's Changqing oilfield, has seen once-in-a-century rains since July 3, Yanan's official news website ya123.com reported. The rainfall killed at least 26 people, injured 118 and caused direct economic losses of 1.57 billion [yuan](#) (\$256 million), according to a statement on the website.

Changqing is PetroChina's biggest field in China, producing about 50 million metric tons of oil and gas a year. The company sent more than 300 people to repair a pipeline that was damaged by

landslides on July 12, Hua Shang News reported. Local government sent 1,500 people to assist the effort, it said.

Pipeline Repair

The newspaper said 1.4 tons of oil leaked, polluting the Wangyao Reservoir. The pipeline leaked for a second time yesterday after a landslide upstream of the reservoir, it reported.

Yanchang spilled about 13 tons of oil upstream of the reservoir on July 12 and the company has managed to repair the pipeline and clean-up most of the leak, according to a statement from the company's unit, Yanchang Petroleum Group Pipeline Co.

PetroChina is trying to contact its local unit for more details, Beijing-based spokesman [Mao Zefeng](#) said by phone yesterday. Mao did not answer two calls to his office seeking comment today.

Yanan had a population of 2.18 million in 2010, according to the Shaanxi government-sponsored website sxpop.gov.cn.

In November 2011, China National Petroleum Corp., the parent of PetroChina, was given a disciplinary warning by the central government for an accident the previous year, after an [oil spill](#) caused by an explosion polluted more than 183 square kilometers (71 square miles) off the coast.

“PetroChina, Yanchang Pipelines Shut After Landslide Damage”, 16/07/2013, online at:

http://www.bloomberg.com/news/2013-07-16/petrochina-shaanxi-unit-shut-after-oil-leak-to-protect-water.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=c9a05488a9-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-c9a05488a9-250657169

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❖ Kenya Plans Talks With Ethiopia Over Hydropower Dam, Daily Says

[Kenya](#)'s government plans to hold talks with [Ethiopia](#) about the impact the construction of the Gibe III hydropower dam in southern Ethiopia may have on Lake Turkana, Business Daily reported.

Kenya wants assurances that water collected by the dam, which is being built on the Omo River, will be released and not used to irrigate land, the Nairobi-based newspaper said, citing Culture Secretary Hassan Wario.

Environmental activists have said the dam may reduce the lake's water level by as much as 33 feet (10 meters), depleting fish stocks and compromising its status as a world heritage site, the newspaper said.

Lake Turkana is the world's largest desert lake and the fourth-biggest fresh-water body in Africa. The lake provides a livelihood for more than 20,000 people and supports more than 48 fish species, the newspaper said.

"Kenya Plans Talks With Ethiopia Over Hydropower Dam, Daily Says", 16/07/2013, online at:
http://www.bloomberg.com/news/2013-07-16/kenya-plans-talks-with-ethiopia-over-hydropower-dam-daily-says.html?utm_source=Circle+of+Blue+WaterNews+%26+Alerts&utm_campaign=c9a05488a9-RSS_EMAIL_CAMPAIGN&utm_medium=email&utm_term=0_c1265b6ed7-c9a05488a9-250657169

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❖ GERD construction ‘24% complete’

Approximately 24% of the construction of Grand Ethiopian Renaissance Dam (GERD) has been completed, the Ethiopian Electric Power Corporation (EEPCo) announced on Tuesday.

Mihret Debebe, CEO of EEPCo, said that this amount includes the design work of a 500,000 kilovolt power transition line extending from the dam to different parts of the country, reported Ethiopian media outlet Walta Info.

Abadula Gemedà , speaker of the Ethiopian House of Representatives, told the Ethiopian News Agency (ENA) that Ethiopia is keen on ensuring mutual benefits for the Nile Basin countries, including Egypt.

Gemedà said that some of the information circulating in Egypt about the dam is “inaccurate and distorted,” and that Ethiopia has been gaining international support.

He added that Sudan has started showing its support for Ethiopia and accepting that the principles of mutual benefit among Nile riparian countries.

Gemedà said any Ethiopian effort to make use of the Nile water originates from its interest in ensuring equal share among all Basin countries.

Ethiopia began diverting the Blue Nile on 28 May in its construction of the Renaissance Dam, a \$4.2bn hydro-electric dam that has sparked controversy in Egypt.

Multiple Egyptian analysts expressed their concerns about the construction of the dam, saying that it would affect Egypt’s share of the Nile water, which has been 55 million cubic metres of water annually as per agreements signed in 1929 and 1959.

“GERD construction ‘24% complete’”, 17/07/2013, online at: <http://www.dailynewsegypt.com/2013/07/17/gerd-construction-24-complete/>

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❖ **Water dispute between Kazakhstan and Kyrgyzstan resolved...for now**

ASTANA (TCA) - After 10 days of Kyrgyz villagers plugging the flow of water of a 13-kilometer canal called "Bystrotok" to Kazakhstan, water supply has resumed, Bnews.kz reports.

This resumption of water supply occurred a day after a phone conversation between Kazakh Prime Minister Serik Akhmetov and his Kyrgyz counterpart Zhantoro Satybaldiev on July 17th. They agreed to renegotiate the current situation.

Meanwhile, the resumption of water supply occurred two days after the Kazakhstan embassy in Kyrgyzstan sent a note to the Kyrgyz authorities with a claim to take immediate measures aimed at resuming water supply through the Bystrotok channel.

"The illegal activity which contradicts to the earlier reached agreements on transboundary water resources and common norms of international law led to a lack of water not only in Kazakh Zhambyl region's Zhualynskiy area but also in the Kyrgyz villages located lower near the channel," the Kazakh embassy said.

On July 7, some 50 or 60 residents of the village of Kok-Say in northwestern Kyrgyzstan's Talas Region blocked the flow of water from the Bystrotok canal to Kazakhstan. They demanded that the 2,600-hectare parcel of land ceded to Kazakhstan in 2001 be returned.

As a result of this water supply blocking, farmers in Kazakhstan were unable to irrigate some 4,000 hectares of land for 10 days.

Border tensions between Kyrgyzstan and Kazakhstan are "relatively rare," according to Eurasianet. But "it highlights the potential for conflict among Central Asian neighbors competing for scare land and water resources."

Eurasianet writes that the Kazakh-Kyrgyz row "seems to have been resolved for now."

"Water dispute between Kazakhstan and Kyrgyzstan resolved...for now", 17/07/2013, online at:
<http://www.timesca.com/index.php/m-news-by-category/agriculture-and-fisheries/11149-water-dispute-between-kazakhstan-and-kyrgyzstan-resolvedfor-now>

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❖ Sichuan rainstorms result in water shortage

Zhou Yi, a resident of Shuangliu county in Sichuan province, turns on her bathroom faucet regularly to see whether water is available.

"The water supply has been unpredictable for six consecutive days now because of the rainstorms. Life is very inconvenient in the summer," Zhou said on Wednesday.

Four rainstorms have lashed Sichuan since June 18. Direct economic losses from floods have reached nearly 28 billion yuan (\$4.6 billion).

"The floods from the rainstorm on July 9 alone caused direct economic losses of more than 20 billion yuan. Twenty-eight reservoirs were destroyed, affecting the water supply," said Hao Yuenan, a provincial information officer.

Since July 11, tap water has been available in Shuangliu for about only an hour at a time in the mornings, afternoons and evenings.

"Water is not supplied at a fixed time, and it smells like bleach," said Zhong Chuan, a resident of Huayang, a town in Shuangliu.

Luo Jiangping, an official at the Shuangliu bureau of water supply, said that the Minjiang Water Plant in Dongsheng, Shuangliu, which supplies the tap water for about 1 million county residents, cannot produce enough safe water because of the high sediment content in Zipingpu Reservoir, in the upper reaches of the Minjiang River, a tributary of the Yangtze River.

"There is too much sand in water from the reservoir," she said.

The reservoir, dealing with the area's largest floods in recent years, has been discharging sediment to ensure its own safety, said Ouyang Li, deputy chief of the reservoir's control center.

"Sichuan rainstorms result in water shortage", 18/07/2013, online at: http://usa.chinadaily.com.cn/epaper/2013-07/18/content_16793548.htm

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❖ Ivory Coast: Plans for Holding the 2013 High-Level Forum on Water and Sanitation for All Underway

Up to 800 participants are expected in Abidjan from 21 to 23 November 2013 for the 2013 High-Level Forum on Water and Sanitation for All

“To promote vibrant and effective South-South cooperation to accelerate access to hygiene, sanitation, and drinking water for all in Africa,” is the theme of the Forum.

Originally set up by the Pan-African Intergovernmental Agency for Water and Sanitation for Africa (WSA) (<http://www.wsafrika.org>), this year’s forum is being organised in association with the Government of Ivory Coast.

This is the third forum; the first two were held in Ouagadougou in Burkina Faso and Dakar in Senegal. Its objective is to provide a platform for various decision-makers and stakeholders involved in this sector in Africa to exchange information and exert their influence, thus encouraging decisions and concrete action in support of WASH in Africa.

The 2013 Forum has three main objectives: (i) to find the best way to take advantage of South-South partnerships for the development of business opportunities in terms of financial cooperation for the implementation of priority projects beyond the reach of national budgets in the Water, Sanitation and Hygiene sector (WASH); (ii) to develop strategic alliances and partnerships to strengthen the technical and institutional capacities of southern countries in the WASH sector; (iii) to stimulate the sharing of experiences and know-how between southern countries in the WASH sector.

The third High-Level Forum on Water and Sanitation for All in Africa is of interest to all stakeholders and senior officials in the Water, Sanitation, and Hygiene sector in Africa. They include African heads of state, ministers responsible for water and sanitation issues in Africa, African finance ministers, as well as technical and financial partners from the North and South, mainly consisting of export-import banks, researchers, investors, NGOs, and integration and development organisations.

The institution, which has 32 member countries, has been working in Africa for 25 years to develop solutions to address the problems of water and sanitation on the continent. Its mission is based on the establishment of integrated systems combining the optimization of technical and scientific approaches with innovative funding mechanisms.

“Ivory Coast: Plans for Holding the 2013 High-Level Forum on Water and Sanitation for All Underway”, 20/07/2013, online at: <http://waterjournalistsafrika.wordpress.com/2013/07/20/ivory-coast-plan-for-holding-the-2013-high-level-forum-on-water-and-sanitation-for-all-underway/>

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❖ **Kenya: Residents Oppose Increment of Water Tariff In Eldoret**

Residents of Eldoret in Kenya are up in arms following a decision by a water company in the town to increase its tariffs.

The locals termed the reasons advanced by Eldoret Water and Sanitation Company (ELDOWAS) to increase its water tariffs unfounded.

In an effort to remedy the situation, the Kenya National Chambers of Commerce and Industry Uasin Gishu county branch chairman Charles Mose has asked (ELDOWAS) to rescind its decision of hiking the tariffs.

Mose said it was wrong for the company to increase tariffs and yet it was not giving quality and effective services to the water consumers in the town and its environs.

According to the new rates announced by the company management, water consumers will pay an additional Sh 8 per cubic meter with effect from this month.

Mose said the reasons given by the company over its decision to hike the tariffs were not justified owing to constant water shortages being experienced by consumers in the area.

He said the firm continues to levy standing charges to consumers even when they have not received the commodity in their taps for one week, a situation he observed has forced them to improvise other ways of getting water.

“We will not allow the company to arbitrarily increase the water tariffs at will without consulting all stakeholders in the sector as the move will hurt the investors and consumers alike,” he said.

But the company chief executive officer Reuben Tuwei defended their move to hike the commodity’s tariffs and asked consumers and the business community to cooperate on the matter.

He said the cost of maintaining equipment used in the generation and distribution of water to the consumers has risen drastically in the recent past, a move that has forced them to increase the tariffs.

“We have no option but to increase the water tariffs if the consumers expect us to offer quality and efficient services to them,” stated Tuwei in Eldoret town.

He assured consumers that there would be no more cases of acute shortage of the commodity as being experienced in several estates in the town and its environs.

ELDOWAS last changed its water tariffs in 2010 and have been anticipating in taking up development loans to enable it build more dams to increase production in the region.

Currently the town has been facing acute water shortage due to increased population that now stands at close to 600,000 people.

Chebara dam in Elgeyo Marakwet County which is the only source of water for the town has a production of 36,400 cubic meters per day contrary to the town's demand of 46,000 cubic meters.

Lake Victoria North Water Services Board is said to be in plan to help the company build Kipkaren dam near Eldoret airport to produce about 10,000 cubic metres daily to address the shortage.

Elegerini dam near Kapataget will also be rehabilitated to produce 9000 cubic metres since at the moment it serves as a storage facility.

“Kenya: Residents Oppose Increment of Water Tariff In Eldoret”, 20/07/2013, online at:

<http://waterjournalistsafrika.wordpress.com/2013/07/20/kenya-residents-oppose-to-increment-of-water-tariff-in-eldoret/>

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❖ Peoples conclave for no dams, hydro projects in Kinnaur Himalayas

Shimla: Still counting the losses from one of heaviest rains in history recorded in higher zones of Kinnaur in June, a people's conclave has demanded that construction of dams and hydro projects be stopped fore with and the entire program be reviewed.

Speaking at the conclave held toady at Peo, the district headquarter of Kinnaur, RS Negi of Kinnaur Sangharsh Samiti (a NGO) said that the unprecedented rains followed by snowfall on 15-17 June not only claimed 25 human lives, but thousand of livestock perished.

More than 12,000 hectares of apple orchards, the mainstay of economy in the tribal lands, 12,600 hectares of agricultural land, over 1700 houses, including schools and more than 300 roads, mainly rural roads suffered extensive damage, claimed Negi.

He lamented that because of the tragedy in Uttarakhand, the plight of Kinnaur people did not get proper attention by the government or in the media.

Numerous landslides and massive soil erosion has impacted vast areas which has been aggravated due to muck dumped in river bank by hydro projects and roads construction. Many houses and even villages have become unsafe to live. Unfortunately the plight of more than seventy thousand people in Kinnaur has not attracted national government and media attention, said Negi.

Ghuman Singh of Himalaya Niti Abhiyan (a NGO) demanded that trans-Himalaya be considered a very risk-prone zone because of the potential of earthquakes, floods and landslides and it needed to be governed by a sensitive and conducive model of development.

He demanded that the union and state government stop construction of dams and hydroprojects in Satluj basin.

Heavy vehicular inflow, entry of external population because of tourism, damming of River Satluj and construction of hydro-projects impacting local climate and were deliberated are causes for the erratic weather witnessed at the conclave.

Rainfall of 365 mm recorded in 48 hours, something which the cold arid desert zone does not experience in a year is an alarming sign for upper reaches of Satluj valley which comes under highly seismological active zone, sad RS Negi.

The unusual weather patterns in Kinnaur are an alarming sign of further catastrophe and it needed to be recognized that the current model of development with unscientific constructions leading to local climate change conditions was a man made phenomenon.

More than 300 participants attended the conclave, held at Bachat Bhawan, Peo organized by Him Lok Jagriti Manch. Other than RS Negi, Guman Singh, the gathering was also addressed by Nanak Singh Negi and Ramamurti Sreedhar from Minerals Mines and People (a NGO) organizations.

“Peoples conclave for no dams, hydro projects in Kinnaur Himalayas”, 17/07/2013, online at:
<http://hillpost.in/2013/07/peoples-conclave-for-no-dams-hydro-projects-in-kinnaur-himalayas/93989/>

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❖ Semi-arid regions in drastic environmental changes cycle

Saturday, July 20, 2013 - Islamabad—Semi-arid regions in Pakistan are witnessing drastic environmental changes with increased rainfall and climate induced disasters. Beside effective adaptation and policy planning, there is need to strengthen economic resilience of local communities to cope with adverse effect of [climate change](#).

This was discussed in a consultative workshop on “Climate Resilient [Economic Development](#) in Semi-Arid Regions “organized by [Sustainable Development](#) Policy Institute (SDPI) here on Thursday. Consultation marked the start of a project by SDPI and Overseas Development Institute (ODI)-UK to scale up climate-compatible [economic development](#) in semi-arid regions of Central Asia, East Africa and West Africa.

Speaking at the occasion, Shamsul Mulk, Former Chairman Wapda suggested expediting work on ‘institutional capacity building’ of related institutions to cope with emerging challenges of [climate change](#). He said that floods in Pakistan are regular phenomenon which are causing damages worth billions of rupees every year and the only way to address this problem is through ‘preparedness’ and ‘structural planning’. He was of the view that business as usual is no more an option as Pakistan cannot afford more damages to the scale of 10-15 billion dollars as witnessed in 2010-11 floods in Pakistan.

Talking of improving capacity of public institutions, he stated that in sixties, Wapda had no capacity to steer large projects, but with firm commitment it was able to bridge capacity gap within short time and completed the biggest ever water development structures of those times under Indus Water Treaty including Tarbella, Mangla and other canals.

Dr Azmat Hayat Khan, Director, Pakistan Meteorological Department presented recent climatic models and revealed that rainfall patterns in Pakistan are changing, where instead of Kashmir and Northern Areas, semi-arid regions particularly in KP and Punjab are now getting more extreme rainfalls events.

He further informed that average rainy days and precipitation have increased in Sindh whereas it is gradually decreasing in Kashmir and GB which are water lifeline for Pakistan. “Water availability is also likely to be affected by westward shift in monsoon which has started to miss the catchment areas of Tarbela and Mangla, along with the fact that we don’t have any water catchment mechanisms in these semi-arid areas which are receiving more rains,” he added.

Dr Azmat said that this climatic shift pose serious threat to semi-arid zones by increasing their vulnerability and affecting agriculture, livelihood, and economics of the region. He said that situation demands immediate policy actions to mitigate floods in new vulnerable areas along with measures to protect agriculture and conserve additional rain water where no [water conservation](#) structures are present.

In his welcome remarks, Dr Vaqar Ahmed, Deputy Executive Director, SDPI called the need for further research on climate induced vulnerabilities that not only resonates with ordinary publics but can also influence policy discourse. He informed that SDPI is building partnerships with relevant institutes and supporting new breed of researchers to bridge this research policy gap particularly in area of environmental governance.

Earlier, briefing participants about the project, Kashif Majeed Salik, Research Associate, SDPI said that project seek to strengthen economic resilience of communities living in semi-arid regions from climate induced vulnerabilities and disasters .

During consultation, there was consensus among the participants that semi-arid regions are receiving heavy damages due to [climate change](#) which are further aggravated by poor-adaptation and lack of institutional governance.

Debating sector specific [economic development](#), participants suggested preparing a comprehensive inventory of semi- arid regions in Pakistan. They also demanded for collection of decade-wise data on change in rain fall patterns to properly gauge adverse impacts on livelihoods sources with possible adaptation strategies.

The participants underscored the need to protect people's livelihoods and assets which are directly linked with their resilience and contribute towards [economic development](#) of the region. It was observed that another way to adapt to climate changes is diversification of livelihoods sources, with maximum policy level support along with support from developed countries.

"Semi-arid regions in drastic environmental changes cycle", 20/07/2013, online at:
<http://pakobserver.net/detailnews.asp?id=213152>

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❖ GCC countries mull combined water supply system

The six member countries of the Gulf Cooperation Council are planning to develop a joint water supply system that can take seawater from outside of the Arabian Gulf to supply the growing network of desalination plans.

According to Reuters, a plan is in place to for a pipeline across the states as a way of staving off potential pollution threats in the Gulf - either from a nuclear leak from Iran's Bueshehr facility on the opposite side of the Gulf or from potential spills from one of the many offshore wells.

GCC assistant economic secretary Abdullah J. al-Shibli said: "With the Iranian nuclear plant in Bushehr, if something goes wrong the water in the Gulf will be polluted."

The lack of fresh drinking water in Gulf countries means that they are increasingly reliant on an expanding network of desalination plants.

"This is a vital and strategic project to provide water under all circumstances," al-Shibli added.

He estimated that the project could cost up to \$7bn.

"GCC countries mull combined water supply system", 21/07/2013, online at:
http://www.constructionweekonline.com/article-23457-gcc-countries-mull-combined-water-supply-system/#.UewxXNKe_PZ

❖ **In building the world's third-largest dam, Brazil aims to build good social practices**

Despite controversy over the construction of Brazil's Belo Monte dam, some say it could change the approach to community engagement around large-scale projects.

Brazil is busy polishing its image in anticipation of hosting the 2014 World Cup and 2016 Summer Olympics, spending billions on budgets for border control, crime eradication, and public projects

But while the construction of soccer stadiums and the war on crime grab headlines, Brazil's largest and most expensive infrastructure project is hidden deep in the Amazon on the "Big Bend" of the Xingu River. There, the Belo Monte dam – the third largest dam in the world – is rapidly being built. And how the dam is completed could play an important role in shaping the future of one of the world's last frontiers – the Amazon Rainforest.

"The effects of this dam will be better than any other dam in Brazil," says Vilmar Soares, a co-founder of FORT Xingu, an organization that supports development in the Xingu Region. "This is the first hydroelectric dam in Brazil that implements a plan of regional development for when the dam is completed."

In an unprecedented move, Norte Energia, the consortium managing the dam, will pay the impacted 11 municipalities of the Xingu Region a compensation fee of \$233 million to be invested in sustainable development projects over 20 years. The money, and the community-led disbursement of it, will allow the Xingu Region to "continue bettering the region," not just respond to the immediate impacts of the dam, Mr. Soares says.

Some observers, like Soares, say that despite controversy over construction, Belo Monte is setting positive precedents in community engagement that can teach the world how to approach infrastructure projects.

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Backlash

Belo Monte has had a long, turbulent history of clashes between national interest and local concerns. When dam plans were first made public in 1987, they met strong public backlash and were eventually

shelved. When the government revived the project in 2002, high-profile protestors such as James Cameron led the international community to halt what the opposition considered an environmentally destructive and inefficient project. Despite their efforts, today Belo Monte is becoming a reality.

Opposing groups hold that Belo Monte is being constructed illegally. Local indigenous populations claim that they were never properly consulted about Belo Monte, a violation of the Brazilian constitution. The legality of granting an installation license was also called into question when two biannual inspections by IBAMA, Brazil's equivalent of the Environmental Protection Agency, found that Norte Energia had fulfilled only five of the 40 installation conditions. This included things such as proper disposal of felled forest, installation of basic infrastructure in impacted communities, and compensation of people facing displacement.

Currently, over 50 lawsuits at all levels of court charge Belo Monte's planners and builders with environmental and human rights violations.

"After the river closes, it's pretty much impossible for the courts to do anything to stop construction," says Maira Irigaray, Brazil program coordinator at Amazon Watch, an environmental advocacy group. "If the courts rule now, they can set precedent for how big companies cannot get away with this – they can change the future of how the Amazon becomes developed."

Although Norte Energia representatives did not respond to repeated requests for an interview, their website states that the company has made widespread efforts to consult the impacted community before construction: "From 2007 to 2010 there were 12 public consultations to discuss plant construction; ten workshops with the community that lives in the enterprise area; technical forums in Belém and Xingu," and various other workshops and conferences.

Yet many members of the regional and indigenous populations hold that these meetings never explicitly asked them for consent. While Norte Energia contends that explicit consent is not required because Belo Monte is not technically being built on indigenous territory, federal prosecutors argue that procuring consent by impacted indigenous communities is required by Article 231 in the Brazilian constitution, which guarantees protection of indigenous lands and lifestyles.

'One of a kind'

The scale of protests has created more public input on regional development, for example. A presidential decree in 2010 established a 30-member steering committee to control Norte Energia's \$233 million investment in the region. The 30 officers represent every walk of life affected by the dam, including fishermen, indigenous tribes, rural farmers, labor unions, entrepreneurs, and environmentalists, as well as every branch of government – federal, state, and municipal. Every month the committee meets for two days, hashing out the best plans for developing the Xingu. The public is encouraged to participate, making for a dynamic democratic process.

"This [space] has a life of its own," says Peter Klein, a PhD candidate in sociology at Brown University who has spent time in the communities around the dam. The conversation taking place "is constantly changing and constantly being created ... it's one of a kind," he says.

This type of community inclusion and oversight has never been attempted at a dam site in Brazil before.

Environmental concerns are also being addressed in new ways. In response to environmental and indigenous outcry, Belo Monte was redesigned as a run-of-the-river dam, an emerging hydropower alternative that uses the flow of the river to generate power, eschewing large reservoirs. Scaled down from a six-dam reservoir complex, Belo Monte will now only flood 516 square km of rainforest instead of the original 1,225 square km. As a result, the dam will emit less greenhouse gases and avoid construction on indigenous lands.

With a maximum capacity of 11,233 megawatts, it will be the first run-of-the-river dam in the world to generate such output.

The Brazilian people and government know that Belo Monte is setting a precedent. With Brazil's new need for energy, hydroelectric dams are of major national interest, and over 30 dam projects are currently being planned in the Amazon.

Many are hopeful that this nascent awareness of social and environmental responsibility will mold Belo Monte into a boon for the region. But others worry Norte Energia has already gotten away with

too much, creating a slippery slope for wholesale destruction of the rainforest. João Artur, a Xingu Region city council member, says there's only one thing that will determine how it turns out.

"It could go either way, really bad or really good. But it all depends on public power," Mr. Artur says. "I'm optimistic."

"In building the world's third-largest dam, Brazil aims to build good social practices", 20/07/2013, online at:
<http://www.csmonitor.com/World/Americas/2013/0720/In-building-the-world-s-third-largest-dam-Brazil-aims-to-build-good-social-practices>

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