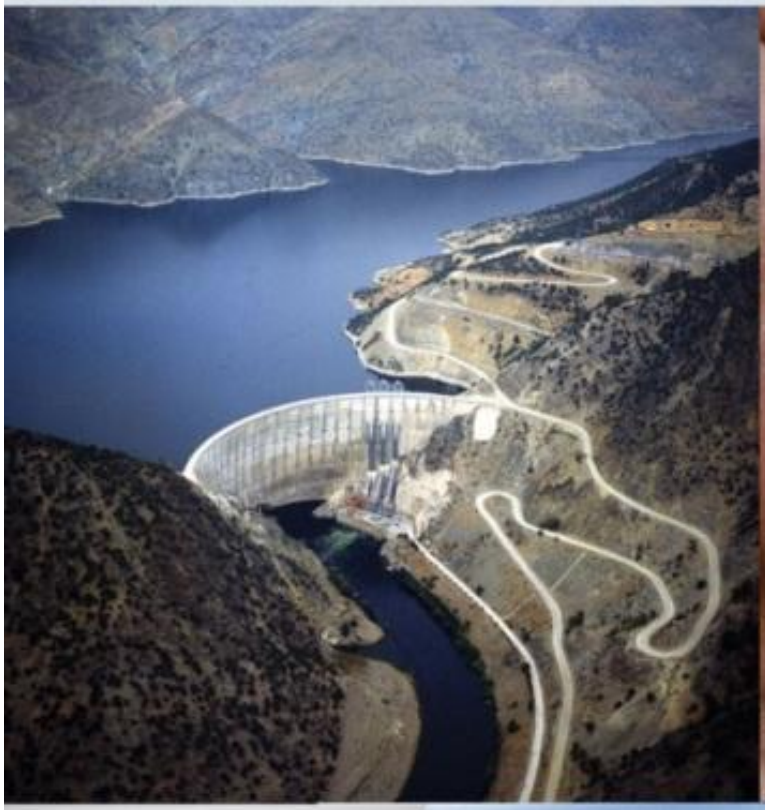


ORSAM WATER BULLETIN

Weekly Bulletin by ORSAM Water Research Programme

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





ORSAM WATER BULLETIN

31 January 2017 – 06 February 2017

Iraq's wetland paradise under threat

Climate change, dams and poor water policy could finish off the Mesopotamian Marshes Saddam Hussein once sought to destroy. With them, rich ecosystems and the unique Marsh Arab culture would be lost.

Ali, 13, looks at the buffalo lying next to him in the straw. He affectionately calls it "the baby." The animal is only two days old and its birth was a relief for Ali's family. Here, in Iraq's Mesopotamian Marshes, buffaloes are often the only capital and wealth.

A year ago, Ali's family lost half its buffaloes to a severe drought. Most inhabitants of the marshes were similarly affected.

The wetlands, which some describe as the cradle of civilization, are located in southern Iraq, where the Tigris and Euphrates rivers meet and divide into dozens of channels before flowing into the Persian Gulf.

They are an oasis in the middle of the desert - a biodiversity Garden of Eden - and home to the "Marsh Arabs," whose unique culture is perfectly adapted to their environment. Or at least, they used to be, before Saddam Hussein drained them in early 1990s to punish tribesmen there who backed a Shiite uprising against the Baath regime.

That paradise, which once encompassed over 20,000 square kilometers, became a hell: a desert filled with mines. The rich wildlife disappeared and locals were forced to leave.

Reviving Eden

In total, half a million people were displaced as a result of what the United Nations in 2001 called a "major ecological disaster, broadly comparable in extent and rapidity to the drying of the Aral Sea."

In 2003, when Saddam Hussein's regime fell following the US-led invasion of Iraq, the Marsh Arabs returned home and destroyed the dikes that blocked the rivers.

"There was no plan to restore the marshes," recalls local engineer Jasim al-Asadi, who was among the first to hack into the embankments built by Saddam Hussein. "The locals took the initiative because this marsh is their life." Soon, water flowed back into the marshes.

This could have marked a rare happy ending for post-invasion Iraq. But today, the marshes are again at risk and some fear they could disappear for good.

The marshes are only half their former size and pick-ups now drive where once there was water

Too salty for life

"There is a big problem with the water, both in terms of quantity and quality," explains al-Asadi, who is also the local managing director of Nature Iraq, a nongovernmental organization working on the marshes.

Climate change, poor usage and distribution of water in Iraq, and above all dams upriver, have dramatically reduced the volume of water flowing into the wetlands. The marshes are about half the size they used to be.

And the water is too salty. With reduced water flow, rising temperatures and evaporation, as well as saltwater intrusion from the Gulf, salinity levels have rocketed.

"Before Saddam drained the marshes, the salinity level wasn't more than 200 ppm [parts per million]," says al-Asadi, who remembers how the Marsh Arabs used to drink it.

Average salinity is currently around 2,500 ppm. But it sometimes reaches 7,000 ppm - and in 2015 it reached 20,000 ppm in some parts of the marshes.

"The buffaloes would drink the water and die. They would poison themselves," remembers Sayeed Ali Murad, 29, a buffalo breeder living deep in the marshes. "The reeds died, all the plants died." He lost more than 15 animals.

01/02/2017 online at: http://www.dw.com/en/iraqs-wetland-paradise-under-threat/a-37267220

Daesh cuts off water supply to Syria's Aleppo

Takfiri Daesh terrorists in Syria have cut off the water supply from two pumping stations on the Euphrates to the east of the city of Aleppo, which was recently liberated from militants.

The blockage occurred on Friday, prompting Aleppo's Water Organization, Syria's Red Crescent Society, and local residents to look for ways to restore the water supply to the city.

Takfiri terrorist groups in Syria have resorted to cutting off water supplies to different residential areas in an apparent bid to retaliate battlefield losses.

On Thursday, the United Nations warned that four million people in the Syrian capital city of Damascus had been deprived of safe drinking water supplies for over a week after springs outside the city were deliberately contaminated by militants.

Water supplies from the Wadi Barada and Ain al-Fija springs to the northwest of Damascus, which served 70 percent of the population in the city, were cut after water facilities were deliberately targeted and damaged, the UN announced in a statement.

Syrian officials had earlier detected diesel contamination in the water piped to the capital and had cut supplies over safety concerns.

According to the UN, 15 million people across Syria are in need of help to access water and households spend nearly a quarter of their income on water.

In a separate development on Friday, the Syrian government forces found a cache of US-manufactured weapons worth of millions of dollars in eastern Aleppo, Russian media reported. The weapons had been sent to the Takfiri terrorists in hundreds of boxes disguised as humanitarian aid, the reports said.

An evacuation deal brokered by Russia and Turkey recently saw militants move from the east of the city — which had been held by armed groups for four years — to designated areas in the Idlib Governorate. As the evacuations were underway, the Syrian government said that trucks meant to deliver humanitarian aid to the area under the auspices of international organizations had to be inspected. Some of those organizations, however, denied inspections.

Last week, a Syrian army unit also discovered a major cache loaded with a considerable amount of munitions in an Aleppo neighborhood. The military later released footage of the weapons depot.

On Friday, the Syrian army announced a nationwide halt to fighting under a deal with the foreign-backed opposition. The ceasefire, also brokered by Russia and Turkey, does not apply to Daesh and Fateh al-Sham terrorist groups.

Over the past almost six years, Syria has been fighting foreign-sponsored militancy. UN Special Envoy for Syria Staffan de Mistura estimated in August that more than 400,000 people had been killed in the Syrian crisis until then. The UN has stopped its official casualty count in Syria, citing its inability to verify the figures it receives from various sources.

31/01/2017 online at: http://www.presstv.ir/Detail/2016/12/31/504197/Syria-Aleppo-water-supply-Daesh

Assad wins the Damascus water war

After weeks of fighting in a valley near Damascus, the government claimed another victory as buses carrying several hundred rebel fighters and their families left Wadi Barada bound for northern Syria. Their departure marked the end of a ‘water war’ between the rebels and the government, which had caused massive water shortages in Damascus. It also underlined the persistence of a government strategy long criticized by the opposition and human rights groups.

Opposition fighters had controlled the valley, which houses the Ain al-Fijeh water pumping station, since 2012. The station provided around 70% of the water for the capital before its destruction in December. Both sides blame each other for putting it out of action but regardless of the culprit, the result was disastrous. The UN announced in late December that four million people in Damascus had gone without safe drinking water.

Days before the evacuation, civil society organizations in the area spoke of a dire humanitarian situation despite several attempted ceasefires, claiming that hospitals were no longer functional and food rations were dwindling.

The events shine a light on what the opposition and human rights organizations have called a deliberate displacement strategy. The patterns are often similar: pro-government forces attack and besiege opposition enclaves, forcing an agreement that sees the rebels either surrender or agree to vacate the area; government forces subsequently take control of the area, while those leaving often head for northern Syria's Idlib province, which is routinely targeted by Russian and Syrian airstrikes.

After the opposition left, Syrian soldiers entered the area near the spring and stole what was left of the furniture, a member of the oppositional Wadi Barada Media Office told The World Weekly, arguing that this was a common tactic by the regime. Images showed scenes of destruction in Wadi Barada.

As The World Weekly went to press, the International Committee of the Red Cross was still on standby in Damascus, waiting for access to the water pumping station to help with repairs alongside local partners.

02/02/2017 online at: http://www.theworldweekly.com/reader/view/magazine/2017-02-02/assad-wins-the-damascus-water-war/9656

Water pipeline to ISIL stronghold Raqqa destroyed

The U.S.-led coalition against the Islamic State destroyed the main pipeline supplying water to Raqqa — the extremist group's de facto capital — Syrian state media reported Friday.

The coalition didn't immediately comment on the report. The militants, who have taken over swaths of Syria and neighboring Iraq, seized Raqqa in Jan. 2014. Iraqi forces are on an offensive against the Islamic State in Mosul, Iraq's second-largest city and the militants' last major stronghold in that country.

The official Syrian Arab News Agency said the pipeline was damaged in an airstrike. A website affiliated with the Islamic State also reported the damage and also said the only two bridges on the Euphrates river in the south of the city were destroyed, the Associated Press reported. The reports couldn't be independently confirmed by USA TODAY.

Raqqa is Being Slaughtered Silently, a local media group, said the water supply to Raqqa was completely cut off. It called the destruction of the bridges, which are used by civilians, "absolutely unacceptable" and said the U.S.-led coalition was apparently trying to "besiege the civilians of Raqqa by demolishing bridges and destroying the infrastructure."

03/02/2017 online at: http://www.usatoday.com/story/news/world/2017/02/03/report-water-pipeline-isil-stronghold-raqqa-destroyed/97436786/

Suspected coalition raids cut water to IS Syria bastion

Water to the Islamic State group's Syrian bastion of Raqqa has been cut after suspected coalition raids on the city's main pipeline, a monitor and activists told AFP on Friday.

"After coalition air strikes, the main water line was ruptured and water was cut to all of Raqqa city," said Hamoud al-Mousa of the Raqa is Being Slaughtered Silently activist collective.

His group said the overnight strikes hit several bridges in the north of Raqqa, including one known as the Old Bridge.

Mousa said a pipeline running along the Old Bridge into Raqqa -- the only way residents could get water -- had been destroyed.

"People were heading to the river at dawn today to get water," Mousa told AFP.

Raqqa, 90 kilometers (less than 60 miles) south of the Turkish border, is IS's de facto capital in Syria and remains home to more than 300,000 people.

The city and surrounding province have been battered by air strikes carried out by the US-led coalition fighting IS and by Russia, a key ally of Syria's government.

The coalition raids are backing an alliance of Arab and Kurdish fighters who launched a major offensive against Raqqa in November.

The Syrian Observatory for Human Rights confirmed water to Raqqa had been cut after "probable" coalition raids.

"Air strikes on the city destroyed a huge water pipe. It's almost certain they were coalition raids," said Observatory head Rami Abdel Rahman.

The Observatory, which relies on a wide network of sources inside Syria for its information, says it determines whose planes carry out raids according to type, location, flight patterns and munitions used.

03/02/2017 online at: https://www.yahoo.com/news/suspected-coalition-raids-cut-water-syria-bastion-085008585.html

Efforts to tackle surface water drainage highlighted

Minister of Works, Municipalities Affairs and Urban Planning Essam bin Abdulla Khalaf received at his office MP Jamal Ali Bu Hassan.

They discussed means of collaboration between the Ministry and the Council of Representatives. A presentation has been delivered highlighting a number of issues that were previously tackled by MP Bu Hassan in one of the council’s sessions.

Works Affairs Undersecretary Ahmed Al Khayyat delivered a presentation to MP Bu Hassan; introducing the Ministry’s efforts towards handling the issue of surface water drainage. He explained that the Ministry has commenced the implementation of 966 projects to address water collection points, which are distributed in Muharraq Governorate (71 projects), the Capital Governorate (303 projects), the Northern Governorate (296 projects) and the Southern Governorate with 296 projects.

Al Khayyat also referred to the contracting projects related to the surface water drainage solutions (Package projects) and the time contract projects at the Capital Governorate, which have been 100% completed, including Road 4211 Project in Block 742 in A'Ali, the Palace Avenue Project in front of Ashraf Stores in Hoora, Avenue 85 Project opposite to Ma'atam Al Basri in Block 361, implementing absorption tanks in Block 308, opposite to Al Marjan Building in Block 356 and opposite to Bait Al Tijar in Block 410.

As for the obstacles that result in rain water floods, Al Khayyat explained that such obstacles include geographical, technical, and financial and climate obstacles, in addition to human obstacles such as the absence of a specialized directorate to design, construct and operate storm water and surface water drainage networks. However, the Works Ministry has recently established a department responsible for putting in place general strategy for surface water drainage. The department is part of the organizational chart for the office of the Works Affairs Undersecretary. The Ministry is also coordinating with the Civil Service Bureau regarding establishing a special organizational chart for the Surface Water Drainage & Management Department.

Reference was also made to the preventative measurements adopted by the Ministry of Works, Municipalities Affairs and Urban Planning, which constantly provides municipal councils with a time program for the maintenance of sewerage networks.

According to Al Khayyat, the Northern Governorate has been divided according to the level of the areas in the Governorate and the existing systems in each area; like North Northern and West Northern). Division of the Governorate aims to look into the issue of storm water drainage over a number of phases. A strategy is presently being prepared to cover all Governorates; determining the main and sub-connections for the future storm water drainage networks and officially studying, documenting and registering sea channels and outlets.

01/02/2017 online at: https://www.bna.bh/portal/en/news/768380

Tough Water Year Ahead

The Energy Ministry predicts that water stress will worsen throughout the Central Iranian Plateau over the next few months, according to an excerpt of a report published Monday on the ministry's website.

The central plateau encompasses the provinces of Yazd, Isfahan, Kerman and Fars.

Experts say at least 90% of Iran's natural water resources have already been used to meet the country's needs and relying on natural reserves is no longer viable.

Based on information released by the ministry, available surface water throughout the plateau since the beginning of the current water year (Sept. 22) has declined by 25% compared to the previous year.

Maharlou and Bakhtegan plains have experienced a 75% decline in surface water volume, recording the highest decrease in the plateau.

Water discharge in other regions has also decreased, including the eastern edges of the plateau (down 57% to 33 million cubic meters), Urmia Lake (36% to 324 mcm) and Caspian Sea (23% to 1.4 billion cubic meters), as well as the Persian Gulf and Oman Sea (22% to 7.2 bcm).

Comparative data analyses of total discharge rate of surface waters during fall and the same period of last year show a 23% decline.

Overall, total surface water discharge in Iran in Sept. 22–Dec. 22 has dropped by 23%, from 13.8 bcm last year to 10.7 bcm.

Many analysts say Iran's water reserves are adequate to supply the needs of its 80-million-strong population, but poor management and excessive consumption have made things difficult.

Located in one of the world's most water-stressed regions, Iran's average precipitation rate has been lower than the global average for at least 10 years.

The country's nearly two-decade struggle with drought, combined with high consumption and waste, has led to renewable water resources dropping to under 120 bcm. However, by some accounts, this figure is closer is 88 bcm.

02/02/2017 online at: https://financialtribune.com/articles/people-environment/58707/tough-water-year-ahead

Egyptian invention cuts rice irrigation water by half

Experts and stakeholders in Egypt warn of imminent water poverty as a result of the Ethiopian Renaissance Dam, which is about to become operational. Meanwhile, agricultural production consumes about 85 per cent of the country’s water resources, half of which goes towards rice irrigation.

Rice cultivation consumes more than 10 billion cubic meters of water annually, or more than one-sixth of Egypt's share of Nile water, Khaled Ghanem, professor of Organic Farming in Al-Azhar University, told SciDev.Net. And this does not account for the water used for cultivation in unauthorized areas, estimated to be about a third of that used in authorized ones, he explained.

But there could be a solution, in the form of a machine that ploughs fields in a manner that saves about half the amount of water usually used for irrigation, and a quarter of fertilizers used in cultivation. A specially imported unit, which sows rice seedlings mechanically, is mounted on the machine.

The machine’s Egyptian inventor, Mohamed El-Sayyed El-Hagarey, a researcher at the Desert Research Center in Cairo, was granted the prestigious WatSave Award for Young Professionals from the International Commission on Irrigation and Drainage (ICID) during the Second World Irrigation Forum held in Thailand in mid-November.

In an interview with SciDev.Net, El-Hagarey explained his motivation for inventing the machine. He said that during cultivation, rice requires complete submersion in a layer of water 10-15 cm above the soil surface, which demands huge amounts of water and fertilizers.

He designed the soil and water management machine to tackle this. The machine makes 'V' shaped lines into the soil, at a depth and width of 20cm, and sows rice seedlings automatically. This operation maintains the water level necessary for rice to grow in the V-shaped troughs, which is less than the water used in conventional agriculture that requires the entire plot of land to be completely submerged.

The machine was tested in a field in Kafr el-Sheikh governorate, which is known for rice crop cultivation in Egypt, with good results. It reduced the amount of water used by half, and "the crop yield increased by 4.6 per cent," Al-Hagary said.

Atef Sweilem, water management and irrigation expert at the International Center for Agricultural Research in the Dry Areas, (ICARDA), praised the machine, but added that "saving water and fertilizers would not tempt small farmers to buy it, as the increase in the yield was not huge". He pointed out that the rice agricultural plots owned by most farmers do not exceed half an acre.

"Saving water and fertilizers does not mean much for farmers, who get water for free and fertilizers subsidized by the state," Sweilem explained.

Therefore, he believes that Egypt's ministries of Agriculture and Water Resources and Irrigation should play an important role in supporting farmers financially and with training in using the machine.

Al-Hagary said the machine costs about US$5000, but needs further development before it is ready for commercial production.

He intends to re-submit a proposal to the Academy of Scientific Research and Technology in Egypt, hoping it would support further development of the innovation. An earlier proposal made in 2014 went unanswered, and he had to design it at his own expense.

Ghanem believes that "Egypt needs to use this machine widely range for several reasons," the most important of which is the implications of Ethiopia's Renaissance Dam on Egypt's share of water. He also referred to the effects of climate change including drought, desertification, and an increase in evaporation rates, as well as the water wasted along the Nile.

"This machine will save a lot of irrigation water in Egypt each year, which will help the country face these challenges and direct the water saved towards cultivating other crops," Ghanem said.

He added: "The concerned ministries might not pay attention to this innovation. The solution is to establish major companies to market similar innovations that can be funded by low-priced stocks, making them available to a larger number of consumers."

02/02/2017 online at: https://www.scidev.net/global/design/news/egyptian-invention-rice-irrigation-water.html

Water Reuse can quench Agriculture's Growing Thirst, SAYS FAO

With food demand and water scarcity rising, it's time to stop treating wastewater like garbage and instead manage it as a resource that can be used to grow crops, according to the Food and Agriculture Organization of the United Nations (FAO).

Ahead of the World Water Day in March, which this year has a focus on water reuse, FAO has said that if properly managed, wastewater can be used safely to support crop production — directly through irrigation or indirectly by recharging aquifers.

Already, agriculture accounts for 70% of global freshwater withdrawals — with demand for food estimated to grow by at least 50% by 2050, agriculture's water needs are poised to expand.

A number of technologies and approaches exist that are being utilized around the globe to treat, manage, and use wastewater in agriculture, many of them specific to the local natural resource base, the farming systems in which they are being used, and the crops that are being produced.

In addition to helping cope with water scarcity, wastewater often has a high nutrient load, making it a good fertilizer.

In Egypt, for example, where water supplies are limited and wastewater tends to be highly contaminated, constructed wetlands are proving to be a promising, economically viable approach to treatment. In Tunisia wastewater is being widely used in agroforestry projects, supporting both wood production as well as anti-desertification efforts. In Jordan, reclaimed water represents 25% of all total water use in the country.

"Although more detailed data on the practice is lacking, we can say that, globally, only a small proportion of treated wastewater is being used for agriculture, most of it municipal wastewater. But increasing numbers of countries — Egypt, Jordan,, Mexico, Spain and the United States, for example — have been exploring the possibilities as they wrestle with mounting water scarcity," said Marlos De Souza, a senior officer with FAO's Land and Water Division.

"So far, the reuse of wastewater for irrigation has been most successful near cities, where it is widely available and usually free-of-charge or at low cost, and where there is a market for agricultural produce, including non-food crops. But the practice can be used in rural areas as well — indeed it has long been employed by many smallholder farmers."

De Souza added: "When safely used and managed to avoid health and environmental risks, wastewater can be converted from a burden to an asset."

03/02/2017 online at: http://www.waterworld.com/articles/wwi/2017/02/water-reuse-can-quench-agriculture-s-growing-thirst-says-fao.html

Desalination Problems Begin to Rise to the Surface in Israel

Israel has pumped increasing quantities of water from the Mediterranean Sea in recent years. The series of desalination plants built along the coast is supplying a significant amount of water to the country's homes, relieving Israel of the chronic water shortages it once endured.

But the new installations have also brought new problems, such as the accumulative effect of large quantities of salt being dumped back into the sea as a by-product of the desalination process.

This question has already led several government ministries to order a study of the issue, which is already underway. Ensuing health and environmental problems will also have to be addressed.

This year, the country's fifth desalination plant goes online in Ashdod. Along with the four older plants, some 582 million cubic meters of water will be produced annually – meeting about two-thirds of Israel's domestic needs. It will not be the last plant, though, with the Israel Water Authority planning to establish another in Western Galilee and another four large facilities along the coast by 2025. Zoning plans for these coastal projects have already been approved.

"Desalination has created a new and reliable source of water, and reduces dependency on the amount of rainwater," said Hila Gil, director of the desalination division in the Water Authority. "It allows us to allocate water for farmers for a much longer period, and also for rehabilitating natural parks," she added.

It's easy to see the effect it is having on agriculture. A study by the agricultural administration, in conjunction with a consortium of government and academic institutions, found that in the years 1992-2011, the concentrations of salt in the leaves of citrus orchards was high, putting the plants at risk. But last year, a study found a decline of dozens of percent in salt concentrations, as a result of increased use of desalinated water.

"Desalination has significantly improved the quality of the water," said Gil.

The dramatic influence of desalination plants on the balance of supply and demand for water can be seen in the Kinneret Basin, in northern Israel. No desalinated water has been supplied there as yet, and its supply is dependent solely on rainwater and natural supplies such as deep wells.

In recent years, there has been a shortage of rain there and the Water Authority has had to set quotas on quantities of water supplied to farmers. But the damage to the region, and Lake Kinneret in particular, could have been greater.

Using desalination plants as a backup, the country can afford to completely stop pumping water from the Kinneret and National Water Carrier (which originates in the north and was

once the main provider of water to the center of the country). This will prevent a more severe drop in the lake's water level.

Alongside the advantages, desalination plants have also had a significant impact on the environment and, indirectly, on consumer health.

Although they supply high quality water, it is devoid of some key minerals found in normal water, like magnesium. Magnesium shortages can raise the risk of heart disease, with some experts pointing to a significant shortage of this important mineral in the water.

"Initial results of Israeli studies point to an elevated mortality risk of myocardial infarction in areas where there is wide use of desalinated water," said public health expert Prof. Yona Amitai, speaking recently at a Bar-Ilan University conference on regulating water supply.

Amitai urged that "more studies be done to examine the possibility of adding magnesium to the water."

As well as being bad for people, magnesium deficiency can also hurt agricultural products. Researchers at the agricultural administration have already found a significant drop in the supply of this mineral in orchards where desalinated water is used. However, they said the problem can be overcome by adding fertilizer containing magnesium to the water.

"We are in the process of choosing a company that would tell us how to check the possibility of adding magnesium to the water," noted Gil. "There are varying estimates regarding the expense of such an additive. There is no established information or survey from which we can tell how necessary or efficient this would be."

She said that even if it transpired that there was a need, "it might cost hundreds of millions of shekels a year. It could affect the price of the water, and we would be the ones who'd have to explain to the public why the prices have risen."

Over-dependence

Desalination plants consume vast amounts of energy, and producing the electricity to power them pollutes the air. But Gil said they account for only a small percentage of the electricity used in Israel. Besides, she noted, air pollution isn't what worries environmentalists, but pollution of the oceans from the flow of wastewater from the desalination process, which contains high concentrations of salt. This also contains the various chemicals used to treat the water. Gil said routine follow-up is done on the effects of salt concentration, and until now it has been seen as having only a localized effect.

Another concern regarding desalination plants is the risk of becoming too dependent on them. One document compiled by a conservation group recently found that the plants can be sensitive to emergencies in the vicinity, such as an oil spill. The membrane technology inside the plants – which separates the salt from the water – cannot handle this type of pollution and can be badly damaged as a result. Proof of this came just a few weeks ago, when oil from one

of the Electric Corporation's installations in Ashdod leaked into the sea. Afterward, the Health Ministry ordered three of the desalination plants to immediately suspend operations.

But government ministries believe further study is required to see what the accumulative effect is from all of the installations.

A study is currently underway at the Israel Oceanographic and Limnological Research Institute in Haifa. Dr. Jack Silverman, one of the researchers involved, says they are trying to assess what effect the high salt concentrations will have on wildlife at the bottom of the sea.

"Along the bottom, there are very important processes that go on with respect to the survival of the ecological system," he noted.

"Our working assumption is that the concentration may influence these processes and, according to the initial findings, there is an effect," he said.

"It's not the desalination that's the problem," the Water Authority responded. "It is one of the solutions for adding to the water supply, which also allows for rehabilitating aquifers in terms of quality and quantity."

So far, desalination plants have been built with almost zero public opposition. But the situation is different in the case of the plant planned for Western Galilee.

Residents there are campaigning against having a desalination plant built near Regba and Lohamei Hageta'ot, two kibbutzim in the Acre area, north of Haifa. They worry about having an industrial-type plant near their agricultural fields and homes.

Citizens are concerned that the landscape would change and the plant would create a lot of noise and pollution. They fear the area would then be used to build even more industrial plants. An experts' report they prepared recommended instead that the plant be built in the Haifa Bay area, which is already industrialized.

"The northern region is really in need of another water source," said Gil. "We have been delaying the establishment of a plant in Galilee for years due to the opposition of residents, and now we are looking for alternative sites."

Gil said of the Haifa option: "We need a plant that can pump water from a clean part of the sea and not in an area such as that bay, where there are still problems with pollution. What is clear is that wherever the new plant is built, it will take at least five years to complete it. And that will leave residents of the north still dependent upon the number of rain clouds hovering over Israel."

06/02/2017 online at: http://www.haaretz.com/israel-news/.premium-1.769798

Pakistan, Australia launch water programme

Federal Minister for Science and Technology Rana Tanveer Hussain and Australian High Commissioner Margaret Adamson on Tuesday launched the Australia-supported water programme with the amount of 15 million Australian dollars to continue longstanding

bilateral collaboration on building capacity to improve water management and boost agricultural productivity in Pakistan.

Australia's Centre for International Agricultural Research (ACIAR) was working with the federal and the provincial agriculture and livestock departments, the Pakistan Council for Water Research in Water Resources (PCRWR), the Pakistan Agricultural Research Council (PARC) and research institutions of the universities to address technical, social, economic and policy constraints hindering growth in the agriculture sector.

On the occasion, Adamson noted that Australia has supported agricultural research in Pakistan since the 1980s. "Our continued support through Australian expertise will help Pakistan to build an innovation-based agriculture sector through targeted public investment not only to boost agriculture profitability, but most importantly to ensure food security," she said.

"Australia has more than one thousand companies which can provide advice and technologies in this critical sector," she announced. The water programme will also encourage advocacy by the government, technical experts and civil society to advocate for effective water resource management and support the government's efforts towards the development of the National Water Commission and National Water Policy.

"Cooperation in water management is a significant and increasing dimension of our bilateral relationship. The water program provides further opportunities for facilitating knowledge exchange between our countries in this vitally important sector," she said. The water program includes the Australian Government's 12-year Indus Sustainable Development Investment Portfolio (SDIP) which is mapping the current and future needs of the Indus Basin.

Australian scientists from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) are working with the Ministry of Water and Power to build the capacity of Pakistan's water managers in efficient water management. The water program also includes three farm-level projects implemented by ACIAR to improve groundwater management in agriculture.

31/01/2017 online at: http://dailytimes.com.pk/pakistan/01-Feb-17/pakistan-australia-launch-water-prog

Pakistan turning into a water-scarce country, say experts

Leading experts on water resources are of the view that there is not sufficient awareness among the policy-makers of the impending water crisis in Pakistan, which is posing a threat to the country’s security, stability and environmental sustainability.

Former chairman of the Water and Power Development Authority (Wapda) Shamsul Mulk highlighted water security issues discussed in a United Nations Development Programme (UNDP) report, ‘Development Advocate Pakistan’.

Pakistan's water policy does not exist and key policy-makers act like 'absentee landlords' of water in Pakistan, he said. "Because of this absentee landlordism, water has become the property of the landlords and the poor are deprived of their share''.

A draft report on water resources was framed at the expressed request of the ministry of water and power. Mr Mulk said it was unfortunate that the federal cabinet never allocated the time for its review and approval.

"The worst example of landlordism is in Sindh. In Khyber Pakhtunkhwa, the Pushtoon society is a lot more egalitarian. In general, landlords don't want the poor to become economically self-sufficient to remain in power. So, this water issue is very political in nature," he said.

Mr Mulk pointed out the extreme variability of river flows season-wise— 84 per cent of flows in summer and only 16pc in winter—as a major problem.

According to the report, with a Kharif to Rabi ratio of two to one, the seasonal needs were about 66pc in summer and 34pc in winter, showing surpluses of 18pc in summer and shortages of 18pc in winter.

The surpluses of summer create floods, inflicting major damages to the infrastructure in the Indus plains and shortages in water disable Rabi crops from its optional yields. Owing to the lack of a strong government, this disability continues to hurt Pakistan and its economy, said Mr Mulk.

According to Director General of Federal Water Management Cell of the ministry of national food security and research, Muhammad Tahir Anwar, 18 million acre feet (MAF) of rainwater or hill torrent potential have not been realized in the overall policy framework.

It is imperative that a comprehensive policy framework inclusive of river basin, groundwater and rainwater and hill torrents be developed and adopted to ensure sustainable use of scarce water resources, he said.

According to all indicators, Pakistan was rapidly becoming a water-scarce country, said Chairman of Pakistan Council of Research in water resources, Dr Mohammad Ashraf. However, there is little awareness of this looming disaster amongst stakeholders, particularly policy-makers and they cannot foresee the real picture of its repercussions on social and economic fronts, he added.

He said that the draft 'National Water Policy' should be approved which provides policy guidelines for sustainable management of water resources, adding that provinces should develop their own strategies within the framework of the national water policy.

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