



International Rivers and Lakes

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The editor encourages contributions of news items for an exchange of information with interested readers.

Individual copies of the *Newsletter* are available upon request. Requests should include full name and address of offices and officials wishing to receive copies.

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I. Important opportunity for expanded discussion on water management: *European Water Management Online*.

Readers of the newsletter are invited to share their views on issues relative to the water cycle by contributing to the Ejournal, *European Water Management Online*. This is a call, particularly, to the some 50,000 experts, scientists, and practitioners who work with the urban water cycle in Europe. Please send your article (not more than 5 MB) to the Chairperson of the EWA Communication Committee, who will initiate a refereed evaluation process before final publication.

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II. Sustainability: Do 'Water Wars' Still Loom in Africa?¹

JOHANNESBURG, May (IPS) — When water affairs ministers from countries along the Nile met recently to discuss the fate of the river, Mr. Boutros Boutros-Ghali was not in the room with them. Nevertheless, the lingering memory of his comment that future wars would be fought over water was probably in the minds of all.

The former United Nations Secretary-General first made the remark in the 1980s. The notion of potential 'water wars' has also been explored in a book of the same title and in numerous reports. In addition, the phrase crops up repeatedly in articles that deal with water scarcity in Africa, and the possibility of conflict amongst communities desperate to ensure access to water.

In addition to the Nile Basin, various sources have identified other trans-boundary river systems in Africa that are subject to increasing demands from growing populations, agriculture and industry. These include the Niger River basin in West Africa (which comprises nine countries), and the Okavango system, shared by Angola, Namibia and Botswana.

The ongoing talks about a more equitable sharing of the Nile's waters provide some cause for hope, even if they have been peppered with demands and even threats of retaliation. At present, use of the Nile water is governed by a 1929 agreement (revised 30 years later) that gives Egypt and Sudan the right to determine how, when, and whether other states can use the Nile and its tributaries.

Although the accord is clearly a reflection of outdated colonial realities, attempts to revise it have previously been resisted by Egypt, which is utterly dependent on the river. However, during the recent meeting of the Nile Basin Initiative, Egypt's Minister for

¹ Hobbs, Jacklynne. Right-to-Water List Digest. 16 May 2004. <<http://216.43.125.72/listarchive/archive.cfm?id=92288>>, (8 June 2004). Permission to reprint parts of the original article was granted by Inter-Press Service News Agency (IPS).

Water Resources and Irrigation, Mahmoud Abu-Zeid, adopted a softer stance. "Whatever decisions that are spelt out in the framework, Egypt will accept," he told Inter-Press Service (IPS).

This framework is the outline of a new water-sharing agreement being crafted by the Nile Basin Initiative, an organization set up in 1999 by the 10 countries within the Nile Basin in a bid to use the river's water sustainably. According to the U.N. Department of Information, 160 million people live in the basin.

It remains to be seen whether Abu-Zeid's words reflect a genuine change of heart, or whether they are simply aimed at calming tempers, while Egypt ponders new strategies to keep a firm hold on the waters of the Nile.

Anthony Turton, water specialist and founding member of the Universities Partnership for trans-boundary waters, believes the minister's new approach constitutes a "break-through of astronomical proportions". In an interview with IPS, Turton expressed the conviction that inter-governmental structures can be useful in resolving disputes over the use of trans-frontier rivers and can deliver the goods -- even in the face of overwhelming odds.

As a case in point, he refers to the Tri-partite Permanent Technical Commission established by South Africa, Mozambique, and Swaziland in 1983. This group met to discuss the use of the Nkomati/Maputo River, even as tensions flared between the three states over South African involvement in Mozambique's civil war, and Pretoria's *apartheid* policies.

"It was a very difficult thing to get off the ground (and) it has still got a few problems. But we now have, in the post Cold War and post-*apartheid* era, all the foundations for very significant intergovernmental cooperation in place," says Turton. He also noted that "there is not one international river basin in Southern Africa that does not either already have a commission functioning, or a commission that is being developed."

He is even upbeat about the situation in the Okavango basin. Discussions about this system have centred on plans to construct a pipe to divert water from the Okavango River to the Namibian capital, Windhoek, to promote development and give that country greater water security. The proposal has generated intense debate, not least amongst conservationists who fear the move might drain water from the Okavango Delta, one of Africa's great wilderness areas.

Turton says that the pattern of water flow through the Okavango is well understood. The river experiences two infusions of water every year -- referred to as "flood pulses" -- that are of key importance to maintaining the ecology of the delta. Engineers know, he adds, that water cannot be taken from the river before these pulses have been allowed to progress through the length of the watercourse.

"The Okavango is misquoted as being a river in conflict and there's a river basin commission that is functioning extremely well," says Turton. "But the uninformed person

may tend to misinterpret the posturing of the different commissioners who make certain statements, without understanding the underlying dynamics. There is a high level of cooperation in that river basin."

On the topic of the Nile Basin Initiative, Turton believes it might be beneficial to shift the focus from water sharing to benefit sharing. This amounts to stripping the basin of its political overtones, and simply considering what would be the most optimal use of the Nile waters. In practice, it might even involve governments allowing their share of the waters to be used by neighbouring states for the greater regional good.

Ethiopia, for example, with its mountainous terrain, would provide a perfect location for the construction of a series of small dams. These dams would contribute to modest irrigation projects and electricity generation, the latter helping to build up the industrial base of one of the world's poorest counties. The project, however, would probably involve Ethiopia retaining water that Egyptian officials might argue was theirs, even if the sluice gates of these dams could be opened to release water to Egypt in times of need.

It is uncertain whether Egypt, with its long history of contentious relations with Ethiopia, would contemplate a move that might increase its vulnerability, even if it could improve the fortunes of Ethiopia and the economic well being of the region. However, cooperation along the Nile would certainly provide more economic and political stability to the region and reduce the possibility of water wars in Africa.

III. Water conflicts unlikely, says new study²

Doomsday scenarios concerning water wars are unlikely to be borne out, new research suggests, as countries that compete for limited water resources are much more likely to negotiate than fight. This is the conclusion of a study by Anders Jagerskog, of Linköping University, Sweden, entitled *Why States cooperate over shared water: The water negotiations in the Jordan River Basin*. He based his study on the processes of negotiation and decision-making surrounding water in one of the world's most conflict ridden areas, the Middle East. This area has the greatest shortage of water in the world relative to population. The Jordan River is a vital resource for Israel, Palestine and Jordan, and all three are dependent on each other when it comes to administration of this water.

Mr Jagerskog's study tries to explain how and why they have managed to collaborate on water issues even in the middle of heated conflict. "It is striking how the parties continue to cooperate on the management of water, even though the intifada flared up again a couple of years ago," Mr Jagerskog said. He also expressed that the main reason for cooperation was mutual dependence on such a scarce resource. "In this region a lot of the aquifers flow from Palestinian areas into Israel, making Israel dependent on

² Edie Weekly Summaries. *Environmental Data Interactive Exchange*. 21 November 2003. <<http://www.edie.net>> (8 June 2004). Copyright Faversham House Group Ltd 2003. Reprinted with permission from Edie.net

Palestinians not polluting or drawing too much groundwater. Likewise, there is an aquifer south of Tel Aviv which flows from Israel to Palestine, so therefore, the dependence is the other way around," he said.

Jagerskog stressed that in areas of strong demand for scarce water resources, water is not likely to be the issue of conflict per se, but a strong tool for negotiations and as a means of exerting pressure on other parties. "Obviously, negotiations often lead to disagreement, and water agreements are far from fair in all cases. But my point is that these conflicts do not lead to war."

IV. International law and water investments: private desalination plants raise debate³

The debate continues over water-related trade and investment agreements.

If private water companies are permitted to operate desalination plants along the California coast, the state could lose the right to regulate those plants, a group of public water officials and environmentalists was told on 7 May 2004. The conference was sponsored by Public Officials for Water and Environmental Reform (POWER) and held at the Monterey Institute of International Studies.

According to Marc Del Piero, a former county supervisor and state Water Resources Control Board member, once multinational water companies are allowed to operate desalination plants, they could try to use international law to bypass state and local regulations. Del Piero is a lawyer who represents the publicly-owned Pajaro-Sunny Mesa Community Services District. Del Piero's comments came during an environmental justice conference examining how water and desalination policy affects disadvantaged and minority communities. Del Piero fears that the private operators could use international agreements executed by the United States in recent years "to facilitate trade and business," including water delivery, over the state water regulations.

Sunny-Mesa is one of nine entities with proposed desalination projects on the Monterey Bay, and is competing on some levels with the privately-owned German-held California-American Water Co. for a plant in Moss Landing.

Del Piero feels that federal law would prevent states from attempting to do something that would interfere with a treaty with another country. "If you grant a (desalination) permit to someone other than a public agency, the opportunity for a complete circumvention of our regulatory process is there," Del Piero said. "It is imperative to get the Legislature to enact comprehensive policy regarding desalination plants, including a requirement that they be operated by public agencies."

Other speakers expressed concerns about the effects of desalination on marine life and ocean water quality, its potential inducement for growth and the huge amount of energy it

³ Hennesy, Virginia. *Monterey Herald*. 8 May 2004.
<<http://www.montereyherald.com/mld/montereyherald/8620809.htm>> (8 June 2004).

takes to operate a plant. Cautioning that each proposal should be evaluated individually, they also acknowledged potential benefits of the process. Chief among the benefits cited was desalination's ability to reduce diversions of water from the state's creeks and rivers.

The challenge, said Jared Huffman of the Marin Municipal District, is to freeze that water savings for conservation.

Susan Jordan of the Coastal Protection Network, who is also a Santa Barbara County planning commissioner, suggested that water created through desalination should be used to "address the disproportionate effects of water problems on disadvantaged communities." Jordan added, "I firmly believe any forays should be by the public and for the public only," Jordan said. "I believe privatization of the ocean, a public trust resource, represents one of the most serious threats to our social fabric."

Huffman, whose Marin district is planning a desalination project to be used only in drought years, said that private companies would be motivated to operate the plant at all times to maximize profits, despite the massive amounts of energy that would consume, rather than only during drought periods.

V. Federal water rights upheld by Supreme Court⁴

SPOKANE, WA — The US Supreme Court refused to hear the appeal of a lower court decision upholding federal water rights. The decision reaffirms the right of the federal government to govern irrigation ditches and other watercourses that run through public land, and is seen as a victory for environmentalists. Notably, the decision allows the federal government to provide more water for endangered salmon. Water-use groups argued that the Forest Service did not have the right under the Endangered Species Act to deny long-standing water rights to farmers. They claimed the state, and not the federal government, had the authority to set in-stream flow requirements for fish.

VI. April rains reduce Mexico water debt to Texas⁵

A single week of April rains significantly reduced Mexico's Rio Grande water debt to the United States, but some US farmers and officials remained skeptical of Mexico's intentions to pay what they say it owes. Rain from the week ending 10 April brought at least 143,000 acre-feet of water into the two bi-national reservoirs along the Rio Grande, officials said. About one-third of that water went toward Mexico's debt, bringing it down to about 920,000 acre-feet.

⁴ Geranios, Nicholas K. *Supreme Court rejects water division case: Environmentalists say decision helps protect wild salmon*. The Associated Press, 4 May 2004. Reprinted with permission of The Associated Press.

⁵ US Water News Online, 10 May 2004. <<http://uswaternews.com/archives/arcglobal/4aprirain5.html>> (8 June 2004).

The rains came during an unusually wet start to 2004 that has helped farmers and made the Rio Grande Valley greener than it had been in years. "Everybody's in pretty good shape," said Wayne Halbert of the Harlingen irrigation district. "But as far as the debt issue is concerned, there is still a problem. It's still being paid the way it's always been paid -- by accident." According to the International Boundary and Water Commission spokesperson, Sally Spencer, more than 100,000 acre-feet of water flowed into Falcon Lake international reservoir in Zapata County during the rainy week. This amount alone has credited Mexico with about two months worth of water. The Amistad Reservoir near Del Rio received about 43,000 acre-feet.

Under a 1944 water-sharing treaty, Mexico must release an average of 350,000 acre-feet a year to the United States from the Rio Grande. The United States in return must send Mexico 1.5 million acre-feet from the Colorado River. But with an extended drought that began in the 1990s, Mexico began falling behind on payments, and many drought-stricken U.S. farmers blamed Mexico for their plight. As of 2002, Mexico owed 1.5 million acre-feet.

State Agriculture Commissioner Susan Combs was not impressed with this month's reduction.

"I think all of us have asked Mexico, since it has such a huge quantity in storage, to make a substantial payment on the debt," she said. She suggested to have ledgers changed so the United States owns more of what is now in Falcon Lake.

Mexican officials have said they are behind only because of drought conditions, and that they have been negotiating in good faith with the United States. The recent tropical weather has helped. The National Weather Service in Brownsville had recorded 8.38 inches of rainfall by April this year, 3.73 inches above normal.

For the short term, Texas is not experiencing drought conditions; however, it is too early to say the drought is over. South Texas is having an unusually moist spell, but the area is still catching up from three to four dry years.

The rains brought Mexico's 2004 payments to 542,015 acre-feet. Mexico has met its yearly obligation and paid almost 200,000 acre-feet toward the deficit.

VII. US may cut water to states: Southwest drought slashes Colorado River flows⁶

The United States administration is threatening to impose water cutbacks on California, Arizona and Nevada if the three states can't come up with a plan to deal with a historic drought on the Colorado River.

⁶ Leavenworth, Stuart. *Sacramento Bee*. 27 April 2004.

Following five years of dry weather, the two largest reservoirs on the Colorado are roughly half-empty and dropping fast, and Interior Department officials are urging water agencies to work together on a contingency plan, or have one imposed on them. "We need the three basin states to deal with shortages," said Assistant Interior Secretary Bennett Raley in a recent meeting with water officials from California, Arizona and Nevada. If the three states cannot work out a plan, he said, the Interior Secretary "will have to do it."

For years, Los Angeles, Las Vegas and other fast-growing cities in the region have depended on surplus water from the Colorado -- supplies that exceed their entitlements. Now, the Southwest is shifting to a much drier period, and states are facing not only the loss of surplus, but also cutbacks that could affect tens of millions of people.

In California, the water squeeze is already being felt statewide. With less water from the Colorado River, Southern California is pushing conservation, more use of groundwater banks and extra pumping from the Delta. "We are entering some new territory," said Raley, who notes that the modern Southwest has never had to deal with an extended drought.

Since 1999, Lake Mead has dropped more than 80 feet and is at 58 % of capacity. With less water pressure going through its turbines, Hoover Dam is losing some of its capacity to generate power, and Las Vegas is preparing to deepen its water intake in Lake Mead to keep up with a moving target.

Upstream, at Lake Powell, the water loss is even more dramatic. In four years, Powell has dropped nearly 120 feet, and now holds 42 % of its maximum water capacity. Never before have both Lake Mead and Lake Powell been at such a low state at the same time, according to the U.S. Bureau of Reclamation.

Water leaders in the Southwest are closely watching these lake levels, and so are those in other Western states. Under the 1922 Colorado River Compact, the upper-basin states of Colorado, New Mexico, Utah, and Wyoming must deliver 7.5 million acre-feet of water to the three lower-basin states each year. Lake Powell was built so the upper basin could deliver on that promise, but now Powell's future is in doubt.

According to federal forecasts, drought and water deliveries could drain Powell in three years. In such a situation, the upper basin would be forced to forgo river withdrawals or risk a major court battle.

To head off that prospect, water officials from seven states have been meeting regularly in recent months, said Dennis Underwood, a former reclamation commissioner who now works for the Metropolitan Water District of Southern California. A meeting was held in late April in Phoenix, where officials discussed options for keeping the taps flowing. Some of those options, said Underwood, include storing lower-basin water in upper-basin reservoirs to reduce the huge evaporation that occurs in Lake Mead. Agencies are also discussing water trades and "forbearance agreements" -- paying farmers not to irrigate --

to help vulnerable areas through a drought. One such spot is Las Vegas, the nation's fastest growing city and one that draws 98 % of its water from the Colorado. Not wanting to gamble on their future, Nevada officials have been pressing for some type of interstate water-sharing arrangement.

Pat Mulroy, general manager of the Southern Nevada Water Authority, said the recent talks are recognition that the regional water situation is serious. "People are finally realizing that the drought is real," said Mulroy, "and not something I thought up."

In a December speech in Las Vegas, Interior Secretary Gale Norton laid out some of the possible scenarios. Under the 2001 Interim Surplus Guidelines, Norton said she is required to cut surplus supplies to California, Arizona and Nevada if the surface of Lake Mead drops to 1,125 feet in elevation, 10 feet below its current level. Further down the road, Norton could use her court-appointed authority as Colorado 'river master' to declare a shortage and impose cutbacks. Some water experts believe Norton could make such a declaration when Lake Mead's surface level hits 1,083 feet elevation -- about 52 feet below its current elevation -- but the law is not specific.

To ratchet up the pressure, Interior officials invited Southwest water leaders and a group of journalists on a boat trip this month down the Grand Canyon, where Raley repeated his warning that Norton was ready to take action. "Time lost now is time we may not be able to recover," said Raley, pacing across a sand bar like Gen. George Patton.

Some environmentalists say the U.S. administration is delaying tough decisions by playing this kind of drawn-out pressure politics. This year, they note, the Bureau of Reclamation declared a partial surplus on the Colorado River, which further depleted Lake Mead. Now federal officials are preaching drought preparedness.

"The bureau is dragging its feet," said Jeff Van Ee, a water watchdog for the Sierra Club in Las Vegas. "They haven't taken this drought seriously."

Raley, who oversees the Bureau of Reclamation, said he started working closely on the drought problem in January. Before that, he helped seal a landmark settlement that quantified how much water California's cities and farms could draw from the Colorado River. By agreeing to limit its water withdrawals to 4.4 million acre-feet, California was given a 13-year grace period to continue receiving 'surplus' water from the river. Now, say water officials, that grace period appears to be moot.

VIII. Study: Canada takes too much water⁷

Gov. Judy Martz of Montana is pushing to renegotiate a 1921 international agreement that, according to a recent study, has let Canadian irrigators take more than their share of water from the St. Mary and Milk rivers.

⁷ U.S. Water News Online. 27 April 2004. <<http://uswaternews.com/archives/arcglobal/4studcana4.html>>, (8 June 2004).

Montana farmers in the Milk River Basin have been shortchanged about 90,000 acre-feet a year for the past half-century, the state study found. An acre-foot of water is 325,851 gallons. The agreement has not been reviewed in 83 years, Martz noted.

Robert Boyles, a spokesperson for Alberta Environment, the environmental agency of the Alberta provincial government in Canada, said Alberta officials believe the agreement is working fine and oppose the idea of changing it.

Last April, Martz asked the International Joint Commission, the panel of three Canadians and three Americans that oversees such agreements, to revisit the 1921 agreement. The commission has not decided whether to reopen the agreement, but will hold public meetings this summer in Havre and Malta in Montana and two communities in Canada, said Richard Moy, chief of the Water Management Bureau in Montana's Department of Natural Resources and Conservation.

The agreement provides for the United States and Canadian to share equally in the waters of the two rivers, which would be considered one stream. The headwaters of both rivers are in Glacier National Park in Montana, and both flow north into Canada.

The Milk River later flows back into Montana north of Havre. From there, it runs east and forms the economic lifeline of Hi-Line agriculture all the way to Glasgow, Moy said. A canal on the plains east of Glacier Park deposits some water from the fast-moving St. Mary River into the slower Milk. About 140,000 acres of Montana farmland are irrigated with Milk River water, Moy said, and the crops grown there make up about 8 % of Montana's agriculture economy.

Montana officials submitted an analysis last December to the international commission. It showed that Montana routinely gets less than its share of water because of a variety of factors, but largely because the Milk River routinely runs dry and the St. Mary rarely does. The analysis shows that Montana farmers have been averaging only about 43 % of the water, and as little as 37 % in dry years.

Further complicating the matter, Moy said, is that when the 1921 agreement was signed, nobody was paying much attention to water rights held by Native Americans. Several tribes have rights to water in both rivers, but only one, the Blackfeet Nation, has yet to settle with the state about exactly how much water the tribe is owed.

The Blackfeet claim, far older than the treaty or any other claims to the water, dates to 1855. Moy said the Blackfeet will eventually settle with the state and may decide to take their water.

IX. Israel signs agreement to buy water from Turkey⁸

Israel has signed an agreement to buy water from Turkey and may pay for part of it with weapons, in a deal aimed at alleviating Israel's chronic water shortage and cementing its relations with an important Middle East ally.

Under the proposed 20-year agreement, Turkey will ship 40,500 acre-feet of water annually from its Manavgat River, which flows into the Mediterranean Sea. The details are still be worked out, including the price of the water and how to transport it to Israel.

The agreement is more than two years in the making and comes at a time when abundant rainfall has left Israel's main source of fresh water, the Sea of Galilee, at or above capacity. Nevertheless, long-term prospects in the arid region are bleak.

Israeli Foreign Ministry spokesperson Jonathan Peled said the water would probably be shipped in tankers or towed across the Mediterranean in large plastic bubbles to a storage facility.

Based on estimated shipping costs from the ministry, the deal could amount to tens of millions of dollars a year for Turkey. Peled said a small amount of that money would be paid in goods, most likely military items.

In the parched Middle East, water is a strategic issue as well as one of survival. Turkey is one of the few countries in the region with water reserves, and sales of the precious commodity could boost its position as a regional power.

Israel's relationship with Turkey is important to the Jewish state, especially after more than three years of fighting with the Palestinians. The violence has caused tension in the Middle East and strained Israel's ties with Egypt and Jordan, the only Arab countries with which it has signed peace treaties.

“This agreement will increase the cooperation between the two countries and also lead to peace and stability in the Middle East,” said Turkish Foreign Ministry spokesperson Namik Tan.

He said the landmark agreement turns water into an internationally accepted “commodity,” and that Turkey hopes to sell water to other countries.

⁸ U.S. Water News Online, 30 March 2004. <<http://uswaternews.com/archives/arcglobal/4israsign3.html>>, (8 June 2004).