

Disappearing act: Why is the Dead Sea dying?

by [Bruce Borthwick](#) in the [February 8, 2003](#) issue

Across from Jericho, on the Jordan side of the Jordan River, is the site where Jesus may have been baptized. It is 300 meters east of the river. During the decades of conflict between Jordan and Israel this area was a military zone, strewn with mines and closed to unauthorized personnel, but since the 1994 Peace Treaty the mines have been cleared and the site is being developed by the Jordanian Ministry of Tourism. Access roads, parking lots, a tourist center and a path to the river have been built. The ruins of three Byzantine churches have been uncovered, and Pope John Paul II has given his imprimatur to the site by visiting it.

Tourists can walk down the path to the Jordan, but they had better not try to be baptized in it, for this river, so rich in religious symbolism, is dangerously polluted. It is also vanishing. And if they want to float in the Dead Sea—not far from the baptism site—enjoy its unusual buoyancy and the benefits of its unique mineral contents, they had better come soon. Its level is going down a meter a year. It could disappear by 2050.

What is making the Jordan vanish and the Dead Sea die? The Jordan Basin is being sucked dry to supply the farms and cities of Israel, Jordan and Syria with water. The center of the basin is Lake Tiberias (also known as the Sea of Galilee or Lake Kinneret), a natural reservoir for Israel. It receives water from the north and is controlled by the Deganya Gate at its southern end. Israel withdraws from the lake about 700 million cubic meters per year, which it puts into the National Water Carrier, the conduit supplying its population centers all the way to the Negev.

The country takes additional water from the lake for use by nearby towns, cities and farms. Because all these extractions total more than the average annual recharge, the level of the lake is falling. At the end of the summer of 2001, it reached its lowest level on record. The “red line”—the level at which water extraction should stop—has been repeatedly lowered by the Israeli water commissioner. It is now 2.5

meters lower than the original mark of 213 meters below sea level.

Today, no good-quality water flows through the Deganya Gate into the Jordan. Rather, brine is collected from springs on the floor of the lake and on its shores, carried around it and dumped into the river. Along the Jordan's zigzag path to the Dead Sea, 100 kilometers as the crow flies, other saline waters and pollutants flow into it, but very little pure water.

Emptying into the Jordan ten kilometers south of Lake Tiberias, the Yarmouk River has historically supplied the river with 400 million cubic meters of water per year. But today the Jordanian government diverts water from the Yarmouk into the King Abdullah Canal to supply the people and farms of the Jordan Valley. Syria extracts water further upstream to supply its agriculture, and Israel withdraws water to supply the farms and settlements on the eastern shores of Lake Tiberias and in the Golan Heights. Thus, the discharge of the Yarmouk into the Jordan has been reduced to almost nothing. The only other major river flowing into the Jordan, the Zarqa, is blocked by Jordan's King Talal Dam. Streams and springs exist on the Jordan's east and west side, but their flow is minimal and seasonal.

Almost completely deprived of fresh water, the Jordan River has become a sewer. In addition to the brine dumped in at the northern end, run-off from Israeli fish farms and untreated sewage from Jewish settlements along the ridge of the Jordan Valley and from the Arab community of Jericho make their way into the river bed from the west. Untreated sewage and polluted irrigation return-flow, coming from farms and communities in Jordan, run into it from the east.

In the 1950s about 1.3 billion cubic meters of water a year flowed into the Dead Sea. The flow is now down to 300 million. When William Lynch, an American naval explorer, visited the mouth of the Jordan in April 1848, he estimated the river to be 180 yards wide and three feet deep. Now it is a few meters wide, more a creek than a river.

The Dead Sea is at the lowest point on earth, and nothing flows out of it. While seasonal streams on the eastern and western shores have contributed small amounts of water, the bulk of its supply has come from the Jordan, and evaporation has kept the level of the sea constant. However, since the 1960s the flow from the Jordan has dropped by 90 percent, and the surface level of the Dead Sea has dropped 25 meters. The southern end has dried up and is more an industrial zone

than a sea. It is dotted with the evaporation ponds and factories of the Arab Potash Works on the Jordanian side, and the Dead Sea Works on the Israeli side.

Along the shores of the deeper northern end are stark cliffs, flowing springs and biblical sites. This is where the tourist hotels are located, perched on bluffs overlooking water that moves farther and farther away.

The disappearance of the deep blue, mineral-rich Dead Sea would be a disaster for tourism. Its demise also would have catastrophic effects on the area's hydrodynamic equilibrium. The sea's high-density salt water acts as a barrier, keeping the fresh water in the aquifers surrounding it from draining downwards, absorbing salts and escaping into the Mediterranean. These aquifers are used to irrigate farms, bring water to villages and feed springs, some of which are important to tourism.

To rectify this situation the Jordanian government is urgently trying to get the "Red-Dead" Canal built and is backing it at the highest levels. The plan is to pump water out of the Gulf of Aqaba, an extension of the Red Sea, and raise it to a level that permits it to flow downwards through a hydroelectric and a desalination plant. The brine would then be passed into the Dead Sea, and the desalinated water would be distributed to Israelis, Palestinians and Jordanians. The project would require financing from the World Bank and the support of the governments of Israel, Germany and the U.S.

Sticky political issues would have to be addressed: Who will represent the Palestinians? How much water will they receive? And the environmental questions are numerous: What will happen when the brine from the desalination plant is mixed with the water of the Dead Sea? What will be the effect of a "new Dead Sea" on the unique species that currently live in and around it? How much will the massive construction project disrupt the environment?

In order to move the project forward, the Jordanian Ministry of Water and Irrigation is proposing that it be built in stages. First a series of tunnels, canals and shafts bringing water from the Red Sea to the Dead Sea would be constructed, raising the Dead Sea back to its former level. Later, electricity-generation and water-desalination plants would be built. The advantage of this approach is that the Dead Sea would be "rescued," and the more expensive and environmentally controversial parts of the project would be put off until later.

Unfortunately, the current Israeli/Palestinian strife has disrupted cross-border communication about pressing environmental issues. In the heady and optimistic days of the mid-1990s, Israelis, Palestinians, Jordanians and Egyptians communicated by telephone and e-mail, held conferences in each other's countries, discussed issues of common concern and issued many reports.

One of these planners was Raouf Dabbas, appointed by Jordan's Royal Court to head the environmental delegation from Jordan to the Young Leaders Network, a group of future leaders from Egypt, Jordan, Palestine and Israel. He is now president of the Friends of the Environment Society.

In an interview, he picked up a rubber band, stretched it, relaxed it and said: "The peace process is like this rubber band. Today it is very tight, and there is no flexibility left in it. Basically, we have a very polarized situation, where it is very difficult to have any discussion, dialogue or networking with the Israelis on various issues, most importantly the environment."

"Around 1996 the band was very flexible," he continued. "You could talk, you could negotiate, you could get things out into the open, in a very transparent, representative and democratic fashion, but in 1996 Netanyahu came to power, and things started to stagnate. And then Barak, and things got tighter. And of course Sharon. Now if the rubber band is not broken, it is only there by a strand."

He stated that public pressure has forced Jordanian environmental organizations to sever their contacts with Israelis. Formerly, they received millions of dollars from American and European organizations to carry out transnational projects, but now when they balance finances with survival, "they will take survival," said Dabbas. "And survival at this point cannot involve active projects with Israel." Another organization, EcoPeace, realized that it was losing supporters by having the word "peace" in its name, so it affiliated with Friends of the Earth International and became Friends of the Earth Middle East.

A "sacred river" has become a drainage ditch and the sea into which it empties is drying up. Restoring them to health will require a cooperation that can only come about when the area's debilitating conflicts are resolved.