

Dust off the blueprints for Mideast development, break ground this month

by Marcia Merry

The Mideast accord signed Sept. 13 in Washington, D.C. calls for the establishment of a joint Israeli-Palestinian Economic Cooperation Committee to carry out economic development programs for the Gaza Strip and the West Bank. Appended to the accord are economic development protocols (Annexes III and IV) that in 1,400 words give specifics on immediate objectives, and longer-term development goals (the full text appeared in *EIR*, Sept. 17, 1993, p. 24).

Similarly, in the preliminary draft of the treaty under discussion between Israel and Jordan, there are economic protocols covering economic development in the Rift Valley region shared by the two nations and Palestinians.

In fact, the engineering studies to carry out these treaties have existed for decades. The region has been extensively mapped and designs worked up, which means that the blueprints are "in the drawer," and can be dusted off, put on the table, and made ready for construction crews and dignitaries to break ground by late September.

The new accord mandates that work go ahead. On Sept. 13, when he signed the accord, Mahmoud Abbas, the Palestinian representative, spoke about how the lack of infrastructure in the region has "drained the population" and caused misery for too long. Israeli Foreign Minister Shimon Peres said that it is time to "make the gardens of Jericho bloom again."

"Take an 'Oasis Plan' approach," was the formulation used by American statesman and physical economist Lyndon LaRouche in recent years, to campaign for initiating the project designs awaiting implementation, and to combine them with nuclear-powered desalination to create "oases of development." Now that his approach has been adopted on paper, what is called for, is to get moving and "turn the dirt" by the end of September.

Mediterranean-Dead Sea-Red Sea canals

Over the past 15 years, *EIR* has repeatedly covered the news of project proposals for the region, and related desert development plans. The following are summary points and selected references for carrying out the development mandate.

The centerpiece projects for the region are the multipurpose Dead Sea canals, as shown schematically on the map. One is to run from the Mediterranean Sea to the Dead Sea, going through the Gaza Strip, where at the town of Gaza, a new port city can be constructed.¹ The other, a "Red Sea-Dead Sea" canal, can run from the Dead Sea, along the Wadi Araba, terminating at Aqaba on the Gulf of Aqaba on the Red Sea.²

Along the canals, key sites can be chosen for locating modular, safe, modern nuclear reactors that can provide the electricity and desalinated water for the development of "nuplexes" (nuclear-powered complexes), entirely new cities in which essential agricultural and industrial activities can be located and expand. This becomes the economic base for the future generations to thrive.

The new port at or near the town of Gaza is the first place to develop as a near-future nuplex.

As it is, the natural water resources base in the greater Jordan Valley Basin, and surrounding desert regions, is entirely inadequate to support the existing population of the region — no matter what kind of riparian and aquifer water-sharing agreements are to be made.

The Jordan River Valley flow is capable of supporting about 5 million people, but there are more than 11 million already resident in the basin. Therefore, the water available from run-off and underground sources per capita for both domestic use, and for minimum standards of industrial and agricultural activities, is way below what is required. Already there is stringent water rationing in Jordan, and nowhere is there adequate water in Israel and the Occupied Territories. Therefore, water must be man-made.

The new canals can thus provide a new resource base of a chain of man-made "oases" through the deserts that will give plentiful fresh water, power, and easy transportation in the lower trans-Jordan Valley region.

The distances involved are small. The Mediterranean Sea-Dead Sea Canal, beginning near Gaza, runs a maximum distance of only about 100 kilometers. The Dead Sea-Red Sea canal runs only about 175 kilometers.

Over the years, several routes and designs have been

proposed. A route just north of the Gaza Strip, and south of Beersheba, was proposed by Dr. Gad Yaacobi, a former Israeli economics and planning minister and an architect of the mid-1980s Marshall Plan proposed by Shimon Peres.

According to another proposal by Prof. Haim Ben Shahr, former president of Tel Aviv University, the canal project was more an energy program, not a water source. There is a 400-meter difference in elevation between the two seas, which can allow the installation of hydropower. However, recent technological advances in safe nuclear power and desalination have superseded this view.

Most recently, the Dead Sea-Red Sea proposal has been advanced by Dr. Munther Haddadin, a former director of the Jordan Valley Authority and head of the Jordan delegation for negotiations over water in the recent Multilateral Peace Talks. He has stressed the role of bringing in seawater to raise the level of the Dead Sea, which has fallen dramatically. A higher Dead Sea water column will act beneficially to stabilize the sweet water aquifers on both sides of the basin.

Nuclear-powered desalination

Several designs are available for providing safe, modular nuclear power plants, that can be constructed in a standardized way, to provide one, two, or several power plants at each site. In 1988, the ASEA Brown Boveri (ABB) company and Siemens proposed a plant with spherical fuel cells, called the Pebble Bed Design, and nicknamed the "potato reactor," that has many special safety features, and affords ease of manufacturing. Engineers further propose that the potato reactors can be built in Europe, floated into place in the Mideast by barge, then hooked up in order to power advanced desalination facilities, which likewise can be built in Europe and brought in by barge for final installation.³

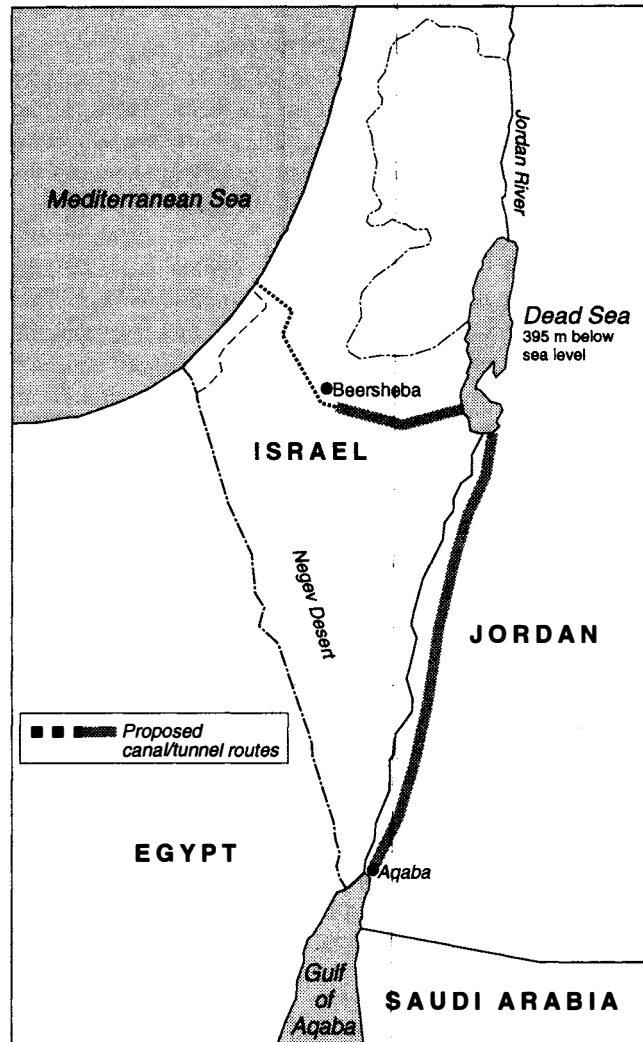
Other companies—for example, General Atomics in California—have proposed designs especially useful for powering large-scale desalination.⁴

There exist off-the-shelf desalination technologies which are compatible with the advanced nuclear reactors, and which are suitable for installation on the desert seawater canal projects. Large-scale desalination facilities have been built over the past two decades at Persian Gulf sites, utilizing either reverse osmosis, flash distillation, or other methods to separate out the salts. The cheaper the energy, the cheaper it is to make sweet water. At Al Jubayl, Saudi Arabia, for example, 288 million gallons of water are produced daily.⁵

High-productivity agriculture

The greatest natural resource of the Gaza-Jordan region is sunlight. By providing water, and making use of the Sun, fabulous crop outputs can be obtained through "soilless" agriculture, where plants are grown in protected environments either in nutrient water solution (hydroponics) or in air, with a controlled mist to their root systems (aeroponics).

Proposals for a Dead Sea-Red Sea canal, and a Dead Sea-Mediterranean canal



These advanced techniques give the highest yields of edible biomass per unit volume of water, and per square meter.

Consider the comparative yields of tomatoes, for example, in conditions similar to the Gaza Strip. In 1,000 square meters (one dunam) in soil culture, under plastic tunnel cultivation, one can grow 8 tons of tomatoes; in soil, under greenhouse conditions, 14 tons. By hydroponics, in greenhouse conditions with tap water, the yield is 14 tons; in plastic bed hydroponics, in saline conditions, 22 tons of tomatoes can be grown.⁶

The methods for accomplishing these high yields have been thoroughly studied and demonstrated, for example, in Egypt and in Israel, especially in the Negev Desert. The technologies are "ready to go." There is no reason to wait

years to develop the desert sands into soil (which is possible to do over much of the region). Instead, the region can become self-sufficient in food practically the very first crop season that the advanced soilless methods are put into place.⁷

Set up the companies for the job

What remains to be done is to set up the new companies to award the contracts to start up the work. There should be, respectively, Israeli and Palestinian “infrastructure companies,” and another company for cooperation between the two and with Egypt, Jordan, and other sovereign entities, teams of advisers, etc.

The most important resource to deploy is the human resource. The skilled Palestinian construction workers from the region can supply the initial labor to break ground, and can then proceed by the “battalion method” to teach phalanxes of less skilled the necessary advanced skills to carry out the projects. Formal classroom education can supplement this process.

In the Gaza Strip, about one-half of the total population of 800,000 people is under 15 years old, as PLO head Yasser Arafat stressed in his speech at the signing of the accords.

Ranking equally with the need for water in the region is the need for provision of housing, health care, education, cultural and religious centers, and all manner of social infrastructure. There are scores of ready-to-go plans for ground-up development of needed infrastructure.

For example, in the east Egypt desert, in the 1980s, agriculture complexes were created from the ground up, located at chosen sites convenient to new experimental agriculture development zones. Power was supplied for pumping groundwater. Where for the past 5,000 years only desert brush grew, water was supplied, and soils “created” by a scientific sequence of cropping, resulting in humus formation and good yields. Wholly new towns were designed and built for the new residents, accounting for dwellings, schools, shops, religious and cultural centers, with attention to the architectural features.

In Israel, modular housing and infrastructure was created “overnight” for political reasons. Now all the acquired experience and skills can be put to use for peace and prosperity. Millions are living without adequate housing, water, or electricity.

Overall, there are 11.4 million people in the immediate region. In millions: Israel, 5.1; Gaza Strip, 0.8; West Bank, 1.1; Jordan, 4.4 (including refugee Palestinians). In the greater region there are additionally 158.3 million. In millions: Egypt, 57.3; Lebanon, 3.3; Syria, 13.2; Iraq, 18.4; Saudi Arabia, 10.6; and Iran, 55.5.

Crossroads to Asia and Europe

The development of the Mideast constitutes a new bridge of development between Europe and Asia. The Mideast is the crossroads between Europe, Asia, and Africa. The conti-

ental transportation and communications links must be improved to reflect this. Improvements are needed on the Suez Canal, the Red Sea ports, and other strategic sites. Connecting lines are needed to join the “spiral arms” of rail lines and corridors of development radiating into the region from the “Productive Triangle” region of central Europe (Paris, Berlin, Vienna), from which many of the high-technology inputs for Mideast construction must come. The main transit corridors to the Productive Triangle are via Cairo and Alexandria to Istanbul, which in turn can run south and west through Africa, and secondly, via the Persian Gulf to Istanbul, which in turn can connect to New Delhi, India and Karachi, Pakistan.

In particular, the rail grid, including high-speed rail, and chosen routes for magnetically levitated high-speed rail, must be built. Railway building in this region has been systematically obstructed by outside intervention, notably since the time that British operative “Lawrence of Arabia” blew up the Arabian links of the Berlin-to-Baghdad rail line. But the engineering studies are done, and designated priority lines are “ready to go.”

Notes

1. “A Development Plan for Israel,” *EIR*, June 20, 1986, giving the proposal for a Mediterranean Sea-Dead Sea Canal by Israeli Economics and Planning Minister Gad Yaacobi, and former head of the Bank of Israel Avnon Gafny. This was part of the “Marshall Plan” for the region proposed by Shimon Peres.

2. “Mideast Water Development: Making the Desert Bloom,” *EIR*, June 19, 1992, giving the proposal for a Mediterranean Sea-Red Sea Canal, advocated by Dr. Munther Haddadin, former director of the Jordan Valley Authority, and chief of Jordan’s delegation to the Multilateral Peace Talks.

3. *Das “Produktive Dreieck” Paris-Berlin-Wien, ein europäisches Wirtschaftswunder als Motor für die Weltwirtschaft*, a 200-page special report published in August 1990 by “Executive Intelligence Review” Nachrichtenagentur GmbH in Wiesbaden, Germany. See page 101, “Die zweite Generation der Kerntechnik: der HTR” (“Second-Generation Nuclear Reactors—the HTR”).

4. “Introduction to Nuclear Desalting: A New Perspective,” *Fusion Technology*, Vol. 20, December 1991.

5. International Desalination Association, “A Brief Background on Desalination and Its Processes,” *Desalination and Water Reuse Quarterly*, Vol. 2, 1992, Westport, Conn.: Green Global Publications, Inc.

6. Meir Schwarz, Negev Institute for Arid Zone Research, *Guide to Commercial Hydroponics*, Jerusalem, New York: Israel Universities Press, 1968.

7. See, for example, *Negev*, periodical of the Ben-Gurion University of the Negev (Department of Public Affairs), which was founded in 1969 in Beersheba, Israel.