

TVA on the Jordan: A Predecessor To LaRouche's Oasis Plan

by Marsha Freeman

Fifty years ago, a proposal was put forward to use the model of the Tennessee Valley Authority to economically develop the nations of the Middle East. While the TVA is best known for the dams it built in the seven-state Tennessee Valley, what was unique to this Franklin D. Roosevelt-era agency was the concept of multi-purpose dams, for intergrated economic development projects. The TVA's dams were designed to provide not only flood control, but crop irrigation, hydroelectric power, navigation, and recreation, because the goal of the TVA was not to build dams, but to transform the Tennessee Valley. In addition to water projects, the TVA built schools, libraries, health-care facilities, transportation, and other infrastructure.

If such an integrated water and economic development approach had been implemented 50 years ago, when the TVA presented it, there would be no threat of war in the Middle East today. In the past five decades, technologies have advanced, and the shortage of water in the Middle East has worsened. Along with dams for water control, new water must be created, using technologies such as nuclear desalination. This idea was the core of Lyndon H. LaRouche's proposed "Oasis Plan," first issued in 1990, during the build-up to the Gulf War. The approach of the TVA, for the integrated development of natural resources, agriculture, and industry,

and the standard of living for the population that this requires, still stands as the model for the great project approach to economic development.

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Lyndon LaRouche has insisted for over 15 years that the only way to achieve a lasting peace in the volatile Middle East is through region-wide integrated economic development projects. Given the arid conditions now prevailing in the region, these development projects must necessarily center around the construction of water projects for agriculture, industry, and cities.

In the mid-1950s, the men who had played key leadership roles in the Tennessee Valley Authority (TVA) presented a plan to the nations of the Middle East and to the United Nations, to develop this region as an alternative to political strife and war. The plan was based on the remarkable success that the TVA had demonstrated during the previous two decades in the transformation of the southeastern region of the United States during the Great Depression.

The TVA, established at the trough of the U.S. economic collapse in May 1933, built a series of 20 dams in less than 20 years to control flooding and expand navigation on the Tennessee River and its tributaries. The program introduced electricity to virtually every farm and household in an area spanning seven states, developed improved fertilizers and advanced agricultural methods, and introduced health care and literacy to a region and population not very different, at that time, from those of many Third World nations.

Internationally, the TVA gave hope and optimism for the future to hundreds of millions of people, especially in nations which had only recently won their independence at the end of World War II.

According to then-TVA head David Lilienthal, writing in 1954, representatives of nearly every nation in the world had visited the TVA over its first 20 years. These included Israeli Prime Minister David Ben-Gurion and officials from many Arab countries. The TVA experts proposed to build a "TVA on the Jordan."

Transforming the Mideast

The area of what was called Palestine in the 1940s is slightly over 10,000 square miles, or approximately one-quarter the area of the Tennessee Valley. The major water supply for Palestine and Israel originates in Lebanon, Syria, and Jordan. Lilienthal wrote in 1944 that "cooperation between Israel and the adjacent Arab states would be absolutely essential to the successful execution of the proposed overall plan;



Palestinians in Jordan wait in line to get water. The scarcity of water in the Mideast is the vital issue that must be addressed, before there is any hope of peace. The TVA approach shows the way.

only small portions could be developed to an individual country's advantage without such cooperation."

It was proposed that the water resources be developed for power and irrigation through a series of dams on the upper Jordan River and its tributaries, which could store water and also divert some into a network of irrigation canals. In order to compensate the Dead Sea for the loss of these waters, seawater from the Mediterranean would be introduced starting at a point near Haifa and conducted through tunnels and canals down the below-sea-level Jordan depression to the Dead Sea.

As this seawater dropped into the Jordan rift, there would be almost 1,300 feet of effective fall for the development of hydroelectric power. It was also proposed to develop underground water resources along the coastal plain from the northern border with Lebanon, south to the Egyptian border. The plan was to be completed in eight stages.

It was estimated that irrigation would provide for at least 606,000 newly cultivated acres, and produce 660 million kilowatt-hours of electrical energy per year.

In the mid-1950s, the United Nations Economic Survey Mission for the Middle East was also proposing economic development programs. Gordon Clapp, who had been the general manager of the TVA, served as the head of the UN Economic Survey Mission for the Middle East.

For the Middle Eastern States of Syria, Lebanon, and Jordan, the UN recommended "pilot demonstration" projects on the Orontes and Litani Rivers, and the Wadis Zerka and Qilt Rivers. Reclamation of the large swamps on the Orontes River in western Syria would add 183,000 acres to the land already under irrigation. The Litani River in Lebanon could provide 350 megawatts of power capacity. The experts determined that a dam on the Wadis Zerka in Jordan could double the dry-season flow and double the irrigable land.

There were many people from the TVA in the UN project. Van Court Hare, from the TVA office of chief engineer, served as a member of the mission's engineering development staff, headed by William L. Voorduin, who was formerly the head project planning engineer for TVA. James B. Hayes, formerly project manager of TVA's South Holston project and an irrigation and power engineer with over 30 years of experience, was the Palestine Commission's chief engineer for the development plan. Other TVA people assisted, including Col. Theodore B. Parker, former chief engineer of TVA.

Development of Iran

In southwestern Iran, north of the Persian Gulf, lies the Khuzistan region, with an area of 58,000 square miles and a population of 2.5 million. It is an oil-producing region where the local population suffers a poor standard of living. After World War II, Iran embarked upon a Seven Year Plan which yielded disappointing results due to political, financial, and other difficulties. In the mid-1950s, Iran launched a second plan headed by Abol Hassan Ebtahaj, an economist and banker.

FIGURE 1

The Area Served by a TVA on the Jordan



In 1955, Ebtahaj invited Lilienthal and Clapp to visit Iran. They arrived in 1956, and were asked to prepare a comprehensive program for the integrated development of this region, and to commit themselves to also *implement* the plan. A two-year program of surveys and investigations was completed, leading to the recommendation for an action program.

The study found that a virtually unlimited amount of natural gas existed in the region. The five rivers which are fed from mountain snow contain enough water to irrigate 2.5 million acres, and the hydroelectric potential was more than 6 million kilowatts.

The TVA team recommended: 1) the construction of a high, thin arch dam on the Dez River for irrigation, power, and flood control, and that eventually 14 dams be built on that river; 2) that a 132-kilovolt transmission line from Abadan north to Ahwaz be built to utilize idle capacity from a steam plant owned by the oil companies until power from the dam was available; 3) that an agency be formed to manage electricity production and distribution; 4) that a 10,000-acre sugar cane plantation be developed, with a mill and refinery; 5) that the agricultural groundwork be laid to prepare for future irrigation projects including the testing and demonstration of

the economic use of fertilizers; and 6) that a polyvinyl chloride manufacturing plant be built as the first step in a comprehensive industrial complex based in part on the abundant reserves of gas.

The program was approved, though the polyvinyl plant was abandoned due to lack of money. Over 200 contracts were awarded, including to companies in Great Britain, Italy, Holland, France, Japan, the United States, Germany, and Sweden. Out of the 400 non-Iranian employees, about half were Americans, and over 30 had TVA experience.

By 1967, the initial plan was essentially complete. Electricity consumption had increased 300% since 1958 when the transmission line had been completed. A 50,000 acre pilot irrigation area for improved agriculture, fertilizer use, and improved seed varieties was in operation. As Clapp reported at that time, "in the pilot irrigation project, the desert truly has been made to bloom; and during the next four years, the irrigation network will be expanded to bring controlled flow of water to 360,000 acres."

By 1967, Iran had invested over \$190 million in the series of projects for the region, including \$42 million loaned from World Bank, with the rest from oil revenues.

Clapp reports that "in the beginning, there was a great amount of cynicism about the Khuzistan program. When plans for the dam and sugar cane factory were announced, only a small minority thought they would actually be built. Once started, many believed that the projects would never be finished. Once finished, it was assumed they probably wouldn't work. But as predictions, one after another, have come to pass, the old spirit of pessimism and cynicism has begun to fade. There is now new hope for a better future in Khuzistan."

'Enterprise on a Large Scale'

The approach of the people who created and led the work of the TVA was distinctly different than the "economic" gobbledygook put forward in 1932 by many "professional economists" as a way to get out of the Depression—gobbledygook which is often repeated today. "The Authority was established in the U.S. of A. at a time of economic distress, in the gravest worldwide economic depression ever recorded. It came into being when governments were taking the desperate course of restricting production and destroying produce in the hope of restoring economic welfare," wrote author Herman Finer near the end of World War II.

"The TVA represented an altogether different conception of the management of a modern nation's economic resources: that of enterprise on a large scale, deliberately undertaken by the public authorities, with certain social and economic purposes clearly in mind from the beginning. It represented an economic policy of hope and expansion in which the government would play a dynamic part," Finer wrote.

As TVA chairman, David Lilienthal became one of the most outspoken advocates for national governments assum-

ing their responsibility to develop the infrastructure prerequisite to economic growth.

The TVA on the Jordan was not started in 1954, and the Suez crisis two years later demonstrated the future of the region without such a perspective.

In the Summer of 1960 a meeting was held at the Weizmann Institute of Science in Rehovoth, Israel. That year, 17 new nations were coming into being, largely in Africa, and were entering the United Nations. About 120 delegates came to the International Conference on Science in the Advancement of New States.

At that conference, the new nations of Africa looked to Israel, in particular, standing at the crossroads of Africa and Asia, for direction on how to develop their peoples. Nigeria was six weeks away from the birth of its independence. The day the conference opened, the Republic of Congo (Brazzaville) was born, on Aug. 15, 1960.

One delegate from Nigeria reminded the delegates at the meeting, "There can be no peace when there is not enough food to eat, not enough clothing, not enough shelter for everybody." At that time, eight out of every ten infants died before the age of one year in Sierra Leone.

David Ben-Gurion, Prime Minister of Israel, told the Third World delegates that, "independence alone will not meet their needs. They require agricultural and industrial development, better education, housing, and health services, material and spiritual progress. . . ."

He described the "second revolution" taking place—the intellectual and scientific revolution. "The day is not far distant when the energy available to man will be multiplied, when scientists will succeed in achieving for peaceful purposes not only the fission of the atom but also the fusion of atoms." This will open an age of unlimited energy for the fructification of deserts, he envisioned.

Director-general for water planning for Israel, Aaron Wiener, spoke at the conference on the planning for water development. He reported that "the idea of linking rehabilitation with bold water undertakings was in itself not new." It was "formulated in engineering terms by the late James B. Hayes in his report of 1948 entitled, 'T.V.A. on the Jordan.'" Systematic work on water development in Israel was begun in 1956, but all hopes for the political integration of development for the entire region were destroyed by the Anglo-American manipulations, which have once again today engulfed the Middle East in the flames of war.

The situation in much of the world is, unfortunately, hardly different today than it was in the 1950s. Today, while hundreds of thousands of American troops try to destroy as much as they can of the military and economic infrastructure of at least two nations of the Middle East [during Operation Desert Storm], the words of M.R. Masini in April 1952, who was a former mayor of Bombay, should be juxtaposed: "The United States has no better ambassador-at-large in Asia than the one which bears the initials T.V.A."