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JOINT WATER PROJECT WITH EGYPT RAISED AS POSSIBILITY

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[Article by Micha'el Gerti: "Project 'Yeor' or the Nile in Blue and White"]

[Text] The idea is not new. The dates printed on many documents--under the classification "classified," and small-print letters titling the project "Ye'or"--evidence the optimistic approach of those who deal with water in Israel. The files concerned with examining the economic value, the engineering details, and the political implications of transporting water from the Nile to the Negev were opened years before the Egyptian president's visit to Israel. The files, which gathered dust between entries, since that visit have become much requested reading material and have become well-known in the 2 weeks since President Anwar al-Sadat's declaration in his meeting with Israeli reporters in Haifa--a declaration which was broadcast in the newspaper headlines: "From the Nile to the Sinai--and Perhaps to the Negev," and "Sadat Is Willing To Supply Water to the Negev."

The idea of bringing water from the Nile to the Negev, like the ideas which resulted in the execution of other gigantic engineering feats (and it will immediately be said, with different levels of success or failure), is not connected with a brilliant spark of genius or prophetic vision. Every year about 55 billion cubic meters of water pass through the Nile, while Israel's entire water supply provides a bit more than 1.25 billion cubic meters. The conditions of the area between the Nile--and, in fact, between the sweet water canal, which has carried the waters of the Nile for the past 100 years, located West of the Suez Canal (which enables the existence of the "agricultural arrow" remembered from the days of the Yom Kipper War)--are favorable and there are no natural barriers or difficult topographical conditions to overcome. If we were to connect the plentiful water from this with the deficiency of that and compare this with the simplicity of planning and execution, the idea of transporting water from the Nile to irrigate the fields of the Negev appears to be a unique answer to the problem.

Just as the advantages of bringing water from the Nile to the Negev appear simple and clear, also the principal danger inherent in the program is

obvious after a first glance at the mission--the utilization of large quantities of water whose source is in a neighboring country and investments in regional development programs based on a water source dependent upon the good will of an outside agent--which carries with it dangerous dependency. The problem of dependency is principally a political problem. In every future contact with Egypt, after the completion of the project the Israeli representatives would be unable to forget the location of the water faucet which feeds the Negev settlements. "All Sadat would have to do to remind us of this when he comes to demand concessions from Israel is to hang a picture of the faucet in the negotiating room," says a water planner. "He would not even have to mention the faucet and certainly would not have to make any threats. He will know that the subject is deep in the Israeli subconscious and overshadows their considerations."

Alternatives to the Project

Apart from the seductive aspect of receiving water to fertilize the desert, even though there is the fear of creating dependency, it appears that an examination of the project from other aspects is like examining a mushroom under a microscope which reveals the spores, while in fact its surface is smooth. The issue of carrying the waters of the Nile to the Negev has three principal interconnecting layers. Above all the other considerations is the political aspect, of which the problem of dependency is not the only one. On the second level, far below the political level are the economic, financial and social problems which would affect the work. On the bottom level are the engineering aspects which, despite their simplicity, go beyond the economic and even the political levels.

Many planning alternatives to "Project Ye'or" exist, some of which deal solely with the Israeli-Egyptian possibility--with relation to the problem of water for the Arab population in Judea and Samaria and Gaza--and some are connected to the possibility of transporting additional water and electricity between Israel and Lebanon (the Litani) and Jordan (the Yarmuk). However, the combination of the Jordan and the Yarmuk is not a necessary condition for carrying out the project; and apparently it does not greatly change the understanding of the principal inherent problem--planning, political and economic.

The former assistant water commissioner, Mr Sha'ul Arlozorov, emphasized three alternatives to transporting the Nile waters only, all of which are based on the same engineering system. According to this plan, three wells would be dug under the Suez canal; their source would be the sweet water canal. These canals would send water to central sites in the Sinai not far from Baloza. At these stations the water would rise to a height of several tens of meters (with much less energy invested than in the primary drawing station of the national water carrier at the Sea of Galilee, which raises water to 400 meters). The water would move by the force of gravity along the Sinai shore in an open canal; the digging of this canal, as stated

previously, does not depend on overcoming topographical difficulties. From that canal, secondary canals would extend to the watering networks that will feed the settlements in which the Egyptians plan to settle more than 1 million people. At the corner, the canal would cross the border and bring water to the existing water network in the northwestern Negev.

The engineering planning is related to the political problem in several aspects, the first of which is planning the division of the water that will come from the Nile, and whether to incorporate it into the national network or to create two networks. If it were included in the national network, it could be combined with the supply of water from Israel to Judaea and Samaria, which show signs of a future water shortage, and to the Gaza strip where the water shortage is already an acute problem. The drawing of too much water from the wells in the strip has already caused seepage of sea water in wells in the populated areas.

Transporting water to Arabs in the territories in exchange for a portion of the Nile's water would create a double dependency--Israel would be dependent upon Egypt, but Egypt in turn would know that the citizens of Gaza and Judaea and Samaria were also dependent upon Israel and their economic well being, which to a great extent is dependent upon the availability of future water sources, would therefore be more dependent upon Egypt's policy than Israel's.

A central political problem dependent upon economic planning is that of quantity. Theoretically, it is possible to transfer large quantities of water to the Negev, and one plan refers to moving 2 billion cubic meters of water from the Nile, of which 1.5 cubic meters would water the Sinai and 500 million cubic meters would water the broad settlement areas in the Negev. The political danger arises from the dependence on such a large water supply (this amount would be enough for hundreds of settlements), and it is reasonable to assume that about 100 million cubic meters would be most reasonable. Also, it is estimated that an additional 50 million cubic meters of water would be enough to fill the country's water needs for a long time.

The outline of the program drawn up by Sha'ul Arlozorov also includes a reverse flow--of electricity and not water. In his proposal, Arlozorov calls for paying for the waters of the Nile by supplying electricity to the 'El 'Arish area. Aside from the economic benefit of eliminating the need to supply electricity from the Nile valley, which involves great losses along the route, it would also have a moderating effect by lessening the dependency which would again become mutual. Another engineering possibility which would moderate the dependency is to create a reservoir (or reservoirs) in the region of the green line in which large quantities of water could be stored. These reservoirs, however, would not cancel the dependence on an external water source, but would change it to a dependence which would have an effect only after some time.

Despite the simplicity of the needed reservoirs and the low cost--because the Nile's waters carry a large quantity of fine silt which would quickly seal the bottom of the reservoir--the building of these reservoirs would increase the cost of the water that they would hold, both because of the additional cost in building them and because of the large loss of water due to evaporation. A more simple way would be to force the water to reservoirs underground and preserve a higher level of the Sea of Galilee, and it is not necessary to use the Nile waters for this. It is possible to force the same amount of water which would be saved and to create one time reserves underground that would have the same influence as the above-ground reservoirs from the aspect of moderating the dependence.

The Problem of Finance

The increase in the price for a cubic meter of water due to building the reservoir is about 4 cents. (All prices are figured in cents because the portion of the estimates made in Israeli pounds lost significance within a few months due to the high rate of inflation.) The price of the Nile's water next to the Israeli-Egyptian border apparently would be competitive with the cost of the water in the national water carrier. In various surveys, the prices were set at between 13 and 18 cents per cubic meter (in fact, the ability of the Nile water to compete in the Negev will increase in proportion to the increases in the cost of oil on the world market, since a large portion of the price of the Galilee waters carried south is the cost of the electricity to draw it and carry it up the mountain--about 2 kw hours per cubic meter--while the cost for energy is a much smaller portion of the cost for the waters of the Nile for the Negev).

A price of 15 cents for water, similar to the real price of water supplied the south in the national water network, from the point of economic feasibility inhibits the possibility of raising wheat over wide areas. Cotton cultivation is also not worthwhile with complete irrigation (without mentioning the competitive Egyptian cotton which will grow as the irrigation networks are developed by our neighbors to the south). But this price makes the feasibility of producing export items, such as flowers and vegetables most certain. However, a massive increase in the areas devoted to raising export products would create a difficult social problem, which anyone interested in the execution of the project should discuss in the early planning stages.

This export production demands many working hands, and if we do not want to create a region of large estates in which Arab children from the Gaza strip are employed (and this is not the fruit of the writer's imagination) it is necessary to act with care when planning the set up in the south.

On the economic level, there is also the problem of financing the project, which apparently will cost millions of dollars (here we must differentiate between the high cost due to the length of the required carrier and the simplicity of engineering, despite the fact that the engineering of the

national carrier is much more complex than "Project Ye'or," it is not reflected in the building cost). The problem of financing is apparently what caused President Sadat to suggest Israeli cooperation. On the side of the political, economic, and engineering aspects of transporting the Nile waters to the Negev, it is worth considering the possible reasons why the Egyptian president made his suggestion at the Haifa press conference. It is worthwhile to do this before fast-moving Israeli companies (including government companies) suggest their services for digging the canal and changing the Nile to a "blue and white" Nile. Aside from creating Israeli dependence on an Egyptian water source, which possibly was a consideration of the planners in Cairo President Sadat knows the expected difference in Washington's attitude if he were to request aid for a northern Sinai waterwork--as a joint project that would contribute to the advancement of peace. Sadat already chose the second possibility; but, in this case, if Israel excitedly joined the project, U.S. financial support would come not only from the foreign aid meant for Egypt but also from the money budgeted for Israel, since it would be a cooperative venture.

Although this project is very seductive (strengthened in the wake of the psychological effect of the drought of '79), it is necessary to be controlled and to weigh properly the pros and cons before taking a formal stand.

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PROBE SHOWS MULTIPLE ERRORS CAUSED POWER BLACKOUT

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[Article by Benny Morris]

[Text]

A five-man committee appointed by Energy Minister Moda'i to investigate the nationwide power blackout of October 9 has determined the reasons for the failure, but "is not fully convinced that they had to lead to a total national blackout."

This was one of the "preliminary conclusions" of the committee submitted to the ministry last Wednesday and made public by the ministry yesterday. A final report is expected in about three weeks, the ministry said.

The investigators said that the breakdown occurred because of three factors, none of which alone would have led to the failure.

At fault were maintenance at the Yarkon switching station, which did not conform to standing safety regulations; maintenance at the same facility, which did not conform to a specific work order; and the turning off of a wrong switch by two Electric Corporation technicians.

The committee, according to Ram Haviv, deputy director-general at the ministry in charge of electricity, said that the work load was not excessive and the systems prior to the failure were in reasonable order.

Once the failure occurred, said the committee's report, the blackout of the centre of the country and of part of northern Israel was inevitable. "But the committee is not fully convinced that the errors had to lead to a total national blackout," it states.

The mechanisms safeguarding the equipment at the various stations functioned properly and no equipment was destroyed as a result of the blackout, states the report.

The committee is headed by Technion electronics professor Michael Eriltzky. It includes Prof. Arthur Shavit, the ministry's chief scientist, another ministry engineer, and two Electric Corporation engineers.

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