ISRAEL/PALESTINE CENTER FOR RESEARCH AND INFORMATION (IPCRI)

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August 11, 1991

Roundtable Forum of Israeli-Palestinian Water Şcientists

Meeting #9

Present: Gershon Baskin, Dr. Karen Assaf, Dr. Yousef Abu-Safieh, Kristy Wright (Canadian Embassy), Isam R. Shawwa, Dr. Yoram Avnimelech, Dr. Yehudit Elkana, Prof. Abdallah Abu Eid,

Regrets: Nadir el Khateeb, Reinhard Meierjohann, Dr. David Scarpa (abroad), Dianne Conway, Abd el Rahman Tamimi, Prof. Hillel Shuval (abroad), Dr. Miriam Waldman (abroad), Meirjohann Reinhart, Dr. Yehudah Laufer (abroad), Dr. Avraham Sela.

Baskin: Good afternoon, we seem to have more new faces than old faces here today. Several of our usual participants are abroad as is the custom during the month of August. The following people are abroad: Prof. Hillel Shuval, Elisha Kally, Dr. Yehudah Laufer, Dr. Miriam Walman, Dr. David Scarpa from Bethlehem University. I think that Ibrahim Mattar said that he would be coming.

Shawwa: Yes the last that I heard from him last night was that he would be coming.

<u>Baskin:</u> Abed el Rahman Tamimi was afraid that he wouldn't be able to get back to his village in time for the curfew so he didn't come. We will have to do something about the time of the meeting because at this late hour several Palestinians will have to cope with the curfews. We wanted to make it later so that Miriam Waldman and Yehudit could attend.

Assaf: In the WB the curfew begins at 6:00.

Elkana: In the future it will be easier for me earlier.

Baskin: Nader el Khateeb is in Haifa today with the German and Italian engineers from the Bethlehem sewage project. They said that if they could they would come on their way home. Why don't we introduce ourselves first and then I have some news to report. I am Gershon Baskin the Israeli director of IPCRI. Mt. Palestinian counterpart was supposed to come with Karen

Assaf: I don't know what happened to him.

Wright: My name is Kirsty Wright and I work with the Canada Fund at the Canadian Embassy.

Shawwa: My name is Isam Shawwa, I am the ANERA consultant and representative in the Gaza Strip - ANERA is the American Near East Refugee Aid although it has nothing to do with refugees.

Elkana: My name is Yehudit Elkana and I am going to from next month be with the school for public health of Hadassah, Hebrew University.

Baskin: And prior to that?

Elkana: Well I have worked on water problems - the transmission of viral diseases through water and so on.

Avnimelech: Yoram Avnimelech and I am from the Technion and from the Ministry of the Environment.

Abu-Eid: I am Abdallah Abu-Eid, I am a lawyer and I teach international law and international relations at the An Najah University in Nablus.

Abu-Safieh: I am Dr. Yousef Abu Safieh I work with Gaza University. My. Ph.D. is in Environmental Sciences. We have a center for environmental protection in the Gaza Strip. We just got the approval from the authorities and we started last month. My specialty is in water pollution.

Assaf: Mt name is Karen Assaf. I have a Ph. D. in environmental science and hydrology from the School of Public Health at the Univ. of Texas. Houston. I live in Ramallah for 15 years. We have an institute in the WB called the Arab Scientific Institute for Research and the Transfer of Technology.

Baskin: I have all kinds of news on different subjects that we have discussed in the past. Firstly, we have written and submitted a proposal called Development of a Regional Water Master Plan as a Contribution to the Peaceful Resolution of the Israeli-Arab Conflict. The proposal was submitted by Dr. Karen Assaf, Nader el Khateeb, Dr. Elisha Kally, and Prof. Hillel Shuval. We had a meeting with two gentlemen from London who are on the Board of Governors of the Technion and the Hebrew University. They have agreed to take the proposal back to England. We received notification from them last week that they have found donors to fund the project. So this project will be undertaken in the next few month. The project is meant to be a preliminary study for a conference which we are trying to put together that will hopefully be co-sponsored by the Hebrew University (The Truman Institute) and another Palestinian university or institution. In the meantime we are trying to get the approval of Bethlehem University, but we are running into some problems with that. There are funds for the conference. Prof. Shuval reported to me a few nights ago that he has found a donor for the conference who will provide 100% of the funding for the conference. The budget includes money to bring 10 international experts. The conference will deal with the Jordan River basin the mountain and coastal aquifer. We must work out the format so that there is complete parity between the Israeli and Palestinian participation in the conference. The funding for the conference is based on equal participation. The grant will not be available if it is solely an Israeli conference.

Assaf: It's based on the success of Baker.

Baskin: We have presented to the funders that if we can't find a counterpart for the Hebrew University then IPCRI might be the sponsor. We are trying to get an answer for that now. I had reported to you about the publications from the Southern Illinois University Press series on Water in the Middle East. The first book is out - it is about The Tigris and the Euphradies. It is actually going to be out in January 1992 and it will cost \$39.95. Next week in Stockholm is the major international water conference of the year. Both Hillel Shuval and Eiman Rabi will be attending. The other news which is quite interesting is that the Defense Ministry has agreed to our request for data from the Hydrological service. Any data which is not classified will be available to us. The next step is that we will make an appointment with Dr. Aryeh Ben Zvi, the director of the service and a group of us here to get acquainted with the service, the library and the data which they have. We will see what kind of cooperation we can develop with them. For those of you who don't know, it has taken us months and a lost of nudging to get this positive answer.

Assaf: I am interested in meeting him because in the last years I have written him 5-6 times asking for publications and he never answered my requests - not even once.

Baskin: I wrote to him on April 2, and it has taken until last week to get the positive answer.

Abu-Eid: Where are they located.

Baskin: The hydrological service's office is on Yermiyahu street in Jerusalem. The last and final news is regarding the Edmund Rothschild visit to the World Bank in July. Rothschild had submitted a program proposal to the World Bank for a two phase solution to the water crisis in the region. The first phase involves the purchasing of super tanking which in the past were used for oil transport and today are greased up and unused. These ships are available for sale. The idea is to purchase water - 300 - 400mcm a year from Turkey at a market price which would solve the acute problem in the region. The second phase is to build a pipeline from Turkey through Syria, Lebanon and into Israel the West Bank and the East Bank. Rothschild originally talked about an underwater pipeline. I understand that this idea is no longer in the plan. The water would be delivered and either pumped into the aquifer or piped into the Kinneret. The pipeline overland is much more complicated politically but much more economically feasible and engineeringly feasible. Rothschild met with the President of the World Bank and they are considering the plan. There should be an answer in a month or two. I spoke to one of Rothschild people this morning, he said that the most urgent thing which must be done and an organization such as our could make would be to provide a preliminary engineering plan which would examine the costs of the pipeline, a map of the pipeline etc. For them to push it through on the international level they will need that kind of data.

<u>Assaf:</u> I thought that on the Turkish side there was a large engineering firm which was pushing the idea. They don't already have a plan?

Baskin: There is some Turkish engineering company run by Turkish Jews which is trying to present their own plan. They are working together with the Japanese on the Medusa - the plastic bags. I have heard that at this point the only feasible plastic bag is one that will only hold 100,000 cm of water and will need one kilometer of rope to pull it by one tug boat. The trip would take so long that the water quality would be seriously questionable. The water would originate from one of the Turkish southern rivers. I will try and get more information when Rothschild's person return from London on the beginning of September. I have asked Isam Shawwa to come and give us a picture of the water situation there. We really haven't dealt with the situation of water in Gaza other then dealing with the Al Arish pipeline idea. I thought that it would useful for us to get some more background data and to get people from Gaza into the forum. So welcome.

Shawwa: Thank you very much indeed. I happen to be very much interested in what goes on about water. I have been collecting data every now and then. I have been aware of the problem for a long time. Whereas people talk to the civil administration about politics, I talk about water. At the beginning they thought I was a mad man. I did go to the US last year to Pheonix and to Los Angeles to see what they are doing and how they cope with their problem. Since you rang me up I have compiled several pages of data and several addenda to it. I don't know if you want me to read it or to pass it around.

Abu-Eid: Why don't you pass it out and give us the high lights of it.

Shawwa: In a nut shell, the Gaza strip which until 1948 was not a strip but a district of 13,000 square kilometers. Today it is only 360 square kilometers. In 1948 the population was 50,000. The plantation of trees was 10,000 dunams of citrus. The influx of refugees starting at around 300,000 now amounts to a total population of over 700,000. The number of dunams planted with citrus went up from 10,000 to 75,000. All growing on the same source of water. The Gaza Strip is built on two stratas of water - the fresh and the saline or brackish water. The fresh is almost 90% depleted. There is very little of it left in small pockets and in the northern part close to the boundaries with Israel. The salinity has gone up in the south to something like -

Abu-Safieh: About 1,000 mg. per litre.

Baskin: What is the accepted level in Israel for drinking water?

Abu-Safieh: In Israel or the WHO?

Baskin: In Israel.

Avnimelech: The National water carrier brings water with about 250mg a little bit less. Most of the wells in the coastal areas have concentration well above this so the average would be about 300-400 mg.

Abu-Safieh: WHO standards are 250mg/liter.

Shawwa: Most of the ingredients in our water are far above the acceptable standards. Nitrates particularly. Some wells have been closed recently.

Abu-Safieh: Appendex #1 shows the concentration of certain chemicals in water for 1989 and 1990. You can look and see nitrates and sulphates -

Shawwa: Appendex #2 mentions all of the ingredients which are also mentioned in the text of the report. You can see the high level of sulphates.

Elkana: What is the standard on that?

Abu-Safieh: I believe 45.

Avnimelech: But it has been raised.

Baskin: Yes, as the quality of water worsens they raised the standards.

Avnimelech: The WHO standards are 45 on nitrates and the EEC is considering to reduce this.

Abu-Safieh: Yes because nitrates cause a large number of cancers and that is why they are restricting the concentration of nitrate. There is a disease called methemaglobenemia in children it is also associated with nitrates. That is why they are restring that concentration to 45.

Avnimelech: Do you have any recorded cases of methamaglobenemia in the Gaza Strip?

Abu-Safieh: You know we do not have a system of recording right now or reporting. I have asked physicians working in the hospitals and they meet large numbers of cases. So I am thinking about doing some sort of research to see if there is any correlation between nitrate concentration and the disease. It is also associated with stomach cancer as well - the nitrates. We have written a proposal to try and find the correlation to the nitrate concentrations as well. That is why the situation in the Gaza Strip is really so terrible. This table is taken from research which I have conducted on renal failure in association with the chemical qualities of water in the Gaza Strip. That is why renal failure is written there as well as the correlation figure. So if you look to the figures about nitrates most of the figures are above most of the wells are above the WHO standards. In terms of 45mg per liter concentration we have only 7 wells out of the 50 drinking water wells in Gaza are suitable for drinking.

Baskin: Those are in the north?

Abu-Safieh: Yes in the north. In the north we have 5 and 1 in Gaza and 1 in the south. In the middle zone we don't have any suitable wells.

Baskin: The Jewish settlements in Gush Katif, where do they get their water from?

Abu-Safieh: They get their water from the coastal area. They actually have good quality water. People in the middle zone are now drinking from Mekorot water because the water there is not suitable. So now they are pumping to the eastern part of Khan Yunis and the middle zone to Dir el Balah, Nusserat, in that area. They can not drink the water.

Assaf: They don't mix it at all?

Baskin: Do you know what price they are paying for water?

Abu-Safieh: I drink that it is .70 NIS. It is not that expensive. By over pumping we have reached the point where that water will be deteriorating any way. You can not depend forever on that water. It will be over consumed and sea water will intrude there.

 $\underline{\text{Abu-Eid:}}$ Do they consider those wells which are suitable for human usage.

Abu-Safieh: Yes we are only talking now about human consumption not agricultural uses. We are trying to do research for the Municipality on the water situation. We are taking samples and analyzing it and seeing the seasonal changes as well.

Shawwa: The municipalities together with the Agriculture Department do do some sampling at least twice a year. Here are some of the results. This is to determine the samples of water unfit for human consumption. This includes more than 400 parts per million of cloride - it is equal to 34% of the artesian wells in the Gaza Strip. Samples of (page 3) unfit water containing more than 900 parts per million of sulphur came out to be 10%, of floride 16%, of nitrogen 10mg per liter this came out to be 77% and nitrates - more than 100 mg per liters came out to be 44%. Samples contaminated with bacteria came out as 12%. In a study by the Gaza Health Department Research center revealed that the cloride level in drinking water in the Strip averages between 0.8 and 3.8 per million. The normal ration allowed in drinking water according to the WHO is between 0.7 - 1.2 parts per million. There have been other diseases related to the question of water. As you know solid waste, sewage water all go down down into the aquifer with the rain water, with the wadis. It has really contaminated many parts of the the Gaza Strip. This has come back with various bacteria and viruses which have affected children. there are unofficial figures of some 30,000 children effected various diseases ranging from polio to other serious

Elkana: Are there still cases of poli in the Gaza Strip?

Shawwa: They do. actually a week ago there was a warning by the civil administration that every child should be vaccinated for the booster.

This has effected many mentally or physically. Unofficial figures have listed 30,000 retarded of whom 10,000 are hearing impaired, others include cerebral palsy. There are developmental problems, still born, deformed babies, bone rickets disease and a score of other diseases. I don't say that they are all related to water, but many of them are.

Baskin: I would like to ask a question, there is an Israeli in the group who has stated many times that the water problem in Gaza actually dates back to prior to 1967 - that the severe over pumping and lack of environmental protections such as the heavy use of nitrate and nitrogen based fertilizers - that these actually pre-date the Israeli occupation. Is that so?

Shawwa: Actually you can derive this - we have no proof of this, but you can derive this by the fact that the number of people had increased and you know the rate of birth is something fantastic. And the more curfews that the Israelis impose the more babies there are. I told General Vilnai that I said that you have to stop these curfews.

Assaf: Wait until 2 months from now, the entire population of the WB is going to double as a result of the curfew from the war.

Shawwa: This is one thing - the increase in the number of the people. I said that we had 10,000 dunam of citrus trees which ended as 75,000 and all of these drew on the same source of water. The Egyptians never did anything to investigate or to guide or to tell people anything. Even the Israelis didn't - until a late stage in the 1970's when suddenly it dawned on someone that we must do something about this increasing problem. The salinity - I for one have an orange grove. Water came at 11 meters in the kurkar and then at 17 meters I had rock and there was water. Now we are down to 30 meters. It used to be as fresh as sugar - maybe (of course I am exaggerating), now we have from the Agriculture department a sign written that this water is unfit for human consumption. This is because of over pumping. It suddenly dawned and then the Israelis tried to curb this. Unfortunately we had a military governor who was not up to the standard of how to tell people to do it. As a military man he thought that just say stop it! and it stops. Anyway, they needed some advice on public relations to say - look here - you are loosing you water and you should do this and that. However, in the end -

Baskin: When was this?

Shawwa: This was in 1977. A man by the name of David Maimon. Finally they made some restrictions - like for example -not on drinking water. You don't make restrictions on drinking water. The irrigation - for a citrus grove you get 1000 cubic meters per dunam per year. For strawberries it's the same. For other vegetables it is a little more. Then there is a differentiation between the north and the south. Because in the south the salinity is higher, the soil is different, the temperature is higher. Iknow people in the north with citrus trees and they water them once every 125 days in the summer. In the south they have to water them every sixth day.

Assaf: I think that in the Jordan valley they do it every 2 weeks. In

Jericho.

Shawwa: It all depends, you know I have some banana trees - I asked, they said you have to water it daily.

Baskin: Yes, well bananas are tropical. Would it be fair to present the Egyptians with a "moral" responsibility regarding the Gaza Strip.

Shawwa: I would say yes, if it serves any purpose. But if it doesn't serve any purpose - I mean let's have some good will here.

<u>Assaf:</u> It is a not a matter of Egyptians. The problem is that in 1948 all of a sudden you had a large number of refugees.

Baskin: Of course, I understand that the refugee problem is the reason. But I am looking for ways to bring more water into the Strip and we have to find some way to motivate the Egyptians who have brought water into northern Sinai to extend that to Gaza.

Shawwa: Let me tell you one thing. The Egyptians who were in Gaza were all officers. Troops, soldiers. These have nothing to do with science, with hydrology, with with all these things. The same thing happened with the Israelis. I wasn't here, but during one of my visits to the Rehovot center - the Weitzman Center, I was told there by Prof. Katzir that in 1967 a group of learned scientists got together toward the later part of 1967 and made a program which the handed to the ministry of Defense for projects in the occupied areas which would give work to the laborers and improve their economy, etc. And nobody did anything about it. Only three months ago and Mr. Sadan comes to Gaza and this Sadan committee...

 $\underline{\mathtt{Baskin:}}$ He participates in our economists and industrialists roundtable group.

Shawwa: I was one of the people who met him and I mentioned this and he said I was one of those people who proposed the program in 1967.

Shawwa: An army is an army, they are not up to such things. They should really have had scientists or civilians who - right now I can see one thing in the Gaza Strip for instance - we're getting a new blood of professionals - of people who really are professionals in their fields. It is only fair to say that Egyptians did nothing, but so did the Israelis until a later stage. When we talk about 1978 it is 10 years after the beginning of the occupation. I hope it is not too late.

Abu-Safieh: I already think that it is too late because the Dutch people who did research on the water situation in the Gaza Strip and they projected that by the year 2000 people will not find any water to drink.

Baskin: Who did the study?

Abu-Safieh: The Netherlands Foreign Ministry.

Shawwa: There is another study by Mr. Kroft from the UN.

Abu-Safieh: They did thier study based on a population growth of 2.5 but the actual population growth is above 4 right now. So when they said that there will be a water deficit in Gaza by the year 2000 would be 200 mcm so with this deficit all the will be turned into brackish water and it will be unfit for drinking. There is an idea that water can be drawn from the Nubian underground aquifer in Egypt or by desalination stations or from Israel which is already suffering a water shortage. It is the same thing, you know, we're in the same boat concerning the water.

Baskin: There have been studies I heard about recharging the aquifer in Gaza in order to prevent sea water intrusion in Gaza.

Abu-Safieh: Yes I think that ANERA did this project.

Shawwa: Yes our project is in Gaza City itself. This is a project which ANERA- actually the Gaza municipality stated back in 1978. I was the city manager at the time and I was the fellow who started it. I left the municipality and the ANERA representative in Jerusalem picked me up to continue the project. They call it a storm water collection project. Actually, it is collecting or trying to collect all of the rain water within the Gaza city boundaries into a lagoon - an artificial lake. The lake was dug on 34 dunams with a capacity of 400,000 cm of water. The project is done in 5 stages. The end costs may go up to 7-8 million dollars of which \$2.5 have already been spent on stage 1 and stage 2 - clearing 45% of Gaza's streets from rain water. The project should - when completed be able to replenish - I don't know if it 400,000 or less of cm meters of water - but that is the cap[acity of the lagoon. It has 8 bore holes in it for water injection. Similar projects are under study and they will no doubt help a lot. Right now there is just this project.

Baskin: Was the project working this past winter?

Shawwa: Yes. It was.

Abu-Safieh: I don't think that this year recharged any significant amount of water. It evaporates and there is a lot of sludge.

Shawwa: This will be removed before the end of the summer.

Abu-Safieh: But this past year I don't think that it did the work.

Shawwa: No not for this year, last year it was alright.

Abu-Safieh: This year

Shawwa: We had a problem with some factories a tile factory close to the main where sludge coming out of the factories were just dumped into the culverts however the civil administration found an alternative place for them with the necessary warnings and now they are dumping it into a new place and everything has been all cleared. It is hoped that this next season would be a good one then it will do some replenishment.

Elkana: Who is in charge of the project?

Shawwa: ANERA.

Avnimelech: Can I ask for some figures? What is the potential amount of fresh water that the Gaza strip can use? How much brackish water do you have. How much flood - surface water do you get? and what is the consumption?

Shawwa: I have some - I can reply to some. I know that our annual consumption is 90 - 100 mcm of water.

Baskin: Do you have a breakdown on what is domestic, agriculture, and
industrial?

 $\frac{Shawwa:}{mcm.}$ I have it but maybe I will send it to you. The recharge is 60 $\frac{Shawwa:}{mcm}$

<u>Avnimelech:</u> How much is the surface run off - the flood water which you can get from the wadis?

Abu-Safieh: We don't have in the last 10 years we haven't had any floods. This past year because the storm water was one week because there is a dam.

Shawwa: Several dams. They stopped the water in the wadi from flowing into Gaza.

Abu-Safieh: But due to the large amount of water this year they opened it for some time.

Avnimelech: What is situation regarding brackish water?

Abu-Safieh: Let me call you attention regarding the problem of recharge in Gaza — the housing projects and the increase in population, the agricultural lands where there was the replenishment of the aquifer the sand — most of the sand dunes in Gaza are changed into houses so you don't have the surface area where you can recharged. Most of the surface water will be run off not recharged. If there are no houses then the recharge would be higher. Fortunately we do not have many paved roads so if we had paved roads that is more sand covered which decreases the amount of recharge. So the only solution is to have the storm catchment projects with the lagoons or most of the water would be run off. You know that the recharge is not 60 mcm, it could be much less.

Elkana: What is the annual rainfall.

Abu-Eid: It's about 200 isn't it?

Abu-Safieh: In the north you have an average of 400mm to less than 100 in the south.

Shawwa: On the average it is about 200mm. If we could get a pipeline

from Egypt it would solve our problem. However

Baskin: How much water would solve the problem?

Shawwa: If we require about 50 mcm replenishing each year - let's say another 15 would do.

Abu-Safieh: 15? Oh just for drinking.

Shawwa: Yes, just for drinking.

Baskin: How much for total needs?

Elkana: What is this 15?

Abu-Safieh: This is the need for replenishment. But in the future when the population is larger the need will grow and when we have sewage systems the need will also grow because people will use more water. When they have drainage systems they consume more water. So the project right now is to construct sewage systems and this means and increase of the water domestic consumption.

Baskin: In Egyptian terms we are still talking about a very small
amount.

Elkana: Where does the Egyptian water come from? From the Nile?

Baskin: Yes the Egyptians have constructed a northern Sinai pipeline from the Nile to Al Arish in order to settle a million people in Northern Sinai over the next few years.

Elkana: This is a pipeline? What about health problems?

Baskin: The water is being treated in parts along the way.

Shawwa: It is only 80 kilometers from Gaza you know.

Baskin: It is cheaper treating the water than desalinated sea water.

Abu-Safieh: And if you can use this water for irrigation you can save the ground water for only domestic use.

Shawwa: So what we have been thinking of now, we in the municipality, the civil administration, UNDP, and ANERA, these are the bodies that we care for this problem - we have the reuse of sewage water by treatment and proper recycling - this is for irrigation. UNDP have gone into this project and they short of a few things to out it into use.

<u>Abu-Safieh:</u> There are severe problems right now. You know the north zone in Gaza. due to the sewage lagoons they constructed last year we had an overflow.

Shawwa: Yes because the project was not completed.

Abu-Safieh: And now it leaks into the underground water and there are

certain wells in Beit Lehia where you pump the water you can smell the sewage in it. We are risking the destruction of the ground water by some of these projects. Now we are trying to pump it to Wadi Beit Hanun and drain it into the sea. This is the situation.

Shawwa: We need a water treatment plant and proper recycling. This is the project and it is incomplete and all of these things that are happening are no doubt leaving behind them some harm

Abu-Safieh: Usually we call it environmental destruction

Shawwa: The other thing is building small dams in small wadis here and there. The storm water preservation projects such as the one I mentioned that ANERA is doing. Of course we have plenty of brackish water in Gaza and with the reverse osmosis technology it could work very well.

Avnimelech: How much brackish water is there?

Shawwa: We don't have exact figures,

Avnimelech: What are the sources of this waster - the geological sources?

Assaf: Pleistocene. They don't go much deeper.

Shawwa: We have plenty of it but that does not mean that we can use it. the way we like. Like down in Eilat they have their own reverse osmosis plant. I visited there and their costs come down to about half a dollar per cm. In Gaza if the same thing is done, the company of Nir-Nahman made a study in Gaza and came out with the result of 25 cents to produce 1 cm from brackish water. He was challenged. I don't remember the name of the gentleman who challenged him, but he said that 45 cents was more like it. That is the reverse osmosis, that is the cheapest means right now. Unless they pump water from Egypt of having the funds to build a desalination plant from the sea water which is very expensive.

Baskin: I understand that several major Japanese companies are putting huge amounts of money into research and development in the area of desalination. The whole world will need desalinated water in the future and the Japanese are preparing for that.

Shawwa: Look at RO - several years ago no one thought of that but this is an improvement and as you say they may come up with something better. The UNDP did a study for a desalination plant. They came out with something fantastic, it will cost about \$360 m and the cost of 1 cm will be about \$1.00. But another company IBE Technologies came up with another project which would run on diesel generators rather than the turbines and this cuts the expense into 50% which makes it about 50 cents per cm. But both are very expensive because they run into the hundreds of millions. I think this is what I can think of as solutions, But here I would like to quite Prof. Thomas Naff who testified in Congress last year - he said that if the crisis is not eased it will result in a significant rise in them [probability of an outbreak of war

which will determine ... fare. It is water in the final analysis which will determine the future of the occupied territories. He added - the Gaza Strip aquifer is rapidly deteriorating - there is already water encroachment from the Mediterranean and if that aquifer goes, it will have a very serious impact not only on Gaza but it could have an impact on the coastal plain aquifer within Israel itself because there is a strong probability that there is an interchange between the two,. There is serious deterioration in the aquifer and it isnrapidly reaching what is the red line. known as

todays conclude to point good Q 18 This Baskin: meeting. גשר בנוח יעקב

מדינת ישראל גנזד המדינה

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שרד החוץ