

The Roundtable Forum of Economists and Industrialists

This forum is IPCRI'S longest running and largest forum. The subjects which have been discussed by the group primarily concern issues of shared interests by Israel and the Palestinians. The Palestinians are naturally most interested in developing their economy and removing the limitations imposed by Israel. Israel is currently interested in encouraging economic development in the West Bank and Gaza in order to create new jobs for Palestinians for the purpose of limiting the number of Palestinians who work in Israel. At the present time there are several clear and shared interests in the area of economic development. IPCRI has been seeking to maximize the perception of shared interests in this area and to facilitate a process of open communication between Israeli policy makers and Palestinian economists and businessmen. There are more than 30 participants in this forum. They include prominent economists, businessmen, industrialists and Israeli government officials.

The following is a brief summary of the past several meetings of the Economists and Industrialists Roundtable Forum:

Meeting #6 was held on February 25, 1991. This meeting dealt with the severe economic situation which has developed in the West Bank and Gaza as a result of the extended curfew imposed on January 15, 1991. The Palestinian participants provided up-to-date data on the situation. Following the meeting a senior economics correspondent from a major Israeli daily published a series of articles based on the information that he learned at the meeting.

Meeting #7 was held on March 7, 1991. The group received more up-to-date information on the worsening economic situation in the territories. Realizing that the ultimate solutions for the economic problems must be rapid economic development in the West Bank and Gaza, the group turned its attention to how to

make the best use of foreign aid promised by the European Community. The forum's recommendations stressed the need to create jobs and suggested that the majority of the funds be used in revolving loan funds for businesses. Additionally, funds should be provided for public works projects which would create jobs and only a small percentage of the funds should be used for direct welfare type aid. These recommendations were brought to the attention of the EEC commission. Additionally, the Forum stressed the need to have the curfew lifted and to allow Palestinians to return to work both inside of Israel and in the territories.

Meeting #8 was held on April 10, 1991. Prof. Ezra Sadan, a consultant to the Defense Minister on Economic Policies for the territories presented the findings of his committee regarding economic development in the Gaza Strip. The Forum debated the findings and suggested several modifications. The most important suggestion of the forum was to extend the committee's recommendations to the West Bank as well and as soon as possible.

Meeting #9 was held on May 8, 1991. Prof. Seev Hirsch from Tel Aviv University presented the results of a three year study on the feasibility of a deep water port in Gaza. While the study proved that under the right conditions the project would be feasible, the forum recommended that the money needed to establish the port (more than \$500m) would be better used to create many jobs in the Palestinian economy. The forum believes that economic arrangements could be made between the Israeli ports and the Palestinians during the interim and immediately post-peace phases. This would allow the Palestinians to make much wiser initial commercial and infrastructure investments.

Meeting #10 was held on June 12, 1991. Samir Hulaileh presented the first findings of a comprehensive study to determine a Consumer Price Index for the West Bank and Gaza. The forum was most

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impressed with the study and made several recommendations for its improvement. Additionally, it was suggested that arrangements could be made with the Israeli Bureau of Statistics to provide technical assistance and sharing of data.

Meeting #11 was held on July 15, 1991. This meeting was a field trip to visit several Palestinian factories in the West Bank and Gaza. The main observation made by the participants was that if the Palestinian business community wishes to compete both on the Israeli market and the international market, they must invest much more in research and development.

Meeting #12 was held on August 14, 1991. This meeting dealt with the issue of taxation. Three Palestinians presented case studies on Israeli taxation policies in the West Bank and Gaza. The forum discussed the situation and made specific recommendations to the Israeli officials present. One major issue which arose several times during the meeting was the lack of data regarding public expenditures in the territories. The question of expenditures cannot be detached from the question of taxation. A Bank of Israel official attending the meeting agreed to accept the challenge of preparing and collecting data on public expenditures in the West Bank and Gaza and to present his findings at a future meeting.

Meeting #13 was held on September 11, 1991. Dr. Simcha Bahiri gave a presentation on the potential avenues for joint ventures.

Meeting #14 will be held October 28, 1991. An official from the Bank of Israel will make a presentation on the public expenditures of the Civil Administration in the West Bank and Gaza.

Roundtable Forum of Water Scientists

Water is one of the most crucial and rare natural resources in the Middle

East. Israel and the Palestinians share the same surface and underground resources. Israel maintains strict control over those resources and has severely limited their use by Palestinians. IPCRI's Roundtable Forum of Water Scientists seeks to propose solutions for the regional water crisis. The Palestinians play a potentially vital role in the development of a regional water regime which would include Turkey, Lebanon, Syria, Jordan, Israel and the West Bank and Gaza. The Roundtable Forum has been examining various proposals for regional cooperation. One of the problems which Palestinian water experts confront is the inaccessibility to data. IPCRI has petitioned the Defense Ministry and succeeded in achieving the agreement of the Hydrological Service - a department of the Israel Water Commission, to allow Palestinians access to data. IPCRI has also begun to establish a data base on the issue of water. The Roundtable Forum of Water Scientists has met nine times. Participants include prominent Israeli and Palestinian water scientists - hydrologists, geologists and engineers, officials from the Ministry of Science and Technology and the Ministry of the Environment.

Roundtable Forum on the Future of Jerusalem

The Roundtable on the Future of Jerusalem has met six times. The Forum is preparing a document which will provide an in-depth model for the future of Jerusalem under peace. The emphasis of the model is on the proper and practical functioning of the city. The Forum is working on a model in which the city of Jerusalem will be an open city with no physical boundaries dividing it. The city will have two municipal councils - one Israeli and one Palestinian. Each council will have governing authority over specific neighborhoods and areas. Standing and ad hoc committees will be established in order to coordinate issues of joint concerns, such as infrastructure, the Holy Places, the Old City, etc. The Forum has developed a set of principles

concerning the governing of the Holy Places and a set of principles concerning issues of physical development. The forum is involved in creating a model for a Jerusalem which will not only hold religious and national significance for both peoples, but will also be home to hundreds of thousands of Israelis and Palestinians. The final document should be prepared for publication by March 1992.

Project on Security and Defense

The issue of security and defense is perhaps one of the most important issues and probably one of the first issues which will be dealt with during future negotiations. No peace process will develop without answering the most basic issues of physical survival for all the sides to the conflict. Israel has continually emphasized the crucial role that security concerns play in its policies. The Israeli psyche is overwhelmed with a need for security. The Palestinians' own experience of exile and occupation for the past 43 years also place great demands for a security regime which will guarantee their physical survival as a people.

IPCRI is in the process of putting together a joint team of Israeli and Palestinian military, security, and defense experts. These people will spend one-two weeks together in an exercise involving informal negotiations on a military framework for an Israeli-Palestinian peace treaty. The team will work out the details of that treaty based on a two-stage peace process involving an interim phase of 2-5 years during which time different elements of authority would be transferred to the Palestinians in the West Bank and Gaza. During the final phase, the project will evaluate two scenarios including a form of sovereignty for the Palestinians over the West Bank and Gaza and a form of confederation agreement with the Hashemite Kingdom of Jordan.

The team will define the elements of the

treaty and work out the details necessary for full implementation. The project will conclude with the publication of a document entitled: Israeli-Palestinian Peace Treaty - The Military and Strategic Defense Agreement.

At the present time the Israeli team has been formed. It consists of a former Israel Defense Force (IDF) Major-General who head military intelligence, a senior military strategist from an Israeli institute for strategic studies, and a former shin bet (secret police) commander of the West Bank. The Palestinian team is in the process of being formed. It currently consists of a Palestinian expert and writer on strategic issues. Two other Palestinian participants will be selected during October 1991. The Chairman for the project will be a former U.S. Statesman. The project will take place in Oxford in the Spring 1992.

IPCRI Receives Grant for Water Research Project

A group of British Scientists has agreed to fund a research project entitled: *Development of a Regional Water Resources Master Plan as a Contribution to the Peaceful Resolution of the Israeli-Arab Conflict*. The research team is composed of: Prof. Hillel a renowned water expert and a professor of environmental health from the Hebrew University, Dr. Elisha Kally who has written extensively on issues of water and peace and is the former long-term planning director of the Israeli Water Commission, Dr. Karen Assaf a Palestinian hydrologist working for the Arab Institute for Scientific Research and the Transfer of Technology in Ramallah, and Nader el Khateeb, the water engineer for the tri-cities Bethlehem, Beit Jalla, and Beit Sahour. Mr. El-Khateeb is also project director of the Bethlehem Sewage Project.

The primary objective of the study is to propose workable alternative solutions

for regional water resources (supply, consumption, conservation, reuse of waste water, etc.) in the future that will best meet the needs of all the partners to the peace process. Alternative scenarios will include cooperation between Israel and the Palestinians only, as well as several other possible scenarios for various ranges of regional cooperation involving Israel, the Palestinians, Jordan, Egypt, Syria, Lebanon, and Turkey. The study will be completed in May 1992.

International Conference on Water Issues

Through IPCRI's Roundtable Forum of Water Scientists grew an initiative to hold an international conference on water issues cosponsored by Israelis and Palestinians. The Hebrew University has agreed to be a sponsor and a professional Palestinian water organization will serve as co-sponsor. Funding for the conference has been promised. The principal goal of the conference is to examine the major elements of the water issue from a technical and geo-political perspective and to propose innovative approaches which would prove that accommodation and mutual benefit are possible. Even partial agreement among the participants would have symbolic significance far beyond the immediate achievements, It is anticipated that by presenting cooperative solutions to alleviate the water problems of the region, there will be greater motivation and readiness to reach a peace agreement. IPCRI will present its own research paper on a Regional Master Plan at the Conference. Ten international experts will also participate. The target date for the conference is June 28 - July 3, 1992

U.S. Allocates Funds For Israeli Palestinian Cooperation

The U.S. Senate's Foreign Operations, Export Financing and Related Programs Appropriation Bill for 1991 included the following legislation:

"The Committee encourages the Agency for International Development to make available under its Democratic Initiatives Program not less than \$350,000 to private voluntary organizations in Israel and the West Bank and Gaza for educational, cultural, and humanitarian purposes involving both Israeli and Palestinian private citizens. The goal of such efforts should be to strengthen contact and mutual understanding between the Israeli and Palestinian peoples"

This legislation was initiated by the Jewish Peace Lobby. IPCRI's Israeli Director, Gershon Baskin was involved in the lobbying process. Mr. Baskin traveled to Washington twice to meet with members of Congress from key committees, State Department Officials including advisors to Secretary Baker, and AID officials responsible for facilitating the funds. On the last day of Fiscal Year 1991, September 30, 1991, the Consul General of the United States in Jerusalem, Ms. Molly Williamson signed a contract on behalf of the recipient organizations for a total sum of \$100,000. IPCRI has received a grant of \$24,690 almost 25% of the funds which were made available.

New lobbying efforts proceeded for fiscal year 1992. Four Congressional Committees have accepted the new funding program which is now called: *Israeli-Palestinian People to People Activities*. The program has been removed from the existing *Democratic Initiatives Project* of AID making it easier for A.I.D. to find the necessary funds within its own budget. The amount to be allocated for 1992 has not yet been determined. The House Committee on Appropriations has

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Roundtable Forum of Water Scientists - Meeting # 11

Nov. 4, 1991

Present: Nader al Khatile, Isam R. Shawwa, Dr. Jad Isaac, Mohammad Sbeih, Dr. Yousef Abu-Safieh, Hisham Zarour, Aaron Wolf, Prof. David Scarpa, Enrico Gallini, Dr. Yehuda Laufer, Dr. Miriam Waldman, Prof. Alfred Abed Rabo, Dr. Yehudit Elkana, Reinhard Meierjohann, Ayman Rabi, Dr. Karen Assaf, Prof. Hillel Shuval, Gershon Baskin, Ghassan Abdallah

Baskin: This is definitely the largest meeting we've ever had and it's going to be quite difficult for everyone to hear each other and contribute to the discussion. I hope it won't be a problem. I think that there are two things which probably are, I have a feeling that we're sitting here in Madrid where even though we didn't see any final solutions come out of the initial negotiations, I think that all of us can probably agree that the general sense of the most fruitful of the discussions and the easiest of the discussions to be held were those between the Israeli delegation and the Palestinian/Jordanian delegation and I would suspect that movement in that arena will be more rapid than in the other two arenas where negotiations are taking place. I think it's also maybe significant that just as in Madrid they had a yellow carpet to greet the dignitaries, here they switched the white tablecloths for a yellow tablecloth, maybe in the same spirit. I would suggest that we begin by going around and everyone saying who you are and where you come from. Jad, please.

Isaac: Jad Isaac, Director of Applied Research Center of Jerusalem.

Shuval: I'm Hillel Shuval from the Hebrew University of Jerusalem, most of you know me.

Sbeih: a water engineer, and Consultant to ANERA.

Abu-Safieh: Yousef Abu-Safieh, I work with the Islamic University, I teach ecology and my research interest is water pollution.

Zarour: Hisham Zarour, a hydrogeologist, Applied Research Institute.

Wolf: I'm Aaron Wolf of the University of Wisconsin, Madison, didn't come special to this meeting although I probably would have. I'm working on two projects, one for the University and another is with the U.S. Institute of Peace in Washington, DC and I'm working with Prof. Shuval.

Scarpa: David Scarpa, a geologist at Bethlehem University.

Gallini: Enrico Gallini, technical advisor for the Bethlehem sewage project.

Laufer: Yehuda Laufer from the Truman Institute of the Hebrew University.

Waldman: I'm Miriam Waldman, Director, Ecological and Biological Research in the Ministry of Science and Technology.

Rabo: Alfred Abed Rabo, Bethlehem University, a chemist interested in waste water.

Elkana: I'm Yehudit Elkana from the School of Public Health of the Hebrew University Medical School.

Meierjohann: I'm Reinhard Meierjohann, civil engineer from Germany working on the Bethlehem area sewage project.

Rabi: I am Ayman Rabi working with the Palestinian Hydrology Group.

Shawwa: I'm Isam Shawwa, a consultant in the Gaza Strip.

El Khateeb: I'm Nader el Khateeb, working on the environmental engineer from the Palestinian Hydrology Group, I'm the manager of Bethlehem area sewage project.

Assaf: Dr. Karen Assaf, from the Arab Scientific Institute for Research and the Transfer of Technology in Ramallah.

Abdallah: I am Ghassan Abdallah, the Palestinian director of IPCRI.

Baskin: And I'm Gershon, I think everyone knows me. I would like to begin before we open up with Prof. Shuval, if we could have a report from one of the people who was at the visit to the Hydrological Service. For those of you who don't know, we had applied for quite a long time to get permission for access to data from the Hydrological Service and to allow Palestinian water experts to have access to official Israeli data; after a five-month period of petitioning and letter-writing and faxing and telephone calls, we were given permission and about three weeks ago, six of the people who are in this room attended a two or two and a half hour meeting with Dr. Arieh Ben-Zvi, the Director of the Hydrological Service, which was the first in a potential series of meetings and other avenues for cooperation with the Service. Perhaps someone will fill us in on what happened there.
Okay, Karen.

Assaf: I think the meeting went very well. He was very specific in explaining what data was available in the Service and not. Some of the things I think we were looking for such as water levels or water maintenance and usage, he distinctly said doesn't come under his auspices, didn't come under his office. He gave us names of ministries or other offices that we should go to for this data. He gave us a free hand to come to the library whenever we want as long as the librarian is there, so we can check out, we can photocopy, we can look at their maps. As far as basic data or raw data, he won't give it out even to people within the Israeli government unless he feels that there really hydrologists who know how to use it but he's willing to give out data that has been processed or reports that he published?

Baskin: I think it was ...

Assaf: I think he was very, very open. I think he was very honest, a very, very smart man.

Bank is lower than Gaza, but it's about 165 cubic m per capita for the Palestinians today with the present population, Jordan it's about 260 according to the Life article it's only 160, I don't know what they based their figures on but I think my figures are more correct, and for Israel it's about 375. This is an important point of departure for this discussion. The partners to this conflict are already all in the water stress zone. Some are a little better off, some are a little worse off, but all of them are already in the water stress zone and if we're talking about planning periods, and here we're sitting around the table are engineers, hydrologists, economists, a normal planning period for water planning would be thirty years in advance, without going into exact detail that we can assume doubling of the population over this planning period ...

Baskin: What is the effect of the Attaturk Dam and the Gap Project in Turkey on the water in Syria ... ?

Shuval: This is what they've got. Most of it's not, they only use about ten percent.

Baskin: Once the Gap Project is completed the Turkish government will be allowing a specific quota of water for Syria and Iraq ...

Shuval: The total amount is correct. Whether Turkey will take a little bit away from that, they're not using anywhere near all of this, and neither is Turkey, so whatever Turkey takes away from Syria, or doesn't take away from Syria, Iraq, at least for the moment it's well below what they're using. It'll be, they'll be using only ten or twenty percent of what they have available, at the moment. But let me get back to this ...

Shawwa: Excuse me, how much of it goes into the sea?

Shuval: In Turkey? Almost all of it. I mean only ten percent is used in Turkey right now.

Shawwa: I mean, right into the ocean?

Shuval: Most of it is, this is water that could become available with engineering development. It is utilizable water resources. When we say utilizable, we mean within the framework of economic engineering projects.

El Khateeb: Another issue is the quality here, because you proceeded from Turkey there was Palestine, the quality is deteriorating and the worst quality is for ...

Shuval: As you get to less and less water available, more and more poor quality of water is used. I have not included in any of this brackish water or waste water re-use. But it could become part of the formula. But it's not numbers that are important here it's the relationship. I mean, you'll see as I develop my presentation. If we're talking about a twenty to thirty year planning period, and we're talking of something like doubling the population, maybe for Israel it'll not be exactly a doubling, but for the Palestinians it will certainly be a doubling and maybe for Jordan also, if no water is added to this matrix and, let's just say for the sake of argument that we're talking about a doubling of the population, in other words, the denominator is twice as big, therefore the per capita available resources is half, it's obvious that the Palestinians, the Jordanians and the Israelis are so seriously below the water stress level that

the present water resources available to all of them provides a serious concern and threat to their future. And I'm putting this all together for the moment, even though there are differences, but it provides, this exposes the three partners, the three main partners to the dispute, to a serious concern and threat to their future. Now I think it's an important point of departure because in a way we are playing a zero sum game and when we get to talk about solutions, shifting from one to the other when none of us have enough, is not going to be a very easily acceptable solution. But that's at the second stage. So taking that as a point of departure, that the present situation is that the three partners are, I'm not denying that Israel has more and the Palestinians have less, but we're all in an era, an era where we don't have tremendous access to the water. Now let's take a look, Israel, of course, planned its present and future water resources over a number of water sources which are in dispute. And let's define water disputes, but before we do that, I would like to talk in general, historically about water disputes. We, in the Middle East, seem to, we're the only people who fight about water. But throughout the history of mankind people have always been fighting about water. If you read the Bible you know that in the time of Abraham, in Beersheba, they were already disputing who could use what wells and we know that there are many, many early water disputes. It's interesting that in the English language, the word water dispute is written into one of our most basic words, the word rival, everybody knows what rival means, it means two people disputing over the same thing. And it's interesting that in English, let's see, the word rival comes from the Latin rivalis, one using the same stream. The ancient Latin meaning of rival is rivalis, two people can, in other words the most obvious form of rivalry in ancient times was fighting over water. Another form is fighting for love and another form is one or two or more striving to reach to obtain something that only one can possess. As far as love is concerned that's debatable but as far as water ...

Baskin: It's also debatable.

Shuval: So we see that we're dealing with a very ancient phenomena, we didn't invent it, we are part of a world problem. There are 200 countries in the world that have shared resources and sometimes in the past have fought over them. We didn't invent the problem of water rivalries. And we may be able to look at other countries to see how they solved it.

El Khateeb: Just another observation, just a comment. What is the last meaning? One that? another ...

Shuval: ... in desired qualities. What does that mean? ... It's an obsolete meaning. Let's quickly go over the areas of dispute. Most of the people in this room know them. But the basic areas of dispute I put red dots on them, the first area of dispute is over the Jordan River and here we have a river which is a truly shared river. Israel is on certain areas on one side, on some areas it's on two sides, but the water arises in one country, at portions of the river there are two countries abutting it and it's a classical situation of a shared resource where more than one person, or more than one country can withdraw water from one river and as way back in 1955 we all know that there was almost a beginning, in fact, the beginning of a war between Israel and Syria over the location of the point where Israel was planning to withdraw water for its national water system, at Gesher B'not Ya'akov, at the B'not Ya'akov Bridge, how do you say that in Arabic? - Jisr Banat Ya'aqub - almost the same. And, as you know, Syria fired on Israel, Israel fired on Jordan and President Johnson sent a mediator, Ambassador Johnson, I think it's important, I don't want to go into it in great detail, but

say that we are using more than we're allocated. I'm not going to go into that right now. The Syrians say we never got our fair share of that allocation. So these are all open for discussion. The Yarmuk, amount of water. The second issue here is the Unity Dam where Syria and Jordan are planning to build a dam which will be an important source of energy for Syria, a very critical source of water for Jordan, water for Amman water supply, and Amman suffers from a serious water shortage, where people get drinking water once a week and have tanks on their roof. And those who are environmentalists know the unsanitary results of having roof tanks and no pressure in the water mains. No pressure in the water mains is a dangerous environmental problem because it can lead to infiltration of sewage into drinking water; it's an undesirable situation. Jordan and most of Jordanian city, Amman, suffer from severe water shortages and one of the solutions is the Unity Dam which could store the floodwater of the Yarmuk which is now going to waste. And to supply vital water both for urban uses and for irrigation. Israel has objected to the construction of the Unity Dam because it feels it might effect the quantity of water that Israel's withdrawing from the Yarmuk and the quality. It's a classical type of dispute where there are two partners on a river and the world financial community, particularly the World Bank, will not accept any water resources plan for funding unless the downstream and the upstream partners agree. And I think it's basically a healthy thing, it forces people to get together. And I can tell you the ? things there are negotiations, we know that, on that, so that both parties can benefit. That's the second area, the Yarmuk, it's called the allocation of the water, the building of the dam, the use of power, how much Israel will get, how much Jordan will get, it's an area of dispute. The third area of dispute is what we call the mountain aquifer. I hope for most of you these are known issues but I'd like to define them. The mountain aquifer and, basically the mountain aquifer is this aquifer here which supplies about, on the western slopes, it supplies about 350,000,000 cubic m of water per year. About. Sometimes Israel has pumped more, overpumped, but what it can supply is somewhere between 300-350,000,000 cubic m a year. Israel has developed long before the '67 war, Israel has developed many, many deep wells pumping that aquifer, about 85 or 90% of that aquifer is utilized by Israel, within Israel's borders, in deep wells which existed before '67. Palestinians today say that, correct me, about 85% of the water of that aquifer falls as rainfall in the West Bank area. This is a rough picture of that. It's not really a, it's just conceptual. In other words, there is a Palestinian claim that about 85% of that water falls as rainfall in the West Bank area and therefore should be seen as a resource which should be allocated to the Palestinians, Palestinian water, if you would like, and therefore in the negotiation process the Palestinians claim and will claim that the Palestinian water should be allocated to the Palestinians for their survival since they don't have enough water. The Israeli claim, on the other hand, this is, we are a downstream country, the groundwater is no different than surface water, and that historic rights and historic uses have to be taken into consideration in any negotiation process. And just because a country is an upstream country is not a reason in itself to have total allocation to the upstream country. The implication being that if upstream countries are absolute owners of water then, for example, Egypt, which is a downstream country on the Nile River, not one drop of the Nile River water, maybe one drop, falls as rain in Egypt, Egyptian civilization has survived on Nile River water for 5,000 years, if, and I'll give it a name now, the absolute sovereignty hypothesis or doctrine of water was universally applied, Egypt would have no rights to any water because all of the water comes from the White Nile and from the Blue Nile, from Zayre, Kenya, Uganda, Ethiopia, Central African Republic and Sudan, and at least, in fact if it was universally accepted as a basis, then Egypt would have no rights. Well it's obvious that Egypt has some rights, 6,000 years of civilization

certainly give it some right, or even 100 years, or even 50 years. But, in other words, the principle, the argument, let me, I'm just laying before you the argument between the doctrine of total sovereignty over water resources of the upstream country, which is one doctrine which is very much debatable by international lawyers, but at one time the United States held to that doctrine, versus the other doctrine, which is called the natural flow doctrine, or the natural water flow doctrine, which holds that a piece of property includes the water that goes through it. That is the natural flow doctrine, that a piece of property that has water underneath it may be starting someplace and ending someplace else, but it has rights to the water that flows, a river that flows through a piece of property ... I just wanted to put the dichotomization of these two doctrines. The natural flow doctrine says that the water that flows through and is used by the residents of that property is an intricate part of the sovereign rights over that property and any attempt by an upstream country to take it away is an invasion of private property. That is the ^{the} claim of Syria against Turkey today. That any reduction of the water by the ? Dam, by Syria, Syria and Iraq will say that would be taking away our private property. So we have these two opposing doctrines.

Assaf: Okay, I'd have to say my comment that I always comment. If that's true you doctrine ...

Shuval: I don't know which is my doctrine.

Assaf: The doctrine you're saying, alright, that the water flowing in the ground is private property, the Military Government has stopped us and taken the private property of the Palestinians for the last forty years. Because they did it ? right or wrong? I always ...

Shuval: That's another, Karen ...

Baskin: ... the Jordan River.

Assaf: I did ? .

Shuval: Absolutely. We're not arguing whether any stopgap was right or wrong. I'm just presenting two doctrines which, if both were practiced absolutely and exclusively, could only lead to war. Well that's the point I want to make. If those two doctrines were practiced by two different countries, in other words the downstream country always held that all of the water that flows through it is absolutely and totally theirs, let's just take ... of Egypt and they say to the Ethiopians, you're starving of droughts, you don't have any water? Too bad. We historically have taken all your water. You have no rights to water. Or, if Ethiopia started building water projects that Egypt didn't agree to and Egypt said, you can't do that, we'll conquer you, in other ? control the sources of our water, and the only way to do that is to conquer Ethiopia, that would lead toward, in that direction. So we have to understand that those two doctrines are mutually exclusive. They do not provide the basis for mutual survival because it means, on the one hand, if the upstream power claims total property rights and the downstream, that means that the downstream powers that are powerful enough will capture the upstream powers and to give you an example, General Rafael Eitan, the Minister of Agriculture, published ultimately in the Israeli press a statement that Israel can never give up the West Bank and the occupied territories regardless of security issues, regardless of any other, because it contains Israel's essential water resources and Israel must hold on to its water

Shuval: ... Disputes between countries, and there are many, should be resolved by examining the principles of equity and equality between the countries and objective needs. Now those are nice words which are hard to put into a formula but they say a lot. In other words, they say both downstream historical rights must be taken into consideration as well as upstream new rights. You have to take into consideration the objective social needs of both partners. You also have to take into consideration whether one of the partners has alternative water resources. For instance, there may be a small river in dispute but the upstream partner has a big river next to it and they say what are you fighting over that small river for? You may have riparian right but you have enough water in the next river. That's another ... Or you don't need that river, maybe you'll accept economic compensation for it. Another possible solution. The Helsinki Rules basically say that the decision, the basis of reaching an accommodation should be, as Nader says, true negotiations, recognizing that history is not something you can just wipe out, you can't wipe out Egypt's history for 5,000 years and say Egyptian civilization has no rights, it has rights. It must be accepted in the formula. And you can't just wipe out Turkey's right to develop more water in the future or Ethiopia's right to develop, or the Palestinians right to develop beyond the state that they were in 1948 with more modern industry, more modern cities, more modern agriculture and to have a higher level of living. These must be recognized in a formula, negotiations. Neither the total riparian rights doctrine or the flow-through doctrine are acceptable basis of reaching agreements. But the main point that I would like to make, that these disputes are over such a limited amount of water that even a Solomon, if it was a Solomon who came down and said I will negotiate, I will arbitrate, couldn't make a just division because there's not enough to go around. After we accept the fact that there has to be some principles of social justice, and certain principles of recognition of rights and historic rights and new rights, see I argue with you on '48 or '67 because I say the Palestinians are people, they need water, they need to live, even if they just, I mean, they're there. And if their birthrate is such, they have to have adequate amounts of water to have a decent life. And when something I said to Karen in a moment, you know, some Palestinians attacked me when I lectured at MIT and said well Israel would have no water problem if it stopped immigration from the Soviet Union. Well, first of all, that's not correct. But even if it was correct, I've said that in relationship between two countries each side has to recognize the national raison d'etre of that country. Israel's raison d'etre, whether you like it or not, is to be a place of refuge for the Jews of the world. That's why we have created. So to tell us well we will make peace with you or we will negotiate if you stop immigration would be to say if you commit suicide we'll negotiate with you. Likewise, Israel would not have the right to say to the Palestinians, how many Palestinians from the Palestinian diaspora will return eventually to live in whatever is created. And I don't want to define it, I don't want to give it a name, because for the Palestinians it's just as much a raison d'etre to provide place for those of the Palestinian diaspora who want to return. So you can't use the argument and say you can't have any more immigration, but we will want immigration. I'm giving that as, there's just not enough water. And the way to solve this problem is to think reasonably and I want to go back for a moment, in other words we have to, Solomon couldn't make a division just as a mother with three children cannot divide up one piece of candy, with social justice. Maybe if she cut it in half, or three ways, but there wouldn't be enough candy to go around. So that the approach, in my opinion, must be, well our friend Elisha Kally made an estimate, and I won't go into the details, that the objective Palestinian needs are about 400,000,000 cubic m per year more than what they have now. I don't know if that's right. We're talking about, what are you going to divide up? The Palestinians are not going to take

400,000,000 cubic m from Israel to get that because Israel would never sit down at a negotiating table if it felt that that was what it was going to end up with. The Palestinians need about, I mean, let's assume that his calculation's correct, about 400,000,000 cubic m more, over the next thirty years, not immediately. Israel needs more water. Jordan certainly needs more water. Where is it going to come from? From haggling between us? And I'm not saying there's not a basis for arguments between us. I'm not saying the allocations now are exactly right or just. The only way is to add water to the formula, to add enough water from outside sources to meet the objective needs of the Palestinians, and they're great, the Palestinians are the worst off, to meet the objective needs of the Jordanians and they have their backs against the wall, and to meet the objective needs of Israel. Negotiating for a just and equitable division when there's enough to go around is a lot easier. Now the question is how to get the best you want? I don't think that I have worked out an economically feasible solution. I am talking in principles. I'm talking about four basic, well three basic options plus desalination. Let's say four basic options. Some or all of them, but adding water. And here I take Elisha Kally's project Nile - El Arish- Gaza with or without Israel. It's not important right now whether the water goes just to Gaza and releases water for Israel or goes both to Israel, but I can say, and I'll just mention for a few minutes, the economics are not bad. It's not an expensive project. The water would be one third the price of desalination, or maybe less. I think Elisha Kally said 25¢ a cubic m or something like that. It's a simple pipeline and could be done. It has lots of political implications for Egypt. One, that Egypt in the next forty years will be short of water. So it couldn't be forever but also it ...

Baskin: That's only true if one continues to use water the way that Egypt has.

Shuval: Yeah. But even then Egypt in the long run will be short of water, when their population doubles. They are using water very inefficiently. But at any rate, why would Egypt be motivated. I think that Egypt has a moral obligation to Gaza; forget about to Israel and the peace process, but to Gaza because between 1948 and 1967, I say this to my Egyptian friends so don't worry, Egypt mismanaged the water in Gaza, severely mismanaged, by a laissez faire policy. They just let people pump. They had a laissez faire policy which maybe in Egypt works because there are no problems, there's, next to the Nile River you can pump as much as you want. They don't have licensing, they didn't have inspection and in Gaza the laissez faire policy led to severe destruction and salination of the groundwater. When the Israel, I know the Palestinians blame Israel as a terrible act when we cut down the use of water in Gaza, but the reason it was done was to save what was left of the aquifer.

Abdallah: Not to save it, not to save it but to use it for ? .

Shuval: No, but the water in Aza, Israel required that the people who live there not to pump so much because they were overpumping. I know the perception of the Palestinians is that Israel did it to ...

Baskin: No, but the root of the problem ... Gaza was what created the overpumping. When the population of Gaza doubled in 1948 there had to be additional pumping.

Shuval: Gershon, I'm talking about an objective situation. The Gaza water supply has been practically destroyed by overpumping. And it's today, it's legal or allowable rate is half of what is actually being pumped.

Awali River that's, from the Litani which goes by tunnel to the Awali River for power, and it's at the moment only partially utilized and some of the water from the lower Litani. Such a project could be economically viable on a commercial basis it could benefit Lebanon but also for a limited time. For both, for that project it would have to be a storage facility, since most of the water in the Litani flows the winter, most of the utilization is the summer. And here the Palestinians have an argument. They say, please we don't want the Israelis to store the water because that means that Israel will control us. And we Israelis have to be sensitive to that argument. The Palestinians don't want to feel that they are going to get water that will be controlled by, even if we're friendly states, even Canada and the United States. There are number of solutions. First of all it has to be addressed. I'm stating here that every fear, concern and problem has to be faced by Israelis over the negotiating table. Palestinians, in other words, Kally said put it into the Sea of Galilee. And I heard you say, no, we won't agree to that because that means that Israel will control and how do we know how much Israel takes. How are these problems solved internationally? There are, this is not the first phase, this is joint inspection, control and management. I know you may think that only in the days of the messiah could that happen. But very bitter enemies have reached accommodation on joint inspection, control and management over water resources. Austria and Hungary, when they were on two sides of the, now they're in the same camp, but there were times when the Danube River during the communist regime, they jointly managed parts of, the management of the Danube River, flow levels, they read the same clocks, they inspected the quality, Canada and the United States, you say well they're good friends, but Mexico and the US have gone to war over water. They have a joint commission, where they read the measurements together, they open and close the, there are a number of examples of joint management and operation. I know that both sides would like to feel that they can be independent but the very act of sharing a resource means the end of absolute sovereignty. Every state would like to be totally sovereign and control its fate but the moment they're going to have a shared river, the only way to live together is to manage it jointly. Now this is a hard pill to swallow, conceptually, for the Palestinians, they would like to be totally, for Jordanians, they would like to be totally, for the Israelis that would like to be totally independent, never be dependent, but if we're going to reach an accommodation we'll have to learn the formula of joint management, mutual respect, mutual inspection, control. It is done in a hundred different places in the world. That's one possibility. Another possibility is that some of the water could go to the Unity Dam. I mean I'm giving you an example. Some of the Litani water could go directly to the, and then it would be entirely under the control of Jordan. Then the Palestinians would say, well we don't want Jordan to control our water. Okay. But we have to work out joint living together. There is no question that the fear of control is deeply rooted in the fears of the Palestinians and in the hearts of the Israelis. General Rafael Eitan, whether I agree or disagree with his advertising, made a statement which no environmental scientist can overlook. He said, what if we reach a peace agreement and we divide up the water on the mountain aquifer, we agree, but the Palestinians through neglect, not through malice, let the sewage and industrial waste from Ramallah flow down and pollute the aquifer below. How could we agree to that? Palestinians say, how can we tolerate the fact that Israel puts industrial waste into the Jordan River and salt water into the Jordan River, it makes it unusable. Well, there is a symmetry here. The only way we can live together is to inspect jointly, control jointly, take tests, I have seen pictures and have visited on the St. Lawrence River where American and Canadian scientists on the same boat taking samples, going to the factories together, measuring the amount of industrial waste, it is not mission impossible. I know it sounds like, as we say

in Hebrew, מִיּוֹם הַמְּשִׁיחַ, the days of the messiah, but there's no question that the alternative is total control by the downstream country of all upstream countries. Military control. That's what General Rafael Eitan believes in. But we're talking now about reaching an accommodation which will provide a good protection for Israel and for the Palestinians. I think both sides need to be protected against the problems of pollution, it can only be some type of joint commission. You may think that that's utopian, I don't. The third project would be what is called the Turkish peace pipeline. You may think it's far-fetched but this project is being carefully evaluated right now, and this is off the record, by the United States Army Corps of Engineers. The Army Corps of Engineers in America is a civilian organization, it's not a military organization. They build dams and big projects. Off the record, they're out of work, they don't have any projects and they're looking for projects globally. They are doing a feasibility study on this project. Now the original Turkish delight, Turkish peace plan is much much more ambitious. It's from Turkey down to, all through Kuwait, Saudi Arabia to the Gulf, only 1,600 km long and down to Mecca. That's the original grandiose plan. For the small figure of \$20 billion. The cost of pumping water from this river down to Muscat is more than the cost of desalination plants in Muscat so obviously there's no economic benefit for this grandiose plan. And of course Syria and Iraq and the other countries talk about Palestinian and Israelis worrying about control, they also don't want Turkish control over their water, they don't want Turkey to have dams and then ration water to them, there are many problems here. But the mini-pipeline is just a small element of that pipeline. It's just this section from Sian River, to Damascus to Amman and to the West Bank. Even if a drop of that water never goes to Israel, but it supplies the needs of Syria, Jordan and the West Bank, or much of its demand, it could make a contribution. It's very complex, it crosses the borders of three countries, it's not so expensive according to calculations I've seen it's about half the cost of desalination and would cost about two or three billion dollars. That sounds like a lot of money? It's not. Two or three, the Gulf War cost a billion dollars a day, so it's three days of the Gulf War. stealth bombers, the United States builds and sells costs a half a billion dollars each; so five billion dollars would be ten stealth bombers. I'm just giving you proportions. It's a small price in the total peace process. It's not mission impossible. It's complicated. It would require an agreement on joint management, Syria and Jordan would never agree to have the faucets completely controlled by Turkey, but under the same principle of a regional peace project with joint management, they could supply enough water in a pipeline 600 km long. I'd like just to give you a frame of reference, in California they are building water pipelines 600 miles long. So it is not entirely new concept in water engineering to transport water such distances.

Baskin: Well, what is the distance ...

El Kahteeb: Libya.

Baskin: It cost \$5 billion.

Shuval: Yeah, but that's not an economically ...

Baskin: How much?

El Khateeb: 20 billion.

Shuval: Yeah, but it's not an economically rational project. It's, you know, it's

it and create a new water stress and that's how you come to new quotation. How much the Palestinians should use, how much the Israeli's should use. Perhaps this is a formula. But we'll have to discuss it next time we meet in this simulation exercise. My main concern with this is that it brings me the idea of the Cadillac and the Vespa, where two people are using, one the Cadillac and the other Vespa and both are saying we want petrol. You know, why don't you cut down the Cadillac and use a Vespa, use another 100cc engine and I think we come to a very good compromise. If you look at how much, what are Israelis using the water for, are they going to strive for, you know, the ? of the water or are you talking about using water for lawns, for swimming pools, using it for subsidized agriculture. We know very well that Israel subsidizes its agriculture with something like \$250 million a year, you know, which means that if you look at the average income from citrus groves which take something like 500, 600, they are not making enough profit from producing citrus. Of course, they can afford it because they are taking Palestinian water. If they were paying for that water I think it would be a difference.

Baskin: No, but citrus groves are being eliminated all over the country today because of that reason, it's not economical.

Isaac: Only in 1990 ... when we had this argument but between 1948 and 1990 we heard Mr. Shamir in his speech was talking about, you know he boosted that thing and he brought in Mark Twain who came to this land and found it, you know, desert. I don't think that is, you know, a real description of the land except if you visit the West Bank highlands and or Gaza now.

Shawwa: Gaza, not now, Gaza was always green.

Isaac: Now it's not green because of the salinization. Now let's go back to the ? , you mentioned something about ? that ? a quarter of distribution is important, exchange of information is important, solving things by negotiation is important but most important is that one user will not cause the destruction of the ... well, we looked at what Israel did whether in the Jordan River or in Gaza, the over-pumping in Gaza is causing desertification in Gaza and in the Jordan River was also hurting the environment in that region. This has not been considered to be a major part, you know, of course, you are using it but don't cause destruction of the Palestinian environment. And this has not been ...

Asaf: And also in Gaza they catch the water before it gets in .

Isaac: I'm coming to that. In Gaza they directed the Gaza Valley .

Asaf : And they have wells all around.

Isaac: Right. So that prevented the Gaza from getting good water which would have decreased the salinity. This should be taken into consideration. Of course, we are talking about the zero sum game, I understand the concern about needing more water but I think I agree with Prof. Shuval that first let's establish how much the Palestinians have the right for. This is the water which we are entitled to and frankly this should not wait, this should not wait for the peace or for the peace conference or whatever. This should not be brought in before '67, these Arabs should not come ? . How much the Palestinians are entitled, definitely you are entitled to more than 150,000,000 cubic m which have been cut down by 10% this year and I think why I'm talking about, because this is becoming an environmental catastrophe. It's only 5% of the total West Bank water potential

that we need in order to prevent a disaster, an environmental disaster in Gaza. This cannot wait. It's an irreversible process. Once the sea water gets into the Gaza aquifers, ...

Shawwa: It is already.

Isaac: It is already ... I mean it is encroaching already to save it by changing the plantation into more ? and it is ...

Meierjohann: the ... population is not resistant against salt, salty water. The population isn't, will never become resistant against ...

Isaac: I'm not talking about population I'm talking about agriculture - for the water, for domestic use we should be a different approach, a different otherwise we will have serious health problems in Gaza and already we hear about blood pressure and kidney stones and ... : ... renal failure, kidney stones ... blood pressure and so forth. So I think this is a question of emergency, you know, which has to be addressed. It cannot wait. As I said, you know, we are talking about 5% of the water potential of the West Bank which should be diverted, I think it's less than, you can do it by just reducing 50% of the lawns ? . This means for me that there is a difference in point of departure. I believe strongly that Israel is a water wasting country, it's not a water scarcity country . Israel could do better in water management. They should look at their account of all their water resources, Palestinians should do the same. This country cannot sustain the current agricultural plants , it cannot sustain the types of plants for which we use it. If it is subsidized, if we believe in the free market economy then let us use water as a commodity and you want to use it you have to pay for it. You are using West Bank water you have to pay for it. If it's economical, if it's economical and you can afford the price, and you can do very good things with it, okay we accept. That does not, by the way, what I am saying, it does not mean that I approve of the current policy for Israel. What I am saying is that the Palestinians want, and and perhaps rightly so, want to know how much they are entitled of their water and perhaps they should get it. And, perhaps, we would decide not to use the Turkish pipeline because, I think, they will be against it because it will never be feasible on the long term, it is a political bribery that will be used to get Israel to move from its intransigence but mass transfer over long distance of water has never proven to be a solution. I don't know of any ...

Shuval: California.

Isaac: Already you are having problems in California because of the mass transfer of water along ... no they are getting from Canada and we have complaints with two very friendly neighbors. I don't know how can we do it especially knowing that the volatile situation in Turkey, in Syria, in Lebanon ...

Baskin: Jad, have you calculated what you called the Palestinians fair share to water? Do you have an estimate of what ...

Isaac: Well, if I will have it now, I will put it to you then why go to negotiations

Baskin: No, I think ...

Shuval: ... have your own figure ...

think that in any coming war Israel will be using them. So those 6 billions would come, or would be covered from cutting off of defense costs, so, perhaps it may be good idea to solve the crisis, partition of the water, and accurate definition of water rights, and afterwards every country can go and settle it water crisis....so perhaps Palestinians don't want to be, to depend on agriculture. Perhaps Israel would change its mind at some stage. And that's why I think that this kind of creation of solution should be left to political entities after settling the political dispute, not to connect it with settling the political dispute.

Baskin: I think that the only comment I have to that is that I think we have to recognize that in the event of peace in this Region that the international economic powers that be, United States, Japan, the European Community, and the Gulf States have already said that they would be engaged in some kind of Marshall Plan for the Region to increase economic development and water projects etc. I think it would be very narrow thinking to limit ourselves to adopt what you are suggesting that we let these future decisions be the individual decisions of the....

Zarour: No, that's not what I'm saying..Gershon..these things are not a prerequisite...

Baskin: No, I don't think that they are a prerequisite, but I think that they should be strongly recommended by anyone such as us sitting together trying to come up with solutions for the problem that regional cooperation, not only on issues of water, but also on issues of water are important for not only resolving the water problem.....

Zarour: and we have the intention of the good will, then you are absolutely right, but we shouldn't make this as prerequisite for what will happen afterwards.

Isaac: Listen, I would argue also that the Marshall Plan, I am all for the Marshall plan, but I think we should use whatever available resources, financial resources, for the most beneficial projects, perhaps the usage of the money for the Turkish pipeline, or for importing water might not be as feasible as the transformation of the economic sectors from, for example, agriculture to light industries. Or, for example, to use solar energy to, or nuclear reactor, or because you are talking about water for .. quality of water, and usage of water. And economics. So, the idea I get seems to overemphasized that we need more water. But, yes, ok you need more, what I don't? . It's going to cost you, 25 cents per cubic meter if use the pipeline. Which means that it would cost 200 dollars at least for water. How much will be the return from this 200 dollars. If it is 200 dollars I think this will be totally nonsense. But, if you make 1000 you can - so I'm all for it. So look at possibility. Don't use that as the blackmail the question of water as an excuse for blackmailing, you know, very harsh words. Blackmailing the international community Well, there are other things here, there are other items, and I want to bring this, it's good that we have at least now one of them, hundreds of the water sewage project in Lebanon. You know, this is a resource in the Occupied Territories, in the West Bank, which is not part of Jerusalem, and could be a source for regretting something like 10,000 dunums now, and all that's needed is something like 10 to 20% of the total project if we include in the just sewage collection current plan which is just sewage collection and dumping it in... the project was divided so the west part will feed into the Jerusalem west, and the east will be taken five

kilometers or more perhaps eight, we take it there and so it will leave with the Kidron Valley where it will meet with East Jerusalem sewage system. While the most rational thinking says that, this, there should be simple sedimentation ponds, created in the Bethlehem region and in this, that desert area called the Judean Desert, we call it the East Highlands, but it is, dessertification is very high, and it's creeping up, and you could have to 10,000 dunums, where the badly needed water, or 20,000 if you do something with that irrigation. I don't understand the logic why the occupation authorities refused this kind of project, and it was a big no. Why the, there were plans presented, while very economically....

Assaf: The same thing happened in ?...

Baskin: I would suggest that we not get into these specific examples and details now. Lets continue going around and hear more comments on this lecture.

Wolf: I just want to say first of all thank you for doing this. I've been reading about this for so long it's nice to see it happening in the flesh. There were just, one of the things I noticed while reading your minutes, and I probably missed some stuff, but let me just bring it up, what I'm noticing are two very distinct discussions interweaving in and out of each other. One is where the next source of water is going to be. And the other is equitable and efficient distribution of the present resources. And the question that would come up, if you're going to sit down and negotiate to define very specifically what the parameters are, are you going to talk about a regional water plan like we saw today, or are you going to talk about what does equity mean? And so far there are a number of points that were brought up, the two that Professor Shuval brought up, which are on the extremes. The one that Johnston used which was you look at how much each entity can actually use, and you extrapolate into the future, that's another way. The three that Mr. Isaac brought up, one is economics as a guide, whoever can use a certain unit of water most efficiently, has the most entitlement to the water. The other I heard also was each entity should be entitled to the same amount of per capita availability. And the last is the historic rights that came up. These are already five different things that are all being thrown out in the same discussion, and it would be important I think before you sit down to clarify what it is that's being talked about. One other point I'd like to add to Professor Shuval's, and it was brought up as part of a Marshall Plan, the first step might be looking at efficiency as measured through economic. One of the things they did in Denver not long ago, maybe a year and a half, Army Corps of Engineers looked for another place to build a dam, they found a spot outside of Denver. And the Environmental Protection Agency did a study and figured out that if you bought everybody in Greater Metropolitan Denver a efficient toilet and an efficient shower head, you could save the amount of water that the dam would have used....

Shuval:...would have created.

Wolf:...would have created, for a third of the cost of the dam...

Meierjohann..but this is Israel. Never have saving system in the toilets here.

Wolf:...So maybe the first step in the Marshall Plan, before you start looking for another source is to definately increase? three fighter planes worth of drip irrigation, worth of sewage reclamation, worth of greater efficiency.

Shawwa: There is very little that I can say, everybody said thank you, I must join you.

Shuval: I think that we are all colleagues and friends here, so you don't have to thank me.

Shawwa: There were various important points were brought here. We are all looking forward to peace I hope, and to achieve peace there are many elements. One of them, a very important one, is water. Now do we start with water before peace or after peace. Is it the chicken or the egg. However, this should not deter us from taking this problem as the most serious problem for the future generations, even for ourselves. A common management, with common inspection, with common studies, must immediately, without delay, in my humble opinion, be started. And this can at a later stage, or at immediate stage start looking for many things. Among these things, distribution of available resources. Another point, ways and means of improving water resources, and that's it's important whether it's importing, whether it is desalination, anything of this sort. And I hope we can all take these thoughts that we all brought home with us and think more for the next session. Thank you.

El Khateeb: I would like to thank you all so many points that I'm so confused now.... ? how to say them all, so excuse me if they are not arranged. I think that everybody was looking to the problem from his own ?.. Water engineers from the water point of view agree ?...that point, you're just from that point. We should from the whole side. What is feasible from the point of economy, or from water engineering could not be from environmental all kinds of these things. A small example about the peace pipelines, we import huge quantities of water and imagine how much a load we are putting on the ground itself. And keeping in mind that it is arid area, so for example this is one point we have to look for. Another thing what Prof. Shuval he just read, it can be studied it indicates from all the points of view. And I think all of us are seeking peace and looking for that time. Peace in the Region, I believe can solve the water problem. If not so, can speed up the solution of the future water problem we all going to be with no doubt. And when you want solve the problem we have to look at it from all sides, and determine our priorities. And the first is management and most of the things we talk about management? . Water conservation everywhere in the world are asking for water conservation, and we can conserve alot of these quantities. But how practical - It's not only in the Middle East, in Europe I have seen them. They are sending airplanes to see who's garden is green during the drought years or something like that. So this has to be studied carefully and decided what have to grow, olive trees, or citrus trees. This is for management, and has to be studied very carefully. At the same time there are legitimate rights. And what Prof. Shuval said I do not argue now about those aquifers...But could be negotiated. Because now we can argue forever, and . But there is eastern aquifers for example. And the test from Israel to show its intents regarding peace is to let the Palestinians exploit that water. Unfortunately last week I visited a Ujja in the West Bank, and everybody know about it, And some of those who joined me in the visit to the Hydrologic Service, here are two names who founded this center, Mr. Blake, who was killed near the Dead Sea, and his partner, Prof. Goldshmit, who some of you might know. These two people have mentioned that the Ujja springs was 15 million cubic meters a year. They have mentioned it in their ? in 1947. And it was indeed by Goldshmit in that ?

Shuval: The name of the Spring?

Everyone..... Ujja

El Khateeb: And before 1967 the Jordanians thought about constructing a dam on that spring. This is another indication about that ? spring. At this time it is dry, I there was no water. Down the stream less than 100 meters there is an artesian well for a settlement. I have seen one too be near the source...yes, I don't know, because it is automatically monitored dam, I am not going . But at least the Israelis cannot claim any historic rights ...An indication that they are looking for peace.....

Baskin: I suggest now to bring something next ?...?

El Khateeb: At the same time the regional rights of region distribution.. It's look to Jordan, Israel, Palestinian, West Bank and Gaza as one unit. All these populations are looking for future development and better life. I think we are going to face that problem. It's not going to add more water. That doesn't help us in the future negotiations. At the same time the capital costs for such a project would not be paid by these people. It would be commissioned from other countries to encourage these people for peace. And if this project is going to come to our area I think there is no danger in joining this project ? There is a danger ?...there will be some disadvantages.

Issac: Why, I am saying for example. If you look at the Israeli control over land in the West Bank, it approaches 65%. So what's left is 35% of total land. The urban population covers 3% of the total area, so all you have you control now is 20%. This includes the deserts, the agriculture, and this includes...so if you start talking now about regional solution without solving your internal solution, you're sovereignty over you land and your own water resources it's pointless....

El Khateeb: I am starting with peace, and I'm looking for peace....

Baskin: I think Jad the whole formula is not recognizing the validity of the status quo. The status quo will change, and that regards land control as well.

El Khateeb: I said 1967 something, and here I just said legitimate rights. And there are many issues underneath. I'm not talking only about water. I said peace then I came to these three priorities, management, legitimate rights and regional solutions, so these were the priorities. And I'm not talking about occupation or 20% of the West Bank, when we said peace I mean everything should be changed.

Meierjohann: Lets look for the future and not look ?

Assaf: There's not much left is there. I think really what this means that today was really summarized all we had so far. Because we hit on the legal, we hit on the economic, we hit on water, we hit on agriculture, and everything we discussed before so it was very good. So it just goes to prove like I always said that there is more than two sides to the problem, there is three or four. And hopefully we'll be able to deal with them.

Abdallah: I am not an expert on water issues - but I like to listen the whole

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ROUNDTABLE FORUM OF WATER SCIENTISTS
Meeting # 12

Present: Daniel Gavron, Evan Schultz, Moshe Hirsch, Deb Housen-Curiel, Eyal Benvenesti, Haim Gvirtzman, Dr. Yehudit Elkana, Dr. Miriam Waldman, Dr. Gideon Dagan, Dr. Yehudah Laufer, Tom Hundley, Dr. Badri Fattal, Mohammad Sbeih, Dr. Alfred Abed Rabo, Br. David Scarpa, ^{CS, SV, AH} Charles Dunne, Meir Ben Meir, Hisham Zarour, Azzam Shuheib, Dr. Jad Isaac, Dr. Yorm Avnimelech, Prof. Hillel Shuval, Aaron Wolf, Suleiman Fadayel, Mansour Zaher, Nader el Khatib, George Huzeineh, Gershon Baskin

Unable to attend due to curfew: Ghassan Abdallah, Dr. Karen Asaf, Eiman Rabi

Baskin: We are used to meeting in a smaller room with fewer people. I'll make a few preliminary remarks. This forum in general is a closed forum for invited guests only. We have been meeting for over a year. In fact this is the twelfth meeting of the round table forum of water scientists whom we've been dealing with various subjects related to water resources in the area, to legal aspects, to quantity aspects, to quality aspects of water in the region, and dealing with it as one of the issues in conflict between Israel and the Palestinians, between Israel and the Arab world. Yet we've been attempting to do that through a spirit of cooperation, through a spirit of understanding that we all live here together. We share the same water resources. We need to find better ways of dealing with them if there is going to be peace in the future. My name's Gershon Baskin. I'm the Israeli director of the Israel/Palestine Center for Research and Information. My partner, Ghassan Abdallah is today under curfew because he lives in Ramallah. As most of you probably know, the Ramallah region is under curfew today, so there are several other Palestinian water scientist who are unable to be with us as a result of the curfew. It makes holding these kind of meetings quite difficult when we have these events of violence on both sides of the conflict that cause, that have caused us in the past to either cancel meetings or postpone them, or to hold them in a smaller forum. Those of you are here for the first time notice that there is a microphone here. We tape the meetings, and we put out word for word transcripts of the meetings for the participants of the group, and for several other concerned participants. If there are any journalists in the room, we work under, and not only journalists in the room, we work under an agreement by all the participants, that what's said in the room, remains in the room. That there will be no direct quoting of any individual. We've adopted what in England is known as the Chatham House rules. We want the

Very important

discussion to be as frank as possible, as open as possible. And we want people to feel comfortable knowing that what they say here will not be attributed to them once they leave the room. If there are journalists here, or people who would like to conduct interviews, or further research with individuals in this room, you can do that on a one to one agreement following this meeting. But I will ask all of you to respect the rules that we work under that people will not be quoted. This meeting is also a little different than other meetings that we've had in the past because we decided to try and hold some kind of simulation of what negotiations on the water issue might look like in the future. In the past our meetings have been dealt with a particular issue where we've had an open discussion, a presentational lecture by one of the participants, and a discussion of it. And here we tried, we will try to simulate in some way what the issues are that might come to negotiating table. Now, as I sent out in the invitation to you, there's one correction in that there will be no opening remark from a representative of the United States Consulate. There is a representative of the United States Consulate in the room, but for obvious political reasons, the Consul General of the United States of America in Jerusalem has requested, more that requested, that the representative of the Consulate not make any official statements, or unofficial statements in the name of the United States. Instead, I will make a statement that I wrote, which could be a statement of the United States of America. Anyone else could have written the statement. I happen to have written it. And we will accept it as part of the simulation game.

Isaac: What about the other co-sponsor?

Baskin: The Soviet Union? I sent an invitation to the Embassy of the Soviet Union, and didn't receive a response of whether or not the representative will come. Is there someone here from the Soviet Union who we don't know? Ok. So we thought that maybe someone would come, and there was a representative from the Embassy of Egypt who said that he would come. And this morning he called up after seeing the news last night about the rains in Tel Aviv, and he was afraid to drive. So, maybe he will come. I suggested he try a bus. Why don't we begin by going around the room, and everyone presenting themselves, and then we will open up the simulation.

Shuval: Prof. Hillel Shuval from Hebrew University of Jerusalem.

Gavron: Daniel Gabron, writer and journalist, freelance.

Shultz: Evan Shultz, journalist for U.S. News and World Report.

Hirsch: Moshe Hirsch from the Faculty of Law at the Hebrew University.

Housen: Debra Housen Curiel from the Hebrew University.

Gvartzman: Chaim Gvartzman, Hebrew University.

Benvinisti: Eyal Benvinisti, Hebrew University.

Elkana: Yehusit Elkana, school of Public Health

Waldman: Miriam Waldman, Ministry of Science.

Dagan: Gideon Dagan, Tel Aviv University.

Laufer: Yehuda Laufer, Truman Institute, Hebrew University.

? ,Chicago Tribune.

Wolf: Aaron Wolf, University of Wisconsin

Meierjohann: Reinhard Meierjohann, German Expert for the Bethlehem sewage project.

Khatib: Nader Khatib, water and environmental engineer, Palestinian Hydrology Group.

Huzeineh: George Huzeineh, Bethlehem municipality

Fedayel: Suleiman Fedayel food and sanitary engineer, UNRWA

Sbeih: Mohammad Sbeih , Irrigation Consultant, Anera

Abed Rabo: Alfred Abed Rabo, Bethlehem University

Scarpa: David Scarpa, Bethlehem University.

Dunne: I'm Charles Dunn for the American Consulate.

Ben Meir: Meir Ben Meir, I am representing the Valley of Jezreel.

Shuval: The independent state.

Zarour: Hisham Zarour, Applied Research Institute.

Shuheib: Azzam Shuheib, engineer and water consultant.

Isaac: Jad Isaac, Applied Research Institute.

Avnimelech: Yoram Avnimelech, Technion

/ Baskin: My parents are sitting in the corner. And....I'm sorry, could you speak up?

Kesser: Yoram Kesser, correspondent.

Baskin: Once again, for those of

Fattal: Dr. Badri Fattal , from the Hebrew University.

Baskin: Ok. For those, the journalist who came in after we began, there is a request here that no one is to be quoted in this room, and the discussion will now commence. Today's session is devoted to conducting a mock negotiation between Israel and the Palestinians on the issue of shared water resources. The discussion is aimed to help us better understand the possible opening positions of the two sides upon the beginning of formal negotiations. Neither side at this meeting needs to feel that statements made here compromise in any way the actual positions of the real representatives. This is merely an exercise. None of us in this room represent anyone other than ourselves. We are simply attempting to simulate what might, or could take

place in a more formal setting. I'm sure that the ability of this group to reach a settlement which would be acceptable to all of us, is much greater than what would most likely eventually occur. We are perhaps, providing a model for the future. The ground rules for this simulation are as follows. We will assume the following political scenario. We are approaching the end of an interim phase during which time the Palestinian population of the West Bank and Gaza has successfully taken over most of the functions of the Israeli Civil Administration. Relative trust has developed between the Israel Administration, and the Palestinian Self-Rule Authority. Negotiations on the final status of the Territories are progressing. Without determining the final nature of the outcome of those negotiations, we will assume that there will emerge, some sort of Palestinian entity, which will engage in some kind of economic relationship with both Israel and Jordan. The borders between the Palestinian entity and Israel, will be mostly open, including the free movement of people and vehicles between them. During the interim period, Israel maintained full control over the water resources. Now, we come to the issue of the future, and all possibilities are open. I would like to indicate, that in any resolution of this issue, we must take into account the total availability of local resources, the actual real need to the population; we must take into account the growth of both populations, both natural, and as a result of immigration; the economic uses of water, the best water for domestic use, and varying grades of water for other needs; the conservation and preservation of existing sources, including waste water reuse; and of course desalination. We should initially concentrate on local resources, and then consider other potential regional sources of water. And finally, we should consider how cooperation between the two sides could greater facilitate the benefits of both populations. That's my opening statement in terms of ground rules. I'll now precede, and ... yes Jad.

Isaac: I disagree with the assumptions you started with from the beginning.

Baskin: I'm sure. I'm sure that we could all....

Isaac: No, it's very important, because I think it should be made clearly to that your assumptions is that negotiations on the water will start only after the interim arrangement, until the interim arrangement Israel is taking control the water, and this is an assumption I do not accept. And so that, I believe that your opening remark should begin without this assumption.

Baskin: Alright, then what I would suggest is that we make the statement, which is a true statement, Israel maintains full control over the water resources, and we are ? on from that.

Isaac: As long as this is clear...

Baskin: Ok. Is that acceptable? I'm going to now deliver a short paragraph of what a representative of the United States Government might say at the opening of a negotiation of this type.

Dear friends. The United States of America is deeply committed to helping to bring about a just and comprehensive peace to this region. The interim phase of Palestinian Self-Rule has proven that the two sides can cooperate and co-exist. Many issues in conflict between the sides were not dealt with during the negotiations on the interim period because the gap between you was too wide. Water resources was one of those issues. Once again we have this problem, so ignore that sentence. There is no doubt to us that the cooperative use and proper exploitation of those very limited resources, will

benefit all people of the region. Water is the life blood of the region. A situation where one side will prevent the other side from enjoying its fair share is unthinkable, and perhaps even a recipe for future conflict. The United States believes and encourages the sides to develop a formula whereby sharing the limited resources equitably will increase cooperation and economic benefits to all. If more economic resources could be freed from military needs, and devoted to scientific research and exploration in the environment, then the entire region will flourish with increased quantities of water. The United States will make available its own services to help alleviate some of the acute water problems. The United States is committed to the development of an international effort to aid in this particular issue. We are well aware of the fears and suspicions of the past. We urge the parties to learn from other examples of international water conflicts, for ways to resolve your own conflict. We will not impose any solution, and we will not suggest any uninvited suggestions. We are here as concerned sponsors, and we are willing to provide our own input should you so desire. We urge you as you consider your own future, to think about the great potentials your children will benefit from in a peaceful and open Middle East. Water shared by all, and enjoyed by all must be your goal. We wish you the most fruitful negotiations possible. How's that Charles?

Dunne: Well at least somebody here knows what the Americans would say.

Baskin: Alright, we'll now progress with Reinhard Meierjohann from Germany, who will deliver a preliminary message from the European Community.

Meierjohann: Thank you, but I have to tell you that I'm not a EC representative here. I speak for myself as a citizen of a State of the EC, nothing more. Well, there is no doubt that the water situation here is very critical. The area is not yet in a state of emergency about water, but already feel very deep water stress. Prof. Shuval gave us at the last meeting the figure of 500 cubic meters per head, and here, under this, below this figure the water stress begins. The available quantity of water for the Palestinians is 165 cubic meters per person and year, and for the Israelis it's 375 cubic meters per person in year. That shows already that we are very much below the 500 cubic meters, but there are some other indications that the area is in a deep water stress. If you don't believe in these figures, everyone knows that these figures must be adjusted for each region, each population, each situation. But the indications that we see here are the very broad public discussion about the water issue. Nearly every day you read about the level of the Kinneret, if it's two centimeters higher or lower. It really shows that the area is concerned about the water crisis. The second is the remove, for example, the remove from the former water commissioner from his office, this ? discussion before; the reduction of water quotes for agriculture in Israel; the restrictions for Palestinians to drill for water. The water reservoirs on nearly all Palestinian houses, and the rapidly growing salination of the water in Gaza. The list is not complete but more indicators could be added. Why did it come to this situation? I mean that the main factors are very clear. The first is the constant increase of population in this area because of the high birth rate of the Palestinians and because of the immigration of Jews. The second is a higher standard of living. The third, the increase of irrigated land. And the forth, and I mean it is very important too, the mismanagement of the water problem. All these reasons must be seen in front of the background of the limitation of the regional water resources, and the unjust partitioning of the resources between the Israelis and the Palestinians. It gives an extra stress on the situation. As we are

not here to complain about a bad situation, we should find, should look for solutions for this water stress, let me give you some ideas. First I mentioned the growings in population. In the present time I don't see an end of the boom of this, because it's really taboo, but the increase of this population can not last forever. You know this water stress figure is one part, ? that is the population that is a head. And if the number of heads are doubled, there is just half of the water capacity available. The second, was a higher standard of living. I think this can obtain without use of more water. The technology is available, it's just a question of water management say the price. If you sell the water for such a low price as you do it here, you should not wonder that the people don't save water. The third is irrigation of land, a taboo too, but not like the increase of population. It is already well known that some kinds of irrigated plants must be reduced in the future, for example cotton and citrus. The Israel Government did this year already some steps in the right direction. But there will be more reduction in the future on both, on citrus and on cotton. And the forth is the most important for me, that is the management, or the mismanagement. There must be many, many steps to be undertaken to stop the pollution of ground water by fertilizers, by pesticides, by garbage disposal, everyone who goes to Tel Aviv sees this very big garbage disposal without any protection to the ground water. And the sewage and through over-pumping by seawater. The price for water should no longer be subsidized, just the opposite. One should really think about a tax on water to make it expensive, that people think about the use of water. One should instead think about subsidizing water systems for use, storm water ? for water flush in toilets, and for the gardens. Finally I want say something to the background, it would really be excellent if additional water, Prof. Shuval, could be brought to the region. Such projects should be carried out on commercial basis only. Israel buys oil from Egypt, why not water. Such projects should be carried out just economic, just on economically basis. It will be much easier for the Israelis and the Palestinians to discuss about a just ? about a joint management, if there is additional water, than to quarrel about injustice of the past. Any water pipeline from Turkey, from Lebanon, or from Egypt depends on peace. I am sure that in connection with a peace treaty, the Gulf States and the Western Countries will finance such a project ?. Thank you.

Baskin: Thank you very much. We'll now begin the official opening with the presentation of the representative from the Jezreel Valley, Meir Ben Meir. For those of you who don't know, Meir Ben Meir, I don't have a full biography, just a word...

Ben Meir: ...bring it with me.

Baskin: ..is a former Israel water commissioner, and most recently, I think, an advisor to the Minister of Agriculture, former Director General of the Minister of Agriculture, and I'm sure there's a whole series of other titles. He's certainly an expert in the area that we're talking about. We'll allow you twenty-five minutes to speak.

Ben Meir: I don't think I need twenty-five minutes because I'm not going to make any remarks to the presentation of the representative of the EC. And it's not because I agree with it, because with most remarks I don't agree, but we don't have the time to discuss it. But before I present my views on the water problem, on the water scarcity between the Jordan and the Mediterranean, and possible solutions, I have again, like the previous speaker, who make it clear, that I am not representing any ? or institutional policy. I must admit

that when I deal with the subject at hand, I'm in a dilemma. I am very acknowledge with the difficulties of my country, with the conflict between the national goal of settling non-populated areas, which means water demand for agricultural consumptions. I am aware of our unique geopolitical situation, and therefore, with the must to populate the desert that occupies about 50% of the land area of Israel. Yet, on the other end, I am also aware of our definite responsibility to respond to the needs of the Palestinians, and contrary to the prevailing wide public opinion, the problem of water scarcity, and even a potential conflict over water resource has nothing to do with the '67 war, or with the prevailing political regime in the Territories. With limited resources, that our two societies share, and depend upon, are not being over exploited because of any political facts, but simply because the quantities of our resources will soon not be able to cope even with the population growth and agriculture demand on the western side of the Green Line. One may reject the location of Jewish settlements east of the Green Line, but one should not base his rejection on the argument of water scarcity. The dispersion of Jewish population and ? does not increase water demand. There is no escape from the reality that our common water resources are limited. I should try from now on to focus my remarks on available solutions. For a very long time I dealt with planning and constructing of water plants, and water schemes, and from my experience I've learned that the period of time for planning and construction of water plants is between, is something between 15 and 20 years. I was ? both the sewage reclamation plant of the Greater Tel Aviv area, and the reuse plant of Haifa. The first one was under planning and construction for over 20 years, and the other one for 15 years. I emphasis these facts because the horizon for planning for a solution to the problem at hand, should relate to the appointed time when the total amount of fresh and replenished water is consumed for drinking purposes. If the total fresh water balance should be reestimated, and the new figure should be 1.4 billion cubic meters per annum instead of the previous estimation before the last 3 droughts, that 1.6 billion cubic meters, and if as I believe, the per capital consumption for drinking water in the Territories will be equalized to the rate prevailing in Israel, then we shall reach this appointed time when the population between the Jordan and Sea will reach the figure of 14 million people. At first glance it seems to be behind the horizon. But after a second thought, we shall realize that we are not so far from that appointed time, and to be precise, not so far from the purpose of forecasting and planning. If my approach is accepted, then all efforts and means should be concentrated to meet this challenge, otherwise we might go on being involved in an non-ending argument on proper or non-proper principles of allocation of water between Jews and Arabs. An argument that will add not even one drop of water to our overexploited resources. Our both societies will face an entirely new situation towards which they have to prepare themselves. Allocation for agriculture on Israel has already been reduced by 50%. And it should remain so until the resources are fully replenished and regenerated. The only exception that should be allowed are the areas that rely upon ? resources, meaning the Arava. The ? of prices and emergency caused an increase in the searching for new water resources, and two options, rather two alternatives, came up at the same time: seawater desalination, and sewage reclamation and reuse. It is my belief that policy makers should be warned for not distinguishing between the two alternatives when setting, budgeting, budgetary and development priorities. If priorities are not set properly, we shall get on, we shall being engaged with two high capital investments, both competing with other demands over limited public capital resources. I am concerned about the proper setting setting of priorities, because this is a key issue to the subject on our agenda. Both public awareness and tension

raise because of severe drought of the last 3 years, and the sharp cut of water allocation for agriculture. Indeed, it has very clearly been stated in the Water Act of Israel, that allocation for drinking purposes comes on the first place. Which means reduction of water for agriculture purposes whenever an increase in human demand needed, for any purpose. Never-the-less, one can not ignore the fact that agriculture has been severely harmed, and that the agricultural sector is quaking in Israel. The more aggravated the conflict between agriculture, agriculture and human demand gets, the more pressure is being put on proper allocation between the two sectors themselves, and between them and the Palestinian sector. The smaller the ? the more difficult the distribution becomes. I would like to stress again, that we might get involved in two major development schemes, without accomplishing even not one of them, unless priorities are properly set. If the potential of sewage reclamation would not be fully exploited, the pressure on fresh water resources will increase. Another major issue that one has to bare, bare in mind is that even sophisticated agriculture is still far from being able to cover the cost of desalination. As long as a ? can not cover the cost of desalination, any activity in this field is premature, and will attract financial resources from the prior alternative, sewage reclamation. On the other hand, if priorities are properly set meaning that every drop of sewage will be reclaimed for agricultural reuse, then when human demand will exploit the total amount of fresh water, we shall still have a solid and stable resource of water for agriculture. These forecasts are based on the fact that 65% of human consumption is released as treated sewage for agriculture. If we are determined to stick this policy, then agriculture will have a reliable resource of 850 ? per annum, which is the figure that is being used now after the last cut. Allocation for agriculture in Israel has already been cut to this figure as a long term allocation, not as a short term allocation. Even if temporarily quantities can be increase if our reservoirs are replenished by ?. If my policy is adopted, and the total amount of fresh water is designed for drinking purpose, then there is no reason for competition over water between Israelis and Palestinians. When demand for drinking water increases, both societies will have to start using desalination, and not transported water from Turkey. And if there will be a discussion, I will explain my point of view. Both societies will have to start using desalinated seawater, and quantities of reclaimed sewage will by then increase without putting the burden of high cost on agriculture, and therefore being able to grow cotton with water of low prices. Having made the above remarks, I must make one major reservation, the Gaza Strip. The above recommended approach does not solve the acute water crisis in the Gaza Strip. The replenishment by rainfall here, does not cover more than 60% of the consumption. Deficit is growing and salinity reached the level that endangers drinking quality. It is a triangular crisis that makes desalination in the Gaza Strip a necessity as well as a possibility. The three factors are: 1. severe water deficit, 2. high rate of unemployment, I hope temporary, and 3. low ? which I also hope is temporary. The combination of these three factors enables both industry and sophisticated agriculture to obtain and at value, after covering the cost of desalination. It is not yet a ? , but if we combine efforts, such an enterprise can sell, both as a pilot, as well as an important milestone on the way for better well-being in our land. Thank you.

Baskin: Thank you. For a wetter well-being?

Ben Meir: I beg your pardon?

Baskin: Not only better, a wetter. Thank you. We'll move on to Nader, who

once again is representing himself, and not the Palestinians. Nader Khatib, for those of you who don't know, is a water engineer. Is a former water engineer for the Bethlehem Water Authority, which deals with the allocation and distribution of water in Bethlehem, Beit Jallah, and Beit Sahour. Today Nader is the manager of the Bethlehem sewage project. Nader.

Khatib: Ok, thank you. You just made a comment, that I would like to start with, what I'm going to say represents my personal ideas about this issue. As an engineer of water, and I've been dealing with water, at least in the Bethlehem area, for a few years. I was encouraged by some my friends to write this paper. And if you could allow me to call it Palestinian Water Rights. And I would like to start with a brief history about this because I believe to solve any problem we have to go back to its source, and try to solve it. Forty-four years ago on Nov. 29, 1947 the United Nations issued Resolution 181. In this resolution the United Nations divide Palestine into two states. One for the Palestinian Arabs, and the other for the Jews. This resolution not only marked a new era in the history of the Middle East, but it also created instability in the region. This was not only because the Arabic countries rejected the decision to just give part of Palestine for the creation of a new state on Arab land, but because the Arabs realized this new country was trying to impose its control over the surface water resources in the region. This knowledge could be traced directly back to 1952 when the Syrians discovered that Israel was drying up the demilitarized area mentioned in the cease-fire agreement between them. Thus the year 1952 can be marked as the beginning of the water conflict in the Middle East, which was enlarged even further by military force in 1967. And Israel ended up with full control of the water resources in the region. As the year 1947 was the beginning of the Arab-Israeli conflict, 1991 may be considered as the turning point to resolve this bloodying conflict, based on the start of peace negotiations in the Middle East, as well as the extensive immigration of Jordanians and Palestinians to Jordan from the Gulf, and the Jews from Russia to Israel. These events have increased the water demands in the region, and area whose water resources have been depleting over the last few years, due to the drought conditions and misuse in addition to increasing demands. The Israeli restrictions imposed on Palestinian water exploitation after 1967, have frozen the water quantities available to the Palestinians at 120 to 130 cubic meters a year for all purposes. This quantity represents, I believe, about 20% of the West Bank underground replenishable water reserves. The remaining 80% of these reserves have been tapped directly and indirectly by Israel. The water experts in the region have openly mentioned the frequently, that more than 30% of Israel's water consumption originates from the West Bank. Also, it is a fact that over 33% of the West Bank villages have no regular water supply. It is also a fact that the average cubic meter per capita per year water usage of a Palestinian for all uses is about 116 million cubic meters. 375 cubic meters per year for an average Israel. As the peace negotiations have shown..... 116 for Palestinians, 375 for Israelis. verses 375 for Israel. As the peace negotiation have shown that the water issue is going to be at one stage one of the crucial items during the negotiations. Thus I believe that the Palestinians have to consider the following: 1. surface water resources. Since the Palestinians seek peace based on international legitimacy, and the United Nations resolutions, then they have to insist on equal water rights, or shares, in the Middle East water resources, especially in the Jordan and Yarmuk Rivers. These rights were approved in the various water plans offered to divide these water resources between Israel and its Arabic neighboring countries. Especially shown by Johnston's plan in the 1950's. And at the same time, the Jordanian west Ghore canal project is also an evidence for

these rights. all the Palestinian shares which were lost after 1967, must be given back to the Palestinians, or they must be compensated for. Israel has ^Q illegal and more^Q obligation towards the Palestinians for denying them their water rights in the Jordan River since 1967. And therefore, Israel should allow the Palestinians to again have access to the Jordan River waters, and must release larger quantities of fresh water to flow into the River for the Palestinians. The other point is the ground water resources. The Palestinians believe that they have been denied their rights in the ground water resources available and that originate in the West Bank. These resources were available until 1967, and there were no rules preventing the Palestinians from exploiting these resources, and using them to satisfy their demands for all purposes. Unfortunately, after 1967, a new military orders were imposed on the Palestinians, preventing them from tapping underground resources, claiming these resources have been over pumped, but at the same time giving absolute freedom for the settlers in the West Bank and Gaza Strip to exploit these resources, or allowing excessive pumpage from the same aquifers, but inside the Green Line, that is inside Israel proper. Today, Israel claims that it has been ? the West Bank water aquifers before the Palestinians. And therefore Israel has historic rights in these resources. But as I have mentioned before, the water conflict between Israel and the Arabs is and/or is as old as the State of Israel. And all the Israel practices and exploitation of the water resources in the Middle East have been implemented by disagreement with the Arabs, and there has never been any official agreements on water resources between Israel and any Arab Country, foremost of which is the Palestinians. It is true that there are common aquifers between the West Bank and Israel, where the water infiltrating from rainfall on the western aquifers of the West Bank flow to the west, and recharge the water aquifers in Israel. This ground water flow is now seen as a threat to Israel. It being said that the Palestinians can't have this water, and thus prevent its flow to Israel. This much talked about threat should not be used as an excuse to prevent the Palestinians tapping water in these western aquifers. Because the Palestinians should logically have rights in these aquifers, since they were tapping them before 1967. And especially since they were forcibly prohibited from any further development after 1967. It is clear that this dispute over the western aquifers of the West Bank, must be resolved in peace negotiations, since international law has not clear and binding in such disputes. At the same time, it must be made clear to the Israelis, that they have prevented the flow of ground water from Israel into the Gaza Strip by sinking wells along the borders of Gaza in order to exploit the water before it crosses into the Gaza Strip. These practices point out a contradiction among Israel claims, and they provide sound evidence that if there is any right for Israel in the western aquifers of the West Bank, then there are also right for the Palestinians of the Gaza Strip in the Israeli water aquifers to the east of the Gaza Strip. The Israel practices on water exploitation in the West Bank were not only limited to the western aquifers, but also the same policy was applied on the eastern aquifers. This clearly indicates that the Israeli authorities have been aiming to decrease Palestinian water consumption to as low as possible in order to limit Palestinian development, and at the same time provide more water for the Israeli increasing demands, all at the cost of the Palestinians. These negotiations on water, and the peace negotiations over water resources, the Palestinians, I believe, must divide the water issue into two disputes. These disputes are, first, Palestinian/Israeli water dispute. This dispute is mainly related to the common ground water aquifers between the Palestinians and the Israelis where there are claims and counter-claims. In order to solve this dispute, Israel should except the following facts: Stop all ground water

exploitation from the eastern aquifers immediately, and leave these water resources for the Palestinians. Limit direct pumpage from the western aquifers, and allow the Palestinians to rehabilitate and use the wells it drilled in these aquifers before 1967, as well as to drill new wells in populated areas where severe water shortages exist. The Palestinians and Israelis if can not agree in negotiations to solve this problem, must ask for arbitration based on international legitimacy and experience with regard to the Israeli claims for rights in the western aquifers of the West Bank. Any decision reached by this arbitration, must also be implemented in the Gaza Strip for the Palestinian claim for their water rights in the coastal aquifers of Israel flowing into the Gaza Strip. Secondly, Israel/Arab water conflict. It is clear for Palestinian, Jordanian, and Israeli water experts, that the water resources available for these countries are not enough to satisfy their long-term demands, and in order to provide enough water, a new resources must be created through regional cooperation. This regional cooperation can not be achieved without solving the water disputes between these regional countries. And in order to do so they should consider the following: first, redistribution of the common water resources of these countries based on the mutual respect, equitable distribution, and international legitimacy. Second, cooperation between these countries to divert the surplus water available in each country to the other countries base on commercial principles. Thirdly, cooperation between Israel and the Arabic countries to import surplus water from countries outside the region, like Turkey for example, to the area. Such a project can strengthen peace between these countries, and to provide more water to the region. At the same time, such a project could help to generate hydroelectric power, and thus help further develop the region. Cooperation between the region's countries, to exchange experience, and carry out joint projects to create a new water resources, and develop, both water reuse, and desalination technologies. I can conclude this, and the water conflict between the Arabs and Israel must be resolved peacefully through peace negotiations based on a mutual respect, equitable rights, and international legitimacy. Today, most of these countries are facing .a critical water situation, and can not solve the water problem for any of these countries. The ideas represented in this paper, reflect on the ground facts found in this region, and may provide a realistic basis to achieve a comprehensive and lasting peaceful settlement in the Middle East, and to set long-term solutions for the people of the region. The people of this region must know that peace can provide a solution to the water problems, while water alone can not bring peace to this region. Thank you.

Baskin: Thank you Nader. Meir, I think we're going to open up a discussion now. You and Nader both have a right to I thought that what we would do now is have an open discussion, and both of you have the right to conclude the discussion at the end.

Ben Meir: I shall be an obedient speaker.

Baskin: Why don't we give a two minute chance for each speaker to respond to each other....

Ben Meir: Even less than two minutes because I don't want respond to professional facts which I don't except because it will take a long time, and we won't reach any agreement. I stated in my presentation that I will favor to the appointed time when all the resources are exploited for drinking purposes only, for drinking purposes only, and on an equal quantities on both sides. Or put it in other words, lets make the assumption that we are one

society that is already exploiting the total amount of available water for drinking purposes, 100 cubic meter per capita per annum on the western side of the Green Line, and the eastern side as well. So there is.....

Isaac: How do you base it...?

Ben Meir: No, no. I came with a figure of 14 million because I said that the new estimation of our total balance, total resources, or total quantity should be re-estimated at the newest estimation should be 1.4 billion cm, not 1.6 as we estimated before. 1.4 divided into 100 per capita consumption for drinking purposes, makes 14 million cm. I came from the last point back, instead of going back as Mr. Khatib did. So, I'm referring to the population between the Jordan and Mediterranean as one population which is already consuming the total amount of water for drinking purposes on equal ground. No matter where the resources are located. Whether they are located in the western side of the Green Line or the eastern side of the Green Line. So I have reduced, I have reduced water consumption for agriculture in Israel to zero. And I have shared the water resources for drinking purposes on equal rights of human beings, or lets go further on, of human beings of one society. Now the question, or the problem we are facing, the problem we are facing is can we, or can we not, 1. protect our resources from contamination. Because if we are talking about people consuming the total amount of water, then we have a problem of contamination, and then agriculture comes as a solution, not as a burden, on limited resources. I thought we are participating in making, that is discussing, not the past - I can relate to the past, and we shall go on, as I said in my statement, arguing about the facts, and about the rights, and about the past. I am not representing anybody. I am saying we both are going to share equal shares for drinking purpose, and by that, exploiting the total amount of water available both in the West Bank and in Israel. And what now? The second, number 2 remark, I am sorry to break the illusion that there is a possibility, there is an physical possibility to transport water from Turkey to Israel. But you have to keep in mind that at the cost of transportation of every cubic meter of water to the distance of 400 km, the cost of it is equal to desalination of every cubic meter of water. So why going to Turkey? What's the purpose for international conversation about the subject. We have the Mediterranean in our possession. We have the technology. We have our research institutions that can develop sophisticated methods for agriculture that can cover the cost of desalination. Anyway, transporting water from Turkey to Israel and the West Bank is so expensive, that none of these societies can afford it.

Baskin: Ok, Nader has the right of response, and then we will open up the discussion. I would also indicate that Mr. Mansour from the Egyptian Embassy is with us now. We're glad....

Khatib: You know, I would appreciate if this policy which has Meir Ben Meir talked about now, was the same policy when he was the water commissioner.

Ben Meir: I grew up since then.

Khatib: At the same time, as a matter of fact, we would like that all the inhabitants of the British Mandate, Palestine, from the river to the sea, are being treated on equitable rights, and among of which is the water. But what we have seen during the past years, and unfortunately we have to refer to the history because we have been denied our rights all this period, if you come to the West Bank, anywhere in the West Bank, just a good witness for the sever

water shortages we are facing, there are water tanks on the roofs of the buildings, which can also be a hazard for the quality of the water. But this is an indication of the water shortages which does not exist anywhere in the settlements of the West Bank, or in Israel. Even the Israeli areas you can find even the swimming pools, which do not exist here in the West Bank. So, I believe even, our rights in this domestic water consumption, which should be the first priority, are not given for us. At the same time if I talk about the regional transfer of water, we are talking about various possibilities. And when the time comes, every case should be evaluated separately, and we will be looking for the feasible and the practical methods where the people can afford them. But as far as I see now, the desalination is still very expensive, and no country here in the Middle East can afford it. We don't have the oil.....

Ben Meir: Can any country afford transportation of water from Turkey to Israel?

Khatib: Yes, yes. But if we look to this transportation, we took it because it is something that is being offered, and it can be bought. Whether it can be implemented or not....

Meierjohann: Yes it is being offered by the politicians

Khatib: Yes, But they are the decision makers, unfortunately. We might not agree with them, but if this is something going to be open for the region, I mean that the inhabitants of this region are not going to pay for it. It is a gift coming, and it is offered for us whether to accept it or not, I think that it can help. There might be disadvantages, but it is one of the methods that can bring more water to the region. I believe, any plan, or any method, that can add a drop of water to this region, can help solving the water problem, or it can compensate for others who are looking for this water.

Baskin: Ok, there are a lot of people who want to speak, so you're going to have to be patient so that we can fit in. The first three speakers will be Hillel, Jad, and then Yoram, and then we will move on from there.

Shuval: Thank you, Mr. Chairman. I think that one of the most promising points in the presentation of both Meir ben Meir and Nader Khatib, they both used the terms mutual respect and equitable distribution. And I think that is something ... we're talking about the future, and I think that I would like to requote what Meir just said. That the solution will only come about by looking forward, and not by quibbling over either the errors of the past or the wrong of the past. Meir ben Meir...

Ben Meir : A lifetime would not be enough for it.

Shuval: Because if we accept both Nader's words, mutual respect and equitable distribution, and Meir's words, mutual respect and equitable distribution, we have a basis of going forward. Because once we accept those two principles, then we can look for formulas. You know formula are only a result of accepting a principle. Now it just happens, Meir, over the weekend, I thought of this and I distributed the paper, we must have been on the same wavelength. Because...

Ben Meir: I have to check my

Shuval: Sometimes, sometimes. We usually disagree. We usually disagree. But just for the sake of argument, I drew up a little table which I'm going to text today. It's not a proposal. I'm an Israeli, and it's not a proposal of the Israeli government, but it's my own personal thoughts. And I drew up a little plan. Assumption number 1. All parties are entitled to equal allocation of water per person per year for domestic urban industrial use, and I've added something else to that, and for essential fresh food crops and animal husbandry. Fresh food crops I've added also, something that should be included, and all such water should have access from within the territory of each party. That's the principle which we have basically agreed upon, although there may be a disagreement on fresh food crop. But I would say that's essential. And the second point that I put into my little formula, is a planning period of about 30 years, but it's assuming a doubling of the population. And lo and behold, I come up of a doubling of the population of 14 million people. I took Israel as 5 million and the Palestinians as 2 million today, about. And a doubling is Israel 10 million and the Palestinians, 4 million, which gives us 14 million. And requires 1400 million cubic meters...1400 for domestic purposes for the combined people based on equity and mutual respect. Now exactly how that's to be divided up is not for this room, but it can be found. Lets leave Jordan out of this for the minute. I also calculated Jordan into this, with a present population of 3 million, doubling to 6 million, with a requirement of 600 million cubic meters. I have thrown into my formula, something which I think is legitimate. Meir has exaggerated purposely the farmer he knows that no society will agree to no agriculture. There must be at least....

Ben Meir: I'm sorry, I have already agreed to no agriculture, stating that I shall consume the total amount of treated sewage.

Shuval: Right, right. I'm going to get to it. But never-the-less, I've assumed, for the sake of this argument, that about 50 cubic meters per capita per year should be available to all of the partners, I may be wrong, you're a farmer more than I am, for fresh agricultural...and I've assumed that, and I come up with some figures, that's category A2, prime irrigation water. And that adds another, between Israel and the Palestinians, another 800, which we have to find a source for, I feel. And then lets go to category B2, because I'm leaving imported water until the end. B1 is imported water, which may or may not be at some time. But category B2 is recycled waste water, and I've assumed that B2, recycled waste water, is 50% of the fresh water supply, just for the sake of argument. It could be more, it could be less, but it's about 50% of A1. So that Israel could generate, if it had 1000 for domestic purposes, it could generate about 500 million cubic meters per year of waste water which could be for agriculture. The Palestinians could generate about 200. So this is a basis of a formula. I'm not saying that it's sufficient. But I agree here with Nader, that in order to meet the needs of economic growth, in order to make a division, an equitable division feasible, it's essential for the great powers, and here I don't agree with you, representative of the EEC who holds the pocket strings, that these additional water projects necessarily must be on a strictly economic basis. You do not build fighter planes on an economic basis, but the EEC and the United States builds fighter planes.

Meirjohann: Just say one word to this. Economic basis only to sell the water, not to project.....?

Shuval: If the capital investment.... but let me just make this statement.

My feeling is that once, let's assume that we are sitting at the real table, we've accepted the assumption number one of equitable division.

Ben Meir: We have to add the real people....

Shuval: Well we're almost the real people. The only way to get to a...to fulfil that obligation is to add water. And I think both people, both sides have said this, fighting over the small pie will not get us any place. We have to get a bigger pie, so that then some equitable distribution can be made. And I think that the great powers have to, let's call it, have to ease the peace process, by making the capital investments in major projects, just as they in the past have eased peace processes in other countries by adding armaments to both sides. And I think that it's much more socially acceptable and much more humane to invest in non-economical water projects, you call them non-economical, which could lead to an equitable distribution of water for all. I think it is the most fruitful investment that the sides can make. Let me just conclude with this. I hope that this is the beginning of a real peace process with agreement on these two very important points. I think that looking carefully for a formula, plus the addition of water to make an equitable distribution a little more easy, with the support of the major powers, we can proceed with peace, and making the water problem one of the things that both sides will look for as an attractive element in achieving peace. Thank you.

Garon: Excuse me. Just one point of clarification. Are these figures what we need or what we can easily expect again?

Shuval: My feeling is this is what we might need. It may be a little more than we might need. And I think they are all with...the imported water may be twice as much as we can really get. Maybe twice as much. I purposely put in importing another 100 cubic meters per capita, just for the sake of the exercise. But even if we can only import half of that amount of water, I think it would ease, in other words, Israel would eventually, in 30 years from now, only have 2500, with a 10 million population, which I think we can live with. The Palestinians would have a little less than what I had calculated, maybe 1000 rather than 1200. But this, these amounts of water are needed, except for column B2, which is negotiable. How much could be afforded. And I think most of it is available.

Isaac: Well, you said simulation, so you must have a devil's advocate in this meeting who would loudly say, you know, why this equity that is being presented now, why wasn't it presented yesterday, one year before. And even now, I mean now, is might be 1997, it's not 1992, or 1991. But this, what you are talking about, that you are asking for equity and sewage treatment projects for the Palestinians. We see the Israeli authorities saying no for a sewage water treatment plant in Bethlhem. It should feed into Jerusalem so that they can benefit from it. While you say equity, and each one is acknowledging that there is not one single drop of fresh water in Gaza. We have not seen one single attempt by Israelis to salvage the situation in Gaza. It's an environmental catastrophe in Gaza. No one is talking about it. Well, in the peace conference we talk about five years from now. By that time you say, well, forget about the past, we talk about that time. Because Palestine has 600 million cubic meters of water supply out of the 1400, it's about 45%, and according to my definition, Palestine is 20% of the total land of total Palestine, which includes Israel and so forth. So it means that we have double the quantity of water compared to the size. Or, if you want to look

at its water potential wise, how much aquifers, by international legality we have more. So, the only source for fresh water, really, would be out of the 1.4 billion which Meir Ben Meir spoke about, 600 originates from the West Bank. And that's why we are talking about equity. Now, well I agree, we'll talk about equity. I am saying we are in 1992. But somebody has to pay, of course the Israeli side is asking the EEC and the Americans to start preparing their checks for water from Turkey or whatever. Now we want also to start asking for the environmental damage. How much damage was. How much was taken from our waters. And let's remember that story of the ten virgins, if you recall that from the Bible. Ten virgins went to a wedding with their oil lamps. Five of them were, you know, did not light it on a very large scale you know, so they went and were able to come back. But five of them were rejoicing and dancing, and all the while, all the time, so by the time they got there to the wedding they had no oil left in their lamps. And they had to go and to come back walking in the night. Now Israel has been living in a fantasy with regard to water consumption. Are we Palestinians suppose to pay the price of their fantasies? Is our environmental catastrophe in Gaza and the damage which we have suffered, and we have a list of how much. Or that is past we should not discuss, we'll only discuss the present and the future. Let's put these on the table. And start prioritizing it, and prioritizing, as a Palestinian I would say the first priority would be 60 million cubic meters to be fed through a pipeline from Israel proper, directly to the people of Gaza so that they can drink and they will stop. We'll stop the renal failures that are escalating at a very unprecedented rate, as a result of the water pollution. This is the beginning of equity. Thank you.

Avnimelech: Alright. First I have the pleasure to agree with two points of my neighbor. One is that... One is that we can discuss the water issues now, and I will explain it. And the second, I agree that the water problems in Gaza need to be solved, the sooner the better. Whether would this be with a pipeline or with desalinization, it's technical economical question, but it has to be solved. Another point that I want to make is that we can, we can introduce everything to the question of water like any other question. So we can introduce history, and we can introduce problems of standard of living, and economy and everything. But this will not help to resolve the issue of water. So I suggest that we concentrate on the issue of water, and let other simulation groups work on the other problem. Now I think that if we look only on the issue of water, and if we'll accept that sometime, and I dream that different sectors of the Palestinians have civic interests and conflict and they want to get more water. Again, it's complicated because it's tied in with standard of living and so on and so forth. But eventually everyone agrees, and I think that all other view point, that in the future everyone in the west of the Jordan will use the same amount of water for drinking, for consumption. And we have to supply this, and this, it will take two extreme scenarios. One scenario is that all these territory will belong to Israel. The other extreme scenario is that there will be two states. The same amount of water will be drunk... Alright, then let's take the other extreme So again that this is the point that is not, the political solution is not relevant. We have to supply the same amount of water which ever political solution will exist. Then the amount of water for agriculture, and agriculture is a business and not a hobby. And water for agriculture should be, the amount of water for agriculture should be determined by economic considerations. Now here, I think that the amount of water that is used for agriculture to irrigate the grapes in Hebron Mt. and to irrigate the cotton in the Negev, is not relevant. The question is how much water is needed for a profitable agriculture, in the Hebron Mt. and how much water is needed for profitable

agriculture in the Negev, and how much the farmers can pay for the water. So this is not, and I don't agree with Hillel that these water for agriculture should be distributed equally. It is an economical item. I recommend that it should be distributed according to economical consideration, and to the ability to use them. Pay for them, I agree with Meir that the future of agriculture in this region depends on the proper utilization of marginal water, and very intensive use of water for intensive agricultures that can pay for water. Now I want to come back to my first point that we need a certain amount of water, and it's not relevant what is the political solution. This belongs to a different group. Now, as to the water in Israel that is in north and the south, but we have mountains, and our Palestinians colleagues say 600 million cubic meter, whatever is originates in the mountains. Hydrologically, the way the plan to extract the water is in the foothills. And this exists everywhere, Jerusalem. And Jerusalem needs water. The water to Jerusalem is delivered from the coast. This is the place where water could be extracted. We have already agreed that the quantities should be distributed, which ever the political situation is there is an important question of quality of water. The people that live on the mountain, have the responsibility to maintain high water quality to avoid water pollution. The people that live in the foothill have the responsibility to supply the water to those who live in the mountains. And again, it is not relevant what is the political boundary is completely irrelevant to this, and we'll have to agree upon these principles.

Zarour: I have standard remarks what said which is that we ought to ? Israel water ? . And I'm afraid that when he said so, he depended on what happened in the last 3 years. The last 3 years were considered to be of a dry nature, and one can never tell if its represent the whole picture . We have to just that the years with the previous 50 years.

Ben Meir: I didn't rely on just the last 3 years, but on the last 50 years.

Zarour: To Prof. Shuval, We really want to know what you mean by equitable distribution. Is it distribution ?.

Shuval: That's the way I worded it.

Zarour: Yeah, or on ?, I mean we are living in a world of rich and poor people, and there is no way to set some kind of an equitable system, which means that all people should have the same resources whether they own them or not. It's absolutely unacceptable to claim that I have a share in Kuwaiti oil as much as a Kuwaiti.

Hirsh: Moshe Hirsch of Hebrew University. I would like toI would like to ask Nadar Khatib, I understood from your interesting presentation that you made a distinction between future negotiations between the Palestinians, on the ground water. And the second set of negotiations between the Arab states and Israel, about the Jordan River. And I would like to ask you if I understood it that the Palestinians won't think that they have rights or any contentions about the Jordan River.

Khatib: I think I just divided the problem in two parts. There are Israel claims about historic rights and utilization of the ground water of the West Bank. This does not interfere with any other Arabic countries. It is not part of their budget. So that's why I concentrate that the Palestinians and

Israelis should agree how to distribute or divide these budgets. The same time, the surface water resources and in particular the Jordan River and the Yarmuk River, is not only a problem between Jordan and Israel you know. This river, the Jordan River originates, and the Yarmuk from Syria, and it runs through Israel, Jordan, and Palestine. So there are several countries benefiting from this, and each country claims a certain right in it. There was never been agreement. We know in the 1950's during the Johnston Plan, these countries did not agree on that plan, and what happens later, all the time it was by military force or anyways. So that's more than bilateral problem. It is multilateral problem because many countries. So that's also in order to reach a lasting, and comprehensive peace in the Middle East, so the solution for it should satisfy all these countries, because Jordan, until now, can not implement one of the most important projects for the providing domestic water for the Jordanians, and that's the Unity Dam. The same project is still important for Syria. Before that and around 1967, before the June War, also, the Jordanians and Syrians start building another dam in the Israel prevented that project, because Israel asked for more water, these things. So this is the regional problem. That's what I meant in my presentation..... Until now that problem is not solved. Maybe Jordan and Israel until now, indirectly following the Johnston Plan, but there is still something unofficially done.

Hirsch: Can you think that the Johnston Plan is can be a basis for future negotiations or agree...The Johnston Plan is it an equitable basis for negotiations, or will it just ? ...

Ben Meir: I suggested that you quote the figures of the Johnston Plan. They are marginal. The figures themselves are marginal comparing with the problem we are dealing with. Yes but we were speaking about three figures - 17 million cubic meters, which is marginal, 25 million cubic meters, which is again marginal, and the maximum that the Jordanians demanded, was 40 million cubic meters. So the whole Johnston Plan is, in terms of quantities is a marginal issue compared with what we are talking about here.

Khatib: Concerning this plan, the Jordanians and Israelis have been benefiting from the water flowing in the Jordan and the Yarmuk. But the Palestinians, since 1967, do not get a drop of water from the surface water.

Shuval: Can I just add an historical note? One of the elements of the Johnston Plan was, in addition to the Eastern Ghore Canal which was build, a western Ghore Canal, which was...I'm just adding an historical note, which was suppose to supply water to the Jordan Valley. That was never built. And I base that what that you are talking about something that possibly should be completed in the framework of a peace negotiation.

Hirsch: The Jordanians robbed the Palestinians, not Israel.... the Jordanians not Israel or the Palestinians, but the Jordanians robbed them.

Shuval: That's right. I didn't say that.

It was not the Jordanians that robbed the Palestinians, it was Syrians.

OK.

.....

Hirsch: But if you want to count how much of it, it's 350 million cubic meters a year that the Syrians and Jordanians must pay you, not Israel.

Khatib: Anyways, maybe I'll say the opposite, or divide it between all. Anyways the Palestinians right in this water, and we've been denied this water.....This was an Israel claim in the past, that they have the right to take this water because the West Bank and Gaza are under Israel control and Israel is providing them with the water. And to my knowledge, Israel is extracting more water from the Yarmuk, more that was allocated in the Johnston Plan. At the same time the Israelis sometimes claim they are benefiting from the flood water. That's why it is not an excuse for this claim. All the time one fact is that the Palestinians are denied their rights, and they are 100% rights for the Palestinians in the surface water.

Meierjohann: it comes from the Armuk or it comes from the West Bank or it comes from the West Bank of the Green Line. Because the crucial question within 20 years will be sufficient ? for drinking purposes. The other crucial question will be protecting our resources from pollution.

Ben Meir: If we are here 14 or 15 million people the standard, the demand requires, the demand of treating the sewage that will be required for the purpose of protecting our resources, will be good enough for irrigation, without spoiling the soil, without spoiling the soil. I was the one who constructed with mostly my own hands, the Greater Tel Aviv Plan, and it's a remarkable plan, and the whole Negev is now relying upon this plan. It provides now approximately, not far away from 100 million cubic meters, out of 850 million, which is the total consumption of agriculture, including brackish water. So Israel has, in my presentation, within 20 years, eliminated agricultural consumption to zero.

Shuval: Drop fresh water resources.

Ben Meir: Just a moment, Israel has, in my presentation, within 20 years share it's..the whole amount, not its water or your water, the whole amount of water between the two populations. On an equal ground. If that's not accepted, then Israel has to chose another alternative to leave the area. As long as Israel stays in the area, and as long as the consumption, the capital consumption, is 100 cubic meters, from the natural resources, then Israel will have its share and the Palestinians will have their share, and both of us will have to look forward and to decide together whether the additional water will come from desalinization or from other resources which I do not want to repeat again and again and again. If we start arguing now, and I'm prepared for this argument, believe me I am, if we start arguing now about what happened in the past, what really happened in the past, I shall start blaming Syria, because Syria prevented water from Jordan. And when Syria prevented water from coming down to Jordan, to Jordanian consumption, then the Jordanians didn't have any other choice. But denying the Palestinians, and when I was water commissioner, I said to the Jordanians, and I had the good opportunity to meet them more than once, then I will present it as the ruler of the West Bank, I am representing the Palestinians, not only the Israelis. But again, and I want to conclude with it, I can refer to the past. We shall sit here some few more hours. We shall not come to a mutual conclusion. The question is again the future, and whether it's the government that I would choose, or any other government, I don't know who was the one who asked the question, I think you were the one... Israel will not, any government will not have the power to eliminate drinking water from any human being in this area. Whether it's a

Jew or an Arab, or you name it.

Baskin: We're at the point of concluding remarks, did you want to ask a question Yehuda.

Laufer: I have a couple of question which Meir responded to. ..Are we to understand from what you just said, that the idea of importing water is politically unfeasible and therefore should....

Ben Meir: From my point of view. Again, from my point of view. I wouldn't recommend it.

Laufer: We are left then.....

Ben Meir: If I can make a very short remark. I was invited by Secretary of Agriculture of Virginia. He wanted to consult me on a trial that was going on riparian rights between in the United States itself. And that the trial is still going on in the Federal Court. So lets be practical.

Baskin: That we can also say that there've been trials going back and forth between the United States and Mexico for over a 100 years....on...riparian rights, yet they are still managing to share the resources, even though there are conflicts.

Ben Meir: Now then, I was referring to the suggestion to bring water, to transport water from outside. ? desalination of course.

Laufer: Well, that is the one solution that I can see. Can I just ask in connection with that, we discussed this earlier also, Khatib, what economies do you see as feasible in agricultural practices, on both the Palestinian side and on the Israel side, and how much water could be saved by these agricultural practices.

Ben Meir: Should I answer now or later?

Baskin: You can answer. We're not going to have a later, so take the opportunity. you can respond to ?....

Khatib: at the same time I'll make some comments about what the others have said. I think we can not ignore the past. It is very important for us, at least to learn from the past experience in order to avoid the future mistakes. The past is a good school to predict the future. Maybe the most important is the future. At the same time I believe drinking water should never be imported from outside. And, that's very important for me. At the same time what kind of technology we can use to provide this water. The best would be the technology that can create water from resources in the region here. It is not necessary to import the water from Turkey or from Egypt. At the same time, any technology that we want to import, should be important, and we should be looking for these technologies that can strengthen the base in the area, not the ones that can create the new disputes for the future. At this is just to prevent future hostilities in the region. At the same time the human factor all the time should be very important. The most valuable issue and we are looking at the future. At the same time going to the question being asked before. There is a mismanagement in almost all countries in the world. And as a water engineer, I have heard engineers all over the world asking for water conservation, for recycling, for creating a new resources.

But we should be looking for a practical things. And I don't know that there, any country has been successful to conserve the water in the extent the water engineers are looking for. At the same time, we should not solve one problem, and create a new problem. Recently I have heard about this joint plan between Israel and Egypt. That's for the sea desalination using nuclear power. We should not forget that even nuclear plants are very risky, and they could be more severe than the water problem we are facing now. We should not be looking for any technology just to bring it and say we want to... this will solve our problem. We should be careful for the by-products of such programs. Waste water recycling, it is possible and efficient. It can be part of the solution. But for the long-term, there won't be enough water to recycle. At the same time also, I believe there will be damage to the soil structure. And the best technology which can fit to the area, is the technology that can provide more water with the least cost, and the least side effects on the environment, and in particular on the human beings. That's my comment.

Baskin: Ok. I would like to conclude by

Ben Meir: No. I have to answer some questions.

Baskin: Oh, ok.

Ben Meir: A colleague of mine named, Ishai Sporim , and myself have prepared the part in Gideon Fischelson's study the agricultural part. And I'll just answer some figures that you've asked about. Let's assume that we don't have any technology that can produce desalinated sea water for cheaper than \$1 per cubic meter, ok? In order to be on equal ground in this discussion, I won't say 60 cents, or 80 cents, lets say \$1 per cubic meter. We are now producing, the eastern coast of the United States is importing every year, one million pounds of tomatoes. Our share there meanwhile has not increased 5000 tons. On 1984, the total yield we received from one dunum of greenhouse of these tomatoes, of export quality, was 5 tons. The export quality of obtained now is 15 to 20 tons per dunum. The price of paid at that time was approximately \$950 per ton. The price paid now is \$1500 per ton. Meaning that the income from every dunum of these kind of tomatoes or cucumbers, or you name it, is approximately \$20,000 per dunum. When the cost of water for these dunum does not extent over \$1000. I am not saying that Israel or including the West Bank is going to be covered with the greenhouse from the seashore to the Jordan without leaving any space for any other technology, but this technology can provide sufficient products for domestic consumption, and for export as well, and cover the cost of desalination in the technologies now know. Not in new technologies. I am not speaking about a canal being dug from the Mediterranean and the creation of water by having...

Shuval: Hydroelectric..

Ben Meir: hydroelectric, and etc. I am speaking about...and not about nuclear power. About conventional power. And \$1 per cubic meter. We still...we already have the technology to cover, in marginal activities in agriculture, but we have the technology to cover these costs. The name of the game...And the name of the game is biotechnology and research, and having better qualities, of our varieties. And share this know-how, not only with the Palestinians. And five years ago I attended such a group meeting in Washington, and they said lets have a tri-lateral, a tri-lateral research team, Jordan, Palestinians, and Israel, for better agriculture in order to be able to cover the cost of desalination, because the future, although I

recommend it so warmly, to start with desalination, the future, within 25 years, is additional outer resources, and not the inner resources. If we want to protect our resources of course.

Isaac: But you are leaving Israel vulnerable regarding its food security. You are not worried about this?

Ben meir: Well, I..we should not start a second discussion now. I can promise you, if I will be invited again, to discuss the question of food security of Israel, I will be very glad to come here.

Baskin: Before I conclude the points that I was going to write down of agreement, I would just like to mention that we have begun in the works with the Hebrew University, the Truman Institute, and the Applied Research Institute of Jerusalem, with increase involvement as well, the initiation of an international conference on the issue of water in the Jordan River Basin, which is scheduled for the fall, 1992. And those of you who are considering different ideas for papers that you would like to present at that time, should begin doing that. In the coming month we will be searching out papers. We will be bring international experts to participate in the conference as well. It will be held in Jerusalem. Probably in Tantor, but not necessarily committing ourselves on that. It will be a conference for professional water experts. Not a masked political conference. This is for your knowledge, and we'll give you more information as it becomes available. Regarding points of agreement that I heard here, I think that we could say that any basis for future agreement between Israel and the Palestinians on water have to account for equitable and equal distribution of the available water resources. I think we heard that from both speakers...

Ben Meir:For drinking purposes.

Baskin: For drinking purpose. But we need to....

Shuval: In the broad sense, domestic ?....

Baskin: The second point which comes from that, is that all use of water, or different grades of water, has to be done in an economic way, so that the best water available is for drinking water, and other water which is available, which is not of the highest quality, should be for other uses. I think we heard an agreement for both speakers that there needs to be an immediate resolution of the acute water problem in Gaza. And this is something that I would like for our forum to pursue in more depth in the near future, perhaps the next meeting, we can devote toward different possible ideas for resolving the immediate crisis in Gaza. And there were suppose to be some Gaza representatives today. Perhaps because of the weather situation they didn't come. But we should get the back

Meirjohann: they has sufficient water today..

Baskin: And sufficient water, yes. Maybe too much prevented them from getting here. Another issue, area agreement we heard, was the need for protect of the resources against pollution of different types. That's a concern of all sides. Another area, I think of agreement that we heard, was that if the scientist were the people dealing with the negotiations on water, we would come to a better and faster resolution, that if it was left up to the politicians. And I think we should also pursue ways of increasing scientific

cooperation amongst us here in the room. Certainly the conference that we're talking about, and other research projects that are on the way, is perhaps the way to do that. I think it was a positive meeting today, and a step in the right direction, that we're all moving on. I would like to, I hope I didn't miss area of agreement. There probably were, and there were certain areas of disagreement. I think that the primary area of disagreement was on how we relate to the past in water negotiations, where the Israelis....

Isaac: The other thing of course, Suppose that somebody starts planting things there, and that will change the water equation. But that, you know, that will take....

Baskin: Well, I talk about the past from the second that I'm talking now, backwards.

Isaac: You put these as principles, yes.

Baskin: I think that there is a clearly, and I think that it's not only the subject of water, I think it's in the overall negotiations on all the issues of how we relate to the past vs how we relate to the future, or correlation of how we relate to the future. And I'll show that I have a formula of how to do that. I think there is a need for both sides to deal with the past, as ugly as it may be. But I would certainly suggest that the emphasis be on the future. Though I would not make a proposal of how we go about doing that. But I think it's a concern that is relevant at any point in negotiations on any one of the subjects in conflict between the sides here. And simply by ignoring the past may not be make any future movement. And certainly by stressing the past, we are also not going to make any future positive developments. We need to think about that a lot more. I would like to set a date for the next meeting, and I would like to propose two possible subjects, and I will check out the viability of holding them. One subject as I mentioned, is the acute water problem in Gaza and ways of resolving it as immediately as possible. The second proposal that I would make, and I will be in contact with you, you'll get the invitation, is trying to get some kind of state-of-the-art report on desalination procedures and technologies today. I will look into those two different areas and see, in terms of scheduling, and who we can bring to talk about them, and you'll get the news in the invitation.

Isaac: Another topic would be the international law we have been trying for the past....

Baskin: We had two meetings, we had two meetings, where Dr. Reuvan Laster, gave a presentation, and then Prof. Abdallah Abu Eid gave a presentation. Maybe we can find....

Shuval: I know now that there are people at the Hebrew University, some of the people present, who could...Laster gave a review of the water law of Israel, but not of international ?. I think a good review of international water law, I'll speak to some of my colleagues whether we can put together a presentation from the faculty of law there is a team of people working on that right now.

Baskin: Ok. I would like to thank the two presenters. Thank you very much. And by the way, who did not sign their name here with their address will not receive the minutes of this meeting, so please do.