FGM#1 – notes from meeting with DSB residents and farmers

September 22nd, 2004. Tamar Regional council

Participants:
Yael Maor – Director, Dead Sea R&D
Dudi Kadosh – Tamar Regional Council
Arye Shahal – Ein Gedi, Kibbutz representative from the mineral water factory
Asher Lozun – Neot Hakikar
Udi Isik – Megilot Regional Council, Education department
Menashke – Kibbutz Almog, Director (Business manager)
Avi Froind Engineer, Drainage Authority
David Lehrer – AIES
Vered Balan – AIES

Abstract
The meeting took place at Tamar regional council. Attendees were representatives of local settlements, representing private farms, (Neot Hakikar) kibbutzim and non-farmers. David Lehrer began by presenting the objectives of the research and of the meetings.

All participants agreed that there is a shortage of water in the area, both in terms of quantity as well as quality. The participants also agreed that this shortage is an obstacle for further development. It was claimed that there is a potential for more water but production is held back either due to high costs, low allocation or political reasons.

Concerning the decline in the level of the Dead Sea, it is clear that the solution is on the national scale and not the municipal level. The participants related to the damage to the infrastructures due to the sinkholes and the retreat in the water line. According to some of the speakers, there is damage to agriculture that is caused by not farming all the land (for fear of sinkholes), as well as damage to tourism industry that is both physical as well as physiological.

It was agreed that there is a need to reach a balance between the chemical industry in the Dead Sea and the threats that industry presents to the rest of the area. This balance could be reached by creating an engineered solution to the decrease in the water level at the sea and increase in the evaporation pools (area of Ein Bokek).

In the future, agriculture will become more and more industrialized and technologically based. The number of farmers will decrease but each farmer will work larger farms and will specialize in fields that will follow world trends (European market).

The economic future of the region is dependant on the development of other sources of income and government investments.

Politically, it appears that any solution to the Palestinian issue presents a threat to the Jewish settlements on the northwest side of the Dead Sea

Notes from the meeting:

David – presentation of the research methods and objectives
Q&A regarding the research itself

1 Q- Is there a water shortage?

Dudi- There is a constant shortage in water production. There might be sufficient supply in the aquifer. The shortage is expressed both in terms of quantity of water as well as in quality. Estimates that there is enough water but not satisfactory quality.

Arye- Ein Gedi has very good quality water but not enough. Kibbutz Ein Gedi farms no more then 200 dunam due to lack of available water.

Dudi – the water supplier is Mekorot as well as local private sources.

Arye – the case of Ein Gedi – the kibbutz produces its own water for the kibbutz as well as for other clients. The spring annual flow is about 3MCM out of which 1MCM is channeled off for use and the rest flows into the ecosystem. This arrangement is based on the agreement between the kibbutz and the Nature Reserve Authority.
Altogether, Ein Gedi's consumption drops constantly (mostly due to the drop in the flow from the springs). The water factory consumes 4% of the general kibbutz consumption. The kibbutz transfers 200,000 CM to other consumers (Ein Gedi field school, army base and others) and of the rest - 1/3 is used for domestic consumption and the remaining 2/3 to agriculture. Future water sources are recycled water from Ein Bokek and brackish water from the Western Negev.

Menashke – The problem is different at the northern end of the DS. There is enough water between Kibbutz Almog and Highway #1. The problem is the price of production and the allocation of the water.
An ongoing dilemma is the issue of water flowing to the ecosystem. If there was a clear understanding of "how much does nature need", a case could be made that a certain amount of the water should flow to the ecosystem and the rest used for agriculture and industry. In practice, human use takes as much water as possible and the remainder flows to the ecosystem.

Example of problems– there was a hydrologic survey done by "the Sediment Research Station" תחנה לחקר הסחף in order to solve a salinity source problem. They have discovered a large source of water with a high level of salinity. If it were possible to use this water at a reasonable cost, fishponds might have been an option for development.

Dudi – Future water source development will be for tourism. Tourism industry requires water of very high quality and therefore, the water is desalinated. The hotels in the region consume 2-3 MCM.

Arye – 2 more points: (1) Dead Sea Works consumes 25MCM. The water sources are drilled wells from the Northern and Central Arava and some harvested floodwater. The factories use water of various levels of quality.
(2) There is a plan in cooperation with the Nature Reserve Authority to build an underground dam around Fesha and Samar Kane springs. The dam, which would not create an aboveground nuisance, will serve two purposes; one is capturing 100MGM (60% Fesha, 40% Samar Kane) that will be used by the Israeli and Jordanian Dead Sea Factories and the second would be to stop the phenomena of river entrenchment together with preserving the river estuary as a green ecosystem. This project was stopped by the PA who maintained that this would divert natural resources from an occupied territory.

Q- How does the water shortage affect you (the settlements in the Dead Sea basin)?

Arye – the future of the area is questionable. (a) Dead Sea factories as an individual unit will not be able to sustain themselves in the long run. The evaporation pools' water surface is constantly rising (20 cm a year). At the present, an engineered solution of raising the barrier of those pools has been established. At some point this solution will not be sufficient. There will come a time when the Dead Sea factories will no longer remain as is. In this case, the whole ecosystem and human environment will stop – (1) 4000 workers will lose their jobs (and about the same number of second hand benefactor contractors), (2) the regional council will no longer have the tax money to support itself and (3) the whole area of the evaporation pools will become a salt pond, which will have a devastating effect on tourism and the natural environment.
(b) On the same issue – there must be some kind of balance between the infrastructure of the evaporation pools and the hotel area. At present, the constant rise in the water level in the evaporation pools presents a real threat to the hotels, as well as already causing actual damage to those hotels that are on the waterfront.

2 Q- In what ways does the drop in the water level affect you?

Yael – the most obvious effect is the phenomena of sink holes. These holes are a real threat all over the area. Development cannot be planned. The governmental authorities don't issue permits for development from Mineral Beach (north west Dead Sea shore) and south.

Udi- There is another influence. The coastline recedes and damages the infrastructure of the coast.

Menashke – There is a psychological effect on people, which affects tourism in the region.

Yael + Avi – roads are affected, watersheds and so on. The government is preparing procedures for risk assessment. It might create a situation where any development east of Highway #90 will not be allowed. This situation caused severe damage to the development plans in the area.

Q- How do you see the year 2025?

Yael – there are efforts to find a technical solution to the problem: i.e. how to build over sinkholes.

Menashke – there are plans to develop tourism in the northern part of the Dead Sea that include building 3000 hotel rooms.

Yael – another engineered solution that is being discussed is creating a lagoon , which should stabilize the water level near by the shoreline by pumping water from separated parts of the lake.

Udi – the solution should be on a national scale – if desalination becomes the main water source of Israel, water would resume flowing down the Jordan River from the Sea of Galilee. The government will not promote this solution until after a peace agreement with Syria, since Israel would be forced to admit that the Sea of Galilee and the Golan Heights are not vital for water use and therefore, the legitimization for holding these lands no longer exists. The chances of this solution coming about are low. It would only happen after a local catastrophe.

Asher – water carrier from the Red Sea or the Mediterranean.

Yael – Dead Sea factories are against the water conduit solution. The effect on the Dead Sea will affect them. There are studies that show various changes in the water – gypsum layer, bacteriologic changes, potassium etc.
Prof. Dan Zaslavsky (former Israeli Water Commissioner & researcher of water and energy issues), vigorously opposes the water conduit plan and asserts that desalination is the only applicable solution both economically and in general.
There is a research team led by the Ministry of the Environment that is studying future options.

Arye – the team led by the Ministry of the Environment does not take into consideration the settlements in the area.

Yael – this point was brought up in one of the discussions and the team had taken it under consideration.

Udi –There isn't much of a relationship between the residents and the Dead Sea. Culturally there is no connection between the Sea and the residents.

Arye – there is a strong economic connection between the residents and the Sea. 80% of Ein Gedi's income is from tourism.

3 Q- What about agriculture in 2025?

Asher – It is crucial to differentiate between kibbutz and moshav type of settlements. In a moshav, the water allocation is calculated per farmer. Development, therefore, is determined by water allocation. Another major influence on development of agriculture is the world market, mainly Europe, the main consumer of the agricultural products from this area. There is no way to foresee the development in the world market. Israel had a relative advantage because of cheap labor but that as well, is not a guarantee for the future.

Dudi – the market price of agricultural products changes rapidly and influences development. Local agriculture is dependent on the European market. The time line for planning is short and every few years there is a shift to different types of crops.
Most of the planning scenarios for future agriculture are determined by the wishes of the planners.

Menashke – farmers will disappear. There will be only a few farmers farming on a large scale with technologically sophisticated means.
We will see an increase in crops that consume less water and can be adapted to recycled water. This goes hand in hand with the continuing governmental policies.

Asher – noted that in the Arava region the number of farmers had doubled. But that is not the case for the rest of Israel.

Yael – agriculture will become more technologically advanced – higher production using less labor. At the same time, there will be a shift to alternative crops. Another alternative is the organic market. The areas of tree plantations will increase – date tree plantations among others.

4 Q – What about other sources of income?

Menashke – there is a need for governmental intervention to distribute the population more equally. Without that, the area will grow weaker and weaker. Alternative areas for development are: (1) tourism and (2) production of gypsum.

Yael – another option for development is clean industry (for example, Ahava factories), biotechnology, the use of interdisciplinary resources management (plants and mineral), and so on. The lack of sources of income is already affecting the development of the area.

Udi – looking at the greater picture – National Policy today is one in which one central area receives most of the development resources and a weak periphery with few people who choose a somewhat alternative life style receives minimal resources. Another alternative is for the central government to divide the investments over the whole area of the country and allow sustainable living. Udi doesn't believe that under current conditions there is a way to create strong settlements and life styles that would allow a significant population to settle in the periphery.

5 Q- What will the future look like in terms of regional cooperation?

Udi – In the future there will be two political entities in the area – Palestinian and Israeli. Jordan will become the Palestinian state.

Yael – Political cooperation is a threat to the area on some level since it means giving up part of the land.

Udi – If there isn't a genuine division of resources in Israel between the center of the country and the periphery, and the same on the Jordanian side of the Dead Sea, it will create a situation where two weaker communities are those in contact with each other and will retard a peaceful relationship.

Notes: Vered Balan
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