EUROMED

EURO-MEDITERRANEAN PARLIAMENTARY ASSEMBLY

AD HOC COMMITTEE ON ENERGY, ENVIRONMENT AND WATER

Special Report on the Situation in the Jordan Valley

tabled by the co-rapporteurs

Stefan Schennach (Austria),
Mongi Cherif (Tunisia) and
Antonyia Parvanova (European Parliament)

CONTENTS

Page

I. DRAFT RECOMMENDATION

The Ad Hoc Committee on Energy, Environment and Water,

– having regard to the fact that virtually all countries of the Middle East consume more water than their renewable water supply,

  a) whereas water scarcity is one of the most pressing issues in the Jordan Valley;

  b) whereas in the region too much water is drawn from aquifers, the tributaries are mostly dried up, pollution is a severe problem in the rest of the still existing rivers and the level of the Dead Sea is dropping at an alarming rate each year;

  c) whereas climate change will most probably lead to more droughts and water scarcity in the region.

- having regard to the Peace Treaty between the State of Israel and the Hashemite Kingdom of Jordan signed on 26 October 1994 at Wadi Araba,

  a) whereas the Parties agreed mutually to recognise the rightful allocations of both of them in Jordan River and Yarmouk River waters and Araba/Arava ground water in accordance with the agreed acceptable principles, quantities and quality;

  b) whereas the Parties, recognising the necessity to find a practical, just and agreed solution to their water problems and with the view that the subject of water can form the basis for the advancement of co-operation between them, jointly undertake to ensure that the management and development of their water resources do not, in any way, harm the water resources of the other Party;

  c) whereas the Parties recognised that their water resources were not sufficient to meet their needs. More water should be supplied for their use through various methods, including projects of regional and international co-operation.

- having regard to the Jordan's Water Strategy 2008-2022 "Water for Life",

  a) whereas groundwater levels have dramatically declined showing that groundwater exploitation in the past was unsustainable;

  b) whereas the economic development of the past two decades has created enormous pressures on the quality of ground and surface water resources;

  c) whereas by 2022, the Disi water conveyance and the Red-Dead Canal would be operational.

– having regard to the Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip (Oslo II Agreement) signed on 28 September 1995 in Washington, D.C., in particular to Annex III, Article 40 (Water and Sewage),

a) whereas Israel recognizes the Palestinian water rights in the West Bank. These will be negotiated in the permanent status negotiations and settled in the Permanent Status Agreement relating to the various water resources;

b) whereas both sides recognize the necessity to develop additional water for various uses;

c) whereas, while respecting each side's powers and responsibilities in the sphere of water and sewage in their respective areas, both sides agree to coordinate the management of water and sewage resources and systems in the West Bank during the interim period, in accordance with the following principles:

I. Maintaining existing quantities of utilization from the resources, taking into consideration the quantities of additional water for the Palestinians from the Eastern Aquifer and other agreed sources in the West Bank as detailed in this Article.

II. Preventing the deterioration of water quality in water resources.

III. Using the water resources in a manner which will ensure sustainable use in the future, in quantity and quality.

IV. Adjusting the utilization of the resources according to variable climatological and hydrological conditions.

V. Taking all necessary measures to prevent any harm to water resources, including those utilized by the other side.

VI. Treating, reusing or properly disposing of all domestic, urban, industrial, and agricultural sewage.

VII. Existing water and sewage systems shall be operated, maintained and developed in a coordinated manner, as set out in this Article.

VIII. Each side shall take all necessary measures to prevent any harm to the water and sewage systems in their respective areas.

IX. Each side shall ensure that the provisions of this Article are applied to all resources and systems, including those privately owned or operated, in their respective areas

- having regard to the UN-Convention on the Law of the Non-navigational Uses of International Watercourses adopted by the United Nations on 21 May 1997, formulated by the International Law Commission (ILC), which has been ratified by 16 countries until now but would need the ratification of 35 countries in order to enter into force,

  a) whereas Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner;

  b) whereas Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other Watercourse States;

  c) whereas Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse.

- having regard to the Helsinki Rules on the Uses of the Waters of International Rivers published by the International Law Association in 1966 and reflecting customary international norms for the use of transboundary water systems as well as the UN-Convention 1997,

  a) whereas the doctrine of limited territorial sovereignty emphasizing the “reasonable and equitable share in the beneficial uses of the waters of an international drainage basin” needs a better definition regarding “reasonable” (Art. IV Helsinki Rules)

  b) whereas neither in the Helsinki Rules nor in the UN-Convention it is clarified if the principle of “prevention of appreciable or significant harm” means unambiguously that a state may only use an international water system in a way that it does not cause noticeable harm to another state and its population.

– having regard to the UNESCO-Convention concerning Protection of the World Cultural and Natural Heritage signed on 16 November 1972 in Paris,

  a) whereas deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world;

  b) whereas sites shall be considered as "cultural heritage", i.e. works of man or the combined works of nature and man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view;

  c) natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty shall be considered as “natural heritage”;

d) whereas the inclusion of a property in the World Heritage List requires the consent of the State concerned.

- having regard to the letter of the Vice President of the European Parliament Ms. Rodi Kratsa-Tsagaropoulou sent to the Enlarged Bureau of the Euro-Mediterranean Parliamentary Assembly demanding to discuss within EMPA the inclusion of the Jordan Valley in the UNESCO World Heritage List ;

- having regard to a Fact-Finding-Mission of the Committee Chair, Mr. Stefan Schennach, and the Vice-Chair, Ms. Antonyia Parvanova, to the Jordan Valley from 29 January 2010 to 1 February 2010 and to the report of the mission annexed to this Special Report,

  a) whereas the Israeli position – as outlined in the document "The issue of Water between Israel and the Palestinians" of the Water Authority of Israel – has been taken note of at a meeting with representatives of the Water Authority, Ministry of Foreign Affairs and the Coordinator of Government Activities in the Territories (COGAT) of Israel at the King Hussein/Allenby Bridge;

  b) whereas also the Palestinian position has been taken note of at a meeting with representatives of the Negotiation Support Unit (NSU) in Jericho;

  c) whereas according to the Jordanian position the Jordan River barely exists - on the one hand this is due to the over drilling of groundwater and to the fact that the amount of water needed for domestic, agricultural, industrial and touristic us keeps on rising. On the other hand the Wadi Araba Peace Treaty is independent of the amount of rain in terms of Israel and gives to Israel water guarantees at the expense of Jordan;

  d) whereas Jordan treats over 60% of waste water and Israel 70%

- having regard to the World Bank report "Assessment of Restrictions on Palestinian Water Sector Development" of April 2009,

  a) whereas Palestinians have access to one fifth of the resources of the Mountain Aquifer;

  b) whereas water withdrawals per head of the Palestinian population have been declining, and there are real water shortages;

  c) whereas per capita domestic supply is very variable and discontinuous, with relatively small improvements since Oslo. Nominal supply rates to a quarter of the connected population are less than 50 lpcd, with some network services providing as little as 10-15 lpcd, which is at or below the supply threshold adopted by international humanitarian disaster response agencies to avoid epidemics;

  d) whereas there has been little progress on wastewater collection and treatment, with negative environmental results;

e) whereas Palestinian abstractions in the West Bank have dropped below the basic level recognized in Oslo;

f) whereas the Joint Water Committee does not function as a “joint” water resource governance institution because of fundamental asymmetries - of power, of capacity, of information, of interests – that prevent the development of a consensual approach to resolving water management conflicts.

– having regard to the Amnesty International Report “Troubled Waters – Palestinians Denied Fair Access to Water” of October 2009,

a) whereas Palestinian consumption in the OPT is about 70 litres a day per person – well below the 100 litres per capita daily recommended by the World Health Organization (WHO) – whereas Israeli daily per capita consumption, at about 300 litres, is about four times as much;
b) whereas a 700 kilometre fence/wall which has been under construction by Israel since 2002 has further reduced Palestinian access to water in the West Bank;
c) whereas in addition to the fence/wall more than 500 military checkpoints, barriers and obstacles of various kinds - most commonly, cement blocks, earth mounds and gates - block access to roads for Palestinians throughout the West Bank;
d) whereas the Palestinian Water Authority’s inability to satisfy the population’s needs has greatly undermined its authority and thus, its ability to confront and overcome long-standing practices that further weaken the water structure, including: water theft through illegal connections and unauthorized water extractions; inadequate disposal of sewage and solid waste, which pollutes water resources.

- having regard to activities of NGOs like the Friends of the Earth Middle East (FoEME) which is an organization that brings together Jordanian, Palestinian, and Israeli environmentalists and whose primary objective is the promotion of cooperative efforts to protect the shared environmental heritage.

1. Urges all parties concerned, in particular Israel, the Palestinian Authority and Jordan, but also Lebanon and Syria to find a common solution to the most pressing problems prevailing in the Jordan Valley, namely an equal distribution of water that respects the need of all the people in the region and a healthy and protected environment for the generations to come;

2. Stresses that the solution of the water issue is of utmost importance for peace, security and stability in the region;

3. Underlines that while Israel has an interest in reliable water supply from transboundary aquifers, sufficient water resources are one of the pre-conditions for a future viable Palestinian State;

4. Believes that Israel and the PA together have to agree on common data of available water and distribution as well as demographic data as a starting point for further negotiations as both sides as well as reports in particular of the World Bank or Amnesty International have presented different figures up to now;

5. Calls on Israel to enter into negotiations for a new agreement on water and sewage with the Palestinians and not leave it to an overall package as the interim agreement (Oslo II) of 1995 was intended to be valid only for 5 years and can no longer serve as a basis due to the fact that the number of inhabitants of both Israel and the Palestinians, the amount of rainfall and available technologies for use and reuse of water have significantly changed;

6. Urges the governments of the riparian states of the Jordan River and its tributaries to respectively ensure and improve the stream and the quality of the water and to actively seek ways to reduce pollution of these waters;

7. Welcomes the application of more and more advanced technologies for treatment of the sewage and wastewater for reuse in agriculture, especially by Israel, and invites Israel to share this knowledge with other countries in the region;

8. Calls on international donor institutions to step up their efforts in providing financial and technical support to projects aiming at improving the overall water supply in the region as well as the construction of purification plants and maintenance of water networks;

9. Urges Israel to actively reduce administrative hurdles in order to facilitate the process of digging new wells and of building waste water treatment plans in the Palestinian Territories;

10. Encourages to make more use of environment friendly and sustainable technologies such as solar power – which might be a source of energy for desalination plants - in order to guarantee that the environment is not stressed beyond its limits and in order to reduce the possible impact of droughts and other natural disasters that are currently increasing in intensity, not least due to climate change;

11. Calls upon Israel and Jordan to fully honour Annex IV of their peace agreement which calls inter alia for the ecological rehabilitation of the Jordan River and for the environmental protection of the Dead Sea water resources;

12. Encourages Jordan in its efforts to realize the Red-Dead Sea Project while ensuring that possible negative environmental effects can be avoided;

13. Calls upon all member states of EMPA to ratify the 1997 UN Convention on the Non-Navigational Uses of International Watercourses so that it can finally enter into force;

14. Encourages the riparian states of the Jordan Valley to have the cultural and natural riches of the Jordan Valley recognized as UNESCO World Heritage in order to safeguard and protect this unique region;

    a) because the Jordan Valley - cradle of the three monotheistic religions of Judaism, Christianity and Islam - owns a wide range of mythological places, archaeological monuments and historical settings such as Mount Nebo, the Qumran caves, the Baptism site of Jesus Christ and Islamic fortress of Karak, the oldest city of the world, Jericho and the mostly quoted city in literature Jerusalem and therefore deserves to be considered as “cultural heritage”;

    b) because the Dead Sea - being the lowest place on earth at 422 metres below sea level - is one of the world's saltiest bodies of water, with 33.7% salinity and possesses a unique ecosystem in the world should be considered “natural heritage” as well as the Jordan Valley with its amazing diversity of flora and fauna.

II. EXPLANATORY STATEMENT

* Introduction:

According to the 2006 United Nations Human Development Report, “there is more than enough water in the world for domestic purposes, for agriculture and for industry. .... Scarcity is manufactured through political processes and institutions that disadvantage the poor.”

It is a fact that virtually all countries in the Middle East use more than their renewable water supply. However, water scarcity is less a problem of lacking water than a problem of the equitable distribution of existing water resources and of their sparing use in line with the region’s needs, its climate and its people. In spite of the fact that the issue of water forms a possible source of controversy and tensions it can also be a basis for understanding and cooperation.

For over 60 years, water supply has been one of the most burning problems for the regions bordering the Jordan valley – Israel, Syria, Jordan and the Occupied Palestinian Territories. The Jordan is the principal water reservoir for all the riparian states. The Jordan River rises in Syria, Jordan, Lebanon Israel and the Palestinian Territories. For Lebanon, Israel and Palestinian Territories, these areas constitute the most important source of drinking water. .

* Jordan Valley and Middle East ecosystem:

I. The Jordan Valley area

The Jordan valley area – 30% of the West Bank area in the Palestinian Territories – stretches from the Dead Sea in the south to Bisan in the north, from the Jordan in the east to the West Bank hills. Of the total valley surface of 2400 km2, 1200 km2 are controlled by Israeli settlements. 46% of the land has been annexed as military occupation zones, and only 4% of the valley remains accessible to Palestinians for agriculture or residential purposes. According to the Palestinian Central Bureau of Statistics, the Palestinian population in the Jordan Valley is around 53,000 people[1] In season, many more Palestinians descend from the mountains in the west to the valley to cultivate their land and to graze their herds. Most settlement areas are currently around Jericho as well as in 24 Bedouin townships and villages.

The Jordan valley is home to an amazing diversity of flora and fauna. This great biological diversity is due in part to its location between three continents (Asia ,Europe and Africa), being situated along major bird migration corridors and supporting a wide variety of habitat type such as riparian, marsh grassland ,scrub and arid desert[2]. Many animal species live in the mountains

[1] This includes all the villages in the Jericho governorate, as well a handful of villages from the governorates of Tubas and Nablus, but not Nablus itself, see also http://peacenow.org/entries/archive5214

surrounding the Dead Sea. Hikers can see camels, ibex, hares, hyraxes, jackals, foxes, and even leopards. Hundreds of bird species inhabit the zone as well. Both Jordan and Israel have established nature reserves around the Dead Sea[3].

The delta of the Jordan river was formerly a veritable jungle of papyrus and palm trees. Flavius Josephus described Jericho as "the most fertile spot in Judea". In Roman and Byzantine times sugarcane, henna, and sycamore fig all made the lower Jordan valley quite wealthy. One of the most valuable products produced by Jericho was the sap of the balsam tree, which could be made into perfume. But by the 19th century Jericho's fertility had disappeared[4]

Desertification which is the extreme deterioration of land in arid and dry sub-humid areas due to loss of vegetation and soil moisture results chiefly from man-made activities and influenced by climatic variations. In the Jordan Valley apart from a general lack of water this is also due to a sometimes high degree of salinity of both irrigating water and soil which makes it more and more difficult for agriculture to plant crops and gives way to further desertification. Against the background of the climate change finding a solution is overdue[5].

II. Jordan River Zone

The Jordan River valley is a special geological and geographical segment of the Great Rift which extends from Syria to the Dead Sea. The central surface water system in the Middle East is formed by the Jordan and its tributary, the Yarmouk (coming from Syria). The Jordan collects and transports water from the main sources in south Lebanon across Lake Tiberias (in Israel) to the Dead Sea. The Jordan's catchment area covers some parts of Lebanon, Syria, Israel, Jordan and the Palestinian Territories. At present, the Jordan River is mainly used by Israel, whereas the Yarmouk is mainly used by Syria and Jordan.

The Jordan River valley is one of 261 transboundary water systems worldwide, of which 19, among them the Jordan River, have more than 5 riparian states. As in most international cases the riparians of the upper course find themselves in a position of strength vis-à-vis the riparians of the lower course, as in the case of the Jordan River. In spite of its length of only 230 kilometres and its relatively low outlet for Israel, the Palestinian territories and Jordan the Jordan River appears to be the most important source of surface water in the region.

With relatively few surface runoffs, the states of the Middle East draw considerable amounts of water from subsurface reservoirs (called aquifers). In Israel, the Palestinian Territories and Jordan, these account for almost two thirds of all water supplies. Some of these subsurface reservoirs are located

[3] see http://en.wikipedia.org/wiki/Dead_Sea#Fauna_and_flora
[4] see http://en.wikipedia.org/wiki/Dead_Sea
[5] see http://en.wikipedia.org/wiki/Desertification

within the states or the Palestinian territories, such as in wide expanses in Jordan or in the Israeli coastal strip. Others stretch across national borders such as the groundwater resources that are fed in the West Bank (Palestinian Territories) and flow towards Israel (Mountain aquifer), or the Disi aquifer in the south of Jordan, which it shares with Saudi Arabia. “With the exception of the Jordan, all rivers have either dried up or have become sewage canals” says Gidon Bromberg of Friends of the Earth. According to the NGO diversion of over 90 per cent of its fresh water, in addition to discharge of large quantities of untreated sewage, threatens to irreversibly damage the Jordan River Valley. Israel, Jordan and Syria have all diverted its upstream waters for domestic and agricultural uses, leaving only a small amount of precious fresh water for river and its once thriving ecosystem In the north, the over-exploited tributaries of the Jordan have shrunk within half a century and today carry only less than one tenth of the original amount of water. In the south, the chemical industry draws on the Jordan’s mineral-rich water. What is left is polluted and full of waste. Pollution has reached a dangerous level. “The concentration of E. coli in the drinking water is too high”, says Mohammad Said al-Hmaidi, former head of the Environmental Agency of the Palestinian Authority.

The further watercourse of the Jordan River has been mainly cut by the construction of the National Water Carrier of Israel, decided in 1956 and completed in 1964, that is fed by water from the Lakes of Tiberias and Hulla and by the construction of the King Abdullah Canal, constructed and extended between 1959 and 1987, in Jordan whose main water source is the Yarmouk River. The Peace Treaty between Israel and Jordan guarantees Israel a certain amount of water (eg. 25 million cubic metres annually from Yarmouk River) which is based on data of the Johnston Plan (Jordan Valley Unified Water Plan) of 1955.

The Oslo II Agreement 1995 has an enormous weakness as regards the hydrological situation of the Jordan River: although it mentions present extractions of groundwater by Israel, it completely leaves aside water extraction from the Jordan River and future fixed quotas of groundwater aquifers or postpones this issue until negotiations on the final status of the Palestinian territories. As a result the water issue has been shifted from “low politics” to “high politics”. Today the formerly mighty Jordan River has turned into a miserable and contaminated rivulet that only carries the historical name of the river and does no longer supply the Dead Sea with water.

III. The Dead Sea

The Dead Sea basin, located in Great Rift Valley, is a unique ecosystem of the world. With 422 meters below sea level this lake is the lowest place on earth. At 33.7% salinity it is also one of the world's saltiest bodies of water - the salt concentration is ten times higher than that of the Mediterranean.

Despite its uniqueness there is no integrated development plan for the Dead Sea Basin. The competing sectors, mineral extraction industry, water supply, tourism, local agriculture and urban development exploit the Dead Sea´s

resources without considering the area's natural capacity. Over the last 40 years the water level of the Dead Sea has dropped by over 25 metres – currently falling at 1 metre per year. The sea has been shrinking in length from over 75 km earlier last century to 55 km at present. This is due to both water extraction from the Jordan and Yarmouk Rivers by Israel, Jordan and Syria upstream and industrial mineral extraction activity in Israel and Jordan at the southern basin of the Dead Sea. As a result Israel appears to be responsible for the decline of the sea level by 75% and Jordan for a decline by 25%.

"The problems of the Dead Sea are all human-made," says Eli Raz, an Israeli geologist, biologist and expert on the Dead Sea. One consequence of the rapidly dropping water level is underground cavities which form on the dried-up sea bed. Ground water undercuts the saline layers of the soil and washes them out. This leads to the formation of cavities which remain invisible from the surface until the earth caves in and a crater opens. Sometimes, it is date palms that are buried, sometimes sheds, and sometimes a human being.

The situation is aggravated by the chemical plants south of the Dead Sea. The size of their huge evaporation basins equals almost one third of the lake surface. Salt, potassium, magnesium, phosphor, bromine and other chemical substances are harvested in these shallow ponds. In terms of cost, this method is unmatched since all that needs to be done is to let water flow into the basins and wait for it to evaporate in the desert sun.

The international community should on the one hand support regional cooperation including the Palestinian Authority which should fully participate in the discussions on the Dead Sea basin and on the other hand guarantee that any funds of international donors are linked to commitments regarding sustainable development and no further aggravation of the situation of the Dead Sea.

IV. Lakes of Hulla and Tiberias

Back in 1951, the Hulla lake area in Israel was so humid it had to be drained to make it amenable to agriculture[6]; Lake of Tiberias and the Jordan supplied sufficient fresh water, and surplus water gushed from wells to the Israeli border. At present, one cannot but call every tributary of the Jordan a sewer.

Even Lake Tiberias, the region's largest freshwater reservoir, is shrinking; after a series of droughts. The shore is now formed by a dust strip that used to be part of the lakebed. As a result decades of over-pumping, the tributaries in the upper course of the Jordan river today carry no more than one tenth of

[6] Lake Hula and its surrounding swamps were drained in the 1950s as an attempt to alter the environment to suit agricultural needs. Though initially perceived as a great national achievement for Israel, with time it became evident that the benefits from transforming the "wasteland" of Lake Hula and its swamps were limited. In the past few years, following nearly 50 years of an unsuccessful struggle to utilize the drained valley's resources, the Israeli government has finally recognized that successful development can endure only if a balanced compromise between nature and development is reached. Thus, a small section of the former lake and swamp region was recently reflooded in an attempt to prevent further soil deterioration and to revive the nearly extinct ecosystem, retrieved on: http://www.jewishvirtuallibrary.org/jsource/Society_&_Culture/geo/Hula.html

the original amount of water, whilst in the south, the chemical industry withdraws mineral-rich water.

*** Conflict impacts on water management**

I. <u>On regional level</u>:

Israel's five main water sources (approx. 2,000 million cubic meters (MCM) annually) currently are groundwater[7], its share in the Jordan, surface water, recycled water, and desalinated water. According to the Israeli Ministry of Environmental Protection Israel's cumulative deficit stands at around 1,500 MCM, an amount equal to the annual consumption of the country, in comparison to the average annual replenishment rate of major aquifers. Moreover, water scarcity is exacerbated by the deteriorating quality of water ressources due to demographic, industrial and agricultural needs. In a survey conducted in 2006, the Jewish National Fund (JNF, 2007) identified two major causes for the extreme water scarcity from which Israel is suffering: drought and excessive consumption (in Israel, private water consumption reaches European levels) – and both problems mutually reinforce one another.

In the 1950s, the region's water reserves were still abundant. At the time, the volume of precipitation was in excess of what people needed. Surplus water gushed from the wells on the Israeli border. As the Israeli population grew, they started to tap the springs. According to Mekorot, the Israeli Water carrier, the water consumption of the average Israeli household declined by more than 9 percent over 2009. This decrease is primarily due to efforts to encourage conservation of water resources. Notably, in July 2009, the Knesset (Israeli Parliament) enacted a "drought tax" targeting consumption.

In 1964, Israel constructed a pipeline that supplies Israel with 500 MCM of water from Lake Tiberias without authorisation from Syria and Jordan. This pipeline is the most important source of water for Israel and irrigates the totality of the agricultural surface, almost to the Egyptian border. It feeds water pipes from Tel Aviv to Jerusalem as well as the settlements along the Jordan River. Some two thirds of the water consumed by Israel is used to irrigate orange and tomato crops, which, however, account for a mere 2% of the country's GDP. Israel and Jordan together use 75% of the water of the Jordan for agriculture even though together they generate only 8% of their GDP from agriculture. As a World Bank Report states an important economic sector in the West Bank is the irrigated agriculture that uses more or less two thirds of Palestinian water resources and contributes around 12% to the GDP.[8]

The appropriation of the Jordan, its shores, and its upper reaches continues to be a major factor in today's political conflicts between the countries mentioned.

[7] This includes also part from the Palestinian Territories where Israeli settlements are located.
[8] World Bank Sector note, *Assessment of restrictions on Palestinian Water sector development*; April 2009, available on http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WaterRestrictionReport18Apr2009.pdf

Drinking water pollution has meanwhile reached dangerous levels, as shown e.g. by the high concentration of E.coli. In the West Bank, Israelis and Palestinians dispose of their waste in old quarries or on the shores of the wadis, from where it infiltrates the drinking water.

Against this backdrop the multiple use of water gains great importance. In Israel 70% of urban sewage are treated and reused (60% in Jordan). The situation is significantly worse in the autonomous Palestinian territories. Only just a quarter of the population is linked to central sewage system and less than 5% of urban sewage is treated in plants operating well beyond capacity[9]. According to the World Bank Report, approximately 25 MCM of untreated sewage flows by gravity into Israel, as this untreated sewage is released to the environment each year at over 350 locations of Palestinian villages and Israeli settlements in the West Bank. Apart from the risk of infection – as sewage often flows untreated through villages - it contaminates wadis and may lead to a serious threat for the groundwater aquifers[10].

II. <u>On the Israeli – Palestinian level</u>:

Between the Six Day War in 1967 and the Oslo Agreement in 1993 it was forbidden to sink new wells in this region. Since Israel has taken over control of the water supply, only 328[11] of the former 774 wells in the region are still intact.
The Oslo Process that started in 1993 has led to a progressive improvement of the water situation for the Palestinians.
The Declaration of Principles on Interim Self-Goverment Arrangements of 1993 contained both a general and a specific reference to the issue of water. It was agreed that cooperation would exist on the subject of water and proposals were formulated for conducting studies and program on water rights for both sides.

In September 1995 the Israeli Palestinian Interim Agreement on the West Bank and Gaza (Oslo II) included an extensive section on the question of water and sewage. The agreement stated that Israel recognizes the Palestinian water rights in the West Bank and that these would be discussed and finalized in the framework of a permanent arrangement. In addition, it was determined that the Palestinians would receive defined quantities of water based on existing uses. The existence of water shortage was also recognized for both sides and the need to develop and create additional sources of water, principally from the Eastern aquifer but also from recycling of sewage effluent and desalination. It was also agreed that no activities would be pursued that would lead to pollution of the environment, and that sewage would undergo proper treatment.

[9] Al-Sa'ad, Rashid: Wastewater management for Small Communities in Palastine, 2000, Amman, published in 2008
[10] Isaac, Jad: Water conflicts in the Middle East, 1998, Berlin
[11] Haaretz of 20 August 2010 which also deals with the issue in general: http://www.haaretz.com/hasen/spages/1107419.html

Despite of Oslo II not enough has changed since that time. The Palestinians in the West Bank are deprived of water. Whereas Israel systematically overstrains the regional water resources, the Palestinian farmers depend almost exclusively on surface water provided by precipitation. In practical terms, the Palestinian population continues to suffer from a shortage of water. The shortage is caused by a lack of access to water sources, over-extraction and climate change. According to a study by B'tselem (the Israeli Information Centre for Human Rights), only 60 litres of drinking water are available to Palestinians in the West Bank per day, as little as 30 litres in some low-precipitation areas in the north.

It must be noted, however, that figures vary significantly: Whereas the Water Authority of Israel asserts[12] that Palestinians in the West Bank consume 100 cubic metres of fresh natural water per capita/year, i.e. 274 litres per day and Israelis 170 cubic metres, i.e. 466 litres, a report of the World Bank[13] claims that only 75 cubic metres are available for Palestinians and 240 cubic metres for Israelis per capita/year (this corresponds to 205 litres/day and 657 litres/day). After deducting industrial use and water losses, however, the latter report assumes that only 50 litres/day are available for domestic use. The Negotiation Support Unit (NSU) of the PLO claims that Israel consumes 4 times as much per capita/day (280 litres vs. 60 litres). So it might be useful that both parties together collect and evaluate data that may be a basis for further negotiations.

The global climate change has affected the area and between the Jordan River and the Mediterranean Sea the aquifer recharge due to seasonal rainfall has significantly decreased. All the regional and local water resources have been affected. In particular the last 5 years have shown a very low amount of rainfall.

From the point of view of the Israeli Water Authority the issue was taken into due consideration in the Water Agreement. Israeli Palestinian Joint Water Committee (JWC) is charged to manage the Water Agreement. The committee has met approximately 60 times over the past 12 years even during the Second Intifada. Of the total estimated potential, 483 MCM was allocated to Israel (71%), 118 MCM to the Palestinian Authority. In addition to the 118 MCM, an extra quantity of 23.6 MCM for domestic use has to be made available for the West Bank: 20.5 MCM was to come from additional wells and 3.1 MCM from Israel supply through Mekorot.

Mekorot, the Israeli water company, is responsible for this distribution. The failure to develop new water sources and the consequent short-fall in water supply within the West Bank has made Mekorot an increasingly important substitute supplier. This has in turn created a dependency on water ressources that are not Palestinian controlled. In fact, this monopolist supplies the 50,000 inhabitants of Bidu and Katana in the West Bank with only half of

[12] "The issue of Water between Israel and the Palestinians" http://www.water.gov.il/NR/rdonlyres/A111EFEF-3857-41F0-B598-F48119AE9170/0/WaterIssuesBetweenIsraelandthePalestinians.pdf

[13] West Bank and Gaza – Assessment of restrictions on Palestinian water sector development: http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WaterRestrictionsReport18Apr2009.pdf

the water they need[14]; Palestinians are forced to buy the rest from private suppliers. During the hot summer months, one can observe a genuine battle for water in the villages of Bidu and Katana. Moreover, privately supplied fresh water is up to six times more expensive than that supplied by Mekorot. The inhabitants of Bidu and Katana are forced to economise on every drop.

Studies conducted by the Applied Research Institute of Jerusalem (ARIJ) (2007) have shown that Israel controls 80% of the water which in fact should be managed by the Palestinian Autonomy Authority. This means that Israel controls some 453 million cubic metres of Palestinian water. In violation of international law, the Israeli occupation regime is denying Palestinians access to Jordan water, so that the Palestinian share of drinking water and water used for agricultural purposes is shrinking dramatically. Under the occupation regime it had always been forbidden to sink new wells or deepen existing ones as substitute for groundwater that is running dry. Deep wells and new wells are reserved for the Israeli settlements, which is one of the reasons for the dwindling the Palestinian water supply.

A number of poor Palestinian families are sinking “unauthorized” wells – Israeli authorities talk about approx. 250 “illegal” wells - which are impure and lead to the propagation of infectious diseases. Since Oslo II the Palestinians have received licenses for 17 wells for 16.7 MCM and have lodged an application for a further 82 wells for 31.5 MCM. Development of the 17 wells began in 1996 but only three of these wells have been developed. According to the Palestinian Water Authority’s (PWA) West Bank database the remaining wells have never operated due to the lack of funds available to install the necessary electromechanical works and the lack of network connection. The Israeli Water Authority says that actual wells permits issued for the Palestinians by the JWC total 50 MCM from 59 wells, much above the 19.1 MCM foreseen in Clause 40. PWA States that the 50 MCM is an overestimation and that actual pumping is 19.7 MCM with 59 wells being replacement, monitoring and new wells.

The low availability and high cost of water have led to coping strategies - mainly in the northern part of the West Bank- less connected to the water system and where the JWC has not licensed further wells. These generally get water from springs cisterns or from shallow agricultural wells that are often unsuitable for drinking. Bassam Sawalhi of the Palestinian Water Authority estimates that this year up to 70 million cubic metres of water will be lacking in the Palestinian zones. The Palestinian expert explains that the amount of water which Israel must supply to the Palestinians was determined already in 1994 within the framework of the Oslo Accords. “Ever since, this quantity has remained unchanged, while our population has increased by several hundred thousand.”

People in the West Bank area derive water from cavities and crevices where rain water collects. These subterranean reservoirs are practically the only natural source of water for the Palestinians and harbour vast potential for

[14] see article in Süddeutsche Zeitung on 2 July 2008: http://www.sueddeutsche.de/politik/274/445011/text/

conflict. In the wake of demographic growth after the creation of the State of Israel, the Israelis started to tap subterranean ground water, withdrawing 300 million cubic metres of water, to the limit of the capacity of these aquifers.

Even before the summer of 2009, the WHO had already warned that poor water supply was causing drinking water-borne diseases among a growing number of Palestinians.

Under the Oslo II Agreement of 1995, the roughly 1.5 million Palestinians in West Bank territories were accorded an annual amount of drinking water of merely 118 million cubic metres (75 cubic metres per capita), whilst each of the 280,000 Israeli settlers (located in the settlements inside Palestinian Territories) is entitled to 264 cubic metres. The minimum required according to the WHO is 100 cubic metres. Since 1995 the Palestinian population has risen to over 2.2 million inhabitants in the West Bank but also in this case Israeli authorities talk about a population of just 1.8 million which again represents a disparity in figures.

In spite of the problem described the Oslo II Agreement has therefore slowly improved the water situation in the West Bank. However, 80 % of water sources are still controlled by Israel. The Oslo Agreement cemented an unequal interim distribution of water reserves in the West Bank which would be ruled under final status agreement.

This inequality is dramatic because of the Israeli separation wall/fence. Officially, the wall/fence does not follow the internationally recognized border between Israel and Palestine[15]. In reality, the “fence” is a complex cordon sanitaire, up to 100 m wide, consisting of trenches, barbed wire, electrical fences and watchtowers on Palestinian territory. At some points, it protrudes up to 10 km into Palestinian territory so that Israeli settlements find themselves situated on the Israeli side of the border. For many Palestinian communities, this arbitrariness means that their springs and land are suddenly on the other side of the wall so that they have to obtain permits from the civil administration – in the case of Jayyous area only 24% of 452 eligible farmers were granted such permits[16]. The wall, Israel argues, had been erected to prevent suicide bombers from reaching Israeli communities. Granted, but as far as water is concerned, it could not have been more disturbing. The fence itself, land closures and movement and acess restrictions have at the same time had a significantly negative impact on the Palestinian agricultural economy. The wall cuts off numerous Palestinians from many of their most abundant sources. People no longer have access to more than 29 wells and 32 springs, so that considerable parts of the Palestinian population are completely cut off from water supply.

[15] The boarders of the State of Israel before the 1967 war (the Armistice line). The war of 1967 resulted in an occupation of the Palestinian Territories (East Jerusalem, West Bank and Gaza Strip), cf. the map in Annex I. taken from: http://unispal.un.org/unispal.nsf/b987b5db9bee37bf85256d0a00549525/b08a2e4d1fde5cec85256b98006e752f?OpenDocument

[16] see World Bank report under footnote 5), p. 25

The wall alone causes a loss of 5 million cubic metres of water annually to the Palestinians. 13% of the population in the West Bank are totally cut off from drinking water supply.

In a report of the Israeli Water Authority[17]. Israel maintains that it has more than fulfilled its obligations under the Oslo II Agreement, that no significant progress has been made with respect to Palestinian wastewater treatment plants and proper reuse of the effluents for agriculture, and that the PA has not taken additional water resources from desalination plants which Israel has offered. The Palestinian Negotiation Support Unit (NSU) stresses, however, that the desalination plant offered at Hadera would not have been a favourable option in technical or economic terms. The construction of additional sewage plants would often be hindered by administrative burdens as in area C not only the Joint Water Committee has to give its consent but also the Civil Administration of Israel.

*** The future of the Middle East ecosystem:**

The Jordan River and the Dead Sea Basin finds themselves in a state of ecological crisis. All stakeholders are aware of the need to reduce water consumption. The Israeli government is planning to reduce the rate of fresh water used for agriculture from currently 50% to 25%. Today already, crops are watered with treated waste water by drip irrigation – the most economical method worldwide for agriculture.

Moreover, the Mediterranean shores are used for desalination plants. One of the largest and most modern seawater desalination plants is located in Ashkelon. It currently covers 6% of Israel's needs and feeds 370,000 cubic metres daily into the grid. The downside of this method is that it requires enormous amounts of power. It is therefore vital to develop hydro-solar water and energy generation plants all over the Middle East which ultimately is one of the goals of the Ad Hoc Committee on Energy, Environment and Water.

The most ambitious project to solve the water problem in the Jordan valley goes back to an idea by Theodor Herzl which he developed in his utopian novel "The Old New Land": The construction of a canal from the Red to the Dead Sea that could re-naturalise the lower Jordan valley and ensure a sustainable ecologic, economic and tourism-related future for the region and its 300,000 inhabitants. The project developed by Jordan in cooperation with Israel and the Palestinian Autonomy Authority will not only feed water to the gradually desiccating Dead Sea and the entire region, but also provide for the construction of a hydro-electrical and a desalination plant[18].

[17] see footnote 4) "The issue of Water between Israel and the Palestinians"
[18] Indeed, the World Bank had monitored the study of creating the Canal of Peace between the Dead Sea and Red Sea under title: Red Sea - Dead Sea Water Conveyance Study Program. The study conducted for 2 years and the report had been handed up to all Middle East partners / beneficiary parties to be used on the table of negotiations in the future. Project details retrieved on:
http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/MENAEXT/EXTREDSEADEADSEA/0,,menuPK:5174623~pagePK:64168427~piPK:64168435~theSitePK:5174617,00.html

Project critics have maintained that mixing sulphate-rich Red Sea water with calcium-rich Dead Sea water could give rise to the formation of gypsum in huge quantities.

Today, there is general agreement among many Israeli ecosystem experts that the Palestinians need more water and that a part of the water currently used by Israel must go to the Palestinians. Anyone who deals with the issue of water supply in the Jordan valley in a serious and responsible fashion must arrive at the conclusion that the “the cost of inactivity or pretended activities is high for everyone in the Middle East” as was stated by the former Czech president Vaclav Havel.

“Tomorrow’s water policy should no longer be an extended arm of today’s politics, but a new opportunity”, President Havel went on to say. Not only the inhabitants of Palestine and Israel, but all the people in the region need water as their lifeline.

“Cooperation to safeguard this resource is the only way forward”.

In summary, one should note that the allocation of land and water is not only central to the livelihood of the people in the region, but also one of the causes of the persisting Israeli-Palestinian conflict. The continuation of current policies will probably turn the water problem into a point of contention between the parties to the conflict in the years to come.

This notwithstanding, the issue of water distribution cannot be an insurmountable obstacle to peace. In order to solve the water problem by cooperation it is necessary to implement plans for a joint administration, decision-making on an equal footing, and the joint management of these resources.

Finally, the Dead Sea Basin with its spectacular landscape is characterized by high mountain cliffs, deep canyons and green oases which are in strong contrast to their desert surroundings. It is the cradle of human culture with sites of high value for the three monotheistic religions, Judaism, Islam and Christianity such as Mount Nebo, the Qumran caves and the Baptism site of Jesus Christ and the Islamic fortress of Karak.

This unique region of the world should be protected as a world natural and cultural heritage regardless of the dynamic regional reality. The international community should support the process of cooperation among the three nations Jordan, Israel and the Palestinians on an equal footing to save the Dead Sea Basin and the Jordan Valley. Against the background of climate change they should guarantee everyone the right of water for daily life and the development of the region.

*** Annex I.**


ISRAEL
National capital
District (mehoz) centre
City, town
Airport
International boundary
Boundary of former Palestine Mandate
Armistice Demarcation Line
District (mehoz) boundary
Main road
Secondary road
Railroad
Oil pipeline
0 10 20 30 40 50 60 km
0 10 20 30 40 mi
LEBANON
Damascus
SYRIAN ARAB REPUBLIC
UNIFIL
UNDOF
Tyre
Qiryat Shemona
Al Qunaytirah
GOLAN
Nahariyya
NORTHERN
'Akko
Lake Tiberias
Tiberias
Haifa
Nazareth
'Afula
As Suwaydā'
Dar'ā
Irbid
HAIFA
Hadera
Buşrā ash Shām
Netanya
Tulkarm
Al Mafraq
CENTRAL
Jarash
Nablus
Jordan
Herzliyya
TEL AVIV
Tel Aviv-Yafo
Bat Yam
WEST BANK
Az Zarqā'
Rām Allāh
Amman
Ramla
Jericho
Ashdod
Jerusalem
Madaba
Ashqelon
JERUSALEM
Bethlehem
MEDITERRANEAN SEA
Qiryat Gat
Dead Sea
Gaza
Hebron
GAZA
JORDAN
Khān Yūnis
Beersheba
Al Qaṭrānah
Al Arish
SOUTHERN
Ak Karak
Zafir
Aş Şafī
Bīr Lahfān
Dimona
Abū Ujaylah
Zin
'Ayn al Quşaymah
NEGEV
Mizpe Ramon
Bīr Ḥasanah
Al Jafr
Ma'ān
EGYPT
Ra's an Naqb
SINAI
Al Kuntillah
Yotvata
An Nakhl
ISRAEL
Eilat
Taba
Al 'Aqabah
Gulf of Aqaba
SAUDI ARABIA
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities or concerning the delimitation of its frontiers or boundaries.
Map No. 3584 Rev. 2 UNITED NATIONS
January 2004
Department of Peacekeeping Operations
Cartographic Section