

Israel State Comptroller Report¹ on
Water Pollution between the State of Israel and
Judea, Samaria² and the Gaza Strip

(Unofficial translation of the original Hebrew text by EcoPeace Middle East)

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Executive Summary

Background

The environment and the natural resources do not recognize any political borders of any kind. Water pollution is the most serious environmental hazard between the State of Israel and Judea and Samaria, due to the fact that it is endangering the most important natural source of water in the region - the mountain aquifer. The ground water of the mountain aquifer, which extends from Be'er Sheva in the south to the slopes of the Carmel in the north, feeds the entire population living in the area, both Israeli and Palestinian.

Most of the wastewater in the Judea and Samaria, domestic and industrial, do not undergo proper treatment for the removal of pollutants and is discharged into rivers or cesspits. The pollution of groundwater and streams is a threat to the population and the environment in three main aspects: (a) Decrease of available water for the population living in the area (b) Harm to public health and quality of life due to health hazards and environmental nuisance; and (c) Damage to ecological systems.

The wastewater collection and treatment system, as well as the utilization of treated sewage in Judea and Samaria, is lagging behind the situation in the State of Israel.

¹ All place names in this Executive Summary were translated from Hebrew as written in the Israeli State Comptroller report and are not necessarily the name used by EcoPeace Middle East. For reader's benefit, we have added common place name / Arabic place name as footnote where it first appears.

² West Bank

The main streams into which sewage flows in the Judea and Samaria and which cross the Green Line are: the Kishon River³ (the sewage of Jenin); Hadera stream⁴ (the wastewater of Palestinian villages); the Nablus stream and Alexander stream⁵ (the wastewater of the cities of Nablus, Tulkarem and the surrounding area); Shilo stream (the wastewater of Ariel and Salfit); Modi'in stream (the wastewater of Ramallah); Hebron Stream (the wastewater from the city of Hebron, Kiryat Arba and the surrounding area); Kidron⁶ stream (the wastewater of East Jerusalem, Beit Sahur and Ubaidiya).

The area of Judea and Samaria has several unique characteristics that affect the environmental situation: high hydrological sensitivity to groundwater pollution, lack of clear boundaries, sharp fragmentation of the area and lack of political territorial contiguity, high population density on the Palestinian side and significant differences in standard of living and environmental management between Palestinians and Israelis. An additional cause of water pollution across the Green Line is the pollution of the sea and streams in the Gaza Strip area from untreated sewage and solid waste.

Environmental management requires cooperation between the various controlling bodies in the relevant area. The geopolitical situation and the protracted political conflict between Israel and the Palestinians, the division of control over the territory and the perception of the temporary nature of the situation, make it difficult for the various parties to deal with environmental hazards in a thorough and long-term manner and to cooperate over this matter. Protecting the groundwater sources shared by the entire population in the region, stopping the pollution of streams and protecting public health are a real challenge for the State of Israel.

Actions taken by the State Comptroller

During February - October 2016, the State Comptroller's Office examined the handling of water pollution that cross the Green Line by Israeli government bodies on the following issues: barriers to treatment and reuse of wastewater originating in

³ Wadi Mukata

⁴ Wadi Abu Nar

⁵ Wadi Zomar

⁶ Wadi A-Nar

Palestinian communities; pollution in the Sharon – Alexander stream and Nablus stream; Hebron stream pollution; pollution of the streams Michmash⁷, Prat⁸ and the Qelt spring from the effluents from the wastewater treatment facility in El-Bireh; pollution of the Kidron stream from the sewage of Jerusalem and surrounding area, and pollution of the sea and streams from the Gaza Strip sewage.

The audit was carried out at the Coordinator of Government Activities in the Territories (COGAT) headquarters and the Israeli Civil Administration (hereafter - the ICA), the Government Water and Sewage Authority (hereinafter: "the Water Authority"), in the Ministry of National Infrastructures, Energy and Water, Ministry of Environment Protection, Ministry of Health, Israel Nature and Parks Authority, the Gihon Company (hereinafter - the Gihon), the Jerusalem District Planning and Building Committee (hereinafter - "the District Committee"), the Israel Electric Corporation (hereinafter - "the IEC"), the Ministry of Regional Cooperation and in the Municipal Associations for the Environment in Judea and Samaria.

Main Deficiencies

Barriers to treatment and re-use of wastewater originating in Palestinian communities

Cease of approval of JWC projects: The Joint Water Committee (JWC) was established under the Interim Agreement of 1995⁹ to implement the obligations of Israel and the Palestinians to deal with all water and sewage issues. Since August 2010, the JWC has not convened to approve projects. For more than five years, the Water Authority and COGAT did not examine the operation of any dispute resolution mechanism in order to resolve the disputes in the JWC and to remove it from the deadlock it encountered. Only in August 2016, during this audit, did COGAT initiate a meeting with the Palestinian side during which the conditions for renewing the committee's activities was agreed upon, and in January 2017 a renewal agreement was also signed.

⁷ Wadi Suweinit

⁸ Wadi Qelt

⁹ "Interim Agreement on the West Bank and the Gaza Strip", also known as "Oslo II," in which the main agreements between Israel and the Palestinians on water and sewage were anchored

Deficiencies in approval, coordination and initiation of projects funded by international bodies: The operation of government agencies in establishing infrastructure for wastewater treatment funded by international bodies suffers from real weakness, low level of involvement, lack of coordination and cooperation between government bodies, and above all an absence of a single, overseeing entity to manage this issue. As a result, there are plans for Palestinian wastewater treatment plants in Area C that have been waiting for ICA permits for years, while the pollution of groundwater and the environment in these areas continues. This situation is caused both by bureaucratic obstacles and deficient treatment by the relevant bodies - the ICA, COGAT, the Water Authority, the Ministry of Foreign Affairs, the Ministry of the Environmental Protection and the Ministry for Regional Cooperation - and in the absence of government policy.

Absence of Government Policy: The Government of Israel has not yet formulated a policy for cross-border environmental management in general and for the management of water pollution in particular, and has not decided on any single governmental entity to be charged with this issue and manage it with the responsible bodies. This is in spite of the far-reaching consequences of the issue, such as on Israel's water reserves, public health and even on the political-security level. Therefore, solutions have been prevented or delayed despite sustained damage to the environment, public health and broad Israeli interest.

Pollution of the Kidron Stream from the Jerusalem Sewage

For decades, the raw sewage of southeastern Jerusalem and of four Palestinian cities has been channeled into the Kidron Valley, toward the Judean Desert and the Dead Sea. The sewage flow in the stream is a very serious health and environmental hazard, a serious nuisance to the residents of the area, contaminating the eastern mountain aquifer and the northern part of the Dead Sea and endangering the flora and fauna in the river basin area, which is one of the most important cultural landscapes in the world. This fact has been known for years to all relevant government bodies.

The findings of the audit revealed a gloomy reality of serious and persistent governmental and municipal failure, a blunt violation of Israeli laws and fear of

violations of international law. Despite the fact that Kidron is the most polluted river that flows between the State of Israel and the Judea and Samaria, with the vast majority of the source of pollution in Jerusalem, and despite the geopolitical and international aspects involved and the many actors involved in it, the issue has not been addressed or lead by even one senior government body, such as a Minister or the Prime Minister's Office.

The Gihon, the Water Authority and the Ministry of Environmental Protection, as well as the Jerusalem Municipality, the District Committee and COGAT, have not been able to find an agreed and feasible solution to the problem for more than 20 years. Only in 2016, following a petition to the High Court of Justice, did the Water Authority issue the matter to the Prime Minister's Office.

The State Comptroller's Office notes positively the actions of COGAT, who is an IDF officer with the rank of Major General who is subordinate to the Minister of Defense that from 2015 tried to find an agreed solution to the matter with the Palestinian Authority. However, even though most of the pollution is found in Judea and Samaria, COGAT and the ICA have not done enough to find solutions to this problem in past years, including within the framework of the Joint Water Committee.

Pollution of the Sharon- Alexander Stream and Nablus Stream

The Alexander stream flows from the Samaria hills to the Mediterranean Sea. At the top of the Alexander river basin, in Judea and Samaria, there are a number of sources of pollution, including domestic and industrial wastewater. The Nablus stream is a main tributary of the Alexander stream. Since 1995, a rehabilitation project has been carried out on the Israeli side of Alexander stream, in which 90 million NIS was invested up to 2016.

The lack of preparation by the Water Authority, which is responsible for the planning and construction of sewage infrastructures, and of the Civil Administration, which is responsible for the planning and approval of infrastructures in Judea and Samaria, resulted in the Yad Hana Waste Water Treatment Plant (WWTP) in Emek Hefer, which was built 14 years ago as an emergency facility with limited capacity to accept

the sewage from Palestinian communities in Judea and Samaria, is not able to treat the volume, nor composition, of the sewage that is discharged into it, causing pollution in the Alexander stream and severe sanitation and environmental hazards to the residents of the area. The lack of preparation stems to a large extent from the information gaps and the uncertainty of the bodies dealing with the issue, including the Water Authority and the ICA, regarding the sewage infrastructure programs on the Palestinian side, which are managed and financed by international bodies.

Every year, sewage containing olive oil waste (Akar) - a toxic by-product in the production of olive oil - coming from the areas in Judea and Samaria, and flowing into the State of Israel, mainly in the area of Alexander stream, causes serious damage to sewage treatment systems, to the point of collapse, and as a result causes severe pollution in the streams. The Ministry of Environmental Protection, the Water Authority and the officials at the ICA responsible for environmental protection, water and agriculture in Judea and Samaria did not act to find coordinated solutions to this problem.

Pollution of Hebron Stream

The Hebron stream is a tributary of Be'er Sheva and the Besor streams, beginning north of the city of Hebron and ending near Tel Sheva, where they meet with Nahal Be'er Sheva. All along the stream in Judea and Samaria, 43.5 km, raw sewage, both sanitary and industrial, flows from Hebron, Kiryat Arba and the surrounding settlements. These effluents contain a high concentration of toxic substances, which include the products of stone industries, coating metals, tannery and olive oil industries. Like many of the streams in Judea and Samaria, the Hebron stream was originally a seasonal stream, but today sewage flows through it year round.

Despite a variety of actions taken by the Environment Officer of the ICA to stop the flow of stone sawdust into the stream by the Palestinian factories, it did not examine all possible solutions and did not provide effective solutions to this problem. Therefore, as of October 2016, the problem of dumping the sawdust into the Hebron River was not resolved.

Regarding the discharge of chromium (a toxic and carcinogenic substance) into the stream by Palestinian leather factories, the State Comptroller's Office notes positively the efforts of the Environment Officer to stop the flow of chromium into the stream. Yet, since 2007, for nine years, the Officer has forbidden the use of sulfuric acid, a dual-use material used to operate a United State Agency for International Development (USAID) chromium recycling facility, thus preventing the recycling of the chromium and continuing its flow into the stream; this was done without proper discussions with all the relevant government bodies.

Pollution of Michmash, Prat and Qelt spring from the effluent of the wastewater treatment facility in El-Bireh

In spite of the importance of the project to recycle the water of the El-Bira WWTP, which may at the same time solve the problem of pollution of the Michmas stream and the Prat stream and provide additional water for agricultural irrigation, the ICA, COGAT and the Water Authority did not formulate coordinated action to promote it in a plan which was approved by the JWC Technical Committee, whether it was dealing with the Palestinian parties or whether it was dealing with the relevant international factor.

Pollution of the Sea and Streams of the Gaza Strip

Water pollution in the Gaza Strip, as part of the water crisis in the Gaza Strip, has environmental and health consequences that do not take into consideration the border between Israel and the Gaza Strip in several main areas: sea and coastal pollution, river pollution, water reservoirs and groundwater and disease contraction. This crisis also has extensive security and political implications, stemming from the population's distress and the accompanying instability, as well as the impact on Israel's foreign relations. In January and February 2016, in two separate instances, the Ashkelon desalination plant was shut down due to extreme organic pollution in seawater, which according to the company operating the facility, apparently originated in the Gaza Strip.

In 2013, the construction of a sewage treatment plant in the northern Gaza Strip, established by the World Bank with the participation of donor countries at a cost of \$75 million, was nearly completed. The WWTP is meant to treat the sewage of residents of the northern part of the strip and supply treated water for agricultural irrigation for 15,000 dunam. In order to operate it however, the WWTP needs a regular supply of electricity that cannot be supplied via the existing power lines because they are collapsing due to overload demand and the rate of malfunctions occurring in them is very large.

Despite the fact that the untreated sewage causes sea, river and groundwater pollution in areas in Israel bordering with the Gaza Strip has been known for years, as well as the health and security risks to Israel in the event of outbreaks of diseases due to water pollution in the Gaza Strip, COGAT did not give proper weight to these considerations when not approving a designated electricity line to the northern WWTP in Gaza in 2013. Only after the subject was exposed in the media and public interest increased, did COGAT begin to examine solutions to the plant's electricity problem, and only after international intervention, did it finally agree, in August 2016, to build the electricity line.

Despite the warnings, including in the reports of international organizations, of health hazards caused by outbreaks of disease from the Gaza Strip, COGAT did not apply to the Ministry of Health to carry out a risk assessment on this issue, and the Ministry of Health did not investigate this on its own initiative. COGAT also didn't approach the Ministry of Environmental Protection in order to assess the risks of the flow of sewage from the Gaza Strip towards Israel in the areas of the environment and water infrastructure.

Failure to Connect the IDF Bases in Judea and Samaria to Sewage Infrastructure

The vast majority of the IDF camps in Judea and Samaria have not yet been connected to the sewage system and proper sewage treatment, and they continue to

discharge wastewater into the environment for years, creating a serious environmental hazard that pollutes groundwater and rivers. The defense establishment's action to deal with the issue does not rely on an orderly multi-year implementation plan that includes timetables for its implementation.

Gaps in Palestinian Wastewater Treatment

Serious and unreasonable gaps have been discovered between the Water Authority and the Israel Nature and Parks Authority data. Examples of this are a gap of approximately 500% in the quantities of wastewater from Palestinian communities treated by sewage treatment plants in Israel, and a gap of about 170% in the quantities of wastewater discharged to cesspits or to rivers without Treatment. Such large discrepancies between the data of these entities are unreasonable and can significantly affect the decisions made by the various bodies based on the data in this area.

Main Recommendations

The barriers to treatment and reuse of wastewater originating in Palestinian communities:

1. **Approval of projects at the JWC:** Now that an agreement has been signed to renew the work of the committee, COGAT and the Water Authority must work vigorously to promote projects and initiatives that have not yet been approved as well as new projects, such as in the field of water pollution prevention- proper treatment of wastewater and reuse of treated wastewater; they need to formulate an agreed mechanism with the PA to resolve the disputes in the future.
2. **Approval, coordination and initiation of projects financed by international bodies:**

Bureaucratic Obstacles: In light of the Israeli interest in building treatment facilities and reuse of wastewater for the Palestinian population in Judea and Samaria and in light of the continued investment of international bodies in this matter, the ICA and COGAT must act as soon as possible and shorten the procedures for approval of projects in Judea and Samaria, primarily projects currently awaiting approval.

Inadequate treatment in the international level in the relevant bodies: the ICA, Water Authority, the Ministry of Environmental Protection, the Ministry of Foreign Affairs and the Ministry of Regional Cooperation must increase their involvement in contacts with international bodies to promote water and sewage projects in Judea and Samaria; it is advised that the said parties recommend one body that will lead the effort.

3. **Government policy:** The management of the Ministry of Environmental Protection must initiate a comprehensive and in-depth discussion in the government on cross-border environmental policy in general and on water pollution between Israel and the Judea and Samaria and the Gaza Strip in particular, so that the government will formulate a coordinated policy for all government ministries dealing with the issue and decide on the body to lead these operations.

The Pollution of the Kidron Stream

COGAT and the Water Authority must continue to lead an agreed solution with the PA, or any other arrangement, to treat the wastewater that is discharged to the Kidron until final approval is given for the implementation of the project, within a reasonable period of time and not exceeding several months. If a solution is not achieved in a reasonable period of time, as stated, COGAT is to report this to the Prime Minister's Office. In this case, the Prime Minister's Office must immediately lead to an informed decision regarding the best alternative to a solution under the circumstances, in consultation with all the relevant parties, and formulate a plan for implementation as quickly as possible. If necessary, the Prime Minister's Office should bring the matter for discussion in the government. At the same time, and regardless of the alternative that will eventually be implemented, the Ministry of Finance, Gihon and the Water Authority must determine without delay the manner of financing the project, whose cost is estimated by the Gihon at 400 million NIS, in order to prevent further delays.

The Pollution of the Alexander Stream

The Water Authority and the ICA must, first and foremost, deal with the treatment of Palestinian wastewater in Judea and Samaria. They must also improve their cooperation and coordination mechanisms in the areas of environmental protection

infrastructures with international and Palestinian bodies, starting with the earliest stages of planning the infrastructure, and working towards coordinated solutions that will serve the economic, environmental and health interests of both sides. With regard to the olive oil waste problem, the Water Authority, the ICA, the Ministry of Agriculture and Rural Development (hereinafter - the Ministry of Agriculture) must work to solve the problem on both sides of the Green Line, in cooperation with all the relevant government bodies. It is recommended to examine solutions in cooperation with the Palestinian side, the German bank and other international bodies, and even consider using civil society organizations, encouraging private initiatives and involvement of local actors.

The Pollution of the Hebron Stream

The Environmental Protection Officer must act as soon as possible to find a solution to the problem of the stone sawdust that is being dumped into the rivers, including innovative research-based solutions. Regarding the problem of the chromium discharge into the river, the Environment Officer must immediately hold a discussion with all the relevant entities for an updated examination of the situation regarding the prohibition of introducing sulfuric acid into factories and the recycling facility, and finding possible solutions to the serious and ongoing environmental problem. In addition, in light of the security, economic, health, environmental and safety implications of the Environmental Protection Officer's decision to approve the introduction of dual-use materials to factories, the Environment Officer must consult with the relevant bodies on a periodic basis and examine effective solutions, including receiving assistance from international bodies.

The pollution of Michmash stream, Prat stream and Qelt spring from treated waste water from El Bireh Waste Water Treatment Plant

In order to stop the pollution, the ICA, COGAT and the Water Authority should jointly examine together with all relevant authorities, Palestinians and international, possible ways to accelerate the project of treated waste water reuse from Al-Bireh WWTP including through the Joint Water Committee or its subcommittee.

Water and River Pollution from the Gaza Strip

COGAT must take all necessary measures to enable the operation of the northern WWTP in the Gaza Strip in 2017, including expediting the planning and construction of the electricity line for the sewage treatment plant, with the assistance of all the relevant bodies. In general, in its consideration of approving the establishment of infrastructures in the Gaza Strip, COGAT must consider the environmental and health hazards of water pollution between the Gaza Strip and Israel. For this purpose, they must collect data and information, and consult with professional bodies such as the Ministry of Environmental Protection, the Water Authority and the Ministry of Health. In addition, in light of the health risks facing the citizens of Israel from the worsening water crisis in the Gaza Strip, COGAT and the Ministry of Health must cooperate on risks assessment regarding this issue.

Connecting IDF (Military) Camps in Judea and Samaria to Sewage Infrastructure

The Ministry of Defense must immediately prepare a multi-year plan that includes detailed timetables and a budget for connecting all IDF camps to sewage and sewage treatment facilities in the coming years.

The Unreasonable Data Gaps Regarding the Quantities of Treated Palestinian Wastewater

The Water Authority, Israel Nature and Parks Authority and the Ministry of Environmental Protection must work together to examine and correct the data in such a way as to obtain one reliable database. In this framework, the possibility of installing water meters that provide as accurate a data as possible on the quantities of Palestinian wastewater treated in Israel should be examined as soon as possible.

Conclusion

Water pollution between the State of Israel and the territories of Judea, Samaria and the Gaza Strip is the most serious environmental hazard that crosses the Green Line faced by the State of Israel. It harms Israel and its neighbor's groundwater reserves, public health and quality of life. Due to the geopolitical situation in the Judea and

Samaria and the Gaza Strip, this issue also affects Israel's political-security situation and its status in the world.

The Government of Israel has not yet formulated a policy for transboundary environmental management with its neighbors, including in the area of water, and does not have such a policy regarding hazards that cross the Green Line and the border with the Gaza Strip. In addition, the government did not define a single entity with an overall vision to lead this issue. Therefore, for many years, solutions to serious and ongoing environmental hazards are delayed, sometimes in violation of the law and harm to public health and important political interests of Israel.

This report reflects a gloomy picture regarding the activities of government agencies and their conduct on water pollution between Israel and Judea, Samaria and the Gaza Strip. There are a series of failures and functional barriers: the discontinuation of the work of the Joint Water Committee; Barriers to promoting and initiating projects with international bodies; Weakness in coordination of activity between government agencies; Low level of involvement of the political sector on the issue and failure to make decisions on important issues; Behavior that is not based on programs that define goals and timetables for dealing with various issues.

These failures and obstacles have a direct connection to the formulation and exacerbation of a range of hazards and damages, environmental and other, on both sides of the Green Line, the prominent ones are: Sharon streams pollution- Alexander stream and Nablus stream; Hebron stream pollution; Pollution of the streams Michmash, Prat and Qelt spring; and pollution of the sea and streams from the Gaza Strip.

The government bodies - the ICA, COGAT, the Water Authority, the Ministry of Environmental Protection, the Ministry of Health, the Ministry of Foreign Affairs and the Ministry of Regional Cooperation - as well as the local authorities and water corporations concerned must act, each in its field, to correct the defects as detailed in this report.

However, beyond the necessary action of each of the aforementioned factors, the findings of this report require a systemic action that will lead to the formulation of a comprehensive action plan that will ensure a significant reduction in the level of pollution and damage in the coming years and as soon as possible. In view of the complexity of the subject and the multitude of factors involved, coordination, cooperation between all the parties and integration of their work will be required. The State Comptroller's Office therefore recommends that the government establish an inter-ministerial team, together with government ministries and relevant bodies, led by one government ministry, to lead staff work on managing a transboundary environment; The goals of the team will be to formulate a government policy on the subject, recommend one government entity that will lead and integrate it, and create mechanisms that will also address complex environmental problems.

Correcting the deficiencies and implementing the recommendations detailed in this report will be an important step in decreasing the water pollution between Israel, Judea, Samaria and the Gaza Strip and encouraging more projects for environmental protection, health and improving the quality of life in our region, while harnessing relevant international entities to assist in promoting these topics.

The full report (in Hebrew) can be read [here on the State Comptroller's Website](#); refer to page 1,481 for the transboundary water issues.