



Status Report September 2006

Act of Vengeance

Israel's Bombing of the Gaza
Power Plant and its Effects

ביצ'לם

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B'TSELEM - The Israeli Information Center
for Human Rights in the Occupied Territories

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B'TSELEM - The Israeli Information Center for Human Rights in the Occupied Territories was founded in 1989 by a group of lawyers, authors, academics, journalists, and Members of Knesset. B'Tselem documents human rights abuses in the Occupied Territories and brings them to the attention of policymakers and the general public. Its data are based on independent fieldwork and research, official sources, the media, and data from Palestinian and Israeli human rights organizations.

Researched and written by Darryl Li and Yehezkel Lein

Data coordination by Antigona Ashkar and Shirly Eran

Fieldwork by Zaki Kuhail and Muhammad Sabah

Translated by Zvi Shulman

Cover photo: Burned transformer at the Gaza power plant (PCHR, Gaza)

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Introduction

Ahmad Isma'il 'Awad Shabat, 52, lives in Beit Hanun, a town in the Gaza Strip. He suffers from kidney deficiency and requires dialysis treatment. Because of problems with his arteries, he had to have artificial blood vessels implanted in his right arm to enable the dialysis. During a routine treatment at a-Shifa Hospital in July 2006, there was a power stoppage for seven minutes. A blood clot formed, and the artificial blood vessels clogged. No facilities are available in Gaza to perform the surgery needed to implant new artificial blood vessels, and since 25 June it has been impossible for residents to go abroad, so the physicians connected the dialysis machine to veins in Shabat's left armpit. "Since then, my right arm has swelled up incredibly large and I have to do the dialysis through my left armpit," Shabat told B'Tselem. "This is a very painful process, which gives me a fever and makes me short of breath."

Shabat's troubles are neither an unavoidable consequence of his kidney disorder nor the result of the quality of health-care in the Gaza Strip. Nor are they the result of an unfortunate accident or a natural disaster. They derive directly from one cold, calculated decision, made by Israel's prime minister, defense minister, and the IDF chief of staff, following the abduction of Cpl. Gilad Shalit near Kerem Shalom Crossing on

25 June 2006. The decision had nothing to do with the attempts to achieve Shalit's release nor any other military need. Surely, the Israeli officials knew, or should have known, the ramifications of their decision.

The decision was to attack the only electricity power plant in the Gaza Strip, situated near the Nuseirat refugee camp. The Israeli air force bombed the plant in the early-morning hours of 28 June. The target of the attack was clear: six missiles were fired at the plant's six transformers. Two missed, and within minutes, two more missiles destroyed the remaining transformers. The oil in the transformers continued to burn for about one month.

Three months have passed since the bombing. In Israel and abroad, the attack is "ancient history" for the general public and the media. But the 1.4 million residents of the Gaza Strip, Ahmad Shabat among them, who have been forced to live without electricity during much of the day and night, continue to suffer the bombing's harsh effects.

The hardships involved in living without a steady flow of electricity are exacerbated by the deep economic crisis prevailing since March 2006 in the Gaza Strip and in the institutions of the Palestinian Authority in particular. An immediate reason for this crisis is Israel's

decision, made following the swearing-in of the Hamas government following its victory in the Palestinian Authority's parliamentary elections, not to transfer to the Palestinian Authority the tax moneys Israel collects for it as part of the Oslo Agreements. Another reason is the decision of most Western countries, also resulting from the establishment of the Hamas government, to cease providing financial assistance to the Palestinian Authority. As a consequence, tens of thousands of Palestinians employed by the Palestinian Authority have not received their salaries regularly and in full for over six months, and the Palestinian Authority has been unable to provide vital governmental services to the population.

The objective of this report is to document the hardships faced by residents of the Gaza Strip following the attack on the power plant and to describe Israel's obligations resulting from the present conditions. The first chapter briefly describes the electricity sector in the Gaza Strip, the difficulties it has faced since the attack, and potential solutions. The next three chapters survey and illustrate some of the consequences of the electricity shortage in three areas of activity: running households and small businesses, supplying water and treating sewage, and providing health services. The last chapter discusses the legality of the attack on the power plant and its implications from the perspective of international humanitarian law.

The Electricity Crisis following Israel's Bombing of the Power Plant

Electricity resources in the Gaza Strip

Three major entities provide electricity in the Gaza Strip: the Palestine Electric Company, the Israel Electric Corporation, and the Gaza Electricity Distribution Company.

The Palestine Electric Company (PEC), a private company, was founded in 1999 and given sole authority by the Palestinian Authority to provide electricity for household use in the Gaza Strip. It owns and operates the power plant that Israel attacked. Two-thirds of its shares are held by private investors, the largest of which is the U.S.-based Morganti Development Co., which holds thirty-four percent of the outstanding shares and for practical purposes controls PEC.¹ The remaining third is traded on the Palestinian Stock Exchange and is held by the public. For legal-administrative reasons, operation of the Gaza power plant is handled by the Gaza Electricity Production Company, a subsidiary of PEC.²

The power plant owned by PEC began to produce electricity in 2002 and reached full capacity in 2004. It has six turbines,

two of which are powered by steam and four by natural gas. The energy produced by the turbines is converted by the plant's six transformers into electricity that is distributed to consumers.

The Israel Electric Corporation (IEC), the second entity that produces electricity for the Gaza Strip, is an Israeli governmental corporation. Some ninety-nine percent of its shares are held by the government, and the remaining one percent is traded on the Israeli stock exchange. The Board of Directors represents the shareholders and establishes the company's general policy and oversees its implementation.³ IEC transfers electricity it produces to the Gaza Strip by means of ten high-current lines that are connected to the Gaza Strip's internal network.

The third entity, the Gaza Electricity Distribution Company (GEDCO), is a Palestinian Authority-owned company. It purchases electricity from PEC and IEC and distributes it to consumers throughout the Strip, collects payments from the users, and maintains the electricity network.

1. For a financial profile of the company, see www.ameinfo.com/financial_markets/Palestine/Company_PS0025.

2. For convenience sake, we shall refer to the two companies as PEC.

3. See the company's Website, www.israel-electric.co.il.

Another entity, which is indirectly involved in supplying electricity in the Gaza Strip is the Palestinian Energy and Natural Resources Authority (PENRA), a statutory body that is responsible, in part, for regulating the electricity sector in the West Bank and in the Gaza Strip and in supervising the relevant entities.

Prior to 28 June 2006, the Gaza Strip used about 220 megawatts of power. Of that, PEC produced some 100 megawatts, and IEC produced the remaining 120 megawatts. In addition to the direct dependence on electricity from Israel, Gaza's electricity sector is indirectly dependent on Israel: all the fuel and natural gas needed to operate the turbines of the Gaza power plant come from Israel via the Nahal Oz crossing, which is under Israel's sole control. The Gaza power plant has a fuel-storage capacity of up to thirty days.⁴

The situation following the attack

Israel's destruction of the transformers at the Gaza power plant brought PEC electricity production to a halt, leaving the IEC the sole supplier of electricity to the Gaza Strip. GEDCO had to resort to load-shedding to distribute the IEC electricity among all the consumers. Since then, electricity has been supplied in fairly regular cycles – six to eight hours on and then six to eight hours off.

In addition to the planned interruptions, power stoppages also occur frequently at unexpected times in various areas of the Gaza Strip, a result of attacks on the power distribution network by IDF operations in the area. The effect of the particular damage depends on the part of the network that is struck. In some instances a small area is affected, while in other cases extensive areas suffer a power stoppage. According to a detailed report prepared by GEDCO, the damages to the network (not including the transformers) from 28 June to 7 July amounted to approximately \$792,000. More than seventy percent of the damage occurred in the northern Gaza Strip and in Gaza City. Almost all these malfunctions were repaired within a short period of time, but the frequency of the power stoppages exacerbated problems in certain matters, such as the supply of water to buildings (see pp. 15-22).

During power cutoffs, the only source of power is by generators operating on diesel fuel. The vast majority of the generators are owned by public institutions that provide vital services, such as medical care and water. Few households can afford a generator and even fewer can afford the fuel and maintenance costs entailed in operating a generator for extended periods of time.

4. Interview with 'Umar al-Dib, shift supervisor, Gaza power plant, 23 August 2006.

According to 'Abed Yassin, the Gaza Strip's largest generator vendor, sales jumped around seventy-five percent shortly after 28 June: some 300 small generators (2-7 kilowatts) and about 100 large generators (17-110 kilowatts) were sold. Because of the increased demand, few new or used generators are available, and sales to the general public have ceased. In his testimony to B'Tselem on 26 August, Yassin stated that his order for some 100 generators of various kinds is currently stuck in Israel awaiting the reopening of Karni Crossing.⁵

It should be stressed that generators are not a sustainable alternative to obtaining electricity through the power grid. First, generators are extremely expensive to operate (in some case almost twice as expensive) because of the high fuel consumption and maintenance costs. The great expense involved in running generators is compounded, of course, by the extremely poor economic situation in the area. Second, generators only provide a partial solution. Most of the generators are not designed to function for extended periods, and using them week after week leads to frequent breakdowns. Third, even if the money is available to meet the operational costs, the use of generators depends completely on the entry of fuel and spare parts from Israel through the commercial crossings, which are often closed.

Planned solutions

The main entity engaged in finding a solution for the crisis is PENRA. Since the beginning of the crisis, PENRA has considered four plans, two of which are in advanced stages of implementation.

The first plan is to acquire new transformers identical to those destroyed by Israel, which would return the production capability to its pre-attack levels. The main problem with this option is that the transformers need to be built to order, and it takes from eight to ten months to receive delivery. This option is currently under consideration.

The second option, which is at an advanced stage of implementation, is to import seven Egyptian-manufactured transformers. They would be ready for immediate installation, but their production capacity is only 60-70 megawatts, which is 30-40 percent lower than the original transformers. This option was originally considered as a temporary solution, until the transformers in the first plan are received. The authorities have recently begun to consider leaving the Egyptian-manufactured transformers permanently, and purchasing additional similar transformers to cover the difference in electricity production.

5. The comments were made to B'Tselem researcher Zaki Kuhail on 26 August 2006.

The transaction was delayed some two months for lack of funding. In early September, the Arab League made a commitment to provide the \$3.5 million dollars for the purchase, and the Swedish government undertook to cover the costs of transportation and installation, at the cost of \$2 million, and to provide technical assistance. The relevant contracts are due to be signed in the coming days. After that, Israel is expected to permit the transformers to enter the Gaza Strip.⁶ From the moment that the transformers arrive at the Gaza power plant, it should take about forty-five days for them to become operational.

The third plan, which was decided on prior to the beginning of the crisis and is also at an advanced stage of implementation, is to connect two additional lines from the Egyptian power plant in el-Arish to the electricity network of Rafah, in the southern Gaza Strip – one five- megawatt line and one twelve-megawatt line. This plan, too, has been delayed because of funding problems. In the second week of September, after the payment for the lines was arranged, the five-megawatt

line was connected. The second line is expected to be connected shortly. These additional lines will provide a substantial improvement of power supply in the Rafah and Khan Yunis areas.

The fourth plan is to increase the supply of electricity from IEC. The lines leading to the Gaza Strip are currently exploited to capacity, so installing new lines or upgrading the existing lines is required. At the end of the 1990s, the Palestinian Authority and IEC agreed to connect a new line, to replace the ten lines currently operating, that would run to the Gaza power plant. The new line would provide up to 400 megawatts, depending on Palestinian demand and IEC production capability. The project's cost is NIS 28 million, of which five million shekels has been paid on account. The Palestinian Authority later decided to freeze the project. In light of the current crisis, and although Israel might attack the plant following its rehabilitation, the Palestinian Authority wants to continue the project. However, as noted above, it does not have the requisite funds.

6. Anika Johannson, who is in charge of the project for the Swedish Embassy, told B'Tselem, in a telephone conversation on 25 September, that the Defense Ministry agreed to permit entry of the transformers into the Gaza Strip without delay.

Effects on Households and Small Businesses

“This is an urban society,” one senior UNRWA official told B’Tselem, “and like any urban society in the world, it is highly dependent on electricity.”⁷ The power stoppages greatly disrupt the lives of all residents of the Gaza Strip. The effects are felt in diverse areas, such as the ability to run households and small businesses. The effect of the electricity shortage on the water supply, which also affects households and small businesses, will be discussed in the next chapter.

One of the most significant consequences of the frequent power cutoffs is the lack of continuous refrigeration of food. With the exception of families that can afford a home generator, the residents have not been able to keep food, especially meat and dairy products, for more than a day or two, a problem exacerbated by the heat of the Gazan summer. In addition to the trouble and waste of time in shopping daily, the lack of reliable refrigeration also significantly increases a family’s expenses. First, residents living a fair distance from the market have additional travel costs (whether by car or public transportation). Second, they are unable to save money by buying in large quantities. Third, residents have to cook one meal at a time, which increases the consumption of cooking gas.

Fourth, the frequent power cutoffs cause electrical devices, primarily refrigerators, to malfunction, resulting in repair costs. Poor families are the most affected: the foods they consume have changed and they eat less, especially fresh food.⁸

Sanaa Kuhail, 38, who lives in Gaza City, is raising seven children, ranging from two to thirteen years of age. Her testimony to B’Tselem illustrates some of these problems.

My husband is a taxi driver. He has another wife and lives with her... He comes to my house once a week to visit the children, and he brings us food to last the week. At the end of every month, he replaces the gas canister with a new one. Our lives continued normally until June 2006, when Israel bombed the power plant in Gaza.

The bombing cut off our electricity and caused one problem after the other. My husband used to bring one kilo of meat, two chickens, and vegetables weekly, and I put the food in the refrigerator. Since the bombing of the power plant, electricity in the house has been off and on. In the first week after the bombing, the freezer compartment malfunctioned and began to smell. During the few hours that we

7. Interview with John Ging, director, Gaza Operations, UNRWA, 22 August 2006.

8. Interview with Nehaia Abu Nahla, director, World Food Program, Gaza office, 21 August 2006.

had electricity, the meat froze, and then it defrosted during the power cutoff.

The second week after the bombing, all the food in the refrigerator had spoiled, and the refrigerator smelled. I threw all the food out – a kilo of meat, two chickens, and half a kilo of hamburgers. My husband blamed me and degraded me because I threw out the food. He did not understand the situation. He told me he wouldn't bring meat and chickens as he did before, but would bring a smaller quantity.

Because of the irregular power supply, my husband now brings 300 grams of meat every two or three days. He brings one chicken a week, and sometimes none at all. In addition, the meat he brings is not good, it has a peculiar smell. Apparently, the merchant who sold it also has a power-supply problem. The children are thinner and long for meat and chicken. We also stopped eating fish since the electricity problems began.

My husband has many more expenses than before. In the past, he used to bring us food for a whole week. Now, he has to come to us three times a week and each time brings us smaller quantities of meat and vegetables. He pays more for the food and his travel expenses are higher. Previously, he brought us large quantities of vegetables, for which he paid less. For example, if you buy one kilo of tomatoes, it costs three shekels,

but if you buy a larger quantity, say three kilos, the merchant would charge only eight shekels.

The first week after the bombing of the power plant, there were lots of power stoppages. The power went on and off all the time. This caused the motor of the refrigerator to break down, and we were left without a refrigerator for six days. To fix it, we needed a special part, which was not available in Gaza. Ultimately, we managed to get a used part. During the time without a refrigerator, I couldn't store food, so that week we only ate fried foods, like eggs, and dried foods that didn't have to stay refrigerated.

Because we are eating more fried foods and because I have to cook fresh food daily, I use more gas, which adds to our expenses. One canister a month is no longer enough. Now we use about one and a half canisters.⁹

The lack of refrigeration also affects small businesses, mostly those dealing in fresh - and frozen-food products: increased expenses resulting from use of generators and reduced revenues resulting from the deepening economic recession in the Gaza Strip, and the decrease in consumption of fresh food products in particular. A large percentage of the businesses have suffered from the prolonged closing of the crossings between Israel and the Gaza Strip, which has delayed the arrival of merchandise

9. The testimony was given to Zaki Kuhail on 14 September 2006.

and prevented the merchants from going to the Israeli suppliers to select the goods. As a result of these hardships, many businesses have had to dismiss employees.

These problems are illustrated in the testimony of 'Abd Rabbo Afaneh, a butcher from Rafah who is married and has ten children.



My extended family and I are butchers, and we import meat from Israel and abroad. We have no other source of livelihood.

I have worked as a butcher for twenty years, and own a shop in the Rafah market. Two of my adult sons work with me. We have good relations with the Israeli meat dealers, and until Israel closed the crossing for goods coming into the Gaza Strip, we used to go to Israel to inspect the meat and buy it directly from them, and our business generated very good profits. We were able to make a living with dignity and felt secure.

Now, because of the Israeli closure on the Gaza Strip, we are unable to make a living with dignity. We are not allowed to enter Israel to buy the meat, and the situation worsens day by day. In the past, we sold about 12,000 shekels of meat a day, of which one thousand was profit. Now, our profit is only about 300 shekels a day. Also, we buy the meat from Israeli dealers by telephone. Because we can't inspect the meat, they sell us what they want and sometimes it is defective and unsuitable for human consumption....

When Israel announces that the crossing will be open on a certain day, we buy large amounts of meat, fearing that Israel will close the crossing for a long time. We store the meat in refrigerators to keep it fresh. When Israel bombed the Gaza power plant on 28 June, everything changed. There have been prolonged power cutoffs, and we can't store large quantities of meat. We can't work when there is no electricity. Also, the residents don't have electricity at home, so they can't store the meat they buy. Fearing that the meat will spoil, they have been buying less meat than before. Our sales have dropped by seventy-five percent. The residents buy a quarter kilo of meat rather than a kilo. They also buy less because of the harsh state of the economy and the lack of employment, which means they don't have money. In addition, the Palestinian Authority does not have money to pay its workers. A kilo of meat costs from 40-45 shekels a kilo, which is a lot of money for the people here. They don't buy meat every day or two, like they used to. Now they buy once a week on average. Some of the families even buy less than that.

When we are working and there is a power cutoff, we turn on the generator. Now all the profits go for paying for the diesel fuel to operate the generator. Sometimes the power cutoff lasts a long time and we have to run the generator all that time. We run the generator about twelve hours a day. The power cutoffs have increased the demand for diesel fuel needed to operate the generators. Sometimes there is a shortage of fuel, and

we have to pay six shekels a liter rather than the fixed price of four shekels. The higher price adds to our expenses. We are spending 360 shekels a day on diesel fuel.

The meat is also more expensive than previously, about five shekels more a kilo, so we had to raise the price to the consumer. Because of the drastic drop in sales, we had to lay off six employees. Together, they support about thirty-five persons. I just don't have the money to pay their salaries.

Now I work in the shop alone and sometimes ask one of my sons to help. My workers are unemployed. We don't know how long our grave economic situation will continue. I hope it won't stay like this, but if it does, I'll have to close the shop and become unemployed myself.¹⁰

Ahmad Jum'a Saliman al-Mu'asher, 39, who is married and has twelve children, owns and operates a bakery in Rafah, in the southern Gaza Strip. In his testimony to B'Tselem, he explained the many difficulties involved in running the bakery without a steady supply of electricity.



I have worked in a bakery for twenty years. I worked with my father in a bakery in Jaffa and then my father opened a bakery in Rafah. I work with my nephews, and it is our sole source of livelihood.

Lots of consumers rely on us. Since the bombing of the Gaza power plant, on 28 June, we have been unable to work because we depend on electricity. We have eight machines: a machine to sift the flour, a 240-kilogram-capacity machine to prepare the dough, a cutting machine that cuts 8,000 pitas an hour, a machine for the first rise before cutting, a machine to roll the dough, a machine for the second rise after kneading, a system for maintaining the texture of the dough, and an oven.

All the machines work on electricity as part of a single system, one feeding the other. They can't operate separately. Because of limited power supply, we tried working with a sixty-kilowatt generator, which costs NIS 35 an hour to run. We did that for fourteen days. It cost us NIS 490 a day and ate up all our profits. But we have to supply bread to the people. We are losing NIS 10,000 a month, and I can't pay my bills for insurance, taxes, and other obligations. I began avoiding the tax payments, like a thief. I have two vehicles to deliver the bread to the shops, but I don't have the money to pay the costs to run and insure them.

Electricity is the most important thing in operating a bakery. A power stoppage, even for a short time, can damage the dough and the bread. The machines work at very high temperatures, and a power stoppage causes a sharp drop in temperature and the machines break

10. The testimony was given to Muhammad Sabah on 25 August 2006.

down. With the crossings [between the Gaza Strip and Israel] closed, it is impossible to obtain replacement parts. The conveyor belt that removes the pitas from the oven, which costs NIS 9,000, was damaged, and I can't find a new one in the Strip. I ordered one, but it hasn't arrived yet because the crossings are closed. The problem with the conveyor belt causes problems with the oven, and sometimes the bread burns.

Occasionally, it is impossible to get diesel fuel, and there was a period of twenty days that we had to buy forty-eight liters of gas a day, which cost me a total of 5,000 dollars. Some generators work on gas, and gas is also needed to keep the oven going.

Because of the electricity shortage, we operate the bakery five hours less than before. Previously, we baked about 50,000 pitas a day, and now we bake only half that amount, and sometimes even less than that, about 15,000. I have eight workers, who support seventy persons. They have worked for me for many years, but because of the decline in production and revenues, I don't have the money to pay their salaries. I may have to let them go.

The power stoppage also causes a water shortage, which makes it hard to keep the bakery clean. There is a chance that bacteria will get into the dough and make it unsuitable for consumption. I have had

to buy water in tanks, for which I pay 50 shekels per 1,000 liters.

All these problems have made me think of selling the bakery. I invested 150,000 dollars in the machines and furnishings, but the way things are now, I can't support my family and the families of my brothers Nabil and Fathi, who are my partners. We are three families, comprising seventy-seven persons. I may have no choice but to sell the bakery at a loss.¹¹

In addition to the decline in the purchase of fresh food, the residents question the quality of the food and worry about potential health problems. According to figures of the UN Office for the Coordination of Humanitarian Affairs (OCHA), in August, the incidence of water and bloody diarrhea for children between the ages of 0-3 who attended UN Relief and Works Agency's (UNRWA) health facilities was fifty-six percent higher than during the same month in 2005, which may indicate a decline in water quality.¹²

Another example of impairment of living conditions resulting from the power stoppages is the difficulty faced by people who rely on elevators to get to and from their apartments. For some, the lack of an elevator is an inconvenience, while for the elderly, the disabled, ill persons, overweight persons, and women with children, as

11. The testimony was given to Muhammad Sabah on 19 September 2006.

12. OCHA, *The Humanitarian Monitor*, Number 4, August 2006.

well as persons who live on the upper floors of multi-storied buildings (in the densely populated Gaza Strip, half of the residents of Gaza City live in high-rise apartments), a power stoppage confines them to their apartment. The testimony of Suhair al-Byomi, 39, who is married and has four children and lives on the eleventh floor of Shifa Towers, in Gaza City, illustrates the distress.

Since Israel bombed the power plant at the Nuseirat refugee camp (on 28 June), my family and I have been suffering from the power cutoffs. I can't do anything without electricity. All my housework, even the simplest things, is based on a power supply. Electricity has become the most important thing in our lives.

We live on the eleventh floor, so because of the elevator, it is very hard without electricity. Going up the stairs is extremely tiring. The elevator works on electricity, which is cut off most of the time. Sometimes, I have to wait two hours for it to start again so I can go up to my apartment or leave my apartment and go outside. Walking up or down the stairs from the eleventh floor is OK, but it is crazy to have to do it twice a day. I prefer to sit at home and not go out.

I work as a health consultant in the Rafah Municipality. I go to work daily.

That means I have to go down eleven stories and go back up at the end of the workday. When I have to take one of the children to the doctor, I have to go down and up again, which exhausts both me and the child. It takes about twenty minutes to go up the steps. Many times I stay at home and don't visit relatives or go shopping. I arrange my life around the electricity supply.

This situation makes me tense all the time. When there is no electricity, the building's guard sometimes operates the generator for the elevator. We limit the use of the generator because the diesel fuel needed to operate it is so expensive, about twenty shekels an hour.

The children have also become prisoners to the flow of electricity. They only leave the apartment when the generator is working or there is electricity and the elevator is working. They can't go downstairs to play or buy candy at the supermarket whenever they want. Often, they have to stay at home, which affects their frame of mind. Without electricity, they can't watch TV or play with the computer. Sometimes, they stay up late at night, hoping for the electricity to come back on so they can watch their favorite TV programs, like "Spacetoon."¹³

13. The testimony was given to Muhammad Sabah on 15 September 2006.

The Effects of the Crisis on Water Supply and Sewage Treatment

Water consumption in the Gaza Strip is seventy million cubic meters a year. Ninety-six percent of the water comes from 120 wells that draw water from the aquifer running the length of the Strip.¹⁴ The remaining four percent, about three million cubic meters, are supplied by Mekorot, an Israeli governmental corporation, through the National Water Carrier for use in the center of the Gaza Strip.

The Palestinian Water Authority sets the regulatory and supervisory framework for water in the Gaza Strip. Actual management of the water and sewage infrastructure, including supply of water and sewage services to residents and maintenance of the system, is handled by the Coastal Municipalities Water Utility.¹⁵ CMWU, a semi-governmental company funded directly by the World Bank and autonomous from the Palestinian Authority, operates the 120

wells mentioned above, thirty-three sewage-pumping stations, and three wastewater treatment plants.¹⁶

This infrastructure depends greatly on a continuous electricity supply for its key functions: extracting the water from the wells and placing it into the distribution system, pushing water from pipes to the upper floors of multi-storied buildings, and transferring dirty water from the houses and septic tanks to the sewage treatment plants.¹⁷

The treatment of sewage is even more reliant on a steady supply of electricity. The Beit Lahiya sewage treatment facility, the largest and most sophisticated of three such facilities in the Gaza Strip, illustrates this dependence starkly.¹⁸ Pumping is required to move sewage through the various stages of treatment (sedimentation, aeration, infiltration). The aeration process of treatment is

14. The Gaza aquifer is the continuation of the aquifer that runs along the coast of Israel to the Mediterranean Sea. Although it is the same water reserve, given that the aquifer runs east to west, pumping the water from either side of the Green Line has no effect on the other side. For an extended discussion, see B'Tselem, *Thirsty for a Solution: The Water Crisis in the Occupied Territories and its Resolution in the Final-Status Agreement*, Position Paper, July 2000.

15. For additional details on CMWU, see www.cmwu.ps/english.

16. CMWU, Situation Report, 22 August 2006.

17. Thirty percent of the houses in the Gaza Strip, primarily in the Khan Yunis area, have never been connected to the sewage network and still rely on septic tanks.

18. Telephone interview with Mundher Shublaq, CMWU director, 27 August 2006.

especially reliant on electricity. In the aeration stage – “the mastermind of the treatment” according to Mundher Shublaq, director of CMWU – bacteria are used to clean the water. These bacteria require a continuous supply of highly concentrated amounts of oxygen provided by aerators. If the aerators shut down, the bacteria start to die within a few hours from lack of oxygen, and recultivation is required to replace dead bacteria.

Since the attack on the power plant, CMWU has relied on generators to operate the facilities during power cutoffs. Operating the generators requires 230,000 liters of diesel fuel a week. This cost has been financed by the European Union through the Temporary International Mechanism, which was established to bypass the Hamas government. The EU promised to continue the funding until the end of 2006.¹⁹

However, as mentioned in the first chapter of this report, despite the important contribution in preventing the system from collapsing, these generators are less efficient than electricity. The CMWU director explained that, as a rule, generators are not intended for extended use, so the CMWU uses them only during half of the power cutoff, i.e., up to four

hours at a time.²⁰ Also, CMWU has had to forego using the generators for even a longer time for maintenance and repair or because of the lack of spare parts.²¹

As a result, it is impossible to supply water around the clock, and the local authorities have to rotate supply among the areas in each town, with each area receiving water for a few hours at a time. The water shortage especially affects the many persons living in multi-story buildings (as mentioned above, about one half of the residents of Gaza City live in high-rise apartments), which rely on electric pumps to push the water to the upper floors. Because the supply of water and electricity is not synchronized, most upper-floor residents do not receive more than two or three hours of water a day.²²

The testimony of Rula Abu Ghazi, a twenty-two-year-old resident of Gaza City who lives on the sixth floor, illustrates the effects of the water shortage.

I used to really love our apartment, which is on the sixth floor, but since the electricity and water crisis began, following the bombing of the power plant on 28 June, I can't live here any longer. I beg my husband to rent a

19. For details on this mechanism, see www.eurunion.org/News/press/2006/20060051.htm.

20. Telephone interview with Mundher Shublaq, 19 September 2006.

21. The UN Development Program undertook to import spare parts needed by CMWU following closure of Karni Crossing, and made \$80,000 available to the utility. OCHA, Situation Report, Gaza Strip, 7-24 August 2006.

22. Ibid.

ground-floor apartment, or at least one on the first floor, so I won't suffer from the water shortage.

We get electricity for eight hours and then it stops for eight hours. We get water about two hours a day, and not always when we have electricity. Without electricity, the pumps don't work, so there is no way to push the water to the roof. The result is that we don't get water in the apartment. In the course of a week, we get enough water for about two days.

We have water tanks on the roof that contain a total of 1,000 liters of water, but there is never enough water to fill them. My son and I often go to my parents to shower, and my husband goes to his parents. We traditionally wash our body after going to the bathroom, but now we use toilet paper, which makes us feel unclean. How can somebody go to the bathroom without water?

Most of the time I am unable to do a wash, and the dirty clothes pile up. My husband has to go to work with sweaty-smelling clothes, and this creates tension between us. Sometimes, I have no choice but to take the clothes to my parents' house and do the wash there.

It is impossible to wash dishes every day, and they pile up as well. The dirt sticks to them, and they are hard to clean

when we get water, making dishwashing a very tiring task.²³

Another reason for disruption of water supply is the damage caused by IDF incursions during the shelling and ground operations inside the Gaza Strip. For example, according to CMWU, the bombing of the bridge between Nuseirat and Mughraq on 28 June also destroyed crucial water pipelines serving 155,000 people in the middle of the Strip, cutting off the water supply; in an incursion in Wadi a-Salqa, on 14 July, the soldiers damaged 850 meters of pipeline and thirty-five valves connecting the water to the houses; and in an operation in Beit Hanun, from 15-19 July, the soldiers damaged about 180 roof-top water tanks.²⁴

Regarding sewage, one of the major dangers following the stopping of the pumps at the sewage plants, to which low-lying areas are especially susceptible, is that the sewage will back up in the pipes and flood the system. So far, no reports of flooding have been received.

An even worse danger threatens residents of the northern Gaza Strip: rise of the water level at the Beit Lahiya sewage plant and flooding of parts of Beit Lahiya and Umm Nasr, a nearby Beduin village. This scenario, which could develop into an ecological disaster, almost occurred during the three weeks after the Gaza

23. The testimony was given to Muhammad Sabah on 12 September 2006.

24. CMWU, Situation Report, 22 August 2006.

Strip power plant was bombed, when the sewage plant stopped operating while the sewage continued its normal flow. Not only the lack of a steady supply of electricity and generators (at the start of the crisis) stopped sewage purification; the IDF's frequent shelling of the area also played a role. Some shells landed very close to the walls of one of the reservoirs, increasing the possibility of a breach and flood. The shelling also prevented excavation of another infiltration reservoir, which was planned to lower the water level. Israel contends that the shelling was in response to the rockets fired from that area. B'Tselem has been unable to confirm or refute the contention.

Toward the end of July, CMWU used generators to enable partial operation of the Beit Lahiya sewage plant. At a meeting that IDF, CMWU, and UN officials held at Erez Crossing on 23 August, the IDF agreed not to shell the area of the plant, except in response to rocket fire launched from there. According to Shublaq, the CMWU director, it is unclear if the IDF referred to rocket fire from the plant itself, or from the general area.²⁵ In any event, since the meeting, the IDF has not fired at the plant. The plant has continued to operate in its limited format and the excavation of the new infiltration pool has been completed, reducing the threat of flooding.

25. The officials also reached agreement, in principle, to discuss implementation of a long-term solution to the many environmental and public-health problems resulting from the plant's location, structure, and function – a plan to build a new facility east of Gaza City that would replace the Beit Lahiya plant. Donor funding has been promised for some years now, but the planned site is in the buffer area along the border from which the Israeli army withdrew, and security guarantees have not yet been provided.

The Effects on Health Services

The lack of a regular power supply also affects the ability of the health institutions in the Gaza Strip to provide medical services to the residents. The Palestinian Authority's Ministry of Health is the largest and most important health-care provider in the Gaza Strip. It provides some ninety percent of the health services and operates twelve hospitals, fifty-six medical clinics, and warehouses for storing medicines and equipment.²⁶

Despite the extensive scope of its operations, the Ministry of Health has only forty-five generators, ten of which it purchased to help meet the current crisis. The Ministry consumes 39,000 liters of diesel fuel a day to operate the generators (some twenty-five percent more than CMWU), at a cost of NIS 156,000. The fuel cost alone increased the Ministry's operating expenses by thirty percent.²⁷

As noted previously, generators are not intended for continuous use for many hours, which leads to frequent breakdowns. The breakdowns range in severity from the generator suddenly stopping operation, requiring it to be started again, to more serious malfunctions that require shutting off

the generator for an extended period. During a three-hour visit B'Tselem made at a-Shifa Hospital, in Gaza City, the largest and best-equipped medical center in the Strip, the lights and the air-conditioners repeatedly failed or lost intensity because of the generators' unreliability.

Only two departments in a-Shifa Hospital – the Intensive Care Unit and the Neonatal Intensive Care Unit – have uninterrupted power supply (UPS) units that can bridge the gaps caused by generator breakdowns and regulate the uneven flow of power. A stoppage of some devices in these units for even one minute is liable to result in death. The hospital's other departments operate as usual, despite the short, albeit frequent, power cutoffs. These cutoffs do not increase mortality rates, but affect patient health in different ways, in some cases over the long term.

The Neonatal Intensive Care Unit provides an illustration. Work in the unit depends on accurate diagnoses from the unit's laboratory. However, the laboratory, unlike the unit itself, does not have UPS, so every time there is a power stoppage, the laboratory's diagnostic devices for

26. For details on the health system in the Gaza Strip, see Physicians for Human Rights, *The Disengagement Plan and its Effects on the Right to Health in the Gaza Strip*, January 2005.

27. Interview with Muhammad Radi, Minister's Office, Palestinian Authority Ministry of Health, 26 August 2006.

the analysis of electrolytes and blood gases have to be reset. Recalibrating these machines wastes time and supplies (materials and solutions) and increases the chance of human error. According to the head of the NICU, “The danger is not so much one of infant mortality but of the long-term health effects.”²⁸

Another example of the long-term health effects involves the hospitals’ tendency to postpone elective surgery as much as possible. One reason is that operating rooms (at a-Shifa Hospital as well) do not have UPS, and hospital officials are concerned the generators, if needed, will stop in the middle of an operation. This concern is especially relevant when the patient is placed under general anesthesia. Postponing elective surgery also results from other considerations, among them the large number of persons wounded by IDF shelling and confrontations between armed Palestinians and IDF soldiers, and the lack of medicines and equipment.²⁹ Even if the decision to postpone elective surgery does not threaten the patient’s life, it likely exacerbates the damage from the disease or the disorder that needs to be treated, and reduces life expectancy.

The effects on the dialysis-treatment unit, on the other hand, are immediate. The dialysis unit at a-Shifa Hospital stops up to three times an hour because of generator malfunctions

and breakdowns. Disruption of the treatment is not lethal, but it raises the risk of blood clots in the tubes implanted in the veins of the patients to enable injections without repeated piercing of the skin. To prevent clotting, the nurses work rapidly to restart the dialysis machine manually, assuming that the power supply returns immediately.³⁰ The risk of blood clots became a reality in the case of Ahmad Shabat, a fifty-two-year-old Gazan, after the power stopped for seven minutes.



I live in Beit Hanun. I suffer from kidney deficiency, and the bombing of the Gaza power plant has seriously damaged my health.

My arteries are narrow, so I can’t undergo the normal dialysis treatment, through the artery. The doctors installed a fistula (a special tube) through which I get dialysis treatments. It was impossible to do the operation in Gaza, so in April 2006, I went to a hospital in Egypt to get it done. They installed the tube in my right arm.

The tube connects the artery in my arm to the vein and enables the blood flow and dialysis. After I had the surgery, I returned to Gaza and began dialysis treatment three times a week, as the doctors prescribed....

28. Interview with Shabat al-Masri, head, Neonatal Intensive Care Unit, a-Shifa Hospital, 24 August 2006.

29. Interview with Dr. Jum’a a-Saqeh, public relations director, a-Shifa Hospital, on 25 September 2006.

30. Interview with Khader Hasuna, head nurse, and Nabil al-’Imawi, nurse, Dialysis Unit, a-Shifa Hospital, 24 August 2006.

In this regard, the worst thing that happened to me took place in July. I was in the middle of a dialysis treatment at a-Shifa Hospital when there was a sudden power stoppage. That time, seven minutes passed before the generator restarted. A blood clot formed inside the tube in my right arm and the doctors had to cut the tube.

Since then, I have had to do the dialysis through my narrow arteries, in my left armpit. This is a very painful process, which gives me a fever and makes me short of breath. It is a temporary solution until I get a new tube in my left arm. The tube can't be placed in my right arm again because it swelled up incredibly large as a result of the damage to it. I have to go back to Egypt for the surgery, but I can't go now because Rafah Crossing is closed. Besides, I don't have the money for the travel and surgical costs. Of course, my health condition also affects my mental state.³¹

Being equipped with generators, all the hospitals in the Gaza Strip are able to provide almost all the health services they offered prior to the onset of the crisis, despite the difficulties described above and other problems they face. The case is different for most of the medical clinics run by the Ministry of Health, which do not have generators, and so are unable to provide some customary services during part of the day.

Immunization of children is an example. The immunization substances must

remain refrigerated, so clinics without generators stopped providing this service and referred the children to hospital outpatient departments. The long lines and crowded conditions at the outpatient clinics of the hospitals have grown substantially since the crisis began. There is concern that some parents, especially those who are less mobile, have postponed their children's immunizations or decided to do without them altogether.

In his testimony to B'Tselem, Faraj al-Batniji, administrative director of a-Rahma Medical Center, in Gaza City, described the electricity shortage's effects on the Center's operation.



A-Rahma Medical Center provides medical services to more than 24,000 residents of the Turkman and Shajaiya neighborhoods in Gaza. The Center has

several departments, among them a dental clinic, an obstetrics department, a mother and child care department, an immunization unit, and a laboratory. Also, the Center provides emergency services. We handle as much as we can. If necessary, we refer patients to a-Shifa Hospital or Muhammad a-Dura Hospital in Gaza and to other hospitals. We have a shortage of medical equipment and do our best. If we had all the equipment we needed, we would surely provide better medical treatment.

31. The testimony was given to Zaki Kuhail on 27 August 2006.

The activity at the Center has been greatly impaired by the repeated power cutoffs, which have slowed down our work a lot. We do not have a generator, and electricity is needed to operate the delivery room, the cardiology department, the blood-pressure unit, the respiratory diseases department, and the immunization unit. We immunize children every week, and the substances used for the immunizations have to be kept refrigerated.

The irregular power supply has resulted in many fewer patients coming to the Center. They know that we can't treat them, and they put off coming to us, or they go to a medical center that has electricity. A patient may have to go from clinic to clinic to find one that has electricity. In many cases, the patient's condition does not enable searching for a clinic with electricity. People suffering from a heart or respiratory problem need immediate treatment. Patients who suffer from shortness of breath or asthma, for example, need urgent and continuous treatment. They need an inhalator to breathe and can't wait until the electricity comes back on. Those who have the resources, and who have generators, buy an inhalator and oxygen hook-up for use in their homes. Patients prefer having the treatment at home, one reason being the harsh security situation. It is not always possible to get to the clinic or hospital.

Because of the repeated power cutoffs, we divide the immunizations among the clinics, based on the availability of electricity. We are not able at this time to handle chronic patients, or provide fertility treatment or obstetrics services. These treatments require medicines and hormones, which have to be kept refrigerated, so we refer the patients to a-Shifa Hospital.

Sanitation has also deteriorated. During power cutoffs, we cannot do the laundry, and we are concerned there will be an epidemic or that patients will infect one another. We also have a water shortage because the pump that pushes the water to the tanks on the roof works on electricity. The lack of a steady flow of water means that we can clean the Center only once every three days and not daily.

We requested a generator from the Palestinian Ministry of Health. Because moneys are not being handed over to the Palestinian Authority, the Ministry does not have funds for generators. Besides, there is a shortage of generators in the Strip because the crossing points into the area are closed. There are now forty-nine medical clinics in the Gaza Strip that do not have a generator. A few days ago, the Ministry of Health provided us with a generator, but it was broken, and we don't have the money to fix it. In any event, the generator was not powerful enough to meet our medical needs.³²

32. The testimony was given to Muhammad Sabah on 16 September 2006.

The Attack on the Power Plant from the View of International Humanitarian Law

Legality of the attack

One of the pillars of international humanitarian law, which sets forth the rules applying to the sides in time of armed conflict, is the distinction between military objectives and civilian objects. According to this principle, it is absolutely forbidden to aim an attack at the latter. Given that this principle is customary international law, it applies automatically to all sides taking part in hostilities, regardless of whether they are party to specific conventions. The principle of distinction appears, among other places, in Articles 48 and 52 of the First Additional Protocol to the Geneva Conventions, of 1977 (hereafter: the Protocol).³³ In addition to the general protection that civilian objects receive, Article 54(2) of the Protocol states that,

It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them

for their sustenance value to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive.

Indeed, electricity installations are not mentioned expressly, but according to the official commentary of the Red Cross, the words “such as” indicate that the list is not closed, and the examples are used for illustrative purposes.³⁴

Was the Gaza power plant a legitimate military object under the principle of distinction? Article 52 of the Protocol states:

(2) Attacks shall be limited strictly to military objectives. In so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.

(3) In case of doubt whether an object which is normally dedicated to civilian

33. Israel is not a party to the Protocol and is obligated to comply only with those provisions that are deemed customary law.

34. International Committee of the Red Cross, *Commentary on the Additional Protocols of 8 June 1977* (Geneva: Martinus Nijhoff Publishers, 1987), para. 2102-2103, p. 655.

purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used.

Regarding the term “definite military advantage” at the end of the section two, the Red Cross’s official commentary states that,

... destruction, capture or neutralization must offer a “definite military advantage” in the circumstances ruling at the time. In other words, it is not legitimate to launch an attack which only offers potential or indeterminate advantages. Those ordering or executing the attack must have sufficient information available to take this requirement into account; in case of doubt, the safety of the civilian population, which is the aim of the Protocol, must be taken into consideration.³⁵

On 28 June, the IDF’s Spokesperson’s Office announced that the IDF had carried out a number of attacks the preceding night, which included attacks against “three bridges in the central Gaza Strip and the power plant south of Gaza City.” No mention was made of the purpose of the attacks, but the announcement stated generally that, “the actions are intended to make it difficult and to disrupt the activity of the terror infrastructure related directly and indirectly to the abduction of Cpl. Gilad Shalit.”³⁶ In response

to B’Tselem’s letter to the Defense Minister on this point, Captain Timor Balan, on behalf of the judge advocate general, wrote to B’Tselem on 8 August that, “*the infrastructure targets*, which you mentioned in your letter, assist the illegal activity of the terror organizations in the Gaza Strip, the foremost being the launching of Qassam rockets at Israeli communities” (emphasis in the original).

The fact that both the IDF spokesperson and the judge advocate general took special care not to mention how the attack on the power plant, or power stoppages resulting from it, would “disrupt the activity of the terror infrastructure” or “the launching of Qassam rockets at Israeli communities” speaks for itself. On 10 August, B’Tselem asked the judge advocate general, in reply to the brief response quoted above, to explain the connection. The organization has not yet received a reply.

Indeed, it is conceivable that the frequent power stoppages affect in one way or another the routine activity of the organizations that launch Qassam rockets. For example, the power stoppages may slow down the production of the rockets, assuming that the makers did not have generators. Even if there was such an effect, it was relatively marginal, and certainly did not provide a “definite military advantage” that would make the power plant a legitimate military object.

35. Ibid., para. 2024, p. 636.

36. The announcement appears on the IDF Website, www1.idf.il.

Furthermore, even if we accept the questionable assumption that the attack provided Israel a “definite military advantage,” to be legal, the attack had to meet another primary rule of international humanitarian law – proportionality. According to this principle, it is forbidden to carry out an attack if it is known that it will cause damage to civilians or civilian objects that is “excessive in relation to the concrete and direct military advantage anticipated.”³⁷ One of the tools in determining whether the anticipated damage is excessive in relation to the military advantage is whether the planners of the attack had an alternative means to achieve the military advantage that would cause less damage to civilians.

As mentioned in the first chapter of this report, through the Israel Electric Corporation and the supply of fuel to the Gaza power plant, Israel maintains absolute control, directly and indirectly, over electric power in the Gaza Strip. This being the case, Israel could have used this control to achieve military objectives without disproportionate effects – for example, by temporarily suspending power to specific areas.

An interview that *Yediot Aharonot* conducted with OC Southern Command Yoav Gallant indicates that cutting off the power supply was indeed considered: “We checked it. The electric company refused. We learned that they

had a legal problem [in doing that].”³⁸ IEC’s refusal is understandable: it has a contractual obligation to supply electricity to GEDCO. Presumably, breach of this obligation would have caused substantial financial loss and led to a suit for damages. Despite this, though, if the questionable conclusion was reached that disruption of electricity in Gaza might give the IDF a definite military advantage without causing disproportionate effects, Israel could have achieved this objective by cutting off or reducing the IEC supply of electricity. By preferring the commercial interests of IEC over values enshrined in international humanitarian law, Israel’s decision-makers acted illegally and outrageously.

This analysis only applies to the hypothetical situation in which the disruption of electric power provides Israel with a “definite military advantage.” However, given that this is clearly not the case, one must conclude that totally cutting off IEC’s power supply is no less illegal: not only is such an action unlawful under the laws of war, which forbid the sides to “render useless” objects indispensable to the survival of the civilian population (Protocol, Article 54(2), quoted above), the laws of occupation require, as we shall see in the last section of this chapter, the occupying state to ensure proper living conditions in the territory.

37. This principle appears, inter alia, in Article 57(2)(iii) of the Protocol.

38. Nahum Barnea and Shimon Schiffer, “War on Three Fronts,” *Yediot Aharonot*, Weekend Supplement, 4 August 2006.

During the interview, Gallant pointed out that, “The objective is that they understand the high cost entailed in firing Qassams. We don’t pretend to be able to reach every Qassam. We don’t have a technological and operational solution for preventing the firing. What we did is move the hostilities to their field. This is an equation that works on deterrence and not on capability.” Although these comments do not relate specifically to shelling the power plant, they hint at a completely different motive – “deterrence,” according to the general. The result of this deterrence is collective punishment, in flagrant breach of international humanitarian law. Article 33 of the Fourth Geneva Convention states: “Collective penalties and likewise all measures of intimidation or terrorism are prohibited.”

Finally, an attack aimed at civilian objects, as defined in Article 52 of the Protocol, is classified as a war crime, where the attack causes serious injury to body or health and excessive damage to civilian objects, and the perpetrators knew that would be the result.³⁹ Furthermore, according to the Rome Statute of the International Criminal Court, which was adopted in 2002, such an attack is classified a war crime, regardless of the resultant damage.⁴⁰

Israel has signed, but has not ratified, the Rome Statute; therefore, the Court does not have jurisdiction in the matter under discussion.

The obligation to make reparation

States are responsible for their illegal acts. This fundamental principle of all branches of international public law leads to the obligation to make reparation. As the International Court of Justice held in 1928,

The essential principle contained in the actual notion of an illegal act – a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals – is that reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed.⁴¹

In 2005, the UN General Assembly adopted a resolution on the fundamental principles of the right to reparation under human rights law and international humanitarian law.⁴² This resolution is not legally binding as such. However, it is useful in examining Israel’s obligations, given that the resolution does not profess to create new norms, but collects and restates accepted norms

39. Protocol, Article 85(3)(b).

40. Article 8(2)(b)(ii).

41. *The Factory at Chorzow [Germany v. Poland (Claim for Indemnity)]* (1928) PCIJ (ser A) No. 17, p. 47.

42. UN General Assembly Resolution 60/147, “Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law” (hereafter: UN Principles).

in international law. The UN resolution enumerates five rights that are derived from the right to reparation, which every state that has committed an illegal act must implement: restitution, compensation, rehabilitation, satisfaction, and guarantees of non-repetition.⁴³

The first right is not relevant in our case, for Israel's illegal act caused the destruction of the object, and it cannot be restituted. The second right, compensation, is the key for reparation for the illegal attack. This right is expressly set forth in Article 3 of the Hague Convention of 1907 and in Article 91 of the Protocol, which state, in similar language, that

A Party to the conflict which violates the provisions of the Conventions or of this Protocol shall, if the case demands, be liable to pay compensation.

An incident that requires compensation is created when a breach of international humanitarian law causes any damage.⁴⁴ This obligation covers the direct and indirect damage caused by the illegal act. The direct damage – the cost of the transformers that were destroyed – is easy to determine. The indirect damage, on the other hand, is much broader and

harder to define. It includes, in principle, all the damage caused as a result of the frequent power stoppages, some of which are illustrated in this report.

The provisions of international humanitarian law relating to the obligation to pay compensation do not explicitly state who is entitled to compensation. Traditionally, humanitarian law arranges the rules of conduct between states, and not between states and individuals or civilian institutions. Therefore, only states are entitled to compensation for the resultant damage, and only through them may a person or institution be compensated by the state responsible for the damage.

This conception of compensation is gradually becoming outdated. Many jurists view compensation in humanitarian law as a dual obligation, both to the state and to the individuals and civilian institutions that suffer damage.⁴⁵ It is important to note that the right of individuals to reparation and compensation from the state is an unquestioned pillar of another branch of international law – international human rights law.⁴⁶ Although humanitarian law and human rights law are two distinct

43. UN Principles, Principle 18.

44. ICRC, *Commentary on the Additional Protocols*, footnote 34, para. 3655, p. 1056.

45. Emanuela-Chiara Gillard, "Reparation for Violations of International Humanitarian Law," 85 *International Review of the Red Cross* (2003), 529-552.

46. See the Universal Declaration of Human Rights, Article 8; International Covenant on Civil and Political Rights, Article 2; International Convention on the Elimination of all Forms of Racial Discrimination, Article 6; Convention against Torture and Cruel, Inhuman or Degrading Treatment or Punishment, Article 14; Convention on the Rights of the Child, Article 39.

branches of international law, they affect each other, in part as regards the individual's status vis-a-vis the state.

Implementation of Israel's obligation to pay compensation for the bombing of the power plant raises a number of legal obstacles. Regarding the losses of private individuals, under Israeli domestic law, the residents of the Occupied Territories are not legally entitled to sue the State of Israel for damages caused by Israel's armed forces, even if the latter acted illegally, except in exceptional cases. This prohibition follows two amendments to the Civil Wrongs Law that were enacted by the Knesset, one in 2002 and the other in 2005.⁴⁷

The amendments violate fundamental principles of international law and Israeli constitutional law, and should be repealed. A petition opposing the law, filed by a group of Israeli and Palestinian human rights organizations, is pending.⁴⁸

Implementation of the obligation to pay compensation at the inter-state level raises two principal problems. One, the status of the Palestinian Authority in international law is not clear; in any case, it is not a state. However, given that the Palestinian Authority is responsible

for most governmental functions in the Gaza Strip, including supply of electricity to all the residents in the area, it is reasonable that, at the inter-state level, the Palestinian Authority is entitled to the compensation for the attack on the power plant. This conclusion is supported by Israel's declared position that, since completion of the disengagement plan, it no longer bears any responsibility toward the population in the Strip, and that the Palestinians must address all their demands or claims to the Palestinian Authority.⁴⁹ On the other hand, as the next section of this chapter shows, arguably the disengagement did not end the occupation, so Israel continues to have overall responsibility for the lives and welfare of Gaza's residents.

The second problem in implementing inter-state compensation results from the decision of Israel and of a substantial portion of the international community not to transfer moneys to the Palestinian Authority governed by Hamas. This action was taken because Hamas is classified as a "terrorist organization." One possible solution to this problem is to transfer the compensation directly

47. The 2002 amendment exempts the state from liability for damages resulting from a "wartime action," and expands the cases that come within this category. See the Civil Wrongs (Liability of the State) (Amendment No. 4) Law, 5762 – 2002. The second amendment expands the state's immunity from damage claims for acts carried out in an area that the Defense Minister defined as a "conflict area," even if the act is not related to hostilities. See the Civil Wrongs (Liability of the State) (Amendment No. 7), 5765 – 2005.

48. HCJ 8276/05, *Adalah et al. v. Minister of Defense et al.*

49. For a complete statement of this claim, see the State Attorney's Office's response to the High Court of Justice in the petition filed by Gisha and a number of Gaza Strip residents wanting to study at Bethlehem University (HCJ 11120/05, *Usama Mahmud Hamdan et al. v. OC Southern Command et al.*).

to entities involved in solving the power shortage problem in the Gaza Strip. In this scenario, one way would be for Israel to pay the cost of connecting the line from the Israel Electric Corporation to Gaza (see the relevant discussion at p. 8). It should be noted that this idea is not new, and is an extension of the arrangement in force today, in which Israel uses some of the tax money it collects for the Palestinian Authority to pay the PA's debts directly to Israeli suppliers, without transferring the moneys directly to the Palestinian Authority.⁵⁰

The right to satisfaction is also applicable in our case. Satisfaction requires the offending state, inter alia, to make a public apology and to take legal action against the persons responsible for the illegal act.⁵¹ The latter obligation is expressly enshrined in international humanitarian law, which imposes personal responsibility on perpetrators of acts that are deemed war crimes, and requires states to prosecute and punish members of its forces who commit such acts. Given that an attack aimed at a civilian object is a war crime, Israel has the obligation to investigate the attack and prosecute the persons responsible, among them the decision-makers.

The right to satisfaction is linked, to a great extent, to the fifth aspect of

reparation – guarantees that the act will not be repeated. This right can be met in various ways, among them a decision by the Israeli government stating that the IDF shall not attack civilian objects, and those that meet vital needs of the civilian population in particular.

The duty to ensure proper living conditions in occupied territory

Following completion of the evacuation of the settlements from the Gaza Strip, in the summer of 2005, and the withdrawal of military forces from the area, Israel declared that the military government in the area had ended. In making the claim, the state sought to exempt itself from responsibility for the lives and living conditions of the residents. However, despite the lack of a fixed Israeli presence in the Strip, Israel continues to maintain almost complete control over major aspects of the residents' lives.

1. Israel continues to maintain complete control over the air and sea space of the Gaza Strip;
2. Israel continues to maintain complete control of the movement of people and goods between the Gaza Strip and the West Bank, even if the movement does not take place across Israeli territory;

50. A similar arrangement is used by the European Union to provide aid to residents of the Occupied Territories bypassing the Palestinian Authority. For details, see www.eurunion.org/News/press/2006/20060051.htm.

51. UN Principles, Principle 22(e) and (f).

3. Israel continues to control the joint Gaza Strip-West Bank population registry, the entry of foreigners into the area, and family unification matters;
4. Israel continues to exercise complete control over the movement of goods into the Gaza Strip, and to a great extent the export of goods as well;
5. Pursuant to the Oslo Agreements, Israel continues to control a significant portion of the Palestinian Authority's taxation system.

Under international humanitarian law, the laws of occupation apply if the “occupying” state has “effective control” over the territory in question. The High Court has held that the creation and continuation of occupation does not depend on the existence of an institution administering the lives of the local population, but only on the extent of its military control in the area.⁵² Furthermore, a certain area may be deemed occupied even without a permanent army presence throughout the area. Leading experts in humanitarian law argue that effective control also exists when the army

controls key points in a particular area, reflecting its power over the entire area and preventing an alternative central government from formulating and carrying out its powers.⁵³ The broad scope of Israeli control in the Gaza Strip, which exists despite the lack of the permanent physical presence of IDF soldiers in the territory, creates a reasonable basis for the assumption that this control amounts to “effective control,” meaning that the laws of occupation apply to Israel's acts and omissions in the Gaza Strip. Two principal provisions of the laws of occupation are especially relevant in our case.

First, the Fourth Geneva Convention states, in Article 53, that it is forbidden to destroy property, whether publicly or privately owned, “except where such destruction is rendered absolutely necessary by military operations.” The expression “military operations” is defined by the International Committee of the Red Cross as “movement, maneuvers, and actions of any sort, carried out by the armed forces with a view to combat.”⁵⁴ This interpretation clearly shows that the exception is

52. HCJ 102/82, *Tsemel et al. v. Minister of Defense et al.*, *Piskei Din* 37 (3) 365.

53. G. Von Glahn, *The Occupation of Enemy Territory: A Commentary on the Law and Practice of Belligerent Occupation* (Minneapolis: University of Minnesota Press, 1957), 28-29. See also, L. Oppenheim, *International Law*, 7th edition (London: Longmans, 1952), 435; *The Handbook of Humanitarian Law in Armed Conflicts*, D. Fleck ed., (Oxford: Oxford University Press, 1995), 243-244.

54. ICRC, *Commentary on the Additional Protocols*, para. 152, p. 67. An identical definition is given in a document prepared by the ICRC legal department, “Interpretation of the ICRC of Article 53 of the Fourth Geneva Convention of 12 August 1949, with particular reference to the expression ‘military operation,’” 25 November 1981.

extremely narrow, and does not include general security needs that are not “military operations.”⁵⁵ As mentioned in the first section of this chapter, there is no connection whatsoever between the bombing of the power plant and the military operations, and certainly not one that qualifies as “absolutely necessary,” as required by the article.

Second, one of the principal obligations of an occupying state, set forth in Article 43 of the Regulations Attached to the Hague Convention of 1907, is that it must ensure “public order and safety.” Regarding the meaning of this provision, the High Court held that,

The obligation of the commander to ensure proper living conditions in the area is construed to mean all aspects of life and goes beyond security and immediate existential needs. It applies to the various needs of the residents, among them welfare, sanitation, economy, education, and society that a person in modern society requires.⁵⁶

Regarding the concrete connection between the supply of electricity in occupied territory, the High Court has

held that, “supply of electricity needed by the local population is unquestionably a function imposed on the military government, so as to ensure proper living conditions of the population... This action comes to meet the government’s duty to ensure the economic welfare of the population of the region.”⁵⁷

Implementation of this provision in the context of the electricity crisis prevailing in the Gaza Strip requires Israel to take all reasonable means available to return the supply of electricity to the amount needed. This obligation is based on Israel’s overall responsibility for proper living conditions in the Gaza Strip, and not because it illegally bombed the power plant. Its obligation is the same as if the crisis resulted from a natural disaster, an attack by a third party, or any other reason. The more that Israel recognizes its obligations, as occupier, to the Palestinians and fulfills the requirements derived from that status, the validity of the demand to compensate the Palestinian Authority, as the representative of the attacked “state,” for the bombing of the power plant decreases.

55. As the former president of Israel’s Supreme Court stated, “The Fourth Geneva Convention makes a clear distinction between necessity for reasons of security and necessity for military reasons. The concept ‘reasons of security’ is broader than the concept ‘military reasons.’” HCJ 7015/02, *Ajuri v. Commander of IDF Forces in the West Bank*.

56. HCJ 10356/02, *Hass v. IDF Forces in the West Bank*, *Piskei Din* 58 (3) 443, 461.

57. HCJ 256/72, *Electric Company for the Jerusalem District Ltd. v. Minister of Defense*, *Piskei Din* 27 (1) 124, 138.

Conclusions and Recommendations

“Let them do what they want, but punish children needing dialysis, people who need light, hospitals?”⁵⁸ In this tone of condemnation, National Infrastructure Minister Binyamin Ben-Eliezer was speaking, in mid-September, about the intention of Israel Electric Corporation employees to cut off power in Israel in protest against the plan to reform the company. Unfortunately, as this report shows, the minister’s great sensitivity to the needs of children requiring dialysis is preserved solely for Israeli children. As for Palestinian children who require dialysis just like Israeli children in their situation, and who are at the mercy of the State of Israel no less than their Israeli counterparts, the minister apparently preferred to leave their fate in the hands of IDF air force pilots.

Since Israel’s decision to bomb the only operating power plant in the Gaza Strip, on 28 June, 1.4 million people have been suffering from power stoppages half the time. The effects are felt in all aspects of life: without refrigeration, families cannot keep food fresh in their homes, increasing their expenses and decreasing the quality of the food; persons with limited mobility who live in high-rise apartment buildings find it difficult to leave their homes because the elevators

are not functioning; residents receive water only two to three hours a day as a result of the disruption in operation of the water infrastructure; the sewage purification system has been impaired, placing many areas at risk of sewage backing up and flooding; the quality of medical care at the hospitals has been affected, and is expected to affect, the health of many patients; many medical clinics, those without generators, have closed down some of their activities; and the list goes on.

Clearly, the State of Israel has the right to protect the lives of its citizens, including, of course, against Qassam rockets fired from the Gaza Strip. But not all means of response and action are acceptable. Aiming attacks at civilians who are not participating in the hostilities, or at civilian objects, is forbidden under international humanitarian law and is considered a war crime. The power plant bombed by Israel was a purely civilian object. The attack did not impede the capability of Palestinian organizations to fire rockets into Israeli territory. Presumably, it also was not intended to achieve that purpose. Possibly, the objective was to collectively punish the entire Palestinian population by transmitting a “message of deterrence”

58. The comments were broadcast on Galei Tzahal [the army radio station] News, 20 September 2006.

to those responsible for making and launching the rockets. It may also simply be that the primary motive was revenge for the abduction of the IDF soldier. Whatever the case, it was forbidden and was a war crime.

As a result of Israel's responsibility for the life and welfare of the residents of the Gaza Strip, stemming from its complete control over the lives of the residents of the Gaza Strip, and in light of its duty to make reparation for the war crime it committed, B'Tselem urges the government of Israel to:

- cover the expenses needed to return the Gaza power plant to operating capacity;
- finance the upgrading of the infrastructure needed to transfer electricity from Israel to the Gaza Strip;
- permit the entry of the equipment needed to rehabilitate the power plant, without delay, including Egyptian-made transformers;
- repeal the amendments to the Civil Wrongs Law and enable persons and institutions from the Gaza Strip that suffered damage as a result of the bombing of the power plant to sue the state for compensation;
- direct the judge advocate general to open a criminal investigation against the persons involved in the decision to bomb the power plant and against those who carried out the attack, with the intention of prosecuting them;
- adopt a government resolution that in principle forbids the IDF to attack civilians and civilian objects.

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