



גישה - מרכז לשמירה על הזכות לנוע (ע"ר)
Gisha - Legal Center for Freedom of Movement
مسلك - مركز للدفاع عن حرية الحركة

Red Lines Crossed: Destruction of Gaza's Infrastructure

August 2009



Red Lines Crossed: Destruction of Gaza's Infrastructure

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Thanks to:

Nedal Toman, GEDCo (Gaza Electricity Distribution Company) | Maher Najjar, CMWU (Coastal Municipalities Water Utility) | Rafiq Maliha, Gaza Power Plant | Mohammed Daher, World Health Organization-Gaza | Hamada Albayari, OCHA-OPT (United Nations Office for the Coordination of Humanitarian Affairs – Occupied Palestinian Territory)

This report was produced with the financial assistance of the Human Rights and Good Governance Secretariat at the NGO Development Center.

Gisha gratefully acknowledges Oxfam Great Britain for its support of our *Protection and Access Project in Gaza*, as well as our other donors who generously support Gisha's core activities: Broederlijk Delen | Foundation for Middle East Peace | Foundation Open Society Institute | Irish Aid | New Israel Fund | Royal Norwegian Embassy

ISBN: 978-965-91069-6-7

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Power Supply - Gaza Strip

Before, after Power Plant Shutdown and Current 6 January 2009

Gaza Strip (1.5 million)



North Gaza (290,843)



Gaza (524,001)



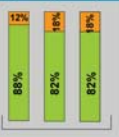
Middle Area (216,494)



Khan Yunis (290,399)



Rafah (177,632)



- Damaged Feeder
- Electric Feeder (Israel, Egypt)
- Electric Feeder (Power Station)
- Hospital
- Water Well
- Wastewater Treatment Plant
- Pumping Station
- Water Treatment Facility
- Crossing Point
- Governorate Border
- Green Line
- Built-up area
- Refugee Camp

Introduction

Daily power outages, frequent disruptions to water supply, raw sewage flowing into the sea, hospitals dependent on decrepit generators – all these things have become a normal part of daily life in the Gaza Strip in recent years.

Since 2007, Israel has limited the amount of fuel entering the Gaza Strip and has blocked the import of building materials and most kinds of goods, in an attempt to exert pressure on the Strip's Hamas government. The restrictions on the import of industrial diesel have caused chronic power shortages in Gaza, since they force the Gaza power station, which is supposed to supply one-third of the Strip's electricity, to limit its electricity output and sometimes to shut down altogether. The frequent blackouts caused by the shortage prevent the water, sewage and healthcare systems, which are dependent on an uninterrupted supply of electricity, from serving the needs of the residents and impact negatively on their daily lives. In addition, the restrictions on the import of regular diesel prevent these vital institutions from using generators as an alternative to the unreliable electricity supply. Restrictions on the import of spare parts and building materials likewise hamper the ongoing maintenance, repair and development of infrastructure.

The restrictions intensified following the collapse of a "ceasefire" agreement between Israel and Hamas authorities in Gaza in November 2008. During the final months of 2008, Israel closed the Gaza Strip's border crossings almost completely, bringing its infrastructure to the brink of collapse. The Gaza Strip found itself in this weakened state in late December, when Israel's three-week military offensive began. Throughout most of the offensive, Israel blocked the entry of industrial diesel into the Strip. Moreover, in its bombardment, Israel damaged most of the electrical lines supplying Gaza from Israel and Egypt, as well as those carrying electricity from the Gaza power station to consumers. As a result, around 75% of the electricity demand of the Gaza Strip went unmet, and more than one million

people were left without power. The power shortage brought the water, sewage and healthcare systems to the point of collapse, compounding the damage they incurred from the bombardment.

The shortage of industrial diesel and spare parts, caused by the restrictions that preceded the conflict, exacerbated the impact of the war and weakened the Strip's capacity to cope with the new blows to its infrastructure. At the height of the crisis, more than half a million residents were cut off from running water, sewage flowed in the streets, and hospitals were left to operate on generators running 24 hours per day. All this took place while the Strip was being bombarded from the air, sea and land, and its borders remained sealed, leaving residents with nowhere to run.

Gisha submitted three petitions to Israel's High Court of Justice against the Israeli government's restrictive policies: in October 2007, when the restrictions on supply of fuel began; in May 2008, when the power shortage intensified; and in January 2009, in response to the infrastructure crisis during the military offensive. The High Court rejected all three petitions and accepted Israel's policy of restricting the supply of fuel to the Gaza Strip.

Following the war, the electricity, water and sanitation infrastructure were all in a seriously damaged state, yet to this day Israel is still blocking their full repair, through the ongoing restrictions it imposes on the import of fuel, spare parts and building materials. This report describes how Israel's closure policies brought critical humanitarian infrastructure in the Gaza Strip to a state of collapse in a gradual process that can be divided into three stages: the weakening of infrastructure prior to the military operation; its bombing during the incursion; and the hindrance of efforts to properly repair it since then. Furthermore, the report details the severe repercussions of this situation on the lives of residents of the Strip, analyzes Israel's legal responsibility, and addresses the support that the Israeli High Court has lent to the State's activities in this regard. A draft of this report was sent to the Ministry of Defense and to the IDF spokesperson for the purpose of publishing their response, however, they chose not to respond.

Background:

The Electricity System in the Gaza Strip

After the Gaza Strip was occupied in June 1967, Israel appointed the Israel Electric Co. to supply electricity to the Strip, replacing Egypt which had previously supplied power to parts of Gaza using centralized generators. In 2002, a power station began generating electricity within the Gaza Strip, but Israel Electric continued – and continues to this day – to supply most of the electricity consumed in Gaza, with the Palestinian Authority covering the cost.¹ The Gaza Electricity Distribution Company (GEDCo) is in charge of distributing electricity from various sources to the Strip’s consumers and maintaining the electrical grid.

The electricity generated at the power station mainly supplies Gaza City and its surrounding areas, where about half the residents of the Gaza Strip live and where most hospitals and other vital infrastructure facilities are located.² The power station’s maximum generation capacity, which was determined with its construction, is around 140 megawatts (MW) per hour but is limited by the load capacity of its relay network. In June 2006, some 90 MW were generated at the power station, and some 120 MW were supplied by the Israel Electric Co. About one-tenth of the demand for electricity in Gaza was not being met, even after the power station became operational.³

On June 28, 2006, the Israeli Air Force bombed the Gaza Strip’s power station in response to the capture of the Israeli soldier Gilad Shalit three days earlier by

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1. Israel deducts this payment from the tax money it collects for the Palestinian Authority, which currently stands at NIS 35-40 million per month (approximately 9-10 million U.S. dollars), Usama Dabbour, GEDCo Director of External Relations, phone interview with Labibah Harash (Gisha), June 25, 2009.
 2. Usama Dabbour, GEDCo Director of External Relations, phone interview with Mai Masalha Chabaita (Gisha), November 26, 2008.
 3. Affidavit of Nedal Toman, GEDCo Engineer and Project Manager, at pars. 3 & 6. The affidavit was provided to Gisha on November 27, 2007, supporting the petition *HCJ 9132/07 Al Bassiouni v. The Prime Minister* (unpublished, 30.1.08), hereinafter: the *Al Bassiouni* case, available at: www.gisha.org; *West Bank and Gaza Energy Sector Review*, The World Bank, May 2007, pp. 60-61, 80, available at go.worldbank.org/GLF6DMYSZ0.

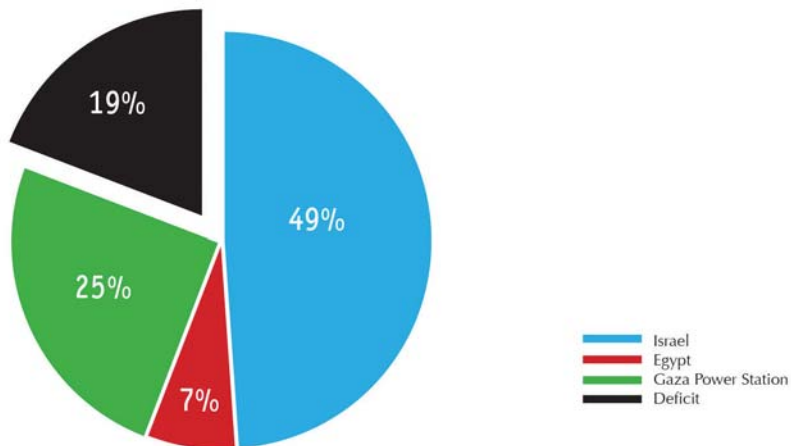
Hamas operatives.⁴ The power station was put out of commission, and in one blow, 43% of the Strip's power supply was cut off. As a result, during that summer, residents experienced constant power outages and disruptions to water supply.⁵ Due to the crisis, Egypt began providing the Rafah area of the Gaza Strip with 17 MW of electricity via two high-voltage lines. Following a drawn-out and gradual repair process, the power station finally reached its current maximum generation capacity of 80 MW in December 2007.⁶

In reality, the power station's generation capacity is dependent on Israel, because Israel is the only source for and controls the supply of the industrial diesel that is essential to operate the plant. This industrial diesel, which cannot be used for anything other than producing electricity, is purchased from the Israeli company Dor Alon, and is paid for by the European Union, which also monitors the transfer of the diesel from the Nahal Oz terminal directly to the power station.⁷ It is not possible to supply industrial diesel to the power station via the underground tunnels from Egypt due to the need to custom-adapt the fuel properties to the technical requirements of the station, because the physical capacity to transfer the quantities needed by the station does not exist, and because the tunnels are not viewed as legitimate channels for the transfer of goods by the relevant sources of funding.

Gaza's electrical network is also dependent on Israel for the supply of spare parts, which GEDCo purchases from Israeli and international companies. These goods cannot be imported into the Strip via any other route, due to Israel's prevention of the import of goods to the Gaza Strip via sea, air or the land crossings on the Egyptian border. The restrictions imposed by Israel on the import of fuel and spare parts into the Strip therefore directly impact the Gaza Strip power station's capacity to produce electricity and the ability of the Strip's entire electrical network to function properly and consistently.

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4. "Act of Vengeance: Israel's Bombing of the Gaza Power Plant and its Effects," September 2006, (hereinafter: B'Tselem, "Act of Vengeance") available at www.btselem.org.
 5. Special Focus: Power Capacity in the Gaza Strip, United Nations Office for the Coordination of Humanitarian Affairs (OCHA), May 14, 2007, p. 1, available at www.ochaopt.org.
 6. Affidavit of Rafiq Maliha, Project Manager, Gaza Power Plant, of January 6, 2008 at par. 7 in the *Al Bassiouni* case. Available at www.gisha.org.
 7. Affidavit of Rafiq Maliha, Project Manager, Gaza Power Plant, of May 12, 2008, at par.10, supporting the petition *HCJ 4258/08 Gisha v. The Minister of Defense* (unpublished, 5.6.08). Hereinafter: the *Gisha 2008* case.

The Gaza Strip currently needs an electricity supply of some 244 MW at times of peak demand in the summer and winter. Of these, 121 MW come via ten high voltage lines from Israel, 17 MW are transferred from Egypt to the Rafah area, and the remainder of the required electricity – more than 100 MW – is supposed to be supplied by the Gaza Strip power station. However, in reality, its generation capacity is limited to some 60 MW due to the shortage of spare parts and/or industrial diesel. As a result, Gaza’s electrical network suffers from a chronic deficit of 46 MW, or almost 20% of the necessary power.⁸ In practice, the deficit is much higher due to the dilapidated state of the network, which leads to energy loss on the lines. During periods when the closure was tightened, the level of power production dropped even further. In order to cope with the chronic shortage and to distribute the available electricity, GEDCo must implement blackouts for several hours every day in different areas of the Strip.⁹



Graph 1: Electricity Consumption in the Gaza Strip and its Proportionate Sources

Source: GEDCo, *Gaza Demand and Deficit*, February 11, 2009

8. GEDCo, *Gaza Demand and Deficit*, February 11, 2009.

9. Affidavit of Nedal Toman, GEDCo Engineer and Project Manger, of January 21, 2008, at par. 8 for the *Al Bassiouni* case, phone interview with Adv. Sari Bashi and Keren Tamir (Gisha), December 16, 2008.

The frequent blackouts have led to an over-reliance on diesel-powered generators, which are used mostly by public institutions that provide vital services, such as the healthcare system and water supply and sewage treatment centers. These generators are designed to be mere temporary

Gaza's electrical network suffers from a chronic deficit of almost 20% of the necessary power, which rises even further when the closure is tightened. In order to cope with the chronic shortage, GEDCo must implement blackouts for several hours every day in different areas of the Strip.

stopgap measures for power outages, since their continued operation over long periods of time wears them out and can cause them to break down. Furthermore, it is not easy to get a generator into the Strip. They are expensive to buy and costly to run, due to the high costs of fuel and maintenance. The operation of generators in the Gaza Strip is likewise dependent on Israel, since Israel controls the importation of the diesel and spare parts necessary to run them.

The Impact of the Closure Policy on Power Supply in Gaza

2007 – Import of Fuel and Spare Parts Restricted

Since Hamas seized control of the government in the Gaza Strip in June 2007, Israel has imposed severe restrictions on travel into and out of the Strip and on the import of goods "that are not considered essential for the basic subsistence of the population."¹⁰ Israel has almost totally barred the import of supplies essential for construction and infrastructure maintenance, such as cement and concrete, other raw materials and spare parts. These policies have led to a severe and ongoing shortage of spare parts for the electrical, water and sewage systems in Gaza, impeding regular maintenance and putting a stop to the repair and development of these vital networks.¹¹ The ban on human traffic has prevented GEDCo from sending engineers and technicians abroad to advance their training and makes it difficult for foreign experts to come to the Gaza Strip in order to consult with GEDCo about the electrical problems.¹²

On September 19, 2007, following persistent rocket fire into Israeli territory from the Gaza Strip, Israel's Security Cabinet declared the Hamas-controlled Gaza Strip to be "hostile territory," and decided to adopt a number of measures against it, including restricting the supply of fuel and electricity to the Strip.¹³ On October 28, 2007, Israel implemented its decision by reducing the amount of industrial diesel sold to the Gaza Strip by around 21% and cutting the sale of gasoline and

10. *HCJ 9132/07 Al Bassiouni v. The Prime Minister*, response of the respondents, November 2, 2007, par. 73. Excerpts available at www.gisha.org.

11. See e.g. affidavit of Nedal Toman, GEDCo Engineer and Project Manager, of November 27, 2007, at pars. 22-25, in the *Al Bassiouni* case; par. 7 of the Water Authority's Press Release, January 22, 2008.

12. Usama Dabbour, GEDCo's Director of External Relations, email interview with Labibah Harash (Gisha), June 16, 2009.

13. Security Cabinet decision of September 19, 2007, available at www.pmo.gov.il.

regular diesel by 15%. The quotas were later reduced further.¹⁴ The restrictions on fuel supply were a serious blow to Gaza's electricity system, due to the need for industrial diesel to run the power station and for regular diesel to operate generators. Because of the cutbacks, the management of the power station was forced to use up all industrial diesel reserves in order to maintain existing production levels. The diesel reserves were rapidly exhausted and in January 2008, as supplies dipped even below existing "quotas" (to be described further below), the power station had to cease producing electricity.¹⁵ As a result, residents of the Strip endured blackouts lasting up to 12 hours a day, and the amount of raw sewage flowing into the sea increased due to the lack of power to run treatment plants.¹⁶

In its response to a petition submitted by Gisha and other human rights organizations to the High Court of Justice against the restrictions on the supply of electricity and fuel to the Gaza Strip, the State informed the Court at the end of January 2008 that the security establishment

"The electricity network in the Gaza Strip is extremely vulnerable and cannot adequately handle all the changes and instability in the power supply to the Gaza Strip. We are facing one crisis after another, struggling to maintain the survival of a very fragile system."

Nedal Toman, GEDCo, January 21, 2008

would allow "the supply of fuel for the humanitarian minimum," as determined by the State. The State set the quota of industrial diesel at 2.2 million liters per week and the quota of regular diesel at 800,000 liters per week. Based on this undertaking, the Court denied the petition.¹⁷ This weekly supply limited the power station's output to 55 MW on average for the subsequent two and a half months – about two-thirds of the station's maximum production capacity of 80 MW, which would require a weekly supply of 3.5 million liters of industrial diesel. Moreover,

14. *HCJ 9132/07 Al Bassiouni v. The Prime Minister*, response of the respondents, November 2, 2007, pars. 20-22.

Later Israel also restricted the supply of electricity from its territory to the Gaza Strip by half a megawatt.

15. Affidavit of Rafiq Maliha, Project Manager, Gaza Power Plant, of January 6, 2008, in the *Al Bassiouni* case.

16. OCHA, "Gaza Closure: Situation Report," January 18-24, 2008, available at www.ochaopt.org.

17. Respondents' response, pars 7, 18, January 26, 2008, in the *Al Bassiouni* case. Excerpt available at www.gisha.org.

this restrictive cap ruled out the possibility of replenishing the power station's exhausted diesel reserves. Each additional reduction in the amount of industrial diesel it received, therefore forced the power station to reduce output.¹⁸

On April 9, 2008, after two Israeli citizens working at the Nahal Oz terminal were killed by Palestinian militants from Gaza, Israel closed the terminal for a week, and during the five subsequent weeks, allowed an average of only 1.5 million liters of industrial diesel to enter Gaza per week. This quota was 31% lower than the amount that Israel undertook to supply before the High Court in January 2008 and 57% less than the amount needed for the optimal operation of the power station. This led to a drop in electricity output to 45 MW and to a shutdown of the station for three days in May 2008.¹⁹ A petition to the High Court submitted by Gisha on behalf of a coalition of human rights organizations against the reductions in the supply of fuel was denied by the Court.²⁰

On June 19, 2008, a ceasefire agreement (literally lull or "tahadiyeh") between Israel and Hamas went into effect, which included a partial easing of restrictions on the import of goods into the Gaza Strip. During the months of the ceasefire, Israel fulfilled most of its undertaking to supply the quota of fuel which it had determined as the "humanitarian minimum," allowing the power station to maintain an output of 60 MW during this period.²¹ However, this period of relative stability, which still involved blackouts lasting several hours a day, did not last long.

November 2008 – The Closure Is Tightened

On November 4, 2008, the IDF entered the Gaza Strip for the first time since the ceasefire agreement went into effect. During the operation, which the IDF said was conducted to destroy a tunnel being dug for purposes of attack, six Hamas

18. Affidavit of Rafiq Maliha, Project Manager at the Gaza Power Plant, of May 12, 2008, at par. 6 in the *Gisha 2008* case.

19. *Ibid* at pars 4-5, 8. See Gisha, "Gaza Fuel Restrictions: Walking Towards Crisis," April 2008, available at <http://www.gisha.org>.

20. petition HCJ 4258/08 *Gisha v. The Minister of Defense* (unpublished, 5.6.08). Hereinafter: the *Gisha 2008* case, available in Hebrew at www.gisha.org. For a discussion of the petition and judgment, see pg. 43-45 below.

21. Rafiq Maliha, Project Manager, Gaza Power Plant, phone interview with Labibah Harash (Gisha), July 9, 2009.

personnel were killed, and a house was destroyed. In response, Palestinian militants launched dozens of rockets from Gaza into Israeli territory. The Minister of Defense ordered the closure of all the border crossings between Israel and the Gaza Strip and stopped all import of goods to the Strip from Israel, including food, medicine, cooking gas, diesel, gasoline and industrial diesel.²² Volleys of rockets and mortar fire were intermittently launched against Israel in the subsequent weeks, and the crossings remained closed throughout most of November and December.

Statements of security officials to the media revealed that the crossings had been closed as a general response to the missile attacks from Gaza. In effect, the entire population of Gaza was being collectively punished for the actions of Palestinian militants and the Hamas government.

In their response to a letter from Gisha, security officials stated that the transfer of supplies to the Gaza

Strip had been halted due to the fire of Qassam rockets at Israel from the Strip, which "endanger operations to supply goods, including fuel."²³ Nevertheless, statements of security officials to the media revealed that the crossings had been closed as a general response to the missile attacks from Gaza, especially on civilian targets in southern Israel, and were unrelated to a specific threat at any particular crossing. For example, Ministry of Defense Spokesman Peter Lerner was quoted as saying that "the opening of the crossings will be considered on a day-by-day basis, and will be conditional on the halt of missile fire on southern Israel by Palestinians."²⁴ In effect, the entire population of Gaza was being collectively punished for the actions of Palestinian militants and the Hamas government.

The Nahal Oz terminal remained closed on most days during the months of November and December 2008, and Israel allowed supply of an average of just 28% of the weekly quota of industrial diesel that it undertook to supply to Gaza before the High Court of Justice. This was only 18% of the amount required to

22. OCHA, "Gaza Humanitarian Situation Report," November 17, 2008, p. 1. Available at <http://www.ochaopt.org>.

23. Ahaz Ben-Ari, Legal Advisor to the Ministry of Defense, phone interview with Adv. Yadin Elam (Gisha), November 10, 2008, and December 11, 2008, respectively.

24. "Israel eases Gaza blockade," AFP, December 4, 2008. Available at newsinfo.inquirer.net.

operate the power station at maximum capacity.²⁵ Due to the shortage, the power station stopped electricity production altogether on November 10, 2008, and remained closed for most of the rest of that month. In December, the station was forced to halt its operations five times, and on half the days of that month it produced no electricity at all. As a result, more than half the residents of the Strip endured blackouts of at least 12 hours a day and received running water only once every few days. Furthermore, as of November 2, 2008, no regular diesel entered the Gaza Strip from Israel, except for small quantities provided to UNRWA and the Ministry of Health from time to time. This made it difficult for generators to fill the void left by the blackouts.

"We have no control over the situation. We're on the verge of collapse. The closure of the power station is causing it to deteriorate, due to wear-and-tear and improper use. The power station is designed to be closed and reactivated perhaps once a year, not all the time. The alternate heating and cooling of the turbines is destroying the power station and the electrical network."

Nedal Toman, GEDCo, December 16, 2008.



photo: Ayda Abdalbari

The severe shortage of spare parts further complicated the Gaza electricity network's desperate bids to continue functioning: in November 2008, 172 different types of spare parts were required, including transformers, power poles and electrical cables, all of which were completely out of stock or for which stock had sunk below the minimum amount required for the proper functioning of the system. These materials, whose quantity numbered in the thousands, had already been sitting for months in warehouses in Israel and the West Bank after having been ordered and paid for by GEDCo but blocked from entering the Gaza Strip by Israel.²⁶

25. These figures were provided to Gisha by officials from the Palestinian side of the Nahal Oz terminal.

26. Nedal Toman, GEDCo Engineer and Project Manager, phone interview with Keren Tamir (Gisha), December 31, 2008.



Electricity polls damaged during Israel's military offensive on the Gaza Strip

Photo: Ayda Abdalbari, 21.1.09

In December 2008, there was a surge in demand for electricity, increasing the burden on the faltering system, primarily because of the lack of other sources of energy, such as cooking gas, regular diesel and gasoline, and the need to heat homes during the winter. This further weakened the Gaza Strip's infrastructure and its capacity to cope with the destruction caused by the bombardment of the Strip during the winter of 2008-2009.

The Military Offensive in Gaza and its Damage to Infrastructure, December 2008 – January 2009

On December 27, 2008, following weeks of escalation since the breakdown of the ceasefire agreement, Israel began a military offensive against the Gaza Strip, with the stated aim of stopping rocket launches targeting Israeli towns from the Strip. Over the course of three weeks, Israel bombarded the Strip from the air, sea and land, causing the deaths of more than 1,440 Palestinians, including 431 children and 114 women, and the wounding of 5,380 Palestinians, including 1,872 children and 800 women. At the same time, Palestinian militants intensified their barrage of rockets and mortar shells on Israeli towns from within the Gaza Strip, causing the deaths of three civilians and one soldier, and the wounding of 182 civilians in Israel. During the offensive, ten IDF soldiers were killed and 340 were wounded.²⁷

The Israeli assault damaged many civilian targets in the Gaza Strip, including electrical, water and sewage facilities, and caused severe and long-lasting damage to civilian infrastructure in the Strip, which had already been on the verge of collapse.

The Israeli assault damaged many civilian targets in the Gaza Strip, including electrical, water and sewage facilities, and caused severe and long-lasting damage to civilian infrastructure in the Strip, which had already been on the verge of collapse. The resulting shortage in electricity and water imposed a very severe hardship on the residents of Gaza, who also faced intense bombardment in a densely crowded area, with no bomb-shelters, and closed borders blocking any

27. OCHA, "Field Update on Gaza from the Humanitarian Coordinator," 3-5 February 2009, p. 1. Available at www.ochaopt.org. Figures comparing the number of Palestinian civilians killed or wounded to the number of militants are not available.

means of escape. The damage to infrastructure also impaired the capacity of hospitals to provide proper treatment for the large number of casualties that flooded in.

Gaza’s power station closed down for ten days, beginning December 30, 2008, due to the lack of supply of industrial diesel from Israel. The station’s emergency holding tanks were of no use during this crisis period, since they had already been emptied due to restrictions imposed on the import of diesel prior to the offensive.²⁸



Graph 2 – The Transfer of Industrial Diesel from Israel to the Gaza Strip. November 2008 – January 2009

Source: Figures provided to Gisha by officials working on the Palestinian side of the Nahal Oz fuel terminal

On January 3, 2009, Israel began a ground offensive in the Gaza Strip. On that day alone, the offensive damaged and put out of commission seven of the 12 electrical lines that connect Gaza to Israel and Egypt. The neutralization of these lines, in combination with the shutdown of the power station, led to a 75%

28. Affidavit of Dr. Laila Abu Ghali, Power Plant Supervisor, Palestinian Energy Authority – Gaza, at par. 10. The affidavit was provided to Gisha on January 15, 2009, supporting the petition *HCJ 248/09 Gisha v. The Defense Minister* (unpublished, 19.1.09). Hereinafter: the *Gisha 2009* case.

shortfall in electricity in the Strip relative to demand.²⁹ The biggest power shortage was in Gaza City, where essential humanitarian facilities, such as the Shifa Hospital and the central water purification facility, are located. About a million residents, primarily in Gaza City and surrounding areas, were completely cut off from the supply of electricity for most days of the military offensive. At the same time, due to the power shortage, around 500,000 Gaza residents were cut off from the supply of running water for a period of weeks, and sewage flowed in the streets.³⁰

Manal Awad, 26, Rafah resident, January 13, 2009:

"During the first week of the war there was no electricity at all for long periods, and there was not enough water. Heating water was a major operation. We did not shower for 10 days, and not just because there was no water and no electricity. It is very scary to think that something might happen while you're in the shower. It's freezing cold, and there was not enough electricity to heat the house. On some days we warmed ourselves as we cooked over a gasoline stove. Four days ago there was an explosion which shook the ground. The flame on the stove flared up, and we almost got burned. Since then we prefer not to cook. We make do with eating pitas that my mother prepares from the little flour we have, and we put a little zaatar herb inside."

As a result of the IDF bombings, all the distribution lines between the power station and consumers were damaged, so that even when Israel eventually allowed a limited amount of industrial diesel to be brought in, the station did not operate for several days because it was not possible to distribute electricity.³¹ It was difficult to transport diesel that had already entered the Strip through the Nahal Oz terminal to the power station because of the danger posed by bombardments, difficulties in coordinating with the IDF and an escort provided by UNWRA, and damage to roads. The result was that the diesel remained stuck at the terminal for several days on some occasions.³²

29. Affidavit of Nedal Toman, GEDCo Engineer and Project Manager, of January 4, 2009, at pars 3-6, 8-9 in the *Gisha 2009* case.

30. OCHA, "*The Humanitarian Monitor*," January 2009, pp 7-8. Available at www.ochaopt.org.

31. Affidavit of Nedal Toman, GEDCo Engineer and Project Manger, pars. 9-10, January 8, 2009, in the *Gisha 2009* case.

32. Affidavit of Dr. Laila Abu Ghali, Power Plant Supervisor, Palestinian Energy Authority – Gaza, of January 8, 2009, at par. 6, in the *Gisha 2009* case. OCHA, "*Field Update on Gaza from the Humanitarian Coordinator*," January 12, 2009, p. 2. Available at www.ochaopt.org.

Bombed-out roads prevented technicians from reaching damaged electrical facilities in order to assess and try to fix damage. For example, at the start of the offensive, GEDCo was notified of 10 transformers that had stopped working in various locations around the Strip, leaving around 150,000 people with no supply of electricity, but it had no way of reaching those locations.³³

On several occasions, GEDCo technicians were caught in the crossfire and bombardments while attempting to repair the electrical network, and they had to flee

About a million residents were completely cut off from the supply of electricity for most days of the military offensive. At the same time, around 500,000 Gaza residents were cut off from the supply of running water for a period of weeks, and sewage flowed in the streets.

without completing their work.³⁴ GEDCo managed to fix most of the electrical lines running from Israel, but only two weeks after they were bombed, due to the difficulties in coordinating their arrival at the sites with the IDF. Some of the lines were repaired only after the offensive had ended.³⁵

Israel's position, as stated before the High Court of Justice, was that the Israeli security establishment coordinated with the Palestinian side during the offensive in order to allow the repair of the electrical network "subject to security and operational considerations which arose from the forces on the ground."³⁶ Gisha wrote to security officials asking whether the damage to the infrastructure and electrical, water and sewage lines was deliberate and if not, what measures that had been taken to prevent damage to such facilities, but it received no reply.³⁷

33. Suheil Zkaik, Chief Executive Officer, GEDCo, phone interview with Itamar Shachar (Gisha), December 31, 2008.

34. Nedal Toman, GEDCo Engineer and Project Manager, phone interview with Keren Tamir (Gisha), December 31, 2008; See also pars. 9-10 of his affidavit dated January 8, 2009, for the *Gisha 2009* case.

35. Usama Dabbour, GEDCo's Director of External Relations, email interview with Labibah Harash (Gisha), June 16, 2009.

36. The *Gisha 2009* case, updated notice on behalf of the State of January 13, 2009, para. 47. The petition was submitted by Gisha and other human rights organizations against the humanitarian damage to the Strip's population during the military offensive as a result of the collapse of the infrastructure. Available in Hebrew at www.gisha.org. For a discussion of the petition, see below, pp. 45-49.

37. Letter to Israeli Defense Minister Ehud Barak from Gisha's Adv. Tamar Feldman, May 12, 2009. During a telephone conversation on July 7, 2009, Adv. Ruth Bar, aide to the Defense Minister, informed Adv. Feldman that the Ministry of Defense does not intend to respond to the letter. Gisha also contacted the IDF Spokesman (in letters to Maj. Zohar Halevi, Head of the Human Rights Organizations' Dept., from Adv. Feldman, dated June 14, 2009 and July 13, 2009), who referred Gisha to the Ministry of Defense and also forwarded a news release from April 2009 that was not responsive to the questions posed.



Electricity polls damaged during Israel's military offensive on the Gaza Strip

Photo: Ayda Abdalbari, 21.1.09

Even if they had been able to reach the site of damaged facilities, the acute shortage of spare parts seriously limited technicians' capacity to make repairs. The damage from the bombardment of the electrical system led to an even greater demand for spare parts, compounding the existing shortage. Following high-level coordination efforts between Israel and the Palestinian Authority in Ramallah, Israel allowed the import of some essential spare parts into the Strip on January 9, 2009, including transformers and electrical pillars. However, on January 13, Israel air-bombed GEDCo's warehouse, and as a result destroyed some of the same spare parts which it had just allowed to be brought into the Strip. Damage to the building and its contents was estimated at around \$400,000. The few spare parts that remained in GEDCo's warehouse were insufficient to repair the extensive damage caused to the Strip's electrical network during the offensive, which has been estimated at more than \$10 million.³⁸

38. Affidavit of Nedal Toman, GEDCo Engineer and Project Manger, of January 14, 2009, at pars. 1-5 and 15, in the *Gisha 2009* case and Usama Dabbour, GEDCo Director of External Relations, email interview with Labibah Harash (Gisha), June 16, 2009.

The Impact of the Damage to the Electricity Supply

GEDCo implements planned blackouts by turning off disconnection pillars on power lines serving homes, as well as hospitals, water wells, sewage treatment plants, schools, pharmacies and clinics. It has very limited capacity to direct electricity to a particular type of institution, and therefore disconnecting any line has serious repercussions both for homes and for essential public infrastructure.³⁹ These repercussions, to be described below, were particularly severe during the military offensive in the Gaza Strip in the winter of 2008-09. However, they were hurting the Strip's residents even before the offensive, and are still wreaking havoc to this very day, more than six months after the war ended.

Furthermore, the electricity shortage and the forced blackouts are themselves causing significant damage to the electrical network. The power station – a sophisticated

GEDCo implements planned blackouts by turning off disconnection pillars on power lines serving homes, as well as hospitals, water wells, sewage treatment plants, schools, pharmacies and clinics. Therefore, disconnecting any line has serious repercussions both for homes and for essential public infrastructure.

facility worth \$250 million – is designed to be operated continuously. The frequent activation and deactivation of its equipment because of the fuel shortage is wearing it down and could lead to irreparable damage. The burden of the blackouts is spread among different areas by manually switching off disconnection pillars – something which is meant to be done no more than once or twice a

39. Affidavit of Nedal Toman, GEDCo Engineer and Project Manager, of January 24, 2008, at par. 9 in the *Al Bassiouni* case. Available at www.gisha.org.



Drinking fountain fixed by Oxfam GB in the Zaytoun neighborhood of Gaza City, which endured serious destruction as a result of the shelling

Photo: Mark Buttle, Oxfam GB, 2.7.09

year, but in recent years GEDCo technicians have been forced to do it several times a day. These frequent power disconnections increase the electricity loss on the lines, wear out the equipment and sometimes take it out of commission altogether. The frequent manual power disconnections also endanger the lives and limbs of GEDCo technicians, and several have been injured and even killed while operating the switches.⁴⁰

Damage to the Water Supply

The disruption to the supply of running water, which itself results from disruptions in electricity production in Gaza, is a daily fact of life for residents of the Gaza Strip. Long and frequent intervals where there is no water – and during the Gaza

40. Affidavits of Nedal Toman, GEDCo Engineer and Project Manager, of January 24, 2008 at par. 9 and January 8, 2009, at par. 10 for the *Gisha 2009* case.

offensive of winter 2008-09 these intervals lasted days and weeks – make it hard for Gaza residents to perform essential basic tasks, such as showering, brushing teeth, doing laundry and washing dishes. Gaza residents are forced to buy water from private companies, to beg favors from neighbors and family members to help them wash and launder, or simply to lower their standards of hygiene. People living in multi-story apartment blocks suffer most from the water shortages – and this includes about half of the residents of Gaza City. Since the water is carried to upper stories using electrical pumps, even during those times when there is water supply to the building, it does not reach the upper apartments if there is no electricity.

Much of the water used in the Gaza Strip comes from underground sources. It is pumped from the aquifer via wells owned by the Coastal Municipalities Water Utility (CMWU), the body which oversees the water and sewage systems in Gaza. A continuous supply of electricity is needed in order to pump the water and carry it to consumers. During the frequent blackouts, the CMWU relies on generators run on diesel, which it buys from a private supplier with funding from the World Bank and other international organizations.

The over-reliance on generators burns them out and contributes to the wearing down of the entire system. To further complicate matters, since June 2007, the CMWU has been plagued by a shortage of materials and spare parts, such as pipes and filters, which are essential for the repair and maintenance of its facilities. Moreover, due to the ban on the importation of building materials and cement to the Strip, there has been almost no new construction of infrastructure in the water and sewage system for more than two years since the closure was implemented. The strict restrictions on travel into the Gaza Strip during the same period also prevented the CMWU from getting external support from experts in the field of water and sanitation system development.⁴¹

The shortage of materials and spare parts caused a rise in the rate of water loss in the CMWU's pipelines from 30% in 2004 to 47% in 2009 and created a need for increased pumping. This is likely to speed up the depletion and salification of the aquifer, which has been a growing problem in recent years due to excessive

41. Maher Najjar, Deputy Director, Coastal Municipalities Water Utilities (CMWU), email interview with Labibah Harash (Gisha), June 16, 2009.

pumping.⁴² Already, about 90% of the water supplied to Gaza residents is not suitable for drinking according to World Health Organization standards, due to the seeping of sea water into underground fresh water sources. The tap water in Gaza can be used for showering, flushing toilets, washing dishes and laundry, but it needs to be desalinated to be fit for drinking. As a result, the vast majority of Gaza Strip residents is dependent on home desalination devices. But in the absence of electricity, water cannot be purified at home, impeding residents' access to clean water and forcing them to buy drinking water from private water purification companies. Desalination facilities are functioning at a level far below their maximum capacity due to the

The need to ration inadequate energy resources among water wells, sewage pumps and purification facilities leaves the CMWU in an almost constant state of crisis. The utility company must focus on addressing short-term crises, which leaves few resources for long-term planning and upgrades.

shortage of electricity, generators, diesel and spare parts.⁴³ The closure is also impeding the import of essential chemicals to the Strip, such as chlorine, which is used to ensure that water is safe for drinking.⁴⁴

The restrictions on the amount of regular diesel that Israel has allowed to enter the Gaza Strip since October 2007 have led to the shutdown of wells that are not connected to the electrical grid and have impeded the functioning of the other wells during blackouts.⁴⁵ Since November 2008, almost no regular diesel has entered the Strip from Israel, aside from diesel allocated to UNRWA. The CMWU relies on the reserves still held by its diesel supplier, and on donations of diesel made by UNRWA. Due to the shortage of electricity and diesel, the CMWU manages to pump an average daily amount that meets only 82% of the demand

42. *Ibid*; CMWU, "Effect of Material Delay Report," November 2008.

43. Ashraf Majed Mushtaha, CMWU Engineer, phone interview with Labibah Harash (Gisha), May 14, 2009, and Maher Najjar, Deputy Director, CMWU, email interview with Labibah Harash (Gisha), June 16, 2009.

44. The World Bank, "Assessment of Restrictions on Palestinian Water Sector Development," April 2009, p. 29, available at go.worldbank.org/W89K7P6QR0 (hereinafter: The World Bank, April 2009).

45. OCHA, "Gaza Humanitarian Situation Reports," November 2007-June 2008. The reports are available at www.ochaopt.org.

of the Strip's residents for running water. In the process, it is forced to alternately disconnect the water supply to tens of thousands of people on a daily basis. During those times that the power station is shut down, the CMWU's capacity to pump water drops so that it can meet barely 60% of the population's needs.⁴⁶ During the period when the power station was closed in December 2008, just prior to the military offensive in Gaza, 60% of the Strip's population had access to running water for only a few hours a day, once every five to seven days.⁴⁷

The acute electricity shortage during the offensive of winter 2008-09 severely impacted the water supply in the Strip. Large sections of the water system became dependent on generators running on diesel, which itself soon ran out.⁴⁸ Combat activities caused further damage to the water system. In fact, 44% of the cost of the damage to the pipelines of the water and sewage system during the offensive was caused by advancing tanks. In addition, water and sewage treatment facilities suffered direct hits by airplanes and tanks, despite the fact that the CMWU informed the IDF of their coordinates through the Red Cross, in the hopes of sparing them from damage.⁴⁹ For example, water lines were hit in Nusseirat and the Rafah area during air assaults, resulting in tens of thousands of people being cut off from running water for up to two weeks.⁵⁰

CMWU technicians could not always reach the damaged sites due to the risk to their lives. In several cases, the CMWU's requests to coordinate essential repairs with the IDF went unanswered. On more than one occasion, technicians attempting to repair water and sewage facilities in coordination with the army and the Red Cross found themselves caught in the crossfire. And even if they did manage to reach the right site, the technicians could not always fix the damage since they did not have the necessary spare parts.⁵¹ A survey conducted by the

46. Maher Najjar, Deputy Director, CMWU, phone interview with Ayda Abdalbari (Gisha), November 18, 2008, and with Itamar Shachar (Gisha), December 31, 2008.

47. OCHA, "*The Humanitarian Monitor*," November 2008, p. 8 and December 2008, p. 1. Available at www.ochaopt.org.

48. Affidavit of Maher Najjar, Deputy Director, CMWU, January 4, 2009 at par. 7 in the *Gisha 2009* case, and in his affidavit dated January 14, 2009 at par. 2 of in the same case.

49. CMWU, "*Damage Assessment Report, Gaza*," December 27, 2008-January 19, 2008, pp. 2, 4-5, 8.

50. Affidavit of Maher Najjar, Deputy Director, CMWU, of January 14, 2009, at par. 2 in the *Gisha 2009* case, and in email interview with Labibah Harash (Gisha), June 16, 2009.

51. Affidavit of Maher Najjar, Deputy Director, CMWU, of January 14, 2009, in the *Gisha 2009* case, and in a phone interview with Labibah Harash (Gisha), July 1, 2009.

CMWU of all the water and sewage facilities immediately after the cease-fire estimated the damage caused during the combat at some \$6 million.⁵²

Some 55 wells – close to 40% of all the wells that serve the CMWU – did not function during the offensive due to the shortage of electricity and diesel, damage from explosions, lack of spare parts and difficulties in repairing the damage. Dozens of other wells functioned only at partial capacity.⁵³ As a result, at the height of the military operation, about 500,000 people were left with no supply of running water; about 500,000 other residents were disconnected from the supply of running water except for a few hours every week; and the rest got running water for only a few hours every two to three days.⁵⁴ The disruptions to the electricity supply prevented residents from purifying tap water in their homes even when the water supply was turned on. To make matters worse, the ongoing bombardment made them reluctant to leave their homes to search out potable water.⁵⁵

Nawal Samir, a 34-year-old mother of six and resident of the Rimal neighborhood of Gaza City, January 6, 2009:

"We have no water, because we have no electricity. This is the second day that we are without any drinking water. I've tried to get as much help as I can from the neighbors. I spoke with someone who owns a drinking water plant who told me that there is a very long line. Today he managed to bring me 250 liters of water which I have to use for cooking, washing and drinking. I bathe the children once a week, but I change their clothes every day. There is lots of laundry waiting to be done. I have no water. Soon there won't be clean clothes. I feel dirty all the time. [...] With six children in the house, there is a lot of mess. Most of our dishes are dirty. This is no life. There's no electricity, no water. In the end, we'll all die of diseases. The tap water is very salty and can't be used for cooking. Right now I'm wishing for that water. It's better than nothing."

52. CMWU, "Damage Assessment Report, Gaza," December 27, 2008-January 19, 2008, pp. 4-5, 8.

53. OCHA, "Field Update on Gaza from the Humanitarian Coordinator," January 13, 2009, p. 4. Available at www.ochaopt.org.

54. OCHA, "The Humanitarian Monitor," January 2009, pg. 8. Available at www.ochaopt.org.

55. Affidavit of Maher Najjar, Deputy Director, CMWU, of January 4, 2009 at par. 13 in the *Gisha 2009* case.

Damage to the Sanitation System

Raw sewage flowing into the sea, contaminants seeping into the drinking water, and sometimes even the flooding of raw sewage in the streets and agricultural fields – all these have become increasingly common occurrences in the Gaza Strip since Israel tightened the closure, restricted the production of electricity and limited the supply of diesel. These measures have impacted the capacity of Gaza's sanitation system to provide residents with a clean and hygienic living environment. The ramifications were especially severe during the military offensive in the Gaza Strip, when the effects of existing restrictions were worsened by the bombing of waste water facilities and extensive damage to the system.

The sewage system in Gaza has suffered from underdevelopment for some time: funding problems, escalations in the conflict and political instability have slowed down the upgrading and improvement of the system. The difficulties have been intensified by the shortage of electricity, diesel, spare parts and building materials as a result of the tightening of the closure in 2007, which led to the further deterioration of an already decrepit system.

Raw sewage flowing into the sea, contaminants seeping into the drinking water, and sometimes even the flooding of raw sewage in the streets and agricultural fields – all these have become increasingly common occurrences in the Gaza Strip since Israel tightened the closure.

The CMWU needs an uninterrupted supply of electricity in order to pump waste water from private homes, carry it to purification plants and operate purification facilities. During blackouts, the CMWU uses generators fed with diesel to operate the sewage system. The CMWU has been forced to divide up its limited energy resources between its two areas of responsibility in the Strip – water supply and waste water treatment. This has harmed the functioning of the sewage system during periods of intense shortages of electricity and fuel.⁵⁶ During those periods,

56. Maher Najjar, Deputy Director, CMWU, phone interview with Itamar Shachar (Gisha).



Sewage flowing adjacent to a residential area

Photo: Ayda Abdalbari, 21.1.09

some waste water pumping stations have shut down, which has sometimes caused sewers to flood and even caused sewage to run in the streets.⁵⁷ The Strip's three purification plants have operated only sporadically due to the shortage of electricity, fuel and spare parts, prompting an increase in the amount of raw sewage flowing into the sea, relative to the amount before the supply restrictions. Some 80 million liters of sewage now flow into the sea every day – more than half the daily sewage output of the Strip. Of this volume, 40 million liters is raw sewage, and 40 million liters is partially treated.⁵⁸

57. OCHA, "Impact of Fuel Shortages on Gaza Sanitation – Polluting the Sea," April 29, 2008, pp. 1-2. Available at www.ochaopt.org; OCHA, "Gaza Closure: Situation Report," January 18-24, 2008, p. 2.

58. Maher Najjar, Deputy Director, CMWU, email interview with Labibah Harash (Gisha), June 16, 2009, and in a phone interview, July 1, 2009.

The need to ration inadequate energy resources among water wells, sewage pumps and purification facilities leaves the CMWU in an almost constant state of crisis. The utility company must focus on addressing short-term crises, which leaves few resources for long-term planning and upgrades. In addition to the restrictions imposed by the power shortage, the tightened closure has meant that since June 2007 it has not been possible to conduct routine maintenance and to implement projects to upgrade the system, projects which have already been allocated funding by international organizations.⁵⁹ This has caused the deterioration of the system and has perpetuated inadequate conditions that include pumping raw sewage into the sea from the pumping station and channeling 10 million liters of waste water daily through the Gaza river bed en route to the sea and via natural areas.⁶⁰ In addition, some 40% of the Strip's residents are not connected to the sewage system, and they instead use cesspits, from which human waste seeps into the ground and even flows in the streets.⁶¹

The flow of sewage into the sea poses a health risk to residents of coastal areas and those who visit Gaza's beaches: dangerous levels of fecal bacteria were detected on about one-third of Gaza's beaches in 2008. The pollution also harms fish and endangers those who consume them. The waste water, which travels north with the sea currents, also threatens to pollute Israel's beaches.⁶²

As the sewage seeps into the earth, it contaminates the groundwater and thereby endangers the drinking water sources of the Strip's residents. According to the World Health Organization, 26% of illnesses in Gaza at the end of 2008 resulted from water problems, and the level of contaminants in the wells is fast increasing. Water contamination poses a risk primarily to children and pregnant women, and it increases the risk of cancer.⁶³ In the Khan Yunis area, where groundwater has been contaminated by sewage for some time, the levels of nitrates in the water in 2008 were found to be twice or more as high as the levels recommended by the

59. "Report from the Early Recovery Mapping Workshop," April 30, 2009, p. 7. Available at www.undp.ps. See, for example, Reuters, "World Bank Says Blair Sewage Project in Gaza May Collapse," June 8, 2009. Available at www.uk.reuters.com.

60. OCHA, "The Humanitarian Monitor," May 2009, p. 13. Available at www.ochaopt.org.

61. The World Bank, April 2009, p. 29. See footnote 44.

62. OCHA, "Gaza Strip Interagency Humanitarian Fact Sheet," May 2008, p. 3. Available at www.ochaopt.org; "Impact of Fuel Shortages on Gaza Sanitation – Polluting the Sea," April 29, 2008, p. 4.

63. The World Bank, April 2009, p. 29. See footnote 44.

World Health Organization. About 20% of specimens collected from water facilities across the Strip in early 2009 showed water contamination levels that posed a public health risk. During that same period, there was an increase in the incidence of diseases caused by contaminated water and inadequate sanitation, such as severe and bloody diarrhea and viral hepatitis. In the first third of 2009, twice as many children contracted diarrhea compared with the same period in 2008.⁶⁴

In November 2008, shortly before the military offensive in the Strip, 25 out of 37 sewage pumping stations were not properly operational due to the shortage of spare parts. Those still operating were becoming increasingly inefficient.⁶⁵ During the military offensive in the Gaza Strip in the winter of 2008-09, the capacity of the Strip's sewage system to function and to adequately process waste water was further compromised, due to the acute shortage of electricity, diesel, and spare parts, damage from direct hits, and the inability to repair damage because of the risks to technicians traveling around.

Sewage pumping stations operated only partially during combat, and some even shut down altogether. As a result, waste water began to flow in residential areas and agricultural fields.⁶⁶ The IDF bombardment caused further damage to sanitation facilities, including sewage pipelines, pumping stations and purification plants. CMWU technicians, more often than not, were unable to fix the damage, due to the threat of bombings and the lack of available spare parts.⁶⁷ The sewage reservoir at Gaza's waste water purification plant was bombed by Israel, flooding its environs and polluting adjacent residential areas and agricultural lands. Several days after the ceasefire, some 500,000 cubic meters of waste water flowed into fields, polluting the groundwater before the damage was finally repaired.⁶⁸ The IDF also refused a request from the CMWU to coordinate the repair of a waste water

64. OCHA, "The Humanitarian Monitor," February 2009, pp. 9, 12; "Protection of Civilians Weekly Report," April 8-14, 2009, p. 3; "The Humanitarian Monitor," May 2009, p. 13. Available at www.ochaopt.org.

65. Maher Najjar, Deputy Director, CMWU, email interview with Adv. Yadin Elam (Gisha), November 18, 2008.

66. Affidavit of Maher Najjar, Deputy Director, CMWU, of January 4, 2009, at par. 23, in the *Gisha 2009* case, and in a phone interview with Itamar Shachar (Gisha), January 6, 2009.

67. CMWU, "Damage Assessment Report Gaza," December 27, 2008 – January 19, 2009, p. 5.

68. OCHA, "The Humanitarian Monitor," January 2009, p. 8, available at www.ochaopt.org; Maher Najjar, Deputy Director, CMWU, email interview with Labibah Harash (Gisha), June 16, 2009.

pipeline bombed from the air in Beit Hanoun, making it was impossible to stop the flow of sewage there during the war.⁶⁹

"As a result of the massive air offensive in the Gaza Strip, the pipeline network has been seriously damaged. A lot of sewage is flooding the streets of Gaza. Maintenance workers cannot go out to repair things, due both to the shortage of spare parts and the serious safety risks. You can't go out without putting your life in danger. The situation is very bad and poses a public health risk to the residents of Gaza Strip."

Maher Najjar, CMWU, December 31, 2008

The IDF also rejected the CMWU's request to coordinate a visit by technicians to the sewage reservoir in Beit Lahia, which threatened to overflow its banks due to lack of electricity or fuel to pump it.⁷⁰ The state of the sewage facility in Beit Lahia remained unstable even after the ceasefire. At the end of March 2009, the level of sewage in a drainage pool on the site rose to the point that one of its banks collapsed, causing some 50,000 cubic meters of sewage to flow near a village.⁷¹

Damage to Healthcare Services

In addition to the public health risks that Gaza Strip residents have been exposed to as a result of the dysfunctional state of the water and sewage systems, the restrictions on electricity and fuel have also directly affected the provision of healthcare services in the Strip. During the Gaza military offensive in the winter of 2008-09, Gaza's health system was at the point of collapse, having to contend with massive and incessant bombardment, thousands of injured persons flooding

69. Affidavit of Maher Najjar, Deputy Director, CMWU, of January 14, 2009 at par. 2j in the *Gisha 2009* case, and in an email interview with Labibah Harash (Gisha), June 16, 2009.

70. Affidavit of Maher Najjar, Deputy Director, CMWU, of January 14, 2009 at par. 2 in the *Gisha 2009* case.

71. OCHA, "*The Humanitarian Monitor*," March 2009, p. 10. Available at www.ochaopt.org. Last March 2007, a disaster occurred at the same place when sewage flooded the adjacent village of Um Al Nassar and caused the death of five people. See OCHA, "Situation Report: Beit Lahia Waste Water Treatment Plant," April 3, 2007, p. 1. Available at www.ochaopt.org.



Dialysis patients receive treatment at Shifa Hospital, Gaza

Photo: Wissam Nassar / IRIN

hospitals and an acute shortage of electricity. The healthcare system had to find a way to cope with this situation in spite of its already weakened state. Following 18 months of closure, the system was already suffering from a scarcity of medical equipment, medicine and ambulances; from a lack of knowledge, expertise and experience among medical staff; and from frequent and extended blackouts.⁷²

The reduction in the supply of fuel to Gaza since October 2007 led to an increase in the length and frequency of power outages in hospitals. By November 2008, on the eve of the offensive, there were blackouts lasting more than 10 hours a day. When power is cut, the Strip's hospitals and clinics depend on generators, which are not designed for such extended and frequent use. The dependence on generators is also risky, since the shortage of diesel or a technical failure could shut them down at any moment and disrupt the hospital's operations, including surgeries.⁷³

72. Physicians for Human Rights – Israel, "Medical Ethics During the War in Gaza," March 2009. Available at www.phr.org.il (hereinafter: PHR, "Medical Ethics").

73. Ri'afat Hamdona, Director, Shifa Hospital, phone interview with Ayda Abdalbari (Gisha), November 18, 2008.

During periods of electricity shortage, the Strip's hospitals and clinics are forced to limit their services, postpone surgeries and medical tests, and scale down lab services.⁷⁴ The lack of a reliable power supply makes it hard to ensure that medicine, blood units and food, not to mention cadavers, are properly refrigerated.⁷⁵ Blackouts also wreak havoc on medical equipment, computers and communications systems needed for the hospitals' functioning. Other devices have been destroyed by surges when the electricity is suddenly turned back on. The power shortages also impede hospitals' ability to ensure a clean, hygienic and sterile environment where necessary, since they interfere with cleaning, laundry and disinfection procedures.⁷⁶

The period of the military offensive in the Gaza Strip during winter 2008-09 was a time of profound crisis for the Strip's healthcare system. For 12 days during the war, Shifa Hospital, the main hospital in the Gaza Strip, was disconnected from the main electrical grid most of the time.⁷⁷ From the start of the ground offensive, on January 3, 2009, all the Strip's hospitals were left without a central electricity supply for an entire week. They were completely dependent on generators.⁷⁸ At the same time, the hospitals were buckling under the massive burden of treating thousands of wounded. Explosions and attacks damaged medical facilities and ambulances and wounded medical staff.⁷⁹

The functioning of many clinics, ambulance stations, vaccination centers, and laboratories around the Strip were disrupted due to recurrent blackouts, diesel shortage and low staff attendance.⁸⁰ Hospitals were forced to cut back on heating during the cold winter days, even though this endangered the health of patients.⁸¹

74. OCHA, "Gaza Strip Interagency Humanitarian Fact Sheet," February 2008, p. 2; "Gaza Strip Interagency Humanitarian Fact Sheet," April 2008, p. 3; "The Humanitarian Monitor," November 2008, p. 8. The reports are available at www.ochaopt.org.

75. Affidavit of Dr. Jamil Mohammed Sliman Ali, Director, Beit Hanun Government Hospital, of October 28, 2007, in the *Al Bassiouni* case.

76. Affidavits of Hassan Khalaf, General-Manager, Hospital, of November 26, 2007 and January 9, 2008, for the *Al Bassiouni* case.

77. Mohammed Daher, Spokesperson, World Health Organization-Gaza, phone interview with Labibah Harash (Gisha), June 22, 2009.

78. OCHA, "Field Update on Gaza from the Humanitarian Coordinator," January 7, 2009, pg. 2; "Protection of Civilians Weekly Report," January 9-15, 2009, pg. 4. The reports are available at www.ochaopt.org

79. PHR, "Medical Ethics," pp. 6, 31.

80. OCHA, "Field Update on Gaza from the Humanitarian Coordinator," January 5, 2009, p. 2, January 5, 2009; "Protection of Civilians Weekly Report," January 9-15, 2009, p. 4. The reports are available at www.ochaopt.org.

81. Hassan Khalaf, General-Manager, Shifa Hospital, phone interview with Mai Masalha Chabaita (Gisha), January 4, 2009.

Patients who stayed at home during the offensive were exposed to health risks due to the power shortage, which prevented the proper use of electrical home medical devices and heaters. The curtailment of the diesel supply to the Strip from Israel made it even more difficult for the Palestinian Ministry of Health to operate its generators, which jeopardized the functioning of hospitals. By June 2009, no more diesel fuel remained in the children's ward at Shifa Hospital in Gaza. Only through the intervention of the UN did Israel permit the transfer of 30,000 liters of diesel to the hospital.⁸²

Damage to Homes and Small Businesses

The lack of electricity for a significant portion of the day severely disrupts the daily lives of Gaza Strip residents, very few of whom have the option of using a home generator. This disruption to ordinary life – even beyond the serious problems with the water supply, sewage system and healthcare services⁸³ exacerbates the hardships which Gaza residents currently face: a very difficult economic situation, high unemployment, substandard social services and closed borders.

During the military offensive on the Strip, Gaza residents were cut off for extended periods from electricity and water supply and bore the brunt of bombardments from air, sea and land.

The power shortage impeded the use of many electrical appliances, which under normal circumstances are taken for granted: refrigerators for food and medicine, elevators in multi-story buildings, home lighting and heating, washing machines, water heaters for bathing, ovens for cooking and baking, radios, televisions, computers, internet and phones chargers. The electricity shortage has also interfered with children's schooling in Gaza. Lack of lighting interferes with classroom activities, and students cannot prepare their homework at home in the afternoon and evening hours,⁸⁴ while science and computer lessons at school have been disrupted or cancelled altogether.⁸⁵

82. Mohammed Daher, Spokesperson, World Health Organization-Gaza, phone interview with Labibah Harash (Gisha), June 22, 2009.

83. See B'Tselem, "*Act of Vengeance*," pp. 7-10.

84. As told by an elementary school principal in Jabalia to Gisha on November 16, 2008.

85. OCHA, "*The Humanitarian Monitor*," November 2008, p. 10. Available at www.ochaopt.org.



Studying by candlelight

Photo: Ayda Abdalbari, 17.1.08

Bahaa, a seven-year-old student in the second grade who lives in Jabalia, November 18, 2008:

"I don't like it when there are blackouts. I'm very scared of the dark. I also like to play computer games but I can't play because of the blackouts. [...] I don't do homework because there is no electricity. At school, I can't see what's written on the board in class because there is no electricity and no lights. They open the window so that a bit of light will come into the classroom, but it's very cold for us. I hate school right now. I hate being in Gaza."

The frequent blackouts cause many electrical appliances, especially refrigerators, to break down, requiring expensive repair. At times when blackouts have coincided with shortages of cooking gas, residents have been forced to gather kindling wood and light fires for cooking and heating. During the military offensive, residents were too scared to leave their houses to look for fuel, and they had no way to heat their homes during the cold winter days, even though in many cases their windows had been blown out due to the impact of bombardments.

Ihab Abu Zaytar, a 32-year-old father of three children and resident of Izbet Abd Rabbo (east of Jabalia), January 26, 2009, after a month with no electricity:

"There is no light for my children. They are scared all the time. There is no electricity in the entire area. It's like a ghost town. It's very scary at night. We used to use electricity for laundry, for baking, for television, but now we wash clothes by hand, don't bake bread and don't watch television [...] Because there was no electricity during the war, we threw out 15 kg of meat that spoiled. Now we don't buy meat. We live off cases of canned food. [...] It's like we're living in the Dark Ages. We use fire for cooking because there is no gas. We burn fires inside the house to warm up the children. It's cold, because there are no windows and doors, which were destroyed in the blast when our neighbors' house exploded. [...] It's a very cold month. We can't sleep without the fire. It stays burning all night. I'm afraid that it could start a house fire or that my children will get burnt. The children are not used to this kind of life, and it is especially hard for them."

The frequent blackouts and the shortage of spare parts harm businesses that produce and market fresh foods, such as butcheries and bakeries,⁸⁶ as well as the agriculture industry, which depends on electricity and diesel to irrigate agricultural fields, heat fowl enclosures and operate fishing vessels. Besides the losses to business owners, fishermen and farmers, this also impacts the availability of food for the entire population of Gaza.⁸⁷

86. Abu Jamal al Ajarmi, head of the Bakery Owners Association of Gaza, phone interview with Ayda Abdalbari (Gisha), November 18, 2008.

87. OCHA, "Gaza Closure: Situation Report," December 14, 2008, p. 3; "Protection of Civilians Weekly Report," February 25-March 3, 2009, p. 3; "Gaza Strip Interagency Humanitarian Fact Sheet," February 2008, p. 1. The reports are available at www.ochaopt.org.

The Legal Struggle – Evolution and Outcomes

Background: Israel's Legal Obligations towards the Civilian Population of the Gaza Strip

The State of Israel bears a legal obligation to ensure the proper and adequate functioning of the Gaza Strip's infrastructure systems. This obligation is derived, first and foremost, from the basic principles of international humanitarian law, according to which Israel must safeguard the welfare and address the needs of the civilian population under its control and protect the dignity and rights of the members of this population.⁸⁸

According to the law of armed conflict, the army must attend to the needs of the Gaza Strip's residents and ensure the functioning of its civil infrastructure during periods of armed conflict.⁸⁹ The Israeli High Court of Justice has already established that the military commander's duty by virtue of this basic principle is twofold: "*First*, he must refrain from operations that attack the local inhabitants. This duty is his 'negative' obligation. *Second*, he must carry out acts required to ensure that the local inhabitants are not harmed. This is his 'positive' obligation. Both these obligations [...] should be implemented reasonably and proportionately in accordance with the needs of the time and place."⁹⁰

88. Geneva Convention Relative to the Protection of Civilian Persons in Time of War, art. 27, August 12, 1949, 75 U.N.T.S. 287 (hereinafter: Geneva Convention IV); Hague Convention IV – Laws and Customs of War on Land, art. 46, October 18, 1907, 36 Stat. 2277, 1 Bevans 631, 205 Consol. T.S. 277, 3 Martens Nouveau Recueil (ser. 3) 461 (hereinafter: Hague Convention).

89. Geneva Convention IV, arts. 3, 13, 16, 18, 19, 23 and 30.

90. HCJ 4764/04 *Physicians for Human Rights v. The IDF Commander in Gaza*, judgment published in English at http://elyon1.court.gov.il/files_eng/04/640/047/a03/04047640.a03.htm, which addressed the legal obligations of the military commander towards the civilian population during the combat in Rafah in 2004 (hereinafter: the *Rafah* case).

During armed conflict, the army must distinguish between civilian and non-civilian targets. Even when it comes to non-civilian targets, though they are deemed legitimate targets, the army must nevertheless uphold the principle of proportionality.⁹¹ Furthermore, as established by the High Court in the *Rafah* case, the military commander has an obligation to ensure that there will be sufficient equipment to meet the essential needs of the local residents in a combat zone, and he must take this into account when preparing for the military operation. "This requires the setting up of a proper infrastructure and logistic planning before military operations are commenced," and this includes "the preparation of alternatives to the existing infrastructure that may be damaged."⁹²

Israel's duty to protect the population applies during both peacetime and wartime, for as long as Israel exercises control over the civilian population and its lifelines. Israel still exercises this control over the Gaza Strip. Israel controls the sea, air and land spaces in the Strip, as well as significant governmental and administrative mechanisms. Gisha's position is that this control amounts to "effective control" for purposes of the application of the law of occupation.⁹³ Even if the law of occupation does not apply in full, according to the High Court, the very fact of the ongoing control of border crossings and the dependence which Israel has created during its long years of military governance impose obligations on Israel towards the civilian residents of Gaza.⁹⁴ Therefore, whether by virtue of the law of occupation, by virtue of the doctrine of post-occupation duties, or in accordance with the general principles of administrative law – the same basic and simple principle holds true: with power comes responsibility.⁹⁵

The responsibility and obligation to protect the lives and dignity of the residents of the Gaza Strip also arise from human rights law, which applies alongside humanitarian law.⁹⁶ First and foremost, there is the right to life, a fundamental,

91. Orna Ben-Naftali and Yuval Shani, *INTERNATIONAL LAW: BETWEEN WAR AND PEACE* (2006) pp. 154-157. (in Hebrew).

92. See *Rafah* case judgment.

93. Gisha, "*Disengaged Occupiers: The Legal Status of Gaza*," January 2007. Available at www.gisha.org.

94. See the judgment of the *Al Bassiouni* case, where the Court determined that the very fact that Israel controls the border crossings imposes increased legal obligations on Israel (unpublished, January 31, 2008). Available at http://elyon1.court.gov.il/files_eng/07/320/091/n25/07091320.n25.htm.

95. Gisha and Physicians for Human Rights-Israel, "*Rafah Crossing: Who Holds the Keys?*" March 2009. Available at www.gisha.org.

96. See Para. 11 of Concluding Observations of the Human Rights Committee, Israel, U.N. Doc. CCPR/CO/78/ISR (2003).



Electricity polls damaged during Israel's military offensive on the Gaza Strip

Photo: Ayda Abdalbari, 21.1.09

inalienable right that must be defended even in the gravest emergency.⁹⁷ This is true in both international law and Israeli law.⁹⁸

These claims and others underpinned the three petitions that a coalition of human rights organizations, represented by Gisha, submitted against Israel's policies which have been compromising the proper functioning of the electricity, water and sewage infrastructure in Gaza. These include the *Al Bassiouni* case, submitted by Gisha and Adalah, and the two petitions in the Gisha 2008 and *Gisha 2009* cases. Despite the fact that the Court, as well as the State in its responses, did not dispute that Israel has a duty to address the essential needs of the civilian population of Gaza, all these petitions were rejected. The subsequent analysis of the State's responses, the Court judgments and the narratives at their basis illustrate why and how this was so.

97. International Covenant on Civil and Political Rights, art.4, 16 December 1966; G.A. res. 2200A (XXI), 21 U.N. GAOR Supp. (No. 16) at 52, U.N. Doc. A/6316 (1966), 999 U.N.T.S. 171; Human Rights Committee, General Comment 14, Article 6 (Twenty-third session, 1984), U.N. Doc. HRI/GEN/1/Rev.1 at 18.

98. The right to life and dignity is established in the Basic Law: Human Dignity and Liberty, 1992, and is derived from the principle of the sanctity of human life, which represents a basic principle in Israeli law.

Eyes Averted from a Situation Out of Control

The *Al Bassiouni* Case

As noted above, the first petition addressing the electricity and fuel issue (the *Al Bassiouni* case) was submitted to the High Court of Justice following a decision by Israel's Security Cabinet in September 2007 to reduce the supply of electricity and fuel to the Gaza Strip. This was in response to the launch of Qassam rockets from the Gaza Strip at nearby towns within Israel. The petitioners – Palestinian residents of the Gaza Strip, the deputy director of the Gaza CMWU, and Palestinian and Israeli human rights organizations, represented by Gisha and Adalah – claimed that this reduction was unlawful since it aimed to exert pressure on Hamas through the collective punishment of the civilian population. The petitioners warned that the deliberate restrictions on supply of electricity and fuel would violate the rights of Gaza residents and harm their well-being, and that such restrictions violate Israel's obligations under international and Israeli law.⁹⁹

In its response, the State did not dispute that it bears humanitarian obligations to Gaza residents. Following a legal analysis of the provisions of international humanitarian law, however, the State Attorney's office determined that the policies were within the bounds of legitimate "economic warfare," so long as they fulfilled two conditions: first, that the reductions do not violate the "humanitarian minimum as required by international law;"¹⁰⁰ and second, that Israel "continuously monitor the impact of the reduction of supply of fuel products on essential services, in order to ensure that basic humanitarian needs are not harmed."¹⁰¹

The petitioners countered that "the humanitarian minimum" is a legal standard that has no basis in law, since the concept of a "humanitarian minimum" has never been defined, and in fact, does not exist in international humanitarian law. Furthermore, humanitarian law does not sanction the deliberate reduction of a population's living standards to a state of "humanitarian minimum." The

99. See the petition document dated October 28, 2007. Available at www.gisha.org.

100. State's response of November 1, 2007 at par. 23. Available at www.gisha.org.

101. *Ibid.* par. 17.

petitioners expressed concern that the introduction of such a nebulous concept to the legal discourse regarding Israel's obligations vis-à-vis the civilian population of Gaza could lead to an erosion of the rights of civilians and substantially damage their means of existence, as indeed eventually became the case.

The second condition set by the State Attorney – the monitoring – is based on the assumption that the capacity for such monitoring exists. That is, that the State of Israel has control of the situation: as though its hands firmly grip the valve controlling the flow of fuel, while its eyes continuously monitor the needs of Gaza residents. By virtue of this assumption, the State promised that it would control the situation and make sure that it did not deteriorate to the point where the essential needs of the population were impacted. This promise was not kept.

As part of the proceedings before the Court, security officials announced that they had set the standard for the "humanitarian minimum" at 2.2 million liters of industrial diesel per week.¹⁰² This was notwithstanding the fact that 3.5 million liters of industrial diesel per week is required to operate the Gaza power station at its maximum capacity.¹⁰³ Regarding electricity supply, the security apparatus decided to make do, as a first stage, with a 5% reduction in the supply of electricity on three of the ten lines carrying electricity from Israel to Gaza.

Following hearings, the Court accepted the State's position that the quota of industrial diesel and electricity that the security establishment declared that it intended to supply met the essential humanitarian needs of the Gaza Strip. The Court did not address the conflicting legal arguments that stood at the heart of the case: illegitimate "collective punishment" according to the petitioners vs. legitimate "economic warfare" according to the respondents. The Court chose to be satisfied with the State's promises to maintain a fixed supply of industrial diesel as stated and to monitor the essential humanitarian needs of the residents. As was written in the judgment:

"It should be emphasized that during the hearing of the petition, the State reiterated its undertaking to monitor the humanitarian situation in the Gaza Strip, and in this context we were informed, in various affidavits filed on behalf of the

102. See the State's announcement of January 10, 2008. Available in Hebrew at www.gisha.org.

103. Affidavit of Rafiq Maliha, Project Manager, Gaza Power Plant, of May 12, 2008, which was appended at Appendix 2 to the petition in the *Gisha 2008* case. Available at www.gisha.org.

respondents, that this commitment is being discharged with the utmost responsibility and seriousness, and that the security establishment carries out a weekly assessment of the situation in this regard, **which is based, *inter alia*, upon contacts with Palestinian officials in the fields of electricity and health**, and on contacts with international organizations".¹⁰⁴ (emphasis added)

Particularly of note is the State's declaration – on which the Court chose to rely – that it is continuously monitoring the humanitarian situation in the Gaza Strip through reports from Palestinian officials and international organizations, in order to ensure that the humanitarian needs of Gaza residents are being provided for. This declaration stands in sharp contrast to affidavits and reports submitted in support of the petition – written by authorized Palestinian officials and international organizations operating in the Strip – reporting significant damage to the civilian infrastructure as a result of Israel's closure policy.¹⁰⁵

The *Gisha* 2008 Case

A few months later, the security establishment reduced the supply of diesel and other fuels further, dipping below the "humanitarian minimum" threshold that it had set. This was in response to an attack by Palestinian militants on Israeli citizens working at the Nahal Oz fuel terminal in April 2008. For five weeks, the security establishment closed the Nahal Oz fuel terminal intermittently, claiming that security threats at the crossing did not permit its opening. Even when it allowed the crossing to open, security officials continued to limit the amount of fuel that passed through it, preventing "compensation" for the shortfall created during the days when the crossing was closed. As a result, in April-May 2008, Israel permitted supply of only about 70% of the quota of industrial diesel which it had undertaken before the Court to allow, representing just 57% of the amount necessary for the optimal functioning of the power station. Blackouts became

104. Par. 19 of the judgment in the *Al Bassiouni* case, see footnote 94 above.

105. Affidavits of Maher Najjar, Deputy Director of CMWU, and Dr. Jamil Ali, Director of the Beit Hanoun Government, which were appended to the petition in the *Al Bassiouni* case. See also the affidavits appended to the petitioners' response of November 27, 2007, for the *Al Bassiouni* case from Isidro Navarro, Country Programme Manager, Oxfam Great Britain in Jerusalem; Hassan Khalaf, General-Manager, Shifa Hospital; and Nedal Toman, GEDCo Engineer and Project Manager. These affidavits are available at www.gisha.org.

more frequent, impairing the functioning of water pumps, hospitals, educational institutions and other essential services.¹⁰⁶

As a result, on May 13, 2008, Gisha submitted another petition regarding the supply of fuel, on behalf of nine human rights organizations.¹⁰⁷ In the petition, the petitioners asked the Court to order the State to end the restrictions on fuel supply, or

The sequence of events in the *Gisha 2008* case proved that the deliberate reduction of supply to the "humanitarian minimum" will inevitably lead to the supply falling below the "minimum" threshold determined by Israel, harming the basic humanitarian needs of the population.

at least to heed the instructions of the Court in the *Al Bassiouni* case and fulfill its commitment to allow the supply of that "humanitarian minimum" which it promised to uphold.¹⁰⁸ The petitioners noted that the presence of security risks at Nahal Oz only re-enforced the problematic nature of the deliberate reduction policy, because the deliberate reductions prevented the power station from amassing the diesel reserves needed to safeguard its operation during periods when the fuel terminal needed to close.

In their correspondence with Gisha, security officials did not deny the harm to the basic humanitarian needs of the population. For instance, in a reply sent to Gisha as part of a pre-litigation proceeding, Lt.-Col. Binyamin of the International Law Division, which reports to the Military Advocate General, stated that "the distress mentioned in your letters is known to the relevant authorities, who are constantly monitoring the changes and developments in the field with the aim of responding appropriately."¹⁰⁹ As part of the State's response to the petitioners' claim that the authorities are not responding appropriately to the distress of the civilian population in Gaza, the state attorneys declared that no change had been made to the policy stated by the Minister of Defense in the *Al Bassiouni* case. They said

106. See details starting at p. 22 above.

107. Petition document, available at www.gisha.org.

108. *Ibid*, pars. 61-77.

109. Response before the HCJ of May 11, 2007, attached as Appendix 14 to the petition document in the *Al Bassiouni* case.

that the severe disruptions in the operations of the Nahal Oz fuel terminal were due solely to the security situation and threats at the crossings.

The Court accepted that position and determined that the fuel shortage and its harsh implications for the Gaza Strip were not due to the deliberate cutback in fuel supply by the security establishment, but rather they "resulted from the policies of the Hamas government and the security constraints that were created following incidents caused by the Palestinian side."¹¹⁰ In other words, when a substantial and significant risk is posed to the lives of the personnel at the border crossing, the Court ruled, the reduction of supply can be justified, even below the "humanitarian minimum" determined in the *Al Bassiouni* case.

The State's declarations and the Court's ruling demonstrate that the security establishment is not capable of preventing supply from dropping below the humanitarian minimum threshold that the State itself determined. These declarations therefore undermine the State's assurances that the fuel supply is under its control and that the deliberate reductions will not cause harm to the population. Furthermore, the Court dismissed out of hand the petitioners' requests that Israel "compensate" for its prevention or reduction of fuel transfers during times when the crossing was closed due to threats – by allowing the transfer of larger amounts of fuel at times when the crossing was open and no security threat existed. Such is the policy of deliberate reduction of the fuel supply.

The sequence of events in the *Gisha 2008* case proved that the deliberate reduction of supply to the "humanitarian minimum" will inevitably lead – whether intentionally or due to loss of control – to the supply falling below the "minimum" threshold determined by Israel – harming the basic humanitarian needs of the population.

The *Gisha 2009* Case

In the subsequent months, after the "ceasefire" agreement between Israel and Hamas went into effect in June 2008, Israel fulfilled most of its commitments to allow supply of the fuel quota which it had deemed to be the "humanitarian

110. Par. 11 of the judgment in the *Gisha 2008* case. Available in Hebrew at elyon1.court.gov.il.

minimum" and even allowed a slightly increased amount to be transferred.¹¹¹ At the same time, Israel sporadically limited the supply of fuel ad hoc, in response to violations of the ceasefire agreement, even when these did not constitute a substantial or direct threat to the crossings. Israeli officials even publicly declared that breaches of the ceasefire agreement would trigger a "response" of the closure of the crossings.¹¹²

With the collapse of the ceasefire agreement on November 4, 2008, Israel halted the supply of regular diesel and gasoline altogether. In the months that followed, it reduced supply of industrial die-

sel by 70% relative to the amount that it had undertaken to supply, which it had deemed the "humanitarian minimum." As described in detail above, Israel thus emptied the Gaza Strip's reserves of industrial diesel and effectively paralyzed its capacity to produce electricity at its power station. Gisha warned of the destructive implications of

Israel's inability to ensure that the needs of the civilian population were met in wartime raises questions about the extent to which the attempt to avoid harming humanitarian needs truly guided Israel's policy of supply restriction.

these policies innumerable times, but to no effect.¹¹³ The situation escalated due to the collapse of the ceasefire agreement – rocket fire on Israel intensified, and the crossings were closed more tightly.

111. During the period between July 1, 2008, and October 31, 2008, Israel allowed about 2.5 million liters of industrial diesel to enter the Strip on average per week, as reported to Gisha by officials on the Palestinian side of the Nahal Oz terminal.

112. Gisha, "Gaza Closure Defined: Collective Punishment," December 2008. Available at www.gisha.org.

113. Letters dated November 9, 2008, and November 10, 2008, from Gisha to the Israeli Minister of Defense, Ehud Barak, and to the acting Coordinator of Government Activities in the Territories, Brig.-Gen. (res.) Amos Gilad; Reply dated November 10, 2008, from the Legal Advisor to the Defense Ministry, Adv. Ahaz Ben-Ari, to Gisha. Letters dated November 16, 2008, November 20, 2008, and November 25, 2008, from Gisha to the Legal Advisor to the Defense Ministry, Adv. Ahaz Ben-Ari; Reply of November 12, 2008, from the Legal Advisor to the Defense Ministry, Adv. Ahaz Ben-Ari to Gisha; Letter dated December 17, 2008, from Gisha to the ministers of the Israeli government; Reply dated December 23, 2008, from the Legal Advisor to the Defense Ministry, Adv. Ahaz Ben-Ari to Gisha; Letter dated December 24, 2008, from Gisha to Adv. Ahaz Ben-Ari; Letters dated January 1, 2009, and January 4, 2009, from Gisha to the Minister of Defense, Ehud Barak.

At the end of December 2008, Israel began a massive military offensive against the Gaza Strip. The severe damage to Gaza's humanitarian institutions, due to the shutdown of the power station and the bombing of high voltage lines during the military operation as described above, led Gisha and colleague organizations to petition the High Court for the third time regarding the supply of electricity and fuel to the Gaza Strip.¹¹⁴

The petition, submitted on January 7, 2009 on behalf of nine Israeli human rights organizations, focused primarily on the dire humanitarian crisis among the civilian population of Gaza, on the one hand, and the State of Israel's obligation to respect and meet these needs, on the other. The petition emphasized the army's obligations under international and Israeli law and cited the High Court's ruling in the *Rafah* case, which established the military commander's obligation to make necessary preparations to meet the needs of the civilian population in advance, prior to beginning an operation.¹¹⁵ The petitioners argued before the Court that instead of preparing in advance to meet the needs of Gaza's civilians, military officials and the security establishment took deliberate steps to empty the Gaza Strip of fuel reserves, damaging the electricity network.

Officials from the security establishment did not dispute the fact that many Gaza residents had been left without electricity and water, and that the imminent collapse of the sewage system threatened to cause environmental hazards and endangered public health. The State's attorneys did not even dispute Israel's legal obligation to safeguard the welfare and see to the needs of the civilian population of the Gaza Strip. Rather, they claimed that the damage to infrastructure was simply a by-product of combat operations and that the army was working to minimize damage to civilian infrastructure and to prevent a humanitarian crisis in the Gaza Strip.¹¹⁶

The High Court held two emergency hearings on the petition, and in between those hearings, studied the updates, affidavits and responses of the petitioners and respondents. Eventually, the Court upheld the State's position and rejected the petition. It determined that even though Israel is indeed obligated under

114. See petition document, available in Hebrew at www.gisha.org.

115. See footnote 90 above.

116. The State's response in the *Gisha 2009* case. Available in Hebrew at www.gisha.org.



Distribution station in Khan Yunis which serves drinking water to 7,000 families in need

Photo: Oxfam GB, 24.1.09

international law to protect the civilian population and to safeguard its basic rights during the incursion, the circumstances and conditions in the field make this difficult, despite the many efforts made by military officials to this end.¹¹⁷

However, when hundreds of thousands of civilians are cut off from running water for weeks on end; when the sewage system fails; and when the functioning of hospitals is impaired at the very moment when they are most needed, attempts and efforts do not suffice. This holds even truer considering that the crisis had its origins, first and foremost, in the restrictive and obstructive policies implemented by Israel. The humanitarian situation on the ground created a presumption that the State failed to abide by its promise, thus shifting the burden to the State to prove that its conduct was proper. However, instead of shifting the burden of

117. See the judgment in the *Gisha 2009* case (not published, January 19, 2009). Available in Hebrew at www.elyon1.court.gov.il.

proof to the State, the Court affirmed the State's position and refrained from any substantial inquiry into the question, what actions did the State take to fulfill its obligations.

The extent of the damage as a result of the fighting could have been significantly less and the capacity to repair it could have been many times greater, had Israel not obstructed, throughout the long closure that preceded the offensive, supply of industrial diesel needed to produce electricity and of building materials and spare parts needed for the electricity, water and sewage systems. Israel's inability to ensure that the needs of the civilian population were met in wartime testifies to a loss of control over its own policy, its implementation and its implications. That inability also raises questions about the extent to which the attempt to avoid harming humanitarian needs truly guided Israel's policy of supply restriction.

The hand on the valve loosened its grip, and the eyes averted their gaze.

The Role of the High Court of Justice

The story of the fuel and electricity petitions, as recounted above, reads like a chronology of boundaries stretched and standards undermined. From beginning to end, neither the State nor the Court ever disputed that Israel owed obligations toward the civilian population of Gaza by virtue of international and Israeli law. So what happened? The threshold at which these obligations could be considered to be fulfilled was incrementally pushed further and further away. At every point, the State offered the Court another reason to restrict or to obstruct while the Court gave its stamp of approval to all these justifications, without ruling on the legal questions in dispute, without holding a serious discussion about the extent of Israel's obligations towards Gaza residents, and without scrutinizing the ever-receding threshold established by the State.

The Court accepted the State's estimations regarding the needs of Gaza's civilian population and affirmed the minimum threshold without further inquiry, even though the estimations presented by the security establishment were crude and based on outdated figures. As Col. Shlomi Mukhtar, Head of the Department of



Running sewage water adjacent to agricultural fields

Photo: Ayda Abdalbari, 21.1.09

the Operations Branch at the Office of the Coordinator of Government Activities in the Territories, testified in his affidavit to the Court: "Most of the figures presented so far are based on estimates and not on complete and verified reports."¹¹⁸ Moreover, the Court paid no attention to the data presented by Palestinian officials in the affidavits submitted by the petitioners, which described a far greater need than that indicated by the Israeli security establishment.

For example, this was the case regarding the reduction of electricity supply. According to the affidavit of Col. Shlomi Mukhtar, meetings were held with

118. These reports included an estimation of how much fuel was required to power the Strip's ambulances, which was based on the number of ambulances in the Strip in 2005. See supplementary affidavit from the respondents in the *Al Bassiouni* case dated November 19, 2007, par. 4, available at www.gisha.org.

representatives of the Palestinian Energy Authority and the electricity company (specific identities were not revealed) who confirmed that "there exists a capacity to regulate" the power supply in order to prevent harm to humanitarian facilities.¹¹⁹ At the same time, however, GEDCo Engineer and Project Manager Nedal Toman stated, in support of the petitioners' position, that "it is impossible, technically, to reduce electricity to Gaza without forcing power outages to vital services, because the cuts will force power outages along main lines, which serve hospitals, water wells, schools and ordinary use buildings without differentiation."¹²⁰

During the debate in the *Al Bassiouni* case, the petitioners suggested that the factual dispute be resolved directly by the officials in charge and requested that the relevant representatives of GEDCo and the Palestinian power station be permitted to enter Israel so that they might participate in the hearing. The Court accepted the request, but on the morning of the last hearing in the petition, the army detained the invitees at Erez Crossing for several hours, so that in the end they arrived at the court half an hour after the hearing on the petition had ended. The Court rejected a request by the petitioners to delay the start of the hearing until they arrived. In the end, the Court accepted the State's position that it was possible to reduce the supply of electricity to the Gaza Strip without detriment to the provision of humanitarian services to its residents.

In its *Gisha 2008* judgment, the Court once again legitimized the deliberate cutbacks, based on the promise of a "minimum" quota and the monitoring of the humanitarian situation, even after security officials admitted that they are not in control of the situation, due to alleged threats to the terminal, and they cannot ensure the supply of the stated minimum quota.

It should be noted that the Court exhibited difficulty in keeping the debate focused on the subject of the petition, which was the question of the obligation of security authorities towards the residents of the Gaza Strip. For example, during the hearing in the *Gisha 2008* case, the petitioners' attorney requested that the

119. See supplementary statement by the respondents in the *Al Bassiouni* case dated December 27, 2007, para. 4. Available at www.gisha.org.

120. See affidavit of Nedal Toman, GEDCo Engineer and Project Manager, at par. 13, attached as Appendix 5 to the response of the petitioners of November 27, 2007, in the *Al Bassiouni* case. Available at www.gisha.org.

deliberate restrictions on the supply of industrial diesel bound for the power station be lifted, so that the power station could replenish its reserves during times when it was possible to open the fuel terminal. In response, one of the justices of the Court interrupted the petitioners' attorney, saying: "You are firing on the crossings," and expressed amazement that under these circumstances, the petitioners could be so bold as to ask that the restrictions be cancelled. The petitioners' attorney was forced to explain to the Court that she herself had never fired a shot at any crossing; that she represents a coalition of human rights organizations who are representing the interests of a civilian population harmed by Israel's policies; and that international law distinguishes between civilians and combatants and mandates special protections for the former.¹²¹

It can be concluded that the legal saga over the fuel and electricity restrictions exposes the limitations of the High Court of Justice in reviewing the activities of the military in the Occupied Territory in general, and in the Gaza Strip in particular.

Furthermore, the Court's decision to refrain from addressing the legal issues involved in the State's restrictive policies is neither a neutral nor insignificant decision. The rejection of the petitions and acceptance of the State's claims time and again, despite the clear erosion of its position regarding Israel's obligations, effectively legitimized the State's policies, which are harming the needs and rights of Gaza residents, by co-opting the law and perverting justice. It can be concluded that the legal saga over the fuel and electricity restrictions exposes the limitations of the High Court of Justice in reviewing the activities of the military in the Occupied Territory in general, and in the Gaza Strip in particular.

121. Protocol of the Court hearing on May 21, 2008, in the *Gisha 2008* case. Gisha is in possession of a copy.

Epilogue:

The Prevention of Reconstruction Efforts since the End of the Military Offensive

Since the end of the Israeli military offensive in Gaza with the ceasefire of January 19, 2009, infrastructure in the Gaza Strip has gradually returned to its "regular" pre-war state: industrial diesel arrives in limited quantities, there is a chronic shortage of electricity, and the water and sanitation systems teeter on the verge of collapse. The almost total ban on the import of spare parts and building materials, which has been in force for over two years, hinders reconstruction efforts in Gaza, including the repair of the vast majority of the damage to infrastructure caused by the recent offensive.

Since February 2009, Israel has reverted to its prior policy of generally allowing the transfer of the limited quota of industrial diesel that it undertook before the High Court to supply – 2.2 million liters a week – which constitutes only 63% of the amount needed for the power station's maximum operation. The power station's present electricity output, which stabilized at 60-65 MW in February 2009, means a 24% electricity deficit compared to demand in the Strip at the start of summer 2009. This necessitates planned power outages of around six hours per day throughout the Strip, and it means that about a quarter of the Strip's population are without power at any given moment.¹²² Since November 2008, Regular diesel, which feeds generators, has been allowed to enter Gaza from Israel only in tiny quantities, when ordered by UNRWA. Diesel smuggled from Egypt via underground tunnels cannot be used by public bodies such as the CMWU and the Ministry of Health, since the international organizations that pay for their diesel do not purchase smuggled goods. At the end of July 2009 Israel resumed the selling of regular diesel to private suppliers in the Strip, in small quantities. Israel's Defense Ministry has yet to respond to Gisha's inquiry regarding its policy on permitting diesel to enter Gaza.¹²³

122. Usama Dabbour, GEDCo, Director of External Relations, phone interview with Labibah Harash (Gisha), June 27, 2009.

123. Letter to Israeli Defense Minister Ehud Barak and to the acting Coordinator of Government Activities in the Territories, Brig.-Gen. (res.) Amos Gilad from Gisha's Adv. Tamar Feldman, July 16, 2009.

The quantity of imports for the electricity system that Israel has approved in the six months since the offensive amounts to only 11% of the total quantity needed to repair the damage caused to the electrical network. Because of the damage, the rate of power loss on the lines has risen from 27% in December 2008 to 35-40% in June 2009, which only exacerbates the existing electricity shortage. The electrical network currently needs 400 different types of parts that are either completely out of stock or in stock but in minimal quantities; Some 70 types of parts, which include more than 33,000 items, are waiting in Israel and the West Bank, many of them since 2008, for Israel's permission to transfer them to the Gaza Strip. As a result of the acute shortage of spare parts, about 10% of the Strip's residents have been totally disconnected from the electrical grid since the start of the military offensive – for more than half a year. They have been forced to find temporary housing until Israel allows the import of the building materials and spare parts that will make it possible to repair the electricity network around their homes.¹²⁴

Khaider Abu Daher, a 34-year-old father of five and resident of Juhar al-Dik in the center of the Strip, June 27, 2009:

"We have been cut off from power and water since the war. When we came back to our home after the war we found it destroyed, and we were forced to live in a tent, cut off from power and water. [...] My family and I have become like homeless beggars. We are forced to walk about 1.5 kilometers from home to the water station every day in order to fill large water containers. Now in the summer they go twice a day. [...]

During the exam periods at school my children suffered more, and I suffered with them: they shouldn't have to go and lug water containers in order to live like the rest of the children in the world. [...] We have also had problems with candles. I don't understand how they manage to read by candlelight. I'm concerned about their eyesight. [...] The children, and we parents too, are scared to go to the bathroom at night. I can't see a thing and I'm worried that I'm going to fall. [...] With regards to food, we've regressed 30 years: we gather wood, light it and cook."



photo: Mohammed Azzaei

124. Usama Dabbour, GEDCo Director of External Relations, email interview with Labibah Harash (Gisha), June 16, 2009, and August 9, 2009.

Part of the water infrastructure in Gaza has been gradually repaired since the ceasefire, using a limited supply of material that Israel allowed into the Strip in May 2009. Nevertheless, CMWU is still awaiting permits from Israel for 40%-50% of the total number of spare parts it ordered for the Gaza Strip. Some of them have been sitting idly in warehouses for two years. As a result, 10,000 residents have been denied access to running water for six months, either because their homes were destroyed during combat last winter or because the infrastructure in the area where they live was damaged. An additional 100,000 residents can access running water only once every 5-7 days.¹²⁵

Rami al Radi, a 28-year-old resident of Gaza City, July 7, 2009:

"For more than a month, the blackouts have lasted more than 10 hours a day for us. Life without electricity has become intolerable. We live on the second floor and the sun is beating down on us from all sides all day long. It's summer now and everything is sticky because without electricity there are no fans. We can't stay in the house. When the power goes out for the day, all of the housework stops. The laundry is piling up more and more, and this is very hard in the summer. The thing that annoys me most is that there is no coordination between the water and the power outages: sometimes there is water but no power, so the pipes don't pull the water up to the apartment, and when there is electricity, sometimes there is no water to pump. This is no life."



photo: Mohammed Azaizeh

The arrival of limited amounts of equipment in May 2009 allowed several urgent projects in the sanitation system to be carried out, but Israel's continued refusal to permit the entry of most materials and spare parts continues to damage the sanitation system in the Gaza Strip and to perpetuate the environmental contamination. Most of the pumping stations are still not functioning at full capacity due to an inability to repair them; tens of millions of liters of raw sewage are still flowing into the sea on a daily basis or endangering the groundwater;

125. Maher Najjar, Deputy Director, CMWU, email interview with Labibah Harash (Gisha), June 16, 2009, and in a phone interview, June 25, 2009. EWASH (Emergency Water and Sanitation/Hygiene), Monthly Report No. 14, July 1, 2009.

projects to repair and expand the water and sanitation systems are severely limited due to the ban on the import of building materials and equipment to the Strip.

Israel, therefore, contributed to the weakening of the Gaza Strip's infrastructure through its rigid closure policies. Its recent military offensive there brought critical humanitarian infrastructure to the brink, and in some cases, to actual collapse. Today, Israel is still preventing reconstruction of infrastructure, and is perpetuating its decrepit state through the ongoing closure policy, all with the stamp of approval of the High Court of Justice.

Recommendations

Gisha calls on Israel to end the closure of the Gaza Strip and to allow the free movement of people and goods, subject only to individual and appropriate security checks, and to stop using restrictions on the reconstruction of Gaza as a tool for achieving political goals. As such, Gisha calls on Israel:

- To allow the unimpeded entry of industrial diesel and regular diesel to the Gaza Strip in accordance with the needs of the population and the electrical, water and sanitation infrastructure of the Gaza Strip, and not based on arbitrary quotas.
- To allow the unimpeded entry of building materials, raw materials and spare parts that will allow the ongoing maintenance, repair and development of infrastructure in Gaza, in order to meet the needs of the population.
- To allow the entry into Gaza of experts and consultants, and the exit of professionals in the field of infrastructure for further education and training outside the Strip, necessary for the repair, maintenance and development of critical humanitarian systems.

Gisha calls on the international community to assist in the rebuilding of the Gaza Strip and its infrastructure by demanding that Israel allow the freedom of movement and passage that are essential to reconstruction efforts. As such, Gisha calls on donor countries to not just to pay for equipment and materials for reconstruction efforts, but also to demand that Israel allow those materials into the Strip.



“This report describes how Israel’s closure policies brought critical humanitarian infrastructure in the Gaza Strip to a state of collapse and details the severe repercussions of this situation on the lives of residents of the Strip.”

Gisha – Legal Center for Freedom of Movement is an Israeli human rights organization, founded in 2005, whose goal is to protect the freedom of movement of Palestinian residents of the West Bank and the Gaza Strip. Gisha, whose name means both "access" and "approach," uses legal assistance and public advocacy to protect that right, which is guaranteed by international and Israeli law. Because freedom of movement is a precondition for exercising other basic rights, Gisha's work has a multiplier effect in helping residents of the Occupied Territory realize their rights to education, livelihood, medical care and family unity.

www.gisha.org