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locked in: **The humanitarian impact of two years of blockade** **on the Gaza Strip**

This report documents the humanitarian impact of the blockade imposed by Israel since June 2007 on the 1.5 million people living in the Gaza Strip. It focuses on the effects of the import and export restrictions and the travel ban to and from Gaza on livelihoods, food security, education, health, shelter, energy and water and sanitation. The report also describes how the recurrent cycles of violence and human rights violations, stemming from the Israeli-Palestinian conflict and Hamas's rule over Gaza, have compounded the suffering of the population in Gaza.

Executive Summary

Following the Hamas takeover of the Gaza Strip in June 2007, Israel has imposed an unprecedented blockade on all border crossings in and out of the Gaza Strip.¹ The blockade has 'locked in' 1.5 million people in what is one of the most densely populated areas on earth, triggering a protracted human dignity crisis with negative humanitarian consequences. At the heart of this crisis is the degradation in the living conditions of the population, caused by the erosion of livelihoods and the gradual decline in the state of infrastructure, and the quality of vital services in the areas of health, water and sanitation, and education.

The blockade, now in its third year, has taken place alongside recurrent cycles of violence and human rights violations, stemming from the Israeli-Palestinian conflict and Hamas's rule over Gaza. The denial of Palestinians' right to leave Gaza, or to move freely to the West Bank, particularly when their lives, physical integrity, or basic freedoms are under threat, is another key component of the current human dignity crisis. This denial had a devastating impact during Israel's "Cast Lead" military offensive, launched on 27 December 2008, contributing to the significant loss of civilian life and the large number of seriously injured and traumatized people as a result.

The three week-long Israeli offensive also involved the widespread destruction of homes, infrastructure and productive assets. The ongoing restrictions on the movement of people and goods to and from Gaza through the crossings has limited the ability of all relevant actors to address the immense needs and challenges that emerged as a result of the most recent military offensive.

Over the past three months, Israel has allowed entry into Gaza of a small number of truckloads carrying goods previously prevented from entering, including limited construction, water, sanitation and education materials. While these are welcome steps, their actual impact when compared to the current level of needs in Gaza remains negligible.

This blockade has been characterized by the UN's most senior humanitarian official, John Holmes, as a form of collective punishment on the entire Gazan population.² The UN, the ICRC, many states and humanitarian organizations have repeatedly urged the Government of Israel to remove the restrictions on Gaza's borders; to allow free access to agricultural areas within Gaza, and to allow unrestricted fishing in Gaza's territorial waters.³ These are the urgent first steps needed to start the reconstruction of homes and infrastructure, the revival of the economy and the restoration of human dignity in Gaza.

The blockade imposed in June 2007 includes:

- The closure of Karni, the largest and best equipped commercial crossing with the exception of a conveyor belt used for the transfer of grains.
- Sweeping restrictions on the import of industrial, agricultural and construction materials.
- The suspension of almost all exports.

- A reduction in the amounts of industrial fuel (used to operate Gaza's sole power plant), benzene, diesel and cooking gas allowed entry.
- A general ban on the movement of Palestinians through Erez, the only passenger crossing to the West Bank, except for limited numbers of "humanitarian cases".
- The closure of the Rafah Crossing, directly controlled by Egypt, except for intermittent openings.
- A significant reduction in the fishing areas and farming land accessible to Palestinians.

Two years of blockade in Gaza has resulted in:

The devastation of livelihoods

- The lack of essential imports, including raw materials, coupled with the ban on exports, has decimated economic activity in the private sector and resulted in the loss of approximately 120,000 jobs. Over 40 percent of Gaza's workforce, or more than 140,000 people, are currently unemployed.
- The local market has been saturated with previously exported agricultural products (mainly cut flowers, strawberries and cherry tomatoes), reducing the income of producers. Approximately 3,500 households were negatively impacted by Israeli-imposed restrictions on fishing in the sea of Gaza. Such restrictions significantly reduced the volume of the fishing catch and subsequent income of fishermen in Gaza.

Rising food insecurity:

- Approximately 75 percent of Gaza's population (more than 1.1 million people) is food insecure, up from 56 percent in the first quarter of 2008.⁴ The main causes of food insecurity are the increase in poverty, the destruction of agricultural assets and the inflation in prices of key food items.
- There has been a gradual shift in the diet of Gazans from high-cost and protein-rich foods such as fruit, vegetables and animal products, to low-cost and high carbohydrate foods such as cereals, sugar and oil, which can lead to micro-nutrient deficiencies, particularly among children and pregnant women.

Physical insecurity

- The reported number of Palestinian fatalities during "Cast Lead" ranges from 1,116 (IDF) to 1,455 (Palestinian Ministry of Health in Gaza). Based on the cross-checking of multiple fatality lists, OCHA has identified the records of 1,383 Palestinians, including 333 children whose death was confirmed by at least two independent sources; a significant proportion of these fatalities were civilians not involved in the hostilities.
- At least 360 people were killed since 15 May 2007 (one month before the Hamas take over) in the context of inter-factional violence. Individuals suspected of affiliation with opposition factions have allegedly been the victims of arbitrary arrests, torture and extra-judiciary executions.

Inability to reconstruct

- The ban on the import of building materials has prevented the reconstruction of most of the 3,540 homes destroyed and the 2,870 homes severely damaged during the last military offensive. No new construction for 7,500 planned housing units to cater for Gaza's rapidly expanding population has been possible due to the lack of building materials available in Gaza.
- More than 20,000 displaced people are forced to continue living in rented apartments, in the houses of relatives and in tents next to their damaged houses. Additionally a small number of families continue to live in tented camps. The lives of these displaced families have been disrupted with children being among the worst affected.

A protracted energy crisis

- The reduction in the amounts of industrial fuel allowed entry has forced Gaza's sole power plant to reduce its level of production, creating a 15-20 percent electricity deficit. Ninety percent of the population currently experience scheduled electricity power cuts of 4-8 hours a day. The remaining 10 percent have no electricity supply due to the lack of construction materials needed to maintain and repair the network.
- In the extreme heat of summer, families are forced to leave food without refrigeration for hours; public institutions have to rely extensively on backup generators, causing problems as a result of the inconsistent supply of spare parts.

The deterioration of water and sanitation infrastructure

- Some 10,000 people in northern Gaza still do not have access to running water due a lack of available building materials to maintain and upgrade the wastewater infrastructure.
- As a result of the lack of adequate maintenance and upgrading of the wastewater infrastructure, 80 million liters of raw and partially-treated sewage are being discharged daily into the environment. This has led to a further pollution of the sea and underground aquifer, creating serious health concerns; only 5-10 percent of the water extracted from Gaza's aquifer meets the WHO safety standards.

A challenged health system

- Follow-up treatment for people suffering from complex injuries and permanent disabilities inflicted during the most recent Israeli offensive has created an enormous burden for a health system weakened by shortages of facilities, equipment, and drugs. The inability of medical staff to upgrade their knowledge and skills due to the continued travel restrictions has significantly undermined the quality of health services in Gaza.
- Patients in need of specialized treatment outside Gaza must go through an arduous and uncertain process to obtain the necessary permits required to leave Gaza, adding considerable anguish and stress to patients' lives. Since January 2008, 40 percent of the applications for permits to leave Gaza were rejected or delayed, compared to approximately 10 percent in 2006.

Education undermined

- Over-crowding of schools as a result of the inability to expand and repair existing facilities, compounded by the recurrent shortages of educational materials delayed or denied entry at the crossings, and frequent electricity power cuts have contributed to a decline in school attendance and performance. In the first semester of the 2007-2008 school year only 20 percent of sixth graders in Gaza passed standardized exams in math, science, English and Arabic.
- Most students are prevented from accessing universities outside of Gaza due to the strict criteria imposed by the Israeli authorities in relation to the authorization of permits for students to exit Gaza as well as the limited openings of the Rafah crossing. For example between July and September 2008, prior to the beginning of the last academic year, only 70 students managed to leave the Gaza Strip through Israel to attend universities outside Gaza.

The systematic destruction of livelihoods

The already weakened economy of Gaza has drastically deteriorated during the past two years. According to the Palestinian Central Bureau of Statistics (PCBS), in the first quarter of 2009 over 140,000 Gazans, willing and able to work, were unemployed, constituting 41.5 percent of Gaza's workforce, up from 32.3 percent in the second quarter of 2007;⁵ unemployment among those less than 30 years of age reached almost 60 percent.⁶ While these figures are among the highest across the world, actual unemployment rates may be even higher, as PCBS records workers who were not formally laid off, but do not work and do not receive salaries as "temporarily absent employees", rather than classifying them as "unemployed". The inability of the unemployed to sustain their livelihoods is a key factor contributing to the ongoing human dignity crisis in Gaza.

The private sector has been devastated by the blockade. According to the Palestine Trade Center (PalTrade), since the imposition of the blockade an estimated 120,000 private sector jobs have been lost, including jobs in the industrial, commercial, construction, agricultural and service sectors.⁷ A number of coping mechanisms that have evolved since the imposition of the blockade, mainly the expansion of the public sector by the Hamas authorities and the growth of the tunnel economy (see below), have partially compensated for the loss of these jobs and prevented an even more pronounced increase in unemployment.

An ICRC household survey conducted in May 2008, after nearly a year of blockade, indicated that over 70 percent of the surveyed families were living on an income of less than one dollar a day per person, and up to 40 percent of the families lived with less than 0.5 dollars a day per person (excluding the value of humanitarian assistance).⁸ As elaborated in this report (section II), the rise in poverty has had a negative impact on the level of food security and nutritional status of the population.

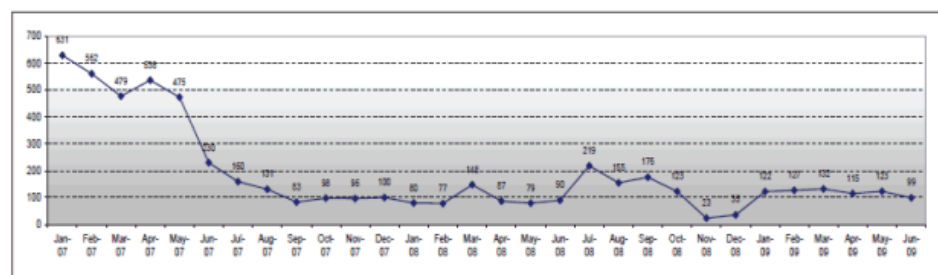
Import and export restrictions

During the two years following the imposition of the blockade, the daily average of truckloads of goods entering Gaza (112) was reduced to less than one fifth of the comparable figure for truckloads entering in the first five months of 2007 (583).⁹ Approximately 70 percent of imports during this period consisted of food products, while most industrial, agricultural and construction materials were either prohibited or severely restricted. The impact of these prohibitions and restrictions has been compounded by the absence of clearly defined processes used by Israel for the authorization of imports.

Prior to the blockade, 95 percent of the inputs used by Gaza manufacturers were imported through the crossings with Israel.¹⁰ There are currently an estimated 1,700 commercial containers with imported goods on hold in warehouses in Israel and the West Bank, some since the beginning of the blockade, causing an estimated loss of US \$10 million, including freight container charges and storage fees.

Exports were almost totally banned in the past two years, with the exception of 147 truckloads of cut flowers and strawberries allowed out of Gaza, compared to a monthly average of 1,090 truckloads exported during the first five months of 2007 to the West Bank, Israel, and Europe. Even if manufacturers were able to overcome the import restrictions, many sectors' were dependent on the ability to export their products; for example, previous goods regularly exported from Gaza included 76 percent of all Gaza-manufactured furniture products, 90 percent of garments and 20 percent of all food products. As a result, 95 percent of the industrial establishments, or 3,750 establishments, were forced to shut down and the remaining five percent were forced to reduce their level of activity.¹¹

Graph 1: Daily average of imported truckloads

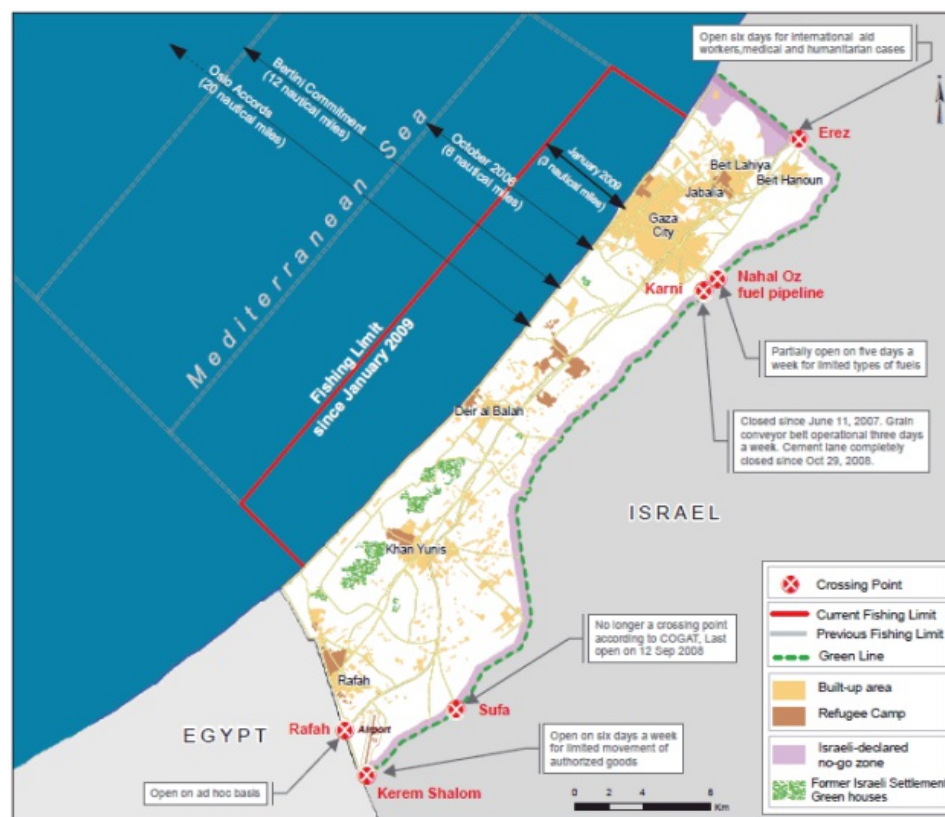


The agricultural sector, which is the source of livelihood to approximately 40,000 farmers, fishermen, herders, and farm laborers has also been affected by the blockade.¹² Essential materials such as certain pesticides, seedlings, livestock, fuel, and spare parts for irrigation systems have been largely restricted since the imposition of the blockade, impacting on the level of overall agricultural production.¹³ The ban on exports has resulted in saturation of the local market with previously exported items (strawberries, cherry tomatoes, green peppers and cut flowers) pushing their prices down and reducing the income of 5,000 farmers and 10,000 farm laborers.¹⁴ As a result of the saturation in the market of previously exported agricultural products some farmers have resorted to feeding their livestock with these products.¹⁵

"Cast Lead" destruction

The state of the private sector in Gaza has been further affected due to the widespread destruction and damage incurred during the "Cast Lead" offensive. A comprehensive survey performed by the Gaza Private Sector Council indicates that 268 establishments were totally destroyed and 432 sustained damage, resulting in a combined loss estimated at US \$139 million.¹⁶ Forty percent of the affected establishments (297) were industrial - small and medium size enterprises mainly in the manufactured food, textile, garment, furniture and plastic sectors, while the remaining 60 percent were commerce, contracting, and fuel establishments. Though much of the damage was sustained by establishments that had already shut down due to the blockade, the recent damage means that these businesses will be unable to recover quickly once conditions improve.¹⁷

The extent of damage caused to the construction sector is significant in relation to the current lack of reconstruction capacity in Gaza. Twenty out of 29 ready-mix concrete factories, as well as 39 other construction-related establishments, were damaged during the conflict, causing a loss of 70 percent of the sector's capacity and an estimated loss of USD \$27 million.¹⁸ In addition, the most recent Israeli military operation resulted in the widespread loss of productive agricultural assets with an estimated direct loss of USD 180 million and an indirect loss over a six month period of USD 88 million.¹⁹



Access restrictions to land and sea

Farmers and herders working in areas that are in close proximity to the Israeli border have faced extreme difficulties in continuing to farm their land as a result of restrictions imposed by the Israeli military when they try to access agricultural land in this region. Following Israel's "disengagement" from Gaza in August 2005, the IDF created a so-called "buffer zone" on a 150 meter-wide strip of land along the border, where Palestinian access is prohibited.²⁰ Warning shots are regularly fired towards Palestinian farmers working their land.²⁰ This "buffer zone" was officially expanded on 23 May 2009, when Israeli air force planes dropped thousands of pamphlets over different parts of the Gaza Strip warning the population to maintain a distance of at least 300 meters from the border with Israel. Reports from Gazan farmers indicate that access restrictions are occasionally imposed on agricultural areas as far as 1,000 meters from the border, on an ad hoc basis. As was previously the case, access prohibitions are enforced by IDF troops patrolling the border by means of opening "warning fire" in the direction of the people present in these areas. Since the imposition of the blockade, OCHA has recorded 33 Palestinian civilians, including 11 children, killed in border incidents and another 61 people, including 13 children who have been injured.

Devastated families and Livelihoods: The Case of the Abu Eida family

The Abu Eida family is an extended refugee family comprising 83 people, who prior to the last Israeli offensive lived in 11 houses in an industrial zone (Izbet Abu Eida), east of Gaza City, approximately one kilometer from the Israeli border. The family owned and operated two concrete factories, a citrus fruit packing factory, 28 commercial and private vehicles, two farms, numerous fruit trees and livestock. Following the onset of the Israeli ground offensive, heavy gunfire and intense military activity forced the family to leave the area without their belongings. When they returned, the family found that most of their property had been destroyed: ten of the 11 houses, as well as the two concrete factories, were almost totally destroyed; all the livestock had been killed; the citrus, date and olive trees had been uprooted; and the citrus packing factory was severely damaged. As a result of the extensive damage incurred during "Cast Lead" direct losses were estimated at several million dollars.

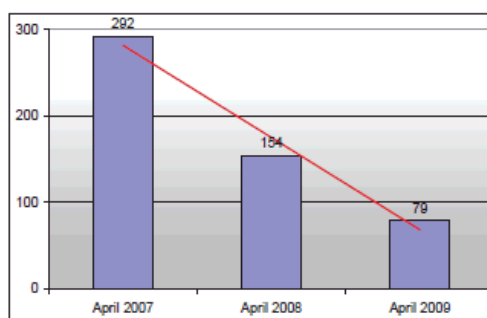
The family is now scattered in rented apartments throughout northern Gaza, fragmenting vital family and social support networks. According to Yousef Abu Eida, one of the Abu Eida family heads, the children have been particularly affected by the separation, with some suffering from depression and other related problems. While they continued to attend their normal schools following "Cast Lead", in the coming school year, they will be relocated to new schools in closer proximity to their current alternative accommodation, which is likely to cause them further stress. Like many people in Gaza, the family is having difficulty coming to terms with the grave losses they have suffered and feel a considerable sense of anxiety regarding prospects for the future.

The Abu Eida family hopes to reopen part of the family business in the near future. In order to do so, it has cleaned up parts of the damaged sites, sold some land, and taken loans from other businessmen in order to finance the resumption of business in the future. One production unit of the concrete-making factories,

which was less damaged, has been repaired and is now ready to operate, provided that the import of cement resumes in the near future.

Similar restrictions have affected the livelihoods of approximately 3,500 households reliant on fishing. Since the beginning of “Cast Lead”, the IDF has prohibited Palestinians from fishing beyond three nautical miles (nm) from the shore, undermining the volume of fishing catch, the bulk of which is located in deeper waters than 3 nm.²¹ This prohibition followed a previous reduction of the fishing zone in October 2006 from 12 to 6 nm.²² Many fishermen have been forced to adopt alternative strategies, such as fishing with smaller nets in the 3nm accessible zone to try to catch smaller fish (e.g. baby sardines); for others the current situation has become unsustainable causing them to cease fishing altogether.

Graph 2: Total fishing catch in tonnes



The total fishing catch in April 2009 amounted to 79mt, which represents one third of the amount of fish available in the market place in April 2007.²³ The reduced supply resulted in a sharp rise in the price of sardines, the most popular and affordable type of fish in the market; in May 2009, the price ranged between NIS 23-25/kg compared to NIS 10-12/kg the previous year.²⁴

Restrictions on the entry of cash into Gaza²⁵

The Palestinian Monetary Authority (PMA) estimates that the 43 banks branches in Gaza require approximately NIS 200 million a month to meet regular needs, while additional amounts are required by international agencies, such as UNWRA, to fund their operations. As part of the ongoing blockade, the Israeli authorities have not allowed regular shipments of cash from West Bank banks to their branches in Gaza, creating a deficit of shekel notes available. This has resulted in banks only allowing partial payments and limits on single day withdrawals of cash. This shortage of cash has had serious consequences on the Gaza economy.

The salaries of Palestinian Authority (PA) staff are paid electronically and the lack of available cash has restricted employees from withdrawing their salaries. The lack of shekels has led to a partial “dollarization” of the economy in Gaza; public hoarding of cash; and has caused a shift away from the formal banking system. According to The World Bank, this reduces banks’ profitability and threatens the confidence of the entire banking system. It also reduces the PMA’s efforts to combat money laundering, which largely benefits groups with access to cash from outside the banking system.

The tunnel economy

The tunnels situated under the border with Egypt, largely regulated by the Hamas authorities, have provided access to goods that would otherwise be unavailable. Almost all possible goods are reportedly transferred through them, including construction materials, livestock, fuel, cash, food products and weapons. While definitive statistics are unavailable, various sources have estimated that the number of tunnels in operation is between 400 and 600.²⁶ Thousands of people are employed in the transfer of goods through the tunnels, the construction and maintenance of tunnels, and other tunnel-related economic activity. Human rights groups have raised concern over the employment of children in the tunnels.²⁷

While the tunnels have provided some short-term relief to the blockade, increasing the availability of certain items in the Gazan market place, the tunnels do not constitute a long term sustainable alternative to the resumption of movement of goods through the official crossings with Israel. In addition, the tunnels pose high safety risks for those employed in this activity; since June 2007 at least 85 people have died in tunnel accidents, mainly following the collapse of tunnels and electrocution and another 144 people were injured.²⁸

Food Insecurity

Preliminary estimates indicate that in the aftermath of the Israeli offensive 75 percent of Gaza’s population, or more than 1.1 million people, were food insecure, up from 56 percent in the first quarter of 2008 and 53 percent in 2006.²⁹ Food insecurity exists when people lack sustainable physical or economic access to adequate safe, nutritious and socially acceptable food to maintain a healthy and productive life.³⁰

The erosion of livelihoods, particularly the destruction of agricultural land and assets during the conflict, is the primary cause for the sharp increase in food insecurity. The impact of these factors has been further compounded by the inflation in food prices, which have made some basic food products unaffordable by the poorest households; between May 2007 and May 2009, the Consumer Price Index for food in Gaza increased by 33 percent. This has been triggered by a global increase in food prices, and by the ongoing import restrictions imposed by the Israeli authorities. These restrictions created large gaps in the supply of certain products in the market, which have been only partially mitigated by the transfer of food products through the tunnel system.

Since the imposition of the blockade, food commodities have made up over 70 percent of the truckloads of imports entering Gaza. However, many food products have been restricted during that period, leading to sharp price fluctuations. Harsh restrictions on the import of livestock, for example, imposed by Israel since November 2008, led to a steep increase in the price of fresh meat, from 40 to 60 NIS/kg. Although limited numbers of cattle and small ruminants have been transferred through the tunnels, many of these animals have been diseased causing health risks, made worse by the inconsistent veterinary vaccinations

available in Gaza as a result of the blockade.³¹

During the past two years, some basic food items were totally unavailable due to the closure of the crossings. For example, during most of the two months that preceded “Cast Lead”, the Israeli authorities closed the conveyer belt at the Karni crossing, which is the only available mechanism for the import of wheat grain. This resulted in the complete depletion of wheat stocks and caused the temporary closure of all six mills in the Gaza Strip; in mid-December 2008, UNRWA was subsequently forced to halt its food distribution programme for the rest of the month. The lack of wheat flour, coupled with a severe shortage of cooking gas, also caused many bakeries to gradually shut down and created a shortage of bread that lasted from late December until the end of January 2009. People were forced to wait in lines for long hours at bakeries during this time and bread products were rationed as a result of the shortage of fuel and wheat.

An Israeli government decision adopted on the 22 March 2009, to allow the unrestricted entry of food products into Gaza, once the source was cleared by the Israeli authorities, remains unimplemented. As a result, some food items are still not allowed entry, including beverages, certain types of canned food, coffee, and certain brands of baby formula. By contrast, in recent months there has been an increase in the amounts of most staple foods entering through the crossings, alongside a parallel increase in the transfer of food products through the tunnels, increasing the overall availability of these items in the market.

Approximately 1.1 million people are currently receiving food aid from humanitarian organizations, primarily UNWRA and the WFP. Due to this ongoing food aid intervention, it is currently estimated that overall, the majority of people consume the recommended daily caloric allowance in their diets. However, a UN survey from 2008 indicated that reducing the quality and variety of the food consumed was one of the main coping mechanisms used by most of the population affected by unemployment and poverty; in this context, there has been a gradual shift in the diet of Gazans from high-cost and protein-rich foods such as vegetables and animal products, to low-cost and high-carbohydrate foods such as cereals, sugar and oil.³² This shift is a possible contributing factor behind the high number of overweight children (15.9 percent) aged 6-16 years old, as recorded in a recent survey, a phenomenon usually triggered by a poor and unbalanced diet.³³ In the future these changes in diet are likely to be reflected in increased rates of micro-nutrient deficiencies, with children and women of child-bearing age being the worstaffected.

Humanitarian Response:

Flash Appeal & Consolidated Appeal: The Gaza Flash Appeal was launched on 2 February 2009, as part of the emergency response to the needs identified in Gaza after the “Cast Lead” offensive. The Flash Appeal was subsequently incorporated into the 2009 Consolidated Appeal (CAP). As part of the Mid Year review of the CAP, all projects were reviewed and revised after subsequent in-depth needs assessments had been completed. By the end of April 2009, US \$254 million had been pledged for Gaza projects, representing 40 percent of specified needs for Gaza in the 2009 CAP. The ongoing blockade has prevented the implementation of a large number of projects.

The Humanitarian Response Fund (HRF) has approved, since the beginning of 2009, 26 projects in the Gaza Strip amounting to US \$4.2 million. The capacity of the HRF to meet critical needs was demonstrated in its quick response to the emergency situation in Gaza.

Pervasive insecurity and lack of civilian protection

During the past two years in Gaza there have been protracted cycles of violence and a continued disregard for the basic norms of international humanitarian and human rights law which provide for the protection of civilians and the respect of civil liberties. The denial of the right of the people living in Gaza to leave Gaza or to move freely within the West Bank as a result of the blockade, particularly when their lives, physical integrity, or basic freedoms are under threat, is another key component of the current human dignity crisis.

While most casualties during the past two years occurred in the context of the Israeli-Palestinian conflict, the inter-Palestinian factional conflict constitutes another continuous source of insecurity. Additionally, a recent UN survey highlighted an increase in the prevalence of domestic violence following the “Cast Lead” offensive which has added to the overall state of insecurity affecting the people of Gaza.³⁴

The Israeli -Palestinian conflict

Israeli-Palestinian violence has fluctuated in intensity over the past two years but has never completely ceased. During the period of the blockade there were two extreme escalations as a result of Israeli military operations: Operation “Hot Winter” (27 February - 4 March 2008) and Operation “Cast Lead” (27 December 2008 - 18 January 2009). There was also one period of relative calm (19 June - 4 November 2008) that occurred in the context of a ceasefire brokered by Egypt. Currently there are still some incidents of sporadic violence: overall however there has been a significant reduction in Israeli-Palestinian violence in Gaza and Southern Israel since the unilateral ceasefires declared by Israel and Hamas on 18 January following the end of “Cast Lead”.

Overall, in the two years that followed the imposition of the blockade (15 June 2007 - 15 June 2009), a total of 2,008 Palestinians were killed and approximately 6,700 people were injured. In the same period, a total of 25 Israelis were killed and 586 were injured inside Gaza and in towns in southern Israel.³⁵

The “Cast Lead” offensive, constituted one of the most violent episodes in the recent history of the occupied Palestinian territory.³⁶ The reported number of Palestinian fatalities during the offensive ranges from 1,116 (IDF spokesperson) to 1,455 (Palestinian Ministry of Health in Gaza). Based on the cross checking of multiple fatality lists, OCHA has verified the records of 1,383 Palestinian deaths (see page 12). Overall “Cast Lead” accounts for two thirds of the Palestinian fatalities and almost 80 percent of injuries since June 2007. The almost total closure of the borders, coupled with a lack of early warning systems or bomb-shelters, denied the civilian population any refuge during three weeks of almost uninterrupted aerial and sea bombardments, artillery shelling, and ground operations. The reported use by the Israeli military of white phosphorus munitions, heavy artillery and flechette shells in attacks carried out on densely populated areas, increased the level of risk faced by the civilian population.⁴⁰ Military operations also seriously impeded the ability of rescue teams to evacuate the wounded, resulting in numerous cases where wounded civilians had to wait several days in the streets or under the rubble of their houses.⁴¹

“Cast Lead” fatality figures: OCHA’s database

Since the beginning of 2005, OCHA oPt has maintained a Protection of Civilians Database, where all deaths and injuries occurring in the context of the Israeli-Palestinian conflict are systematically verified and recorded. As part of this ongoing project, based on the cross checking of multiple fatality lists, OCHA has identified the records of 1,383 Palestinians whose death was confirmed by at least two independent sources.³⁷ These fatalities include 333 children under the age of 18 (including 236 boys and 97 girls), 1,029 adults (including 919 men and 110 women) and 21 persons whose age could not be confirmed.³⁸ According to Israeli official sources, 13 Israelis, including three civilians, were killed during the hostilities, and 512, including 182 civilians, were injured.³⁹

A significant proportion of the Palestinians killed during the offensive were civilians who did not take part in the hostilities. However, the precise figure remains disputed. The list of casualties published by the two leading Palestinian human rights organizations in Gaza indicate that civilians constituted between 73 and 83 percent of all fatalities.⁴² The IDPF spokesperson, however, has reported that its information shows that the number of civilians ranged between 25 and 39 percent of all Palestinian deaths.⁴³

The lives of approximately one million Israelis living within a range of 40 km from the border of Gaza were disrupted and threatened as a result of the continuous firing of rockets and mortars by Palestinian armed groups.

In addition to deaths and injuries caused directly by the recent Israeli military operation, the population of Gaza is also at risk due to a number of conflict-related factors, including the presence of unexploded ordnance (UXO) and other hazardous materials. UXO remaining after the “Cast Lead” offensive has posed a high risk to the entire population but particularly to children, who are more prone to come in contact with UXO when playing outside or due to lack of risk awareness. According to UNICEF since the “Cast Lead” ceasefires began on 18 January 2009, there have been a total of twelve people killed (average age 17.5 years) from UXO, with 50 percent (six) of these fatalities being children. Twenty three people have been injured four of whom were children.⁴⁴ There has been a continued and concerted effort by UN agencies and international NGO’s to clear areas of UXO hazardous material, including training workshops delivered by UN Mine Action teams on safety. In addition, the large amounts of rubble as a result of “Cast Lead” could potentially contain asbestos or other hazardous chemical substances, such as persistent and/or bioaccumulating carcinogenic substances, constituting additional environmental and health risks.⁴⁵

Inter-factional conflict

Intra-Palestinian violence is another continuous source of insecurity, heightening the overall vulnerability of the civilian population in Gaza.⁴⁶ In the month that preceded the Hamas take over of Gaza’s security apparatus (15 May -15 June 2007), approximately 190 Palestinians were killed and 850 were injured as a result of inter-factional violence and related family feuds; 170 others were killed and 1,130 were injured in the context of the intra-Palestinian violence in the following two year period (15 June 2007 – 15 June 2009).

While the frequency of armed clashes between Hamas forces and various opposition factions sharply decreased after the June 2007 take-over, Hamas has reportedly continued exercising violence to suppress potential challenges to its rule in Gaza. In this context, there have been consistent allegations made by human rights organizations denouncing Hamas’s arbitrary arrest, ill treatment and extra judiciary execution of people allegedly affiliated with opposition factions.⁴⁷ The Palestinian Centre for Human Rights (PCHR) in Gaza, for example, reported that during the last Israeli military offensive it documented the execution of 32 Palestinians accused of collaborating with Israel, 17 of whom were prisoners and detainees who fled the Gaza Central Prison after it was bombarded by the Israeli Air Force on 28 December 2008.⁴⁸

In July 2008, following a bombing attributed to a faction affiliated with Fatah, which resulted in the death of one child and five Hamas members, Hamas forces raided and closed 210 community based organizations (CBO’s), allegedly connected to Fatah, confiscated equipment and arrested dozens of employees. In the course of the following months the majority of these organizations were gradually allowed to reopen; however the closures of these organizations are estimated to have affected approximately 50,000 beneficiaries participating in various programmes, including psychosocial, special needs, children’s summer games and women’s health. Furthermore, the CBO sector has faced increased levels of restriction and monitoring by the Hamas authorities, which has caused concern about the overall ability of CBO’s in Gaza to continue providing independent and impartial community services in Gaza.⁴⁹

Family Violence

In a recent UN survey conducted after “Cast Lead” most respondents reported an increase in the prevalence of domestic violence against women, as compared to before the war, with displaced women viewed as being at heightened risk of gender based violence. Fifty one (51) percent of men, 52 percent of women and 57 percent of female-headed households surveyed also perceived violence against children to have increased after the “Cast Lead” operation.⁵⁰ The survey indicated that violence against men is more likely to be treated as a public crime, while violence against women is most likely to be treated as a private family problem. Furthermore, concern was expressed in the survey that there is a critical lack of legal and public mechanisms available to male and female victims of social and political violence in Gaza and an overall distrust of the legal and public avenues that do exist.

Possible factors behind the increase in domestic violence include not only the unprecedented levels of trauma and stress that emerged after “Cast Lead”, but also due to the growing number of male heads of households who lost their jobs as a result of the blockade. In some instances, women who would not have traditionally gone to work have been forced to seek employment as a survival strategy, in order to ensure the household’s security, placing added tension in family relationships.

Reconstruction of homes prevented; thousands of families still displaced

The prohibition on the import of construction materials, including cement, gravel, wood, pipes, glass and steel bars is one of the central components of the blockade regime. Except for a short interval during the ceasefire brokered by Egypt (July-October 2008), almost no construction materials were allowed into Gaza through the official crossings, compared to an average of 7,400 truckloads imported every month between January and May 2007.⁵¹ According to the Israeli authorities, these restrictions are implemented against “dual use” items, in order to prevent Hamas from using such material for military purposes.

The most visible and urgent unmet need in Gaza is the repair and reconstruction of homes damaged during the last Israeli military offensive. A joint UNRWA and UNDP housing survey showed that 3,540 homes were totally demolished and a further 2,870 homes sustained major damage. In addition to the 6,400 destroyed or severely damaged homes, there are 52,900 homes that sustained minor damages during the hostilities. As of mid July 2009, approximately 20,000 people previously living in destroyed homes were still displaced, and were either renting apartments or living with relatives; an estimated 100 families were living in tents next to their damaged homes, some of whom continue using those parts of their homes that were less affected. Approximately 40 families are still residing in one of the tent camps that have been erected in northern Gaza.

The lives of displaced families have been severely disrupted. Particularly those living in tents, either in camps or next to their destroyed homes are deprived of the most basic facilities which were available prior to their displacement. Anecdotal evidence suggests that children are among the worst affected by displacement,

including many who were relocated to alternative schools closer to their place of alternative accommodation.

Shelter needs are not limited to the reconstruction of homes destroyed or damaged during the “Cast Lead” offensive, and also includes approximately 2,700 housing units that were damaged in previous Israeli military operations; 1,800 housing units that by June 2007 were under construction by UNRWA and UNDP and could not be completed; and 3,000 new housing units needed to replace substandard and unsanitary homes in refugee camps. As a result, the current number of housing units needing repair or replacement is 13,900, excluding the repair of homes that sustained minor damages.

A Family Displaced Waiting to Rebuild

A year ago, Manal Shubair, 35, lived in a large house with many rooms and modern conveniences, such as a refrigerator, washing machine and running water. Today, this refugee and mother of two – a son aged nine and a 10-month-old daughter – live in a small tent, with no running water and only a few blankets, two mattresses, and some basic cooking utensils.

During the “Cast Lead” offensive, Mrs. Shubair, the third wife of a now unemployed blacksmith, left her home north of Gaza City after leaflets were dropped by the Israeli military warning people to leave the area. The family took no possessions from their home except white flags that they waved as they walked to an UNWRA school in Beach Camp to seek refuge. At the time, the family expected to return home shortly.

Once at the school, Mrs Shubair had to use flip chart paper that she found in a classroom as makeshift blankets to cover her children: “I had nothing for my daughter, who was five months at the time, and I could not keep her warm”. The following day, food and blankets were distributed. As increasing numbers of people sought refuge at the UNWRA school, Mrs Shubair heard stories of widespread damage to houses in her community, and she gradually gave up hope of returning to a house that was still standing: “We are grateful to UNWRA for providing us with food and water, but the conditions were very cramped and it was not home. We just yearned for home.”

As soon as military forces had left the area, the family returned to their home to find that it had been flattened to the ground by rubble from a neighboring apartment building that had been directly hit by an Israeli military strike. Mrs Shubair husband’s blacksmith business and assets were also completely destroyed. As a result, Mrs Shubair took her children to stay at her sister’s house. She registered with the local authorities and, two weeks after the ceasefire agreement, was told that she had been allocated a tent in the new tent camp in Al Attatra, several kilometers from her home.

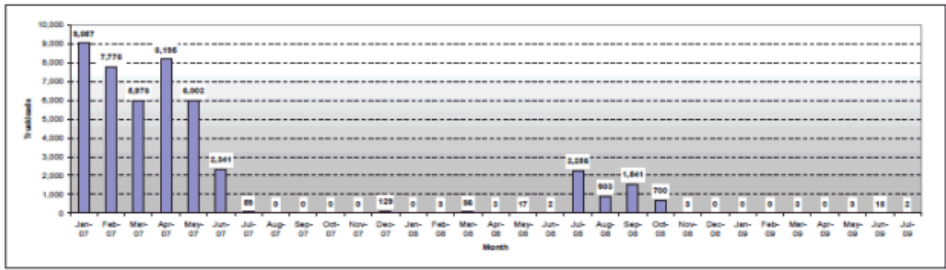
The Shubair family has received financial assistance from UNWRA and the local authorities, and continue to reside in the tent camp, in very difficult conditions: “The first tent leaked and it was very cold, it was later replaced with a better tent, but it gets very hot and is full of flies.” The camp has temporary, pre-fabricated bathrooms, one for women and one for men, and water supply is sporadic. Mrs Shubair buys water for her children to drink. Three times a week a PRCS team visits the camp. Two times a week an NGO delivers hot meals of rice and lentils. On the other five days the family has to make do with cold food, mainly bread and canned food, which was delivered by humanitarian agencies in the months after “Cast Lead”.

Until the recent summer holiday, Mrs Shubair’s nine-year-old son continued attending the same school, but the distance proved a challenge as he had to walk a long distance to reach school each day. Mrs Shubair’s son has been affected in a range of other ways. According to Mrs Shubair, her son suffers from bedwetting and exhibits other psychological problems. His school work has suffered, his grades are lower and he is disconnected from his friends.

Mrs Shubair no longer sees her friends and neighbors. Her social network and support system has broken down and she believes that she no longer has an existence. “My day starts with me hoping it will finish. I am worried and I don’t know what the future will bring.”

Mrs Shubair and her family are on the UNRWA shelter caseload list to have their house rebuilt. However, due to the ongoing blockade of construction materials, there has been no reconstruction to date.

Graph3: Number of imported truckloads with construction material



Limited amounts of construction materials are reportedly being transferred through the tunnels and are available in the Gazan market. However, the immense gap between current supply and actual need for building resources has increased prices, making available materials unaffordable for most of the population. The current price of one tonne of cement (3,400 NIS) is nearly ten times higher than the price in June 2007 (350 NIS), before the imposition of the blockade. The shortage of construction materials has been exacerbated since the “Cast Lead” offensive as a result of the damage incurred by construction sector businesses, causing a 70 percent loss in the sector’s capacity. As previously noted, 20 out of 29 ready mix concrete factories were damaged in the course of the hostilities.⁵² As a result of the ongoing shortage of construction materials, several pilot schemes were recently launched using rudimentary materials, primarily mud brick building initiatives.

Humanitarian agencies have been assisting displaced people through the provision of “nonfood items”, including more than 300,000 blankets, 2,500 tents, 55,000 mattresses, 30,000 clothing kits, and 30,000 kitchen sets.⁵³ In addition, families whose shelters were destroyed or have suffered damages, including minor damages, are entitled to cash assistance by UNRWA (for refugees) and UNDP (for non-refugees), with the latter acting on behalf of the Palestinian Authority. This assistance is aimed not only at the rehabilitation or reconstruction of homes, but also to help families cover the costs of alternative accommodation. To date, USD

20 million of an estimated USD 30 million allocated for cash assistance to those who lost or sustained severe damage to their homes has been disbursed.

A further USD 20 million of the estimated USD 50 million allocated for the repair of minor damage to homes has been disbursed. USD 30 million dollars are outstanding due to lack of liquidity in the banks in Gaza.⁵⁴

Despite these difficult circumstances, a number of organizations, including UN agencies, are actively seeking ways to initiate reconstruction. The UN Special Coordinator for the oPt has presented to the Israeli Defense Minister a proposal to kick-start early recovery in Gaza by opening the crossings for materials to complete UN construction work on housing, health and education facilities suspended since June 2007. Intensive consultations with the Israeli government have taken place and the UN awaits Israel's response to the proposal.

A protracted energy crisis

In November 2007, following the declaration of the Gaza Strip as a 'hostile entity', the government of Israel decided to reduce the amount of all types of fuel allowed into Gaza, including benzene, diesel, cooking gas, and industrial fuel. This reduction created a protracted energy crisis, with negative implications on the provision of key services, as well as on the ability of Gazans to run their households.

The main component of this energy crisis is the electricity deficit created by the reduction in the production levels of Gaza's sole power plant. Production levels have been previously reduced in a drastic manner, following the destruction of six electric transformers by the Israeli air force in June 2006, immediately after the capture of Israeli soldier Gilad Shalit.

The electricity demand in the Gaza Strip fluctuates between 230 and 250MW (megawatt), depending mainly on the weather conditions. Approximately half of this demand, 122MW, is met through the purchase of electricity from Israel and another 17MW are supplied by Egypt to the Rafah area. Gaza's sole power plant can potentially produce, at full capacity, approximately 80MW. However, due to the cut in the amounts of industrial fuel imported from Israel, compounded by the recurrent lack of materials and spare parts, the plant is currently able to produce only 55-60 MW, or approximately three quarters of its capacity, creating an electricity deficit of 15-20 percent.⁵⁵ In the past two years the power plant has been forced to shut down completely for several days at a time due to lack of fuel, which has resulted in power cuts across the Gaza Strip lasting up to sixteen hours a day during these times.

In addition, currently 10 percent of the population has no electricity supply because of the lack of available building resources to maintain and repair the system. There are 150 electricity-related materials (e.g. high voltage cables, transformers, wires and switches) at zero stock level and approximately 400 others in short supply as a result of the blockade.

Most of the remaining 90 percent of the population experience scheduled electricity cuts of 4 to 8 hours a day.⁵⁶ The Rafah area, which receives electricity directly from Egypt, experiences power cuts of 4 hours a day two times a week. With the extreme summer heat, these electricity cuts are directly affecting refrigerated foods and air conditioning supply in individual households, as well as on the provision of essential services like water and sanitation, health care, medicine storage and waste disposal. As a result, public institutions are forced to rely extensively on backup generators and other alternative devices, which are extremely vulnerable due to the inconsistent supply of spare parts (see Health Section).

Since the beginning of November 2008 and until recently Israel suspended the import of benzene and diesel except for small quantities supplied to humanitarian agencies and hospitals, and reduced the quantities of cooking gas allowed entry. However according to the Gas Stations Owners Association (GSOA), in parallel to the tightening of the restrictions, there has been an increase in the transfer of such fuels through the tunnels, making them available on the open market in Gaza at relatively low prices. Since late July 2009, the Israeli authorities have authorized the import of limited quantities of benzene and diesel for commercial use, however given the lower prices of the Egyptian fuel entering through the tunnels' system, the scope of the current demand for the Israeli fuel remains unclear.

Framework for the Provision of Minimum Humanitarian Assistance

Following the end of hostilities in Gaza, the Humanitarian Country Team developed a Framework for the Provision of Minimum Humanitarian Assistance in Gaza. Recognizing the challenges presented from an operational perspective, the Framework describes how the basic humanitarian principles must be operated in order to facilitate an adequate and principled humanitarian response, including the swift implementation of the projects included in the Consolidated Appeal. The Framework also provides a tool to strengthen humanitarian programming internally. Specifically, it supports internal monitoring and evaluation to ensure the distribution of aid according to need and addresses concerns related to the possible diversion and misuse of assistance. Based on this Framework, regular reporting will commence in August 2009.

A challenged health system

The blockade, the internal Palestinian division, and the "Cast Lead" offensive, have all undermined the ability of the health system in Gaza to function properly, resulting in an overall decline in the quality of health services provided to the population.

Pervasive shortages: facilities, electricity, drugs and equipment

As in other sectors, the shortage of building materials has prevented the expansion of health facilities required to meet the needs of a growing population. The completion of the new surgical wing of Gaza's largest hospital (Shifa) for example, has been frozen as a result of the continued shortages of construction materials.

The impact of the shortage of space and facilities has been further compounded by the recurrent power cuts triggered by the ongoing reduction in the supply of industrial fuel to the Gaza power plant. These cuts have forced hospitals and clinics to rely extensively on the use of back-up generators, which are not designed to function for prolonged periods of time and are often damaged as a result, with replacement parts needed to repair them frequently unavailable. During the peaks of the electricity crisis and the most prolonged power cuts, many hospitals have suspended or postponed elective surgery to reduce the risk to patients.

Given the limited reliability of generators, hospitals also use UPS (Uninterruptible Power Supply) devices to minimize the damage of power cuts and fluctuations in power to sensitive medical equipment. However, the effectiveness of this solution has been undermined due to the restrictions and delays by the Israeli authorities in regard to the import of the batteries needed to operate these devices. There are currently hundreds of UPS units out of use because of dead batteries.⁵⁷

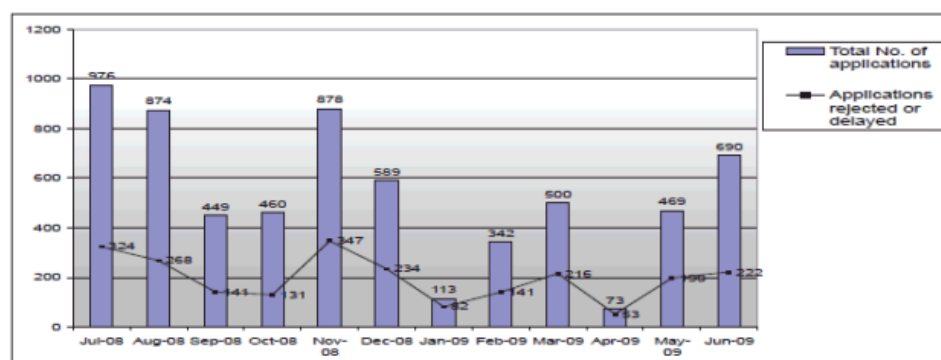
Repeated denials and prolonged delays of the needed import clearance at the crossings have significantly reduced the availability of image diagnostic devices, including x-ray equipment. Similar to the UPS batteries, these devices are considered by the Israeli authorities as “dual-use” items, which may serve military purposes, and therefore remain severely restricted.⁵⁸

The optimum functioning of medical equipment has been undermined also by the restrictions and delays at the crossings. Export restrictions have impeded the regular recalibration of key medical machines and instruments, which should be performed by the manufacturer or by specialized companies, some on a strict six month basis to maintain their efficiency and safety. The Gaza branch of the St. John Ophthalmological Hospital, for example, has had a retinal laser unit for eye surgery out of order for more than two months, as it is awaiting export to Germany for recalibration.⁵⁹ The inability of maintenance staff to leave Gaza to gain the training necessary to maintain medical equipment, the restrictions on the entry to Gaza of medical technicians to undertake vital equipment maintenance, and the extreme lack of spare parts, have directly prevented the repair of vital equipment with negative health implications for patients.

The provision of adequate medical services has also been challenged by recurrent shortages of pharmaceuticals and consumables. While the clearance procedures at the crossings have occasionally caused delays in their supply, these shortages occur mainly due to poor management and distribution of available supplies, unreliability of estimated needs, inefficiencies in the procurement process and funding shortfalls. The large influx of drug donations during the “Cast Lead” offensive has had only a moderate impact in the current stock levels, mainly due to a lack of coordination which resulted in the delivery of massive amounts of nonessential items, much of them with short expiry dates. As a result these items have not been able to be utilized and have caused a significant problem relating to storage and disposal of unused drugs and medical equipment and has resulted in increased storage costs and disposal costs. As of July 2009, there were 77 essential drugs (or 15 percent of the essential drug list) and 140 disposable items (or 20 percent of the essential list) out of stock.

Patients and staff prevented from leaving Gaza

Graph 4: Patient's applications for permits to leave Gaza through Israel



The lack of adequate investment that has affected the health system in Gaza for decades, compounded by the ongoing blockade, has created significant gaps in the provision of medical services.⁶⁰ These gaps have created the need to refer patients to hospitals outside Gaza, mainly in the West Bank (including East Jerusalem), Jordan, and Egypt for specialized medical treatment. The process that patients are required to undertake in order to obtain the necessary documents to leave Gaza is time consuming, arduous and uncertain, thus adding significant anguish and stress to people already vulnerable due to illness.

The first step in this process is the approval of the patient's application by the Palestinian Referral Abroad Department (RAD), which ensures that the required treatment will be funded by the PA's Ministry of Health. While this step currently takes up to one week, in March 2009 the approval of new applications were halted for more than a month, following the take over of the RAD by the Hamas authorities.⁶¹ According to the Palestinian Centre for Human Rights (PCHR), ten patients died during this period while waiting for the approval of their applications.⁶²

Once the RAD approves an application, patients referred to the West Bank, Jordan, or Israel must make an appointment with the relevant hospital, and then apply for a permit from the Israeli authorities that allows them to leave Gaza through the Erez Crossing. Between January 2008 and June 2009, 40 percent of the applications for permits submitted to the Israeli authorities were either rejected (three percent) or delayed (37 percent), compared to 10 percent of the applications rejected or delayed during 2006.⁶³ Having the application delayed means that no reply was received by the patient from the Israeli authorities by the day of the planned travel, resulting in a loss of the pre arranged appointment at the relevant hospital. When this occurs, the patient must seek a new appointment and subsequently submit an entirely new application for another permit, thus significantly prolonging the waiting period before the patient can receive the necessary medical treatment.

Patients referred to Egyptian hospitals must register with the Hamas authorities Ministry of Interior, who submits a request for a permit from the Egyptian authorities. While virtually all of these requests are approved, the sporadic and unpredictable openings of the Rafah Crossing, usually no more than three days a month, generate prolonged and uncertain waiting periods.

In addition, the ongoing discord and lack of coordination between the Palestinian Authority (PA) in Ramallah and the Hamas authorities in Gaza has prevented patients from leaving Gaza for medical treatment, or delayed their travel, due to the limited number of passports issued by the PA to Gaza residents. The Ministry of Interior in Gaza estimates that there are currently hundreds patients prevented from traveling due to the lack of a passport.

The almost total ban on the movement of “nonhumanitarian” cases through the Erez crossing and the erratic and unpredictable opening of the Rafah crossing have prevented medical staff from upgrading their knowledge and skills through their participation in vocational training outside Gaza. The impact of such a “learning freeze” in a dynamic and constantly evolving discipline such as medicine cannot be underestimated.

Dealing with the “Cast Lead” legacy

During the 22-day-long Israeli offensive, medical teams in Gaza demonstrated outstanding courage and professional ability, working around the clock in very dangerous conditions managing mass casualties, particularly in the first three days of “Cast Lead” when hundreds of people presented to hospitals for treatment. The scope of the injuries, and the widespread trauma and destruction caused during the offensive created an extreme challenge to Gaza’s entire health system.

According to the Palestinian Ministry of Health in Gaza, 5,303 people were injured, including over 1,815 children, 785 women and 2,703 men, many sustaining multiple and complex injuries. In addition, it is estimated that 40 percent of patients with chronic illnesses did not receive essential in medical treatment during the military offensive as priority was given to those with life-threatening injuries. This has negative long-term health ramifications for those chronically ill patients who had their treatment interrupted. The provision of follow-up treatment to those suffering from complex injuries and permanent disabilities has added an enormous burden to an already weakened health system, thus widening the health gaps in Gaza.⁶⁴

Of equal concern is the mental health impact of the widespread trauma, human loss and high levels of violence witnessed by the population in Gaza during the military operation. The lack of any safe haven against the almost continual bombardment, coupled with the continued sealing of the borders during the conflict placed the civilian population in an extremely vulnerable position. People lost even the most basic sense of security, which is one of the foundations of overall psychosocial wellbeing. WHO has estimated that between 20,000 and 50,000 people will continue to suffer longterm mental health issues as a result of the “Cast Lead” offensive.⁶⁵ According to a household survey carried out in March 2009, approximately one percent of the population suffered from severe acute psychological distress as a result of the war; 13 percent from sleeping problems; 34 percent reported frequent loss of appetite and difficulties concentrating; 9 percent of adults said that they were totally unable to carry out normal activities such as getting dressed, washing, household chores, going to work; and 23 percent of children aged 5-14 had a bed-wetting problem.⁶⁶

The limited availability of building resources, spare parts, and fuel has prevented the adequate operation and maintenance of the water and sanitation infrastructure in Gaza, creating a significant public health and environmental hazard. While some supplies, including plastic pipes, plumbing spare parts, and power generators have been sporadically allowed entry enabling the performance of certain urgent works, these imports remain insignificant when compared to the current existing needs of infrastructure repair in Gaza.⁷³ Following the recent completion of some rehabilitation projects, the number of people not connected to the water network has decreased to 10,000 people, residing in Northern Gaza and the Az Zaitoun area, southeast of Gaza city.

The Effects of “Cast Lead” on Women

The widespread loss of life, the destruction of homes, and the lack of available protective mechanisms during the conflict have had an extremely negative effect on Gazan women, particularly among the displaced and those disabled due to injuries sustained. The inability of women to carry out their normal caretaking roles significantly contributed to their psychological suffering. A UN survey reported that during the conflict women feared disability and dependency more than their own death.⁶⁷ According to UNFPA,⁶⁸ pregnant women were particularly affected: during the offensive there was a 31 percent⁶⁹ increase in the number of miscarriages; an increase in neonatal death by 50 percent;⁷⁰ an increase in the number of premature births⁷¹ and obstetric complications, which necessitated an increased number of Caesarean sections⁷² undertaken in the surveyed hospitals during the conflict. Women, who gave birth during the conflict, were usually discharged 30 minutes after delivery as a result of the need to free beds for the critically injured, increasing risk and trauma to mothers and the newborn due, in part, to the precarious levels of risk faced during the conflict. Many women did not attend their first post-natal checkup as a result.

Water and sanitation infrastructure: a health and environmental hazard

The decline of the system is reflected at multiple levels, including the current inability of Gaza’s wastewater utility to properly treat the volume of sewage produced. Consequently, every day approximately 80 million liters of untreated and partially-treated wastewater are being discharged into the environment. In the Middle Area, for example, about 10 million liters of raw, undiluted, sewage flows every day into the Gaza Stream (Wadi) and into the Mediterranean Sea. Even though the damage incurred to the core infrastructure (e.g. water wells, pumping stations and treatment plants) during the last Israeli offensive was relatively limited, the widespread destruction of buildings previously connected to the wastewater network has led to the release of additional quantities of untreated sewage into the environment.

The Gaza wastewater treatment plant, which currently treats 50 million liters of sewage a day was originally designed to treat only 32 million liters per day. As a result, the wastewater discharged into the sea contains twice the safe standard amount of biological pollution and suspended solids.⁷⁴ An existing project aimed at upgrading the plant’s capacity to 70 million liters a day is still in an early planning stage as a result of being delayed for an extended period of time due to the blockade and the ongoing internal Palestinian conflict.

The emerging public health concerns due to the inability of the current system to properly treat the current volume of sewage produced in Gaza are significant. Microbiologically contaminated seawater found along the Gaza Strip coast poses a serious health hazard not only to people using beaches for recreation, but also to the entire population, through potentially contaminated sea food.

Of equal concern are the potential health impact of the sewage infiltration into the coastal aquifer and the resulting contamination of the aquifer, the sole fresh water resource in Gaza. The aquifer has undergone a gradual process of salinization and pollution over the past decades, exacerbated by the ongoing sewage infiltration.⁷⁵ Currently, only 5-10 percent of the extracted water is considered drinkable when compared to WHO safety standards.⁷⁶

In Khan Younis governorate, one of the worst affected areas, the average levels of nitrates detected during 2008 in the water wells was more than three times (169 mg/L) the safe WHO level (50 mg/L). Consumption of water with high concentration of nitrates compromises the transmission of oxygen in the blood and could cause an increase of the potentially lethal “blue-baby syndrome” among infants in the Gaza Strip.⁷⁷ The deterioration of the sanitation services is likely to have also contributed to a recent increase in the prevalence of watery diarrheal disease (WDD) among children aged 9-12 months as reported by UNRWA in March 2009. For example in comparison to 2008 figures there was a major increase of (WDD) in Khan Younis by 88 percent and in north Gaza by 77 percent.

Education undermined

The restrictions on the movement of goods and people across Gaza's borders have constrained the functioning of the education system in Gaza, negatively impacting the quality of the education provided to Gaza's students.

The lack of building materials needed to expand existing educational facilities has resulted in an overcrowding of schools and kindergartens. The problem has been compounded following the damage incurred to the existing education facilities during "Cast Lead". According to a rapid assessment of the Education Sector, at least 280 schools and kindergartens were damaged, including 18 facilities totally destroyed (eight governmental schools, two private schools and eight kindergartens). By the end of the last academic year, some 88 percent of UNRWA schools and 82 percent of governmental schools were operating on a shift system to accommodate the growing number of students. Approximately 1,200 secondary students in governmental schools in north Gaza, which was the worst affected area during the "Cast Lead" offensive, are currently at risk of not having a local school to attend due to a lack of alternative premises for the schools to operate from.

In addition the recurrent electricity power cuts, created by the restrictions on the import of industrial fuel, have disrupted the functioning of schools in most areas of education provision. In the course of the past two years, some of the most basic educational items including paper, text books, computers, and educational kits have been systematically denied entry or delayed for prolonged periods by the Israeli authorities. In the past two months, however, there has been a significant and positive improvement in the clearance of educational items allowed entry into Gaza, with the majority of items previously on hold currently being allowed in.

The combined impact of the different shortages (space, materials, electricity) is reflected in the decline in school attendance and performance. In the first semester of the 2007-2008 school year, for example, only 20 percent of 16,000 sixth graders in Gaza passed standardized exams in maths, science, English and Arabic.⁷⁸

Access to higher education was also drastically curtailed due to the blockade.⁷⁹ The tertiary education system available in Gaza includes five universities, which offer a limited selection of undergraduate disciplines and an even more limited choice of post-graduate programmes. In January 2008, Israel announced that it would not allow any student to exit the Gaza Strip to pursue tertiary education.

Following a public outcry when seven Fulbright scholarship recipients from Gaza were not granted permission to leave so as to attend their studies in the United States, the Israeli authorities decided to allow a limited number of students to travel abroad subject to strict criteria: the student must have a scholarship with a 'recognized' university (although no such list has been produced by the Israeli authorities) and a diplomat from the country that awarded the scholarship must accompany the student from the Erez Crossing, across Israel and the West Bank, until the student reaches the border crossing between Israel and Jordan.

Between July and September 2008, prior to the beginning of the last academic year, only 70 students were permitted to leave the Gaza Strip through Israel. Hundreds of other students who were not awarded scholarships, or who could not secure diplomatic escort (including those bound for countries that do not have a diplomatic presence in Israel) were denied exit. While some students managed to leave Gaza through the Rafah Crossing, the number of such cases has been limited by the rare and sporadic openings of this crossing.

CONCLUSION

For more than two years the blockade of the Gaza Strip has caused a protracted human dignity crisis that is reflected in almost every aspect of daily life: over 140,000 people, willing and able to work, are currently unemployed with over a million living in poverty and reliant on food aid; most of the 6,420 families whose homes were destroyed or severely damaged during the last military offensive are still displaced due to the ongoing ban on the entry of construction materials; in the extreme summer heat in Gaza, almost no one has continuous electricity supply to operate refrigerators or air conditioning, and some people still have no access electricity at all; patients requiring specialized medical treatment unavailable in Gaza must overcome a long and arduous permit processing system, resulting in unnecessary anguish and stress. These are but a few examples of the daily challenges that deprive 1.5 million people in Gaza of a normal, dignified life as a result of the blockade.

The distress experienced by the population has grown as the months have passed since the blockade began in 2007. Many people report a growing sense of being trapped; physically, intellectually and emotionally. Levels of anguish and concern regarding day-to-day survival and prospects for the future have increased as the coping mechanisms available to people in Gaza have gradually been exhausted.

The continuation of the blockade on Gaza has been linked to various political factors and it is currently unclear what conditions may lead to a lifting of the blockade. The UN's most senior humanitarian official, John Holmes, has stressed that "protection, food, water, healthcare, and shelter are basic human needs, not bargaining chips. This fact must be recognized by all parties responsible for the immense suffering in Gaza".⁸⁰

This blockade is collectively punishing the entire Gazan population. The UN, the ICRC, many states and humanitarian organizations, have repeatedly urged the Government of Israel to remove the restrictions on Gaza's borders as well as to allow free access to agricultural areas within Gaza and to fishing areas in Gaza's territorial waters. These are the urgent first steps needed to start the reconstruction of homes and infrastructure, the revival of the economy, and the restoration of human dignity in Gaza.

End notes

1. The blockade marked the peak of a gradual process of isolation of the Gaza Strip that started in the early 1990s with the imposition of a general closure which forced Gazans to obtain special permits to travel to the West Bank; in 1995, Israel built a perimeter fence encircling the Gaza Strip and separating it from Israel; for most of the time since the beginning of the second Intifada in September 2000, permits to enter or leave Gaza were limited mainly to "humanitarian cases"; following the victory of Hamas in the January 2006 elections, the international community impose an embargo on the Palestinian Authority and suspended development projects in the West Bank and Gaza Strip.
2. John Holmes, *Briefing to the UN Security Council on the situation in the Middle East, including the Palestinian question*, 27 January 2009.
3. See for example, Quartet Statement, Trieste, 26 June 2009, paragraph. 6; ICRC, *Gaza - 1.5 million people trapped in despair*, June 2009; Joint statement on 2nd anniversary of the Gaza blockade issued by 38 humanitarian organizations, including three UN agencies, 17 June 2009.
4. Food insecurity exists when people lack sustainable physical or economic access to enough safe, nutritious, and socially acceptable food for a healthy and productive life.
5. Palestinian Central Bureau of Statistics (PCBS), *Labor Survey Results*, relaxed definition. The ILO definition of unemployment includes persons (15 years old and above) who do not work and are actively seeking a job. PCBS's "relaxed definition" adds to the ILO definition people willing to work but currently not engaged in active job search (known as 'the discouraged').
6. Ibid, ILO unemployment definition.
7. Palestine Trade Center, *Gaza Strip Two Years through Siege*, Special Report, 7 July 2009.
8. ICRC, *Gaza - 1.5 million people trapped in despair*, June 2009.
9. OCHA, Crossings Database.
10. Palestine Trade Center, see footnote 7.
11. PalTrade, Ibid.
12. FAO/WFP, *Report of the Rapid Qualitative*
42. See The Palestinian Center for Human Rights, *War Crimes Against Children*, Press Release, 14 May 2009; and Al Mezan Centre for Human Rights, *The Attack (Cast Lead) in Numbers*, Press Release, 15 June 2009.
43. IDF Spokesperson, Majority of Palestinians Killed in Operation Cast Lead: Terror Operatives, 26 March 2009. According to this source, 25 percent of all deaths were identified as civilians and another 14 percent were men whose names have not yet been attributed to any organization.
44. Data provided by UNICEF. August 2009.
45. United Nations. *Consolidated Appeal Process, occupied Palestinian territory*; Gaza Flash Appeal. 2009.
46. Human Rights Watch: *Rockets from Gaza. Harm to civilians from Palestinian Armed Groups*, August 2009.
47. There have been similar allegations made regarding Fatah affiliated members, as well as PA security forces, involved in the arbitrary arrest and ill treatment of Hamas affiliated members in the West Bank. See for example, Al-Haq, *Torturing Each Other: The Widespread Practices of Arbitrary Detention and Torture in the Palestinian Territory*, July 2008; Human Rights Watch, *Internal Fight: Palestinian Abuses in Gaza and the West Bank*, July 2008.
48. PCHR, *Inter-Palestinian Human Rights Violations in the Gaza Strip*, 3 21. February, 2009. See, http://www.pchrgaza.org/files/Reports/English/pdf_spec/Increase_rep.pdf.
49. In parallel, the PA engaged in the closure of dozens of CBO's allegedly affiliated with Hamas. See, The Humanitarian Monitor, August 2008, available at: www.ochaopt.org
50. UNIFEM *Voicing the Needs of Women and Men in Gaza. Beyond the Aftermath of the 23 day Israeli Military Operations*. 2009.
51. Between July and October 2008, some 2,400 truckloads of construction materials were allowed into Gaza.
52. Private Sector Coordination Council- Gaza Governates: *Gaza Private Sector Post-War Status and Needs*. Gaza City. 2009.
53. Information provided to OCHA by the Shelter Cluster.
54. 54 Ibid.

13. According to WFP and FAO, agricultural items urgently needed include nursery equipment, seeds, seedlings, fertilizers and greenhouse and irrigation rehabilitation materials. Strawberry farmers are unable to access strawberry mother plant seedlings, which are traditionally imported from Israel and cultivated in greenhouses from mid-April onwards to produce the off shoots for the next strawberry season. See, WFP/FAO, *Update on Food Security Issues*, 20 April, 2009.
14. FAO/WFP, footnote 12.
15. On 29 April 2009, the Ministry of Agriculture (MoA) in Gaza instructed farmers not to plant export crops, in particular those in need of sizeable investment inputs, such as cut flowers and strawberries. According to the MoA, this instruction was given to protect farmers in Gaza from losing huge investments and to preserve water reserves. Instructions to farmers were also to direct crop production to service local Gaza market needs only.
16. Private Sector Coordination Council Gaza Governorates, *Gaza Private Sector, Post-War Status and Needs*, February 2009.
17. World Bank. *Palestinian Economic Prospects: Gaza Recovery and West Bank Revival*. Economic Monitoring Report to the Ad Hoc Liaison Committee. June 8th 2009. Available at www.worldbank.org/ps.
18. Private Sector Coordination Council- Gaza Governorates: *Gaza Private sector Post War Status and Needs*. Gaza City. 2009.
19. Agricultural Sector Report – *Impact of Gaza Crisis*, March 2009.
20. An exception to this definition is an area along the northern border of Gaza – the past location of three Israeli settlements where the no-go area is significantly larger.
21. The only types of fish found in the market are Asafeer, Ghobos and very small quantities of sardines and Dennis imported from Israel (20-35 NIS/kg). See WFP/FAO, *Update on Food Security Issues*, 16 March, 2009.
22. The current sea blockade of 3 nm is one quarter of the area to which Israel committed to allow fishing under the Bertini commitments in 2002 (12 nm) and is one sixth the area as defined
55. Since mid-July the Power Plant is producing 70 MW. This level is expected to last until the end of the first week of August. Routine maintenance works necessitated a decrease in production in the first week of July, resulting in increased fuel stores. To continue operations at current levels, the power plant would need 2.9 million liters of industrial gas per week compared to 2.2 million currently supplied.
56. The increase production levels since mid-July (see footnote 55) allowed a reduction of these outages to 4-6 hours, during 4 days a week only.
57. World Health Organization, *Medical Equipment in Gaza's Hospitals*, July 2009, p. 7.
58. Ibid.
59. Ibid, p. 8.
60. Treatments unavailable in Gaza include heart bypasses and other surgical procedures, treatment of complex burns, paediatric cardiology, neurosurgery, mouth and jaw surgery, radiology therapy, organ transplants, advanced eye operations, paediatric MRI and bone scans, and bone marrow tests.
61. The critical situation was finally resolved on the 26th of April 2009 when agreement was reached after mediation efforts were undertaken by both parties WHO, (PCHR) and other civil society figures.
62. PCHR: Press Release. *10 people Die and Health Conditions of Hundreds Deteriorates as Gaza's External Medical Treatment Crisis Continues; PCHR holds Minister for Health in Ramallah Accountable and Calls on Palestinian President to Intervene*. 19th April 2009, Gaza.
63. WHO database.
64. For example, at least 150 patients whose limbs were amputated as a result of their injuries are currently waiting for artificial limbs.
65. World Health Organisation, *Gaza Strip Initial Health Assessment*, 16 February 2009.
66. Fao Institute for Applied International Studies and UNFPA, *Life in the Gaza Strip six weeks after the armed conflict 27 Dec 2008 – 17 Jan 2009, Evidence from a household sample survey*, March 2009.
67. UNFPA, *Gaza Crisis, Psychosocial consequences for women*, 8th February, 2009.

under the Oslo Agreement (20 nm).

23. WFP/FAO, *Update on Food Security Issues*, May 2009.
24. Ibid.
25. This section relies entirely on The World Bank, *Palestinian Economic Prospects: Gaza Recovery and West Bank Revival*, Economic Monitoring Report to the Ad Hoc Liaison Committee, June 8th 2009, p. 24. Available at www.worldbank.org/ps.
26. OCHA interviews with sources in Gaza and journalists covering this issue.
27. Palestinian Centre for Democracy and Conflict Resolution, *Children of tunnels, death mixed with sand flavor*, July 2009. Available in Arabic at: <http://www.pcdcr.org/Arabic/index.php?page=NewsDetails&NewsID=283&CatID=1>
28. OCHA's Protection of Civilians Database, 15 June 2007 – 28 July 2009.
29. *Mid Year Review of the CAP*, July 2009, p. 21. For previous figures see, WFP/UNRWA/FAO, *Joint rapid food security survey in the occupied Palestinian territory*, May 2008.
30. In the WFP/UNRWA/FAO survey households suffering from food insecurity included those with and income and consumption below 1.9 US\$/per capita/day and showing a decrease in total food and non-food expenditures.
31. WFP/FAO, *Update on food security issues in Gaza*, May 2009. Source of concern is particularly related to common livestock diseases like PPR (peste des petis ruminants), enterotoxaemia, sheep pox, and brucellosis.
32. WFP/UNRWA/FAO, *Joint rapid security survey in the occupied Palestinian territory*, May 2008.
33. Overweight among girls is five times higher than among boys (24.6 compared to 5.4 percent), possibly due to the increased lack of physical activity among them. Data collected by the PA Ministry of Health between September 2007 and June 2008. See WHO, *Gaza Health Assessment*, July 2009, p. 7.
34. UNIFEM, *Voicing the Needs of Women and Men in Gaza. Beyond the Aftermath of the 23 day Israeli Military Operations*, 2009.
35. Unless it is otherwise specified, the source for all casualties' figures is OCHA's Protection of Civilians Database. The source for Palestinian
68. UNFPA, *Gaza Crisis: Impact on Reproductive Health and Obstetric Care*, 13 February 2009.
69. According to UNFPA, Shifa hospital reported 40 cases of miscarriage for December 2008 and 52 cases for January 2009, an increase of 31 percent. See: UNFPA, *Gaza Crisis. Impact on Reproductive Health and Obstetric Care*, 13 February 2009.
70. Ibid. Data from Shifa hospital only.
71. According to UNFPA, 5,000 deliveries occurred in January, compared to the monthly average of 4,000 deliveries prior to the crisis. The excess number could be explained by an increase in premature deliveries caused by stress and shock. See: UNFPA, *Gaza Crisis. Impact on Reproductive Health and Obstetric Care*, 13 February 2009.
72. Ibid. Increased prevalence of obstetric complications as reflected by increased Caesarean sections proportion to reach 32 percent in December 2008 and January 2009 respectively. The average monthly Caesarean section delivery, prior to the crisis, was 15 percent.
73. In the first week of May 2009, for example, a total of 54 truckloads carrying water and sanitation supplies were allowed entry into Gaza. This was the largest shipment since June 2007. The imported materials enabled the implementation of various urgent water and sanitation projects by the Gaza Coastal Municipalities Water Utility (CMWU), the ICRC, The World Bank, Oxfam GB and UNICEF. Notably, the entry of these supplies allowed the completion of a critical ICRC project providing a sea outfall from the Khan Younis emergency wastewater treatment lagoons.
74. Gaza wastewater treatment works was designed to produce an effluent quality of 30 mg/L BOD (Biological Oxygen Demand-Measure) and 30 mg/L of suspended solids. As a result of the increased quantities of sewage effluent, quality is up to 100 mg/L BOD and 100 mg/L suspended solids.
75. The growing water needs of the population has led to an increasing over-use of the aquifer, with the quantity of water extracted exceeding natural replenishment. As a result, the aquifer has undergone a gradual process of salinization, caused by the emergence of brackish water from deeper strata and the intrusion of sea water. See, The World Bank, *Assessment of Restrictions on Palestinian Water Sector Development, West Bank and Gaza*, April 2009.
76. The gap in the availability of drinkable water has been met by emerging small private desalination plants selling desalinated water. This "solution" has caused health concerns, due to a lack of regulation and control over the quality of the water produced by these plants.
77. Abu Naser, A, et al., "Relation of nitrate contamination of groundwater with methaemoglobin level among infants in Gaza", *Eastern Mediterranean Health Journal*, Volume 13, No.5, (September-October 2007).
78. UN Humanitarian Coordinator and AIDA, *The Gaza Blockade: Children and Education Factsheet*, 28 July 2009.
79. Information in this section relies on Gisha, *Obstacle Course: Students denied exit from Gaza*, July 2009, See, www.gisha.org.
80. John Holmes, *European Voice*, 30 April 2009

injuries during the “Cast Lead” operation only is the Palestinian Ministry of Health in Gaza. The source for Israeli civilian casualties during “Cast Lead” is the Magen David Adom (the national society of the International Red Cross Movement in Israel), while figures regarding IDF soldiers are based on the Israeli Ministry of Foreign Affairs’ information.

36. For example, more Palestinians were killed in Gaza during the three weeks of Israel’s military operation than during the entire first Intifada (December 1987 - September 1993). See B’Tselem’s statistics: http://www.btselem.org/English/Statistics/First_Intifada_Tables.asp.
37. This figure excludes Palestinians killed by inter-factional violence. The sources used by OCHA are :Al Mezan Centre for Human Rights, the Palestinian Centre for Human Rights, Defense for Children International, B’Tselem, The Israeli Information Center for Human Rights in the Occupied Territories, and the Palestinian Red Crescent Society.
38. The sources used by OCHA are: Al Mezan Centre for Human Rights, the Palestinian Centre for Human Rights, Defense for Children International, B’Tselem, The Israeli Information Center for Human Rights in the Occupied Territories, and The Palestinian Red Crescent Society (PRCS). Most of these sources have recorded a higher number of fatalities than OCHA, due to the inclusion of names were confirmed only by them. The UN Humanitarian Coordinator also requested information about casualties from the Israeli Ministry of Foreign Affairs (letter sent on 18 February 2009), however, as of the writing of this report, no reply has been received.
39. See footnote 35.
40. While none of these weapons are explicitly banned by IHL, their use is subject to the general rules in IHL governing the conduct of hostilities, including the prohibition on indiscriminate attacks. See for example, Human Rights Watch, *Rain of Fire: Israel’s Unlawful Use of White Phosphorus in Gaza*, March 2009; Amnesty International, *Operation ‘Cast Lead’: 22 Days of Death and Destruction*, chapter 1.3.
41. See, for example, PRCS, *Gaza Situation Update, 8 January 2009*; ICRC, *Gaza: Grief and devastation as fighting abates*, 18 January 2009; ICRC, *Gaza: ICRC demands urgent access to wounded*, 7 January 2009.