



“Humanitarian Minimum”

Israel's Role in Creating Food and Water Insecurity in the Gaza Strip

December 2010

רופאים לזכויות אדם - ישראל (ע"ר)
أطباء لحقوق الإنسان - إسرائيل
Physicians For Human Rights - Israel



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Special thanks to Prof. John Yudkin, of University College London, Dr. Colleen Doak, of Vrije University, Amsterdam, and Dr. Anette Huber-Lee of Tufts University School of Engineering, Medford, USA, for contributing the expert opinions used in this report.

Special thanks to Dr. Sara Roy of Harvard University, Cambridge, MA, USA for writing the Foreword for the report.

This report was made possible through the generous support of: Christian Aid, Diakonia, EED and HEKS-EPER.

Special thanks to medico international for their translation of the Executive Summary into German and for their help in distribution.

**"To improve nutrition, food safety and food security, throughout the life-course,
and in support of public health and sustainable development".**

(Strategic Objective 9 on responsibility of the state for health,

WHO PROGRAMME BUDGET, 2008-2009)

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Map of Gaza Strip



Map 1: Gaza Strip, Office for the Coordination of Humanitarian Affairs, January 2009.

Foreword

Dr. Sara Roy, Center for Middle Eastern Studies, Harvard University, Cambridge, MA, USA

In September 2010 I spoke with a trusted friend in Gaza. Our conversation centered on living conditions and the impact of Israel's siege on peoples' everyday lives. We spoke for some time and his concluding words echo the central message of PHRI's compelling and critically important report. My friend said: "We are not allowed to participate in our own lives but must accept our decay. Our horizon is vague. There is no vision, no debate, no critique. The critique that does exist is for the benefit of the individual not society. We are not allowed to plan, even to think of planning and we are rejected if we try. We are denied the right to live as normal [human beings] and there is a growing feeling among people here—despite the fact that some still resist—that this will not change. If there is a plan, we believe it is to insure that our abandonment is total."

The starkness of life in Gaza, which is described in powerful detail in this report, constitutes a form of abandonment that is undeniable. Yet, the pages that follow speak of something far more pernicious: a policy (whether of siege or military attack) deliberately and consciously designed to inflict harm on an innocent and defenseless civilian population and on the Hamas-led government elected to represent it. And while this policy has been imposed by Israel, it has had the explicit support of key members of the international community, notably the United States, the European Union, and Egypt, as well as the Palestinian Authority in the West Bank.

The outcome has been devastating: not only has Gaza's formal economy all but collapsed—a clear objective of the siege—and its society weakened, Palestinians there have been rendered invisible and mute, deprived of their agency and dignity, forced to accept their own decay as my friend said. Perhaps the greatest and most damaging aspect of Israeli policy has been the transformation of

Palestinians in Gaza especially, from a people entitled to, and capable of, national self-determination and developmental change into a group of aid-dependent paupers worthy only of the humanitarian minimum.

Furthermore, the impoverishment of Gazans has become the sole responsibility of a compliant international community unwilling—despite the importance of foreign aid in addressing basic needs—to meaningfully challenge, let alone, defy, Israeli policy. One result, according to a November 2010 internal donor document, is the fact that: “donors are indirectly not following universally accepted humanitarian principles and by [their] inaction allow for the continuation of illegal policies to take place.”

These findings, among the many more examined by PHRI, point to a critical but often neglected fact: Gaza (and the profoundly adverse conditions that define it) is not a humanitarian problem but a political one and the solution—if one can be found—must also be political. And as this report makes absolutely clear, in the continued absence of reform and the rights and freedom that must attend it, Gaza’s descent will hasten and bring with it far greater disaster.

Executive Summary

Humanitarian Minimum: Israel's Role in Creating Food and Water Insecurity in the Gaza Strip examines how the Israeli occupation and blockade of the Gaza Strip have created a situation of dependency and de-development, whereby the Palestinian people are denied full and dignified lives. The focus on food insecurity and unsafe water in this report is intended to describe and analyze this situation, which amounts to nothing less than the collective punishment of the people of Gaza.

Part I of the report describes the state of food insecurity in the Gaza Strip and Israel's role in creating and maintaining this problem. According to the World Food Programme, food insecurity is defined as a lack of access to sufficient, safe, and nutritious food, which meets dietary needs and food preferences for an active and healthy life. Levels of food insecurity have steadily risen since 2003 and currently 61 percent of the population of the Gaza Strip (973,600 of the 1.5 million people) is defined as food insecure, and a further 16 percent (218,950 people) is vulnerable to food insecurity. An analysis of available data reveals that food insecurity in the Gaza Strip is not caused by a lack of available food, but rather the poor economic situation in general, which creates problems of affordability for many households and has increased their dependency on humanitarian aid. As of the second half of 2009, 71 percent of Gaza's households were receiving some form of humanitarian assistance.

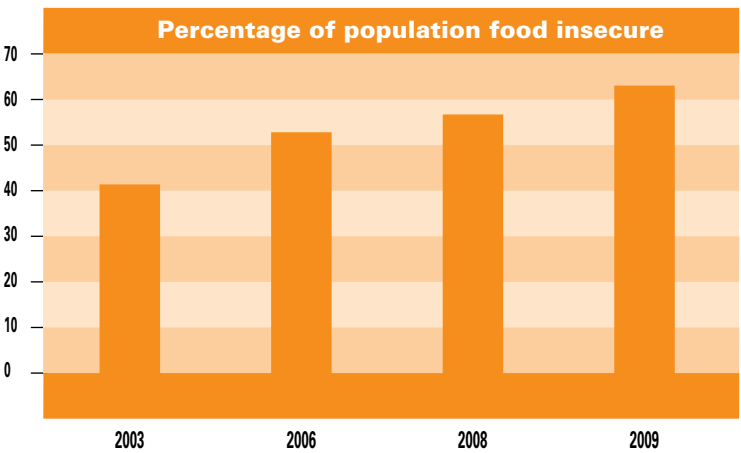


Figure 1: Graph showing rising levels of food insecurity in the Gaza Strip.

These high levels of humanitarian aid are the reason that the Gaza Strip does not face a widespread nutritional crisis. Assistance organizations often provide food vouchers and

handouts, enabling people to keep a somewhat healthy diet. Because many families have reduced their consumption of fresh meat, fruits, and vegetables, aid agencies have initiated programs to fortify basic food products with vitamins and minerals before distribution, preventing mass micronutrient deficiencies in the population. Despite this, however, scientific studies have revealed that levels of malnutrition in Gaza are on the rise and are higher than those in the West Bank. Among other problems, wasting, stunting, and high levels of anemia are a cause for concern.

Following this in-depth description of food insecurity in Gaza, the report goes on to expose and investigate the major shortcomings in Israel's June 2010 policy to 'ease' the blockade, Israel's strategy of a humanitarian minimum in Gaza, and the reasons why Gaza is dependent on the tunnel trade from Egypt. Since the June 2010 announcement to the time of going to print, the Israeli government has demonstrated that it has no intention of opening additional land crossings, leaving only Kerem Shalom and the Karni conveyor belt to operate as crossing points for all imports. Israeli imposed logistical problems like the 'split shift pattern' for processing cargo, the lack of lighting at the crossing, and insufficient operating hours continue to hinder the amount of goods possible to import into the Gaza Strip. This problem is compounded by the long-winded and unclear procedures stipulated by Israel's Coordinator of Government Activities in the Territories (COGAT), which often result in unnecessary delays and rejections in importing goods.

This closure policy has resulted in the near collapse of Gaza's economy. The lack of raw inputs and the almost total ban on exports from the Strip has led to a significant decline in industrial production within Gaza. Products that have been entering the Gaza Strip between the June 2010 announcement and the time of going to print are ready-to-consume goods rather than essential inputs for industry within Gaza, with which Palestinians would be able to produce their own consumer items. This policy change, therefore, does not address the economic problems in the Gaza Strip, which have severely worsened since the escalation of restrictions in June 2007. Even if raw inputs were available for industrial production, the ban on exports (apart from restricted and rare cases negotiated by international mediators) means that important sources of income for people in Gaza have been severed. The new flow of products entering into the Gaza Strip does nothing to improve this situation.

In this context, a system of tunnels has been developed by Gaza's residents to bring in raw materials and products for consumption from Egypt to the Gaza Strip. The tunnel trade fluctuates according to supply and demand, depending on what products are allowed through the crossings from Israel at any given time. Until Israel allows imports through the land and sea crossings that match Gaza's needs and ends the occupation and blockade, Gaza's residents will continue to depend on this fragile tunnel trade as an economic lifeline.

The report then presents an analysis of two sectors within Gaza's economy – agriculture and fishing – and their relations to food insecurity and the general economic situation in the Gaza Strip. Both sectors have suffered immensely due to restrictions on access to land and water, under the so-called 'buffer zone' implemented by Israel within Gaza's land and water territories. In addition, the ban on exports means that the agriculture sector is now barely viable, and, as in other sectors, the shortages of certain essential inputs have affected the ability for production. Violence against farmers and fishermen, and damage to infrastructure and equipment, particularly during Operation Cast Lead, have resulted in the injury or death of hundreds of people and put thousands out of work.



Figure 3: Fishing boat of Khaled Al-Habil, set on fire by the Israeli army in September 2009.²



Figure 4: A destroyed poultry farm in Zeitun after Operation Cast Lead.³

2 Image courtesy of International Solidarity Movement, Fishing Under Fire, <http://fishingunderfire.blogspot.com/>, accessed May 2010

3 Image courtesy of FAO-Jerusalem.

Part II of the report describes Gaza's water crisis and its effects on the health of people living in the Strip. Methaemoglobinemia (also known as 'blue-baby syndrome'), diarrhea, and poor sanitation are not new problems in Gaza, but the dramatic deterioration of Gaza's water infrastructure under the blockade, and especially after the damage caused by Operation Cast Lead, have made these problems more acute and difficult to solve in the long-term.

High nitrate and salinity levels mean that 90-95 percent of the water provided by Gaza's coastal aquifer, the Strip's main source of water, is unfit for human consumption. This has pushed most of Gaza's residents to rely on unregulated, privately supplied drinking water, which is frequently contaminated with bacteria. Water storage and treatment facilities were severely damaged by Operation Cast Lead and repairing them has been extremely slow due to the difficulty in bringing in essential spare parts and other materials.



Figure 5: Extent of sewage flood from Al Zaitoun sewage treatment plant as a result of Operation of Cast Lead (Image from 19th January 2009).⁴

This situation is contributing to environmental deterioration which threatens the future of Gaza's water supply and may result in a public health crisis. Because of over-abstraction and the release of partially or completely untreated sewage into the land and sea, the salinity of the coastal aquifer is increasing at a rapid pace. Both of these problems have been made more severe by the effects of the Israeli occupation.

Physicians for Human Rights-Israel believe that people, regardless of their nationality or government representatives, are entitled to much more than the 'humanitarian minimum.'

⁴ Image courtesy of United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

Palestinians in Gaza deserve full recognition of their human rights, including what we all wish for ourselves: to live to our full potential. Ensuring that starvation is not rampant is an objective following a natural or man-made disaster; under no circumstances can it be the long-term goal of a decades-long policy. We believe the following recommendations for Israel and the international community should be immediately adopted:

Recommendation One:We call on the Israeli public and government, as well as the international community, to recognize that lifting the blockade requires much more than changing Israeli policy towards the crossings.

Recommendation Two:We call on the government of Israel to take responsibility for the current situation in Gaza and immediately end the blockade and occupation of the Gaza Strip.

Recommendation Three:We call on the international community to acknowledge its role in enabling Israel to make the people of Gaza dependent on humanitarian assistance and to speak out and act against the larger political context when distributing aid.

Expert Opinion on nutritional health and food security

Dr. Colleen Doak

Department of Health Sciences, Section of Infectious Disease, Vrije University Amsterdam

Professor John Yudkin

International Health and Medical Development, University College London

In the Gaza Strip, the underlying cause of poor nutrition relates to trade restrictions, limitations on free movement, and the disruption of water and agricultural systems. These conditions threaten food security by limiting “physical, social and economic access to sufficient, safe and nutritious food.” The food supply is reported as sufficient in energy but of poor quality. The diet, based largely on staples and energy dense foods, raises concerns for increased risks related to chronic disease, both in present and future generations. A diet that is rich in energy rich but of poor quality is consistent with the reported results showing a high prevalence of anemia, but low prevalences of child stunting and underweight.

Furthermore, a diet low in fresh fruits, vegetables and meat has led the Food and Agriculture Organization and the World Food Programme of the United Nations to warn of possible mineral and vitamin deficiencies. While micronutrient deficiencies can be addressed through supplements and fortified food products, fresh fruits and vegetables are necessary to protect against cancer and cardiovascular disease. Fruits and vegetables are also an important source of carotenoids which serve as antioxidants and have immunomodulatory effects. Furthermore, the loss of n-3 fatty acids consequent upon disruption of fish supplies and reduced intake of alpha-linolenic acid from green leafy vegetables may increase susceptibility to cardiovascular and other diseases of adulthood, as well as to effects on intrauterine growth and development.

The high incidence of methaemoglobinaemia in Gaza appears to be related to unacceptably high levels of nitrates in untreated water, but may be compounded by subclinical deficiency of essential sulphur-containing amino acids with consequent impairment of antioxidant capacity. A nutritional survey should document intake and biological levels of folic acid, vitamin B12, iron and n-3 fatty acids, and reported intakes of other essential vitamins, minerals and essential amino acids. Levels of anti-oxidants, including glutathione, should be measured.

Strategic Objective 9 of the World Health Organization is 'To improve nutrition, food safety and food security, throughout the life-course, and in support of public health and sustainable development.' The population of the Gaza Strip is suffering from deteriorating nutrition and food security as a consequence of the damage to agriculture and fishing, and the restrictions on trade and free movement. These threats to health are compounded by the severe infrastructural damage to the water purification and sewerage systems, which have led to the majority of Gaza's water supply being classified by WHO as unfit for human consumption.

Expert Opinion on the Water system in Gaza

Annette Huber-Lee, PhD

Visiting Scholar, Tufts University

The current situation in the Gaza Strip is simply untenable with respect to water in all its dimensions. The direct impacts of unsafe water range from immediate life-threatening blue baby syndrome and diarrhea to longer term impacts on health due to high levels of salinity. The indirect impacts of unsafe and inadequate quantities of water are equally serious, resulting in contaminated fruits and vegetables and shortages of food more generally.

I carried out research on how to plan for a sustainable water supply in the Gaza Strip in the late 1990's. Problems were quite serious at that time. My research

showed that the only sustainable options were either to find a new source of water, such as desalination, or phase out agriculture. The latter is socially unacceptable, so the only possible option is finding new sources for the people of Gaza. This result is true even with all domestic and industrial wastewater treated and reused in the agricultural sector - something not happening at all at this time.

The water situation is worse than the worst case scenario in this earlier research. I did not envision the damage and destruction of existing infrastructure. Adding to this is what is a classic case of the tragedy of the commons - widespread over-pumping of the aquifer which results in everyone being worse off. The salinity of the water is damaging to human health, agricultural production, livelihood options and incomes.

Water and food security are fundamentally inter-twined - they need to be addressed simultaneously. And they need to be addressed immediately.

Water in Gaza represents the most basic violation of human rights - a right to safe and adequate water and food. Politics need to be put aside to stop this tragedy. Several measures should be undertaken.

First, additional water needs to either come from neighboring states or via desalination.

Second, wastewater treatment is needed for all domestic and industrial water uses, and can provide an additional source of water if adequately treated.

Third, pumping from the aquifer needs to be reduced, and recharge is essential to attempt to stem the progress of saltwater intrusion. The coastal aquifer does not have sufficient supply that is safe for human or agricultural use.

Introduction

To date, 61 percent of Palestinians in the Gaza Strip are food insecure.⁵ A major nutritional crisis is being avoided because of the vast quantities of aid distributed in Gaza by international agencies, and the supplies entering the Strip through the tunnels from Egypt. The situation regarding water is worse still. 90-95 percent of water from the coastal aquifer, which is Gaza's main water source, is unfit for human consumption.⁶ Most people in Gaza drink unsafe water, in direct violation of the Universal Declaration of Human Rights.

This report focuses on food and water insecurity in the Gaza Strip and analyzes how Israeli control of Gaza has created a population on the edge of disaster. The dependency of Palestinians in Gaza on external aid is the result of years of de-development, recently intensified with the blockade policy in place since June 2007. Under these conditions, Gaza's economy has virtually collapsed, and people living in the Strip have suffered the humiliation of being unable to feed their children without daily handouts.

Additional actors, like the Hamas government, the Palestinian Authority, and the State of Egypt, are also responsible for the dire situation in the Gaza Strip. Actions sanctioned by the Hamas government and little overt involvement by the PA and Egypt have often influenced Israel to intensify, or at least maintain, harsh policies in Gaza. While they too should be held accountable, this should not deflect responsibility from Israel, nor give the Israeli government an excuse to impose collective punishment on the people of Gaza. While the majority of the research and writing of this report occurred before Israel's ease of closure restrictions following the Gaza Flotilla events in May 2010, Israeli policy of enforcing dependency and de-development in the Gaza Strip still continues.

The report is divided into two sections, which together paint a picture of the Gaza Strip following years of Israeli occupation:

5 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

6 Office for the Coordination of Humanitarian Affairs, Locked In: The humanitarian impact of two years of blockade on the Gaza Strip, August 2009; EWASH, Factsheet 3: Water Quality in the Gaza Strip; Amnesty International, Troubled Waters – Palestinians Denied Fair Access to Water, October 2009.

Part I: Food Insecurity and Gaza's Economy

- **Food Insecurity:** An analysis of the alarmingly high rates of food insecurity in Gaza, the reasons for this situation, and its existing and potential effects on nutrition and health.
- **Imports and Exports:** An examination of Israeli policies regarding the crossings from Israel into Gaza, and their links to Gaza's weak economy. The chapter exposes the major shortcomings in Israel's June 2010 policy to 'ease' the blockade, explores Israel's strategy of a humanitarian minimum in Gaza, and investigates the reasons why Gaza is dependent on the tunnel trade from Egypt.
- **The Agriculture Sector:** An analysis of Israeli effective control of farming in Gaza, and its links to the high levels of food insecurity. This chapter examines the restrictions on access to agricultural land, Israel's prohibition on essential farming inputs, and other factors contributing to the collapse of one of Gaza's most vibrant export industries.
- **The Fishing Sector:** An investigation of how the Israeli occupation has brought the fishing industry near to total collapse, and the implications on rising food insecurity. This chapter describes how the Israeli navy harasses fishermen, denying them access to Palestinian waters and causing thousands of people to lose their livelihoods.

Part II: Gaza's Water Crisis

- **Water and Health:** An examination of the links between the dire state of Gaza's water infrastructure and the spread of disease in the Gaza Strip.
- **Gaza's Water System:** An investigation into the damage to both the waste-water and drinking water systems caused by Operation Cast Lead and the Israeli occupation as a whole. The chapter focuses on the poor quality of water and the difficulties for much of the population in accessing it.

The report concludes with Physicians for Human Rights-Israel's analysis of the range of ethical and legal violations committed by Israel through its policies towards the Gaza Strip. Recommendations for Israel and the international community are provided, which we believe should be adopted as a way to immediately cease such violations.

Expert Opinion

Dr. Colleen Doak

Department of Health Sciences, Section of Infectious Disease,
Vrije University Amsterdam

Professor John Yudkin

International Health and Medical Development, University College London

In the Gaza Strip, the underlying cause of poor nutrition relates to trade restrictions, limitations on free movement, and the disruption of water and agricultural systems. These conditions threaten food security by limiting "physical, social and economic access to sufficient, safe and nutritious food." The food supply is reported as sufficient in energy but of poor quality. The diet, based largely on staples and energy dense foods, raises concerns for increased risks related to chronic disease, both in present and future generations. A diet that is rich in energy rich but of poor quality is consistent with the reported results showing a high prevalence of anemia, but low prevalences of child stunting and underweight.

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deficiencies can be addressed through supplements and fortified food products, fresh fruits and vegetables are necessary to protect against cancer and cardiovascular disease. Fruits and vegetables are also an important source of carotenoids which serve as antioxidants and have immunomodulatory effects. Furthermore, the loss of n-3 fatty acids consequent upon disruption of fish supplies and reduced intake of alpha-linolenic acid from green leafy vegetables may increase susceptibility to cardiovascular and other diseases of adulthood, as well as to effects on intrauterine growth and development.

The high incidence of methaemoglobinaemia in Gaza appears to be related to unacceptably high levels of nitrates in untreated water, but may be compounded by subclinical deficiency of essential sulphur-containing amino acids with consequent impairment of antioxidant capacity. A nutritional survey should document intake and biological levels of folic acid, vitamin B12, iron and n-3 fatty acids, and reported intakes of other essential vitamins, minerals and essential amino acids. Levels of anti-oxidants, including glutathione, should be measured.

Strategic Objective 9 of the World Health Organization is 'To improve nutrition, food safety and food security, throughout the life-course, and in support of public health and sustainable development.' The population of the Gaza Strip is suffering from deteriorating nutrition and food security as a consequence of the damage to agriculture and fishing, and the restrictions on trade and free movement. These threats to health are compounded by the severe infrastructural damage to the water purification and sewerage systems, which have led to the majority of Gaza's water supply being classified by WHO as unfit for human consumption.

Part I: Food Insecurity and Gaza's Economy

Chapter 1: Food Insecurity

"Food security exists when all people, at all time, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Food insecurity exists when this access is jeopardized."⁷

From this definition offered by the World Food Program, it is clear that food insecurity incorporates not only shortages of certain kinds of foodstuffs but also factors which affect people's access to food more broadly. With regard to the Gaza Strip, food insecurity is mainly caused by the inability of Gaza's residents to self-sufficiently purchase or produce food. The high levels of food insecurity in the Strip are symptomatic of the wider problem of the Israeli occupation of Gaza, which, as of late, defines the Palestinian population as one deserving only a humanitarian minimum.⁸

Most people in Gaza are not starving, a fact which has been used by the Israeli government and some media reports to defend Israeli policies. This is not because of Israeli benevolence, however, but rather because of the high levels of aid distribution and the large amount of goods which enter the Strip from Egypt through the tunnels. Decades of occupation and the recently escalated blockade have created a situation of dependency and de-development, whereby people are denied a full and dignified life. The focus on food insecurity in this report is intended to describe and analyze this situation, which amounts to Israel's collective punishment of the people of Gaza.

According to the most comprehensive recent analysis of food security in the Gaza Strip, published in December 2009, 973,600 people are defined as food insecure (61 percent of the population), and 218,950 persons (16 percent) are vulnerable to food insecurity.⁹ This is a rise from earlier figures (56 percent food insecurity in 2008, 53 percent in 2006, and 41 percent

7 World Food Programme/Food and Agriculture Organization, Socio-economic and food security survey report 2 – Gaza Strip, November 2009.

8 This chapter is based on a review of studies published about Food Security and Nutritional Health in the Gaza Strip, mainly by bodies such as the Palestinian Central Bureau of Statistics, the World Food Programme, the Food and Agriculture Organization, and the Office for the Coordination of Humanitarian Affairs. Evidence from this literature was collated, and its relevant and important findings are presented in summary form here. The situation regarding food security and nutritional health was also confirmed to us in interviews with United Nations and World Health Organisation sources in Gaza. A full list of sources can be found in the endnotes section.

9 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

in 2003¹⁰), indicating that the food security situation, which was already poor under years of closure policies and violence, has continued to decline under the Israeli blockade. The graph below exemplifies this trend:

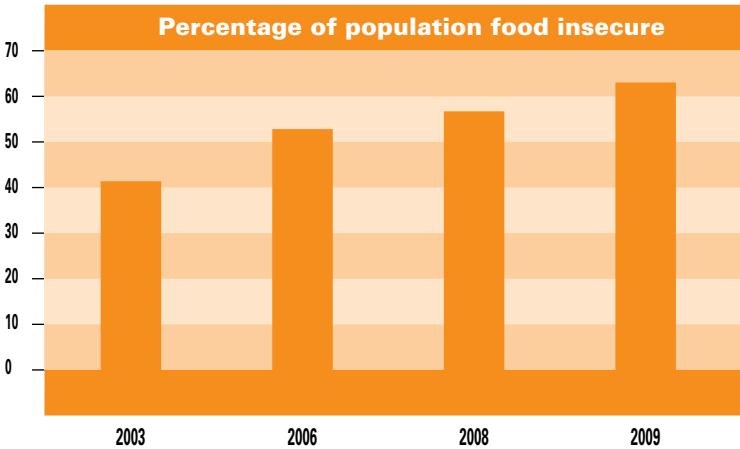


Figure 1: Graph showing rising levels of food insecurity in the Gaza Strip.

The Food and Agriculture Organization/World Food Program (FAO/WFP) December 2009 report states that: "'insufficient households' capacity to purchase food and unsatisfactory food utilization are the main underlying factors contributing to food insecurity and signs of increasing rates of chronic malnutrition."

A high level of food insecurity and poverty in the Gaza Strip is not a new phenomenon resulting from Israel's blockade policy. Gaza's economy, always under strain, took a turning point for the worse in 1991 with Israel's introduction of the permit policy that significantly reduced the number of Palestinians allowed to enter Israel for work. The economic situation worsened further with the start of the 2nd Intifada and the increased restrictions on movement that followed. The complete closure of the Gaza Strip in June 2007 is only the continuation of a process of imposing restrictions on movement of people and goods which has been underway for the past 20 years.¹¹

However, the situation over the past three to four years has seen an even more dramatic policy of blockade which has caused rising levels of poverty, food insecurity, and dependency

10 World Food Programme/Food and Agriculture Organization, Report of the Food Security Assessment West Bank and Gaza Strip, 2003.

11 Ibid.

on humanitarian assistance. The increasingly harsh closure policy inflicted by Israel onto the Gaza Strip with the start of the Second Intifada isolated markets within the Strip and led to the denial of access permits for many seeking to work in Israel. Already in 2007, many of the 'new poor' from the 2nd Intifada had become chronically food insecure and were exhausting the coping mechanisms available to them.¹² Over the past ten years, the number of people relying on humanitarian aid has been extremely high, with at least two thirds of the population receiving aid at all times, and peaking to 85 percent of the population at crisis points like the middle of the 2nd Intifada and immediately after Operation Cast Lead.¹³

Unlike in the West Bank, where food insecurity is often linked to refugee status,¹⁴ in the Gaza Strip employment status is the most influential factor. Thus, households relying on low-paid, unskilled labor, and those with a large number of female and child members, are more likely to be food insecure than others. Those living in rural areas are more likely to be food insecure than those living in cities, after the massive destruction of crops, animals, and agricultural assets during Operation Cast Lead and the blockade's ban on exports and import of essential inputs (see the later chapter on agriculture). However, because most of the population of Gaza lives in urban areas, the number of food insecure households is still far greater in the cities as opposed to rural areas.

According to available data, the central issue of food security in the Gaza Strip is not food **availability**, even though the variety of food available in the market has at certain times been limited, but rather the poor economic situation in general, creating problems of affordability for many households, and increasing dependency of the local population on humanitarian aid. The tunnel trade from Egypt has prevented shortages of most items in local markets, but is an informal economy which is highly vulnerable, given the Israeli and Egyptian attempts to end this trade. If the tunnel trade was to be more restricted or halted completely, there would most likely be an increase in food insecurity due to the shortages of some foodstuffs in the Gaza market.¹⁵ (See the following chapter for more on Gaza's tunnel economy.)

12 World Food Programme/Food and Agriculture Organization, Comprehensive Food Security and Vulnerability Analysis, January 2007.

13 World Food Programme/Food and Agriculture Organization, Report of the Food Security Assessment West Bank and Gaza Strip, 2003; World Food Programme/Food and Agriculture Organization/United Nations Relief and Works Agency, Joint Rapid Food Security Survey in the Occupied Palestinian Territory, May 2008; United Nations, Consolidated Appeal for occupied Palestinian territory, Mid-Year Review, July 2010; World Food Programme/Food and Agriculture Organization, Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip, February 2009.

14 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

15 Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories, December 2009.

In addition, the situation regarding local production contributes to rising prices and difficulties in obtaining certain kinds of food. Although levels of milk production have risen since 2000, production levels remain very close to minimum consumption requirements. Egg production also meets most of local requirements, but producers appear to be seriously affected by the restrictions on the movement of inputs needed in the production process, as well as on the movement of the produce itself.¹⁶ Local red and poultry meat production is about 20 percent of local consumption, thus consumers in Gaza rely on canned or frozen meat which enters through the crossings from Israel or the tunnels from Egypt. As the December 2009 FAO/WFP report states, "local food production would be larger should land, water and other inputs be more accessible."¹⁷

Rather than directly causing shortages of certain kinds of food, the restrictions on local production mainly contribute to overall impoverishment, rising food insecurity, and the general dependency on aid of the people of Gaza.

According to the definitions previously established, a food insecure household in Gaza is one which does not have the capacity to purchase sufficient and nutritious food. The fact that 61 percent of households in the Gaza Strip fall into this category is not to say that all of those households do not have a bare minimum of food to eat on a daily basis. Rather, it means that 61 percent of people do not have the self-sufficient means to grow or purchase the bare minimum amount of food for themselves and their families. Seventy-one percent of Gaza's households were receiving some kind of humanitarian assistance in the second half of 2009, which has saved many of those who are food insecure from having poor diets. This interjection of aid means, the FAO and WFP report, that half of those who are food insecure do not have unhealthy diets. However, this still leaves 30 percent of the whole population both food insecure and with poor diets.¹⁸

A poor diet is defined as 'poor' food consumption, consisting mainly of cereals, potatoes, sugar and oil on a daily basis, vegetables 4 times a week and very rare consumption of animal products and fruits. Quantities are also likely to be low and below kilocalorie requirements for household members who are pregnant, lactating women, or physically active adults. Similarly, a "borderline diet" includes slightly more frequent consumption of vegetables (5

16 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

17 Ibid.

18 World Food Programme/Food and Agriculture Organization, Socio-economic and food security survey report 2 – Gaza Strip, November 2009.

times a week), meat and eggs (3 times a week) and fruits (2 times a week), with quantities just sufficient to meet energy requirements.¹⁹

The following groups in Gaza were identified as most likely to be food insecure and with poor diets, due to the vulnerability of their primary sources of income under the current conflict and blockade:

- **farmers and agricultural workers:** the agriculture sector has been severely affected by the restrictions on access to land and agricultural inputs. **Agriculture used to provide work for nearly 40 percent of Palestinians who are employed in informal jobs. Farmers now report that they often rely on the labor of family members rather than employing additional workers.**²⁰
- **fishermen:** the fishing sector has been damaged almost to the point of collapse, mainly because access to waters is restricted by the naval blockade.
- **urban poor:** they have irregular and low wages, in the context of increased food prices (see section below on prices).
- **the unemployed:** different sources all estimate unemployment rates in the Gaza Strip at 34 percent.²¹ The halting of industrial production and most exports is a major cause of a lack of jobs in Gaza today. Since the blockade was imposed, 96 percent of industrial production has ceased, as most of Gaza's industrial production was export-based and also required imports for most of its inputs. This has led to the unemployment of 120,000 workers.²²

Under the blockade, prices have risen for various reasons. The global economic crisis has contributed to this problem, but other factors specific to the local situation are also crucial. Prices rose particularly high starting in January 2006, when Israel restricted the entry of certain food items to the Strip for the first time. Palestinians in Gaza have been importing products from Israel (with whom Gaza's merchants conduct 80 percent of their trade) and

¹⁹ World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

²⁰ Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories, December 2009; World Food Programme/Food and Agriculture Organization, Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip, February 2009.

²¹ World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009; World Food Programme, Food Security and Market Monitoring Quarterly Report, January to March 2010; World Food Programme/Food and Agriculture Organization, Household Food Security Profiling in the Gaza Strip 2009, January 2010; Palestinian Central Bureau of Statistics, Labour Force Survey First Quarter 2010, May 2010.

²² Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, July 2009.

from elsewhere for many years prior to the blockade.²³ The dependency of the population has increased, however, as those in the Gaza Strip have had less power in the negotiation of trade conditions, as well as less purchasing capacity, given the inability to travel to Israel themselves and a shortage of cash in Gaza's banks. Since June 2007, Israeli merchants no longer extend credit to importers in Gaza and they often demand payment in advance. In turn, credit available to consumers in the Gaza Strip has decreased, although in the current economic situation many more people are relying on credit as one of their main economic coping mechanisms.

Since the imposition of the blockade, trade in Gaza has become more difficult, causing an overall increase in prices for Gaza's consumers. 17 percent of traders interviewed in September 2009 reported increased delivery time since the blockade was imposed, and 52 percent reported increased transportation costs, which, given that they constitute 70 percent of traders' overall costs, led to an inevitable rise in consumer prices. Between May 2007 and May 2009, the Consumer Price Index for food in Gaza went up by 33 percent.²⁴ Prices would be even higher than they are currently, were it not for the high levels of humanitarian aid being distributed to the population in Gaza. The distribution of humanitarian aid adds products to the market, which suppresses prices.²⁵

23 Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, *The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories*, December 2009.

24 Office for the Coordination of Humanitarian Affairs, *Locked In: The humanitarian impact of two years of blockade on the Gaza Strip*, August 2009.

25 Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, *The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories*, December 2009.

Food Price Index

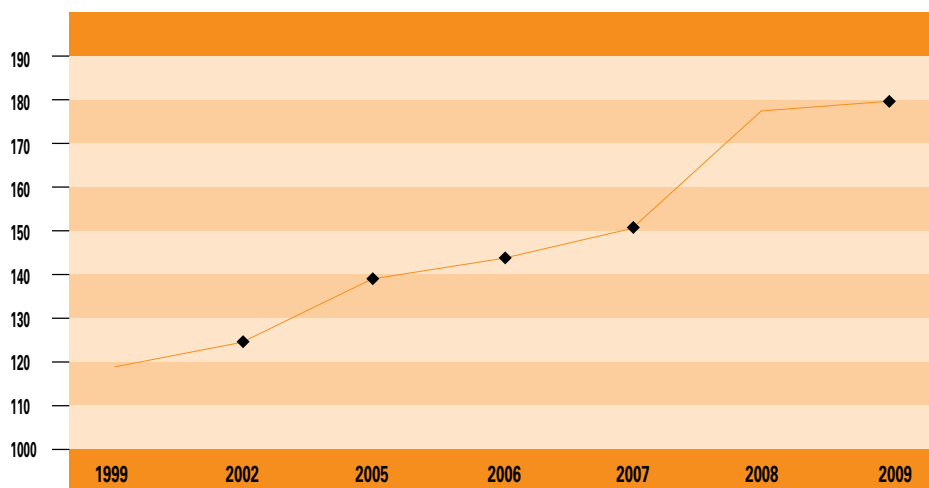


Figure 2: Rises in consumer price index for food from 1999-2009.²⁶

The difficult economic circumstances facing most of Gaza's residents have affected the variety of foodstuffs in their diets. There is less consumption of animal products and some vegetables (like tomatoes). Traders interviewed reported a depressed demand for fruits and some vegetables, and have thus been forced to stock a more limited variety of products. Overall energy intake has not decreased, due to an increase in the consumption of staples and energy-dense foods (wheat and bread, beans, oil, sugar), and therefore the FAO and WFP warn of possible mineral and vitamin deficiencies in the long term. Factors such as a lack of cooking gas can be mitigated by using alternative fuel sources, such as firewood or kerosene, but there are also reports of people eating less cooked foods and increasing consumption of ready to eat dry foods, or consuming foods which take less time to cook, such as cooking rice and lentils, rather than meat.²⁷

When economic conditions turn for the worse, households often cope by decreasing their expenditures for all purchases, and for food in particular. About one fifth of food insecure households in Gaza reported a decrease in their total expenditures after the conflict with Israel, mostly for food. Among those households, more than half (59 percent) decreased the quantity of food bought and the majority (94 percent) reduced the quality of food bought.

²⁶ Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories, December 2009.

²⁷ Interview with Amani Jouda, National Nutrition Officer, World Health Organization Gaza Office, 16th February 2010; World Food Programme/Food and Agriculture Organization, Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip, February 2009.

The growing poverty of food insecure households means that they are often unable to further reduce the amount of food purchased, leaving them able only to reduce the quality of food purchased. Examples of this trend include purchasing canned foods instead of fresh foods, chicken wings instead of whole chickens, and foods nearing their expiry dates.²⁸

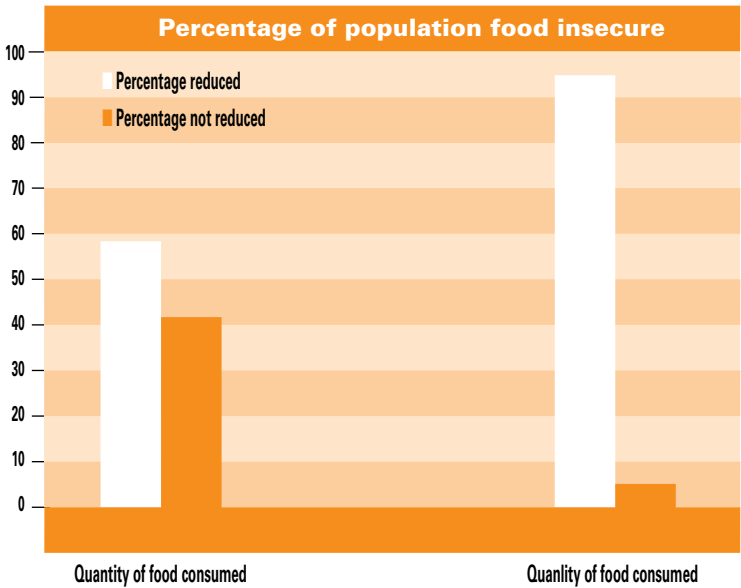


Figure 3: Coping mechanisms used in the Gaza Strip.

Nutrition in the Gaza Strip

Humanitarian aid and the trade through the tunnels from Egypt have prevented widespread problems of nutritional health, such as wasting, stunting and weight problems. For example, the United Nations Relief and Works Agency’s contracts with the bread mills in Gaza prevent micronutrient deficiencies through the fortification of flour with essential vitamins and minerals. Given the lack of these micronutrients from different sources such as fresh meat, fruit and vegetables, this kind of aid program prevents levels of malnutrition from rising in the Gaza Strip.²⁹

However, some data does highlight certain problems of nutritional health, which existed before the blockade, but has been on the rise in recent years. The most comprehensive

28 World Food Programme/Food and Agriculture Organization/United Nations Relief and Works Agency, Joint Rapid Food Security Survey in the Occupied Palestinian Territory, May 2008.
29 World Food Programme, Food Security and Market Monitoring Quarterly Report occupied Palestinian Territory, January – March 2010.

study available at the time of publication is the 2008 National Nutrition Surveillance System conducted by the Palestinian National Authority's Ministry of Health and the World Health Organization (WHO). This study took measurements from 3,172 children aged 9 – 12 months, and 13,286 schoolchildren in the Gaza Strip. In the first group (9-12 months) some results are significantly worse than those in the West Bank, although overall levels of malnutrition are still not very high. In the Gaza Strip, 3.09 percent were found to be underweight (low weight for their age), compared to 1.36 percent in the West Bank; 5.7 percent wasting (low weight compared to height), compared to 2 percent in the West Bank; 5.55 percent stunting (low height for their age), compared to 4.65 percent in the West Bank. The stunting levels have increased from 4.2 percent in 2007.³⁰ Initial reports of findings from the 2009 surveillance program indicate a further increase in levels of stunting (up to 7 percent).³¹ And amongst older children, those of school age, stunting is at 7.4 percent, compared to 4.28 percent in the West Bank.

A very concerning result is the level of anemia among children 9-12 months, at 73.4 percent, an increase from 68.2 percent in 2006, and much higher than 45.4 percent in the West Bank.³² Levels of anemia are also high amongst pregnant women (31.7 percent as compared to 22.7 percent in the West Bank).

Another 2008 study, carried out by the WHO with the support of UNICEF,³³ with a much smaller sample size (754 children aged 6-59 months), also found some concerning results regarding malnutrition. This study found that 2.5 percent children were underweight, 10.3 percent stunted, and 2.4 percent wasted. While the higher figures of malnutrition found in this study, compared to the 2008 National Nutrition Surveillance System, mean that caution is required in reading these results; this WHO study enables the examination of certain variables not covered elsewhere. In general the study found that malnutrition was significantly linked to low birth weight, insufficient intake of vegetables, being a refugee, and mother's low educational level. More specifically, one example of the role played by poverty in nutrition was the relationship shown between meat intake and levels of stunting. There is a large increase in levels of stunting as frequency of meat intake decreases. Those who ate meat once or more daily were found to have 3.4 percent stunting, whereas of those who ate meat only once biweekly, 19 percent were stunted. With food insecure families often eating a

30 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, May 2009.

31 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, May 2009.

32 Palestinian National Authority Ministry of Health and the World Health Organization, National Nutrition Surveillance System 2008 Report, July 2008.

33 World Health Organization, Nutritional Status of Palestinian Children Under Five (6-59 months) in Three Governates of the Gaza Strip: A Rapid Assessment Study, April 2008.

poorer diet, the long-term nutritional effects of increasing rates of insecurity have yet to be determined.

Studies using data collected before June 2007 show that malnutrition is not a new problem caused only by the imposition of the blockade. Levels of anemia, wasting, and stunting have been higher than normal, especially after 2000 and the start of the 2nd Intifada, since which time levels of stunting in particular increased.³⁴ However, all these studies highlight the link between socio-economic realities and nutritional health, and the effects of policies of closure and violence on these issues. Rather than causing a widespread lack of food, the occupation and blockade have led to the collapse of Gaza's economy, so that the Palestinians in Gaza are increasingly dependent on humanitarian aid for basic survival. Any further deterioration or shocks (periods of intense conflict, rise in prices, climatic event) threatens to cut off their ability to survive even at the bare minimum. Without the lifting of the Israeli blockade, economic recovery of the population is impossible, meaning food insecurity and malnutrition levels will probably continue to rise.

Chapter 2: Imports and Exports

On July 13, 2010, the New York Times reported regarding Gaza, "talk about food and people here get angry because it implies that their struggle is over subsistence rather than quality of life. The issue is not hunger. It is idleness, uncertainty and despair."³⁵ As the Times succeeds in conveying, Gaza is not plagued by a food crisis. The State of Israel uses this fact to deflect responsibility and claim that they are fulfilling their obligations to Gaza residents.

In reality, however, the lack of food crisis in Gaza is despite Israeli policy and because of Gaza's resiliency in desperate times. Even since the June shift in closure policy, Israel has actively denied Gaza residents commercial development and personal prosperity, continuing people's reliance on outside aid. For the last three years, Israel has sought to allow the "humanitarian minimum" in Gaza, through a policy that often fell far below what can be considered minimum. Gaza's tunnel economy, which Israel continuously strikes from the air, has filled Gaza's markets and grocery stores. Without it, the situation on-the-ground in Gaza would be quite different, with the fight for food and basic subsistence much more commonplace.

34 Palestinian National Authority/Palestinian Central Bureau of Statistics, Palestinian Family Health Survey 2006 Final Report, December 2007; Palestinian National Authority/Palestinian Central Bureau of Statistics, Demographic and Health Survey 2004 Final Report, February 2006; Palestinian Central Bureau of Statistics, Nutrition Survey – 2002: Main Findings, December 2002; Palestinian Central Bureau of Statistics, Health Survey 2000: Final Report, November 2001.

35 The New York Times, Trapped by Gaza Blockade, Locked in Despair, Michael Slackman and Ethan Bronner, July 13 2010.

June 2010 Announcement: Israeli Shift in Gaza Policy

Not long after May's Gaza Flotilla Incident and the resulting international pressure, the Israeli government announced a change in policy regarding the crossings between Israel and the Gaza Strip. While Israel claimed to change its overall blockade strategy, this shift only addressed Israeli policy towards imports through the land crossings; it did not mention the overall closure policy including exports through the land crossings, importing raw materials and inputs for commercial use in Gaza, imports and exports through Gaza's sea port, Israel's policy towards the tunnels, and Israeli de facto control of Gaza's agriculture, fishing, and water sectors.

Specifically, on June 20, 2010, the Israeli government announced that it would take the following steps as quickly as possible: publish a list of items not permitted into Gaza so to facilitate the entry of all products not on the list, enable the importation of construction materials for approved Palestinian Authority authorized projects with international supervision, expand operations at existing operating land crossings, and add substantial capacity to the existing crossings and, barring security concerns, open additional land crossings.³⁶

Since late 2008, Israel has facilitated the transfer of goods into the Gaza Strip via the Kerem Shalom crossing and the Karni conveyor belt. In addition, until January 2010, fuel was transferred through the Nahal Oz fuel depot. Throughout the blockade, the Erez crossing has been used to transport people in and out of Gaza and allow for the import of medicines and medical equipment.

Israel's recent policy announcement makes the opening of additional land crossings, like the once operating Sufa, Nahal Oz, and Karni crossings,³⁷ appear imminent. However, even from the press conference following the policy announcement, the Israeli government made it quite clear that it did not intend to open additional crossings any time soon. According to Israel's Coordinator of Government Activities in the Territories (COGAT) Major-General Eitan Dangot, "Kerem Shalom will be the main conduit for the supply of goods... We will supply all the needs that will be requested from Gaza through the present crossing point of Kerem Shalom." The Director-General of the Foreign Ministry Yossi Gal made similar comments at the same press conference. After pointing out that the new policy does allow for the opening

³⁶ Israel Ministry of Foreign Affairs, Prime Minister's Office Statement Following the Israeli Security Cabinet Meeting, 20 June 2010.

³⁷ While the conveyor belt at Karni Crossing has been open throughout the blockade, the Karni crossing itself has been closed for the past three years.

of new crossings, he stated "But I think that there is a lot of room to work on the existing crossings in terms of capacity."³⁸ As confirmed by several UN sources, as of the end of July 2010, Kerem Shalom remains the only goods crossing currently open.³⁹

While the Israeli government has announced that it has changed its policy to let in a substantially wider variety of products than ever before under the blockade policy, the Kerem Shalom crossing simply does not have the capacity to facilitate the transfer of goods required to match Gaza's large and diverse needs.⁴⁰ Unlike Kerem Shalom, Karni is the only crossing which has developed infrastructure. However, while the conveyor belt is used, the crossing itself remains idle while Israeli policymakers discuss infrastructure improvements at Kerem Shalom. While Karni is a full-fledged commercial crossing, Kerem Shalom is a paved field with some small lights and fuel pipes.



Figure 3: The photograph shows a side-by-side comparison of the entrances to the Kerem Shalom and Karni Crossings (Source: UN News Center).

38 Israel Ministry of Foreign Affairs , Briefing: Israel's New Policy Towards Gaza, July 5, 2010, http://www.mfa.gov.il/MFA/Government/Speeches+by+Israeli+leaders/2010/Briefing-Israel_new_policy_towards_Gaza_5-Jul-2010.htm.

39 Interviews with anonymous UN sources in Gaza close to the crossings, July 25, 2010.

40 To see a breakdown of Kerem Shalom's capacity by number of trucks, please see Gisha: Legal Center for Freedom of Movement's latest assessment at "Unraveling the Closure of Gaza," published on July 7, 2010 <http://www.gisha.org/UserFiles/File/publications/UnravelingTheClosureEng.pdf>.



Figure 4: The photograph shows the entry point and exit on the Israeli side of the Kerem Shalom Crossing. This crossing has only one lane in and one lane out. On the right is the entrance to the unused Karni Crossing. As exemplified in the above comparison, the Karni crossing is much better equipped than the Kerem Shalom crossing to handle large quantities of cargo.⁴¹

Since the announcement of the new policy, the Israeli government has begun construction activities at the Kerem Shalom Crossing. Specifically, on July 6, Israel began construction of 35,000 square meters of paved asphalt to the 'loading bay' on the Palestinian side of the crossing.⁴² While this is the terminology used by the Israeli government, the term 'loading bay' is somewhat misleading because the Gaza side of the Kerem Shalom crossing is just an asphalted field. In addition, the road leading to the crossing is being widened on the Palestinian side. On the Israeli side, they are expanding one of the staging areas used for security checks and they are developing an area for trucks to wait located outside of the terminal.

Further adding to the hindrances at Kerem Shalom crossing, Israeli policy requires a "split shift pattern" of loading and unloading cargo whereby the Israeli side moves cargo and only after they are finished can Palestinians begin to load the cargo onto their trucks. This double back to back system does not allow Israelis and Palestinians to unload and load cargo at the same time.⁴³

41 Kerem Shalom Crossing Source: Israel Ministry of Foreign Affairs, Briefing: Israel's New Policy Towards Gaza, July5, 2010, http://www.mfa.gov.il/MFA/Government/Speeches+by+Israeli+leaders/2010/Briefing-Israel_new_policy_towards_Gaza_5-Jul-2010.htm and Karni Crossing Source: UN News Center, Truckloads of goods enter Gaza, from Israel, UN Reports, November 2, 2009, <http://www.un.org/apps/news/story.asp?NewsID=32813&Cr=gaza&Cr1>.

42 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, June 2010.

43 This process was initially described in USAID-West Bank/Gaza, Trade Facilitation Project, Kerem Shalom Presentation, May 2009; Verification that this is still the policy via anonymous interviews with UN sources in Gaza close to the crossings on July 25, 2010.

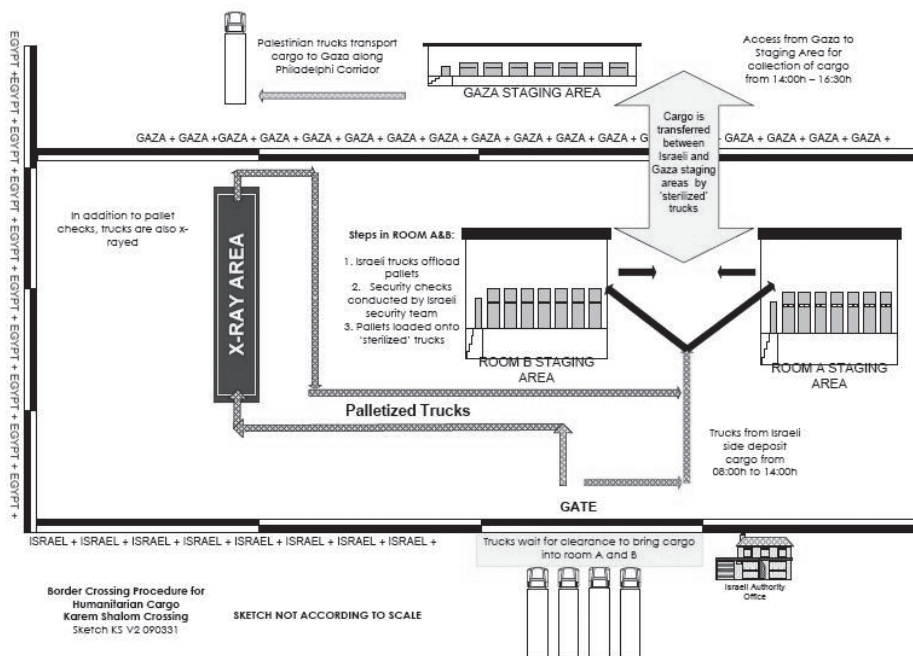


Figure 5: The above diagram shows the complicated process Israel requires to move goods through the Kerem Shalom crossing. This chart was created by the UN Logistics Cluster, an organization mandated with coordinating humanitarian organizations entry and exit of goods procedures. The above diagram was drawn after their May 24, 2009 visit to Kerem Shalom. Based on interviews with UN officers in Gaza, it was confirmed that this complex process is in place as of July 25, 2010.⁴⁴

This complex process does not allow for work on both sides of the crossings to happen simultaneously and thus unnecessarily slows down the process of transferring goods through the crossing.

As of July 25, 2010, the opening times on both the Israeli and Gaza side of the crossing has not changed with Israel's shift in policy. During the summer, the crossing has been open between 8 in the morning and 18:30 in the evening and will close earlier during the winter. Security checks and reloading onto trucks in the sterilized area are usually completed by 15:30. This gives the Palestinians until sun down to reload the cargo onto their trucks. It usually takes one and a half hours to load 100 trucks. Any cargo not loaded has to wait until 15:30 the next day, often delaying the transfer of new cargo arriving on that day.⁴⁵

⁴⁴ UN Logistics Cluster, Visit to Kerem Shalom, March 24, 2009, http://www.logcluster.org/ops/gaza09a/supply-chain/kerem-shalom-visit-of-logcluster-delegation/logistics-cluster_gaza_ks-visit_0900331.pdf.

⁴⁵ The opening and closing times were verified by anonymous interviews with UN sources in Gaza close to the crossings on July 25, 2010 and an additional interview with the logistics coordinator in Gaza for a major American aid organization on July 27, 2010.

To make matters worse, while vast lighting infrastructure exists on the Israeli side of the crossings, the Palestinian side lacks sufficient lighting. Approximately 3 months ago, after 2 years of requests from international aid agencies, three small lights were installed on the Gaza side of the crossing under the supervision of the Crossings Authority of the Israeli Ministry of Defense. In addition, Palestinians are not allowed in or near the crossing after dark, so all loading must be finished before the sun sets.⁴⁶ Even if the Israeli sponsored construction increased the number of trucks able to pass through the crossing to 250, there is no way to guarantee that the system will be able to process that many trucks in the hours the government allows the crossing to remain open.

In order to solve this backlog, many international aid organizations have continuously requested to use containers to transfer cargo instead of pallets. Before June 2007, most international aid organizations imported all products to Gaza in containers. When Karni was closed in June 2007, the Israeli government banned the use of containers.⁴⁷ Using containers would significantly speed up the process of loading and reloading and would make security checks much faster. As such, member organizations of the United Nations Logistics Cluster, including groups like the WFP, FAO, WHO, and UNRWA, requested permission from the Israeli government to use containers over 13 times during 2009.⁴⁸ Their repeated requests went unanswered and containers are still banned by the Israeli government.

In an interview, a UN source close to aid distribution policies in Gaza explained how he once asked the Israeli government why they banned containers and they replied that it is out of fear that Hamas would break them down and use them to line the walls of the tunnels under the Gaza-Egypt border.⁴⁹ However, this fear is untenable because the UN agencies that requested the permission also explained that they would be responsible for the exit and return of empty containers as a mechanism to monitor their use.⁵⁰ According to UN sources, containers would be taken directly from the Port of Ashdod to Kerem Shalom, pass through the crossing and distribute their goods in Gaza, exit through the Rafah crossing where EU security monitors would supervise an additional security check, enter Israel from Egypt through Nitzana and head back to the Port of Ashdod to pick up more goods.⁵¹ Using this system, international aid organizations could supervise the use of containers. As part of the June 20 announcement,

46 Ibid.

47 Anonymous interviews with UN sources in Gaza close to the crossings, July 25, 2010.

48 United Nations Logistics Cluster Situation Reports: 13-19 February 2009, 20-26 February 2009, 27 February – 04 March 2009, 14 – 20 March 2009, 21 -27 March 2009, 09-17 April 2009, 18 -24 April 2009, 16-28 May 2009, 29 May – 11 June 2009, 12 – 25 June 2009, 26 June – 9 July 2009, 7 August – 10 September 2009, 11 Sept – 8 Oct 2009.

49 Anonymous interview with UN source in East Jerusalem, January 26, 2010.

50 United Nations Logistics Cluster Situation Report, 13-19 February 2009.

51 Anonymous UN source, interview in East Jerusalem, January 20, 2010.

Israel declared that it would let in construction materials for Palestinian Authority approved projects with international supervision, showing their willingness to rely on international groups to monitor supposed 'dual use' items. In a similar fashion, the Israeli government could easily rely on international organizations to monitor the use of containers making the transfer and distribution process much faster than it is currently. Yet, the Israeli government does not do this, further slowing down the process of transferring goods and making it impossible for Gaza's needs to be met only by the cargo transferred through Kerem Shalom.

Beyond the physical aspects of the transfer of goods, Israel's Coordinator of Government Activities in the Territories (COGAT) has made the process for requesting clearance of humanitarian cargo quite challenging for both humanitarian and commercial goods. All shipments must include the Palestinian Authority donation number, a detailed list of goods including full description, quantities, weights, details of manufacturing date if available, and expiry date. All goods must have a minimum shelf life of one year, a certificate of origin, a certificate of health, and a non-commercial invoice.⁵² Even with these documents prepared well ahead of time, most humanitarian groups, including UN agencies, find it quite difficult to get approval for cargo even when they meet all the requirements. Even after providing photographs of goods and all of the necessary invoices and specification customs forms, aid groups must send many reminders before a decision is made regarding their shipments. Delays for several months at a time are not uncommon and arbitrary rejections and ad hoc policies are an everyday phenomenon.⁵³ These cumbersome procedures remained unchanged after the June announcement.

Lastly, while the June change in Israeli policy may increase the amount of food in Gaza, it will do nothing to eliminate Gaza's dependency on finished goods and will hinder the future development of industries. At the time of going to press, new items allowed in following the announcement were limited to consumer goods in packaging meant for family consumption. Local industries that struggle to make their products from the small amount of raw materials available in Gaza now must compete with the increased number of finished products coming from the crossings. For example, as of July 2010, the local beverage industry in Gaza is now under severe strain as it is challenged by the increase of ready-made cans of juice and soda drinks from Israel.⁵⁴ Furthermore, even if Israeli policy soon allows for the import of raw materials and not just finished goods, Gaza's dependency will not end without the ability to

52 United Nations Logistics Cluster, Briefing paper – in-kind donation to Gaza, accessed July 2010, <http://www.logcluster.org/ops/gaza09a/briefing-paper-in-kind-donation-to-gaza>.

53 Anonymous interviews with UN sources in Gaza close to the crossings, July 25, 2010.

54 Office of Coordination for Humanitarian Affairs, Humanitarian Monitor, June 2010.

export products to foreign markets. Without the ability to produce products in Gaza and export them outside of Gaza, Israel is forcing residents to remain dependent on foreign humanitarian aid without any prospects for becoming self-sufficient.

Without a real Israeli policy to end the blockade, which includes opening all land and sea crossings for unlimited transfer of both humanitarian and commercial cargo and the end of Israeli de facto control over the agriculture, fishing, and water sectors, the Gaza Strip will be unable to move beyond subsistence and the process of de-development will continue.

"Humanitarian Minimum"

Throughout the blockade, the State of Israel has maintained a policy of minimums in Gaza. To clear up a common misconception, while Israel regulates and facilitates the transfer of goods into Gaza, the State rarely sends aid into Gaza itself. Instead, international donors, humanitarian agencies, and commercial industries purchase goods and then work with the Israeli authorities to transfer them into Gaza for distribution. An evaluation of Israel's actions shows that the State believes its obligation is to facilitate the transfer of a humanitarian minimum in Gaza. The State has manipulated the definition of humanitarian to only apply to the provision of basic commodities like fundamental food and hygiene products. According to the State, commercial development and personal prosperity are not humanitarian goals. By just providing for this 'humanitarian' minimum, the State is further causing the de-development of Gaza where residents are dependent on charity and are unable to provide for themselves.

The closure policy enforced by the Coordinator for Government Activities in the Territories (COGAT) is informed by a document entitled "Food Consumption in the Gaza Strip – Red Lines." This document includes four pages of detailed nutritional charts that outline the bare minimum nutritional requirements for an individual's survival. Every person can find themselves on such a chart, by age, sex, weight, and height. According to journalists who saw the classified report, in large letters at the bottom of the document it says "the stability of the humanitarian effort is critical for the prevention of the development of malnutrition."⁵⁵ The document reflects Israel's understanding of their obligations the people of Gaza, namely that they should let just enough products through the crossings to prevent mass malnutrition.

55 Ha'aretz, Gaza Bonanza, Uri Blau and Yotam Feldman, June 11 2009.

Specifically, the Document explains “In order to make basic living in Gaza possible, the Deputy Defense Minister approved the entry into the Gaza Strip of 106 trucks with humanitarian products, 77 of which are basic food products. The entry of wheat and animal feed was also permitted via the aggregates conveyor belt outside the Karni terminal.”⁵⁶ First, in this quotation, the Israeli government is explicitly stating that it is attempting to “make **basic** living in Gaza possible.” This reaffirms that the State of Israel views its obligation to the people of Gaza as a bare minimum. Second, it sets a minimum standard of 106 trucks per day. Multiplying this number by the number of scheduled days of operation at both Kerem Shalom Crossing and Karni conveyor belt gives the minimum number of trucks the Israeli Defense Ministry believes is necessary to meet this minimum obligation to Gaza. Below is a chart comparing this minimum obligation to the number of trucks that in reality entered the Gaza Strip.

Month	Scheduled Days of Operation	Minimum Number of Trucks/Day as outlined by the Red Lines Document	Minimum Number of Trucks/Month as outlined by the Red Lines Document	Actual Number of Trucks/ Month that Crossed into Gaza
October 2009	26	106	2,756	2,291
November 2009	26	106	2,756	2,679
December 2009	27	106	2,862	2,453
January 2010	27	106	2,862	1,933
February 2010	24	106	2,544	2,104
March 2010	25	106	2,650	2,486
April 2010	24	106	2,544	2,411
May 2010	26	106	2,756	2,650

Figure 6: The above chart outlines, by month, the minimum number of trucks the Israeli government set as its obligation according to the “Red Lines” Document and the actual number of trucks that crossed into the Gaza Strip.⁵⁷

The above chart assumes that the Red Lines document specifies that the Israeli government must provide 106 trucks every day excluding the Sabbath and Jewish holidays. If the Document means every day, including these holidays, then the Israeli government is even

⁵⁶ Ibid.

⁵⁷ The number of scheduled days of operation by month and the actual number of trucks that crossed into Gaza by month comes from the following reports: Paltrade, Monthly Report, October-November 2009, Paltrade, Monthly Report, December 2009-January 2010, Paltrade, Monthly Report, February-March 2010, Paltrade, Monthly Report, April-May 2010. The minimum number of trucks per day comes from Ha'aretz, Gaza Bonanza, Uri Blau and Yotam Feldman, June 11 2009.

farther off from meeting its minimum obligation. In not one month between October 2009 and May 2010 did the Israeli government meet the minimum obligation it decided for itself. On average, the State permitted the transfer of only 87.6% of this minimum obligation per month. This minimum was not even reached by COGAT and the Israeli government as a whole.

Beyond the serious ethical concerns surrounding this document, it provides no mechanism to ensure that at least the bare minimum is reaching the mouths of Gaza's residents, let alone any recovery from this enforced crisis. It does not take into account the distribution of aid once it has entered Gaza, nor, crucially, does it take into account households' economic standing and their ability to purchase these food products.⁵⁸ Much more is "critical for the prevention of the development of malnutrition" than simply ensuring aid crosses the border into the Gaza Strip.

In late April 2010, the State confirmed the existence of this document in a High Court hearing brought by **Gisha: Legal Center for Freedom of Movement**. The State claims that this paper is just a draft used for "internal planning work," and "never used as a basis for the policy of the authority."⁵⁹ However, even if this document was just used for 'internal planning,' this still means that the State considered minimum nutritional requirements when building its closure policy. Crafting a policy that would allow for personal and commercial development is explicitly not on COGAT's agenda.

Additionally, the composition of the products allowed into Gaza reflects the State's belief that they can "get away" with providing the humanitarian bare minimum comprised mostly of food products. Between October 2009 and May 2010, on average 59.8 percent of products passing through the Kerem Shalom crossing were either designated as humanitarian or food products. If you include animal feed in this calculation, this number goes up to 76.8 percent.⁶⁰ An entire economy cannot be sustained, let alone developed, on basic food items. This prioritization on food items shows that the State only considers its obligation to the people of Gaza to extend to their basic survival rather than economic development.

Evaluating the State's use of the Kerem Shalom crossing reflects their conception of their minimum policy to Gaza's residents. Before the blockade policy began, Karni Crossing (and

⁵⁸ Ha'aretz, Gaza Bonanza, Uri Blau and Yotam Feldman, June 11 2009.

⁵⁹ BBC News, Details of Gaza Blockade Revealed in Court Case, Tim Franks, 3rd May 2010 <http://news.bbc.co.uk/2/hi/8654337.stm>

⁶⁰ his analysis comes from four reports: Paltrade, Monthly Report, October-November 2009, Paltrade, Monthly Report, December 2009-January 2010, Paltrade, Monthly Report, February-March 2010, Paltrade, Monthly Report, April-May 2010.

not just the conveyor belt) was the main entry and exit point for most imports and exports. Suva crossing was used exclusively for importing construction materials, a commodity that was basically not imported during the majority of the blockade. Erez crossing, in terms of transferring products, was mainly used for the importation of medical supplies. And Kerem Shalom was only used for the passing of humanitarian aid.⁶¹ During the majority of the Israeli blockade on Gaza, Kerem Shalom crossing has been the main passage for goods between Israel and Gaza (mid-September 2008 until the time of publication). In 2009, for example, 73.7 percent of products entered Gaza from Kerem Shalom Crossing, while the remaining 26.3 percent entered via the conveyor belt at the Karni Crossing.⁶² As previously discussed, the Karni Crossing, a developed commercial terminal, has the physical infrastructure to facilitate the transfer of hundreds of more trucks than Kerem Shalom. Yet, the once humanitarian crossing is now the main gateway into the Gaza Strip. Not only does this reflect the State's overall policy towards Gaza, it also severely limits the number of goods possible to transfer into Gaza.

To provide this humanitarian minimum, the Israeli government did not even operate the conveyor belt at Karni and the Kerem Shalom Crossing on all scheduled days of operation. The government schedules days of operation for most days of the week excluding the Sabbath and other Jewish holidays. Between March 2009 and May 2010, the conveyor belt at Karni was open for 133 days out of the 378 scheduled days of operation, or 35.2 percent of all scheduled days. Numbers at Kerem Shalom are a bit better; out of the 378 scheduled days, Kerem Shalom was open 323 days at 85.4 percent.⁶³ Closing the crossings on additional days beyond holidays makes the transfer of even the 'humanitarian' minimum into Gaza that much harder.

Israel's policy of only providing the minimum, a policy the State calls humanitarian, essentially shut down all of Gaza's industries relying on trade outside of Gaza. Save for a few trucks of cut flowers and strawberries allowed to exit as exports because of concentrated European pressure, exports from Gaza have been non-existent. Before the blockade, 76 percent of all Gaza-manufactured furniture products, 90 percent of all garments, and 20 percent of all food products left Gaza as exports to foreign markets.⁶⁴ Even the flowers that left Gaza were nowhere near pre-blockade levels. From 2000-2005, Gaza farmers exported an average of 48.2 million

61 Paltrade, Monthly Report, June 2009.

62 Paltrade, Monthly Report, December 2009-January 2010. This does not include the Nahal Oz fuel depot which was closed on January 1, 2010 and has not reopened since.

63 This analysis comes from five reports: Paltrade, Monthly Report, March-September 2009, Paltrade, Monthly Report, October-November 2009, Paltrade, Monthly Report, December 2009-January 2010, Paltrade, Monthly Report, February-March 2010, Paltrade, Monthly Report, April-May 2010.

64 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, July 2009.

flowers a year. In 2009, however, they were only able to export 1.1 million flowers.⁶⁵ More on exports and the effect on the farming industry will be discussed in the next chapter. Needless to say, Israel's policy of banning exports reflects their policy that commercial development and prosperity are not part of the 'humanitarian' minimum allocated for Gaza's residents.

COGAT does not always consult with Palestinians in Gaza to determine what products are needed to reach this 'humanitarian' minimum. In an interview with a Palestinian close to the crossings who chose to remain anonymous out of fear of political retribution, he explained that "there is definitely no role for the unions or businessmen in deciding things... the major player was and still is Israel."⁶⁶ Evaluating the needs of Gaza's residents is not a factor for the State in determining the products permitted and denied entry into Gaza. For example, over 2009 only 49% of the needed cooking gas was allowed into Gaza through the Crossings. The graph below shows this discrepancy.

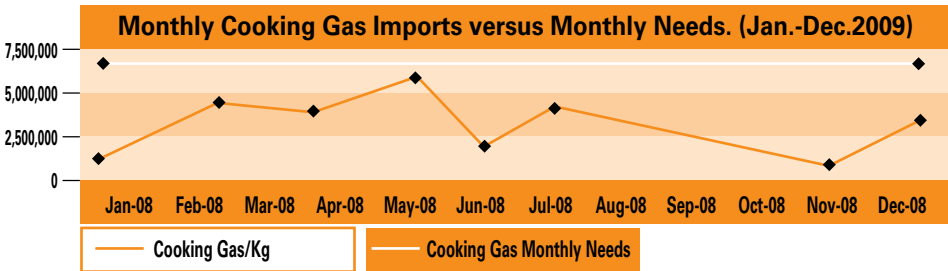


Figure 7: The graph above shows the differences in the kilograms of cooking gas allowed into Gaza from Israel versus the monthly need of Gaza's residents. Without examining the needs of Gaza's residents, the Israeli government cannot even reach the bare minimum of Gaza's needs.⁶⁷

When setting its policy for the amount of cooking gas to allow into Gaza, the Israeli government did not examine Gaza's overall needs. Palestinian economists determined the need above by evaluating personal and family consumption requirements as well as the needs necessary to run the food industry (including restaurants and processed food). COGAT does not evaluate such considerations when crafting their policy.

Instead of considering the needs on-the-ground, Israeli lobbies often corrupt COGAT by influencing this body to allow their products into Gaza. In June 2009, the Israeli newspaper Ha'aretz reported that various members of Israeli Vegetable and Fruit Growers Associations use their good rapport with government ministers and COGAT in particular to get their produce

⁶⁵ Paltrade, One year after the military operation, January 2010.

⁶⁶ Anonymous interview with Palestinian source close to the crossings, January 2010.

⁶⁷ Paltrade, One year after the military operation, January 2010.

into Gaza. The report describes how bribing the Defense Ministry is the key to gaining access to Gaza's markets.⁶⁸ Stories of corruption are further corroborated by the fact that certain products were let in under the 'commercial' designation, yet were denied when designated for humanitarian agencies. Specifically, shipments of veterinary items for the Food and Agriculture Organization (FAO) were classified indefinitely as 'under review,' while the exact same products were allowed in under commercial channels.⁶⁹ This policy raises the question of why COGAT approved the delivery of cargo for commercial use and yet denied the same products for humanitarian agencies. Instances like this, combined with previous reports of corruption, show that not only is commercial development not a factor for COGAT, but that the needs of Gaza's residents are sometimes subordinate to Israeli commercial interests.

In an attempt to show that COGAT is indeed humanitarian in nature, on March 22, 2009 the Cabinet announced that they would "enable the entry- without restriction- of foodstuffs to the residents of Gaza from all relevant sources, after it has been verified that they are indeed foodstuffs, and this is the framework of the humanitarian efforts. The Government directs that the foregoing be scrupulously implemented."⁷⁰ However, this announcement was just empty words. For example, in April 2009, just days after this policy announcement, fruit juice, sweets and chocolates, certain types of baby formula, beverages and tea were not let in to Gaza.⁷¹ From when the policy was announced to October 2009, the UN Logistics Cluster, the umbrella organization for international aid organizations that transfer goods through the crossings, called on the Israeli government on 9 separate occasions, asking them to follow through on this policy.⁷² Despite these appeals, the Israeli government did not follow through on this policy.

Israel's disregard for this policy change calls into question the government's commitment to their most recent policy announcement to expand the types of goods and overall activity of the crossings. With this as the precedent, Israel's commitment to its new June 2010 policy seems less concrete. Allowing all food products into Gaza, whether because Israel is following the March 2009 or June 2010 policy announcements, is essential in meeting any "humanitarian" standard. However, it is clear that Israel's obligation must go well beyond just meeting what it considers a "humanitarian" minimum. By not opening all land and sea crossings and

68 Ha'aretz, Gaza Bonanza, Uri Blau and Yotam Feldman, June 11 2009.

69 United Nations Logistics Cluster Meeting Minutes, 16 March 2009.

70 Israel Ministry of Foreign Affairs, Cabinet Communique, March 22, 2009, http://www.mfa.gov.il/MFA/Government/Communiques/2009/Cabinet_communique_22-Mar-2009.htm.

71 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, April 2009.

72 United Nations Logistics Cluster Situation Reports: 21 -27 March 2009, 09-17 April 2009, 18 -24 April 2009, 16-28 May 2009, 29 May – 11 June 2009, 12 – 25 June 2009, 26 June – 9 July 2009, 7 August – 10 September 2009, 11 Sept – 8 Oct 2009.

maintaining the blockade policy on all of Gaza's industries, Gaza cannot progress from bare subsistence to real development.

The Tunnel Economy

In order to compensate for Israeli limitations on product imports through the crossings and Israeli effective control and restrictions on Gaza's agriculture and fishing industries, residents of the Gaza Strip have developed a vast tunnel economy. In March of 2010, the World Bank estimated that 80 percent of Gaza's total imports come through the tunnels.⁷³ Until Israel ends the blockade by allowing imports through the land and sea crossings that match Gaza's needs and by ceasing their effective control over agriculture and fishing in Gaza, Gaza's residents will continue to act in spite of Israeli policy by developing an immense and intricate tunnel system.

Tunnels under the Gaza-Egypt border are not a new phenomenon. Since the early 1980s, PLO factions used tunnels to smuggle weapons into Gaza. Following a PLO crackdown on these tunnels in the late 1990s, the tunnel economy significantly decreased in size.⁷⁴ With the start of the blockade in Gaza in 2007, this small arms smuggling trade transformed into a well-developed pipeline for all types of goods to enter the Gaza Strip.

Although numbers vary according to source, most agree that today over 1,000 tunnels exist under the border, ranging in depth, length, and development.⁷⁵ Most are equipped with electric lighting, pulleys, and telephone lines and some even have cement walls.⁷⁶ While the blockade has shut down many Gaza businesses, the tunnel economy is the only industry to develop and flourish because of the blockade. Tunnels employ between 20,000-25,000 workers, and while wages have dropped as the tunnel economy has grown, tunnel wages are still some of the highest in the Strip, especially for Gaza's youth.⁷⁷ The tunnel industry is extremely dangerous; tunnel workers are often killed or injured from tunnel collapse or electrocution due to poor tunnel design or Israeli air strikes. Between January 1, 2008 and

73 IRIN Humanitarian News and Analysis, Egyptian Steel Barrier Tests Gazan Mettle, March 25 2010, <http://www.irinnews.org/Report.aspx?ReportId=88552>.

74 Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories, December 2009. <http://unispal.un.org/UNISPAL.NSF/0/04B5A703DD69F26A852576C500534BAB>.

75 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, July 2009

76 Paltrade, Monthly Report, August 2009.

77 Amer Madi, Hassan Abu Hassan, Nabil Al-Ghool, Omar Abu Ghosh, for the World Food Programme, The Impact of Closure and High Food Prices on Performance of Imported Staple Foods and Vegetable and Fruits Market in the occupied Palestinian territories, December 2009. <http://unispal.un.org/UNISPAL.NSF/0/04B5A703DD69F26A852576C500534BAB>.

April 1, 2010, 128 workers were killed and an additional 211 were injured.⁷⁸ Despite these difficult conditions, the resiliency of Gaza's population, the need for imports, and the lack of any other alternative has led to a well-developed tunnel economy.

Like any other industry, tunnel activity is cyclical and depends on supply, demand, and risks to the business. Such risks include tunnel collapse, electrocution of workers, Israeli air strikes, and Egyptian police harassment. But beyond such risks, the major influence of the types of products brought in through the tunnels is Israeli policy regulating imports through the crossings into Gaza. For example, beginning in December 2009, Israel allowed glass into Gaza for the first time since the blockade started. Previous to this change in policy, glass was brought into Gaza solely through the tunnels. Once Israel allowed glass into Gaza, the price of this product declined significantly.⁷⁹ For the first time, Gaza's poorer residents could afford to purchase glass and finally repair damages to homes and businesses brought on a year before by Israel's Cast Lead Operation. Such a trend could easily be replicated with other products, assuming Israel allows in sufficient amounts to match Gaza's needs. While some consider Israel's policy shift in June 2010 to be a positive step in this direction, as previously discussed, the capacity of the crossings is not nearly sufficient for imports to be able to match Gaza's needs.

While the tunnel economy has served as an important lifeline for Gaza's population under siege, the nature of the tunnel industry combined with the immediate needs of Gaza's residents has contributed to the overall deterioration of Gaza's economy. For over three years, Israeli policy dictated that most products in either raw material or finished form were not allowed entry into Gaza through the crossings. After the massive damages during Operation Cast Lead, construction inputs like cement and iron bars became the most important good needed in Gaza and therefore quickly became the most popular products imported through the tunnels. However, apart from construction inputs, other raw materials are rarely imported through the tunnels. Because of the nature of the tunnel industry, ready-made goods are much cheaper to transport through the tunnels.⁸⁰ In addition, the demand for finished goods like processed food and clothes is a lot higher in Gaza than for the raw materials needed to produce these goods in Gaza's industries. Even if raw materials arrived in Gaza through the tunnels, Gaza's manufacturers would be unable to export their finished products. While tunnels are a life-line for imports, their value is one-way; they do not provide a mechanism for export of products

78 Statistics are compiled from the Office of Coordination for Humanitarian Affairs' monthly Humanitarian Monitor Reports for 2008, 2009, and 2010.

79 Office of Coordination for Humanitarian Affairs, Humanitarian Monitor, March 2010.

80 The Portland Trust, Palestinian Economic Bulletin, March 2010.

into Egypt. And beyond a very small amount of agricultural products, Israel does not allow for exports through the crossings.⁸¹ All of these factors greatly contribute to Gaza's dependency on finished products, leaving them with almost no way to produce finished goods on their own. As the tunnel industry is a direct result of Israel's blockade on Gaza, the dependency of Gaza's population caused by the tunnel industry is yet another symptom of Israeli control on the Gaza Strip.

Despite the fact that the tunnels reinforce Gaza's weak economy, they prevent the situation in Gaza from devolving into a humanitarian crisis. While some tunnels do smuggle arms, Israel is set on destroying the entire system, including those tunnels that transport goods like diapers and food. According to sources within the Israeli military, during Operation Cast Lead alone, the Israeli army destroyed 60-70 percent of Gaza's tunnels.⁸² From the beginning of the blockade, Gaza's tunnels were often a target of Israeli military strikes sometimes on a daily or weekly basis. In other words, not only does Israel force Gaza's residents to rely on tunnels for basic food products, they frequently destroy this lifeline.

Egypt, like Israel, also acts against the tunnel economy. They too are responsible for creating Gaza's dependency and charity-based economy. However, this should not deflect responsibility from Israel as Egypt's actions are in line with Israeli policy and Egypt often acts in response to Israeli demands. Following the capture of Israeli soldier Gilad Shalit in June 2006, Egypt responded to Israeli pressure by ending its regular operation of the Rafah Crossing. In June 2007, the Rafah Crossing was completely closed.⁸³ Following the Gaza Flotilla events in May 2010, Egypt responded to internal and international pressure to reopen the Rafah Crossing. While Egypt does not always follow Israeli policy, Egypt's general desire to keep Rafah closed and end the tunnel trade reflects a general alignment between Egypt and Israel. While Egypt is also to blame for Gaza's deplorable state, Egyptian actions cannot be isolated from Israeli policy.

Beyond the closing of the Rafah Crossing, Egypt also actively combats the tunnel system. Egyptian police intervention has shutdown many of the tunnels and led to the arrest of scores of Gaza's tunnel workers. In December 2009, Egypt began its biggest endeavor to end the tunnel economy, namely the building of an underground steel wall. This wall, set to take

81 In addition to the previous discussion on exports, Israeli policy towards exports will be further discussed in the next chapter on Gaza's agricultural industry.

82 IRIN Humanitarian News and Analysis, Egyptian Steel Barrier Tests Gazan Mettle, March 25 2010. <http://www.irinnews.org/Report.aspx?ReportId=88552>.

83 Office of Coordination for Humanitarian Affairs, Humanitarian Monitor, April 2010.

18 months to complete, will be 10 kilometers long and 19 meters below the ground.⁸⁴ The wall will probably not completely end the tunnel economy; however, it will likely destroy the hundreds of smaller tunnels closer to the ground's surface. Other tunnels, built at a depth of 30 to 60 meters will not be affected. Israel has praised Egyptian efforts to combat smuggling and shutdown the tunnels.⁸⁵ While Egypt is also responsible for destroying Gaza's only lifeline, Israeli pressure on Egypt to carry out this destruction and Israeli praise for Egyptian efforts, both show that Israel cannot use Egypt as a way to deflect any of its responsibility for the situation in Gaza.

While the tunnels are Gaza's only lifeline, and while the June 2010 policy announcement has led to the increase in products entering Gaza, both do nothing to end Gaza's overall dependency on external aid.

Chapter 3: The Agriculture Sector

In light of the destruction caused to the agricultural sector in the Gaza Strip during Operation Cast Lead, the ongoing restrictions placed on farmers' access to their land along the border with Israel, a ban on exports, and a lack of essential agricultural inputs, the agriculture sector in Gaza is considered by international and local organizations working in Gaza 'barely viable.'⁸⁶ The agricultural industry has been almost destroyed by Israeli policies, affecting the livelihoods of approximately 45,000 people and their families. Currently, families' abilities to cope financially and remain food secure are under immense strain, as the population of Gaza has become increasingly dependent on international humanitarian organizations for their basic needs. The continuation of Israeli policies of suppressing agricultural production in Gaza makes the recovery of this sector, along with the whole economy of the Gaza Strip, virtually impossible.⁸⁷

84 BBC News, Egyptians build steel Gaza wall, Christian Fraser, December 9, 2009.
<http://news.bbc.co.uk/2/hi/8405020.stm>.

85 IRIN Humanitarian News and Analysis, Egyptian Steel Barrier Tests Gazan Mettle, March 25 2010
<http://www.irinnews.org/Report.aspx?ReportId=88552>.

86 EWASH, Advocacy Task Force Fact Sheet 6: Water for Agriculture and Food Security in Gaza, 29th March 2010.

87 Oxfam/Crisis Action, Failing Gaza: No rebuilding, no recovery, no more excuses, December 2009.

Exports

The most damaging aspect of the blockade on the agricultural sector is the ban on exporting farming produce, imposed by the Israeli authorities since June 2007. Despite the agreement between Israel and the Palestinian Authority in 2005, that 400 trucks of exports **per day** would be able to exit from Gaza, between April 2009 and April 2010, a **total** of 118 of trucks of exports have been permitted to exit.⁸⁸ Among other goods, like furniture, garments, and metal products, cash crops, vegetables, and processed food were some of the most popular products exported from the Gaza Strip before the blockade.⁸⁹ Although some trucks of cut flowers and strawberries have been allowed to exit Gaza, the ban on most exports has severely damaged the incomes of approximately 5,000 farmers dependent on the export of these cash crops, primarily carnations, strawberries, and cherry tomatoes.⁹⁰ A further 40,000 permanent and temporary workers from the sector have lost their jobs because of the ban on exports.⁹¹ The exports are crucial for people's livelihoods, and this produce is hard to sell within the Gaza market. The income obtained from selling it in Gaza is only a fraction of that obtained through exporting to Israel and Europe. This problem is made more acute by the fact that the saturation of the local market with such products has pushed down their prices even further.⁹² Many farmers lost half of their income since the export ban was imposed.⁹³

Before the blockade, the FAO reports that exports could reach 2,300 tons of strawberries, 55 million cut flowers, and 714 tons of cherry tomatoes annually. Since the start of the blockade, there has been almost no export activity, the Israeli authorities allowing only 2% of the annual strawberry harvest and 25% of cut flowers to be exported.⁹⁴ Most of these exports have been allowed only since January 2010, and these exceptions have been made possible only after interventions from foreign governments and humanitarian agencies. For example, in December 2009 the Dutch government negotiated with Israeli authorities to secure the exit of six truckloads of cut flowers the export to European markets.⁹⁵ The saturation of the local market with produce intended for export has led to the situation that some farmers

88 Agreement on Movement and Access, signed on November 15, 2005, <http://www.eubam-rafah.eu/portal/node/11>; Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, June 2010.

89 Paltrade, Monthly Report, June 2009.

90 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

91 World Food Programme/Food and Agriculture Organization/United Nations Relief and Works Agency, Joint Rapid Food Security Survey in the Occupied Palestinian Territory, May 2008.

92 Office for the Coordination of Humanitarian Affairs, Locked In: The humanitarian impact of two years of blockade on the Gaza Strip, August 2009.

93 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

94 Food and Agriculture Organization, Agriculture Fact Sheet: Farming without Land, Fishing without Water, May 2010.

95 Office for the Coordination of Humanitarian Affairs, The Humanitarian Monitor, December 2009.

have resorted to feeding their livestock with these products, or leaving them to go to waste completely.⁹⁶

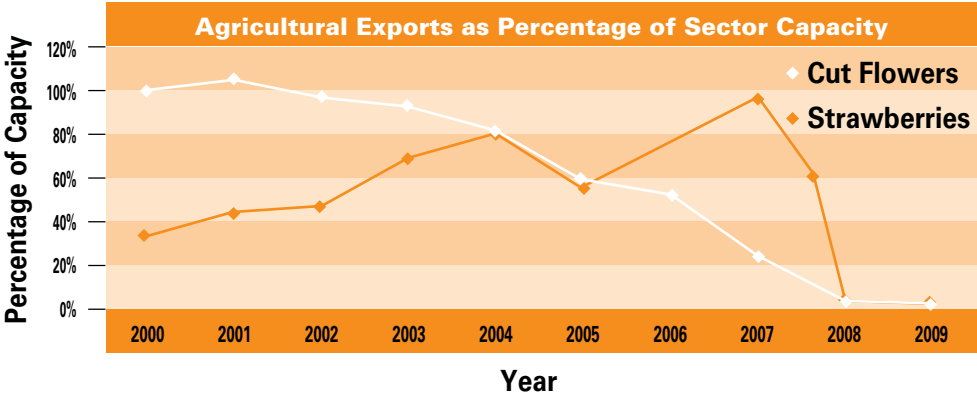


Figure 8: Cut Flower and Strawberry exports from Gaza as a percentage of sector capacity 2000 – 2009. Source: Paltrade.⁹⁷

The collapse of this industry will have negative effects on Gaza's economy and food security situation even longer than the blockade continues, given the difficulty and cost of the re-establishment of the industry once the farmers have ceased producing flowers and strawberries.⁹⁸ This problem is also exacerbated by the lack of inputs for the industry, such as strawberry mother plant seedlings, which will have a negative impact on future strawberry production.⁹⁹

The blockade on necessary agricultural inputs also has a significant effect on levels of production, alongside the violence and restrictions of the 'buffer zone' (see section below). There is a lack of inputs, like seeds, seedlings, and fertilizer, required for the agricultural sector, caused by the past refusal of COGAT to let such materials through the crossings. While the Israeli authorities sometimes claim that the denial of such materials is for security reasons – for example fruit and olive trees are not allowed through on the basis that they may 'provide cover for terrorists'¹⁰⁰ – it is clear that the blockade is intended to prevent the recovery and development of the agricultural sector. The UN Logistics Cluster reported in late 2009 that

⁹⁶ Office for the Coordination of Humanitarian Affairs, *Locked In: The humanitarian impact of two years of blockade on the Gaza Strip*, August 2009.
⁹⁷ Paltrade, *One Year After the Military Operation*, January 2010.
⁹⁸ Maan News, *Tons of flowers, strawberries piled up at closed Gaza crossing*, 08.01.2010.
⁹⁹ World Food Programme/Food and Agriculture Organization, *Update on Food Security Issues*, 20 April 2009.
¹⁰⁰ Gaza Crisis Response Logistics Cluster, *Meeting Minutes*, 21 April 2009.

such inputs for the agricultural sector were banned by the Israeli authorities, because they are “creating new livelihoods.”¹⁰¹

Between June 2007 and May 2010, the following necessary materials were the only ones consistently allowed through the crossings, but not in nearly sufficient quantities:

- feed for animals
- irrigation pipes
- compost

Other required items which are urgently needed in Gaza but were not allowed through the crossings, except for brief infrequent exceptions, include:

- livestock (cattle, chicks and sheep)
- feeders and drinkers for poultry farms
- iron bars for animal shelters
- nylon nets and wooden bases for greenhouses
- pumps for irrigation
- seedlings for fruit trees
- various kinds of fertilizer
- some kinds of veterinary drugs¹⁰²

This contrasts greatly to the inputs imported into Gaza before the blockade. Between June 2006 and June 2007, an average of 225 trucks of agricultural inputs entered the Gaza Strip. From January 2009 to February 2010 an average of 60 trucks were let in per month.¹⁰³

The amount of agricultural inputs entering the Gaza Strip after the start of the blockade is equal to approximately one quarter of the amount entering in the year before the blockade was imposed. It is also worth considering that although the average was 60 trucks per month, most of these were let in only after November 2009. For most of 2009, there were almost no trucks of agricultural inputs entering the Gaza Strip. Thus for production during 2009 there was only a very limited supply of materials needed for the agricultural sector, which will have its effect not only on what was produced in 2009 but also on future harvests. The June policy change may have a somewhat positive effect on the situation regarding agricultural inputs. However, fertilizers still remain on the list of prohibited items, and the increase in the number of trucks entering the Strip has until now been limited and still mostly comprising food items (as described in more detail in the imports chapter).

¹⁰¹ Occupied Palestinian Territories Logistics Cluster, Situation Report 11 September – October 8 2009.

¹⁰² Interview with UN source in Gaza, close to the agricultural sector; Occupied Palestinian Territories Logistics Cluster, Situation Report 28th March - 8th April 2009; Occupied Palestinian Territories Logistics Cluster, Situation Report 11 September – October 8 2009.

¹⁰³ Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, February 2010 and December 2009.

The water shortage in the Gaza Strip (as will be further described in Part II) is also having a severe effect on agricultural production, with as much as 70 percent of agricultural lands in the Strip no longer being irrigated.¹⁰⁴ This figure is a stark decrease from before Operation Cast Lead, when only approximately 33 percent of agricultural land had stopped being irrigated. Consequently, some farmers are changing the kinds of crops they grow to rain-fed crops, and because of the increasing salinity of the ground, young plants often do not survive.¹⁰⁵ Without the ability to depend on irrigation, farmers cannot guarantee end of season crop yields, increasing their personal financial insecurity and decreasing the amount of produce available in Gaza's markets.

In relation to livestock, the reduction in the amount of grazable land means an increasing reliance by farmers on animal feed, which has to be imported from Israel, and, as noted above, is only available currently in insufficient quantities.¹⁰⁶ The agricultural sector is also adversely affected by the power shortages under the blockade, disrupting the refrigeration of crops, the water supply, and lighting and heating for animal shelters. This particularly affects the yield of egg production and the output of dairy farms.¹⁰⁷

Water Contamination of Farmland in Tal al Hawwa, Gaza City¹⁰⁸

Mohammed Qandil is a farmer in Gaza City. Prior to Operation Cast Lead, he grew a wide variety of vegetables which he irrigated using an unlicensed well. Mohammed's farm is next to Gaza City's Waste Water Treatment Plant, which was severely damaged during Operation Cast Lead. This extensive damage caused raw sewage to flood Mohammed's farmland and fill his well. Mohammed was unable to plant crops on his land for several months. Even though he has returned to farming, Mohammed is worried: "the water I extract from the well looks clean, but I have been told that it's contaminated. That must be why some of my plants have died and the crop harvest is less than I expected. I'm relying on rainfall for irrigation now." Mohammed is concerned that in the dry months of summer he will have to rely on the contaminated well to irrigate his plants, even though he knows the water might damage them.

104 United Nations, Consolidated Appeals Process for occupied Palestinian territory, 2009.

105 EWASH, Advocacy Task Force Fact Sheet 6: Water for Agriculture and Food Security in Gaza, 29th March 2010.

106 Ibid.

107 Office for the Coordination of Humanitarian Affairs, Fact Sheet: Gaza's Electricity Crisis, 17 May 2010.

108 Testimony cited from EWASH Advocacy Task Force Fact Sheet 6: Water for Agriculture and Food Security in Gaza, 29th March 2010.

Coping strategies by Palestinians whose livelihoods have been severely affected by the collapse of the agricultural sector range from improvising on materials used for their work to turning to other sources of income altogether. For example, many farmers have reported that they have been attaching together old and worn-out plastic sheets used to cover their greenhouses as they either cannot afford new ones or are unable to find them in the market.¹⁰⁹ Many farmers have ceased employing workers, relying instead on household members' labor, which has led to the unemployment and underemployment of thousands of agricultural workers.¹¹⁰

Since the first months of 2010, some former farmers have gone as far as to cease farming in favor of collecting the rubble remaining from Cast Lead on their farming land to sell to brick factories. These factories use it for construction purposes, given the lack of construction materials, which are only minimally allowed through the crossings from Israel by COGAT.¹¹¹ There is increasing concern for those taking part in this work, given that it is mainly carried out in the buffer zone near the border fence. Many human rights groups have reported that such workers have been injured by the Israeli army while digging through rubble.¹¹²

The 'Buffer Zone'

Since the end of Operation Cast Lead, the Israeli army has expanded restrictions on access to arable land along the border with Israel, from anything between 150 meters to 2 kilometers away from the border. Under the Oslo Accords, this military no-go area was supposed to be limited to 50 meters in width.¹¹³ Only in May 2009 did the Israeli authorities officially declare the expansion of the 'buffer zone,' by dropping leaflets which warned farmers not to enter land within 300 meters of the border.¹¹⁴ The actual area where agricultural workers are in danger of attacks from the Israeli army ranges up to 2 kilometers from the border with Israel, however, and so farmers and other civilians can never be sure exactly where it will be safe for them to enter. In April 2010, the Israeli army went even farther by declaring the area along the border a 'combat zone.'¹¹⁵

The restrictions on access to agricultural land have a dramatic impact on the capacity of farmers to feed their families and to continue their work in providing basic foodstuffs to be

109 World Food Programme/Food and Agriculture Organization, Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip, February 2009.

110 Ibid.

111 Office for the Coordination of Humanitarian Affairs, Protection of Civilians Report, April 2010.

112 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, May 2010.

113 EWASH, Advocacy Task Force Fact Sheet 6: Water for Agriculture and Food Security in Gaza, 29th March 2010.

114 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, May 2009.

115 Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, April 2010.

sold in Gaza. A Save the Children UK survey found that, since 2000, 50 percent of respondents living in the buffer zone areas had lost their sources of livelihood, compared to 33 percent of the general population. And 73 percent of households in these areas live below the poverty line, compared to 42 percent of the general population.¹¹⁶

Violence against farmers in the Gaza Strip is not new. Ten to fifteen farmers have been killed every year during the last nine years.¹¹⁷ Between the 20th February 2009 and the 20th April 2010, at least 11 people, all farmers, or people involved in collecting rubble – none of whom were involved in violence against the Israeli army – have been killed by Israeli forces in or near the buffer zone.¹¹⁸ More recently, it was reported that 78-year-old Fuad Ahmad Matar was shot and killed by Israeli forces on the 14th of May 2010.¹¹⁹ In addition to the killing, 37 more people have been injured and the Israeli army has entered Gaza at least 173 times to raze sections of land near the border and/or detain farmers and others in the area for questioning.¹²⁰

Non-violent demonstrations against the restrictions on access to land since February 2010 have been met with live fire from the Israeli army, resulting in the injuries of several protesters and the death of a young Palestinian protester, Ahmad Salem Deeb, on 28th April 2010.¹²¹ In and around this designated zone the Israeli army has continued to kill and injure agricultural workers and other civilians, including children, and to enter the area in order to conduct land leveling operations. Such violence and restricted access is having a large effect on agricultural outputs, as there is a lower crop production due to the reduction of land available on which to grow crops and a low animal production resulting from the limited area on which animals can graze and the consequent over-grazing of land.¹²²

116 Cited in Food and Agriculture Organization, Agriculture Fact Sheet: Farming without Land, Fishing without Water, May 2010.

117 United Nations Human Rights Council, Report of the United Nations Fact Finding Mission on the Gaza Conflict, September 2009.

118 Office of the Coordination of Humanitarian Affairs, Humanitarian Monitor and Protection of Civilians Reports, February 2009 to May 2010.

119 Ha'aretz, Report: IDF soldiers kill elderly Palestinian near Gaza border, 15.05.2010; Maan News, Gaza medics: Elderly man killed by Israel forces, 15.05.2010 15.05.2010

120 Figures compiled from Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor and Protection of Civilians reports, January 2009 to May 2010.

121 Maan News, Gaza protester injured by Israeli fire dies in hospital, 28.04.2010, Ha'aretz, Palestinians: IDF troops kill Gazan at border protest, 28.04.2010, Office for the Coordination of Humanitarian Affairs, Protection of Civilians Reports, January 2009 – May 2010.

122 United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

The Testimony of R.¹²³

On Thursday, 25th February 2010, R. and his friend A. were on a piece of land owned by R.'s father, about 500 meters south of the Karni crossing. The land reaches to the border fence, but since the army confiscated 300 meters of the land from the fence, they no longer use that part of the land for growing crops. That day they were collecting rubble to sell, which the military had placed on their land to clear passage for their vehicles. While leaving their land, walking towards the main road, two soldiers suddenly started to shoot at them, and they started to run. A. was hit in his left hand. They went to Shifa hospital in Gaza, where he was treated before returning home. Due to these kinds of incidents, R. and his family can no longer farm about 4 dunams of their land, all near the fence. While the official policy bans human activity within 300 meters of the fence, soldiers have reportedly shot at civilians 500 or more meters away from the border.

Land-leveling operations and the frequent detention of Palestinian agricultural workers further hinders farming activity. For example, in February 2010, following an attempted attack on an Israeli border patrol, the Israeli army entered a few hundred meters inside Gaza and razed a rural area east of Al Maghazi refugee camp, in the process demolishing two civilian houses and one agricultural structure, and consequently displacing two families (comprising 13 people). In addition to this, Israeli forces leveled 18 dunams of cultivated agricultural land, including approximately 520 olive and citrus trees, before withdrawing.¹²⁴

The Testimony of S.¹²⁵

S. is a father of three, and works as a farmer on his land east of Wadi El-salqa in the central Gaza Strip. Since the year 2000, and the start of the Second Intifada, his land, which used to be a fertile source of olives, almonds, figs and different kind of vegetables, has been razed countless times by the Israeli army, drastically reducing S.'s ability to work his land and earn a living as a farmer. S. and his family (6 brothers and 7 sisters) used to be able to live off the produce of the 50 dunams of land that belonged to them. Since 2000 the land, which lies in the so-called 'buffer zone' imposed by the army, has become gradually less and less accessible to S. and his family. After Operation Cast Lead, in which further damage was caused to the land, it

¹²³ Testimony collected and shared with Physicians for Human Rights-Israel by B'Tselem.

¹²⁴ Office for the Coordination of Humanitarian Affairs, Protection of Civilians Report, February 2010.

¹²⁵ The testimony was shared with PHR-Israel by Bt'selem.

became practically impossible to work on any of the land. After the last war on Gaza, the Israeli army prohibited us, my brothers and I, from getting to the parts of our land which were left. Today we don't earn anything from the 50 dunams of land. We are left with it empty of any kinds of trees. There is an irrigation network on the ground, part of which was uprooted some time ago. I have no way of getting to the hose pipes to collect anything from them, as the Israeli army shoots at everybody who tries to get near to the land."

As a result of this situation, S. and his family are now dependent on the aid of UNRWA and S. is unable to support his children. His only means of making a living, as a farmer, has been made impossible by the restrictions imposed by the Israeli army and he fears for the future of his family if Israel does not end the blockade soon.

Damage during Operation Cast Lead

"The amount of destruction there was incredible. You drive around those neighborhoods, and can't identify a thing. Not one stone left standing over another. You see plenty of fields, hothouses, orchards, everything devastated. Totally ruined. It's terrible. It's surreal." – The description of the Gaza Strip by an Israeli soldier after Operation Cast Lead.¹²⁶

This mass destruction is the reality for the people and farmers of Gaza, well after the end of Cast Lead. With 186 greenhouses and 14,500 dunams of open fields completely destroyed, as well as 200,000 dunams of animal farms partially damaged, 17 percent of total farmland in the Strip was destroyed and direct damages were estimated at 180 million USD.¹²⁷ In addition 300,000 trees, including citrus, olive, stone fruit, palm dates and other species, were uprooted.¹²⁸ The loss of livestock also dealt a severe blow to the sector, as 35,750 cattle, sheep and goats and more than one million birds and chickens were killed during Operation Cast Lead.¹²⁹

¹²⁶ Breaking the Silence, Soldiers' Testimonies from Operation Cast Lead, Gaza 2009, August 2009.

¹²⁷ United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009; Agriculture Sector Report, Impact of Gaza Crisis, 2 March 2009; Oxfam/Crisis Action, Failing Gaza: No rebuilding, no recovery, no more excuses, December 22, 2009.

¹²⁸ World Food Programme/Food and Agriculture Organization, Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip, February 2009.

¹²⁹ United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.



Figure 9: A destroyed poultry farm in Zeitun after Operation Cast Lead.¹³⁰

Thus this already weakened sector, which nonetheless continued to employ 40,000 people before Operation Cast Lead, was devastated by the incursion, threatening both the livelihoods of many agricultural workers and a key source of fresh meat, fruit, and vegetables for the population of Gaza.¹³¹ During the attacks, many farming families were displaced from their homes, making it impossible to conduct agricultural work in many areas. Thus strawberry, cherry tomato, cut flower and other vegetable growers were unable to complete the winter harvest, their most profitable source of income during the annual cycle.¹³² Future production was also affected by the offensive, which damaged water resources necessary for agricultural activity: 250 ground water wells were demolished and a further 53 were damaged.¹³³ Israeli soldiers who took part in the operation report that such destruction was intentionally conducted with the aim both of clearing entire areas so that the Israeli army would have a clear field of vision as far as possible, and of fragmenting the Gaza Strip, separating the north,

¹³⁰ Photograph courtesy of FAO-Jerusalem.

¹³¹ Oxfam/Crisis Action, *Failing Gaza: No rebuilding, no recovery, no more excuses*, December 22, 2009.

¹³² Agriculture Sector Report, *Impact of Gaza Crisis*, 2 March 2009.

¹³³ World Food Programme/Food and Agriculture Organization, *Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip*, February 2009.

central and southern districts. One soldier reported that: 'One night they saw a terrorist and he disappeared so they decided he'd gone into a tunnel, so they brought a D-9 and razed the whole orchard.'¹³⁴



Figure 10: A destroyed agricultural storage building in Al Fukhari in the Gaza Strip.¹³⁵

¹³⁴ Breaking the Silence, Soldiers' Testimonies from Operation Cast Lead, Gaza 2009, August 2009.

¹³⁵ Photograph courtesy of FAO-Jerusalem.



Figure 11: Destroyed greenhouse in Al Fukhari in the Gaza Strip.¹³⁶

The damage caused to wastewater facilities also affected farming in Gaza, as sewage overflow from the bombed Gaza treatment plant in al-Zaytoun flooded up to 55,000 square meters of agricultural fields.¹³⁷ Further contamination of agricultural lands came from the weapons used by the Israeli army, with pollution from heavy metals from DIME (dense inert metal explosive) bombs and phosphorous from white phosphorous shells.¹³⁸ So far no conclusive studies have been done either on the effect of these residues on the viability of the contaminated land for agricultural use or the threats to the health of those eating products from such land, but residents of the Gaza Strip and experts are extremely concerned about these possible outcomes.¹³⁹

¹³⁶ Photo courtesy of FAO-Jerusalem.

¹³⁷ Amnesty International, *Troubled Waters – Palestinians Denied Fair Access to Water*, October 2009.

¹³⁸ Ibid.

¹³⁹ Interview with Amani Jouda, National Nutrition Officer, WHO Gaza Office, 16th February 2010; Palestinian National Authority, *Palestinian Early Recovery and Reconstruction Plan for Gaza*, March 2009; World Food Programme, *Food Security and Market Monitoring Report*, April 2009.

This massive destruction caused by Operation Cast Lead has also adversely impacted Gaza's wheat mills. The levels of production and availability of bread, the most basic of staple food products, have fluctuated over the course of the blockade. Shortages of wheat flour stock and cooking gas have affected the capacity of flour mills and bakeries to meet the demand for bread in the Gaza Strip. One of the 7 flour mills in Gaza, Al Bader, was destroyed by the Israeli army during Operation Cast Lead, and remains out of operation at the time of publication. Despite rising levels of wheat flour stock in late 2009, bakeries were still operating at only 50-60 percent of their capacity in the first quarter of 2010, due to shortages of cooking gas.¹⁴⁰

Like agricultural workers, livestock herders and chicken breeders were also severely impacted by Operation Cast Lead. Whole chicken farms were destroyed during the Operation, leading to the death of over one million chickens and birds. Over 70 percent of Gaza's residents rely on chicken for animal protein, generally the cheapest kind of meat available. Following the Cast Lead Operation, chicken prices have been on the rise, due to a decreased availability and a shortage of animal feed and gas for incubators. Some families are struggling to be able to afford chicken and are eating fresh meat less as a result.¹⁴¹ This is one example of the increasing levels of food insecurity and poor diet under the blockade, as described in an earlier chapter of this report.

The damage to the agricultural sector caused by Operation Cast Lead has been cited as a key reason that levels of food insecurity in the Gaza Strip continue to rise.¹⁴² Future livelihoods are also under threat, as the damage caused by Operation Cast Lead is predicted to cause a change in the variety of agricultural products available to cultivate, which will disrupt the farming economy in the long term.¹⁴³ Without an end to the Israeli blockade, food insecurity in Gaza will only continue to get worse.

140 World Food Programme, Food Security and Market Monitoring Report, April 2009; World Food Programme, Food Security and Market Monitoring Quarterly Report, January to March 2010.

141 Office for the Coordination of Humanitarian Affairs, Field Update on Gaza from the Humanitarian Coordinator, 2 – 9 March 2009.

142 World Food Programme/Food and Agriculture Organization, Socio-economic and food security survey report 2 – Gaza Strip, November 2009; Agriculture Sector Report, Impact of Gaza Crisis, 2 March 2009.

143 Food and Agriculture Organization, Agriculture Fact Sheet: Farming without Land, Fishing without Water, May 2010.

Chapter 4: The Fishing Sector

Like the agriculture industry, Gaza's fishing sector has been virtually wiped out over the course of the blockade. In April 2007, the peak month for fishing season, 237 tons of fish were caught and sold. In April 2009, only 79 tons of fish were harvested.¹⁴⁴ Looking at the cumulative fish catch from January to September for 2008 and 2009, the Food and Agriculture Organization reported a 63% decrease.¹⁴⁵ Initial figures also suggest a further reduction in the catch in the first months of 2010, declining by one-third in March 2010 compared to the parallel figure for March 2009.¹⁴⁶

These dramatic figures reflect the steep decline of the fishing industry in the Gaza Strip, which until recently provided an important source of employment and income for thousands of fishermen and others working in the sector, as well as contributing to a staple in the diet of the Palestinians in Gaza. Fishermen are struggling to survive from what they can catch under the naval blockade, which restricts their access to the waters off the Gaza coast and involves daily harassment of their boats by the Israeli navy. People in Gaza now rely on the tunnel trade for fresh and frozen fish, which supplies fish at lower prices than the fishermen of Gaza can afford to match. This situation is the direct result of a sustained policy by the Israeli military to keep Gaza's fishermen out of their waters. This further shows how the occupation and blockade have created a population largely dependent on humanitarian aid and unable to engage in production and consumption on their own terms.

The 'Buffer Zone'

As part of the Oslo Accords, Palestinians are supposed to be allowed to fish up to twenty nautical miles into the waters off the Gaza coast.¹⁴⁷ This commitment has been consistently disregarded by the Israeli navy, who currently limit the distance to approximately three nautical miles from the coast, as well as imposing 'buffer zones' of approximately two nautical miles at both the north and south ends of Palestinian waters.¹⁴⁸ Fishermen who sail beyond these restrictions are frequently shot at, detained, or have their equipment damaged or confiscated. Sometimes such incidents occur even within the 3 nautical miles zone. In the context of this violence, the fishing sector in Gaza has all but collapsed.

144 Office for the Coordination of Humanitarian Affairs, Locked In: The humanitarian impact of two years of blockade on the Gaza Strip, August 2009.

145 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

146 Office for the Coordination of Humanitarian Affairs, Protection of Civilians Report, May 2010.

147 The Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip, Annex I, Article XIV, September 28, 1995; B'tselem, Israel's control of the airspace and the territorial waters of the Gaza Strip, accessed May 2010, http://www.btselem.org/english/gaza_strip/control_on_air_space_and_territorial_waters.asp.

148 IRIN Humanitarian News and Analysis, Gaza fishing industry reeling, 12th March 2009.



Map 2: The Coast of the Gaza Strip: Areas Restricted for Palestinian Access.¹⁴⁹

The restrictions depicted above have never been officially communicated by the Israeli military to the fishermen of Gaza, who instead are forced to gauge the situation daily by the ‘line of fire’ – they venture as far out as they can into the waters before they are shot at or arrested by the Israeli navy. Despite this violence, some fishermen continue to attempt to catch fish, for lack of an alternative livelihood and given the demand within the Gaza Strip for seafood. Over the years, several fishermen have been severely injured and on the 28th August 2009 one man was killed by the Israeli navy. Between the end of Operation Cast Lead and May

¹⁴⁹ Map courtesy of the Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, May 2009.

2010, incidents of shots being fired, arrests, or equipment being damaged or confiscated by the Israeli navy are reported by representatives of the sector in Gaza to be daily occurrences.¹⁵⁰

Before firing, the Israeli navy often shouts at the fisherman. Mohamed Al-Hissi, from the Gaza Fisherman's Syndicate, reports that soldiers have shouted to the fisherman: 'Release Shalit, or we will not allow you to fish freely.'¹⁵¹ A former Captain in the Israeli Navy confirmed the intensification of the harassment of fishermen in the run-up to the blockade and the 2008-2009 offensive. In an anonymous interview, he told us that permission to shoot in the air, in the water, or at the boats themselves, became easier to obtain from the commanders, and each time he went back to do reserves, he noticed soldiers radioing in an increasing number of requests to arrest fishermen. These tactics of harassment are employed with the knowledge that these are simply fishermen, trying to catch fish, and not engaged in any illegal or violent activities: "you know when a fisherman behaves like a fisherman, and when someone else behaves oddly, you think, where are his nets, his fishing tools, why is he sailing so close to you, why is there only one guy on board? All kinds of things," explained this former Navy captain.¹⁵² Despite this knowledge, the navy routinely shoots at fishermen who are simply trying to catch fish, confiscates or damages their equipment, or detains them - sometimes for days or weeks at a time - before they are sent back to the Gaza Strip.

Testimony of F.

F, father of five children, lives in the Al-Rimal neighborhood of Gaza City. Together with two friends, he bought a boat, which cost 22,000 USD, in order to be able to fish as a source of income to feed his family. On April 28th 2010, they were attacked by the Israeli navy while fishing on the boat about 1 km from the shore, between Rafah and Khan Younis. The navy started to shoot at them and threaten them on megaphones, for about an hour. The men were then asked to take off their clothes and jump into the water, which they did. They were shot at in the water, until they reached the army boat after about five minutes. The navy took the 3 of them to Ashdod, where they were interrogated by army officers for two hours each. They were then transferred by the army to the Erez crossing, where they were further interrogated by the General Security Services (GSS). On refusing to cooperate with the GSS as collaborators in Gaza, they were taken to a cell where they were held naked for 6 hours. They were given some old, smelly clothes to put on instead of their own clothes and then

¹⁵⁰ Office for the Coordination of Humanitarian Affairs, Protection of Civilians Reports, January 2009 – April 2010.

¹⁵¹ Interview with Mohamed al-Hissi, Gaza Fishermen's Syndicate, 6th May 2010.

¹⁵² Interview with former Israeli navy captain who chose to remain anonymous, March 2010.

released on foot into Gaza. Soon after, F. approached the Red Crescent and other Human Rights organizations to help him get his boat back, but until today it is still confiscated by the Israeli navy.

In order to get around the restrictions imposed by the Israeli navy, some of Gaza's fishermen have started to head towards Egyptian waters, a dangerous but sometimes more profitable route. While there is no official agreement from the Egyptian navy to let fishermen from Gaza work in Egypt's waters, sometimes they are able either to catch fish in Egyptian waters or purchase fish from Egyptian boats at sea. However, on certain occasions, the Egyptian navy has shot at, detained, or confiscated equipment of fisherman coming from Gaza.¹⁵³ One fisherman was killed by Egyptian forces on the 12th of May 2010, after being chased by the Egyptian navy off the coast of Rafah.¹⁵⁴

153 Reuters, In seaside Gaza, fish in short supply, 24.02.2010; interviews with Nizzar Ayyash and Mohamed al-Hissi, Gaza Fishermen's Syndicate, 29th April and 6th May 2010; Food and Agriculture Organization, Agriculture Factsheet, May 2010.

154 Maan News, Gaza fisherman killed off Rafah, 12.05.2010; Office for the Coordination of Humanitarian Affairs, Protection of Civilians Report, May 2010; Food and Agriculture Organization, Agriculture Factsheet, May 2010.



Figure 12: Fishing boat of Khaled Al-Habil, set on fire by the Israeli army in September 2009.¹⁵⁵

Efforts to resist this violence and to continue to earn a living despite the difficult circumstances are reflected in the reported increase in numbers of people working as fishermen or in the fishing sector since the beginning of 2010. This is due to the high levels of unemployment, causing people who used to work in other sectors to turn to the dangerous fishing sector as a source of income. Hundreds of fishermen and workers who abandoned the sector in the past, because of Israeli attacks, have now returned for want of any other employment.¹⁵⁶

¹⁵⁵ Photo courtesy of International Solidarity Movement, Fishing Under Fire, <http://fishingunderfire.blogspot.com/>, accessed May 2010.

¹⁵⁶ Palestinian Centre for Human Rights, Factsheet: Israeli Attacks on Palestinian Fishermen in Gaza, 05 May 2010.

Restriction on Inputs

While the central problem facing fisherman is the restrictions on access to their waters, fishermen also have to deal with confiscated, broken, or damaged equipment. Many boats, nets, and other equipment belonging to Gaza's fishermen were damaged by the Israeli military during Operation Cast Lead and because of COGAT's input restrictions, they have not been replaced.¹⁵⁷ Throughout the blockade policy, nets and motors for fishing boats, which were ordered and paid for by fishermen in Gaza, have been confiscated and remain sitting idle in the West Bank or the Ashdod port in Israel. Since the policy change, such inputs have only entered through the crossings in small quantities (at the time of going to print), as opposed to the complete ban on these products over the last three years. In light of this situation, Gaza's fishermen have become adept in new skills, such as sewing old, smaller nets together to make nets of the required size, or taking working motors from damaged boats to replace broken motors in boats that are still able to sail. Such methods are costly in time and often unreliable, causing major problems at sea. These creative coping mechanisms are best summed up by Nizzar Ayyash, of the Gaza Fishermen's Union, who describes: "Once we used to work with fuel. When there was no fuel we turned to gas. When there was no gas, we turned to generators. But for generators we need fuel, so we started putting cooking oil in the generators."¹⁵⁸

The desperate state of the fishing sector in Gaza is also illustrated by the development of a new technique – land-based fish farms. First seen in the Gaza Strip in 2004, the sector suffered when many fish farms were destroyed during Operation Cast Lead. Out of necessity, however, this industry has grown in 2009 and 2010 to about 14 aquaculture projects, involving both the private and public sectors. Such initiatives are being supported by international bodies, in particular the Food and Agriculture Organization, in order to counter the effects of the restrictions on access to the sea off Gaza's coast.

Land-based fish farms are projected, however, to produce only 150 tons of fish this year, which is a very small amount relative to the pre-blockade average annual catch by sea-based fishermen. In addition, Israel's restrictions on imports of products through the crossings has made it almost impossible to obtain essential parts in Gaza including such as fodder, aerators, cleaning pumps, and filters. Even with the new policy announcement, when these materials are available in Gaza, they are very expensive. There is a similar shortage of

157 United Nations Human Rights Council, Report of the United Nations Fact Finding Mission on the Gaza Conflict, September 2009.

158 Interview with Nizzar Ayyash, Gaza Fishermen's Syndicate, 29th April 2010.

broodstock fish, the basic stock from which fish farms are bred, which are urgently needed to replenish low supplies. In addition, the energy crisis also affects these fish farms, as costs are increased by having to rely on generators for power.¹⁵⁹

Livelihoods

As a result of the difficult circumstances under which Gaza's fishermen are currently forced to work, many kinds of fish previously available can, at the time going to print, only be purchased through the tunnel trade, at high prices. The type of fish most commonly consumed in the Gaza Strip is the sardine, the price of which has risen from about 6 NIS/kg three to four years ago, to 20-25 NIS/kg for locally caught fish today.¹⁶⁰ All the fish which are caught by Palestinian fishermen in Gaza are sold and consumed as soon as they go on the market, demonstrating how high the demand is for the rare produce.¹⁶¹ As of July 2010, even sardines are now being imported through the tunnels, because of the shortage caught by Gaza's fishermen. These are sold for cheaper prices (about 18 NIS/kg) than the locally caught sardines, which in turn threatens to make it even harder for Gaza's fishermen to survive from what they catch.¹⁶² While some seafood is allowed through the crossings by the Israeli authorities, it is generally spoiled by the time it reaches Gaza's markets, because of the long delays and waiting times at the crossings.¹⁶³

With Israel's blockade policy, overfishing, the process by which so many adult fish are caught that not enough remain to breed and replenish the population, has become a major problem in the Gaza Strip. Given the combination of a high demand for fish products in Gaza, and the restriction from fishing further out to sea than 3 nautical miles, fishermen in Gaza now mainly catch very small, immature fish – the only fish they are capable of catching given such harsh restrictions. These replace the main kind of fish usually consumed in Gaza, the sardine, which is found outside of the 3 nautical mile limit (the sardine catch thus decreased by 72% in 2009).¹⁶⁴ This situation leads to over-fishing of the fish which are found within the waters close to the shore, and experts are currently highly concerned about the impact on

159 Reuters, In seaside Gaza, fish in short supply, 24.02.2010; BBC News, Gaza's fishermen look to farms, not the sea, Jon Donnison, 02.02.2010; Food and Agriculture Organization, Agriculture Factsheet, May 2010; Occupied Palestinian Territories, Logistics Cluster Situation Report 11 September – October 8 2009; Interview with UN source in Gaza, close to the fishing sector.

160 Interview with Amani Jouda, National Nutrition Officer, WHO Gaza Office, 16th February 2010; World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

161 Interview with Nizzar Ayyish, Gaza Fishermen's Syndicate, 29th April 2010.

162 World Food Programme, Food Security and Market Monitoring Quarterly Report, January to March 2010.

163 Interviews with Nizzar Ayyash and Mohamed al-Hissi, Gaza Fishermen's Syndicate, 29th April and 6th May 2010.

164 Food and Agriculture Organization, Agriculture Factsheet, May 2010.

future supplies.¹⁶⁵ Recent campaigns by international agencies and the Fisherman's Union in Gaza have warned against over-fishing of the seas which is having a disastrous impact on the ecosystem and future stocks of fish close to the Gaza shore.¹⁶⁶ The fishermen's union and experts in the field agree, however, that in such conditions there is no alternative but to fish in this environmentally irresponsible way, given the need for fish as a protein source in Gaza and the high number of fishermen whose source of income is in jeopardy.¹⁶⁷ This situation does not bode well for the future of the fishing industry in Gaza, as, even once the blockade is lifted, the marine ecosystem may be irreparably damaged, affecting future fish supplies in the long term.

Therefore, most fishermen and their families are currently food insecure. In addition to the direct effects on these people, access to fish, a basic source of animal protein, has become harder for the wider population of Gaza. Fish are available in Gaza's markets, but only at a high price, making the average person in Gaza unable to include fish in their family's diet on a frequent basis. The collapse of the fishing sector is thus a significant factor in rising levels of food insecurity under the blockade, and part of a shift in the reality in Gaza which has defined Palestinians as recipients of a humanitarian minimum, rather than persons with the capacity to lead full and self-sufficient lives.

¹⁶⁵ United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009; World Food Programme/Food and Agriculture Organization, Report of the Rapid Qualitative Emergency Food Security Assessment Gaza Strip, February 2009; Office for the Coordination of Humanitarian Affairs, Locked In: The humanitarian impact of two years of blockade on the Gaza Strip, August 2009.

¹⁶⁶ Interview with Nizzar Ayyash, Gaza Fishermen's Syndicate, 29th April 2010.

¹⁶⁷ Interviews with Nizzar Ayyash and Mohamed al-Hissi, Gaza Fishermen's Syndicate, 29th April and 6th May 2010; Al-Dameer Association for Human Rights, A special report on marine environment in the Gaza Strip, June 2009.

Part II: Gaza's Water Crisis

Chapter 1: Water and Health

Diarrhea and poor sanitation are not new problems for the Palestinians of Gaza. Even though poor water infrastructure existed in Gaza well before the start of the Israeli blockade, the last three years has witnessed a major degradation of Gaza's water system. The United Nations Relief and Works Agency (UNRWA), which carries out surveillance of infectious diseases among the refugee population in Gaza, reports that watery diarrhea and acute bloody diarrhea are the major causes of morbidity among the population.¹⁶⁸ These two diseases, according to the World Health Organization (WHO), are caused by an unsafe water supply, inadequate sanitation, and poor hygiene.¹⁶⁹

Diarrhea in Gaza is so bad that UNRWA's alarm threshold for levels of acute watery diarrhea among children under 3 years was breached several times in 2009, and UNRWA warned that "the risk of decreasing levels of hygiene, consequent to the infrastructure damage brought upon by the recent conflict, puts the Gazan population at risk of epidemics of food and water borne diseases. Access to safe water and to sanitation should be ensured in the Gaza Strip to reduce the risk of outbreaks."¹⁷⁰

Levels of these diseases have stabilized since Operation Cast Lead, but they are still high and have caused many easily preventable deaths. In a survey carried out from August to December 2009, twenty percent, or one in five, of households said they had at least one child below five years old who had been infected with diarrhea in the four weeks prior to being surveyed.¹⁷¹ 12 percent of young deaths in Gaza can be attributed to diarrhea, a figure which could be dramatically reduced with access to safe water and adequate sanitation.¹⁷²

¹⁶⁸ United Nations Relief and Works Agency, Epidemiological Reports, January 2009 to May 2010.

¹⁶⁹ World Health Organization, Water, sanitation and hygiene links to health, Facts and figures, November 2004, http://www.who.int/water_sanitation_health/publications/facts2004/en/index.html, accessed in May 2010.

¹⁷⁰ United Nations Relief and Works Agency, Epidemiological Bulletin, Volume 1 Issue 1, 15th February 2009.

¹⁷¹ UNICEF/Palestinian Hydrology Group, Water, Sanitation and Hygiene Household Survey, April 2010.

¹⁷² EWASH, Factsheet 3: Water Quality in the Gaza Strip.

Blue Baby Syndrome:

High nitrate levels in the water supply in Gaza are also thought to cause the relatively high levels of a potentially fatal condition known as 'blue baby syndrome' (methaemoglobinemia).¹⁷³ In 2007, 48.5 percent of infants under 12 months old in the Gaza Strip had blood levels with at least 10 percent methemoglobin.¹⁷⁴ The WHO describes the condition, "Methaemoglobinemia is characterized by reduced ability of the blood to carry oxygen because of reduced levels of normal haemoglobin. It is uncommon. Infants are most often affected, and may seem healthy, but show signs of blueness around the mouth, hands, and feet, hence the common name "blue baby syndrome." These children may also have trouble breathing as well as vomiting and diarrhea. In extreme cases, there is marked lethargy, an increase in the production of saliva, loss of consciousness and seizures. Some cases may be fatal. In the body nitrates are converted to nitrites. The nitrites react with haemoglobin in the red blood cells to form methaemoglobin, affecting the blood's ability to carry enough oxygen to the cells of the body. Bottle-fed infants less than three months of age are particularly at risk. The haemoglobin of infants is more susceptible and the condition is made worse by gastrointestinal infection. Older people may also be at risk because of decreased gastric acid secretion. The most common cause of methaemoglobinemia is high levels of nitrates in drinking-water. Levels greater than 50mg/litre are known to have been associated with methaemoglobinaemia in bottle fed infants."¹⁷⁵ No recent studies have been conducted on infants in Gaza; however, physicians in hospitals and clinics report this Syndrome as fairly common.

Beyond diarrhea and methaemoglobinemia, other health conditions are known to inflict Gaza residents because of the poor water infrastructure. The FAO and WFP, in their analysis of levels of food insecurity in the occupied Palestinian territories, report that the poor quality and insufficient amount of available water for drinking, cooking, and hygiene increases the risk of parasites and skin infections. These in turn increase the likelihood of malnutrition for the most vulnerable groups, including young children.¹⁷⁶

173 EWASH, Fact Sheet: The Impact of the Blockade on Water and Sanitation in Gaza, 03.09.2009; The World Bank, West Bank and Gaza Assessment of Restrictions on Palestinian Water Sector Development, Sector Note, April 2009.

174 Gaza Strip Health Cluster Meeting Minutes 14 October 2009.

175 World Health Organization, Water-related diseases: Methaemoglobinemia, http://www.who.int/water_sanitation_health/diseases/methaemoglob/en/; see also World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

176 World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009.

Chapter 2: Gaza's Water System

“States...should refrain at all times from imposing embargoes or similar measures, that prevent the supply of water, as well as goods and services essential for securing the right to water. Water should never be used as an instrument of political and economic pressure.” - UN Committee on Economic, Social and Cultural Rights, General Comment 15

Water Infrastructure

The destruction of the water treatment and distribution network during Operation Cast Lead brought into crisis a system already under severe pressure, caused by years of neglect under occupation and the further deterioration under the Israeli blockade since 2007. The United Nations Environment Programme (UNEP) reports on the dire situation even before Operation Cast Lead: “the Gaza Strip had 97 percent water supply coverage at 80 liters per capita per day, and 64 percent sewage collection and treatment coverage. The water supply was often saline, however, and was well below international standards of drinking.”¹⁷⁷ The 2008-9 offensive damaged the water distribution infrastructure to the extent that, at the height of the attacks, over 800,000 Palestinians had no access at all to running water.¹⁷⁸ Since January 2009, international humanitarian agencies working in Gaza and the Gaza Coastal Municipalities Water Utility (CMWU) have struggled to repair this damage and conduct regular maintenance work on the water network due to a lack of the necessary materials. In addition, the ongoing shortage of power has severe effects on the amount and quality of water available to the Palestinians of Gaza.

After the offensive, the damage caused to the water and wastewater facilities in Gaza was found to include the following:

- 11 drinking water wells (partially damaged or totally destroyed)
- Gaza wastewater treatment plant was hit and one of its lagoons was severely damaged
- 20 kilometers of steel and plastic water pipes
- about 7.5 kilometer of steel, UPVC, and asbestos sewage pipes
- about 5,700 roof storage tanks were destroyed and about 2,900 were damaged¹⁷⁹

¹⁷⁷ United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

¹⁷⁸ Amnesty International, Troubled Waters – Palestinians Denied Fair Access to Water, October 2009.

¹⁷⁹ The European Network of Implementing Development Agencies (EUNIDA) Final Report, Damage Assessment and Needs Identification in the Gaza Strip, March 2009; United Nations Human Rights Council, Report of the United Nations Fact Finding Mission on the Gaza Conflict, September 2009, EWASH, Factsheet 1: The Impact of the Blockade on Water and Sanitation in Gaza.

The damage to 11 out of approximately 160 municipal drinking water wells reduced the percentage of working wells from 80 percent before Operation Cast Lead to 70 percent afterward.¹⁸⁰ While some of the damage to the wells has since been repaired, this work took place under the difficult circumstances of the ongoing blockade, with the CMWU having to rely on international humanitarian agencies in order to obtain and transport essential parts for maintenance and repair. These organizations reported that the effort to repair the infrastructure was hampered for months as COGAT refused to allow the entry of materials such as pipes, fittings, pump equipment, and electrical equipment. Because of these difficulties, in April 2009, 35,000 people in Gaza still did not have access to running water.¹⁸¹ In the months following, truckloads of materials for the water and sanitation sector entering Gaza were only a fraction of overall requirements: 54 trucks in May, 12 in June, and none at all in July and August 2009.¹⁸² Under these circumstances, Gaza residents often have no choice but to turn to sources of water which are unsafe. For example, many families rely on water from agricultural wells, water that is not intended for drinking and, therefore, is not adequately chlorinated or regulated by the water authorities.¹⁸³

Environment and the Waste-Water Treatment System

The basic water supply of the Gaza Strip is in crisis, as the effects of the occupation and the damage during Operation Cast Lead on the water treatment and distribution system are exacerbating an existing environmental crisis. Drinking water in Gaza comes from one source, the coastal aquifer under the Strip. Environmental damage to this aquifer will have repercussions on Gaza's drinking supply for years to come. High salinity and nitrate levels are a central problem, because the aquifer has been over-abstracted for many years, due to the rapid demographic changes, pollution by raw and untreated sewage, and the use of large quantities of water in the agricultural sector. The annual abstraction from the aquifer far exceeds its natural recharge levels with the most recent figures estimating abstraction at 163 million cubic meters per year, and recharge at 45 million cubic meters per year. In addition, infiltration of salt water from the sea and pollution from the damaged waste-water treatment system is causing the increasing salinity and contamination by other pollutants of the water in the aquifer.¹⁸⁴

¹⁸⁰ Ibid.

¹⁸¹ Occupied Palestinian Territories Logistics Cluster Situation Report 28th March - 8th April 2009.

¹⁸² EWASH, Factsheet 1: The Impact of the Blockade on Water and Sanitation in Gaza.

¹⁸³ Amnesty International, Troubled Waters – Palestinians Denied Fair Access to Water, October 2009.

¹⁸⁴ United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

The CMWU and international organizations working in the field of water and sanitation in Gaza are extremely concerned about the environmental crisis which is developing at a rapid pace because of the desperate situation regarding access to water in the Gaza Strip. If the authorities responsible remain unable to properly treat sewage, to build a sustainable infrastructure for water use with large-scale desalination plants, and to prevent the unauthorized extraction of water from the aquifer by the drilling of private wells, the likelihood of long term safe and secure access to water for the Gaza population continues to decrease. Currently, the salinification of the groundwater has caused the usable water available from the coastal aquifer in the Gaza Strip to shrink rapidly. This aquifer is the single source of water available for all domestic, agricultural, and industrial purposes in the Gaza Strip.

As of April 2010, approximately 65 – 75 percent of the population in Gaza was connected to the sewage network, and the rest are reliant on cesspits and septic tanks.¹⁸⁵ The blockade and the damage from Operation Cast Lead have caused the sewage treatment system to operate at a drastically reduced level, because of damage to some sewage treatment plants, a lack of necessary materials to maintain and repair the network, and the power shortages which limit the CMWU's ability to treat sewage appropriately. The Gaza Waste-Water Treatment Plant, for example, was bombed by the Israeli army during Operation Cast Lead, causing the outflow of more than 200,000 cubic meters of raw sewage onto the surrounding land.¹⁸⁶ Additionally, the collapse of the electricity supplies during the offensive caused transfer pumps to stop working, thus diverting untreated sewage to the nearest available lagoons, including those which normally dispose of treated sewage by infiltration into the groundwater.¹⁸⁷

185 UNICEF/Palestinian Hydrology Group, Water, Sanitation and Hygiene Household Survey, April 2010.

186 United Nations Human Rights Council, Report of the United Nations Fact Finding Mission on the Gaza Conflict, September 2009.

187 United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

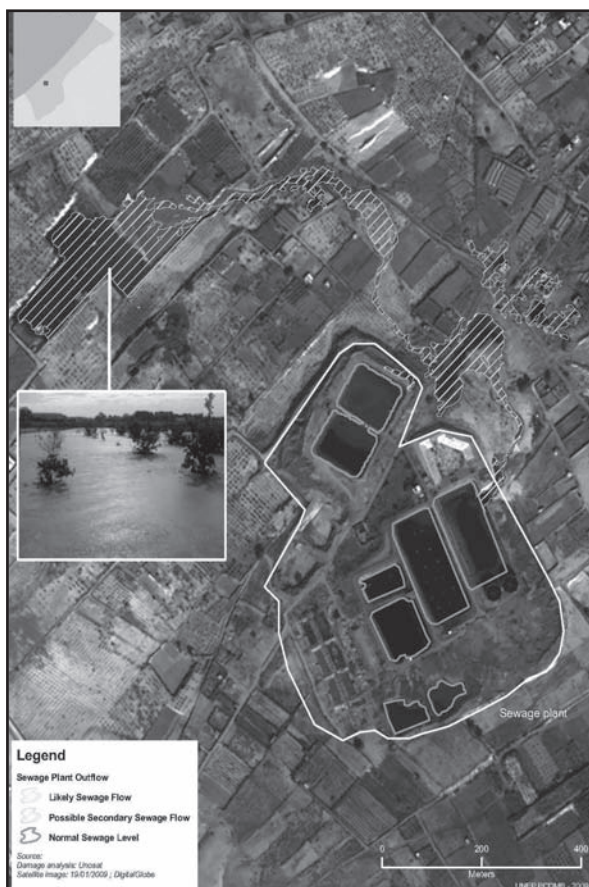


Figure 13: Extent of sewage flood from Al Zaitoun sewage treatment plant as a result of Operation of Cast Lead (Image from 19th January 2009).¹⁸⁸

Four waste-water treatment plants are currently active in the Gaza Strip, all of which are operating beyond their capacity, due to the inability to repair and upgrade the facilities for the needs of the population. Although these materials will now be allowed for projects under UN or international supervision, the unwieldy process of gaining permission for such materials to enter will continue to make it difficult to rebuild basic water infrastructure. The Beit Lahiya plant is designed for 8-10 million liters per day and in reality handles 17-20,¹⁸⁹ and the Gaza City plant is designed for 32 millions liters per day but handles 50-60.¹⁹⁰

¹⁸⁸ Image courtesy of United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

¹⁸⁹ Office of Coordination for Humanitarian Affairs, Humanitarian Monitor, June 2010.

¹⁹⁰ See also Physicians for Human Rights-Israel, Report on Medical Ethics during the War on Gaza, March 2009.

In Rafah and KhanYounis, emergency treatment plants were constructed using sections of the old Rafah security wall, due to the lack of cement for building.¹⁹¹ In these conditions, sewage is often partially or not treated at all, with additional strain caused by frequent power shortages, which mean the wastewater treatment plants function only intermittently. This untreated sewage is then discharged into lagoons, valleys, and the sea. For example, raw sewage is discharged at numerous points into the Gaza valley, facilitating the flow of 70,000-80,000 cubic meters daily of this sewage into the Mediterranean Sea, along the way contaminating adjacent wetlands, the groundwater, and the beaches near the mouth of the Gaza valley.¹⁹²



Figure 14: One of many outfalls of untreated sewage into the Mediterranean Sea.¹⁹³

The UN Environment Program (UNEP) tests of sewage at various points during the treatment process found that levels of ammonia, coliforms and chemical oxygen demand were such that "none of the sewage samples are fit for infiltration or marine disposal, which are the two alternative methods of sewage disposal currently used in the Gaza Strip."¹⁹⁴ In May 2009, OCHA reported that the increase on the pressure on the wastewater lake next to the Khan Younis treatment plant caused a backflow of raw sewage into people's residences and into the sewage network, posing a serious public health risk. This could have been avoided had COGAT allowed the entry of steel pipes into the Gaza Strip for use in the sewage treatment

191 EWASH, Factsheet 1: The Impact of the Blockade on Water and Sanitation in Gaza.

192 United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

193 Image courtesy of United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009.

194 Ibid.

system, which, months after they had been requested by humanitarian organizations working in Gaza, were still being denied entry by the Israeli authorities.¹⁹⁵

Monther Shublak, the Director of the CMWU, explained that Israel has in the past made agreements with the CMWU that chemicals imported from Israel, which are essential to the water treatment process (such as hydrochloric acid, aquatic soda, and antiscalants), will be permitted entry in quantities which will ensure that there is at least a three-month supply of such materials in the Gaza Strip at all times. COGAT has repeatedly failed to implement this agreement, with supplies at times coming to within one week's time of running out completely, despite the appeals of the CMWU.¹⁹⁶

The energy crisis in the Gaza Strip: a critical factor in sewage treatment and access to safe drinking water

The disruption to the power supply in Gaza has been ongoing since the beginning of the blockade and was further brought into crisis during Operation Cast Lead, in which most electrical lines supplying Gaza from Israel and Egypt and much of the internal Gaza network were damaged or destroyed.¹⁹⁷ The majority of Gaza's population experience power cuts of up to 12 hours every day.¹⁹⁸ This situation has led to many people in the Gaza Strip relying on generators when the electricity supply runs out. These are obtained through the tunnels from Egypt and are often unsafe. Accidents involving generators are common, as a result of poor usage, carbon monoxide poisoning, and fires and explosions occurring when people attempt to fuel the generators by candle-light during a blackout. This situation has resulted in 29 deaths and 37 injuries in the first four months of 2010.¹⁹⁹ Without electricity, wastewater treatment plants cannot run at full capacity. Power is also needed to keep pumping water from the wells and, especially in Gaza City, where much of the population lives in multi-storey apartment buildings, from the ground up to the rooftop tanks on the tops of buildings.

¹⁹⁵ Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, May 2009; Occupied Palestinian Territories Logistics Cluster Situation Report 28th March - 8th April 2009.

¹⁹⁶ Interview with Monther Shublak, Coastal Municipalities Water Utility Director, March 2010.

¹⁹⁷ Gisha, Red Lines Crossed: Destruction of Gaza's Infrastructure, August 2009.

¹⁹⁸ Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, March 2010, Office for the Coordination of Humanitarian Affairs, Fact Sheet: Gaza's Electricity Crisis, 17 May 2010.

¹⁹⁹ Office for the Coordination of Humanitarian Affairs, Protection of Civilians Report, 13.05.10.

Drinking Water

Today, 90-95% water from the coastal aquifer, which is Gaza's main source of water, has been deemed by the World Health Organization as unfit for human consumption. The UN recommends the immediate cessation of extraction of water from the aquifer in order to preserve both the environment and future water supplies of the Gaza Strip, and the health of the people living there.²⁰⁰

Both municipal services and private sources extract water from Gaza's coastal aquifer. Municipal water, as opposed to private water, is treated for bacteria. However, 83 percent of people in Gaza have turned to the private sector for their household water needs.²⁰¹ While municipally supplied water has usually been treated with chlorine and is thus largely free of contamination by bacteria, because of the high salinity levels of Gaza's water, municipal water has a very salty taste. In contrast, the privately supplied water is treated by reverse osmosis before distribution, thus reducing the high nitrate levels and salty taste, but is not treated with chlorine. Therefore, if any pollutants enter the water between treatment and consumption, which commonly occurs due to inefficient delivery and storage systems, it remains and can multiply in the supply, and the water may be unsafe to drink.

Although the water tastes better than the water from municipal sources, making many Palestinians presume it is safe to drink, the majority of residents in Gaza are drinking potentially contaminated water. Tests of this privately supplied water found that 70% of samples were indeed contaminated with bacteria.²⁰²

200 Office for the Coordination of Humanitarian Affairs, Locked In: The humanitarian impact of two years of blockade on the Gaza Strip, August 2009; EWASH, Factsheet 3: Water Quality in the Gaza Strip; Amnesty International, Troubled Waters – Palestinians Denied Fair Access to Water, October 2009.

201 Interview with Mark Buttle, Oxfam UK, 16th February 2010, Interview with Amani Jouda, National Nutrition Officer, WHO Gaza Office, 16th February 2010, Interview with Monther Shublak, CMWU Director, March 2010; EWASH, Fact Sheet 6: Water for Agriculture and Food Security in Gaza, 29th March 2010; WASH Cluster occupied Palestinian territory, Monthly Situation Report, Number 19, Jan 28th 2010.

202 WASH Cluster in Gaza, Drinking Water Quality Working Group Minutes, January 12th 2010; Interview with Mark Buttle, Oxfam UK, 16th February 2010; a separate joint study by an Italian and a Palestinian NGO found that 45 percent of the samples, supplied by private vendors, was contaminated with bacteria (faecal coliforms) – see Office for the Coordination of Humanitarian Affairs, Humanitarian Monitor, June 2009.

	Reality in Gaza	International Standards
Chloride levels (Samples from private wells)	Up to 1,840 mg/litre	250 mg/litre (WHO Guideline Maximum)
Nitrate levels (Samples from private wells)	Up to 330 mg/litre	50 mg/litre (WHO Guideline Maximum)
Fluoride levels	Up to 2.7 mg/l	1.5 mg/l (WHO Guideline Maximum)

Figure15: Quality of water in the Gaza Strip compared to international standards.²⁰³

To make matters worse, the unregulated water trade is also contributing to the already dire environmental situation, and the continuing over-extraction of Gaza's aquifer. In March 2010, it was reported that as many as 2,000 additional unlicensed drinking wells have been drilled without permission from the authorities.²⁰⁴

Buying water from private sources is costly (at an average of 35 NIS/cubic meter) and households report spending up to one third of their income on water.²⁰⁵ As such, it is a highly unstable resource for a population which is becoming increasingly impoverished under rising levels of unemployment (currently about 34 percent).²⁰⁶ There are already many who cannot afford to purchase desalinated water. In Al Mawasi, in the Khan Younis area, for example, which is not connected to the water network, only 58 percent of households can afford to buy water from private vendors. To compensate, 47 percent use agricultural wells as their primary source of drinking water.²⁰⁷ Palestinians in Gaza are being forced to turn to unsafe sources of drinking water, which at the same time are exacerbating the environmental crisis affecting the water supply in the region.

203 United Nations Environmental Programme, Environmental Assessment of the Gaza Strip: following the escalation of hostilities in December 2008 – January 2009, September 2009; World Health Organization, Extended report of the World Health Organization Specialized Health Mission to the Gaza Strip, May 2009; World Food Programme/Food and Agriculture Organization, Food Security and Vulnerability Analysis Report, December 2009; EWASH, Fact Sheet 3: Water Quality in the Gaza Strip

204 EWASH, Advocacy Task Force Fact Sheet 6: Water for Agriculture and Food Security in Gaza, 29th March 2010.

205 UNICEF/Palestinian Hydrology Group, Water, Sanitation and Hygiene Household Survey, April 2010.

206 Palestinian Central Bureau of Statistics, Labour Force Survey First Quarter 2010, May 2010.

207 UNICEF/Palestinian Hydrology Group, Water, Sanitation and Hygiene Household Survey, April 2010.

Testimony of Naeem Qaneeta

Naeem Qaneeta and his wife and children live in Al Rimal, Gaza City, together with his brothers and sisters and their children. In their neighborhood, every house has its own filter at home, which cleans the water. The trouble is that the filter is run on electricity. But in Naeem's neighborhood, every day from 7am until 3pm there is no electricity. So the family also has to buy bottled water to use during this period. They also need a special generator to pump the water up above the ground floor when there is no electricity.

In order to fix the public system, as of May 2010, 1,250 tons of cement was needed to repair water storage tanks alone. As cement is one of the materials only recently let in through the crossings, with many restrictions, repairing storage tanks and other necessary water infrastructure is nearly impossible.²⁰⁸ Other basic materials are needed for the drinking water system, such as plastic and metal pipes and pumps, which are in short supply, due to the restrictions on importing materials through the crossings from Israel.²⁰⁹

Because of this lack of essential materials to repair and build infrastructure, Gaza's existing water storage facilities are not sufficient to store the water pumped from the wells. Instead, water must be pumped straight from the wells into the distribution network. However, even this system fails to deliver a satisfactory water supply in the current circumstances, because it requires both a continuous power supply and working parts to maintain the system, such as pipes and pumps. Ensuring both of these factors is a huge challenge in today's Gaza Strip. Thus, although 98 percent of Gaza's residents are connected to the water network, a recent survey found that only 48 percent of households have running water 4-7 days a week, and 39 percent have water only 2-3 days a week.²¹⁰ All of these difficulties often mean that water is not pumped into the pipes for some time, causing the pressure in the pipes to drop, and pollutants enter the pipes from the ground. This further contaminates the drinking water.

208 EWASH, Factsheet 1: The Impact of the Blockade on Water and Sanitation in Gaza.

209 Occupied Palestinian Territories Logistics Cluster Situation Report 11 September – October 8 2009; Occupied Palestinian Territories Logistics Cluster Situation Report 28th March - 8th April 2009; Interview with Mark Buttle, Oxfam, 16th February 2010; Interview with Monther Shublak, CMWU Director, March 2010.

210 UNICEF/Palestinian Hydrology Group, Water, Sanitation and Hygiene Household Survey, April 2010.

Testimony of Yehia Asaliyeh

Yehia Asaliyeh, who lives in Jabalya in Gaza, explained in an interview the hardships he and his family endure regarding water after Operation Cast Lead. He remarked that while his house is connected to the municipal water network, the water coming out of his taps is very salty and contaminated. Because of this, he and his family drink mineral water which they buy from private desalination companies. The water from the municipal network is normally used for other things like laundry, cleaning the house, and washing dishes. Even for domestic use, they have a filter, because they are afraid the water might contaminate the dishes. Yehia checks the filter every 2 or 3 days, and after his initial shock at how dirty the filter is, he cleans it. He explained how the whole neighborhood is worried about being sick because of the water. They talk about this a lot. In his family there have been two cases of kidney deficiency, which he fears was caused by the water.

United Nations Humanitarian Coordinator for the occupied Palestinian territories, Mr Maxwell Gaylard, remarked regarding water in Gaza: "The deterioration and breakdown of water and sanitation facilities in Gaza is compounding an already severe and protracted denial of human dignity in the Gaza Strip. At the heart of this crisis is a steep decline in standards of living for the people of Gaza, characterized by erosion of livelihoods, destruction and degradation of basic infrastructure, and a marked downturn in the delivery and quality of vital services in health, water and sanitation."²¹¹

The state of waste-water treatment and drinking water in Gaza is in crisis. To fix this, the restrictions imposed by Israel on materials allowed to enter the Gaza Strip must be fully lifted and the energy crisis must be resolved. Access to safe water is a basic aspect of living a healthy life, which is currently being denied to the Palestinians.

²¹¹ United Nations Humanitarian Coordinator for the occupied Palestinian territory, Statement on water in Gaza, 3rd September 2009.

Expert Opinion

Annette Huber-Lee, PhD

Visiting Scholar, Tufts University

The current situation in the Gaza Strip is simply untenable with respect to water in all its dimensions. The direct impacts of unsafe water range from immediate life-threatening blue baby syndrome and diarrhea to longer term impacts on health due to high levels of salinity. The indirect impacts of unsafe and inadequate quantities of water are equally serious, resulting in contaminated fruits and vegetables and shortages of food more generally.

I carried out research on how to plan for a sustainable water supply in the Gaza Strip in the late 1990's. Problems were quite serious at that time. My research showed that the only sustainable options were either to find a new source of water, such as desalination, or phase out agriculture. The latter is socially unacceptable, so the only possible option is finding new sources for the people of Gaza. This result is true even with all domestic and industrial wastewater treated and reused in the agricultural sector - something not happening at all at this time.

The water situation is worse than the worst case scenario in this earlier research. I did not envision the damage and destruction of existing infrastructure. Adding to this is what is a classic case of the tragedy of the commons - widespread over-pumping of the aquifer which results in everyone being worse off. The salinity of the water is damaging to human health, agricultural production, livelihood options and incomes.

Water and food security are fundamentally inter-twined - they need to be addressed simultaneously. And they need to be addressed immediately.

Water in Gaza represents the most basic violation of human rights - a right to safe and adequate water and food. Politics need to be put aside to stop this tragedy. Several measures should be undertaken.

First, additional water needs to either come from neighboring states or via desalination.

Second, wastewater treatment is needed for all domestic and industrial water uses, and can provide an additional source of water if adequately treated.

Third, pumping from the aquifer needs to be reduced, and recharge is essential to attempt to stem the progress of saltwater intrusion. The coastal aquifer does not have sufficient supply that is safe for human or agricultural use.

Conclusion

Most people in Gaza are not starving, a fact which has been used by the Israeli government and some media reports to defend Israeli policies and deflect responsibility from Israel. This is not because of Israeli compliance and benevolence, however, but rather because of the high levels of aid distribution and the large amount of goods entering Gaza through the tunnels. Moreover, no actor, including Israel, the surrounding nations, and the international community, should view survival as the ultimate aim. Ensuring that starvation is not rampant is an objective following a natural or man-made disaster; under no circumstances can it be the long-term goal of a decades-long policy. The occupation and blockade have created a situation of dependency and de-development, whereby people are denied a full and dignified life. The focus on food insecurity and unsafe water in this report is intended to describe and analyze this situation, which amounts to nothing less than the collective punishment of the people of Gaza.

This report has presented the various ways in which Israeli control of the Gaza Strip has led to Palestinians leading a life of 'humanitarian minimum,' and for some, less than it. Most people in the Gaza Strip may not go hungry, their basic energy requirements are being met. However, in order to prevent hunger, many Palestinians in Gaza change their diet to include more basic staples, like bread and rice, in the place of more expensive foods like meat and fresh fruit and vegetables. Many of these basics are provided by international aid organizations which further prevent widespread malnutrition. Most people in Gaza are drinking unsafe water caused by years of occupation and neglect. As a result, many in Gaza are inflicted with water-borne diseases like diarrhea, causing some to die from easily preventable infections.

Physicians for Human Rights-Israel believes that people, regardless of their nationality or government representatives, are entitled to much more than the 'humanitarian minimum.' Palestinians in Gaza deserve full recognition of their human rights, including "the right to life, liberty and the security of person," as outlined in Article 3 of the Universal Declaration of Human Rights. They deserve what we all wish for ourselves: to live to our full potential.

To address this situation, we believe the following recommendations must be adopted:

Recommendation One:

We call on the Israeli public and government, as well as the international community, to recognize that lifting the blockade requires much more than changing Israeli policy towards the crossings.

When Israel announced a policy shift towards Gaza in June 2010, this was heralded by many as an 'easing' or even 'lifting' of the blockade. The blockade on Gaza is a much more holistic policy and lifting it must include ending all limitations on imports and exports through the land and sea crossings, removing the land and sea buffer zones, and ceasing Israeli military campaigns in Gaza. Without the recognition that Israel's blockade extends well beyond expanding the list of goods allowed into Gaza, pressure by the Israeli public and the international community to hold the government of Israel accountable will be partial and ineffective at best.

Recommendation Two:

We call on the government of Israel to take responsibility for the current situation in Gaza and immediately end the blockade and occupation of the Gaza Strip.

The government of Israel needs to take responsibility for the full scope of the blockade and the damage it has caused in the Gaza Strip. Ending the blockade and occupation, in all forms, is essential for restoring Gaza's economy and reversing the dependency and de-development of the Strip.

Recommendation Three:

We call on the international community to acknowledge its role in enabling Israel to make the people of Gaza dependent on humanitarian assistance and to speak out and act against the larger political context when distributing aid.

While aid organizations supported by foreign governments often deal with the symptoms and results of the Israeli blockade of Gaza, this work is not always followed by an effective policy for change. We call on foreign governments to utilize political avenues and international forums in order to exert pressure on the State of Israel to lift the closure policy on the Gaza Strip.

Israeli Army Position

Mr. Ran Yaron,

Director Occupied Territories Department

Physicians for Human Rights - Israel

Re: Response to the PHR report: "Humanitarian Minimum: Israel's Role in Creating Food and Water Insecurity in the Gaza Strip

The following is our response to the claims addressed to the IDF in the above-noted report:

Since Operation Cast Lead, Hamas has been trying to rehabilitate its military ability, and is endeavoring to expand the range of fire by means of smuggling from the Philadelphia Corridor and by sea. In order to combat terror directed at Israeli citizens, the IDF targets the tunnels through which military equipment is smuggled for the use of terror organizations, as well as terror tunnels dug into Israeli territory in order to facilitate attacks on civilians and soldiers. Among these is the terror tunnel targeted on 4.9.2010 through which it was planned to infiltrate terrorists into Israel for purposes of terror activity.

In the past few years there have been numerous incidents of hostile action against IDF forces operating in the vicinity of the security fence, and attempts to infiltrate Israeli territory in order to perpetrate attacks on Israeli citizens by terrorists, often under the guise of civilian Palestinians. For example, on 25.05.10, a cart loaded with explosive devices was detonated after being pushed towards Israeli territory by a Palestinian boy in civilian clothing.

In early 2010 there were 82 incidents of firing at Israeli forces close to the security fence, 15 of them involving advanced anti-tank rockets, and 35 incidents of planting of explosive devices. On 28 June 2010, for example, during a seemingly innocent civilian demonstration, a device aimed at Israeli forces was planted by two of the demonstrators. In order to defend Israeli civilians and IDF personnel, and in response to a vital security need, uncultivated vegetation is removed from time to time at specific sites and in certain areas close to the security fence of the Gaza Strip which serve the terror organization for perpetration of terrorist activity aimed at the IDF forces operating in the area.

Moreover, in view of the threat of such terror activity in the vicinity of the fence, the IDF has cautioned the Palestinian population against approaching the security fence. The area to which the warning applies was determined after analysis of the security threats and with maximal

consideration for the need to minimize the negative impact on the fabric of life of Palestinians. At the beginning of the year leaflets were dropped in the Gaza Strip, informing the Palestinians of the ban on approaching the fence.

The IDF has formulated detailed orders with regard to rules for opening fire in the sector, and any incident which evokes suspicion of deviation from the rules is examined in accordance with extant policy.

Terror organizations, including Hamas, exploit the sea off the Gaza Strip shore for hostile terror activity, which includes attempts to perpetrate devastating mega- attacks against Israeli strategic installations and Israeli naval vessels, attempts to infiltrate Israel by sea, weaponry-smuggling into Gaza etc. In order to combat the security threats created by these activities, the Israeli navy has been forced to restrict shipping activity in the marine area off the Gaza Strip coast.

During Operation Cast Lead, in view of the fierce combat between Israel and Hamas, the Israel Navy was obliged to ban movement of shipping vessels in the maritime area off the Gaza coast. When the Operation ended, and despite the increased security threats in the Strip, it was decided to permit activity of vessels within a range of 3 miles from the Strip shore. In refutation of the claim in the draft report, the interim agreements with the Palestinians defined certain buffer areas as banned to shipping vessels, with the exception of Israeli naval vessels in the northern Strip and in the vicinity of the border with Egypt.

The Israel Navy devotes considerable effort, in so far as possible, to minimizing the regrettable economic damage to Gaza Strip fishermen as a result of the ban. The Navy conducts regular situation assessments in order to examine the possibility of expanding the area in which fishing is permitted, by weighing the existing security threats against the negative impact on fishing activity.

In April 2009, an attempt was made to perpetrate a terror attack at sea from a fishing vessel loaded with a large amount of explosives which was detonated close to an Israeli naval vessel. The naval vessel, which was maintaining safe distance, was not damaged.

The Israel Navy does not disturb fishing vessels which remain within the permitted area. Any concrete complaint of unjustified damage to fishermen is checked.

Sincerely,
Captain Rinat Hameiri
Human Rights and Public Outreach Department
IDF Spokesperson Division

"To improve nutrition, food safety and food security, throughout the life-course, and in support of public health and sustainable development".

**(Strategic Objective 9 on responsibility of the state for health,
WHO PROGRAMME BUDGET, 2008-2009)**

Cover photo: A family eating in the rubble of their home, Rafah, February 2009. Photo: Iyad El Baban UNICEF-oPt,

Physicians for Human Rights-Israel (PHR-Israel) believes that every person has the right to health in its widest possible sense, as defined by the principles of human rights, social justice and medical ethics. It is the responsibility of the State of Israel to ensure the fulfillment of this right in an egalitarian manner for all populations under its legal or effective control: residents of Israel who are eligible for National Health Insurance, Bedouin residents of unrecognized villages in the Negev desert, prisoners and detainees, migrant workers, refugees and asylum seekers and Palestinian residents of the occupied Palestinian territory.

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ISSN # 0793-6222