

Our Common Responsibility

The Impact of a New War on Iraqi Children

International Study Team

30 January 2003

This independent report was compiled by an the International Study Team, an international team of researchers, academics and practitioners expert in physical and mental health, food security, infrastructure, gender, humanitarian law and emergency preparedness. The Team's visit to Iraq took place from 19-26 January 2003.

The report describes the status and vulnerabilities of children in Iraq, examining the likely humanitarian impact of a military conflict on the civilian population, particularly children.

Assessment and analysis is based on in-country data collection from a wide variety of sources including the United Nations, international and national non-governmental organizations, and Iraqi government officials. Existing published and unpublished reports were consulted and reviewed. In-country field research also included assessment visits to Baghdad, Kerbala, and Basra. More than 100 unaccompanied visits and interviews took place in individual households, involving children and their parents. The specific program, including all meetings and visits, was determined solely by the International Study Team. Team experts were unobstructed in their work. No financial or any other support was received from the government of Iraq.

Financial support for this report was received from more than twenty leading humanitarian non-governmental organizations in Canada, the United States and Norway.

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The International Study Team is an independent group of academics, researchers and practitioners expert in examining the humanitarian effects of military conflict on the civilian population, particularly children. In 1991, the International Study Team produced a comprehensive report on the humanitarian effects of the Gulf War on Iraqi children. Based on more than 9,000 independently conducted household interviews in more than 300 locations across all parts of Iraq, the International Study Team report has been acknowledged as the most comprehensive study of the impact of war on civilians.

The International Study Team received financial support for *Our Common Responsibility* from the following organizations:

Canadian Action for Indonesia and East Timor
Canadian Auto Workers (CAW)
Canadian Catholic Organization for Development and Peace
Canadian Friends Service Committee (Quakers)
Canadian Labour Congress (CLC)
Center for Crisis Psychology, University of Bergen, Norway
Centre for Studies in Food Security, Ryerson University, Canada
Inter Pares
International Physicians for the Prevention of Nuclear War (IPPNW)
Mennonite Central Committee Canada
Near East Cultural and Educational Foundation
Norwegian Psychological Association
Oxfam Canada
Peacefund Canada
Physicians for Global Survival
Primate's World Relief and Development Fund
Project Ploughshares
Rights and Democracy
United Church of Canada
United Steelworkers of America
War Child Canada
World Vision Canada

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Executive Summary

Iraqi children are more vulnerable to the adverse effects of a new war than they were before the Gulf War of 1991.

Our Common Responsibility: The Impact of a New War on Iraqi Children, a report by the International Study Team assesses the vulnerability of Iraqi children today as compared to 1991. The report comes as the United Nations Security Council meets to consider the report of the United Nations weapons inspectors. As such, this report is directed to the Security Council, to the government of Iraq, and to the international community as a public document encouraging these entities to take into account the plight of Iraqi children when considering the alternatives of war and continued weapons inspections.

This report examines the physical and mental well-being of the 13 million Iraqi children based on data collected in Iraq between 20 and 26 January 2002. The team conducted interviews, collected data, and reviewed existing data pertaining to the state of children in Baghdad, Basra, and Kerbela in Iraq. In addition, the Team independently visited more than 100 Iraqi families (children and their parents) in their homes.

The main findings of the report are presented in sections divided into Physical Well-Being, Mental Well-Being and Emergency Preparedness. The first section, Physical Well-Being concludes that despite some improvements in the health and nutritional status of children from their post-1991 Gulf War state, Iraqi children are still in a significantly worse state than they were before the 1991 Gulf War. Similarly, because most of the 13 million Iraqi children are dependent on food distributed by the Government of Iraq, the disruption of this system by war would have a devastating impact on children who already have a high rate of malnutrition. The state of the physical well-being of Iraqi children thus makes them much more vulnerable to war today than they were in 1991.

Perhaps the most startling findings are based on field data collected by two of the world's foremost child psychologists who are leading experts on the psychological impact of war on children. They found that Iraqi children suffer significant psychological harm from the threat of war that is hanging over their head. This finding, based on the first ever pre-war psychological field research with children, is powerful evidence that the concern for children's well-being needs to be considered in the decision making process about to take place in the United Nations Security Council.

Finally, a review of the available data on emergency preparedness indicates that the international community has at present little capacity to respond to the harm that children will suffer by a new war in Iraq.

The study was initiated and organized by the International Study Team, an independent group of expert academics, researchers and practitioners examining the humanitarian effects of military conflict on the civilian population.

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Key Findings of *Our Common Responsibility: The Impact of a New War on Iraqi Children*:

- Iraqi children are even more vulnerable now than they were in 1990, before the 1991 Gulf War.
- 16 million Iraqi civilians are 100 percent dependent on government-distributed food rations. If war breaks out, this distribution system will be disrupted, leading to food shortages, malnutrition and possibly starvation.
- There is only an estimated one month's supply of food in Iraq. If war occurs, food imports will be disrupted.
- Approximately 500,000 Iraqi children are acutely malnourished or underweight. These children are particularly vulnerable to disease and death should war occur.
- The health care system is worn down and only a fraction of its pre-1991 state. The UN estimates that hospitals and clinics will run out of medicines within 3-4 weeks of a conflict.
- The death rate of children under 5 years of age is already 2.5 times greater than it was in 1990. Most children (70%) die of diarrheal and respiratory diseases. This greater vulnerability means greater illness and death under conflict circumstances.
- Iraq's water and sanitation systems are in bad need of repair following 12 years of sanctions. 500,000 metric tons of raw sewage is dumped into fresh water bodies each day. Only 60% of Iraqis have access to fresh (potable) water. Further disruption to these services, as occurred during the 1991 Gulf War, would be catastrophic for Iraqi children.
- The UN estimates that a war could lead to more than 1.4 million refugees and as many as 2 million internally displaced persons (IDPs).
- Iraqi children are already badly traumatized by 12 years of economic sanctions. With war looming, Iraqi children are fearful, anxious and depressed. Many have nightmares. And 40 percent do not think that life is worth living.
- The United Nations estimates that, in the event of war, as many as 500,000 persons could require emergency medical treatment.
- The level of emergency preparedness is currently very low. It will not be enough to respond to the expected humanitarian emergency.

In summary, a new war in Iraq would be catastrophic to Iraq's 13 million children, already highly vulnerable due to prolonged economic sanctions.

Iraqi children are at grave risk of starvation, disease, death and psychological trauma.

The International Study Team is forecasting, should war occur, a grave humanitarian disaster. While it is impossible to predict both the nature of any war and the number of expected deaths and injuries, casualties among children will be in the thousands, probably the tens of thousands, and possibly in the hundreds of thousands.

Table of Contents

	Page
Introduction	1
Context	2
Legal Framework	3
The Security Council.....	3
The Laws of War	3
Physical Well-Being	6
Household Economy	6
Food Security	6
Agriculture	6
Limits to Food Production.....	7
Food Ration Program	7
Food Insecurity and the Possibility of War	8
Infrastructure and Environment	9
Electricity.....	9
Water and Sewage	10
Health and Nutrition	11
Child Morbidity and Mortality.....	11
Nutrition	12
Maternal Mortality and Life Expectancy	13
Vaccine Preventable Diseases, Immunization Coverage and the Cold Chain	13
Health Services and Essential Drugs.....	13
Gender	14
Methodology.....	15
Women’s Main Roles and Responsibilities.....	15
The Effects of the Gulf War and Economic Sanctions on Women in Iraq.....	15
The Impact of Further Deterioration in Living Conditions on Women	15
Displacement	16
Mental Well-Being	17
Psychological Consequences of the 1991 Gulf War on Children.....	17
Mental Consequences of a Possible War on Children	17
<i>Depletion of family resources</i>	17
<i>Malnutrition, cognition and parent-child interaction</i>	17
Traumatic Loss.....	17
<i>The 2003 Iraqi data</i>	18
Study One – Visiting Families.....	18
<i>Alone with the fear</i>	18
Interviewing the Youngest Ones (4 to 7 years old).....	19
<i>The mental impact of the present situation</i>	19
Messages from Iraqi Children	20
Questionnaire Results.....	20
Conclusion.....	20
Child Questionnaire Results (tables)	22

Emergency Preparedness.....	23
Food	23
Emergency Shelter and Non-Medical Supplies	24
Medical Needs.....	25
Water and Electricity.....	25
Planning and Coordination.....	26
Military Force.....	27
Scales of Military Power.....	28
An Air Assault	28
A Ground Assault.....	28
Conclusions.....	29
Child Vulnerabilities Compared: 1990 and 2003	30
References.....	31
Tables and Charts	
Three Basic Principles of International Humanitarian Law Protecting Children	4
Iraq's Food Dependency	7
Under-Five Mortality Rates in Iraq	11
Trends in the Malnutrition of Iraqi Children	12
Trends in Nutritional Status of Children Under-Five Years of Age in South and Central Iraq	12
Trends in Low Birth Weights in Institutional Deliveries.....	13
Iraqi Ministry of Health Budget	14
Child Questionnaire Results	22
Child Vulnerabilities Compared: 1990 and 2003.....	33

Introduction

“It is not true to assume that the suffering of Iraqi children cannot get worse.”
(Sherlock, 2002)

This report comes at a time when the international community, as represented by the United Nations and the Security Council, is in the process of deciding whether to authorize the use of military force to disarm Iraq, or to continue to advocate peaceful means of disarmament, namely the existing regime of weapons inspections.

The strategic and political considerations of such a decision are complex and subject to debate, but they are not themselves the focus of this report. Instead, the aim of this report is to concentrate international attention on the approximately 13 million children who reside in Iraq, and to identify and highlight the likely negative humanitarian impacts of a military conflict on their health and well being.

The threat of war comes at a time when Iraqi children are perhaps least equipped to withstand further stresses on their physical and mental well-being. Compared to the period immediately preceding the 1991 Gulf War, Iraqi children are now much more vulnerable to any attack. The life-sustaining infrastructure around them – health care, water, sanitation, food supply and infrastructure – has broken down and is badly in need of repair.

This report examines the current humanitarian status of Iraqi children, their vulnerabilities, and the potential impact of a war in Iraq. It examines eight key sectors that, together, provide a snapshot of the humanitarian condition of children in Iraq. These sectors are (1) Household Economy, (2) Food Security, (3) Infrastructure and Environment, (4) Health and Nutrition, (5) Gender (6) Child Psychology, and (7) Emergency Preparedness.

Analysis of the above sectors is based on data collected in published and unpublished reports, interviews with United Nations, governmental and non-governmental officials, research, household interviews and field visits conducted in Iraq from January 19-26, 2003. Field visits were carried out in Baghdad, and the two southern cities of Basra and Kerbela. Field data concerning the psychological impact of the risk

of conflict on Iraqi children and the ability of these children to withstand another war was collected from more than 100 households in Baghdad and Basra. In addition, more than 200 12-year-old Iraqi children completed a questionnaire to assess their mental health.

Data used in this report was only acquired from reliable sources and excluded all Iraqi government data. Rigorous scientific methodology was employed throughout the study. Conclusions reflect the considered analysis of the most reliable data available by acknowledged experts in the various sectors.

The International Study Team takes no position on the current political crisis with Iraq. Instead, it has as its sole objective the advancement of principles concerning the protection of civilians, and to highlight dangers faced by children caught in the crossfire of war.

In recent years, the Security Council has embraced the concept that protection of civilians, particularly children in armed conflict, is a fundamental part of their peace and security agenda. Yet despite this development, decisions are regularly taken without full regard, or sometimes despite it, for the well being of children. The authors of this report have a simple request: give serious consideration to the humanitarian implications of pursuing a military solution to the crisis with Iraq. On behalf of the smallest of the world's citizens, and also the most vulnerable, we ask this of you.

At the same time, we address this report to the government of Iraq. The past 12 years has witnessed tremendous human suffering of the Iraqi people. Iraqi sovereignty means not only independence, it means responsibility. The government of Iraq has a profound responsibility to protect and nurture its 13 million children. As the search continues for a diplomatic solution to the current political crisis, we implore the government of Iraq to act in the best interests of the Iraqi child and fully implement Security Council resolution 1441, calling for an end to its weapons programs.

Context

Iraq is inhabited by approximately 13 million adults and 13 million children. More than 4 million children are under five years of age.

Just prior to the 1991 Gulf War, Iraq was described by the United Nations as a high-middle-income country, with a modern social infrastructure. Although the Iran-Iraq war caused enormous economic damage, and more than 100,000 deaths, Iraq's health, education and other social programs continued to advance throughout the 1980s. Life expectancy, at 67 years, was at a level equivalent to Brazil. Nearly all urban dwellers and 72 percent of rural residents had access to clean water, while 93 percent of Iraqis had access to health services. Iraq's medical facilities and public health system were well developed (UNICEF, 1993).

With Iraq's August 1991 invasion of Kuwait, and the subsequent 1991 Gulf War, a country on the verge of joining the ranks of developed industrial states was temporarily plunged into a pre-industrial era (Khan, 1991). Over a period of six weeks, coalition forces dropped more than 90,000 tons of explosives on Iraq. Between 50 and 70 percent of bombs dropped missed their intended targets (Haines, 1993). Civilian deaths during the Gulf War, the subsequent civil uprisings, and the Kurdish refugee crisis were estimated at between 40,000 and 80,000 deaths. As many as 100,000 Iraqi soldiers were also killed (Ahtisaari, 1991; Daponte, 1993).

The Gulf War resulted in a complete breakdown of the Iraqi civilian infrastructure. Bomb damage reduced postwar electricity to just 4 percent of prewar levels. Oil refineries, food storage facilities, industrial complexes, sewage pumping stations, telecommunications facilities, roads, railroads and dozens of bridges were destroyed during the war. Water supply in Baghdad was reduced to 5 percent of prewar levels (Joint WHO/UNICEF Team Report, 1991). Sewage systems were paralyzed, with raw sewage backing up into homes and hospitals. Raw sewage from most of Baghdad's then 4 million inhabitants was pumped untreated into the Tigris river, southern Iraq's main source of drinking water. A breakdown in food distribution resulted in country-wide food shortages, widespread malnutrition and, in some areas, pre-famine conditions (IST, 2001). The breakdown in electricity, water and sanitation led to outbreaks of infectious diseases, including cholera, typhoid,

gastroenteritis, malaria, meningitis, measles and others. The combination of malnutrition and infectious diseases resulted in dramatically increased rates of infant and child deaths – a three-fold increase – resulting in more than 50,000 child deaths in 1991 alone (IST, 2001).

In Iraqi Kurdistan, more than 2 million Kurds were forcibly displaced from their homes and sought refuge in neighbouring Turkey and Iran. Many thousands died from exposure and disease. In the south of Iraq, a civil uprising was brutally suppressed resulting in more than ten thousand civilian deaths.

Since early 1991, despite substantial attempts to recover from the damage caused during the Gulf War, Iraq has remained subject to a sanctions regime that has crippled basic services and made it impossible to recover economically. By mid-decade, although modest improvements in social services had been made, the social infrastructure (electricity, water, sanitation, health care, education and the economy) were still functioning at a fraction of their prewar state. Malnutrition remained high, and mortality rates among children tripled prewar levels.

Meanwhile, until Iraq complied with UN Security Council Resolution 687, which mandates the elimination of Iraq's nuclear, biological and chemical weapons programs, sanctions remained in place, furthering jeopardizing civilian recovery. It remains a subject of considerable debate the degree to which Iraq has complied with the terms of UN Security Council Resolution 687.

In 1996, Iraq finally accepted the terms of UN Resolution 986, which permitted the controlled sale of limited quantities of Iraqi oil in order to purchase essential humanitarian supplies. To date, Iraqi oil valued at approximately \$61 billion has been exported under the Oil-for-Food program. Of this amount, some \$26 billion worth of humanitarian supplies have been delivered to Iraq – on average \$4.3 billion per year since the program began. An additional \$10 billion worth of supplies are currently in the production and delivery pipeline. It is worth noting that prewar food imports alone amounted to \$3 billion per year, while the cost of returning the civilian sector of Iraq to its prewar state has been estimated at more than \$200 billion (Arab Monetary Fund, 1993).

Since the inception of the Oil-for-Food program, there has been modest improvement in certain

sectors, particularly child malnutrition and drug supply. Overall, however, the social infrastructure remains badly broken down and worn out, unable to meet even the basic needs of the civilian population. Illness and disease remain at high levels, and mortality rates of children remain more than double their 1990 levels.

Now, in early 2003, Iraqi civilians face the renewed threat of military conflict. This threat, and the accompanying uncertainty, has already led to increased anxiety and fear among Iraqi children. More physically and mentally vulnerable than they were in 1990, the 13 million Iraqi children now face a future potentially even more grave and more devastating than that which they suffered during the 1991 Gulf War.

War is always most deadly for the civilian population, particularly women and children. A war in Iraq will be no different. Indeed, it is because the international community has been witness to the humanitarian disaster resulting from the 1991 Gulf War that it is known that this war will result in many thousands of child deaths. This is indeed a great price for the children of Iraq to pay, and must be weighed against the rational and serious requirement that Iraq must rid itself of all efforts to possess nuclear, chemical or biological weapons. As the international community weighs its options to deal with the political crisis involving Iraq's government, it is essential that it also give equal and serious consideration to the tragic consequences a military conflict would have for Iraqi children.

Legal Framework

The Security Council

The United Nations Security Council (UNSC) is the world's primary authority for making decisions concerning international peace and security. Its mandate is based on the Charter of the United Nations. This instrument has been accepted by almost every government, including the United States, its allies and Iraq, as a binding obligation of the highest order. According to Article 25 of the Charter member states agree to implement the decisions of the UNSC. The Charter also states that "the Security Council shall act in accordance with the Purposes and Principles of the United Nations" (art. 24).

In the implementation of its responsibilities the UNSC has acted to restore Kuwaiti sovereignty after Iraq's 1990 invasion, to impose sanctions on Iraq, to attempt to address humanitarian concerns, and to take steps towards destroying Iraq's weapons of mass destruction (WMD). Sanctions were imposed by UNSC Res. 661 (6 August 1990). UNSC Res. 687 (3 April 1991) created the regime of weapons inspections after the 1991 Gulf War. To mitigate the adverse humanitarian impact of sanctions, the Oil-for-Food Program (OfF) was proposed by UNSC Res. 706 (15 August 1991) and finally adopted by UNSC Res. 986 (14 April 1995). It was accepted by Iraq in May 1996 and, under the terms of the Oil-for-Food program, the first oil flowed in December 1996. The program has since been revised several times. A revision in 1999 allows Iraq to sell as much oil as it can produce, although Iraq's production remains well below what it has actually contracted to sell (UNHPI, 2002). Although 72% percent of the monies are now earmarked for humanitarian assistance, delays in the delivery of drugs, medical supplies and other humanitarian goods have limited the system's effectiveness (Interviews, 2000a).

The circumstances of children in armed conflict has increasingly been a focus of the Security Council's agenda. Annual reports on the issue are presented by the Secretary General's office, and the UN Special Representative to the Secretary General for Children and Armed Conflict regularly meets with the Council. The issue of the protection of civilians during warfare, the topic of several UNSC resolutions, is now the subject of annual discussions. It is fair to say that the plight of war-affected children has not gone unnoticed by the UNSC. On the contrary, there have been substantial gains in recent years, and many Council members are genuinely and seriously concerned with the issue.

This report calls upon the UNSC to consider, in a serious, comprehensive and verifiable manner, the impact of an armed conflict on Iraqi children. For the UNSC to do so would be in accordance with its own statements of concern for the well-being of children in armed conflicts and further enhance the credibility of these important statements and resolutions.

The Laws of War

War leaves children exposed to the most ruthless and unforgiving environment on earth. To mitigate the harm to children during wartime,

States have agreed to respect several principles of human rights and humanitarian law at all times. Thus the Convention on the Rights of the Child (CRC) is non-derogable – that is, it applies at all times without exception - as do the laws of international humanitarian law.

The most basic rules of international human rights and humanitarian law apply regardless of the legality of the use of force. These rules purposefully impose restraints on how states may fight wars against each other. In a conflict involving the United States and Iraq the most prominent of the legally binding instruments of international human rights law relevant to the protection of civilians are:

- The Convention on the Rights of the Child
- The International Covenant of Civil and Political Rights
- The American Declaration on the Rights and Duties of Man
- The Fourth Geneva Convention Relative to the Protection of Civilian Persons in Time of War

While each of these instruments provides explicit protections for children during armed conflicts, it is the Fourth Geneva Convention that provides the most explicit *lex specialis* (relevant law) during an armed conflict in Iraq. In part, this is true because although the Convention

on the Rights of the Child is non-derogable - applies at all times without exception - the United States (Somalia being the only other country) is not a party to the CRC. In addition, rules derived from customary international law will apply to all parties in the conflict.

While some nations considering participating in an attack on Iraq have a wide variety of universal, specialized and regional conventions applying to them, several, including the United States, are governed by the rules of warfare as reflected in the four Geneva Conventions from 1949, and customary international law. Customary international law is distilled from the *opinio juris* (legal opinion) and practice of states, which may in turn be reflected in the Hague Regulations annexed to the Fourth Hague

Convention and in United Nations Resolutions (UNGA Res. 2444 and 2675).

There are three commonly cited primary rules of laws of war related to the protection of civilians that are found in the above-mentioned sources of law. These are the most basic of the laws and govern the interpretation of other rules of law.

The rules are aimed at protecting both the direct physical integrity of protected human beings, as well as providing indirect protection of facilities necessary for human survival. Here they are stated with the emphasis on the child.

The first of these laws is that **children are not to be the object of attack**. Every child is considered not to be officially a part of the armed forces of his/her country when an attack takes place and is therefore protected by this rule. This includes the children of soldiers who are off duty, as well as those soldiers participating in an armed conflict. And all children in Iraq, without distinction as to nationality, are unambiguously protected by customary international law. The customary law protection is elaborated in United

Nations Resolutions UNGA (Res. 2444 and 2625). An example of this is the statement in the resolution concerning Respect for Human Rights in Armed Conflict where it is stated “[t]hat it is prohibited to launch attacks against the civilian populations as such” (UNGA Res. 2444). The United States

government has unambiguously accepted this resolution as customary international law (UN Doc. A/C.3/SR.1634).

A second law is that **soldiers must always distinguish between children and combatants**. This corollary to the first principle of law must be interpreted in the interest of the protection of children and provides a positive obligation for states. This distinction serves as the basis for the protections in the first principle and in the following principle of law. This law is customary international law and is reflected in words immediately following the statement of the first law in the same resolution which reads: “distinction must be made at all times between persons taking part in the hostilities and members of the civilian population to the effect that the latter be spared as much as possible.” This

Three Basic Principles of International Humanitarian Law Protecting Children

1. CHILDREN MUST NOT BE ATTACKED.

2. CHILDREN MUST BE GIVEN SPECIAL PROTECTION.

3. FACILITIES NECESSARY TO THE SURVIVAL OF CHILDREN MUST NOT BE ATTACKED.

provision requires states to make effective and identifiable efforts to ensure that children are protected as effectively as possible, even if this means that military action that is considered otherwise necessary must be suspended.

And finally the third principle of law is that **facilities essential for the survival of children must not be the subject of attack**. Again, the United Nations resolutions indicated above provide the basis for this understanding. While neither the United States nor Iraq have ratified the 1977 Protocols that elaborate these laws, these protocols form the basis of some of the principles of customary international law. Attacks on civilian supporting electrical facilities, food warehouses, schools and hospitals, among others, are prohibited.

These three principles are directed to soldiers at every level from the commander-in-chief to the enlisted infantryman. Each of these provisions have been strenuously discussed and negotiated over many years by the diplomatic representatives of states and with substantial involvement by the military of these states.

In addition to these three overriding principles of law, there are numerous specific protections that should be extended to children. The following is a short list of the specific protections provided for children in the Fourth Geneva Convention, which will apply to any armed conflict in Iraq, and to which the article numbers in parenthesis refer:

- Safety zones may be established to protect children (art. 14)
- Local agreements may be concluded to remove children from the theatre of war (art. 16)
- All civilians have a right to receive humanitarian assistance, with only minimal constraints regarding assurance that it will not be misused, and administrative controls that do not obstruct the delivery of the assistance (art. 23)
- Separated children under 12 should be given special care that enables them to be identified, and children under 15 reunified with their families in a neutral country (art. 24)
- Children under 15 years of age must at all times be treated as well as nationals of the country under whose control they are (art. 38)
- Children under 15 shall be given additional food as needed (art. 89)

- Child internees have a right to education and playtime and space (art. 94)
- Children shall be released at the end of a conflict or during a conflict if they can be safely transported to a third country (art. 132)
- In occupied territories, children's maintenance and education must be provided for by the occupying power working with local institutions (art. 50)
- In occupied territories, no children under 18 may be recruited into the armed forces (art. 51)
- In occupied territories, the death penalty may not be applied to children under 18 at the time the offense was committed (art. 68)
- In occupied territories, detained minors must be given special treatment (art. 76)
- In occupied territories, parents may request that their children be interned with them when no other adequate means of care for the children exists, and family members have the right to be lodged together (art. 82)

The majority of these rights are legal imperatives. That is, they are stated using the word "shall" indicating that states have no choice but to implement them, or they violate international humanitarian law.

All of the provisions of the Fourth Geneva Convention may be implemented by a body of enquiry (art. 52, 53, 132, and 149, respectively in the four Geneva Conventions). Although there is no standing body, such a body is to be formed at the request of any party to the conflict. If the parties to the conflict cannot agree on the modality for such a Commission, they are required to then agree on an individual that can determine the procedure for the enquiry. Once this enquiry body makes a determination that there is a violation of law, "the Parties to the conflict shall put an end to it and shall repress it with the least possible delay." Failure to implement a determination of this body constitutes an additional violation of international law.

A weakness inherent in using the above laws to protect children is that there is no body that can effectively require states to act in accordance with the law. Nevertheless, the mere fact that a violation of law is established contributes substantially to de-legitimizing government acts that are contrary to these most basic dictates of humanity.

Physical Well-Being

“Armed conflict kills and maims more children than soldiers.”

Graça Machel Report (1996)

A *conditio sine qua non* for the well-being of children is their physical health. War is the greatest man-made threat to the physical health of children. Between 1985 and 1995, an estimated two million children have been killed during wars. Since 1991, hundreds of thousands of children have died in Iraq under circumstances that can be attributed to either war or sanctions. And perhaps most importantly, a future Gulf War may have many more child victims than any that has come before it in contemporary times. Thus, perhaps the strongest argument for considering the plight of Iraqi children when deciding whether to start a war is their current state of physical vulnerability.

Household Economy

For most Iraqi families, grinding poverty is an everyday reality. After two wars and twelve years of sanctions, most families have depleted their resources by selling whatever they could to compensate for lost income. In 1989, 1 Iraqi Dinar was equal to US\$3 (UNICEF Annual Report, 2002). In 2003, on the currency markets in Baghdad, 2,200 Iraqi Dinars buys US\$1 – less than 1/6,000th its prewar value. Furthermore, salaries have not kept up with inflation. An average schoolteacher now earns between US\$3 and US\$5 per month, while most public servants earn between US\$3 and US\$6 per month (UNICEF, 2002). Iraq’s unemployment rate currently stands at more than 50% (ICRC, 2002), with more than 50% of Iraqi families living below the poverty line and working multiple jobs to make ends meet (UNICEF, 2002). As a result, the purchasing power of average Iraqi families has plummeted since 1990, with many families lacking the basic financial resources to make ends meet.

Sharp declines in household economy have also affected national educational levels (UNICEF, 2002 “Working Together”). Many children are being forced to drop out of school for financial reasons, and at least 23% of children are not attending primary school (UNICEF MICS, 2000). In addition, rehabilitation of the educational sector in the South/Central regions under the OFFP has been slow, compromising the capacity of average Iraqi families for self-

advancement and gainful employment through education. Adult literacy rates fell from 89% in 1985 to 57% in 1997 (UNDPa). Children are also being forced into the workforce because of family need, and there is a visible rise in the number of children working as peddlers and beggars on the streets (UNICEF, 2002).

As a result of a combination of factors, including rapid inflation, increasing commodities prices, the sale of household resources, rising unemployment and a decline in educational levels, Iraq’s household economy is in a far more critical state than in 1990. In the face of a new war, few Iraqi families will have the necessary resources to sustain themselves.

Food Security

Availability and accessibility of food constitute the two essential elements of food security for children (FAO, 2003).

Following the 1991 Gulf War and twelve years of sanctions, Iraqi families do not yet possess food security. Agricultural production has been hampered by economic sanctions, while imports under the Oil-for-Food Program have increased household dependency on government-distributed food rations. Many families’ food intake remains nutritionally poor, with inadequate caloric, protein and micronutrient value.

Entitlement and access to food has been hindered by the fact that the majority of Iraqi families are now very poor. Most have long since exhausted household financial resources, and are now living day-to-day under conditions of extreme poverty.

Importantly, existing social, economic, and nutritional data indicate that Iraqi children are now more vulnerable to malnutrition than they were before the last Gulf War.

Agriculture

In 1989, agriculture comprised only 5 percent of Iraq’s Gross Domestic Product (GDP). According to the United Nations, Iraq imported

more than 70 percent of consumed foodstuffs, valued at more than \$3 billion per year.

Following the 1991 Gulf War, sanctions initially prohibited the importation of seeds, fertilizers, pesticides, insecticides, crop spraying equipment and other agricultural inputs. Gradually, exemptions were granted for most essential items and inputs, yet financial resources were limited until the beginning of the Oil-for-Food Program in 1996. At the same time, the Iraqi government embarked on a vigorous program aimed at reducing dependency on food imports, by providing incentives to farmers and encouraging production and diversification of crops.

The result has been that, in 2003, although production of wheat (for example) is approaching prewar levels, yields per hectare remain below levels attained in the late 1980s. Furthermore, recent droughts have reduced production and yields during the late 1990s.

Limits to Food Production

Despite the above efforts at increasing domestic production, drought, inadequate supply of essential agricultural equipment and products such as fertilizers, pesticides and spare parts have negatively affected Iraqi agriculture. A shortage of imported feed, overgrazing, and inadequate veterinary services have also contributed to a decline in livestock production.

By 2000, the ratio of imported versus domestically produced foodstuffs revealed a continued heavy dependency on imported foods. Domestic wheat production in 2000 was approximately 300,000 metric tons. Wheat imports amounted to approximately 3.3 million metric tons. In this sense, only 8 percent of wheat was produced domestically; 92 percent of wheat supplies were imported. Similarly, only 7 percent of vegetable oil, 1 percent of sugar and 4 percent of rice was produced domestically in 2000 (FAOSTAT, 2003).

Iraq's Food Dependency

Commodities	Domestic Production (metric tons)	Imports (metric tons)	Import Dependency (Imports as a percent of total prod.)
Wheat	300,000	3,312,978	91.7 %
Vegetable Oil	22,326	297,231	93.0 %
Sugar	2,065	299,898	99.3 %
Rice	40,020	1,010,618	96.2 %
Infant formula	0	24,500	100 %

Food Ration Program

Food support programs in Iraq started on a modest scale in the mid-1980s. This program provided food to approximately 1 million civil servants at subsidized prices (UNICEF, 2002c). Immediately, following the imposition of the UN embargo of August 1990 (Resolution 661), a food rationing system was introduced to offer essential staples to all Iraqi residents (including foreigners living in Iraq). In its initial phase, the food ration program supplied roughly 1,093 kilocalories per person per day of basic foodstuffs (UNICEF, 2002c).

In response to the rapid post-war deterioration of the socio-economic conditions in Iraq, the Oil for Food Program (OFFP) was initiated in 1996.

The OFFP was never intended to be a substitute for normal economic activity. As long as the current sanctions remain in force, however, it is the only reliable tool available for seriously addressing the humanitarian situation in Iraq. Despite its shortcomings, the Oil-for-Food Program has made a significant difference in the lives of Iraqis.

Routine distribution of food on this scale is a major logistical operation that appears to be running smoothly. Some 24 million people (20.5 million in the south/centre and 3.5 million in northern Iraq), currently receive an average of 2,230 kcal per person per day (kcal/p/d) (UNICEF, 2002c).

Funds authorized for food by the OFFP are used to handle a massive food distribution regime which involves some 60,000 metric tons/month in the North and some 350,000 metric tons/month in the South/Central regions. In northern Iraq, food is distributed by the World Food Program, and in the South/Central regions by the government of Iraq. Funds for both programs are paid for through the sale of Iraqi oil.

A massive network, involving the Ministry of Trade (in the South/Centre) and WFP (in the North) import OFFP-approved food. It should be noted that the Iraqi government is not allowed to purchase domestically produced foods for the rationing program, even when Iraq has bumper crops. This situation has contributed to Iraq's significant and continuing dependence on food imports and foreign suppliers.

The ration system views Iraqi families as a unit, allocating food to each household, according to

the number of individuals per family. Children under one year of age receive a special monthly infant ration that includes milk powder. Ration tickets issued by the government are distributed to families, who then receive their rations from local merchants. Each merchant, of which there are approximately 43,000 in Iraq, handles the rations of approximately 360 persons in their immediate neighbourhood.

Imported food, once cleared through the ports, is distributed to regional warehouses. The food distribution system is divided into two separate networks, one network for handling wheat, and a separate network for all other food items. Wheat is then transported from regional warehouses to regional mills (both private and public) and once milled sent to local ration centres. Other items are sent directly to ration centres from the regional warehouses. Ration centres then transfer the various food items to the network of local agents according to the number of individuals they are supplying. Families receive their monthly ration by paying 250 ID (approximately US\$0.125). The Iraqi food rationing system has been identified as one of the most efficient mechanisms of food distribution in the world by various UN agencies and observers visiting Iraq, and has been practically free of abuse due to strict control by the authorities (UNICEF, 2002). Cheaters are fined the market price equivalent of items included in the food-basket and, in the case of retail agents, loss of license is the minimum penalty.

On average, the monthly rations provide 2,215 kilocalories of energy and 49.4 grams of protein per person per day (United Nations Office of the Iraq Programme, 2002).

The food-basket has a very low vegetable protein content and does not include any animal proteins. Moreover, some of the rationed items can only last for two thirds of the month. According to an FAO/WFP report in April 2000, monthly food rations only lasted for 21 days and milk powder 12 days. This means that families have to buy additional food items in the market place.

Low household purchasing power, a combination of high unemployment, devaluation of the Iraqi dinar and low monthly wages, means that most Iraqi families are 100 percent dependent on food rations for their survival.

It is estimated that, even with food rations, 72 per cent of the average household income is spent on food. Since many households do not have any

additional source of income, families often resort to selling part of their ration to purchase other necessities in the private market, items such as meat, medicine and clothing.

UNICEF reports indicate that close to 60 per cent of the population in Iraq (approximately 16 million people) are fully dependent on the food ration distributed each month by the government (UNICEF, 2002c).

Anticipating a possible military conflict, in August 2002 the government began providing an advance ration together with the current month's ration. Iraqi families have now received an 'advance' of five months of food rations, to enable them to stockpile food at home in case of war.

However, quantities of pulses, dried whole milk and vegetable oil have declined in these rations due to low in-country stocks. Current stocks for vegetable oil are sufficient to last only one and half months, while stocks for pulses and dried whole milk will not be adequate to cover even a one-month ration (UN, Office of the Iraq Programme, 2002).

According to the WFP's food price monitoring mechanism, food market prices are extremely sensitive to changes in the political arena. After September 11, for example, the prices of food-basket items increased significantly which required WFP intervention.

Food Insecurity and the Possibility of War

UNICEF estimates that over 18 million people out of an estimated population of 26 million are food insecure in Iraq and "even a short-term interruption in basic services that would follow a conflict in Iraq" would have very negative effects on their lives (UNICEF, 2003).

A war situation, which may also involve the destruction of transportation facilities, ports, bridges and warehouses would likely lead to rapidly increasing food prices in the markets. That situation, coupled with the fact that most of the urban Iraqi population are dependent on government rations and would be unlikely to cope with food shortages without immediate and massive emergency assistance, means that war would most certainly have a massive negative impact on the civilian population.

Child Vulnerability Analysis - Food Security -

- Most Iraqi families have fully exhausted their financial resources and are highly dependent on government rations. A major military assault resulting in disruption of the food supply system, including the ration distribution system, is likely to cause major loss of civilian life, especially among the most vulnerable segments of the Iraqi population.
- Destruction of bridges, transportation, storage facilities and ports have the potential to severely disrupt the food distribution system resulting in food shortages and even potential famine situations in certain parts of the country.
- Collapse of the Iraqi government would undermine the food rationing system in South and Central Iraq where 85 percent of the Iraqi population live.
- Attempts to respond to an emergency situation in Iraq would likely increase food prices in other import dependent nations in the region and spread the civilian suffering beyond boundaries of Iraq.
- Acute malnutrition rates in under-five children are likely to increase as a result of critical food shortages. UNICEF estimates an increase from 4 to 30 per cent in acute, 20 per cent in moderate and 10 per cent in cases of severe malnutrition (UNICEF, 2003).
- Child morbidity rates are likely to increase (especially diarrheal disease) from the consumption of contaminated water and food shortages.
- Given the current state of food and nutritional insecurity, not only the threat of war but even prolongation of sanctions are going to cause further human suffering in Iraq.

Infrastructure and Environment

Electricity

Iraq had an installed capacity of 9,500 MW prior to the Gulf war with electric generation being provided by a mix of thermal, hydroelectric and gas turbine stations. One unusual feature of Iraq's power system was a high reserve capability – almost 46% of installed capacity. (International Study Team, 1991)

This installed capacity of 9,500 MW was reduced to about 300 MW as a result of allied bombings. Repairs since have restored generation capacity to about 3,500 MW, 68% of peak load in 1990 of 5,162 MW and about 37% of installed capacity. About 75% of the transmission lines were again made operable (International Study Team, 1991).

By the summer of 2002 power generation requirements reached a peak of 6,200 MW while the operating capacity was only 3,800 MW

(UNDP, 2003). By the end of 2002 it was estimated that there was still a deficit of electricity of over 2,300 MW (UNICEF, 2002).

In numerous interviews it was cited that the capability for further repair had been exhausted. The lack of spare parts and the poor condition of the transmission and distribution networks has been the primary factor limiting capacity of the Iraqi government to repair and rebuild its electric grid (OIP, 2002).

Damage to the electrical system has had profound negative impact on public health, water and wastewater systems, agricultural production and industrial capacity.

Since the early 1990s until recently, the government of Iraq has not been able to significantly increase its generation capacity through the construction of new power plants. Although the reasons have been varied, they have been primarily connected to the sanctions regime. Lack of funds for 99 approved projects valued at \$360 million will forestall the addition of an extra 1,090 MW generating capacity. Materials for two new power plants (Ai-Shimal and Salah al-Din) worth about \$81 million that have arrived cannot be utilized because applications for main equipment are not approved (OIP, 2002).

Unlike the situation in 1991, Iraq's stockpile of spare parts for their electricity system is almost non-existent as most of the spare parts that they have been able to import are used for routine maintenance. Any further damage to the system will decimate their ability to generate and distribute power. Considering the poor conditions of their existing equipment, they will not be able to cannibalize parts from damaged systems to the same degree that they did in 1991.

The impact of damage to the existing electricity system will likely be even more catastrophic than it was in 1991. At that time absent or erratic power supply limited hospitals and health centers in their ability to sterilize equipment and refrigerate vaccines and medicines. Water and wastewater stations were also limited in their ability to treat and distribute water and treat and dispose of raw sewage. Directly as a result of this Iraq has seen mortality and morbidity rates increase due to increased levels of water borne and waste borne diseases (International Study Team, 1991).

While most major hospitals in 2003 are equipped with standby generators, these generators can only operate for 6 hours at a time and then must be shut down for another 6 hours before they can be used again. The power that a generator provides meets only 60-70% of the hospital's needs while the generator is running. In case of major damage to the electricity supply due to war, with almost no spare parts in country, these generators would not be able to cope with the demand and would likely breakdown quickly.

Water and Sewage

Before the Gulf War of 1991 Iraq had a modern physical infrastructure of water treatment plants and distribution systems to provide safe potable drinking water to its urban population.

The crippling of the electricity generation system as a result of the 1991 Gulf War and subsequent events had a significant impact on the water and wastewater systems. In the years following the Gulf War, most of the water treatment plants were operating at 30-70 percent of design capacity due to the lack of spare parts. Chlorine was being rationed at all plants with supplies on hand varying from a few days to four weeks. It was estimated early in 1991 that the operational capacity of the water system would deteriorate to about 5-10 percent of capacity within months due to the lack of spare parts, chlorine and regular power supply.

The wastewater systems in Baghdad and in most Governorates south of Baghdad were operating anywhere from 0-70 percent capacity (some plants were not operating at all) with the lack of spare parts and electricity as the main rate limiting factor (International Study Team, 1991).

It is interesting to note that direct physical damage either from the bombing or from looting during the civil uprisings was found to be only a minor factor in the impairment of the water and wastewater systems. The primary rate limiting factors were the lack of spare parts, the supply of chlorine and erratic electricity supply (International Study Team, 1991).

At present 50% of sewage treatment plants are inoperable and another 25% do not meet national environmental standards (UNDP, 2003). Most sewage treatment plants' operating capacities stand at an average of 33-48 percent as contracts for major mechanical and electrical parts are either unfilled or on hold under the sanctions regime (OIP, 2002).

Potable water coverage in urban areas had dropped from 95% before 1991 to 92.4% and rural access from 75% to 45.7% (UNICEF, 2002). Nationally it is estimated that approximately 60 percent of the population currently has access to safe potable water (UNDP, 2003). Daily per capita share of potable water between 1990 and 2000 decreased from 330 litres per capita to 150 litres in Baghdad, from 270 litres to 110 litres in other urban areas, and from 180 litres to 65 litres in rural areas (UNICEF, 2002).

Even the quality of water has been severely affected. In the southern governorates the turbidity of 70 percent of tested water exceeded 10 Nephelometric Turbidity Units (NTU). In some places the turbidity exceeded 25 NTU. The standards should not exceed 1 NTU (UNICEF, 2002).

Garbage collection and sewage treatment has been affected also. It is estimated that about 500,000 tons of raw sewage is dumped into fresh water bodies every day – particularly the Tigris river, the south's main source of drinking water (UNDP, 2003).

Garbage collection in Baghdad has dropped from 1.5 kilograms per capita per day for 4.25 million people in 1990 using 800 garbage collection trucks to about 0.5 kilogram per person per day for 5.6 million people now using only 80 garbage collection trucks assisted by another 400 hired garbage collectors (UNICEF, 2002).

In 2003, safe drinking water is a serious problem right across the country because of the inability to process water and the wastewater properly. Cases of diarrhea have increased from an average of 3.8 episodes per child/year in 1990 to 15 episodes per child/year in 1996. During the same period typhoid fever increased from 2,240 to 27,000 cases per year. (UNICEF, 2002).

In addition to this deterioration in water supply and water quality, Iraq is now only recovering from one of the most serious droughts in recent history. Water resources are now less than half normal levels. The United Nations agencies estimate that recent droughts may have affected up to 70 percent of all arable land. (UNDP, 2003). In addition, salination affects more than 75 percent of land in Iraq and is one of the major causes for desertification (UNDP, 2003).

With the health of children so severely affected by a crippled and crumbling water and sewage

treatment system, any further disruption of these systems would be catastrophic for the children of Iraq, further increasing morbidity and mortality rates to unacceptable levels beyond the already high levels that they are at now.

Child Vulnerability Analysis - Infrastructure and Environment -
<ul style="list-style-type: none"> • In 2003, Iraq is experiencing a shortage of electricity so that only approximately 60 percent of its electricity needs are currently being met. • Damage to the electrical system has had a profound negative impact on public health, water and wastewater systems, agricultural production and industrial capacity. • Badly damaged during the 1991 Gulf War and subsequent sanctions, only about 60 percent of Iraq's population currently has access to safe potable water. • Roughly 500,000 tons of raw sewage is dumped into fresh water bodies every day – particularly into the Tigris river which is the number one source of water for southern Iraq. • The result of damage to water and sanitation systems is that cases of diarrhea have increased in Iraqi children. • With the health of children so severely affected by a crippled and crumbling water and sewage treatment system, any further disruption of these systems would be catastrophic for the children of Iraq, further increasing morbidity and mortality rates to unacceptable levels beyond the already high levels that they are at now.

Health and Nutrition

By most accounts, prior to 1990 Iraq had one of the best health care systems in the Middle East. The World Health Organization previously described Iraq's health infrastructure as "a first class range of medical facilities" (Medact, 2002), including well-established public health services, hospitals, primary care facilities and an ample supply of medicines and medical equipment (Popal, 2000).

The Gulf War and twelve years of economic sanctions have had a devastating effect on Iraq's health infrastructure, resulting in a significant decline in the health and well being of Iraqi children (Hoskins, 1997). Death rates of children under five have more than doubled over the past decade, with 70% of deaths attributed to diarrheal disease and respiratory tract infections (UNICEF, 2003a). Marginal gains in health services under the Oil-for-Food Program (OFFP) are having a limited impact on child morbidity

and mortality in South/Central Iraq due in part to persistent deficiencies in the water and sanitation sectors. In addition, inefficiencies and delays in the procurement of essential medicines and medical equipment under the OFFP are resulting in frequent shortages and reduced capacity within publicly funded hospitals and health clinics. While there have been improvements in immunization coverage and malnutrition rates in the past several years, overall Iraqi children are much more vulnerable to starvation, death and disease than they were in 1990.

Diarrheal disease and acute respiratory tract infections currently account for 70% of all deaths of Iraqi children under five, with a ten-fold increase in the case fatality rate over the past decade (UNICEF, 2003a).

Child Morbidity and Mortality

The under five mortality rate for South/Central Iraq is currently estimated at 131 per 1,000 live births, 2.3 times the level recorded in 1990 of 56 per 1,000 live births (UNICEF, 2003b). Infant mortality has also increased during the same period, from an average of 50 per 1000 live births to 107 per 1000 live births (UNICEF, 2003a). However, this increase is not consistent throughout the country. In the three predominantly Kurdish governorates in northern Iraq, the so-called self-administered region, under five mortality has actually improved, decreasing from 80 deaths per 1000 live births (1984-1989) to 72 deaths per 1000 live births (1994-1999), a decrease of 10 percent (UNICEF, 2003b). Gains in the North are attributed to special consideration under the OFFP, which allocates 13% of Iraqi oil revenues to the North, administered under the direction of the United Nations.

Under-Five Mortality Rates in Iraq

Region	1984-89 Deaths/1000 Live Births	1994-1999 Deaths/1000 Live Births	Percent change
South /Central	56	131	+ 134 %
North	80	72	- 10 %

Source: Unicef Humanitarian Action: 14 Jan 2003.

Poor water quality, sanitation and environmental conditions, compounded by malnutrition, continue to have the most significant impact on child morbidity and mortality. Significant repair

of the water, sanitation and electrical facilities, damaged during the 1991 Gulf War, has been hindered by ongoing economic sanctions. In the South/Central regions of Iraq, this has resulted in persistently high rates of diarrheal disease in children. Water quality analysis undertaken by the World Health Organization in combination with the Ministry of Health shows high rates of contamination in water samples and a 40 percent decline in potable water production during the 1990s (WHO, 2002). Iraqi children currently experience an average of 14.4 days of diarrhea each month, compared to an average of 3.3 in 1990 (UNICEF, 2003a). While rates of diarrheal disease remain much higher than 1990 levels, from 1998 to 2001 the number of cases of diarrhea in children under five decreased by 19 percent (UNICEF, 2002b).

In addition to diarrheal disease and acute respiratory infection, the main health problems of Iraqi children include: nutritional anemia, vitamin A deficiency, iodine deficiency, malaria, leishmaniasis (kala azar) and measles (UNICEF, 2003b). The World Health Organization has noted a decrease in the number of reported cases of both cholera and typhoid over the past three years (WHO, 2002).

Government officials and hospital directors also report an increased incidence of childhood cancers in South/Central Iraq, but this reported increase is difficult to quantify as there is only limited reliable epidemiological data. Furthermore, the impact of depleted uranium from radioactive shell material used by coalition forces during the Gulf War, and its possible association with childhood cancers in Iraq, remains scientifically unproven (Medact, 2002).

Nutrition

There is no nationally representative data on malnutrition available prior to 1990 (Garfield, 1999). The earliest available data is that collected by the International Study Team in August 1991, one year after the imposition of sanctions. However, several published, but unverifiable, reports suggest that acute malnutrition rates prior to 1990 were in the order of 1% to 3% (Garfield, 1999; UNICEF, 2003a).

In 2002, while malnutrition levels in South/Central Iraq remain high, there have nonetheless been significant gains since the start of the Oil-for-Food Program. Unfortunately, data available from a UNICEF-supported survey reported in February 2002 does not allow for

comparisons between the self-administered three northern governorates and the South/Central regions of Iraq. It is possible that nutritional gains in the North may be significantly greater than in other parts of the country. If so, this would artificially magnify improvements seen in the South/Central regions of Iraq.

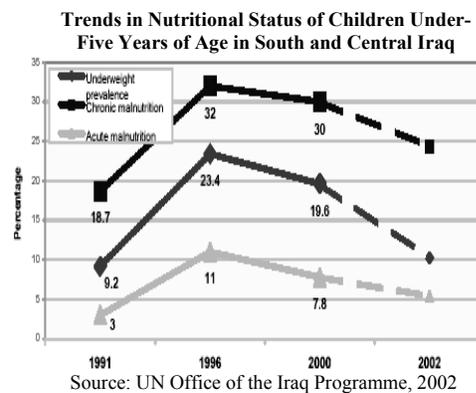
That being said, February 2002 nutritional data for the country as a whole demonstrates an improvement in rates of malnutrition compared to the mid-1990s as follows:

Trends in the Malnutrition of Iraqi Children

Malnutrition	1991	1996	2000	2002
Acute	3	11	8	4
Underweight	9	23	20	9
Chronic	18	32	30	23

Source: Unicef, 2002b

On average, rates of malnutrition in rural areas exceed urban areas by between 10% and 30% for the years in which data is available.



The decline in malnutrition rates over the past five years is due to multiple factors, including: an increase in the caloric content of the government food ration; gradually decreasing rates of diarrheal disease; modest improvements to the health sector; implementation of the Targeted Nutrition Program (supplementary and therapeutic feeding); breastfeeding promotion, and improved immunization coverage (UNICEF, 2002).

While these results are on the surface encouraging, and there is no question that some improvement in nutritional status has taken place, Iraqi children are by no means in a stable or appropriate nutritional state. One quarter of Iraqi children under-five years of age (close to one million children) are chronically malnourished.

Between 1990 and 1998, there has been a five-fold increase in low birth weight babies - an important indicator of maternal nutrition - from 4.5 percent to 24.7 percent. Low birth weight babies are 40 times more likely to die in their first month of life when compared to infants of normal weight (UNICEF, 2003a).



Source: Ministry of Health and UN Office of the Iraq Programme, 2002.

UNICEF surveys indicate increases in incidences of night-blindness, rickets, goitre, and the prevalence of anemia among both pregnant women and children below 5 years of age (UNICEF, 2003c)

The inclusion of breast milk substitutes in the food basket also encourage mothers to wean their babies earlier which also increases risks for malnutrition and death, especially when clean water is not always easy to find.

Any disruption to the food rationing system, upon which an estimated 16 million Iraqis are 100 percent dependent as their only source of food (United Nations, 2003) will result in a significant increase in the number of acutely malnourished and underweight children. Furthermore, 240,000 children and 140,000 malnourished pregnant women are currently undergoing targeted nutritional rehabilitation in the country (UNICEF, 2002c) and would be highly vulnerable to malnutrition, starvation or even death in the event of a disruption, or cessation, of these services.

Maternal Mortality and Life Expectancy

Life expectancy has declined over the past decade from 67 years in 1987, to 63.8 years in 1998. According to a 1999 UNICEF survey, maternal mortality has also experienced a staggering increase, from 117 deaths per 100,000 live births in 1990 to 294 deaths per 100,000 live births in 1999 (UNICEF, 2003a) – a 2.5 fold increase. Increased maternal mortality can be

attributed to high rates of malnutrition among pregnant women, decreased access to quality health services and high fertility rates. Higher maternal mortality correlates closely with an observed decline in educational indicators.

Vaccine Preventable Diseases, Immunization Coverage and the Cold Chain

Immunization coverage rates for children under-five years in South/Central Iraq have improved since the early 1990s, with the exception of BCG. Tetanus coverage for women of child bearing age remains low, with fewer than 63 percent of women vaccinated (UNICEF, 2002c). The cold chain is generally well maintained throughout the country, with vaccines stored in fridges powered by kerosene (UNICEF, 2003b). The distribution of kerosene fridges has made it possible to maintain an effective cold chain despite frequent disruptions in electricity.

A peak in the number of cases of measles occurred from 1991 to 1995, with a resurgence in 1998 of 24,718 reported cases (UNICEF, 2002c). While measles vaccine coverage rates have increased since the early 1990s, they remain below 80 percent (UNICEF, 2003b). In addition, immunization surveys only assess coverage rates in children under-five years of age. Due to the disruption of vaccination services from 1991 to 1996, it is expected that coverage rates would be much lower for all vaccine-preventable diseases for children aged 6 to 12 years. In fact, more than two thirds of all measles cases in the South/Central region are now occurring in older children (UNICEF, 2003b). In combination with high malnutrition levels, the probability of a measles outbreak within the country remains high, and represents a major threat to the morbidity and mortality of children in the event of a new war. While kerosene fridges have supported an effective cold chain in recent years, disruptions to the supply of vaccines and/or kerosene (including any potential war-related price increases or shortages) could lead to a sharp decline in coverage rates for all children and significantly impede emergency measures to contain a measles epidemic.

Health Services and Essential Drugs

Iraq's health infrastructure, particularly in the South/Central region, is based on a highly curative model that is under-funded when compared with 1990 levels (Medact 2002). Reconstruction and revitalization of health services have been slow, with many hospitals

reporting structural deficiencies and overcrowding. Compounding the problem further, Iraq's health professionals have experienced technical and professional isolation under sanctions and a decline in the number of trained health care workers as a result of emigration (UNICEF, 2003a).

Iraqi Ministry of Health Budget

Year	Annual Budget (US\$)	Population
1989	450 Million	<20 Million
2002	20 Million	26 million

Adapted from Unicef, The Situation of Children in Iraq, 2002

In 1999, hospitals adopted a system of self-financing whereby the Ministry of Health provides equipment, supplies and medicines under the Oil-for-Food Program, while furniture, maintenance and construction are funded by revenues generated through a system of fee-for-service which includes both outpatient and inpatient care, as well as prescribed medications (UNICEF, 2003a). It is difficult to know what impact, if any, the fee-for-service system has had on patient access to essential services. At meetings with hospital officials undertaken as part of this report, hospital directors affirm that patients who cannot afford the cost of care are subsidized through the hospital budget. However, this information cannot be verified.

Chronic under-funding of the health sector, as well as delays in the approval and delivery of essential drugs and medical equipment, have severely compromised the health sector's capacity to respond to a humanitarian emergency. Despite improvements in drug supply resulting from the Oil-for-Food Program, supplies remain erratic and many essential medications remain unavailable. Anecdotal evidence from interviews with health workers suggests that hospitals in the South/Central regions have less than 3 to 4 weeks of reserves, while UNICEF and the Ministry of Health report that at the present rate of consumption vaccine and drug stocks would likely be sufficient for only 4 months (UNICEF, 2003b). This assumes transportation mechanisms from the Ministry of Health storage facilities to hospitals and primary care clinics are not interrupted. Furthermore, several drugs, such as Pentamidine used to treat kala azar, are currently in short supply due to outbreaks and distribution delays under the OFFP. In the event of an unexpected outbreak or any disruption in the delivery of medicines,

hospitals and primary care clinics will quickly exhaust their reserves of essential medicines. While many hospitals now have generators and can operate for a limited period of time without electricity, in the event of a humanitarian emergency the current situation in hospitals and at primary care clinics would make it difficult for medical staff to provide even the most basic medical care to their patients.

Child Vulnerability Analysis

- There have been marginal gains in certain health and nutritional indicators in South/Central Iraq over the past three years under the Oil-for-Food Program, specifically in the areas of acute malnutrition, vaccine-preventable diseases and drug supply.
- When compared with 1990 indicators, morbidity and mortality data suggest overall that Iraqi children are far more vulnerable to the effects of armed conflict in 2003 than they were in 1990. This is particularly true if there were to be a disruption in the food rationing system, the Targeted Nutritional Program, water and sanitation, or health service delivery (including the supply of essential drugs). Even without a new war, Iraqi children under-five years of age have a baseline mortality rate that is already 2.5 times greater than it was in 1990, before the last Gulf War.
- Close to 1 million, and possibly more, Iraqi children have not been vaccinated against measles. Low measles vaccination coverage rates, particularly in older children, in combination with high rates of child malnutrition, place children in imminent danger of a measles epidemic in the event of a war.
- Specific vulnerabilities in child nutrition include high rates of acute and chronic malnutrition, rendering children more susceptible to death and disease. At a minimum, more than 500,000 Iraqi children under-five years of age are acutely malnourished or underweight and, in the event of a war, would be at grave risk of hunger, starvation, and the risk of communicable disease.
- The health service infrastructure is severely weakened when compared to 1990 levels. While most hospitals are now equipped with generators that would enable them to function for short periods of time, current drugs and medical supply stocks could not withstand a sustained increase in demand for health care services (particularly in the event of an epidemic) and it is likely that hospitals will not be function effectively for more than one month in the event of a humanitarian crisis.

Gender

The Security Council has given special attention to women as victims of armed conflict. International humanitarian law, as indicated above, also provides special protection to women. In Iraq, as in many countries around the world, the primary care providers for children have traditionally been women.

Methodology

Informal interviews with more than 100 Iraqi women were conducted between January 20 and 26, 2003. In-depth information was gathered from more than 20 households, 5 hospitals and 2 markets, in South/Central Iraq including Baghdad, Kerbala and Basra. In addition, information was gathered from a comprehensive literature review, as well as from meetings with representatives from non-governmental and United Nations representatives, as well as Iraqi officials.

Women's Main Roles and Responsibilities

76.3% of children are attending primary school, with 82.5% attendance rates for boys and 69.8% for girls (UNICEF MICS, 2000). This shows that almost one third of girls (31.2%) are not attending primary schools with a dropout rate almost twice as high as that for boys. From an early age, girls are more likely than boys to stay home to help with household responsibilities, including care of other children within the family.

“I am responsible for cooking and cleaning. My daughters help me, but this is not for the boys, they are in school.”
– Mother of 6 children, 3 girls and 3 boys (Basra, January 25, 2003)

Between the ages of 15 and 49, 51 percent of women are married and an additional 5 percent have been married at some point in their lives (UNICEF MICS, 2000). 26% of women have no education, while another 38% have achieved only a primary education level (UNICEF MICS, 2000).

All of the women interviewed (100%) for this assessment confirmed that they are responsible for ensuring the cleanliness of the home and the provision of food and meals.

At the 5 hospitals visited, all the sick children were accompanied by their mothers or another female relative. Mothers, or occasionally other female relatives, stay with the child throughout the duration of the hospitalization, sometimes living hundreds of kilometers from the rest of the family in order to be with their sick child. Also, it was noted that women frequently provide basic health care to their children in the hospital due to staff shortages.

“The doctor showed me how to give my daughter oxygen because nobody else has time to do it right now.”

– Mother of 3 (Baghdad, January 20, 2003), with 1 year old child hospitalized for pneumonia.

The women's other children stay at home during this time, to avoid a disruption in their regular lives. All the women who were interviewed (100%) said that in their absence, their other children are in the care of a grandmother, aunt and/or eldest sisters.

The Effects of the Gulf War and the Economic Sanctions on Women in Iraq

The Gulf War aggravated the domestic load of a majority of women, as daily chores became more time-consuming (Hoskins, 1997).

Since the introduction of the food rationing system (see Food Security section), women's responsibilities surrounding the collection of food items and the preparation of meals have increased. While the food rationing system functions effectively, securing adequate quantities of food has nonetheless become a major preoccupation for Iraqi women (Hoskins, 1997). The Iraqi women interviewed for this assessment agreed that household responsibilities such as obtaining medicines and other rare items became more challenging and time-consuming as a result of the sanctions.

In the last decade, an increase in poverty levels (see Household Economy section) has placed added pressure on women to find sources of income in addition to caring for children, the home and the family in general.

The Impact of Further Deterioration in Living Conditions on Women

For women to find additional sources of income now is more difficult than in pre-Gulf War Iraq. Unlike in the early 1990s, when women sold their valuables to care for themselves, their children and families, few have any remaining financial resources or savings. Additionally, there is less vacancy in the workforce than there was 13 years ago. During the 1990s, there was a decline in female literacy affecting women's employability (UNICEF Sit Rep, 2002). Fertility rates remain high, at 7.7, placing an additional

strain on women, their health and their capacity to care for their children. Also, children's health has deteriorated in the last decade, further burdening women within the role of caregiver, preventing them from seeking income sources.

Approximately 10% of women are widowed and/or single heads of households (Hoskins, 1997). The burden of female-headed households places even more responsibility on women, as they lack the financial, social, and emotional support normally provided by husbands.

The entire population is currently greatly dependent on the food rationing system as the most significant source of nutrition (see Food Security section). Since women bear the brunt of the responsibility of providing food to the family, any threat to the food rationing system also affects women and children directly.

Women's health has become more fragile due to malnutrition and the limitations in health care resulting from the sanctions (see Health section). Furthermore, deficiencies and/or disruptions in the health care sector have a direct impact on women's short, medium and long-term well-being. Most significant are the general deficiencies in essential drugs and in health staff.

While women are not currently recruited to participate in the armed forces, unofficial reports from government and non-governmental sources suggest that as many as 2 million women have received training in the use of light weaponry, specifically guns, through government training programs including the popular army. The potential impact of this in the context of a new war and its impact on women, particularly in the context of a possible ground offensive, is extremely worrisome although difficult to gauge.

Child Vulnerability Analysis - Gender -
<ul style="list-style-type: none"> • In the last decade, an increase in poverty levels has placed added pressure on women to find sources of income in addition to caring for children, the home and the family in general. • Women's health has become more fragile due to malnutrition and the limitations in health care resulting from the sanctions. • Dependency on the ration distribution system, increasing poverty, and a badly run down infrastructure (water, sanitation, health care, etc), have made it much more difficult for women to care for their children, their families and themselves.

Displacement

There are an estimated 134,054 official refugees living inside Iraq (UNHCR, 2003). They are provided with food rations, and free access to health and education on par with Iraqi citizens, in accordance with UNSCR 986 (OFFP) and in line with the provisions contained in its Refugee law No.51 of 1971 (UNHCR, 2003). However, the government's capacity to support refugees has declined over the past decade, and they have requested additional assistance from UNHCR (UNHCR, 2003)). UNHCR provides complementary material assistance in the areas of health, education, sanitation, shelter, income generation, potable water and relief items.

In addition to refugees, the International Federation of the Red Cross and Red Crescent Societies (IFRC) estimates that there are about 1.2 million Internally Displaced Persons (IDPs) in Iraq (IFRC, 2002). IFRC's country assistance strategy aims at rehabilitating six collective centres in areas where high concentrations of IDPs reside.

It is difficult to predict the scope and flow of displacement of people in the event of an emerging crisis. Looking at various worst-case scenarios in a protracted emergency, the UN estimates that war with Iraq could result in approximately 1.4 million refugees. Based on meetings held with UNHCR in Baghdad on January 23, 2003, it is possible that as many as 900,000 Iraqi civilians could cross borders and become refugees, and another 500,000 could be trapped along closed borders in "refugee like situations". The United Nations also estimates that there could be as many as 2 million Internally Displaced Persons (IDPs), some of whom would in all likelihood eventually become refugees (United Nations, 2002c).

Neighbouring countries are currently stating that they will close their borders with Iraq to people seeking refuge. While Iran has indicated it will close its borders, it is also apparently in the process of building camps for potential refugees, located between 500 meters to 16 kilometers from the border.

Mental Well-Being

“Conflict is fear.”

A 5-year-old Iraqi child in Baghdad.

Psychological Consequences of the 1991 Gulf War on Children

Members of the International Study Team carried out the only existing long-term psychological follow up of the 1991 Gulf War (Dyregrov, Gjestad, & Raundalen, 2002). A group of ninety-three children in Iraq were interviewed at 6 months, one year and two years after the war. The group was exposed to the bombing of a shelter where more than 400 civilians were killed. Selected items from different inventories, including the Impact of Event Scale (IES) assessed children's reactions. Results revealed that children continued to experience sadness and remained afraid of losing their family. While there was no significant decline in intrusive and avoidance reactions as measured by the IES from 6 months to 1 year following the war, there was a reduction of these types of reactions two years after the war. However, the scores were still high, indicating that symptoms persist, with somewhat diminished intensity over time. It was concluded that the psychological impact of war on children is not over when the fighting ceases.

The results of this study were in line with empirical evidence from non-war (Green et al., 1994; McFarlane, A., Policansky, S. K., & Irwin, C., 1987; Pynoos & Nader, 1989; Terr, 1983) and war situations (Dyregrov, Gupta, Gjestad & Mukanoheli, 2000; Sack et al., 1993) that posttraumatic stress reactions in children and adolescents persist. Threat to survival is especially critical in the development of posttraumatic symptoms in children (Carlson & Rosser-Hogan, 1994).

Mental Consequences of a Possible War on Children

Depletion of family resources

War results in a variety of macro-environmental consequences that will increase stress on parents (i.e. poverty, death, economic depression, sanitation, electricity and water problems). Regarding young children, a UNICEF report pointed out that "exhausted parents who can hardly meet the family's basic needs are

naturally less sensitive and caring towards their children, and deprived children often add through their consequent difficult behavior to parents' distress. Families whose resources for loving care are depleted through long-term multiple distress can no longer provide their children with a sense of belonging, which is necessary to promote young children's curiosity, exploratory activities and tolerance for unfamiliar situations. Finally, the home environment of many young children has become depleted of essential commodities, toys, books and other opportunities for self-directed learning and achievement" (UNICEF, 1999). A new war will further add to this exhaustion and will impact the children negatively while increasing family disintegration.

Malnutrition, cognition and parent-child interaction

A series of micro-environmental consequences are also to be expected. High war trauma exposure constitutes a risk to children's concentration, attention and memory performance (Qouta, Punamäki & El Sarraj, 1995). Studies associate exposure to violence with cognitive impairment (Arroyo & Eth, 1985; Diehl, Zea & Espino, 1993). Malnutrition also adds to this as it can directly influence the development of the central nervous system (CNS) and its functioning. In addition malnourished children become more passive, and engage less in the exploration of their environment. As a consequence, they solicit a different kind of feedback both from peers and caregivers. This results in lower levels of stimulation than required for normal development.

The sanctions made it impossible for many Iraqi parents to provide for their families. In the past few years this downward trend has been stopped and to a certain extent reversed (see Household Economy section). A new war would be a serious set back.

Traumatic Loss

Losing loved ones causes long lasting grief reactions in family members. It is considered a

risk factor for chronic depressive reactions and may result in a reduction in mental life quality. If the deceased is a parent, the consequences for the child may be devastating. In a situation of hardship and crisis, as in Iraq where the families have suffered the strain of long term sanctions, and in the event of an escalating war, the negative consequences from the loss of family members may be multiplied. Psychologically, there is a far higher risk for a complicated and avoidable pathological grief if the lost one dies in a traumatic context (accident, violence, war) or from avoidable causes (malnutrition, lack of proper treatment, lack of medicine) inflicted on the family than from identified causes. In these cases the risk of depression increases. In addition to that the natural grief process may be disturbed by anger and guilt. In the Iraqi case the infant mortality measured by UNICEF is calculated to be 131 per thousand children below the age of five years which means that every second family runs the risk of losing a child. In cases of war when loss is caused by bombing, shelling or shooting, the loss occurs in the context of trauma. Lifelong mental suffering may be the consequence. In the large family network of Iraq one may count that each death from a military attack may cause sadness and anger in more than fifty relatives.

The 2003 Iraqi data

The 2003 Iraqi data are based on two studies carried out in the fourth week of January 2003. In the first study we visited 21 families and had in depth interviews with 85 children and youngsters from the ages of 4 to 18 years. The family visits took place in different areas of Baghdad and Basra by door-to-door knocking without any appointments. In the second study, we visited two schools and collected 232 questionnaires from school children ages 10 to 16 years (mean of 12.7 years). The three-page questionnaire consisted of an *Iraqi Child & Adolescent Questionnaire*, *The Impact of the Threat Questionnaire*, and the *Birleson Depression Inventory* all soliciting information about the mental consequences resulting from the present situation.

Study One – Visiting Families

The main aim of this qualitative study was, through a personal encounter with the child, to get an in depth impression of how children in different age groups experience the present war threat. All the families welcomed us and cooperated in a very friendly and open manner.

When we explained to the parents that according to our experience the children were more open and talkative without the parents present they left the room. For some families we did not find this appropriate (for example, when we needed their cooperation to talk to the smallest children). Most often they followed our gentle instruction not to interfere during the interview. After the interview we all gathered together and we reiterated the aim of the study and reported on our interaction with the children. The interview was semi-structured, without pre-written questions but with issues to be covered. These issues were: how the present situation and the threat of an armed attack influence their daily life including psychological reactions with special attention to fear, sadness and anger. A second issue was communication about their thoughts and worries both at home and at school. It was to cover who the child could talk to for updated information, explanation and comfort. We adapted part of the interview to the present climate in the family and the individual state of the child, for example, for some of the children, the smallest included, we did not elaborate on their own personal fear and thoughts about the prospects of being killed.

Alone with the fear

There was a lack of communication, updated information and comfort concerning the current threat of war.

“I think every hour that something bad will happen to me.” Hadeel (aged 13).

With very few exceptions the entire group of interviewed children reported that the imminent threat of war is influencing their daily lives. Most think about the threat every day and a considerable number made statements similar to the above quotation. The most striking observation from the talks with these children is the lack of communication concerning the present threat of war. The parents obviously have found no good way to inform or comfort their children and the children are not confronting the parents with penetrating questions. They assume the position of a distant listener to their parent’s interaction with visiting adults and when listening to news and commentary from the media.

The school environment has also not managed to set up a structured way to meet the needs of children in this crisis. From this study we may conclude that the teachers do not address the war

threat in the classes. However, a few of the older children (aged 17-19 years) have reported that training in crisis preparedness in school has had a calming effect, while others report increased fear. They listen to news and watch TV, but they are often confused and as a result many of them tell us that they try to avoid watching the news.

We find this lack of communication concerning the present situation and the threat of war problematic considering the seriousness of the crisis. From a psychological point of view one could say that the more serious the crisis, the stronger the need to improve the communication with, and the care for, the children. The phenomenon we observe here, however, is not specific to this situation. Raising awareness of the children's needs is still an important reminder which is needed in all sorts of crises and critical situations.

Nonetheless, we empathize with the Iraqi parents and teachers. It is not easy to transform one's own fear and worry for the future into calming and comforting language for children. In many ways it could be compared to trying to comfort the passengers at the upper deck of a sinking Titanic.

Interviewing the Youngest Ones (4 to 7 years old)

"They have guns and bombs and the air will be cold and hot and we will burn very much."
Assem, 5 years.

We spoke to 9 children below 7 years of age. As a rule they were sitting with parents, older siblings, or very close to the interpreter. The main objective behind this encounter was to get some glimpses into the mental world of preschoolers concerning their concepts on what was going on in their world and if possible how they were affected.

It was almost shocking to us to learn that even children of four and five years possessed concepts of the real physical threats of bombs and guns: destruction of houses, burning homes, killing of people; and in the end referring to their own family: "we will all die". They still have some mental protection from their lack of understanding: one thinks that she is protected when her sister put the blanket over her head and another by the mere fact that her brother has a knife in his room. Generally the parents express a shocking surprise when they listen to their preschoolers.

The mental impact of the present situation

"I feel fear every day that we might all die – but where shall I go if I am left alone?"
Hind, 13 years.

In our personal interviews with the children we wanted their own words as unbiased as possible. We usually started by asking them how the threat influenced their daily life.

The first and foremost message from them was about their fear. Except for some boys who denied any fear at all and 14 year old Ahkmed who in a breaking voice stated: "Right now I think more about my exams", they all report strong, daily fear. A majority specify this fear to be thoughts about the death of family members and the fear for their own lives. Their way of expressing this fear, however, is distinctly different from the emotions of the victims of bombing we met in the early nineties at Al Ameriyah, where crying and shaking was a common feature. The group we met now said they were very often in a state of fatigue, resignation and sadness. They may be involved in discussions of the prospects for peace and whether there still are chances for negotiations. They express hope for peace and even optimism for the future, but in the end they resign and state: "There will be a war." They speak about having adapted to the situation, but this adaption has resigned depressive quality.

Those old enough to understand the task were shown a circle with the following instruction: Inside yourself you may have three strong feelings: anger, sadness and fear. We now ask you to divide the circle in three parts or "pieces of cake," the biggest piece for your strongest feeling, the smaller ones for your not so strong feelings. Although anger is a prominent and strong sentiment, the dominant one is fear. In the Basra area previous bombing and extremely harsh living conditions leave children's mental health extremely vulnerable.

More than half of the group reported sleeping problems and nightmares. A majority state that they have severe concentration problems affecting their schoolwork and attention level during school-hours and exams.

Concerning our impression of a sort of detachment or lack of emotionality in the group, a few of them reported this in clear words like Hana (9 years old): "Often I feel nothing. Nothing at all."

Interviewing the teenagers

The special feature in the interviews with the teenagers is their political references to the conflict and the present situation. Their understanding is related to geo-political thinking believing in the Western (US) bid to dominate the Arab world and thus control their access to oil from the Gulf countries. Some of the youngsters see the specific aim of the long term sanctions and the present threat to attack Iraq as part of a strategy to keep them weak and underdeveloped. For most of them, their way of expressing themselves did not have the flavour of rote learned political rhetoric. We get the impression that they believe in their own analysis. None of them refer to religious concepts like the popular “the Muslim world”. There is (naturally) a total lack of questioning or criticism of the present leadership of the country.

The political issues were not the main concern for the teenagers when they were given the opportunity to express worries and concerns. Central in all their statements were their personal feelings of being powerless victims of deprived lives (the sanctions) and prospects of having their life and future totally destroyed by an inevitable war. In this context they revealed mental sufferings and problems similar to those of the entire group.

Messages from Iraqi Children

“They come from above, from the air, and will kill us and destroy us. I can explain to you that we fear this every day and every night.” Sheima (5 years old)

“I have only one thought in my head most of the time: war means death to me and my family. Of course.” Aizar (18 years old)

“There will be a lot of destruction and loss of lives. We know that. What concerns me most is the situation afterwards if I am still alive.” Isra (16 years old).

Aesar (10 years old) wished to send a message to American President George W. Bush, saying: **“A lot of Iraqi children will die. You will see it on TV and then you will regret.”**

“I do not expect them to kill so many. It is not acceptable. Maybe American people have some sympathy with us since we are peaceful and do not want to attack them.” Shahad (11 years old).

Questionnaire Results

The responses to the questionnaire are aligned with what we found in the in-depth clinical interviews. From **Table 1** it is evident that almost all children are concerned about a possible war. They worry that they might not live to become adults and that something bad will happen to them or anyone in their family. The high numbers of children that report headaches may reflect physical consequences of this constant tension. More than 70 % fear very much that something will happen to their family. Despite this fear they are optimistic and have hopes that things will improve for them, and they enjoy play and fun activities.

Table 2 reflects the high level of intrusive thinking about the threat. Although they do not want to think about it, the thoughts often come. They actively refrain from thinking, but the thoughts keep occurring. It is likely that their attention and concentration difficulties partly reflect this, but malnourishment and difficult living conditions may add to the problems. The same reasons may increase their irritability. The threat often leads to waves of strong feelings, and alertness and watchfulness when they do not need to.

Items reflecting depression clearly reflect the toll of the situation, whether this is caused by the sanctions or the present threat. Almost 40 % think that life is not worth living most of the time, while an additional 17 % sometimes feel this way (**Table 3**). Nearly half of them feel very lonely most of the time. About 25% never sleep well and the same percentage sometimes sleep well. Many suffer from bad dreams that further jeopardize their sleep.

Conclusion

Given the magnitude of the possible exposure and duration of distress evidenced by Iraqi children there is strong reason to expect that this, in combination with unforeseeable consequences of malnutrition, and reduced school attendance can dramatically reduce the learning potential, especially among the poor. The mental resources of Iraqi parents have been depleted over a long period of time, and in combination with other negative health effects this may have a catastrophic effect on children’s mental health.

**Child Vulnerability Analysis
- Mental Health -**

- With a very few exceptions the entire group of interviewed children reported that the imminent threat of war is influencing their daily lives.
- The first and foremost message from the children was about their fear.
- More than half of the group interviewed reported sleeping problems and nightmares.
- Central in all the children's statements were their personal feelings of being powerless victims of deprived lives (sanctions) and prospects of having their life and future totally destroyed by an inevitable war.
- They worry that they might not live to become adults and that something bad will happen to them or anyone in their family.
- Almost 40 percent think that life is not worth living most of the time, while an additional 17 percent sometime feel this way.

Child Mental Health Questionnaire Results

Table 1: Responses to the threat of a war (%) N = 200-222

Question	No	A Little	Much	Very Much
1. Are you concerned about a possible war?	5	36	11	48
2. Are you optimistic about the future?	3	11	20	66
3. Do you feel as if others don't really understand how you feel?	5	37	15	43
4. Do you worry that you may not live to become an adult?	4	28	22	46
5. Do you enjoy playing with friends, doing sports, or participating in other fun activities like before?	1	7	17	75
6. Do you worry about something bad happening to you?	2	18	19	61
7. Do you think things will improve for you in the next year?	1	23	18	58
8. Are you angry with those you hold responsible for the sanctions?	2	5	6	87
9. Are you afraid that something terrible will happen to anyone in your family?	1	11	16	72
10. Do you have headaches?	5	34	16	45

Table 2: Reactions to the threat of a war (%). N = 211-219

During the Last 14 days	Not at All	Rarely	Sometimes	Often
1. Do you think about it when you do not mean to?	16	22	19	43
2. Do you have difficulties paying attention or concentrating?	19	22	25	35
3. Do you have waves of strong feelings about it?	9	8	23	60
4. Do you try not to think about it?	17	22	17	44
5. Do you get easily irritable?	18	26	20	36
6. Are you alert and watchful even when there is no obvious need to be?	16	17	30	37

Table 3: How children are feeling (%). N = 196-207

Agreement with statement over the last month	Never	Sometime	Most of the Time
1. I think life isn't worth meeting?	46	17	37
2. I have horrible dreams?	29	33	38
3. I sleep very well?	24	24	52
4. I feel very lonely?	34	26	40

Emergency Preparedness

“The Security Council underscores the importance of unhindered humanitarian access for the benefit of children and, in this connection, calls on parties to conflict to make special arrangements to meet the protection and assistance requirements of children...”

Statement by the President of the UN Security Council

This section identifies specific vulnerabilities that Iraqi children will face if a new war erupts. It also looks at how the humanitarian community (both inside Iraq and internationally) is positioned to respond to a humanitarian crisis in Iraq.

Food

The food distribution system has been found to function efficiently and equitably throughout most of the government controlled areas (Khan, 1991; and interview with WFP, 2003). In anticipation of a renewed full scale armed conflict, the Iraqi Government has been providing an additional (advance) monthly ration since August, 2002. This has, however, caused shortages in certain commodities and forced authorities to reduce the amounts of lentils and vegetable oil in the monthly food baskets. Currently, the government of Iraq supplies just 37% of the lentils and 68% of the vegetable oil that they were previously providing to families. WFP officials confirm that as a result, the protein intake of those receiving the rations has been further reduced (Interview with WFP, 2003).

According to anecdotal reports by various agencies, people in Saddam City (one of the lower socio-economic areas of Baghdad) and in other poor areas have been selling their additional rations for extra cash. While officials claim that the population will have about 6-7 weeks of extra rations and food available to them in the event of a crisis, this may not be the case. Even without selling extra rations, a normal monthly ration generally lasts only three quarters of a month (UNICEF, 2002b).

The Government has reserves of approximately 600,000 MT of cereal in-country. Between 430,000 and 450,000 MT is distributed through the ration system every month. The reserves are then replenished through fresh imports. On average, there is little more than one month of food supply in-country. The food pipeline

appears to be reasonably secure, as enough contracts have been signed to ensure that the pipeline is full for the short to medium term provided that access points and delivery systems remain in place. There are stocks in-country of vegetable oil, pulses and dried whole milk to last approximately one month (see Food Security section).

In the event of a full-scale armed conflict, the vulnerabilities of the food distribution system would be as follows:

- Access and distribution within the country: If roads, railways and ports are either damaged or become clogged with military traffic, it would be extremely hard to replenish depleted resources in-country fast enough to meet emerging needs. This would be further complicated by fuel shortages if refineries are hit, pipelines are disrupted, or if fuel prices escalate, making it difficult to distribute stocks to Food and Flour Agents (the contact point for rations for families throughout the country).
- In 1991 some food warehouses, flourmills and distribution points were damaged during the bombing. If this were to happen again, pockets and/or whole regions would not have any access to basic food rations.
- If the conflict was to be protracted beyond a couple of months, causing extensive damage to civilian areas and accompanied by civil disturbances, it would almost certainly lead to massive displacement. The displaced population would not have access to food under the existing system or have the resources to purchase them on the open market.
- The system by which people register and get their ration cards is a government structure. It is possible that the registration and distribution system could collapse entirely.

Even if the food distribution mechanisms remain in place, changes to the government structure could negatively impact on families' access to food. For example, it could become more difficult to move food into the system as new government contracts would need to be reissued to pay associated costs. Delays could cause inflation in market prices. The combined impact is that even in a best-case scenario, food prices would likely increase and families would have difficulty meeting their food needs.

The UN is aware of the fragility of the food distribution system in Iraq in the case of an escalated emergency. Since the system is able to deliver food efficiently to more than two thirds of the population, every effort will be made to support the system and maintain its integrity. It is estimated that between 4.9 to 9.6 million people could become immediately vulnerable and food insecure. These people would include vulnerable groups within the population, IDPs, asylum seekers, refugees fleeing into neighboring countries and those affected by war within the country. If the conflict is prolonged as many as 16 million Iraqis could suffer extreme food shortages.

Considering some of the aforementioned vulnerabilities, the UN is implementing some contingency measures. Fifty four expatriate staff and 400 national staff have been involved in monitoring the existing food distribution system. These food monitors and observers are being "transformed" and trained to become more prepared in emergency response. In addition, equipment, systems and communications are being upgraded, additional experts recruited, logistics (alternate routes into the country) are being evaluated and potential suppliers, including those in neighboring countries, are being surveyed.

The main concern in the eventuality of a conflict is the limited stock (approximately one month) of food inside the country, and the ability to replenish these stocks fast enough in the context of closed borders, fuel shortages, inaccessible roads, railways and ports, and a highly insecure environment.

Some further specific anticipated needs include:

➤ If the food supply were to be disrupted, the nutritional status (especially of children), which has been improving over the past couple of years, would deteriorate very quickly. There would be

an urgent need for supplementary and therapeutic feeding.

➤ Institutions such as hospitals, primary care facilities and orphanages would be badly affected.

➤ If there were to be an increase in the number of IDPs within the country they would have significant food needs. They would not have any food reserves under the present system nor would they have the resources to purchase them on the open market.

In anticipation, the UN and the Red Cross (ICRC) have been pre-positioning limited supplies of therapeutic biscuits and emergency rations within the country.

Emergency Shelter and Non-Medical Supplies

In view of the number of possible scenarios of how the conflict could unfold, it is hard to plan for emergency shelter and non-medical supplies. Quantities and locations for pre-positioned supplies need to take into consideration the possible extent of damage to civilian areas, the level of insecurity and the numbers and location of those displaced.

While UNHCR's mandate is to address the needs of the displaced once they cross into neighbouring countries and become refugees, discussions are underway to address the potential needs of those who may become trapped along closed borders (see Displacement section) in "refugee-like situations".

The Red Cross movement, particularly the ICRC and the Iraqi Red Crescent Society, would be the key agencies addressing the needs of the IDPs within the country.

While some tarpaulins, tents and emergency supplies have been pre-positioned by the UN and the Red Cross/Red Crescent, these supplies are far from adequate to respond to a fast evolving environment. Most agencies are pre-positioning stocks in the region or in their central warehouses in anticipation of being able to move them quickly when they are needed. Emergency materials that are in short supply in-country are:

- Tents
- Bed sheets
- Jerry Cans and water containers
- Plastic sheeting

- Emergency first aid kits
- Cooking sets
- Emergency operation kits
- Emergency stretchers
- Lamps
- Antibiotics
- Portable cookers
- Generators
- Disposable gloves
- Blankets
- Sutures

The concern with emergency supplies, as with the food, is that inadequate supplies in-country along with delays in moving them to distribution points, due to damaged or inaccessible infrastructure, will further endanger the lives of the vulnerable and displaced.

Medical Needs

The UN estimates that there are about 3-4 months of medical supplies in-country. This is approximately 80 percent of current existing needs, as not all medications required are allowed in under the sanctions regime (see Health section).

However, these stocks are in warehouses and not readily available at hospitals and medical centers. UN officials indicate that there would likely be a severe shortage of medical supplies in the hospitals within a couple of weeks of an escalating emergency. It may not be possible to move supplies from warehouses to hospitals across the country due to fuel shortages and damaged infrastructure, as well as the danger to transport personnel.

The ICRC has already pre-positioned 7,000 war-wounded kits in their three warehouses in the north, and one in the south.

Further vulnerabilities to the medical system include:

➤ **Hospital power supply:** While most hospitals now report some level of regular power, almost all have backup generators. If the power supply were to be significantly degraded, the backup generators would not be able to pick up the load as they can only operate for six hours at a stretch before they have to be shut down. They then must stay shut down for another six hours before they can be started again. With limited fuel supply (as the emergency escalates) and almost no spare parts, vital systems in the hospital such

as the operating theatres, refrigeration and sterilization of equipment would be severely affected.

➤ There is an acute shortage of ambulances: Though 900 new ambulances have been added over the past several years, this is only half of their estimated requirement across the country.

The UN estimates that in the early stages of the conflict up to 500,000 persons could require treatment for traumatic injuries (100,000 direct injuries and 400,000 indirect injuries). Even if a portion of these were to materialize, the existing fragile medical infrastructure would not be able to cope.

While the UN has requested emergency supplies, which includes medicines, nutrition supplies, water treatment equipment and chemicals for sanitation, very little of this is pre-positioned within the country.

Water and Electricity

As previously noted, any disruption to the electricity generating system would have catastrophic effects on the water and waste disposable systems, and on hospitals.

While generators are available at hospitals and at water and sewage treatment plants, many of these are not fully functional due to the lack of spare parts. UNICEF reports that 70 percent of the standby generators in water projects are out of order due to lack of batteries and spare parts. (UNICEF, 2003b).

The Iraqi Red Crescent Society has requested backup generators. UNICEF and CARE are the international agencies providing the lead in the area of water. The two agencies are pre-positioning 130 water bladders (5 cubic meters each), which can be loaded onto trucks – the priority being to deliver water to institutions such as hospitals. In addition, CARE has acquired a generator and a compact water treatment plant, which they can move around to different areas in Baghdad as needed. They have also put together a small mobile mechanical and electrical workshop, which can repair and rehabilitate water treatment plants. Admittedly, these important initiatives are a drop in the ocean of Iraq's water needs if there is a war.

UNDP reports that the rehabilitation of the Basra chlorine plant is almost complete. This should be able to produce enough chlorine to treat drinking

water nationwide. As the emergency escalates it will be a question of whether chlorine supplies will be available at water treatment plants across the country if the road and rail infrastructure along with a fuel shortage prevent the deliver of chlorine. Also, as was the case during 1991, damage to the chlorine production plant would seriously jeopardize Iraq's ability to disinfect its water supply.

The concern with regards to electricity and water is that what is being done to prepare and reposition is woefully inadequate to meet the needs across the nation. Any disruption to the electricity system will have disastrous effects on the health, water and waste water systems.

Planning and Coordination

Almost all the agencies interviewed for this report are in the process of developing contingency and preparedness plans. Few agencies were willing to share a copy of their plans, though they were willing to discuss certain elements. Their main rationale for not sharing their plans was concern over being perceived as having prejudged the diplomatic initiative still underway.

The UN agencies indicated that they had revised and updated the four tiers of their planning:

- ❖ Each agency's country plan for Iraq
- ❖ The UN interagency country plan for Iraq
- ❖ Each agency's regional plan
- ❖ The UN interagency regional plan

Individual NGOs also had developed either contingency plans or response strategies for their work in Iraq. A number of NGOs were in the process of registering with the Iraqi Red Crescent Society to establish a presence inside the country.

In terms of staff capacity within the country to handle an escalating crisis, most agencies expressed concern because their existing staff were focused on rehabilitation and development programs and did not have the required skills to handle emergencies. Only WFP indicated that they were training their staff to be fully prepared in the event of an emergency response. An associated concern is that most agencies will evacuate all expatriate staff at the onset of any conflict. This will leave a critical gap in terms of leadership and specific technical skills. The UNDP Resident Representative indicated that out of 4,500 UN staff in-country, 3,500 were Iraqi

nationals and there is an urgent need to strengthen the Iraqi national capacity to respond to any emergency.

Almost all the agencies are identifying staff and having them on standby globally.

Concerns with the planning process:

➤ The first concern is that while there has been a considerable military build-up in the Gulf progressing at a very rapid pace, there has not been a parallel level of planning and pre-positioning for a humanitarian response in the event of an emergency. The reason being, at least in part, that no donor government or UN agency wants to prejudge the diplomatic initiatives and give the impression that war is a foregone conclusion. The problem with this is that the level of preparedness to be able to respond, as there are limited pre-positioned supplies and capacity in-country, is extremely low. It will likely not be enough to prevent a humanitarian catastrophe.

➤ The second concern is that at this late stage in the process the contingency preparedness planning by most agencies remains secretive and confidential.

There has been a considerable amount of information sharing and interagency meetings, and some level of coordination, both in-country and outside. The UN agencies, IGOs and NGOs in-country have been meeting together along with the Iraqi Red Crescent to share information and to begin to identify roles based on their present capacity. The international lead in each sector will be provided by the following:

- ❖ Water and sanitation - UNICEF and CARE
- ❖ Health - WHO
- ❖ Food - WFP
- ❖ Logistics and communications - UNDP

UNDP indicated that there have been discussions about having a "Code of Conduct" for any agency wanting to respond to the emergency in Iraq. What was not clear if this "Code of Conduct" would be different from the Red Cross Code of Conduct that most international NGOs have already signed.

The UN response is being organized by the UN Office of the Coordinator for Humanitarian Affairs (OCHA). Some NGOs have been privy to this process at a meeting held in a hotel at the UN European Headquarters in Geneva in mid-

January 2003. The only concrete plan to emerge from this meeting was that Cyprus will be the likely coordination centre for relief operation, but no feasible coordination plan was announced.

The US Office for Foreign Disaster Assistance (OFDA) has funded a consortium of NGOs to be based in Amman, Jordan for the purposes of information sharing and contingency planning.

Since a humanitarian emergency has not yet been declared, a coordinator for the overall response has not been appointed by the UN Secretary General nor has the response mechanism been identified. There is an Office of the Humanitarian Coordinator in Iraq who is part of the UN mission in Iraq right now.

Some concerns in the area of coordination:

➤ The Iraq Red Crescent Society (IRCS) is designated by the Civil Defense to be the Government's lead agency in responding to disasters. The IRCS has been a part of the information sharing meetings of the UN and NGOs in Baghdad. Considering the scale of the potential crisis, there has been little apparent coordination between the UN and other government departments or Ministries

None of the discussions or meetings have discussed seriously the relationship between the civilian and military activities (CIMIC) in terms of roles and responsibilities, creating humanitarian space and humanitarian access to

vulnerable populations. The concern is that there will be considerable urban warfare in and around population centers. Certain strategies may be employed to isolate the combat zones, but that would mean that civilians could become trapped with no access to humanitarian assistance.

Child Vulnerability Analysis - Emergency Preparedness -
<ul style="list-style-type: none"> • On average, there is little more than one month of food supply in-country. The main concern in the eventuality of a conflict is the limited stock of food inside the country and the ability to replenish these stocks fast enough in the context of closed borders, fuel shortages, inaccessible roads, railways and ports, and a highly insecure environment. • If conflict is prolonged, as many as 16 million Iraqis could suffer extreme food shortages. • The United Nations estimates that there are only about 3-4 months of medical supplies in-country. However, due to difficulty transporting these medicines from central stores during a war, the UN estimates that there would likely be a severe shortages of medical supplies, including drugs, within a couple of weeks of an escalating emergency. • The United Nations estimates that, in the early stages of the conflict, up to 500,000 persons could require treatment for traumatic injuries. • While the UN has requested emergency supplies, which includes medicines, nutrition supplies, water treatment equipment and chemicals for sanitation, very little of this is pre-positioned within the country. • The level of preparedness to be able to respond is extremely low. It will likely not be enough to prevent a humanitarian catastrophe.

Military Force

It is the Iraqi children who are most vulnerable to any massive use of force against Iraq.

Children are the most vulnerable human beings during a war. As the lists of weapons that may be deployed indicates, as well as the intensity of recent conflicts, it is unlikely that children will be able to shield themselves so as to avoid severe trauma and loss of life. It is also highly predictable that children will be among those who suffer the most in the post-war context.

In this report the authors have not so much tried to construct a likely war scenario as tried to understand the impact of even the most reasonable scenario. Prediction of the intensity and duration of an attack on Iraq is perhaps the issue most subject to dispute and speculation.

Nevertheless, a number of sources have tried to prognosticate likely war scenarios, and the United States government has allegedly itself engaged in such scenario building. Also, there are several recent examples of the intensity of an American-led coalition attack to help inform the current situation.

The sources from which the authors of this report have drawn are the United States Department of Defense, the Medact Report from 12 November 2002, and the several reports that are cited therein. The only adaptation that we have made to the Medact analysis is to indicate the magnitude of the American arsenal and to

highlight the particular vulnerabilities of children to this collection of weaponry.

Scales of Military Power

Our starting point has been to acknowledge that the United States' military is the most powerful in the world. This is in large part because it outspends (\$396.1 billion USD in its 2003 budget) all its allies put together (\$198 billion in 2003 budgets) by a margin of more than two to one, and all its declared enemies (\$16 billion in 2003 budgets) by a margin of almost 25 to 1 in military spending (Stockholm International Peace Research Institute, 2002).

With these funds the United States has acquired a formidable cache of weapons that includes a variety of aircraft and munitions. This collection of weaponry is complemented by the weapons NATO allies have produced themselves or purchased from others. In addition the United States is expected to deploy more than 200,000 military personnel in the Gulf Region.

The scale of American and NATO allies' military power dwarfs that of the Iraqi's. The estimated 375,000-strong Iraqi army is ill equipped because new and spare parts have been hard to obtain. Much of Iraq's military capacity was destroyed in the 1991 Gulf War and remains un-replenished (Medact, 2002 and Rogers, 2002). Nevertheless, the estimated 80,000 strong Republican Guards is expected to vigorously defend Baghdad.

In addition, it must be acknowledged that there is a possibility – assuming such weapons capability exists and this has not yet been proven – that Iraq could use chemical or biological weapons as part of their arsenal. This would drastically change the dynamics and consequences of any war. Furthermore, although the likelihood remains very remote, the possibility of nuclear engagement cannot be ruled out entirely.

In a war with Iraq, it is likely that the United States would first employ intense air power to isolate the capital.

An Air Assault

Any full-scale armed conflict is likely to begin with intensified aerial bombings. In an air assault the variety of weapons that would likely be employed, based on weaponry used by US forces in the most recent conflict in Afghanistan, would include Stealth bombers, F-117 Nighthawk

bombers, B-2 Spirit bombers, and Tomahawk cruise missiles, among others (Rogers, 2002). These weapons are more advanced, more destructive, and more deadly than they were in 1991.

Despite the best intentions of commanders on both side of the conflict, it is likely that, merely because of the deadly intensity of the weapons that may be deployed, that there will be substantial civilian impact and damage to civilian-supporting infrastructure. Such was the case in the 1991 Gulf War. Even with improved missile and bomb guidance systems, there will be missed targets. In addition, many potential military targets lie in close proximity to civilian neighborhoods, if not actually within them.

A Ground Assault

If a ground war takes place, it is likely that the listed cache of aerial weapons will continue to be used to the degree and intensity needed to clear the way for American and/or coalition troops based on the experiences of Afghanistan, Kosovo, Panama, and Somalia. It is also likely that between 60,000 and 80,000 of the more than 200,000 estimated allied troops that will be in the Gulf will be deployed in active combat. Medact, based on expert analysis, has estimated that such deployment could kill between 48,000 and 251,000 individuals. Of these they estimate that between 2,000 and 50,000 deaths will be among civilians, with another 6,000 to 200,000 civilians wounded. Although it is difficult to specifically estimate child casualties, it is appropriate to say that the well-being of all 13 million Iraqi children will be significantly threatened when weapons of such magnitude are used.

Despite the balance of power residing with American and coalition forces, the Iraqi government's deployment of ground troops, depending on the nature of the war, would also have a grave impact on the civilian population. Any exchange between the two military forces bears the likelihood that civilian casualties would occur. In addition, it is not clear whether children might be included, at some time in the conflict, in active military ranks of the Iraqi armed forces.

Finally, there are particular weapons likely to be used by one or both sides that are of grave danger to the civilian population. These weapons include landmines, cluster bombs and penetrating shells made of depleted uranium (DU). Ratifying countries of the Landmines Treaty have agreed to ban the use of anti-personnel landmines. Cluster

bombs are bombs that, once released, deploy dozens of small ‘bomblets’. It is estimated that between 5 and 15 percent of these bombs do not detonate on impact, remaining on or buried in the ground, a type of unexploded landmine themselves. Experience in other conflicts including Kosovo and Afghanistan show that children regularly mistake these cluster bombs for toys or even food packets. The danger to children from these three weapons, landmines, cluster bombs and depleted uranium is sufficiently high that the authors of this report strongly emphasize and urge that the belligerents in any conflict recognize the humanitarian dangers behind these weapons and refrain from their use. Of course, unexploded ordnance will continue to cause casualties for many years after the conflict is long over. It has been shown that civilians, particularly children, are the likely victims.

The governments and military forces of both sides of a potential conflict need to keep foremost in their minds the likely negative humanitarian impacts of their actions. War, if that path is ultimately decided, is always devastating to the civilian population, particularly children. However, the absolute minimum that should be expected from both sides is that they adhere to well-established principles of international

humanitarian law and the rules of war, as they engage in conflict.

Finally, and this perhaps needs no emphasis due to its obvious nature, war must be considered as an option of last resort and an indictment to the failure of diplomatic and all other means to resolve disputes. It is hoped that other non-violent and diplomatic means can be found to accomplish the currently articulated political objectives without having to resort to force.

**Child Vulnerability Analysis
- Military Force -**

- It is unlikely that children will be able to shield themselves so as to avoid severe trauma and loss of life.
- The use of chemical or biological weapons would drastically change the dynamics and consequences of any war.
- A ground war would have a grave impact on the civilian population.
- The danger to children from landmines, cluster bombs and depleted uranium is sufficiently high that they should not be used by either side.

Conclusions

The children of Iraq are more vulnerable to war than they were in 1991. This fact needs to be considered in deciding whether war is the right answer.

War is always a traumatic experience and for children this experience is amplified and spread out across many years. Despite such unambiguous expressions of concern for the rights and welfare of children as the Convention of the Rights of the Child, the international community has regrettably often ignored the interests and well-being of children in practice. Once again, as the international community contemplates the necessity of war with Iraq, children have been left out of focus. Their plight has been overtaken by the politics of the moment and the lack of consensus on the best way forward. It may well be that considering the best interests of Iraqi children requires recourse to more tedious alternatives such as prolonged weapons inspections and other diplomatic initiatives. The decision as to whether these alternatives are appropriate is a difficult one that

has been delegated by the international community to the UN Security Council. It is undoubtedly a decision that will consider a complex set of variables. While the evaluation of these variables is not within the ambit of this report, we do understand our brief to extend to urging the world’s most important body to consider the best interests of the child when considering alternatives to the use of force to resolve this conflict.

Equally, we remind the Iraqi government of its obligations under international law to fully safeguard the rights of Iraqi children and, as a member of the United Nations, to implement the relevant United Nations Security Council resolutions calling for a verifiable end to existing nuclear, biological and chemical weapons programs.

Child Vulnerabilities Compared: 1990 and 2003

Sector	Comparison to 1990	Key Vulnerabilities to Children
Household Economy	<ul style="list-style-type: none"> ■ Critically worse than 1990. High unemployment, low wages, and few assets. Household unable to withstand financial shocks of conflict. 	<ul style="list-style-type: none"> ■ As a result of a combination of factors, including rapid inflation, increasing commodity prices, the sale of household resources, rising unemployment and a decline in educational levels, Iraq's household economy is in a far more critical state than in 1990. In the face of a new war, few Iraqi families will have the necessary resources to sustain themselves. This will directly impact on children in terms of mental and physical health, financial well-being, education and growth.
Food Security	<ul style="list-style-type: none"> ■ Much more vulnerable and dependent. Families have little reserve or capacity to withstand food disruptions. 	<ul style="list-style-type: none"> ■ Most Iraqi families have fully exhausted their financial resources and are highly dependent on government rations. A major military assault resulting in a disruption of the food supply system, including the ration distribution system, is likely to cause major loss of child life, especially among the most vulnerable segments of the Iraqi child population. ■ Destruction of bridges, transportation, storage facilities and ports has the potential to severely disrupt the food distribution system resulting in food shortages and potential famine situations in certain parts of the country.
Infrastructure and Environment	<ul style="list-style-type: none"> ■ Critically worse. Electricity, water and sanitation operating at a fraction of 1990 prewar state. No spare parts. High vulnerability of children now due to poor water and sanitation. 	<ul style="list-style-type: none"> ■ The electricity, water and sanitation systems, badly damaged during the 1991 Gulf War, never fully recovered and function at a fraction of their pre-war state. ■ Any further damage to the system would have catastrophic effects on the health and well being of all Iraqi civilians, particularly children.
Health and Nutrition	<ul style="list-style-type: none"> ■ Critically worse. Health facilities provide only the most basic care. Low supply of drugs. Unable to withstand pressures of war – casualties, illness and disease. <p>Improved since post-war period, but high levels of child malnutrition remain compared to 1990. Also, high dependency on rations and targeted supplementary feeding programs.</p>	<ul style="list-style-type: none"> ■ When compared with 1990 indicators, morbidity and mortality data suggest overall that Iraqi children are far more vulnerable to the effects of armed conflict in 2003 than they were in 1990. This is particularly true if there were to be a disruption in the food rationing system, the Targeted Nutritional Program, water and sanitation, or health service delivery (including the supply of essential drugs). Even without a new war, Iraqi children under-five years of age have a baseline mortality rate that is already 2.5 times greater than it was in 1990, before the last Gulf War. ■ At a minimum, more than 500,000 Iraqi children under-five years of age are acutely malnourished or underweight and, in the event of a war, would be at grave risk of hunger, starvation, and the risk of communicable disease.
Gender	<ul style="list-style-type: none"> ■ Significantly worse. Household economy is far worse than in 1990, as are health problems, and women's ability to care and provide for children. 	<ul style="list-style-type: none"> ■ The vulnerabilities of Iraqi women, whose main role is to care for children in the household, are currently heightened due to: economic pressures, dependencies on the food system, and the fragile health system. Any impact on women brought by a deterioration in living conditions will in turn hurt the children of Iraq.
Displacement	<ul style="list-style-type: none"> ■ Worse. Significant higher number of internally displaced persons compared to 1990, as well as uncertain reception to potential refugee flows into neighbouring countries. 	<ul style="list-style-type: none"> ■ Based on previous experience and depending on the extent of damage to civilian areas, together with the level of civil unrest, there could be as many as 2 million Iraqi civilians, the majority of them women and children, displaced internally within the country, or externally as refugees.
Mental Health	<ul style="list-style-type: none"> ■ Critically worse. Children are already affected psychologically from (a) 1991 Gulf War and (b) 12 years of sanctions. Baseline state of mental health below that of 1990. High level of fear and anxiety. 	<ul style="list-style-type: none"> ■ A new war will further add to the exhaustion and impact the children negatively as well as increase family disintegration. ■ Throughout the 1990's sanctions have made it impossible for many Iraqi parents to provide for their family. In the latter half of the decade until the present this trend has slowed and somewhat reversed, a new war would represent a serious set back. ■ Iraqi children are fearful, anxious and depressed. Many of them have nightmares, and many do not believe that life is worth living.
Emergency Preparedness	<ul style="list-style-type: none"> ■ Critically worse. Low emergency stocks of food and non-food items. Humanitarian response is already fully invested in responding to current sanctions vulnerabilities. Capacity to respond to war extremely limited. 	<ul style="list-style-type: none"> ■ Food stocks are only sufficient for roughly one month's supply. However, if the food distribution system is compromised, as it was in the 1991 Gulf War, up to sixty percent of the population (including an estimated 8 million children) could become severely food insecure. ■ The level of preparedness by any agency (government, UN, non-governmental organization) in the country is nowhere near being able to address the potentially huge levels of need during wartime. This applies even for the 'best case' scenario.
OVERALL VULNERABILITY	<ul style="list-style-type: none"> ■ Children are critically worse compared to the prewar (1990) situation. High levels of vulnerability across virtually all civilian-supporting sectors are significantly greater than in 1990, often critically so. This high level of vulnerability puts Iraqi children in grave risk. ■ There is a high likelihood of a catastrophic humanitarian disaster if war occurs. 	

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