Social Determinants of Health in Countries in Conflict and Crises: The Eastern Mediterranean Perspective

Susan Watts[1], Sameen Siddiqi[1], Ala Shukrullah[2], Kabir Karim [2] and Hani Serag[2]

Health Policy and Planning Unit, Division of Health System Eastern Mediterranean Regional Office, World Health Organization, Cairo

Association for Health and Environmental Development, Cairo, Egypt

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Acronyms

AHED	Association for Health, Environment and Development (Cairo)
ARI	Acute Respiratory Infection
AI	Amnesty International
CS	Civil society
EMR	Eastern Mediterranean Region
EMRO	Eastern Mediterranean Regional Office
EPI	Expanded Programme of Immunization
HRW	Human Rights Watch
ICRC	International Commission of the Red Cross
IDP	Internally displaced person
MMR	Maternal mortality ratio
MSF	Medécins sans Frontièrs
NGO	Non-governmental organization
PHC	Primary health care
PTSD	Posttraumatic stress disorder
RAMOS	Reproductive Age Mortality Studies
TBA	Traditional birth attendant
WHO	World Health Organization

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[1]Health Policy and Planning Unit, Division of Health System Eastern Mediterranean Regional Office, World Health Organization, Cairo

[2]Association for Health and Environmental Development, Cairo, Egypt

1. Introduction

1.1 Background

Six countries in the Eastern Mediterranean Region (EMR), with a total population of around 100 million, are in a state of crisis as a result of armed conflict and/or occupation. Our purpose here is not to add to the documentation on the origins and perpetuation of these crises. It is rather to explore the impact of these crises on health status, and to understand the broad social and economic determinants and conditions that affect people's health in such crisis settings. How do the conditions in which they are living affect the health of the general population, as well as the vulnerable groups such as young children and women of reproductive age? What can be done to mitigate these adverse health impacts?

Social inequality is widely recognized as an important cause of conflict; unequal distribution of resources between groups; uneven economic development; and an unequal pattern of gains and losses prior to and during conflict. The social determinants of health in conflict settings reflect and further reinforce these inequalities, and the vulnerability of those who are disadvantaged due to poverty, marginalization and discrimination (see Krug et al. 2002). However, recognition of the resilience, capabilities and skills of those caught up in conflict is a basis for positive actions to cope with extremely distressing situations and build a hopeful future.

We start from the recognition, fully supported by WHO since its foundation charter in 1948, that health is a human right and that living in conditions that result in poor health and being deprived of health care are human rights issues. Maintaining human security is also a central concern for WHO, as mentioned by Kofi Annan in his farewell speech to the UN in December 2006. He spoke about the central concern of UN for the "the interconnectedness of the security of all people", "the global community's responsibility for everyone's welfare", "respect for the rule of law" and the "accountability of governments for their actions" (Editorial 2006). A moral and human rights viewpoint and the UN doctrine of the "responsibility to protect" also motivates the documentation of the ways in which conflicts, such as those in EMR, have a devastating impact on the daily life, health and wellbeing of civilians caught up in conflict in the Region (see Grono 2006).

The Eastern Mediterranean Regional Office (EMRO), individual countries in the Region, and civil society partners expressed concerns that the particular social determinants of health associated with conflicts in the Region should be recognized and explored.

Arising from these concerns, the Commission on Social Determinants of Health requested a review from the Region. EMRO has prepared the technical background and has been responsible for writing the review, drawing on reports from civil society organizations in the countries in conflict.

1.2   Objectives of the paper

- To assess the impact of conflict on the health of people in affected countries on EMR
- To document how conflict affects social determinants and thus results in adverse health outcomes
- To identify some examples of activities and interventions that may help mitigate the impact of these conflicts on the health and wellbeing of the affected populations.

1.3   Scope of the paper

This review focuses on six countries in EMR which are identified as being in a state of crisis due to armed conflict: Afghanistan, Iraq, Lebanon, Palestine, Somalia and Sudan. Many other countries in the Region are affected by the regional and global politics that fuel these conflicts. Thus, the paper also considers briefly exploding refugee populations and disturbed border areas.

2. Methodology

2.1   Definitions

This report focuses on countries experiencing "armed conflict" and its aftermath; "armed conflict" is a better term than "war", as the legal definition of war is controversial. Armed conflict has been defined as: "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in one calendar year" (Upsala University 2007; http://www.pcr.uu.se/database/definitions_all.htm

In EMR armed conflicts involve the use of armed force by the government of that country or an external state. They are fueled by "collective violence" on the part of people who identify themselves as members of a group and by external political forces, governmental or non-governmental (Krug et al. 2002, ch 8). Some countries are actually under "occupation" by a foreign power: such as Iraq and Palestine.

Stated briefly, by ICRC, "Territory is considered 'occupied' when it is actually placed under the authority of foreign armed forces, whether partially or entirely, without the consent of the domestic government. A situation of occupation confers both rights and obligations on an occupying power." (http://www.icrc.org/Web/Eng/siteeng0.nsf/htmlall/section_ihl_occupied_territory?OpenDocument accessed 3 May 2007).

At one time or another, all or parts of the six countries in EMR which currently or very recently experienced armed conflict also experienced a "humanitarian crisis", an almost total breakdown of authority and security, which requires an international response to protect civilians who are the main casualties.

2.2   Assessing the validity of the evidence

Because conflicts, by their very nature, elicit heightened, often exaggerated responses and emotional reactions, it is especially important to evaluate evidence with great care. Accusations of partisanship are often used as arguments to refute disturbing findings about health and conditions of life in conflict settings. A case in point is the debate about an article in *The Lancet* in October 2006, which presented very high estimates of civilian mortality following the 2003 invasion of Iraq (Burnham et al. 2006; Bohannon 2006; Boseley 2006). After extensive academic and media debate, all but the most partisan parties accepted these figures as valid (Keiger 2007; Horton 2007).

Conventional health indicators, presented on an annual basis for a whole country, do not reflect the impact of conflict on health status. Health indicators are required that assess the health impact of conflict over the short term, and in different parts of a country; they are often based on sample cluster surveys rather than reports from ministries of health (see Annex 1 for further discussion of these indicators). It is also important to move from body counts and disease indicators to look at suffering and human wellbeing (Executive Action…April 07; see also Ugalde et al. 2000).

In the area of mental health, the definition of post-traumatic stress disorder (PTSD) is open to criticism for medicalizing a response to extremely stressful life situations, and thus rendering it subject to medical treatment with drugs. Other observers, especially representatives of civil society, have stressed the importance looking at the societal responses, rather than those of the individual (Stein et al. 2007; Summerfield 2001 and 2000; Hundt et al. 2004;Joop et al. 2002).

Ethical issues around collecting information in conflict must first and foremost consider the safety of researchers, those who respond to their enquiries, and other survivors. These issues pose a challenge when documenting sexual violence, where police and military who are assigned to protect women could be the major perpetrators of sexual violence (Overcoming challenges… 2007; Patrick 2007).

We have tried to face problems posed by the evidence by:

- declaring our interests, in terms of the rights of all people to health and respect, regardless of religion, ethnicity and gender

- acknowledging the right of people to speak for themselves, and to be listened to: hence our concern for the views of civil society organizations

- identifying all information sources when this does not put the lives of informants at risk

- being especially rigorous in the assessment of validity and reliability

2.3 Information from civil society organizations

The Association for Health and Environmental Development (AHED), the regional facilitator for civil society in the Region, coordinated the collection of material from NGOs and individual members of civil society. These were designed to give immediacy to the civilian experience of conflict that is often overlooked in reports of body counts or in media reports. A check list for interviews was prepared as a guide to major topics for discussion (Annex 2). Because of the short time frame and acute problems of security (especially in Somalia) not all questions could be asked, and the original plan to hold focus group discussions could not be carried out in all countries.

2.4 Published and grey literature

Huge quantities of grey literature and on-line resources currently exist, of varying reliability. We have tried to focus as much as possible on certain issues such as the conditions of daily life and health for those caught up in conflict. Where possible, we have used primary sources, rather than relying on secondary reports in the media and on websites.

3. Profiles of suffering

3.1 Who suffers and why

A "humanitarian crisis", such as is experienced in crisis areas in EMR, is defined by four characteristics that affect the most vulnerable populations and have a profound adverse impact on health:
- dislocation of population
- destruction of social networks and ecosystems, including destruction of livelihoods and health and social systems
- insecurity
- abuse of human rights, including random acts of violence and destruction to spread terror, fear, uncertainty among population (Krug et al. 2002).

Civilian casualties are high and those who are fighting often have few scruples about attacking civilians. In such a setting, it is necessary to identify traumatic events that are likely to demand humanitarian action in the short term. It is also necessary to identify the resources and resilience of the population and how such capabilities can be harnessed for present and future wellbeing.

These conflicts develop within the context of longstanding inequalities and social conflicts, exacerbated by the breakdown of civil authority, and are associated with:
- competition for power and resources such as land and livelihoods, food security (the ability to import food supplies as well as to access local supplies), water, and oil (the five countries with the largest oil reserves, and 4 of the top 6 with natural gas reserves, as of 2003, are in EMR; Chourou 2005, p 44-45)
- cross cutting local identities that reflect social, political, economic, religious and cultural structures and divisions
- predatory social domination (Krug et al. 2002; Chourou 2005, sections III, IV).

Local identities, that so often lie at the heart of conflict, are fluid. At some times, and for some purposes, religious identity is paramount, at other times identities based on ethnicity, language, livelihood, or place of residence come to the fore and are often manipulated by those in power   Sectarian labels are potentially dangerous, depending on who asks questions about identity and when (de Waal 2005; Chourou 2005, III, 3). Time series maps, such as those labeling areas as Shiite or Sunni (as in Iraq), are often assembled by outsiders, and are usually contested and simplistic. They tend to heighten existing tensions and contribute to the political fragmentation of peoples who, in pre-conflict times, saw themselves primarily as "citizens" (Al Ahram Weekly, 29 March-4 April 2007, p 6).

Other factors that threaten human security in EMR have been associated with tensions associated with accelerating urbanization, and the large proportion of young people who need education, health care, jobs and opportunities for family formation; and (Chourou 2005).

These conflicts provide opportunities for intervention by foreign governments fighting wars by proxy as part of the "war on terror", or by actual occupation. They also provide opportunities for transnational companies involved in oil and armaments, and the recruitment of mercenary soldiers. Often participants in the conflict accuse aid workers of political involvement. This challenges to principles of "operational neutrality and independence" that are supposed to protect humanitarian workers in a conflict setting. The departure of non-local representatives of NGOs and multilateral organizations when security decreases leaves local aid workers in an exposed position (Stoddard et al. 2006).

3.2   Protecting civilians in conflict settings

In the various forms of internal conflict experienced in EMR countries, civilians are victims of forms of violence which violate basic human rights. Occupying powers have a legal obligation to respect the rights of civilians in occupied territories (http://www.icrc.org/Web/Eng/siteeng0.nsf/htmlall/section_ihl_occupied_territory?OpenDocument accessed 3 May 2007).
The 1949 Geneva Conventions apply to "war" and combatants and civilians caught up in war. More recent protocols are designed to "protect the victims of modern military conflicts". In such situations, it may be difficult for combatants to avoid injuring or killing civilians. Attacks on civilians are illegal if they are defined as "intentional", "indiscriminate" or "disproportionate".

The Fourth Geneva Convention, Article 18 states that "Civilian hospitals organized to care for the wounded and sick, infirm and maternity cases, may in no circumstances be the object of attack, but shall at all times be respected and protected by the Parties to the conflict." (HRW April 2007; www.icrc.org/ihl). The acceptance by the UN of the "responsibility to protect" in cases of genocide, war crimes, ethnic cleansing and crimes against humanity was accepted at the 2005 World Summit and endorsed by the Security Council in April 2006 (Grono 2006). Organizations such as Amnesty International, Human Rights Watch and Physicians for Human Rights document violations of civilian rights, and the serious and deliberate deprivations that can be defined as "war crimes" and "genocide". Afghanistan has an Independent Human Rights Commission which courageously reports on violations in that country (HRW April 2007; http://aihrc.org.af/).

3.3   The regional impact of conflict

Short profiles of the 6 countries in crisis in EMR can be found in annex 3. In addition to these six countries, a number of other countries can be identified as being directly affected by these conflicts, as shown in the map below...

The impact of these conflicts directly affects civilians beyond the conflict zones:
- Iran, Jordan, Syria and Pakistan have been affected by the inflow of refugees from neighbouring countries
- Afghanistan, Iran and Pakistan have open and insecure border areas with very poor resident populations, as well as refugees and insurgents

Beyond EMR:
- the conflict in Sudan has affected neighboring Chad, with refugees and armed combatants crossing the border from Darfur
- the conflict in Somalia has drawn in Ethiopia, which decided to intervene on behalf of one of the combatant groups
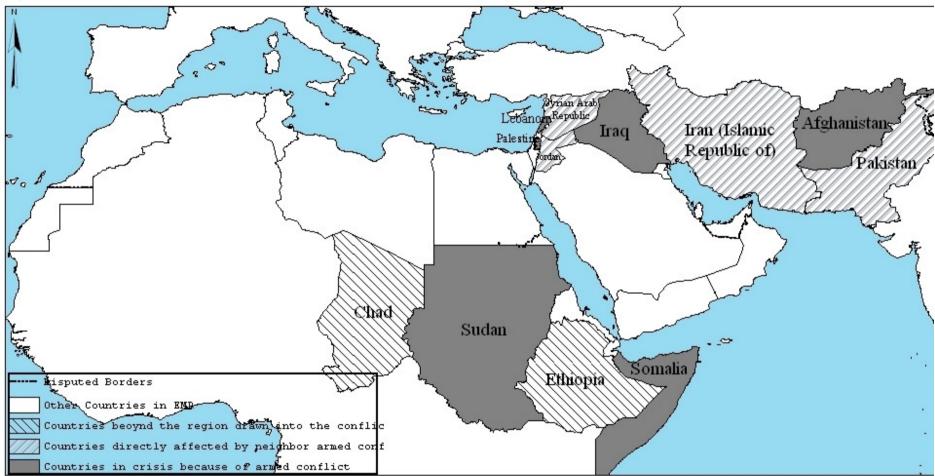
3.4   Refugees

Refugees are identified as those who have fled their countries in conflict in search of security elsewhere. The United National High Commission for Refugees (UNHCR) following the 1951 Geneva Refugee Conventions, has been given the task of assuring refugees basic human rights in the host country, and preventing forced repatriation when conditions are not perceived of as secure; in the long term, they assist in repatriation to countries of origin. http://www.unhcr.org/protect.html (accessed 30 April 2007) Refugees should be distinguished from internally displaced people (IDPs), who remain in their country of origin, often in very insecure situations, without any recourse to livelihoods or rights.

Refugees fleeing conflict to neighboring EMR countries need emergency and long term support. The place stresses on existing institutions and social relationships in the destination country.

In Iraq, by March 2007 it was estimated that around 4 million people had been displaced: 1.9 m were displaced internally and 2 m have fled to nearby countries, primarily to Syria (1.2. m) and Jordan (750,000). Half a million live in Aman and 1 m in Damascus http://www.unhcr.org/news/NEWS/4610f0d04.html (accessed 4 April 07) see also http://www.uruknet.info/?p=31769 accessed 4 April 07). ICRC (2007) estimated that 106,000 families were displaced inside Iraq between February and mid-April 2007.

Palestinian refugees are descendants of those displaced as a result of the Arab-Israel War in 1948/9. As of 2005, there are an estimated 3 million Palestinian refugees in Jordan, and 900,000 in Syria and Lebanon (PMRS April 2007). Palestinians living in Palestine comprise two thirds of the 1.4 million people in Gaza, and 28.5% of the West Bank population of 2,372,216 (Palestine cs report).

Map 1. Countries of involved in EMR conflicts

Disclaimer: The presentation of material on the maps contained herein does not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or areas or its authorities of its frontiers or boundaries

The large number of Afghan refugees in the unsettled border area of Iran and Pakistan has strained local health provisions, which often lack basic supplies, mental health and maternal care for the local population. Until recently, NGOs focused on disaster relief and emergency supplies for refugees, rather than on the long term needs of the community and so few sustainable improvements in welfare could be made (Poureslami et al. 2004).

3.5   Unsettled frontier areas

The long frontier area between Afghanistan, Pakistan and Iran (where the international border runs through Baluchistan) has long been recognized as a disturbed area because of:

- arms smuggling, fueled by drug profits and supporting local insurgencies
- drug smuggling: Afghanistan is the major global supplier of opium and much of it leaves the region via the countries to the north
- the unregulated movement of people; most boundaries were imposed regardless of the similar ethnic identity of those on either side of the border
- the absence of cross border disease surveillance, or surveillance in neighboring countries.

These conditions are not conducive to the welfare and health of those living in the border provinces (Poureslami et al. 2004).

4. The impact of conflict on health

4.1   Mortality directly and indirectly due to conflict

The first question usually asked in a conflict situation concerns mortality and morbidity: how many, who, when, where and why? This information provides an indication of the severity of the crisis, and can be used to advocate for humanitarian intervention. Conflicts in EMR are characterized by high rates of civilian mortality. Pre-existing poverty, ill-health and lack of health services are exacerbated by long standing conflict in Afghanistan, Somalia and Sudan.

In Iraq, estimates of deaths during and after the 2003 invasion vary widely, according to source. The first epidemiological survey of excess mortality during the 17-18 months after the invasion, based on cluster sample methods, estimated an excess mortality of at least 98,000. Over half the deaths recorded in this 2004 study were from violent causes and about half of them occurred in Falluja (Roberts et al. 2004). A follow up cluster sample survey, in May-July 2006, identified an escalation in the mortality rate that surprised the researchers, an estimate of 654,965 excess deaths since the invasion, of which 600,000 were due to violence (the most common cause being gunfire). These figures indicate that the Iraq conflict is the deadliest international conflict of the twenty-first century. These national surveys were conducted by academics from Johns Hopkins University, in the USA, with the essential support of local researchers and field workers, many of whom risked their lives to carry out the work (Burnham et al. 2006).

In West and South Darfur cluster sample surveys conducted by the staff of Epicenter, the Paris-based research division of Medécins sans Frontièrs identified high mortality

rates. In West Darfur, in 2003: "in the four sites we surveyed high mortality and family separation amounted to a demographic catastrophe." The death rates (calculated, in the short term, as numbers per 10,000 per day) were highest among adult and adolescent males, especially during the destruction of settlements and during flight; but women and children were also targeted. During the period in "camps" the overall mortality rate fell but remained greater than the emergency bench-mark (that is, double the normal mortality numbers for the region, 1 per 10,000 per day) (Depoortere et al. 2004).   In South Darfur, in September 2004, in the three survey areas overall mortality was 3.2, 2.0 and 2.3, and mortality for children under 5 years was 5.9, 3.5 and 1 (Grandesso et al. 2005).

In Kohistan District, Afghanistan, a study in April 2001 identified a humanitarian crisis on the basis of their findings that the crude mortality and <5 deaths per 10,000 per day was 2.6 and 5.9 respectively, representing, over a period of 4 months, 1,525 excess deaths among the 57,600 people in the district. Most of the child deaths were due to diarrhea, respiratory tract infections, measles and scurvy, reflecting underlying malnutrition. This study was conducted by staff of Save the Children-USA (Assefa 2001).

In Palestine, by 2005, the MoH reported that deaths due to accidents associated with the conflict became the leading cause of death for those over 20 years of age. Seventy per cent of *intifada* activists killed were in the age group 18-39 (Palestine cs report).

In Iraq a cluster survey found infant and child mortality increased more than three fold between January 1991, when the first Iraq war began, through August 1991; 128.5 for < 5 mortality, compared to a baseline in Baghdad of 34 in 1985-90. The increased risk of death was found for all levels of maternal education and for all regions. The association between war and mortality was stronger in north and south Iraq than in the central areas and Baghdad (Aschero et al. 1992: see annex for methodology of cluster surveys in crisis settings).

Maternal mortality rates in Afghanistan are among the highest in the world, due to a combination of persistent poverty and conflict, at around 1,600 per 100,000 live births in 2002 (EMRO 2007). According to a national 2000-2002 RAMOS (Reproductive Age Mortality Study), figures ranged from 418 in Kabul city to a horrifying 6,507 in Ragh, Badakshan, the highest maternal mortality rate ever recorded. Even though Ragh was not directly affected by conflict, it was affected by the general paucity of health services found in Afghanistan; it was in a remote region in the Hindu Kush mountains, up to 10 days ride or walk from the nearest hospital with emergency obstetric care. Given the high total fertility rates, these figures translate into a total life time risk of maternal death of 1 in 42 in Kabul and 1 in 3 in Ragh,. On the basis of such figures, Afghanistan can be considered the worst place in the world to become pregnant (Bartlett et al. 2005: Smith & Burnham 2005; see also Amowitz et al. 2002).

4.2   Deaths and injuries due to mines and unexploded ordnance

Unexploded land mines and ordnance remain a serious hazard after the end of conflict, as people attempt to resume their economic activities. Cluster bombs represent a new type of ordnance, that break open in midair and disperse bomblets that were expected to explode on impact.

During 2001 and 2002 Afghanistan had the largest number of reported landmine and unexploded ordnance casualties world wide. Between March 2001 and June 2002 as in other affected areas, a high proportion of those injured were civilians (81%), most were males (92% were men and boys), and a high proportion (46%) were younger than 16. Overall risks were mostly associated with economic activities, children tending animals (and playing), and adults farming, traveling and involved in military activity. The small proportion of women injured probably reflects their more restricted mobility. (Bilukha et al. 2003).

Cluster bombs were targeted at southern Lebanon by Israeli forces in the closing days of the July-August 2006 war, in defiance of international law against excessive incidental loss of life and injury to civilians. According to an Israeli media source, Israel fired at least 1.2 m cluster bomblets. By October 2006, more than 20 Lebanese civilian deaths and 150 injuries resulted from the delayed explosion of these cluster bomblets, and rendered much of the fields and olive groves of southern Lebanon useless (Al Ahram Weekly 25-31 January 2006, p 13; UN 10 November 2006).

4.3 Other measures of health status - morbidity

Morbidity data is much more difficult to capture than mortality data. This is especially the case in a conflict setting, where many sick and injured fail to reach health facilities (such as there are) and thus do not enter a data base. However, it is possible to focus on a few areas where detailed epidemiological studies have provided a general view of the impact of conflict on health.

4.3.1 Mental health

Poor mental health and inability to cope with daily life are the cumulative results of deprivations found in all countries in conflict situations. As there is no universal response to conflict and its deprivations, there is no universal measurement of mental health (Summerfield 2000). It is important to present whatever evidence is available, as mental health remains a serious and neglected public health problem in conflict settings.

In Iraq, in June 2005, after 12 years of economic sanctions and two wars, there were about 5 million people (20% of the population) experiencing "significant psychological symptoms" and at least 300,000 people suffering from "severe mental health related conditions" (Iraq June 2005). Of 2,000 people interviewed in 18 provinces of Iraq in late 2006, a period of increasing insecurity for the civilian population, 92% feared being killed in an explosion and 60% said that the level of violence had caused them to have panic attacks (Association of Iraqi Psychiatrists 2007). Such high levels of mental distress are likely to affect people for many years to come.

In Afghanistan, in 2002 a national survey supported by the Ministry of Health, Centers for Disease Control (USA), UNICEF and other organizations found a high prevalence of symptoms of depression, anxiety and PTSD, even compared to other population in a conflict setting. Two thirds of the survey participants had experienced multiple traumas, and 42% experienced PTSD symptoms. The disabled suffered higher levels of anxiety (85%) than the non-disabled (69%).

The prevalence of mental health problems among females is usually found to be higher than among males, and the same holds for crisis settings. The national Afghanistan study also reported significantly lower mental health status among women than among men (Cardozo et al. 2004, 2005).

Mental distress in children is common in conflict settings. In Iraq in early 2007 it was estimated that over 90% of 1,000 children studied had learning difficulties, mainly due to the current climate of fear and insecurity (Association of Iraqi Psychologists 2007). In Palestine in 2002/3, among boys and girls in aged 6-16 years, girls were more affected than boys, with 58% suffering from severe PTSD. Symptoms were related to both the extent of exposure to violence and the family setting, showing that military violence affected the ability of the family and home to protect children ; the authors were staff of the Gaza Community Mental Health Program (Qouta et al. 2003; Qouta & Odeeb 2005; see also Thabet et al. 2002; and for adolescent mental health in Palestine (Giacaman et al. 2006; Al-Krenawi et al. 2006).

As each society is likely to interpret their experiences differently, and have different ways of expressing them, a more nuanced, and less biomedical approach to psychosocial distress may yield useful insights that reflect what those involved feel and how they express themselves. In Darfur, researchers from an NGO, the Tear Fund, found that most of those interviewed interpreted their experiences of distress in terms of the social body, rather than the "self". For them what counted was the effect on the social life of their community of fleeing from their villages, and the loss of dignity and of the social roles they had enjoyed in their villages (Murray 2006).

4.32. *Malnutrition*

Measures of malnutrition (stunting, underweight and wasting) for children < 5 years old, are good indicators of changing health status among a vulnerable group, and relatively easy to identify. Long term chronic malnutrition, stunting, is often highlighted as it can result in long-term health damage.

In Iraq, three nutrition surveys in 1996/7, which together covered all Iraq, found alarming rates of malnutrition among children after the UN oil-for –food agreement of December 1996. Almost one third (32%) of children < 5 were stunted, chronically malnourished, an increase of 72% since pre-war 1991 surveys, and almost one quarter (23.4%) were underweight. Some regions suffered more severely than others. The Multiple Indicator Cluster Survey (MICS) for the Governorate of Missan, in eastern Iraq, showed almost half of children < 5 were malnourished (UNICEF 26/11/1997; http://www.unicef.org/newsline/97pr60.htm accessed 15/4/07; see also annex 1).). MICS for 2000 and 2006 showed continued chronic malnutrition (stunting), 22% and 21.4% respectively (MICS Iraq 2006, 2000). A survey in Baghdad just after the war in 2003 found 16% of children were stunted (UNICEF 2003). Even higher rates of stunting (63.7% of children 6-59 months) were found in Kohistan, Afghanistan in 2002 after three years of civil war and drought (Grandesso et al. 2004)

4.3.2   Diarrheal diseases and other infectious diseases among children

Infectious diseases become major causes of morbidity (and mortality) among children in conflict setting, especially among refugees and IDPs, especially diarrhea, ARI and, to a lesser extent, vaccine preventable diseases. One camp in Darfur recorded a 50% weekly attack rate of diarrhea among children (Grandesso et al. 2004).

In contrast, in Palestine, as of June 2006 (before the July-August war), only 6.6% of infant mortality was caused by infections diseases. Other health status indicators also appeared to hold up well. As of mid-2006, the immunization programme was functioning well, with a coverage of more than 95% for DPT, HepB, and MMR (EMRO August 2006).

4.3.3 Injuries directly due to conflict

Children were often injured during the conflict. In Afghanistan, 25% of injuries due to anti-personnel mines during the early 1990s were in children under 16 (Moss et al. 2006).

In Palestine, of the total of 31,232 people injured between 29 September 2000 and 31 January 2007, 18% have acquired a permanent disability that will affect them for the rest of their lives (Palestine cs report, based on data from the Palestine Central Bureau of Statistics).

5. A social determinants approach to the health impact of conflict

5.1 The broad social determinants underlying conflicts

In a conflict setting, people suffer a range of physical and social deprivations that need to be identified before one can look at the more conventional social determinants (in this review gender, early child development, and health systems will be discussed). Essential elements of crisis settings which affect these broad determinants are expressed in the experiences of people caught up in crisis. These include:
- lack of security; a daily fear of the next assault to life and dignity – inability to protect ones family, vulnerability to bomb attack, a rape, absence of water or food
- displacement, movement from "home" place and the familiar; becoming a refugee or an IDP
- loss of social networks and family structure that comprises the fabric and meaning of daily life and its social reciprocities; this also involves the loss of social roles that guide behavior
- loss of livelihood; loss of daily activity, access to land, employment opportunities etc. that provide for daily life and needs, resulting in extreme poverty
- food insecurity due to loss of land and resources for livelihood
- poor environment:
  - lack of shelter: a plastic sheet, the shade of a tree or a ruined home
  - lack of safe water and safe sanitation: water, an essential for life, may bring death
  - lack of essential health and other social services: education for children, electricity for
  - lack of communications: isolation; "is there anyone here I can talk to"

      o   dependence on others, on aid handouts, producing a sense of helplessness and lack of purpose to life.

In total, these daily assaults represent a lack of rights essential for survival: security, shelter, food and health. They also involve a loss of the familiar, accustomed life and way of doing things which is profoundly disturbing, not only for the most vulnerable groups, but also for people who were accustomed to "coping" adequately in their familiar way of life.

5.2   Early childhood development

In emergency settings, children under 5 are the most vulnerable, very often living and dying without adequate nutrition and health care and in unhygienic environments. The commonest causes of death and illness are the same as those usually experienced in poor countries: diarrheal diseases, respiratory infections, measles and malnutrition. Children and young people often comprise the highest proportion of the population in refugee and IDP camps, and are exposed to risks over which they have little control (Moss et al. 2006; Zwi et al. 2006).

The social determinants affecting children in crisis settings are also those affecting children in poor countries:
- poor environment: lack of safe water and sanitation; poor quality housing;
- poor nutrition
- lack of access to health services

In conflict settings additional social determinants operate:
- lack of security and family support, so essential during the first five years, to provide a stable foundation for the rest of life
- immediate threats to security during occupation, fighting etc.; experience of traumatic events.
- lack of opportunity to learn social skills through social interaction with family and peers
- lack of opportunity to play, as a way of developing social and motor skill.

Causes of mortality and morbidity often provide indications of the particular risks for children in crisis settings. For example, the survey in Kohistan, Afghanistan in April 2001 revealed a high mortality rate among children under five: most of deaths were from:
- diarrhea (25%): reflecting lack of access to safe water
- respiratory tract infections (19.4%): reflecting lack of access to health facilities and appropriate drugs
- measles (15.7%): pointing to failure of EPI
- scurvy (6.5%): pointing to malnutrition (Assefa et al. 2001).

Where children suffer severe acute malnutrition (a weight-for-height of three SDs or more below the mean reference value) pilot studies have demonstrated the value of providing locally ready to use high energy foods, that minimize the need for hospital care. So far four pilot studies have been conducted, all outside EMR; extending these interventions to crisis countries in EMR could be recommended (Collins et al. 2006).

In Palestine, in spite of long term chronic crisis, long term child health trends have improved, as mentioned earlier. This has been attributed to the ability of the health system to deliver care under difficulties; to control major childhood infectious diseases, maintain immunization and oral rehydration programmes, and to increase in the number of deliveries taking place in hospitals. The high education status of the population has also been identified as supporting child health (EMRO August 2006). Whether or not these health indicators can hold up in the long run is a moot point, given recent assaults on the health services and deteriorating security. Recent evidence indicates that chronic malnutrition among children has been increasing, suggesting that food security problems are affecting children's health (EMRO August 2006).

In emergency settings, children may adopt new roles; no longer in school they may be helping to provide food and care for the family or for younger siblings and young girls may be mothers. Some boys as young as 12 years old may be abducted or "voluntarily" join rebel groups and be given arms, and girls forced into various forms of sexual slavery, as reported since early 2004 in Darfur (http://hrw.org/backgrounder/africa/darfur1104/7.htm accessed 30 April 2007). UNICEF is now working to reintegrate former child soldiers in southern Sudan into society, and provided with education, employment skills and counseling. The resilience of these children was noted to be remarkable. http://news.independent.co.uk/world/africa/article2488809.ece; accessed 30 April 2007); http://www.unicef.org.uk/press/news_detail.asp?news_id=942; accessed 30 April 2007). Yet, it appears that the resilience and strengths of children are rarely acknowledged in conflict settings, as they undertake what are often seen as adult roles or are forcibly engaged in the fighting. Human rights are not confined to adults, children too, have the right to be listened to, and to participate in health decisions that affect them (Zwi et al. 2006)..

5.3   Gender – social determinants affect women's roles, capabilities and rights

Conflict and its attendant traumas often require that women undertake new social and economic roles. These may strengthen women, if they are able to take advantage of opportunities to provide for their families. Alternatively, they may become more vulnerable, if they are isolated and exposed to violence and lack of resources. Women and children comprise a high proportion of displaced people; about two thirds of the displaced in Iraq are women and children, often female headed households (ICRC 2007).

New roles for women may strengthen their ability to cope in stressful situations, especially if they are able to act independently when they are separated from their husband's or male relatives. Ways in which women creatively respond to crisis include:
- maintaining social capital and social networks in crisis; working together for mutual support
- establishing and joining civil society organizations to protect themselves and their rights (see section 7)

For social and physiological reasons **exposure to violence** and reactions to it differ for females and males. Women are more commonly exposed to sexual and domestic violence, while men are exposed to direct military and civilian violence. Often women suffer more severe mental distress as a result of personally experiencing or seeing violence than do men. For example, a study in Gaza found the lifetime occurrence of at

least one traumatic event was higher among men (86%) than among women (44%),, yet women showed higher levels of psychiatric distress, especially anxiety disorder (but not PTSD). These are similar to findings of exposure to violence in non-conflict settings (Punamaki et al. 2005).

For women, lack of security can result in an increase in sexual violence. **Rape** is a weapon of war, and a deprivation of women's most precious right, control over their own bodies; it is also a violation of the whole social order. Social stigma associated with rape means that many women are unwilling to report an assault: children of rape are often unacknowledged by kin and the mother ostracized. In Darfur the Janjaweed militia is widely reported as perpetrating sexual violence as part of their strategy to destroy people, villages, and livelihoods.
Reliable reports of sexual assault in Darfur include:
- o sexual violence when women leave camps to collect firewood to sell, or to use for cooking (Patrick 2007).
- o traumatic fistula resulting from sexual assaults with sticks, guns, broken glass etc. which tear the vagina causing a rupture between the vagina, bladder or rectum, causing incontinence (Pinel & Bosire 2007).

Interfamily violence is a longstanding problem in many EMR countries. It is exacerbated in conflict situations, as in Palestine, when people's tempers are daily on edge. Laws in force in the West Bank and Gaza, and in other areas of EMR, do not protect women and girls from domestic violence, indeed they often condone practices such as honor killing (Human Rights Watch November 2006).

New social roles may be forced on women in a conflict setting, or valued roles lost. For example, many women suffered under the era of Taliban control because of the extension of the strict tribal law of Pashtunwali that severely limits women's authority and independence. Women were not allowed to work outside the home and girls were banned from school. Gender boundaries become stronger among strangers, affecting the status of migrants and those in refugee camps (Kakar 2005). Researchers from Physicians for Human Rights found that Taliban policies were detrimental to the health, needs and interests of Afghan women. The majority of their respondents reported a decline in physical and mental health status and in access to health care over the previous two years. Many reported family members killed (84%), family members detained and abused by Taliban militia (69%), and extremely restricted social activities (68%) (Rasekh et al. 1998; see also Scholte et al. 2004). A national 2002 study, after the nominal end of Taliban control in late 2002, conducted by CDC (USA), found similarly high levels of mental illhealth for women (Cardozo et al. 2004; Cardozo et al. 2005).

The social determinants of maternal mortality in conflict settings are likely to be due to a combination of existing circumstances (such as, in Afghanistan, long standing poverty and limitations on women's mobility) and factors specifically related to conflict. In 2002, after twenty years of war, a survey in Herat Province, Afghanistan, found the social determinants of high maternal mortality to include:
- rural residence: 92% of maternal deaths occurred in rural areas
- age at marriage: mean age at marriage 15 years
- lack of education: 94% of respondents had < 1 year of formal education

- women reported barriers to obtaining permission to seek health care
- low utilization of what health care was available:
    - Only 11% of women reported receiving prenatal care.
    - Less than 1% of women reported that a trained health care worker attended their delivery
- Lack of availability of hospital care: only 17 of the 27 listed health facilities were functional and only 5 provided essential obstetric care.

The authors of this study, affiliated with Physicians for Human Rights, based in Boston, USA, interpreted such high maternal mortality rates as a deprivation of women's human rights (Amowitz et al. 2002; see also Bartlett et al. 2005; Freedman 2001).

5.4   Employment and livelihoods

Many people living in areas of conflict have lost their livelihoods due a combination of:
- forced population movement (in Darfur, Iraq, Palestine)
- deliberate destruction of farmland and homes (in Darfur, Lebanon, Palestine)
- barriers denying access to jobs (Palestinians working in Israel or on the wrong side of the separation wall)
- fear and flight when livelihoods are threatened (government workers in Afghanistan and Iraq).

People become dependent on aid as they loose their livelihoods, and food security is endangered.

Food security in Palestine is related to changing economic conditions, loss of jobs, assets, and incomes, and the increasing cost of food. As of January 2007:

- about 70% in Gaza workforce either out of work of without pay (due to non-payment of salaries of public sector employees, especially in health and education)
- more than 70% of the population was living below the poverty line (report to UN by Dugard 2007).

The crisis in early 2006 prompted the FAO and WFP to conduct a food security analysis in the West Bank and Gaza. The study found that one third of the population is food insecure and one third food secure, with the rest hovering in between. These findings were similar to those of the 2003 food security assessment, which found around 4 out of 10 food insecure, with 30% under threat of becoming food insecure. One reason for the situation not becoming so much worse between the two surveys was the continuing family support and resilience of the population, which was further stretched during and after the summer 2006 war. Food insecurity in 2006 was markedly higher among refugees, who lived in camps (44.7%). As almost half (46%) of the Palestinian population are children under 14, the impact of food insecurity is proportionally more severe (WFP & FAO 2007 and 2003).

5.5   Health systems that fail to support health

Health systems in conflict settings can, as in "normal" situations, support a healthy life, or, by their absence or ineffectiveness, undermine it and perpetuate health inequity. Especially in emergencies, it is essential to maintain services in the areas of maternal

and child health, childhood immunization, and the provision of essential medicines (for malaria, for TB – DOTS, and, increasingly, for chronic non-communicable diseases).

In crisis situations, many organizations are likely to be called upon to provide health services, ministries of health, NGOs and private services. Lebanon had always depended on a complex system of for profit and not-for profit health services, with a relatively weak MoH; nevertheless these organizations appeared to work together well during the crisis of summer 2006.

In many cases the absence of health services is a barrier to health, or health facilities may actually be dangerous to health. For example:

- In Afghanistan, as hospitals and community mental health centers have ceased to function, people suffering from mental illness have largely been unable to access care, and emergency obstetric care is largely absent (Cardozo et al 2004; Bartlett et al. 2005: Smith & Burnham 2005).
- In defiance of international humanitarian law, health facilities and health staff are often targets for attack, as in Afghanistan, Lebanon, Iraq, Palestine and Somalia. In Iraq, armed gunmen have entered hospitals, demanded treatment for their injured or randomly attacking health staff, as representatives of a hated government. Like teachers and university professors, they are captured for ransom – they are assumed to belong to families who can pay the ransom, or they are targeted because they work for the government. Iraqi Red Crescent employees have also been attacked (ICRC 2007; Al Ahram Weekly, 5-11 April, 2007. p 10; Al Sheibani et al. 2006).

6.   Views and voices from civil society

6.1   A continuing health disaster and conflict in Afghanistan

The civil society study, by SHDP (Social and Health Development Program)/CAF (Care of the Afghan Family) research team, captures in qualitative terms the impact of conflict on the health and wellbeing of Afghans, in what has long been one of the poorest countries in the world. Interviews and focus group discussions were held in Kabul, 24 February to 2 March 2007, including in-depth interviews with staff of ministries and relief workers, and focus group discussions with staff of NGOs working directly with affected people, and with refugees and IDPs.

Three comments reflect the desperate situation in the country:

- "harm does not mean just killing, but three million martyred, two million disabled, 5 million illiterate, 5 million addicts and 6 million refugees in Pakistan, Iran and other countries"
- "people lost their tranquility, dignity, family members, wealth, farmlands and houses."
- "two hundred families live in my village, and almost 100 residents have been injured by landmines" (Afghanistan has the greatest number of landmines and unexploded ordnance in the world).

Marked differences in health and wellbeing were noted between different areas of the country, especially between the central lowlands and the remote highland frontier districts. This was seen as a reflection of the availability of health services, with more

services in north eastern, southeastern and southern parts of the country, and in urban areas, especially Kabul.

The major health related problems were identified by respondents as:

- drug addiction: affecting almost 5 million people. Drugs could be found everywhere, and even security forces are illicitly involved in drug distribution. (Afghanistan is the world's largest producer of opium, most of which is smuggled across its borders to find ready markets in the west)
- mental problems: affecting half the people; respondents coined the term "continuous stress" to describe the current situation of anxiety about poverty and obtaining food, and daily fear and danger
- malnutrition: resulting in the short height of the new generation, and people going prematurely white haired and loosing their teeth
- sexual abuse and sexual violence
- early and forced marriage and rape.

Poor access to services was reflected in reports of:
- deterioration in agriculture, irrigation systems, forests and fuel access
- scarcity of safe water, even in large cities
- disruption of foodstuff transportation to remote areas
- damage to schools, unavailability of teachers; even boys may be forbidden to go to school; teacher training and education for girls stopped completely.

The consensus was that these groups were vulnerable:
- the poor, who could not afford to flee from danger etc, especially those near front line fighting in Kabul
- youth get killed and disabled
- women get poorer treatment at health facilities than men; they faced complications of pregnancy and sexual violence
- children suffered from under-nutrition, infectious disease and abuse
- Refugees have no access to regular health services, except immunization during national immunization days.
- IDPS and nomads (between 1/5 and 1/7 of the population are vulnerable, and are not covered by existing health services.

Coping strategies were related to individual and family ability. Wealthier people left the country or moved to safe cities, where health and social services were better. The most wealthy migrated to US, Europe and other developed countries; the middle category of people to Iran and Pakistan. Currently, the wealthy people go to Pakistan or India for medical treatment.

6.2   Doctors for Iraq: an NGO reporting from Iraq

These comments on the current situation in Iraq were compiled by the NGO Doctors for Iraq in April 2007. They reflect the view of doctors trying to uphold their professional obligations in increasingly difficult conditions, as the conflict escalates and the boundaries between the forces involved, the US and UK army, the Iraqi army, "resistance" forces, militias and gangsters, are increasingly blurred.

The conditions that the doctors and other health staff have to cope with also reflect the fears and frustrations of those who need their services: "There is no minor health problem…having an illness is a tragedy by itself, because it means suffering for the patient and his relatives".

For them, access to health services was often a problem:

- Difficulty in accessing surviving health services because of check points, road blocks, curfews, and lack of transport
- IDPS, especially those in remote areas, have greatest difficulty accessing health services
- Insufficient drugs and equipment.

Doctors identified the groups most likely to suffer poor health during the conflict period:

- Men, who from the beginning of the conflict became involved in fighting, later became targets for kidnapping and assassination
- Children are "silent victims"; increasingly over the last year when children and women have been victims of attacks on markets and schools
- Children and women also suffer from lack of access to health facilities
- Prisoners: DFI visited a government prison and found appalling conditions; scabies, diarrhea and TB were widespread; prisoners lacked medical attention, especially those suffering from chronic diseases such as hypertension, diabetes etc.

Doctors identified health problems common in today's Iraq as:

Communicable diseases are increasing:

- Typhoid, hepatitis A and diarrhea, in crowded areas of cities, in remote areas and among IDPs
- Children suffer from diarrheal disease, respiratory infections and malnutrition, mostly in remote areas and among IDPs
- Doctors have started seeing diseases they rarely saw before: typhoid, measles and hepatitis

- Noncommunicable diseases:
    - Chronic illnesses such as hypertension and diabetes mellitus are increasing; patients suffer because of shortage of medication, quality of drugs, and poor case management
    - Increase in leukemia over the last year, in Basra, the west of Iraq and in Baghdad
- Other health problems are:
    - Drug abuse, especially among young people; evidence from increasing number of people being taken to hospital after an overdose
    - Mental illness, especially depression, which is difficult to deal with because of stigma associated with it.

Since April 2003 doctors reported seeing new kinds of injuries from the conflict:

- Injuries from cluster bombs, and for the last year an increase multi-shell injuries (including nails) mostly on the head and chest; patients with such injuries die before reaching hospital because of severe bleeding, and lack of first aid at the scene or in an ambulance.
- New weapons cause suffocation and first and second degree burns; colleagues in Ramadi reported two attacks with chlorine gas which killed victims and spread

irritating toxic gas in the surrounding area (most victims are children). Burns units do not have the capacity to deal with these injuries.

Doctors interviewed were concerned about breaches of medical neutrality, in contravention of Geneva Convention, that they considered to be undermining the whole health system. They mentioned:
- attacks on health units by American and Iraqi armed forces, and other armed groups
- arresting and abduction of health workers by the American army, Iraqi army or armed groups.
- ethnic and political discrimination is rife; most employees in a facility come from the same ethnic background or political affiliation
- allegations that the militias are infiltrating the Ministry of Health and hospitals.

The doctors interpreted the overall result of this situation as contributing to:
- the breakdown of trust and confidence between the patients and the health provider – for example, people are afraid to go to a provider or facility associated with a different ethnic background.
- The mass migration of health workers from Iraq (MoH estimates that one half of the country's doctors have fled; ICRC 2007).

Doctors reported coping strategies to respond to the health crisis:
- doctors start opening clinics in their homes rather than in commercial areas, which they see as less secure
- people visit the pharmacy or a local nurse rather than a doctor
- people return to the use of natural remedies and herbs
- women return to dependence on midwives and on delivering at home.

6.3   Resilience and social networks in the Lebanon crisis

The civil society interviews need to be seen against the backdrop of the short, extremely destructive war of July-August 2006 which resulted in:
- 1 million people fleeing their homes:
  - 270,00 fleeing the country
  - 130,000 IDPs
- 1,184 civilians killed and 4,059 injured
- Destruction of infrastructure:
  - 73 bridges and 400 miles of roads destroyed
  - Breakdown in water, sewerage and electric power supply
  - ¼ + of all health facilities badly damaged or destroyed
  - 350 schools destroyed
  - 15,000 homes destroyed, 130,00 badly damaged
  - Bombing and closure of Beirut International Airport
- An oil spill spread over 150 kms of coastline
- Minefields were created with over one million unexploded cluster bombs (Kronfol 20006).

The report from civil society was based on interviews with government officials, members of NGOs and other key informants. Comments on access to, and quality of, goods and services during and immediately after the war included:

- People who stayed in their homes south of the Litani River lived in a state of siege during the hostilities; populations who moved north had better access to facilities.
- IDPS and residents south of the Litani River suffered from a lack of safe water.
- Those living in schools reported problems accessing sanitation facilities
- Emergency evacuation services were hindered by the destruction of roads and bridges.
- Former residents returned to the south quickly after the end of the war, presenting a challenge to emergency services, who provided food rations for two months, tents and blankets.

Features of the conflict that impacted on health included:
- family dislocation: the population in areas in the south under the most intense fire was just recovering from years of Israeli occupation that ended in 2000.
- unanticipated scope and intensity of destruction
- obliteration of several towns and villages, and destruction in southern suburbs of Beirut
- systematic destruction of transport, water, electricity, telephone communications
- in violation of international humanitarian law and Geneva Conventions, two ambulances were struck directly, as well as hospitals, civilian convoys etc.

Coping strategies were expressed in terms of the "solidarity factor", shared resilience and responsibility; a sense of pride in the resistance that faced the assault: in spite of former divisions, a gritty confidence that they would pull through. Evidence from civil society sources includes:
- the reception of the majority of IDPs in homes, rather than shelters; families hosted IDPs regardless of ethnic/sectarian differences
- the ability of communities under siege in the area south of the Litani River to access on loan, food, clothing and other resources left by neighbors who fled
- Immediate return to the devastated areas south of the Litani River was also seen as a coping strategy
- Spirituality was important, especially noted were group prayers by IDPs
- People coped by focusing on daily needs and not being too demanding on relief workers.

People helped each other, depending on their situation and abilities. The resilience, especially of the IDPs, and resourcefulness which contributed to the prevention of epidemics and psychological breakdown in the short term, was associated with prior preparation, a continued awareness of the recurrence of past humanitarian disasters (Zurayk et al. 2006). During the period of civil war, 1975-1992, it was also noted that civilians were determined to maintain their daily routine (Acra 2006).

6.4   Impact of the Separation Wall on life in Palestine

The civil society report, compiled by the NGO, the Palestinian Medical Relief Society in April 2007, draws on official reports, personal interviews and one focus group discussion to respond to the checklist. From the long report, this review focuses on the impact on health of the separation wall being built in the West Bank.

Gaza, with a population density of 3,808 per sq km one of the most crowded places on earth (see Hill et al. 2006 2006) and the West Bank are both suffering acutely in the

current crisis, with two thirds of the population living below the poverty line, and around 50% unemployed (Dugard 2007).

The separation wall around the West Bank has worsened conditions for all Palestinians. The wall, which began building in June 2002, will stretch for 670 km, and will split the West Bank into five regions, separating the rest of the West Bank completely from East Jerusalem. Check points and roadblocks in Gaza and in the West Bank in association with the separation wall restrict movement within and between the West Bank and Gaza, preventing Palestinians from meeting family and kin, accessing employment and social services, such as health care and education.

The construction of the wall has denied many Palestinians access to health care:
- 41 health care facilities are now isolated, with the wall almost 50% complete; 22 are in vulnerable enclaves; 23 are government facilities, 15 are run by NGOs, and 2 by UNRWA, and one is private Of the currently isolated facilities:
    - 36% reported that many of their patients can no longer attend
    - 53% received new patients who could no longer attend their former health centers
    - 63% reported delay in delivery of services by their mobile and medical terms
    - 55% reported difficulties in accessing medicine for chronic diseases (civil society report).
- Palestinian ambulances are not allowed to enter the area between the Green Line and the wall; as the International Court of Justice has declared the Wall and gate system and the permits illegal, UN and NGO staff are not applying for permits for staff so they cannot continue mobile health services and supplementary food distribution (Morris 2006; see also Shearer 2006)
- When the wall is completed:
    - 71 clinics will be isolated, assuming that the existing clinics will remain functioning
    - 17,510 disabled people will be prevented from reaching required specialized healthcare in central cities such as Ramallah and Jerusalem (Shaar 2005)

Some specialized services for Palestinians in Gaza and the West Bank are only available in East Jerusalem, such as eye surgery, open heart surgery, oncological treatments and heart surgery for children; hospitals in East Jerusalem have reported a drastic decline in the number of patients, jeopardizing their existence (Palestine civil society report)

The combined impact of closures (checkpoints, road blocks etc) in Gaza and associated with the separation wall in the West Bank for the year 2005 included:
- 129 people died at checkpoints as they were denied access to hospitals
- 57 deliveries took place at checkpoints as a result of which 38 newborn and four women died on the spot
- 1905 ambulances were denied crossing checkpoints to reach a hospital
- for those who succeeded in negotiating checkpoints, journeys to facilities took three or four times more than the regular journey had done (according to MoH sources quoted in the cs report).

The proportion of home deliveries in rural areas increased from 5% prior to the *intifada* to around 30% during the times of strict closures in 2003-2003, primarily because women were unwilling to undergo the stressful journey to a health facility (Shaar 2005).

The UN General Assembly resolution on 15th December 2006, to establish a register of damage arising from the construction of Wall by Israel in Occupied Palestinian Territory, noted that "the damage was severe, vast and continuous" and involved "violations of the Palestinian people's freedom of movement and their right to work, to health, to education and to an adequate standard of living; as well as the displacement of Palestinian civilians from their homes and lands." (UN General Assembly 2006).

When the wall is completed it will isolate 71, compared to the current 41 health facilities, and thus will have an even more severe impact on health. It will isolate an estimated 750,000 people (Shaar 2005). The completed wall will place 46% of West Bank land out of reach of Palestinians. Residents in the area between the Green Line, the internationally recognized boundary between Israel and Palestine, and the wall will be especially affected as they require permits to live there and to cross into the West Bank proper (Morris 2006: see also Loewenstein 2006; Shearer 2006,). The stress of negotiating all these barriers, on a day to day basis cannot but have a serious effect on the physiological wellbeing of residents. Restricted mobility will increasingly affect all aspects of the life of those living in enclosed areas; access to employment, to social activities, kin and friends; and to services such as health care and schools.

6.5 Surviving in Somalia?

The Somali civil society report was compiled by the NGO Somali Organization for Community Development Activities, in Mogadishu in April 2007, under great difficulty because of the daily escalation of the conflict.

While conditions in the north and northeast, in Somaliland and Puntland, are fairly secure, currently, they reported conditions in the rest of what was once Somalia are dire, after 16 years of civil war:
- There is no effective government or infrastructure, or regional health authorities
- over 1 million civilians have fled the country and ½ million are in IDP camps
- unarmed civilians are suffering most acutely, with at least 6 being killed every day and many more injured, by sniper fire and unexploded combat devices
- Droughts floods, and the Indian Ocean tsunami have affected health, resulting in epidemics of diarrhea and cholera
- Free education has disappeared.
- mentally disturbed people wander around the urban centers
- people smuggling across the Arabian Sea to Yemen continues, with many fatalities en route (Independent 5/11/2006).
- **The state health services collapsed** when the state ceased to exist in January 1991; all government hospitals in Somalia, especially in Mogadishu were looted and destroyed; Currently:
  - some private hospitals and clinics have been established, but only the upper class business people can afford them
  - refugees, IDPS, the disabled, orphans, street people, and the unemployed cannot afford health care

- some hospitals offer inexpensive services, but transport costs are too high for disadvantaged people to reach them

In Mogadishu, the capital, the focus of current fighting, as of April 2007:
- almost ¼ of the city's 1.5 million people are moving out of the city
- cheap municipal water and electricity services collapsed; boreholes and generators are beyond the reach of all but the rich; there is no state authority to control water quality
- rubbish collection and sanitation services have disappeared; rubbish mountains are a hazard to health.

Cholera was confirmed in Mogadishu in March 2007. The outbreak was related to the complete breakdown of health and water systems, continued fighting and population displacement. The usual responses to the outbreak, such as supplying clean water and oral rehydration therapy, were not available.

(http://www.msf.org/msfinternational/ accessed 19 April 2007)

Coping strategies mentioned by the civil society report include:
- the preservation of the clan and subclan organizations, which provide people with a social identity and support network
- people have established community based organizations to help those in need.

6.6   Darfur - "poverty is what they share"

Two million IDPs, who have been displaced from their homes and lost their livelihood, experience:
- Major health problems resulting from lack of clean water and adequate housing; northern Darfur, mostly desert, is most seriously affected by lack of water
- women suffer from:
  - rape and harassment
  - malnutrition, which contributes to the death of their children
- children suffer from:
  - malnutrition, which is most acute during the rainy season
  - trauma because of bombardment, militia raiding and the killing of relative
- attacks by armed groups on aid workers caused a suspension of some aid activities
-

 Aid organizations responded to the crisis by providing emergency surgery, basic health care, anti- and post-natal care, rehabilitation for rape victims and therapeutic and supplementary feeding during peaks of malnutrition. However, education has been neglected.

Coping strategies included IDPs attempts to organize themselves into social groups based on their tribes. However, most IDPs are now politicized, as armed groups emerged which were tribally based; this makes them vulnerable to attack by other groups in the camps.

7.   Civil society responses to conflict

7.1   Introduction

A number of promising responses to conflict, which help to ameliorate the dire conditions described in this review, are identified here. Because of the orientation of this report, they are based on a "bottom up" rather than "top down view" of crisis, seen in terms of people, rather than organizations. However, most of these activities can best be described as "promising" rather than "proven". Serious evaluations of relief efforts (including those of NGOs) that could provide evidence for "best practices" to ameliorate the impact of conflict on civilian populations are rare. These tentative beginnings will, it is hoped, respond to the need for locally adapted, evidence based examples that would both deal with the immediate crisis and assist in the transition to longer-term development (Moss et al. 2006).

Many countries in crisis depend on funding and emergency services provided by WHO and other multilateral organizations, as well as NGOs, to maintain or restore health systems shattered in crisis. International agencies often turn to international and, especially local NGOs, to deliver health services, sometimes on a contractual basis. NGOs working in the local setting are thus able to expand existing services or provide new ones. However, they, and all other partners involved in health and welfare interventions in a crisis setting, need to be able to move from a crisis mode towards more sustainable, long term programmes that will support a range of related activities.

7.2.   Civil society, and NGO responses

The Gaza Community Mental Health Program began in 1990. During the second *intifada* the conflict rapidly escalated and there was a growing need for mental health assistance as a result of the increased prevalence of mental disorders among the population increasingly exposed to trauma, violence and torture. These acts of violence disturbed their family members and entire communities, neighborhoods, schools, children and families. A new approach to mental health, with a greater community orientation that directly addressed dysfunctions in the social environment was identified, moving away from the institutional therapeutic approaches then available through MoH. Human rights considerations for the community members were the reference points for organizing the program and delivering services. Because of the effect of violence at all levels in the community, the programme aims to address simultaneously many sectors of the society. It aims to give tools to the community to enable it to face future problems in the long terms. The program works with the MOH and UNRWA to deliver complementary services, meeting regularly to assess and coordinate crisis interventions. Training and research engage up to 70 % of the programme, with the other 30% focusing on delivering clinical services for needy people (Shaar 2005; see also papers by staff: Qouta et al. 2003; Qouta & Odeb 2005; Punamaki et al. 2005; http://www.gcmhp.net/research/pub&research.htm accessed 15 April 2006).

The Palestinian Medical Relief Society (PMRS) supports a programme for targeted populations living in extreme poverty and suffering from a lack of food and economic resources due to closures and the restricted mobility of people and goods. PMRS mobilizes its resources to reach those living in the most remote, isolated and poor regions, which were not provided with services from the national authority or other

organizations. It does not rely only on food provision to tackle malnutrition as this approach created problems of dependency. In order to tackle malnutrition and anemia in a comprehensive manner, the program first screened the affected families and provided medical treatment and vitamins. It then provided job creation activities for the target households and individuals living below the poverty line, paying them for their labor. Job creation programs focused on developing community assets by building schools, clinics and kindergartens. Support for female headed households was also provided, working with organizations already active in this field. PMRS provided the participants with sheep and goats, which provided the household with milk and cheese, as a valuable source of nutrition for the household. It also assisted women to enter the market and sell their products (Shaar 2005).

Protection against sexual violence in Darfur has focused on listening to women, giving them space for empowerment, and providing protection for risky activities. In such a setting, individual actions support a community NGO focus but must have support of international agencies with a responsibility to maintain security and human rights.
Women's centers provide women victims of sexual violence with resources, support and referral. Women share their individual stories, recognizing that where rape is a weapon of war the experience is a collective one. By providing a safe space for women to build trust, share experiences and rest from the tasks of daily survival, such centers provide a source of empowerment to women (Lowry 2006; the author works for the International Rescue Committee which supports this programme).
In response to sexual violence, IDPs call for:
- increased prevention and response to sexual and gender based violence
- community-based policing based on dialogue with IDPs
- health facilities that offer privacy to women, and can treat them for fistula
- sensitizing TBAs and community leaders about health and emotional needs of survivors of sexual violence (Listening… 2006; see also Hashim 2006).

Women were in danger of being raped collecting firewood, for their own use or to sell. It was important to solve this problem because selling firewood was the only form of livelihood available for most women:
- firewood patrols could protect the women outside the camps: however these were often ineffective because of the difficulty of communication between the women and the civilian police or troops assigned to protect them
- the use of fuel efficient stoves and/or alternative fuels would obviate the need for women to go outside the camp to collect firewood (Patrick 2006).

7.2   Cooperation to improve health care and access to care

Collaboration between the many actors responsible for health care in crisis is essential. Often the MoH has been fatally weakened and, by default, much care is provided by voluntary, not for profit organizations or by private organizations.

In the West Bank areas affected by the separation wall, as of early 2005 (before the crises of 2006), mobile clinics operated jointly with the MoH and UNRWA provided the full package of primary healthcare services including vaccination, antenatal care and care for chronically ill people. These clinics are part of the emergency response project, and became more important after the extension of closures and the construction of the separation wall. In 2005 these clinics served more than 26,000 beneficiaries in 135

remote locations, reducing the percentage of the population not receiving health care from 70% to 50%. Funds, and coordination provided the European Union and European Commission Humanitarian Office (ECHO), were crucial in supporting this system of mobile clinics.   According to the Palestinian civil society report: "Mobile clinics represent a success story in coordination, resource use, and human intention, as mobile clinic staff put their lives at risk to serve the Palestinian population and provide it with the opportunity to liva a healthy life (Palestine cs report; see also Shaar 2005).

In Afghanistan, in 2002, the seriously underfunded MoH embarked on a program to contract out a Basic Package of Health Services to NGOs, which were already providing most of the health care in the country. Although these services resulted in a positive improvement in access to basic health services, the short term contracts fostered a short term "quick fix" view of the task. The transition from a health system largely relying on the MoH contracting out to NGOs requires that these contracts are carefully managed and monitored in the interests of long term sustainability (EMRO March 2007). The MoH is also responding to particular health problems. Prompted in part by the preliminary results of the 1999-2002 RAMOS maternal mortality survey, the ministry identified the reduction in maternal mortality as a major objective (Smith and Burnham 2005).

In **Lebanon**, remarkably, regular MOHP services continued to be provided during the July-august 2006 conflict, under extreme difficulties, and no major disease outbreaks were recorded. Interventions that helped to mitigate the impact of the conflict on health included collaborative activities and the increasing role of NGOs:
- Emergency health services:
    - MOPH and Ministry of Social Affairs provided full coverage of medical care for casualties irrespective of nationality, including ambulance, hospitalization, prostheses and rehabilitation
    - joint management of emergency services by private sector, NGOs, hospital syndicates, medical suppliers, Lebanese Red Cross and Red Crescent (with international partners), Civil Defense and the army. Two clusters were established; one for hospital services and one for PHC.
- NGO role, with many new NGOs established, NGO activities included:
    - Directly providing health care
    - Following IDPs back to their villages and involving local residents in relief operations
    - Supporting women in establishing small enterprises
    - Working with youth – entertainments, sport, and awareness raising about behavioral issues (Lebanon cs report).

Somaliland, an autonomous region of former Somalia not recognized internationally, is making an attempt to rebuild health system following widespread destruction of health facilities and mass migration or death of health workers. International linkages, specifically with UK institutions, support rebuilding facilities, staffing and professional education (Leather et al. 2006).

Health staff have a professional obligation to care for everyone, according to their need. However, the needs are often overwhelming, and the conflict is often mirrored in health settings. Responses from Doctors in Iraq who prepared the Iraq civil society report, stressed the overwhelming importance of health staff and health facilities treating all

irrespective of sectarian loyalties. As examples of overcoming sectarian prejudices they quote:

- The first medical aid convoy that broke the Falluja siege was an aid convoy from Sadr City, a Shiaa stronghold, to help the mainly Sunni residents of Falluja
- Doctors for Iraq and other health NGOs have mixed groups of volunteers working in different parts of the country providing medical aid for people without regard to ethnicity or religion.

The NGO Doctors for Iraq is currently campaigning for the release of health workers from prisons and abduction. In collaboration with OXFAM GB they have recently carried out a research project about the appearance of ammunition on the black market. Most was found to originate from the American Army and the Iraq army and end up on the black market (Iraq cs report).

8. Conclusions

Conflicts, especially in EMR, are not a one-off event. They are often chronic, lasting for years. Thus preparedness is essential to meet crises in health and wellbeing. Important this is, it is tackling the symptoms of the crisis, not the causes. To tackle the causes requires enormous political will on the part of all parties. However, it can be argued that, this task would be a little easier if political leaders were aware of the capabilities and concerns of ordinary people, and their ability to act together to overcome their differences.

Conflict can damage health in various ways: directly affecting physical and mental health, disrupting health systems, and damaging infrastructure that affects health directly, such as water and sanitation. The impact of the crisis on health will depend on local circumstances, or it may cause the health services of a formerly middle income country to plunge into chaos.

Social determinants of health take specific forms in a conflict setting. The underlying determinants may include population displacement, loss of livelihood, shelter and social networks, and crucial social support networks These have differential impacts on various groups in society; according to gender, age, economic status, or group identity. Coping strategies by civilians caught up in conflict vary. Maintaining social networks and/or ethnic allegiances in a changed or new setting can be a key to maintaining mental and physical health. Those caught up in crisis should not primarily be seen as "victims". They are also members of social groups who together have an enormous resilience, and skills and capacities which could be harnessed in response to crisis. NGOs need to be given the space to participate in alleviating crisis. They are usually in closer touch with local people than are representatives of ministries, national and international organizations, who tend to have a "top down", "one size fits all" view. In contrast, NGOs are usually better able to respond to local needs and respect and build on local capabilities.

Development agencies, especially agencies such as WHO, which has a special mandate to respond to health needs in crisis settings, should work together to provide health services. They can pool their expertise to identify and respond to the social determinants of health in crisis situations.

Acknowledgements

9. Annexes

9.1 Assessing health status in conflict settings.

Many health indicators may fail to indicate health status during conflict as they are based on annual data for a whole country; such averages cover too long a period, and fail to reflect conditions in the most affected areas. Some indicators will take longer to reflect the impact of conflict than others. Innovative epidemiological methods have been developed to measure mortality in conflict settings over a relatively short period of time, and rates across the whole country, as well as in specific settings or areas. Cluster sample surveys (as pioneered in EPI) are now increasingly accepted as valid for national mortality studies in conflict settings. By interviewing survivors, such surveys can provide estimates of excess of mortality, as in Iraq (see below).

Using a cluster sample survey method to identify the number of deaths in sample households over a fixed period of time, a study by Johns Hopkins epidemiologists and Iraqi colleagues estimated 654,965 excess deaths (the midpoint, top of the bell curve, between 392,979 and 942,636) since the end of the war in March 2003. This compared to existing estimates of somewhat < 100,000 (Burnham et al. 2006). Faced with this new, horrifyingly high figure, the first reactions of many lay commentators, epidemiologists and government officials was to question the findings (Bohannon 2006; Boseley 2006). Of major international news sources, only AlJazeera (2006) took the findings seriously when they were first released.
Predictably, President George Bush stated that he "did not consider it a credible report" and, in UK, the prime minister's official spokesman said that the study "was not one we believe to be anywhere near accurate". In March 2007, following a freedom of information request in UK, it was revealed that when the report came out the government's own scientists found the report accurate and reliable but the government chose not to acknowledge this political damning figure. After widespread debate in the press and on the internet, and in-depth presentations of the methodology and the intensive review process undergone by the paper, it is, as of March 2007, generally accepted that the figure is a valid estimate (Keiger 2007; Horton 2007).

Cluster sample surveys can also be used to identify deaths per 10,000 per day in a particular place. The need for humanitarian intervention is identified by an emergency benchmark, a rate twice the normal mortality rate for the region. Where events have taken place relatively recently, as in Darfur, death rates can be identified retrospectively to assess the differences in mortality in the various settings auch as during the destruction of their village, during flight or at various times after arrival in a camp (Depootere et al. 2004).

Bearing in mind the debate on PTSD, it is important to examine a number of reports of mental health in conflict which have incorporated this concept. Two recent Afghan studies of self-reported symptoms of mental illness used multi-stage sampling techniques, and well recognized instruments to determine exposure to trauma, and assessments of mental health, social functioning and general health and wellbeing adapted to the local setting. Both were able to indicate the magnitude of the mental health problem in the study area and identify policy relevant coping techniques (Bolton and Betancourt 2004; Scholte et al. 2004: Cardozo et al. 2004).

Information on morbidity, as an indication of current and anticipated early crises can be provided by Early Warning and Alert Response Surveillance (EWARS).. Various units report "health events" by age and condition (such as ARI, malaria etc) and reported deaths for crisis areas, such as Darfur. For example, in late January 2007, surveillance for malaria was improved, with the onset of the high risk season; the attack rate was reported to be below the rate observed during 2006 and in 2005. Reports also found that an outbreak of *Vibrio cholerae* that began in May 2006 in South Darfur was successfully contained within 28 weeks due to the combined activities of FMOH/SMOD, UNICEF and WHO (*Weekly Morbidity and Mortality Bulletin (Darfur)* 20-26 January 2007.

Multiple Indicator Cluster Surveys (MICS) were conducted in Iraq in 1986, 2000 and 2006 providing time series data for child nutrition ; models based on the 1996 survey estimated the < 5 mortality rate at c 87 per 1,000, in line with estimates from mortality surveys. Preliminary data from the 2006 MICS survey is difficult to interpret. It shows   a marked decline in vaccination rates, compared to MICS 2000 and the most recent estimates agreed by WHO and Iraq MOH in 2006.   Health and environment indicators in MICS 2006 are better for Kurdistan for the rest of Iraq; results for individual governorates, which would be expected to show wide variations in mortality and nutrition for children, and access to health services, safe water and sanitation were not available as of April 2007.

9.2   Annex 2. Checklist for civil society key informants

Conflicts and social determinants of health equity
Checklist for Key Informant Interviews

Background   The SDH team in WHO EMRO and the regional civil society AHED are jointly developing a position paper on "Conflicts and their effects on social determinants of health equity". There are several countries in the EMR that are in a state of conflict. For the purpose of this work, conflict has been defined as a state of opposition, disagreement or incompatibility between two or more people or groups of people, which is sometimes characterized by physical violence. Military **conflict** between states may constitute war.[1]

The paper will be based on evidence gathered from an extensive review of literature on the subject, as well as information collected from key informants in countries in conflict in the EMR, through the use of a a checklist of questions that provide further insights on how conflicts influence health and health equity.

For this purpose an open-ended checklist has been developed and individuals from civil society organizations, academia, and those working for international development agencies shall be contacted in the six conflict ridden countries to seek information. It is proposed to collect information for up to 30 individuals on the above subject.

Checklist for questions on impact of conflict and violence and health equity

1. When did the conflict start?

    a. Originally

    b. What is the current state i.e. if there has been a new wave of violence or exacerbation of violence during the last year

2.   What in your opinion are the underlying factors that led to the conflict. What is the relationship of the conflict to sharing and distribution of resources, ethnic and/or religious differences, changing policies, external interventions or other factors?

    a. Longstanding

    b. Currently

3.   How has the conflict affected the political stability, economic development, social advancement of the country?

4. Who are the major parties, factions, sects etc. involved in the conflict and what are their stated positions?

5. What is the geographical scope of the conflict? Is it restricted in one area/several areas of a country, does it involve the entire country or is it regional in nature?

6. How many people have been affected by the conflict and has it led to the establishment of refugee settlements, internally displaced persons and/or an extensive exodus of populations?

7. What has been the effect/impact on people's health in terms of:

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[1] http://en.wikipedia.org/wiki/Conflict

- The major health problems being seen as a result of conflict - Injuries from firearms, land mines; Mental health; others
- The overall trends in mortality, morbidity, and disability, life expectancy (Infant mortality, child mortality, maternal mortality, changing patterns of morbidity…etc.)
- The level of access to health services, especially emergency health services.
- The kind of health services are available to refugees, IDPs and other vulnerable groups.

8. In terms of the above indicators are there any data on differential outcomes i.e gender, social class, geographical i.e. does the conflict affect different groups of people differently

9. What has been the effect/impact on access to, and quality of basic goods and services such as:

- resources such as water, food supply, electricity, fuel and heating, sanitation…etc
- Access to health services, educational services …etc.

10. Who has been most affected by the disruption of the social services identified above?

11. How does the population cope with the effect of the social and health effects of the conflict?

12. Have there been any recent assessments or surveys done and what impact has there been on other social indicators such as:

- Trends in poverty, employment …etc.
- Impact on power relationships, in terms of the degree of political participation, wealth gap and representation in office. Include gender relations.

13. Are there any specific characteristics of conflict that impact on people's health; e. g. violence against government workers (incl health workers), aid workers and NGO staff; indiscriminate violence against civilians; etc?

14. Any examples of interventions/activities that helped to mitigate the impact of the conflict on health, such as: specific responses by health services and staff (e g "peace building through health initiatives"); programs for schools or special groups (stress management, mines awareness etc.); strengthening the social fabric, social capital etc

9.3.   Annex 3.

9.3.1. Afghanistan

The origins of the present conflict started in 1979, with Soviet invasion, but can be seen as a modern extension of earlier rivalries between Imperial Russia and the British Empire. Afghanistan remains one of the poorest countries in the world; as reflected in its health statistics and a Human Development Index rank of 169th out of 171 countries. The impact of invasion of 2001 and current conflict affects everyone. Although the conflict originated in the remote border areas that have a long history of instability and poverty, it gradually extended to the more prosperous farming areas and to the large cities (Afghanstan cs report).

9.3.2. Iraq

Iraq has suffered from conflict and sanctions since its seizure of Kuwait in August 1990, the subsequent Gulf War and economic sanctions designed to bring down the Saddam regime, and most recently the US/UK invasion, and the current state of civil war or near civil war. From being a reasonably prosperous middle income country, the economy and infrastructure has collapsed and the living standards and health of its people has plunged, amid daily threats to life and health.

9.3.3. Lebanon

Lebanon experienced 17 years of continuous civil war between 1975 and 1992 which totally destroyed infrastructure and displaced 650,000 of the 4 million population. The largest city, Beirut, with over half the country's population, suffered severely (Acra 2006). After considerable reconstruction, accompanied by sectarian violence especially politically-motivated assassinations, Lebanon experienced a destructive one month invasion and bombardment by Israeli forces, in July-August 2006, and the resistance offered by Hezbollah. This resulted in 1 million people fleeing their homes and widespread destruction of infrastructure – electricity generating stations, water supply and sanitation systems, hospitals and schools. Physical destruction of housing was most severe in the extreme south and in the southern suburbs of Beirut.

9.3.4. Palestine

Palestine has endured a turbulent existence for almost 60 years, following the Arab-Israel war in 1948. After the 1967 war, Israel occupied Palestine, controlling the life and health of Palestinians, in the interests of "protecting" Israeli residents and Israeli settlers who were being encouraged to settle in gated enclaves in Palestine. The internal situation deteriorated following the second *intifada*, beginning in September 2000, the international isolation following the Hamas election victory in early 2006, and the war of July-August 2006.

9.3.5. Somalia

Since the collapse of the regime in January 1991 Somalia has endured 16 years of civil war. However, in the north and north-east, the self-declared republic of Somaliland and the semi-autonomous authority of Puntland now enjoy relative peace. The south,

including the capital, Mogadishu, is the center of current conflict, and suffers from an absence of effective government infrastructure and services. Civil society respondents state that Ethiopian forces and local allies are fighting for control of the area with "local militia".

9.3.6. Sudan (Darfur)

Following the power sharing agreement between the Khartoum government and the south of Sudan, the center of conflict in Sudan moved to Darfur, in the west. Although the current violence in Darfur had many precursors, it took its present form in early 2003, when insurgents attacked government installations in Darfur, allegedly to draw attention to the government's neglect of this western area. The government in Khartoum responded by supporting proxy Janjaweed militias in a systematic destruction of Darfurian people, both agriculturalists and nomads, and their homes, villages and livelihoods,. By mid-2006 200,000 Darfurians had died, mostly from conflict-related diseases and malnutrition, and 2 million had been forced from their homes. The conflict has now spread to neighboring Chad (Grono 2006; see also de Waal 2005).

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