

## D5 | War

War has an enormous and tragic impact on people's lives. It accounts for more death and disability than many major diseases; destroys families, communities, and sometimes entire nations and cultures; diverts limited resources from health and other human services and damages the infrastructure that supports them; and violates human rights. The mindset of war – that violence is the best way to resolve conflicts – contributes to domestic violence, street crime, and many other kinds of violence. War damages the environment. In sum, it threatens not only health but also the very fabric of our civilization (Levy and Sidel 1997).

### **The impact of war on health**

Some of the impacts of war on health are obvious, some are not (WHO 2002). The direct impact on mortality and morbidity is apparent. An estimated 191 million people died directly or indirectly as a result of conflict during the 20th century, more than half of them civilians (Rummel 1994). The exact figures are unknowable because of generally poor record-keeping in many countries and its disruption in times of conflict (Zwi, Ugalde and Richards 1999). Active armed conflicts – primarily civil wars – continue in many parts of the world: 21 major armed conflicts occurred in 19 different locations during 2002. During the post-Cold War period of 1990–2001 there were 57 major armed conflicts in 45 locations, all internal except those between Iraq and Kuwait, India and Pakistan, and Ethiopia and Eritrea, although in 15 of them other states contributed regular military troops. Conflicts concerning government became slightly more frequent during that period than those concerning territory (Eriksson et al. 2003).

These civil wars exert a huge toll in human suffering. For example, at least three million civilians probably died in the civil war in the Democratic Republic of Congo (Roberts et al. 2001). Over 30 years of civil war in Ethiopia have led to the deaths of a million people, about half of them civilians (Kloos 1992). Civilians, particularly women and children, bear a disproportionate share of these casualties (Ahlstram 1991).

Many people survive wars only to be physically scarred for life. Millions of survivors are chronically disabled from injuries sustained during wars or their immediate aftermath. Landmines are a particular threat. For example, one in

236 people in Cambodia is an amputee as a result of a landmine explosion (Stover et al. 1994). Around a third of the soldiers who survived the civil war in Ethiopia were injured or disabled and at least 40,000 people lost one or more limbs during the war.

Millions more people are psychologically impaired from wars during which they were physically or sexually assaulted; were forced to serve as soldiers; witnessed the death of family members; or experienced the destruction of their communities or even nations. Psychological trauma may be demonstrated in disturbed and antisocial behaviour such as aggression toward others, including family members. Many combatants suffer from post-traumatic stress disorder on return from military action (Kanter 2005).

Rape has been used as a weapon in many wars – in Algeria, Bangladesh, India, Indonesia, Korea, Liberia, Rwanda, Uganda, the former Yugoslavia and elsewhere. Soldiers rape the families of their enemies as acts of humiliation and revenge; during the war in Bosnia and Herzegovina military personnel raped at least 10,000 women (Ashford and Huet-Vaughn 1997). The social chaos brought about by war also creates situations and conditions for sexual violence (Mann et al. 1994).

Children are particularly vulnerable during and after wars. Many die as a result of malnutrition, disease or military attacks; many are physically or psychologically injured; some are forced to become soldiers or sexual slaves to military officers. Their health suffers in many other ways, as reflected by increased mortality and decreased immunization (Machel 1996).

The health-supporting infrastructure, which in many countries is in poor condition before war begins, may be destroyed – including health-care facilities, electricity-generating plants, food-supply systems, water-treatment and sanitation facilities, and transport and communication systems. This deprives civilians of access to food, clean water and health services. For example, during Gulf War I in 1991 and the ensuing 12 years of economic sanctions against Iraq, an estimated 350,000 to 500,000 children died, mostly owing to inadequate nutrition, contaminated water and shortages of medicines, all related to destruction of the infrastructure. The 2003 attack on Iraq led by the US and UK devastated much of its infrastructure, leading again to numerous civilian deaths (summarized in Medact 2003 & 2004).

Armed conflict, or the threat of it, accounts for most of the refugees and internally displaced persons in the world today. Refugees and internally displaced persons are vulnerable to malnutrition, infectious diseases, injuries, and criminal and military attacks. At the start of 2002, there were an estimated 19.8 million worldwide. Twelve million were officially recognized as refugees by the



**19 Chechnya destroyed. War has wide ranging implications for people's health.**

United Nations High Commissioner for Refugees (this excluded three million Palestinians). Donor governments and international organizations have generally failed to provide adequate financial support for refugees and internally displaced persons. In 2002, there were 20–25 million internally displaced persons, many living in more extreme conditions than those who received refugee assistance – only 5.3 million of them received UNHCR aid in 2002 (Hampton 1998, Cranna 1994, Macrae and Zwi 1994, WorldWatch Institute 2003).

In addition to its direct effects, war and preparation for war have indirect and less obvious impacts on health that fall into three categories: diversion of resources; domestic and community violence; and damage to the environment. First, war and the preparation for war divert huge resources from health and human services and other productive societal endeavours. These are detailed in the discussion of militarism below.

Second, war often creates a circle of violence, increasing domestic and community violence in countries engaged in war. It teaches people that violence is an acceptable method for settling conflicts, including children and adolescents. Men, sometimes former military servicemen who have been trained to use violence, commit more acts of violence against women. The return home of servicemen and women can damage health and well-being, through separations, divorces, dysfunctional family interactions and other forms of post-traumatic stress (Kanter 2005).

*Box D5.1 The disastrous impact of war on the environment*

Destruction of urban environments by aerial carpet bombing of cities in Europe and Japan during World War II.

Over 600 oil well fires in Kuwait, ignited by retreating Iraqi troops in 1991, had a devastating effect on the affected areas' ecology and caused acute respiratory symptoms among people exposed, sometimes far away.

Destruction of environmental resources, such as the destruction of mangrove forests by Agent Orange (a herbicide widely used by the US) and bombs during the Vietnam war.

Contamination of rivers, streams, and groundwater supplies, such as occurs with chemical leakage from rusting metal containers at military storage sites.

Finally, war and the preparation for war have profound impacts on the environment. Military activities consume huge quantities of non-renewable resources, such as fuels to power aircraft and ships, and rare metals used in the production of equipment and weapons (Sidel and Shahi 1997). More profoundly, military activities contribute to widespread pollution and environmental contamination (see examples in Box D5.1) (Levy et al. 2000). Less obvious are the environmental impacts of preparation for war, such as the huge amounts of non-renewable fossil fuels used by the military before (as well as during and after) wars and the environmental hazards of toxic and radioactive wastes, which can contaminate air, soil, and both surface water and groundwater (Renner 1997).

*The changing nature of war* Overall, war takes an increasing toll on civilians, both by direct attack on them or by 'collateral damage' caused by weapons directed at military targets. During some wars in the 1990s, approximately 90% of the people killed were noncombatants (Garfield and Neugut 2000). Many were innocent bystanders caught in the crossfire of opposing armies; others were specifically targeted civilians. The changing nature of war includes use of new weapons, drone (unmanned) aircraft and high-altitude bombers, and the increasing use of suicide or homicide bombers in guerrilla warfare and what is termed 'terrorism'.

The US has claimed the right to conduct a 'preventive' or 'pre-emptive' war against nations that it perceives as posing a threat to its security and has

initiated a 'war on terrorism'. In addition, its 2002 nuclear policy says it may choose to use nuclear weapons not only in response to a nuclear attack but also against attack by other weapons of mass destruction (US Department of State 2002). The pre-emptive strike against Iraq by the governments of the US and UK may lead to abandonment of the rules and procedures of law and diplomacy that have prevented many wars.

### **Underlying causes of conflict and militarism**

The underlying causes of armed conflict and militarism include poverty, social inequities, adverse effects of globalization, and shame and humiliation. Some of the underlying causes of war are becoming more prevalent or worsening, including the persistence of socioeconomic disparities and other forms of social injustice. The rich-poor divide is growing, as documented in part A. Abundant resources, such as oil, minerals, metals, gemstones, drug crops and timber, have also fuelled many wars in developing countries. Globalization, also discussed in part A, may be among the causes of violence and war if it leads to exploitation of people, of the environment and of other resources (Cornia and Court 2001, Zwi et al. 2002).

The Carnegie Commission on Preventing Deadly Conflict (1997) has identified factors that put nations at risk of violent conflict. These include:

- lack of democratic processes and unequal access to power, particularly where power arises from religious or ethnic identity, and leaders are repressive or abusive of human rights;
- social inequality characterized by markedly unequal distribution of resources and access to them, especially where the economy is in decline and there is, as a result, more social inequality and more competition for resources;
- control by one group of valuable natural resources such as oil, timber, drugs or gems; and
- demographic changes that outstrip the nation's capacity to provide basic necessary services and opportunities for employment.

The commission might also have noted that the consequences of colonialism are still felt in many countries. Colonialism destroyed political systems, replaced them with new ones unrelated to the population's cultural values and created commercial dependence. Neocolonialism, through multilateral agencies, transnational corporations and international organizations, and in some instances with the use of the military, is responsible for social inequality, control of natural resources, and lack of democratic processes. In many countries, the US has systematically opposed political processes that would

have resolved some of the problems identified by the commission, often with invasions, assassinations and violence.

What has been called ‘terrorism’ is another important form of armed conflict. Levy and Sidel (2003) define it as politically motivated violence or the threat of violence, especially against civilians, with the intent to induce fear. Its causes include exploitation and dominance by a power that is considered illegitimate, exacerbated nationalism, religious fanaticism, and shame and humiliation of people. The US definition of terrorism excludes acts by nation-states, which it considers to be a part of ‘war’, but many analysts define such acts as the carpet-bombing of cities during World War II or the use of napalm in Vietnam as terrorism. The US and other nations must increase funding for humanitarian and sustainable development programmes to address the root causes of terrorism and political violence such as hunger, illiteracy and unemployment.

*Militarism in developing countries* Militarism is the subordination of the ideals or policies of a nation’s government or of its civil society to military goals or policies. It has two major components, ideological and financial. In 2003, nations spent US\$ 956 billion on war and the preparation for war; the US spent almost half of that. World military spending that year increased by about 11% from 2002, mostly due to spiralling US military spending (Stockholm International Peace Research Institute 2004a).

Expenditures for war and the preparation for war divert huge human, financial, and other resources from health and human services and other productive endeavours. In the US, for example, as military expenditures soar, there have been ongoing and substantial cutbacks in government-operated and financed health and human services. This problem is often more acute in less developed countries affected by armed conflict or the threat of it. Their populations have high rates of death and disease and relatively short life expectancy, but many spend much more on military activities than on public health. Governments in some developing countries annually spend US\$ 10–20 per capita on military purposes, but only \$1 on health.

### **The disarmament agenda**

Prevention of war and, if war is initiated, lessening of its health consequences require not only the measures discussed above but also the reduction or elimination of weapons. The main types of weapons are described below:

*Nuclear weapons* The nuclear bombs detonated over Japan in 1945 each had

an explosive force equivalent to about 15,000 tons of TNT. Each killed or fatally wounded about 100,000 people and caused additional thousands of injuries and illnesses from the blast, heat, and radiation (Yokoro and Kamada 1997). During the 1950s, the US and the USSR developed thermonuclear weapons (hydrogen bombs) with an explosive force of up to 20 million tons of TNT each. They could cause millions of casualties, catastrophic global health problems and 'nuclear winter' (Sidel et al. 1962). The nations known to possess stockpiles of nuclear weapons are the US, Russian Federation, China, UK, France, India, Pakistan and Israel. There are still approximately 34,000 nuclear weapons in these eight stockpiles combined, with an estimated explosive yield of 650,000 Hiroshima-sized bombs. Five thousand of these weapons are ready to fire at a few minutes' notice (Forrow and Sidel 1998). The United States is developing 'usable' nuclear weapons (Sidel et al. 2003)

There is no comprehensive treaty banning the use or mandating the destruction of nuclear weapons. The US should set an example for the rest of the world by renouncing the first use of nuclear weapons and the development of new nuclear weapons, and work with the Russian Federation to dismantle nuclear warheads and increase funding for programmes to secure nuclear materials so they will not fall into others' hands.

*Radiological weapons* Depleted uranium, a toxic and radioactive material, has been used as a shell casing in recent years because of its density and pyrophoric qualities (igniting spontaneously on contact with air). It was used by the US in Gulf War I and the wars in the Balkans and Afghanistan, and by both US and UK in Gulf War II. An estimated 320–1000 metric tons of DU remain in Iraq, Kuwait and Saudi Arabia. Its use arguably constitutes a violation of the Hague Convention (which bans use of 'poison or poisoned weapons'), the Geneva Conventions, and the UN Charter (Depleted Uranium Education Project 1997).

*Chemical weapons* The serious toxic effects of chemical weapons can include permanent disability and death. In 1994 and 1995, terrorist attacks using sarin gas in the underground railways of two Japanese cities caused 19 deaths and many serious injuries (Lifton 1999). Destruction of these weapons is taking place, but stockpiles remain in several countries (Spanjaard and Khabib 2003).

The Chemical Weapons Convention (CWC), which entered into effect in 1997, is the first multilateral disarmament agreement that provides for the elimination of an entire category of weapons of mass destruction. It prohibits all development, production, acquisition, stockpiling, transfer, and use of

chemical weapons. The US should work to reduce the threat, stop the spread, and hasten the destruction of chemical weapons by strengthening the inspection regime and by accelerating the safe disposal of its own chemical weapons.

*Biological weapons* Biological weapons are composed of living microorganisms, such as bacteria and viruses, and products of microorganisms, such as toxins. They are designed to cause disease, disability, and death in humans or animals. Some diseases, such as smallpox, can be spread from one infected person to another; others, such as anthrax, cannot. Toxins such as botulinum are viewed as both biological and chemical weapons. Biological weapons have rarely been effectively used (Carus 2000) but the release of anthrax spores in the US in 2001 and allegations that some nations have stockpiles of smallpox virus have caused concern (Cohen et al. 2004).

The 1975 Biological Weapons Convention (BWC) prohibits the development, production, stockpiling, retention, and acquisition of biological agents or toxins of any type or quantity that do not have protective, medical, or other peaceful purposes, and of any weapons or means of delivery for them. The US and other nations need to strengthen it to include a stringent verification protocol by enactment of enabling legislation by all nations, and by suspension of ambiguous 'defensive' research (Arms Control Association 2004).

*Anti-personnel landmines* Anti-personnel landmines have been called 'weapons of mass destruction, one person at a time'. Civilians are the most likely to be injured or killed by landmines, which have been inserted into the ground of many nations (Stover et al.1997). Since the entry into force of the Anti-Personnel Landmine Convention in 1997, production has markedly dropped, 20 million stockpiled mines have been destroyed, and four million have been cleared. It has been signed by 144 countries, but the US, Russian Federation, South Korea, India, Pakistan and China, which between them have stockpiles of more than 180 million anti-personnel mines, have not ratified it (*The Lancet* 2004). Many mines are still buried, and enormous resources are required to continue unearthing and destroying them; an additional 20,000 people will probably be injured by mines during 2005, most in poor areas with limited access to health care and rehabilitation.

*Small arms and light weapons* 'Conventional weapons' such as explosives, incendiaries, and small arms cause the vast majority of casualties in current wars. Much can be done to improve control over legal small arms to decrease

the risk of their misuse and diversion into illegal arms markets. International agreements at global and regional level that are designed to prevent or decrease illicit small arms trade need to be promoted and strengthened. Measures to reduce proliferation and misuse include adoption and enforcement of stronger gun-control laws, strengthening of export and import licence authorizations, and better record-keeping on arms production, possession and transfer. The UN Small Arms Action Plan needs to be supported.

Legal and illegal arms sales are the source of most of the small arms and light weapons used in ongoing armed conflicts. The US is the world leader in supplying conventional weapons to other countries: 43 companies sold US\$ 94.6 billion in arms in 2000, representing 60% of total arms sales of the top 100 arms-producing companies.

The previous downward trend in major arms transfers appears to have been reversed – more major weapons were delivered in 2001 and 2003 (Stockholm International Peace Research Institute 2004). The major suppliers of conventional weapons in 1999–2003 were the US (34%) and the Russian Federation (30%), which supplied more arms than all other countries combined. The leading recipients of major conventional weapons in the same period were China and India, followed by Greece, Turkey, the UK, Egypt, Taiwan and South Korea, together accounting for nearly half.

### **The health sector response**

The health sector should play an important role in leading efforts by civil society to recapture government from the corporate sector and particularly from the military-industrial complex. These efforts must include controlling weapons, preventing armed violence, promoting multilateralism, ending poverty and social injustice, and creating a culture of peace. While support of these efforts requires action from many sectors, health workers and their organizations have major responsibilities, as follows:

*Controlling weapons* People in the health sector are already playing a major role in action to prevent war, control weapons and outlaw weapons of mass destruction. For example, International Physicians for the Prevention of Nuclear War was awarded the 1985 Nobel Peace Prize for work to prevent use of nuclear weapons and ban their production, testing, and transfer. Health professionals and others have made similar efforts to strengthen the conventions on biological and chemical weapons.

*Preventing armed violence* Acts of violence by individuals and non-state

*Box D5.2 Military spending and the UN: whose priorities?*

One year's world military expenditure of US\$ 880 billion would fund the entire UN system for more than 70 years.

The entire UN system (excluding the World Bank and IMF) spends US\$12 billion a year. The annual budget for its core functions is US\$ 1.25 billion. This is equivalent to only 4% of New York City's annual budget – and nearly US\$1 billion less than the yearly cost of Tokyo's fire department.

groups and by nation states must be prevented by strengthening international institutions, rejecting unilateral pre-emptive war as a means of resolving international conflict, and increasing support for the UN and other cooperative security programmes. Specifically, the US must change priorities to reflect real security needs, by eliminating military spending for wasteful Pentagon programmes and investing those resources in urgent domestic needs for health care, education, and jobs; by providing new investments in renewable energy alternatives to reduce dependence on foreign oil; and by providing adequate peacekeeping funding to secure peace and stability.

*Promoting multilateralism* Since its foundation in 1946 the UN has attempted to live up to the goal in its charter, 'to save succeeding generations from the scourge of war'. Its mandate also includes protecting human rights, promoting international justice, and helping people achieve a sustainable standard of living. Its programmes and agencies have made an enormous difference to people's lives. Yet the resources allocated by its member states are grossly inadequate (see Box D5.2).

The UN has no army and no police, but relies on the contribution of troops and other personnel to halt conflicts. The US and other members of the Security Council, and not the secretary-general, decide when and where to deploy peacekeeping troops. Long-term conflicts fester, such as those in the Sudan and Kashmir and the Israeli-Palestinian conflict, while conflicting national priorities deadlock the UN's ability to act. In fact if stymied by the veto, the organization has little power beyond the bully pulpit. The US and the UK severely weakened the UN by their illegal invasion of Iraq in 2003. The US has also failed to support the International War Crimes Tribunal through signature and ratification of the Statute of the International Criminal Court.

### *Box D5.3 An agenda for peace*

The Hague Agenda for Peace and Justice for the 21st Century (Hague Appeal for Peace 1998) has been distributed widely around the world. It includes a 10-point action agenda:

1. Educate for peace, human rights, and democracy.
2. Counter the adverse effects of globalization.
3. Advance the sustainable and equitable use of environmental resources.
4. Eradicate colonialism and neocolonialism.
5. Eliminate racial, ethnic, religious, and gender intolerance.
6. Promote gender justice.
7. Protect and respect children and youth.
8. Promote international democracy and just global governance.
9. Proclaim active non-violence.
10. Eliminate communal violence at local level.

*Ending poverty and social injustice* Poverty and other manifestations of social injustice contribute to conditions that lead to armed conflict. Growing socio-economic and other disparities between the rich and the poor within countries, and between rich and poor nations, also contribute to the likelihood of armed conflict. Rich countries can help to address these underlying conditions through policies and programmes that redistribute wealth within and among nations, and by providing financial and technical assistance to less developed nations.

*Creating a culture of peace* The Hague Appeal for Peace Civil Society Conference was held on the centenary of the 1899 Hague Peace Conference, which explored ways of making war more humane. The 1999 conference, attended by 1000 individuals and representatives of civil society organizations, was devoted to finding methods to prevent war and to establish a culture of peace (see Box D5.3).

People in the health sector can do much to promote a culture of peace in which nonviolent means are used to settle conflicts. A culture of peace is based on the values, attitudes, and behaviours that form the deep roots of peace. They are in some ways the opposite of the values, attitudes, and behaviours that reflect and inspire war and violence, but should not be equated with just the absence of war. A culture of peace can exist at the level of the relationship,

family, workplace, school and community as well as at the level of the state and in international relations.

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