

DISARMAMENT

A Basic Guide

by
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NOTE

The Department for Disarmament Affairs is publishing this *Basic Guide* in collaboration with the NGO Committee on Disarmament, Inc. pursuant to the purposes of the United Nations Disarmament Information Programme (UNDIP). The mandate of the Programme is to inform, educate and to generate public understanding of the importance of multilateral action, and support for it, in the field of arms limitation and disarmament. The *Guide* is intended for the general reader, but may be also useful for the disarmament educator or trainer.

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The NGO Committee on Disarmament

The *Non-Governmental Organizations (NGO) Committee on Disarmament, Inc.* was established in 1972 as a non-profit entity to provide a coherent interface between hundreds of peace and disarmament NGOs and the United Nations. The role has grown in importance since the end of the cold war, a period when the public profile of global peace and security concerns has been de-emphasized by Governments. The *NGO Committee* is a clearinghouse of information for a worldwide network of activists. It publishes *Disarmament Times*, the only paper that regularly reports on and puts into meaningful context, the whole range of disarmament issues before the United Nations.

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FOREWORD

Arms control and disarmament issues are critical to the peace and welfare of our world, but all too often people feel that they can be understood only by “experts”. The main reason for this is that the issues are almost always couched in jargon.

The booklet shows that this need not be so. It explains basic disarmament issues in terms that not only adults but also high school students can understand. It also has a valuable list of non-governmental contacts which will allow those interested to get more information. The Department for Disarmament Affairs welcomes the initiative of the NGO Committee on Disarmament in producing this booklet and is pleased to support it.

A handwritten signature in black ink, reading "Jayantha Dhanapala", with a horizontal line underneath the name.

JAYANTHA DHANAPALA
Under-Secretary-General for
Disarmament Affairs

Why Do We Need Disarmament?

The nature and implements of war have changed more dramatically in the last 100 years than in all of preceding human history. Before the 20th century, few countries maintained armies of more than 50,000, and they were armed with weapons that limited damage to the immediate vicinity of conflict. Although war has always been a barbarous activity that took a significant collateral civilian toll, the majority of those killed and wounded in pre-20th century conflicts were active combatants. In 19th century Europe with its mercenary soldiery, when the economic and political benefits of victory could outweigh costs, war was seen as a rational and indeed, necessary instrument of State policy. As the Prussian strategist, Carl von Clausewitz put it, war was “a continuation of policy, carried out by other means.”



Armed to the Teeth is a new United Nations documentary that tells of the menace of small arms and light weapons.

20th Century

In contrast, 20th century wars have been struggles encompassing entire societies. As weapons with ever more indiscriminate destructive power came into use — long range artillery, the bomber, the intercontinental ballistic missile, chemical, bacteriological and nuclear weapons — battlefields expanded till they quite lost their original meaning. Entire countries and regions were embattled. In the Second World War, unarmed merchant shipping became game for submarines and terror bombing of populous cities was routine, culminating in the use of nuclear weapons on Hiroshima and Nagasaki.

Massive Death Tolls

As a result of these developments, the 20th century was the most militarized and bloodiest period of human history. There were 63,000,000 soldiers engaged in the First World War, and it left 10 million dead. For the Second World War 107,000,000 soldiers were mobilized and its toll was so enormous that there are only estimates of the dead — anywhere from 30 to 60 million.

Although most conflicts since the Second World War have been fought without heavy weaponry, their toll has been staggering. Wars of national liberation, the proxy wars of the Cold War period and the current “resource wars” of Africa are estimated to have killed some 100 million people.

Prohibitive Costs

The cost of modern conflict is prohibitive. The Second World War cost between one and four trillion dollars.

Property damage in the Soviet Union was put at \$485 billion. The French government estimated losses in the rest of Europe at \$259 billion. Those figures were dwarfed by the global military expenditures of the Cold War period. Propelled by an arms race between East and West, they had reached \$1,000 billion annually by the mid 1980s.

Since the end of the Cold War (the 1989 fall of the Berlin Wall serving as a marker of that event), arms expenditures and the stocks of the most deadly weapons have declined. But governments continue to maintain peacetime armies and arsenals of unprecedented magnitude. At the end of the 20th century, global arms expenditures were estimated by the Stockholm International Peace Research Institute (SIPRI) at some \$750 billion annually. After a post Cold War decline, they are increasing again.

Current Scene

As we begin the 21st century, the world is awash with weapons for which there is no rational need. There are some 30,000 nuclear weapons still in the arsenals of the major Powers, many of them on “hair-trigger” alert. That means decisions about their use can be made in a matter of minutes if warning systems — which can be misread — indicate that a missile attack is under way.

Till 1998, there were five declared nuclear-weapon-States: China, France, Russian Federation, United Kingdom, United States. In 1998, India and Pakistan conducted nuclear tests and the former claimed the status of a nuclear-weapon-State. Israel is generally believed to be an undeclared nuclear-weapon State. South Africa and Iraq

had clandestine nuclear-weapons development programs; the former abandoned it voluntarily, the latter was forced to do so by the UN Security Council. Some other States are suspected to have secret programs to develop nuclear weapons.

Chemical weapons also continued to be maintained in the arsenals of a number of countries. Biological weapons, though banned by international agreement, could be in secret national stockpiles. Meanwhile, the proliferation of small arms and light weapons — an estimated 500 million are now in circulation — has made them massively destructive.

Need for Change

None of this makes economic or political sense in a period that is characterized above all by trends that link all societies in a web of interrelated and shared economic and social interests, endorsed at the highest level by the world's governments. (*Most recently in the Millennium Declaration of the Heads of State and Government at the UN General Assembly summit, in September 2000.*) While there is an obvious and legitimate need to maintain international and national security, the pattern of current military doctrines, expenditures and priorities needs a comprehensive reassessment from the perspective of a globalizing world.

Two aspects of the picture need particular attention. One is the elimination of weapons of mass destruction, especially nuclear weapons. The other is the rechanneling of military expenditures to economic and social areas. Military expenditures now siphon resources away from

social programs that are desperately needed in countries around the world, including the most affluent. They profit small and powerful elites, while affecting negatively the rest of society.

Many non-governmental groups are working for change. In the age of the Internet and the World Wide Web, they are increasingly effective in telling people about current realities and mobilizing democratic action in support of change. In these pages we look at the basic concepts and issues that must be understood if you are to participate in that effort.



*A cartoonist's hope:
that the founding of the
League of Nations
would muzzle for ever
the dog of war.*

Changing Concepts of Security

International security is a condition in which States are free to pursue their own development and progress without danger of military attack, political pressure or economic coercion. The perception of how near or far States are from that ideal condition defines all efforts at disarmament.

In seeking security, States have been generally guided by the conventional wisdom that those who want peace should prepare for war. Traditionally, that has meant maintaining enough military strength, either singly or in alliance with other States, to deter or defeat attack. The result of this approach is inescapable volatility, for the security of one State or alliance is a condition of insecurity for others and thus subject to constant challenge and change.

United Nations

The United Nations represents an effort to replace balance-of-power politics with the concept of “collective security.” Under the UN Charter, member States pledge not to use armed force except in the common interest, and if that becomes necessary, to do so only under the auspices of the Security Council.

For over four decades the UN did not work as planned because of the “Cold War.” Ideologically opposed military alliances led by the United States and the Soviet Union sought security in dominance, which they pursued through subversion, conduct of “proxy wars” and a prolonged “arms race.” Huge stocks of nuclear, chemical and bacte-

riological weapons were built up during the Cold War, and long-range delivery systems developed. Submarines and bombers on constant patrol and intercontinental ballistic missiles, all armed with nuclear weapons, made cataclysmic war possible at very short notice. Under such conditions, international security depended on a balance of terror at the prospect of “Mutual Assured Destruction” (MAD). During that period, most developing countries sought their own security in the Non-Aligned Movement, which called for disarmament and peaceful coexistence.

Post Cold War

The end of the Cold War removed a primary source of insecurity in the world, but it left a legacy of massive military expenditures and arsenals of deadly weapons entirely disproportionate to any rational assessment of threats to security. In fact, a major threat to international security now comes from the existence of those arsenals, and military doctrines that continue to give weapons of mass destruction a central role. This is largely because the political/economic power structures of the Cold War remain in place and continue to benefit from military expenditures. They have the power to shape international events in ways that validate military prescriptions for security.

In addition to the legacy of the Cold War, there are many other sources of international tension. Among the most important are major economic, social and political inequalities among the world’s people. The emergence of new centers of political and economic power, competition for resources, continuing trade imbalances, volatile finan-

cial flows, demographic changes and environmental degradation, all pose unprecedented challenges to security. Over the last five decades it has become clear to governments — in part because of a series of major UN conferences — that these security challenges cannot be dealt with in traditional ways. The only way to address them effectively is, in fact, by making human security — the welfare of individuals and families — a central concern of policy.

Economic and social development, basic human rights, environmental protection and good governance are now the essential underpinning of the security of States. Disarmament today is important not only to reduce the risk of war and dismantle the dangerous legacy of the Cold War, but to prevent the continued waste of human and material resources that are needed for much more productive and beneficial ends.

Arms Expenditures

Declines in global military expenditures and arms production since the end of the Cold War seem to have bottomed out, and expenditures may be headed back up. Arms production has been level since 1995. The details:

Arms expenditures have fallen by about one-third in the last decade, reflecting cuts in every region except Asia (where the trend has gone the other way, up 27 per cent since 1989). The number of military personnel has been reduced by about 6 million and there have been cuts in both production and stockpiles of weapons. The United States which accounts for about a third of the world total, has dropped its spending by a third. However, a 6-year defense plan presented in 1999 projects a return to growth.

The Russian Federation's expenditures on arms has fallen precipitously: in 1998 it amounted to one-fifth of that of the Soviet Union ten years earlier. The fall is even more dramatic if the



A panel from a new Disarmament Exhibit at the United Nations

combined military expenditure of all the states that made up the Soviet Union is considered. In 1998, it was only 6% of their 1989 expenditure.

West European military expenditure has fallen by 14% over the last decade, but has levelled off since 1995. European NATO member states have significantly increased their combined equipment expenditures in 1998 after a continuous decline since 1987.

Available data from Latin America — the least transparent region — show a ten-year fall, interrupted by a major increase in 1997.

African military expenditure, only 1.2% of the global total in 1998, has fallen over the decade because of deteriorating economic conditions and disarmament in post apartheid South Africa.

Arms Production

Arms production declined in the post Cold War period in 100 countries surveyed by the Stockholm International Peace Research Institute (SIPRI). Figures available to SIPRI showed that the reduction in volume of arms production, which levelled off in 1995, was accompanied by a “profound restructuring of the industry.” A series of mergers and acquisitions in recent years has created companies with annual arms sales that are more than the entire defense budgets of most countries. “The largest arms-producing company, Lockheed Martin, had 1997 arms sales of \$18.5 billion (total sales of \$28 billion), exceeding the 1997 national defence budgets of all but ten countries in the world.”

As arms manufacturers become bigger — narrowing decision-making power — production is being internationalized, raising questions of political control over the production of armaments. The redistribution has reinforced the hierarchical structure of arms production, concentrated in a small number of countries, SIPRI says. Ten countries accounted for almost 90 percent of estimated world arms production in 1996. The United States produced about half the total. With Britain and France, the next largest arms-producing countries, the share rose to two-thirds.

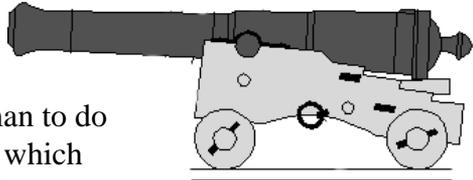
World arms sales totaled \$55.8 billion in 1998, according to the London-based International Institute for Strategic Studies (IISS), with half of those made by the United States. Russian arms sales were \$2.8 billion in 1998 and \$3.5 billion in 1999.

According to William Hartung of the New York-based World Policy Institute, US taxpayers, not the recipients, financed more than half the \$12 billion in new agreements signed in 1996 for arms sales (the latest year for which these figures are available).

The Weapons of War

Through most of human history, the scale and destructiveness of conflict were constrained by the limitations of available weaponry. And over the centuries, advances in the destructive power of weapons were few and far between. Cannon, first used in the 14th century, remained much the same for the next 400 years. As recently as 1850, armies used muzzle-loaded artillery fired by lighting fuses. And it was not till the Napoleonic Wars (1800-1815) that Henry Shrapnel, a British artillery-man, invented the exploding cannonball; its fuse also had to be hand-lit.

The first hand-held guns were scaled down cannon, which took two men to operate: one to aim and the other to light the fuse. The matchlock, developed in Europe in the 15th century, allowed one man to do both, and the flintlock, which replaced the match with a flint and allowed combat under damp conditions, remained in use till the 19th century in Europe, and the 20th century in other parts of the world.



Compared with that rate of change, the 20th century was a rush to mayhem. With the scientific and engineering communities of several countries committed to the work of war, the variety and deadliness of weaponry made quantum leaps. As a result, disarmament today must encompass

weapons — nuclear, chemical and biological — with historically unprecedented capacity for mass destruction, as well as conventional weapons, especially small arms, that have become massively destructive.



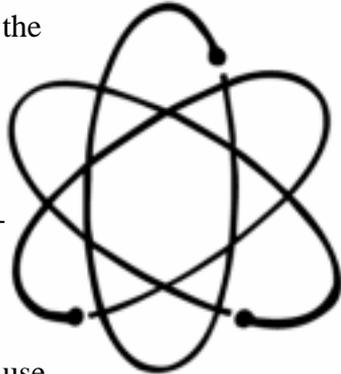
Nagasaki after nuclear attack. Many of the nuclear weapons in national arsenals now are hundreds of times more powerful than the bombs used in the Second World War.

NUCLEAR WEAPONS

The most dangerous weapons in the world are nuclear, which use the enormous amounts of energy released when the nucleus of a heavy atom such as uranium or plutonium is split in a chain reaction (fission), or when isotopes of a light element such as hydrogen combine in a thermonuclear bomb (fusion). The nuclear bombs dropped on Hiroshima and Nagasaki, each with the explosive power of 20,000 tons of dynamite (20 kilotons), have long been dwarfed. By the 1970s, the Soviet Union and the United States, which have 98 per cent of the world's nuclear weapons, had in their arsenals thousands of 25 megaton warheads. (A megaton is equivalent to a million tons of TNT.) Far more powerful thermonuclear bombs have been tested.

It is not only the enormous destructive power of nuclear weapons that argues against their use.

They also release deadly radiation: extremely poisonous isotopes created by nuclear explosions will remain a danger for many thousands of years. And the material will not stay confined to the area of conflict. It will get into the planet's life processes, and be carried by wind and wave to distant areas, eventually poisoning all of Earth. (The far flung threat of radioactive fallout from atmospheric testing was the main reason why a partial test ban was agreed upon in 1963.) A major nuclear war could also throw up such a



cloud of dust into the atmosphere as to block out the sun and create a prolonged “nuclear winter” that would devastate life on earth.

Because of such long term and widespread effects, nuclear weapons cannot be used with any rational expectation of “victory” in the traditional sense. Yet today, there are some 30,000 nuclear weapons in the world’s arsenals, nearly as many as when the Nuclear Non-Proliferation Treaty (NPT) was agreed to in 1968. Since the end of the Cold War, the strategic role of nuclear weapons has been reaffirmed both by NATO (which includes all three Western nuclear-weapon States) and the Russian Federation. They do not rule out the first use of nuclear weapons, as China does. In 1999, India issued a draft nuclear doctrine, also affirming no-first-use. Pakistan, which is also a nuclear-weapon-capable State, has not done so.

Nuclear warheads continue to be mounted on intercontinental ballistic missiles, carried by long-range bombers and submarines, and deployed on mobile launchers. Some are small enough to be referred to as “suitcase bombs.” About 5,000 nuclear weapons are thought to be on hair-trigger alert, intended for launch within minutes of notification of an incoming missile attack. Such arrangements might have had a mad logic at the height of the Cold War — they were to assure retaliation to any surprise attack — but in the context of an overall relaxation of tensions in a globalizing world, they make no sense at all.

Nuclear weapons in the world today represent many varieties of fear and insecurity. Though they are possessed by countries that are among the world’s most powerful in

economic and/or military terms, nuclear weapons signal a fundamental lack of self-confidence. Those who feel the need not only to hang onto existing stocks of nuclear weapons but to continue with the work of improving their design and efficiency are motivated by fear that some day the weapons will be needed as a last resort, however improbable such an eventuality might seem. This at a time when old political enemies have reconciled and new ones are unlikely to appear if the world continues to progress towards a regime of encompassing international law. (Only Hollywood, in blockbuster movies like *Armageddon* is making the case for nuclear weaponry for use against extraterrestrial threats.)

Meanwhile, the existence of nuclear weapons presents a clear and present danger. Not only are accidents or inadvertent use an ever-present possibility, the extremely poisonous materials in nuclear weapons are a huge environmental and taxpayer liability. The direct cost of implementing the START I and INF treaties to the United States has been put at \$31 billion. The cost of clean-up — although there is no really safe way to dispose of the highly toxic remnants of nuclear bombs — would add another \$365 billion. Russian costs would be comparable.

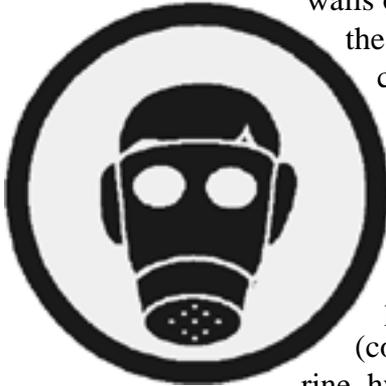
The high and unavoidable costs of disarmament pale in comparison to the cost of nuclear weapons: the United States is now spending \$30 billion per year to maintain its stocks. A Brookings Institute study in 1998 put the overall cost of the US nuclear weapons program since 1940 at over \$5.5 trillion.

While the United States and the Russian Federation have significantly reduced their arsenals in the post Cold War period, it is quite clear that neither is aiming at total elimination of nuclear weapons in the foreseeable future. Along with Britain and France they have resisted the proposal by Non-Aligned countries at the 66-member Conference on Disarmament in Geneva, to start talks aimed at the elimination of nuclear weapons. They have pushed instead for negotiations to ban the production of fissile material for use in nuclear weapons, a measure that many non-nuclear-weapon States as well as China, India and Pakistan, would like to negotiate only as part of a larger effort at nuclear disarmament. In addition, Russian and Chinese concerns that the United States will proceed with the creation of a national missile defense system, in violation of the Anti-Ballistic Missile (ABM) treaty, have led them to propose that the CD take up the issue of preventing an arms race in outer space — which the United States has opposed. Because the Conference on Disarmament (CD) can act only by consensus, these linkages had (at this writing), prevented any substantive work for four years.

In the wake of the 2000 Review Conference of the Nuclear Non-Proliferation Treaty (*see chapter on the NPT*), it seemed that substantial progress on nuclear disarmament and related issues would be possible, but this has not yet materialized.

CHEMICAL WEAPONS

Chemical warfare is not unique to the human species, nor is it a recent development in history: as early as 431 B.C. the armies of Sparta used burning sulphur around the walls of besieged cities to disable



the defenders. Modern use of chemical weapons occurred mainly during the First World War, when both sides had artillery-fired projectiles that released poisonous gases such as chlorine, phosgene and “mustard gas” (compounded of carbon, chlorine, hydrogen and sulphur).

Poison gas created ghastly casualties, blistering the lungs, eyes and skin of soldiers, and subjecting victims to agonizing suffering. But it was not as efficient as conventional weapons, for effectiveness depended on uncontrollable external conditions: a turn of the wind could blow the gas from the intended victims to the attackers. That, plus general revulsion at the needless suffering inflicted, facilitated agreement on a ban on the use of poison gas, the 1925 **Geneva Protocol on Gas Warfare**. It was widely observed by all participants in the Second World War. However, chemical weapons were reportedly used by Italy in North Africa and Japan in China.

Since 1945 (when the Second World War ended), there

have been only a few cases of the use of chemical weapons. The United States used chemical defoliants during the Viet Nam war in an effort to deny forest cover to the Viet Cong. Iraq was reported to have used chemical weapons against Kurdish insurgents and against the Islamic Republic of Iran. After the Gulf conflict of 1991, the UN Special Commission established by the Security Council to disarm Iraq of weapons of mass destruction, found evidence of a substantial chemical weapons program.

As the 1925 Geneva Protocol only banned the *use* of chemical weapons, the Cold War period saw significant development, manufacture and stockpiling of such weapons. The main types of chemical weapons developed were:

- ▶ Agents like sarin, soman and VX that render the brain and nervous system dysfunctional.
- ▶ Blistering agents such as hydrocyanic acid and mustard gas.
- ▶ Asphyxiating agents such as phosgene and chlorine gas.
- ▶ Poisons that block the blood's oxygen carrying capacity.
- ▶ Irritants such as tear gas.

The danger these weapons represented, even if unused, led governments to negotiate a total ban on their development and production; and a requirement that all existing stocks be destroyed. Negotiated over a decade at the Conference on Disarmament in Geneva, the **Convention on Chemical Weapons** was adopted in 1992. The CWC was the first multilaterally negotiated treaty that

provided for the elimination of an entire category of weapons of mass destruction under universally applied international control. To ensure against clandestine development, it set in place a stringent system of inspections, including challenge inspections, covering not only military installations but significant portions of the chemical industry. (In 1998, the United States Senate set limits on challenge inspections of the civilian industry to protect the confidentiality that it said was necessary to protect cutting-edge technology from foreign competitors.)

The Russian Federation and the United States, which were known to have chemical weapons programs, have declared a total of 70,000 tons of poisonous material, which must be destroyed within a ten-year period. The United States will probably meet that target on its own, but the Russians, under newly straitened economic conditions, will need substantial foreign aid if the expensive destruction program is to be completed on schedule. Eight other countries have declared previously secret weapons programs.

By December 2000, the CWC had 141 States parties. It is seeking universal membership but a number of Middle Eastern countries have not joined, linking their accession to the CWC with that of Israel to the Nuclear Non-Proliferation Treaty as a non-nuclear-weapon State.

The Organization for the Prohibition of Chemical Weapons (OPCW), based at the Hague, the Netherlands, carries out inspections and ensures the safe destruction of weapons. The need for safety is paramount, for if the poisonous chemicals used in the weapons were to be released into the environment, the results would be disas-

trous. The town of *Ypres* in Belgium, where some half a million soldiers died in the first poison gas battle of the First World War, is living proof of the long-term effects of chemical weapons. More than 80 years after the battle of *Ypres*, people there continue to sicken and die from the poisons. Another place where the poisonous legacy of chemical weapons is clear in continuing sickness and death is *Qiqihar*, in northern China, where chemical and bacteriological weapons dumped by Japanese forces at the end of the Second World War were collected and buried. It now has the reputation of being “Asia’s most dangerous dump.”

BIOLOGICAL & TOXIN WEAPONS

Biological and toxin weapons differ from chemical weapons in that they are derived from living organisms.



Historically, organic poisons and diseases have been widely used in war, perhaps because there is a natural aversion to practices that are extremely risky to the attacker and reek of weakness and cowardice.

During the Cold War, both sides developed biological means of warfare, and it was not till the late 1960s that initiatives were made to control the proliferation of weapons using some of the deadliest diseases known to human beings. Multilateral negotiations in Geneva were given a boost in 1969 when the United States unilaterally renounced first use of lethal or incapacitating chemical agents and weapons and unconditionally renounced all methods of biological warfare. (Since then, the US biological program has reportedly been confined to research on strictly defined measures of defense, such as immunization.)

In 1972, following a procedure they had established with the Non-Proliferation and the Seabed Treaties, the Soviet Union and the United States agreed on a draft convention on biological weapons and toxins before submitting it to the larger UN membership. The General Assembly adopted it the same year. Parties to the Biological and Toxin Weapons Convention (BTWC), which entered into force in 1975, undertake not to develop, produce,

stockpile, or acquire biological agents or toxins “of types and in quantities that have no justification for prophylactic, protective, and other peaceful purposes,” as well as weapons and means of delivery. There have been several Review Conferences on the Convention, and they focused increasingly on the lack of verification arrangements. States Parties to the BTWC agreed in 1994 to begin work through an Ad Hoc Group, on binding verification measures. That work is still continuing.

In 1985, the year after a UN investigatory mission reported that Iraq had used chemical weapons against the Islamic Republic of Iran, Australia proposed to a number of countries that they cooperate in monitoring the transfer of precursors to chemical and biological warfare agents, and equipment needed to weaponize them. The initiative resulted in the “Australia Group” of countries, which meet twice a year at the Australian Embassy in Paris. The 30+ States in the Group have no legally binding obligations. They exchange information, coordinate measures and agree when new action is needed to impede the production of chemical and biological weapons. Controls agreed by the Group are applied on a national basis. Since the Chemical Weapons Convention came into force, the Australia Group has concentrated on controlling a long list of human, animal and plant pathogens as well as BW dual-use equipment.

MISSILES

Rockets long predated artillery in war. They were used in medieval China against Mongol armies, in 18th century India against the British, and by the latter in Europe and the Americas in the 19th century. But the difficulty of precise targeting kept rockets from being a major factor in military operations till the Second World War, when the German V-2, the first truly long range missile, came to be used as a weapon of terror. At the end of the war, captured German rockets and scientists helped begin massive missile devel-



opment programs in the United States and the Soviet Union. Missiles made devastating nuclear attack possible at short notice.

The hair-raising prospect that nuclear-tipped missiles could be stationed in orbit and hit targets within a few minutes of launch, helped foster agreement on the Outer Space treaty. And the destabilizing growth in the number of missiles led the US and USSR to agree in 1972 on the Strategic Arms Limitation Treaty (SALT) and the Anti-Ballistic Missile (ABM) treaty. SALT limited

the number of launch vehicles. The ABM treaty prevented either side from developing a national defense system: equal vulnerability to attack was deemed essential to stability.

In January 2000, Russia reportedly had 756 Inter-Continental Ballistic Missiles (ICBMs) with 2000 warheads; the United States, 550 missiles with 3,540 warheads, and China 20 (without multiple warheads). The number of submarine-launched long range missiles (SLBMs) are reported to be 432 for the US (3,456 warheads) and 348 for Russia (1,576 warheads). France had 64 SLBMs (384 warheads) and Britain, 48 (185 warheads). Other countries have only short and intermediate range missiles. (Democratic Peoples Republic of Korea is said to have built a prototype of an intercontinental missile, the *Taepo Dong 2*, but has yet to test it.)

While missiles made devastating war possible at short notice, they also weighed in on the side of peace. The artificial satellites they hefted into orbit — there are some 500 now — allow verification of major arms control treaties that would not otherwise be possible. By ushering in an unprecedented era of commercialization of outer space, missiles have created a potent counterweight to the military in that environment. Already, there are more satellites performing commercial than military functions, and over the next decade, when some 1,800 satellites are projected to be put into orbit, that balance will tip further.

It is, however, too early to say that outer space will remain peacefully civilian. The United States military and

its new Space Command is gearing up to “develop, operate and maintain space control capabilities to insure freedom of action in space and if directed, deny such freedom of action to adversaries.” It will take a watchful citizenry to ensure that only the legitimate security needs of a globalizing world are served.

A more immediate concern is the push by the United States to amend the 1972 Anti-Ballistic Missile treaty: it wants to deploy a national missile defense system capable of protecting against attack by what it used to term “rogue States.” (The Islamic Republic of Iran, Iraq and the Democratic Peoples Republic of Korea, the ones most often mentioned, are now “States of concern.”) The US argues that such a defensive system would not destabilize the strategic balance with Russia because it would not be effective against the large missile arsenal at Moscow’s command. However, as of this writing, the Russian Federation has continued to maintain a firm opposition to any amendment of the ABM treaty.

Noting the lack of multilaterally negotiated norms against the spread of ballistic-missile technology for military purposes, the UN General Assembly in 1999 underlined the need for a comprehensive, balanced and nondiscriminatory approach to the matter and asked the Secretary-General to canvass the views of member States. In 2000, the General Assembly asked that a group of governmental experts be enlisted in writing a comprehensive report on missiles.

Conventional Weapons

Positional warfare among States has become a rarity in the period after the Second World War, but governments continue to spend significant portions of their military budgets on heavy conventional weaponry. Since only a handful of States manufacture these weapons, efforts at the UN have focused on inducing greater transparency in international transfers. A UN Register of Conventional Arms has been published annually since 1992. Every year till 1997, it included information from over 90 member States on their imports and exports of seven main categories of conventional weapons: battle tanks, armored combat vehicles, large-calibre artillery systems, attack helicopters, combat aircraft, warships, and missiles and missile launchers. In 1998 the number of reporting States dipped to 82 but rose to 90 in 1999 (the latest report). States are also invited to submit information on military holdings and internal procurement; 26 did in 1999.

Overall, the Register has functioned better than other instruments based on government reporting, for it covers the bulk of arms transfers. However, it is a far cry from being comprehensive.

In recent years, non-governmental activists have focused on small arms, light weapons and anti-personnel mines. These have been the weapons of choice in the numerous intra-State wars of the last half century, and their destructive impact on non-combatant civilians has been massive.

SMALL ARMS

The term “small arms” refers to weapons an individual can carry. Light weapons are those operated by two or three people. The weapons in question range from revolvers to grenade launchers, mortars and light missiles.

The numerous armed conflicts since the end of the Cold War have been fought almost exclusively with small arms and light weapons. In these wars, eight of ten noncombatant civilians killed have been women or children. Concern at the growing carnage has, since 1995, led to increased activism by governments and civil society. A UN Panel of Governmental experts on small arms outlined the magnitude of the problem in a 1997 report, and a number of other studies since then have added to the understanding of the situation.

A major contributory factor to the present small arms situation is that arms brokers who worked as agents of governments during the Cold War, are now in the business for profit. As governments dumped excess stocks in the post Cold War period, they became middlemen, trafficking the weapons into areas of conflict,



Non-governmental organizations have taken the lead in pressing for action to curb the flood of small arms that has engulfed the world in the post-Cold War period.

selling indiscriminately to drug dealers, terrorists and insurgent armies. There are few international or even national regulations to check this, and monitoring is skimpy. Meanwhile, the world's stock of over 500 million small arms and light weapons is growing steadily as some 70 countries continue with industrial scale production.

LAND MINES

Under the 1997 Ottawa Convention on anti-personnel land mines, which entered into force on 1 March 1999, States Parties must destroy all stocks in four years and clear all mine fields in their territory in 10 years. According to a voluminous report (*Landmine Monitor Report 2000*), issued by the International Campaign to Ban Landmines in time for the second meeting of States Parties to the Ottawa Convention in September, there was quite a bit of good news to report. Not only were numbers of those killed and maimed down in such key trouble-spots as Afghanistan, Bosnia-Herzegovina, Cambodia and Mozambique, but fewer new mines were being laid and legal trade in the deadly weapons had come to a halt. The number of land mine producers was down dramatically, from 54 to 16.



The number of States Parties in September 2000 stood at 107, and 50 of them had destroyed over 22 million anti-personnel mines. Supported by increased aid, seven of the

largest humanitarian demining agencies had cleared a total of 168 million square meters of land in 1999.

As efforts to deal with the land mines problem increased, the problem itself had undergone some shrinkage: detailed field studies indicated that there were only about 60 million land mines sown in the world's conflict areas, rather than the 100 million estimated earlier.

There has been progress also on the technology front: corporations in Japan and the United States have developed computer-enhanced radar for mine detection. They read the electromagnetic "signatures" of nitrogen compounds in explosive material, which are said to be as distinctive as human fingerprints.

The Non-Proliferation Treaty

The nuclear Non-Proliferation Treaty (NPT), was adopted in 1968, came into force in 1970, and was indefinitely extended in 1995. It now has 187 States parties. Five of them are nuclear-weapon States (Britain, China, France, Russian Federation, United States), pledged to negotiate in good faith to rid the world of nuclear weapons. The rest of the membership is committed not to develop, acquire or possess nuclear weapons. The Treaty is generally viewed as a cornerstone of international nuclear security.

Although considerable progress has been made by the United States and the Russian Federation since the end of the Cold War in cutting down the number of strategic nuclear weapons, the NPT has been subject to serious internal and external pressures.

A major reason for external pressure on the treaty is that three of the four States — Cuba, India, Israel, Pakistan — that remain out



of it, are nuclear-weapon-capable States. India asserted that it was a nuclear-weapon State after conducting nuclear tests in May 1998. Israel has made no declaration of its status, but is generally believed to have nuclear-weapons capability. Efforts by Arab States to have the international community deal with the situation in the Middle East are a major source of internal pressure on the Treaty. Another source of tension is the arrangement under which the North Atlantic Treaty Organization (NATO) locates nuclear weapons in the territory of its non-nuclear-weapon States. Also at issue are clandestine nuclear-weapons programs such as in Iraq.

The prospect that a country like the Democratic People's Republic of Korea, or even a terrorist organization, could attack it with a nuclear missile, has led the United States to reconsider the bilateral 1972 Anti-Ballistic Missile Treaty with the Soviet Union banning the development of a national missile defense system. Such a system was seen during the Cold War as a factor that would weaken nuclear deterrence and thus dangerously destabilize the strategic balance between the major nuclear Powers. The United States now argues that it would no longer do so, but China and the Russian Federation have strongly opposed any change in the ABM Treaty. If the US does decide to develop a national missile defense system, it could lead to reconsideration of strategic postures not only in Russia and China but in Western Europe and South Asia. The results would not be supportive of nuclear disarmament.

A more generic source of pressure on the NPT is the perception of most of its members that the five nuclear-weapon States recognized by the Treaty do not intend to disarm. Although all five have signed the Comprehensive Test Ban Treaty (CTBT), only three (Britain, France, Russian Federation) have ratified it so far, and non-explosive testing is continuing. With the exception of China, they have opposed multilateral negotiations on nuclear disarmament at the Conference on Disarmament.

Non-nuclear-weapon States, the great majority of them observant of their Treaty commitment not to develop, acquire or possess nuclear weapons, have become increasingly unwilling to accept the rationale advanced by nuclear-weapon States for maintaining large stocks of nuclear weapons. In the post-Cold War period, their impatience has grown, and increasingly, they have come to view the nuclear-weapon States as unwilling to implement the disarmament provisions of the Treaty. The split between the two categories of NPT States Parties prevented three Review Conferences (in 1980, 1990 and 1995), from reaching consensus on a Final Declaration. However, in extending the Treaty indefinitely after its initial 25-year term, the 1995 Conference adopted several measures to strengthen the review process. In a package deal, it agreed on annual preparatory meetings in the three years preceding each five-year Review Conference, adopted a set of principles and objectives to govern nuclear non-proliferation and disarmament, and focused attention on the Middle East in a separate resolution.

2000 Review Conference

When the Sixth Review Conference of NPT States Parties began its four-week session in New York on 24 April, expectations were low. The three annual preparatory meetings had done little to advance the cause of nuclear disarmament, and every nuclear-weapon State continued to affirm the central strategic importance of its nuclear weapons. Four of the five NPT nuclear-weapon States had military doctrines that envisaged first-use. Although the world's stock of nuclear weapons had fallen rapidly from Cold War peaks because of the Russia-US Strategic Arms Reduction Treaty (START I), they remained at about the same level as when the NPT came into force in 1970. Thousands of weapons continued to be on hair-trigger alert, capable of being launched within minutes of a decision to do so. Disarmament negotiations were stalled, both at the bilateral level between the United States and Russian Federation, and at the 66-member Conference on Disarmament in Geneva.

Particular reasons for gloom were the 1999 rejection of the Comprehensive Test Ban Treaty (CTBT) by the United States Senate, and Washington's consideration of a National Missile Defense system that would violate the Anti-Ballistic Missile (ABM) treaty.

As it turned out, the [2000 Review Conference](#) was not a failure. Under intense pressure to avoid a breakdown that would further test the credibility of the NPT, nuclear-weapon States acceded to the demand of non-nuclear-weapon States and made an explicit commitment to get rid

of all their nuclear weapons. Official statements from national capitals quickly poured cold water on heated expectations, but the fact that the Conference had been able to call for an “unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals, leading to nuclear disarmament” was enough to make it a qualified success. A joint decision by the five nuclear-weapon States (China, France, Russian Federation, United Kingdom and United States) provided that undertaking.

The Conference also affirmed that “the total elimination of nuclear weapons is the only absolute guarantee against the use or threat of use of nuclear weapons.” It recognized the need for “legally binding security assurances by the five nuclear-weapon States” to the non-nuclear-weapon States Parties to the NPT, and called on the Preparatory Committee for the next Review Conference (in 2005), to make recommendations on the issue. In setting the course for the next five-year period, the Conference also adopted a set of “practical steps” which pulled together disparate elements and set in place an agenda for immediate action.

The many compromises reached by States Parties at the Conference represented no major breakthroughs, but the nuanced flexibility of key countries was significant. In negotiations with the “New Agenda Coalition” (NAC), consisting of Brazil, Egypt, Ireland, Mexico, New Zealand, South Africa and Sweden, the nuclear-weapon States agreed to set in motion processes that would engage them and other NPT States Parties in meaningful action to realize

all the principal aims of the Treaty. On the provisions of the Treaty that require promotion of the peaceful uses of nuclear energy, the Conference introduced for the first time the concept of sustainable development.

None of this came close to the demand of the Non-Aligned Movement for a Nuclear Weapons Convention with a time-bound plan for the eradication of nuclear weapons, but it was the best that was politically possible. The President of the sixth Review Conference, Abdallah Baali of Algeria, described it as a “delicate, hard-won compromise between divergent and sometimes conflicting positions.” UN Secretary-General Kofi Annan said it was “a significant step forward in humanity’s pursuit of a more peaceful world.”

Regional Issues

The Conference dealt with a number of regional issues, including the Middle East, South Asia and Korea. It endorsed existing nuclear-weapon-free zones (including Mongolia’s declaration of its “nuclear-free status”), and supported proposals to create new zones “where they do not yet exist, such as in the Middle East and South Asia.” The Conference welcomed the Joint Declaration on the Denuclearization of the Korean Peninsula between the Republic of Korea and the Democratic People’s Republic of Korea and urged its rapid implementation.

The Middle East: The Conference reaffirmed the “importance of the Resolution on the Middle East adopted by the 1995 Review and Extension Conference” and said it remained “valid until the goals and objectives are

achieved.” Noting that the resolution was co-sponsored by the NPT depositary States (Russian Federation, United Kingdom and United States), the Conference said it was an “essential element of the outcome of the 1995 Conference and of the basis on which the Treaty on the Non-Proliferation of Nuclear Weapons was indefinitely extended without a vote in 1995.” The Conference noted that “all States of the region of the Middle East, with the exception of Israel,” are States parties to the NPT and reaffirmed the importance of Israel’s accession. Nine States parties in the Middle East “have yet to conclude comprehensive safeguards agreements with the IAEA,” the Conference noted in inviting them to conclude such agreements and bring them into force as soon as possible.

South Asia: While deploring the nuclear tests conducted by India and then by Pakistan, the Conference emphasized that “nuclear disarmament and nuclear non-proliferation are mutually reinforcing.” It said: “Notwithstanding their nuclear tests, India and Pakistan do not have the status of nuclear-weapon States.” The two countries were called upon to implement the measures called for in UN Security Council 1172 (1998), adopted unanimously soon after the nuclear tests. Both countries have voiced fundamental objections to that resolution, which requires them not only to accede to the NPT as non-nuclear-weapon States, but to ratify the CTBT without reservations or conditions and to stop their missile development programs.

Democratic People’s Republic of Korea: The Conference noted with concern that the IAEA “continues to be unable to verify the correctness and completeness of the

initial declaration of nuclear material made by the Democratic People's Republic of Korea, and is therefore unable to conclude that there has been no diversion of nuclear material in that country.”

IAEA Role

The Conference recognized that the safeguards of the [International Atomic Energy Agency](#) (designed to prevent diversion of nuclear material from peaceful uses) are “a fundamental pillar of the nuclear non-proliferation regime.” It expressed “the conviction ... that nothing should be done to undermine the authority of IAEA” in overseeing and verifying safeguards, and emphasized the “importance of access to the Security Council and the General Assembly by IAEA, including its Director General.” It recalled that the Security Council and the General Assembly had a role in taking “appropriate measures in the case of any violations notified to it by the IAEA.”

The Conference stressed that comprehensive safeguards and additional protocols should be universally applied once the complete elimination of nuclear weapons has been achieved. In the meantime, it called for “wider application of safeguards” in the nuclear-weapon States under “voluntary-offer safeguards agreements.”

Endorsing measures approved by the IAEA Board of Governors in 1995 to strengthen the safeguards system and the “Model Additional Protocol” adopted by the Agency in 1997, the Conference said that measures to prevent diversion of nuclear material from declared activities and ensure the absence of undeclared nuclear material and activities

“must be implemented by all States parties to the Non-Proliferation Treaty, including the nuclear-weapon States.” (This is to prevent the recycling of plutonium, highly enriched uranium or other components of dismantled nuclear weapons into new nuclear warheads.)

The Road Ahead

The Conference turned down proposals for a permanent secretariat to oversee the strengthened review process agreed to in 1995, but set guidelines on how the preparatory committee should organize its work. The first two sessions of the next Prep-com will “consider principles, objectives and ways in order to promote the full implementation of the Treaty, as well as its universality.” That will involve consideration of the 1995 resolution on the Middle East and any developments affecting the operation and purpose of the Treaty. A factual summary of each Prep-com will be transmitted to the next, and it will be taken into account in a consensus report containing recommendations from the third Prep-com (or fourth, if necessary) to the Review Conference.

An Arms-Related Chronology



© Heather McGuire

At the beginning of the new millennium, the world has some 30,000 nuclear weapons. This is more than enough to end life on Earth as we know it. The commitments made at the 2000 Review Conference hold out the hope — if meaningfully implemented — that we could eradicate this greatest of man-made threats to our future.

The following pages put in chronological perspective the road we have travelled over the last five decades towards a more secure world.

- 1945 United Nations Charter** signed at San Francisco on 26 June (came into force on 24 October).
- ▶ World's first **nuclear explosion**, at Alamogordo, New Mexico, on 16 July, followed by bombing of **Hiroshima** and **Nagasaki** on 6 and 9 August respectively. **World War II** ended formally on 2 September.
- 1949** First nuclear test by the **Soviet Union** at Semipalatinsk, Kazakhstan. The **North Atlantic Treaty Organization** (NATO) established by 12 States with the aim of mutual defense.
- 1952** First nuclear test by the **United Kingdom** at Monte Bello, near Australia.
- 1956:** The Statute of the **International Atomic Energy Agency** opened for signature. It came into force in 1957. The IAEA aimed to facilitate peaceful uses of nuclear energy and guard against military use.
- 1959:** The **Antarctic Treaty** demilitarized an entire region and created the first nuclear-weapon-free zone. It forbids all military activity, the testing of any kind of weapon and disposal of nuclear waste.
- 1960** First nuclear test by **France**, near Reggane, in the Sahara Desert.
- 1963:** The **Partial Test Ban Treaty** banned nuclear weapon testing in the atmosphere, outer space and under water.
- 1964** First nuclear test by **China** at Lop Nor, Xinjiang.
- 1967:** The **Outer Space Treaty** prohibited military maneuvers and the placing of nuclear and other weapons of mass destruction in earth orbit and on celestial bodies, including the moon. This was supplemented by a 1979 agreement to prevent the use of the moon and other celestial bodies for military purposes.
- ▶ **Treaty of Tlatelolco** establishing the Latin America and the

Caribbean Nuclear-Weapon-Free Zone opened for signature: the first inhabited region of the planet to seek that status.

1968: The nuclear **Non-Proliferation Treaty** (NPT) balanced a commitment by States without nuclear weapons not to develop or possess them, with one by nuclear-weapon States to negotiate their total elimination. The NPT entered into force in 1970 and has been the subject of periodic 5-year review conferences. *See also 1992, 1995 and 2000.*

► Security Council resolution 255 set out **security assurances** for non-nuclear weapon States.

1970: The **International Atomic Energy Agency** established the safeguard system for NPT member States.

1971: The **Sea Bed Treaty** prohibited the placement of nuclear weapons on or under the ocean floor beyond a 12-mile limit from the coast line.

1972: A Convention banning **Biological and Toxin weapons**. It entered into force in 1975, the first major disarmament agreement in history committing States Parties (now including all the major military Powers) not only to stop developing biological weapons but to destroy all stocks in their possession. The BWC does not have verification arrangements and a protocol providing for that is currently under negotiation.

► The **Anti-Ballistic Missile (ABM) Treaty** restricted the development of defensive missile systems by the United States and the Soviet Union (later Russian Federation), in order to ensure that neither side could have a shield that would allow it to launch a nuclear strike and survive. The treaty banned ABM systems based at sea, in the air, in space and on mobile launchers. Initially, it allowed the deployment of land-based ABM system at two sites with no more than 100 launchers each, but under a 1974 Protocol, that was reduced to a single site. *See also 2000.*

► A **Strategic Arms Limitation Treaty** (SALT) set limits on

the number of launchers of strategic weapons.

1973: Agreement between the United States and the Soviet Union on the **Prevention of Nuclear War** aimed at aligning efforts to guarantee stability and peace.

1974 First nuclear test by **India**, at Pokharan, in the Rajasthan Desert.

▶ A **threshold yield** of 150 kilotons was agreed between the United States and the Soviet Union for underground nuclear weapon tests.

1975: Final Act of the **Conference on Security and Cooperation in Europe** initiated confidence-building measures that led to agreement in 1986 on concrete and verifiable measures that were further elaborated in 1990.

1976: Limits were set by the United States and the Soviet Union for underground **peaceful nuclear explosions**: 150 kilotons yield for a single test, and 1,500 kilotons for grouped tests.

1977: Agreement on preventing the use of **environmental modification techniques** to cause such phenomena as earthquakes, tidal waves, and changes in climate and weather patterns.

▶ Fifteen countries constituting the “**London Club**” of nuclear suppliers agreed on principles and guidelines for the transfer of nuclear materials, equipment and technology. *See also 1992*

1978: The UN **General Assembly’s first special session on disarmament** adopted a consensus Final Document. It gave the highest priority to nuclear disarmament.

1979: Agreement by the United States and the Soviet Union to limit the number and types of **nuclear strategic missiles** (SALT II). It expired in 1985 without entering into force.

1981: Convention to ban the use of **weapons deemed to be excessively injurious** or to have indiscriminate effects. This included certain types of ammunition that inflict great suffer-

ing on victims, booby traps and, under a 1996 amendment, undetectable anti-personnel land mines. The amendment also banned the use of non-self-destructing/deactivating anti-personnel land mines outside marked areas.

1982: The UN General Assembly's **second special session on disarmament** could not agree on a final document. China, France, and the Soviet Union made declarations on unilateral security assurances.

1985: Treaty of Rarotonga establishing the South Pacific Nuclear-Weapon-Free Zone was opened for signature.

1987: UN Conference to promote international cooperation in the **peaceful uses of nuclear energy** met in Geneva but was unable to agree on text to reconcile principles of peaceful use with those related to non-proliferation.

▶ **Missile Technology Control Regime** to oversee international transfers is established by seven industrialized countries.

▶ Agreement by the United States and the Soviet Union on the Elimination of **Intermediate-Range and Shorter Range Missiles** (INF Treaty). It arranged for the verified elimination of an entire class of missiles. Another agreement established Nuclear Risk Reduction Centers in Washington and Moscow to exchange information and oversee notifications required under other arms agreements.

1988: Agreement by the United States and the Soviet Union to provide **24-hour notification** of launches of land and submarine-based intercontinental ballistic missiles, with information on launch and impact areas.

1990: The United States and the Soviet Union agreed to stop producing **chemical weapons** and begin destruction of existing stocks. Agreed to as a means of facilitating the multilateral Chemical Weapons Convention, the bilateral treaty set 31 December 2002 as the target for each party to

reduce its holding to no more than 5,000 tons of chemical agents.

▶ Last **USSR** explosive nuclear test — moratorium continued by the Russian Federation.

▶ The treaty on **Conventional Forces in Europe** between the North Atlantic Treaty Organization and the Warsaw Pact lowered and balanced the strength of armed forces. Its verification procedures survived the end of the Warsaw Pact in July 1991 and in 1999 they were amended to take account of national forces rather than bloc strength.

1991: Last British explosive nuclear test.

▶ **Strategic Arms Reduction Treaty (START)** agreed by the United States and the Russian Federation, reduced to 6,000 the number of “accountable warheads” each country could have, and set a limit for each of 1,600 deployed strategic nuclear delivery vehicles — bombers, intercontinental ballistic missiles and submarines capable of launching nuclear missiles. A few months after START was signed, the Soviet Union began to unravel, and it was not ratified by the Russian Duma till December 1994.

▶ The **Brazil-Argentine** Agency for Accounting and Control of Nuclear Materials established.

▶ Last **United States** explosive nuclear test.

▶ Former Russian test site, **Semipalatinsk**, closed by newly independent Kazakhstan.

1992: China and France acceded to the **NPT**. Belarus,

Kazakhstan and Ukraine signed the Lisbon Protocol to **START I**, agreeing to adhere to the NPT as non-nuclear - weapon States.

▶ The **Nuclear Suppliers Group** revised its guidelines to require full-scope IAEA safeguards as a condition of exporting dual-use technology.

1993: The General Assembly adopted the **Chemical Weapons**

Convention, the first globally verifiable multilateral disarmament treaty. It banned the production, stockpiling and use of chemical weapons, and committed States parties to destroy all stocks. By the time it came into force in April 1997, the Organization for the Prohibition of Chemical Weapons was established at The Hague.

► **Strategic Arms Reduction Treaty (START II)** continued the cuts initiated by the United States and the Russian Federation under START I. By December 31, 2003, land-based ICBMs with multiple independently-targetable re-entry vehicles (MIRVs) would be completely eliminated and neither side would have more than 3,000-3,500 strategic nuclear warheads. START II was ratified by the United States in 1996 and in April 2000 by the Russian Federation. Under the 1997 Helsinki Protocol, the implementation deadline was extended to December 31, 2007. By that time, all delivery vehicles to be eliminated under START II are to be deactivated.

1995: Security Council resolution 984 sets out **security assurances** to non-nuclear-weapon States that are parties to the NPT.

► The **Bangkok Treaty** established the South East Asia Nuclear-Weapon-Free Zone. It entered into force in 1997.

► 33 States signed the “**Wassenaar Arrangement**” setting export controls for conventional arms and dual use goods and technologies.

► The nuclear **Non-Proliferation Treaty** was indefinitely extended, with strengthened accountability arrangements, incorporated into a process of annual preparatory meetings leading up to the five-year review conferences. As part of the agreement to extend the Treaty indefinitely, States Parties agreed to a set of Principles and Objectives, and adopted a resolution on the Middle East.

1996 Last explosive nuclear tests by **France** (January) and **China** (July).

▶ The **International Court of Justice**, in an advisory opinion sought by the UN General Assembly on the legality of the threat or use of nuclear weapons, agreed unanimously that the nuclear-weapon States had “an obligation to ... bring to a conclusion negotiations leading to nuclear disarmament.”

▶ **Comprehensive Test Ban Treaty** to stop all explosive nuclear tests adopted by a vote of 158 to 3 with 5 abstentions in the UN General Assembly, after the *Conference on Disarmament (CD)* was unable to reach consensus on the text it negotiated. India blocked consensus in the CD on the grounds that the treaty did not cover non-explosive nuclear testing (subcritical and computer simulation), and was thus not comprehensive. The CTBT cannot come into force unless 44 nuclear-capable States listed in its annex ratify it. By the end of 2000, 41 of the 44 had signed (India, Pakistan and North Korea had not), and 28 had ratified, including Britain, France and the Russian Federation. The United States Senate rejected the treaty in 1999, but the Clinton Administration remained committed to ratification. Meanwhile, the Preparatory Commission for the CTBT Organization was established in Vienna (November 1996) and work began on establishing a global system to verify the comprehensive ban on explosive nuclear testing.

▶ **The Treaty of Pelindaba** established the African Nuclear-Weapon-Free Zone.

▶ **Summit on Nuclear Safety and Security** is held in Moscow in April.

1997: The **International Atomic Energy Agency (IAEA)**

Board of Governors approved the Model Additional Protocol, strengthening safeguards.

▶ A comprehensive ban on **anti-personnel land mines** and

destruction of existing stocks was agreed as the result of a process initiated by non-governmental organizations.

► The **Inter-American Convention** against the illicit manufacturing of and trafficking in firearms, ammunition, explosives and other related material was approved by the Organization of American States annual assembly. This was the first regional treaty to address the serious problem of illicit flows of small arms and light weapons.

► **NATO and the Russian Federation** signed a “Founding Act on Mutual Relations, Cooperation and Security,” agreeing to build a “lasting and inclusive peace in the Euro-Atlantic area.”

► US and Russia agreed at the summit-level on the outline of **START III** negotiations.

1998: India and Pakistan conducted nuclear tests and declared themselves nuclear-weapon-States.

► **Bangkok Treaty** on the Southeast Asia Nuclear Weapon-Free Zone entered into force.

► **Mongolia’s** declaration of its “nuclear -weapon-free status” was welcomed by the UN General Assembly.

1999: 50th anniversary meeting of **NATO** adopted a new strategic doctrine, affirming the role of nuclear weapons.

► The **Russian Federation** set out a new strategic doctrine, affirming the role of nuclear weapons.

► **India** issued a draft nuclear doctrine that said it would maintain a minimum deterrent capacity.

2000: The sixth five-year Review Conference of the nuclear **Non-Proliferation Treaty** — the first since the indefinite extension of the NPT in 1995 — called for and received an “unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals, leading to nuclear disarmament.” The Conference also affirmed that “the total elimination of nuclear weapons is the

only absolute guarantee against the use or threat of use of nuclear weapons.” It recognized the need for “legally binding security assurances by the five nuclear-weapon States” to the non-nuclear-weapon States Parties to the NPT, and called on the Preparatory Committee for the next Review Conference (in 2005), to make recommendations on the issue. The Conference also adopted a set of practical steps which pulled together disparate elements and set in place an agenda for continuing action.

The United Nations and Disarmament

The United Nations system is a key proponent of disarmament, and deals with the issue through its most important organs and their subsidiaries:



General Assembly: Composed of the full membership of the United Nations, the General Assembly is the Organization's main deliberative body, and it focuses on disarmament and international security through its **First Committee** and the **Disarmament Commission**. The First Committee meets while the Assembly is in session, during the last three months of each year. The Disarmament Commission meets once a year, between regular sessions of the Assembly. All UN member States are represented on the Committee and the Commission, and both are based in New York. While the Committee deals with all disarmament and security issues of concern to the international community, the Commission considers a few chosen topics in three-year cycles.

The General Assembly has held three special sessions on Disarmament (SSOD). At the first, in 1979, agreement was reached on an overall set of priorities, with nuclear disarmament the highest priority. The two succeeding sessions could not agree on a final document. A fourth special session (SSOD IV) has been under consideration for several years, but in the flux of the post Cold War period,

States have not been able to agree on what precisely it should do.

Security Council: The United Nations Charter mandates the 15-member Security Council to formulate plans for the regulation of armaments, but under the political circumstances that have prevailed over the life of the Organization, that has not been possible. In recent years, the Council has been actively involved in disarming Iraq of its weapons of mass destruction. It has also been increasingly involved in authorizing UN peacekeeping forces to disarm combatants in post conflict situations.

Conference on Disarmament: With 66 members, the Geneva-based Conference on Disarmament (CD), is the world's single multilateral forum for negotiating disarmament. It operates on the basis of consensus to ensure that there is full support for the agreements that are concluded. It negotiated the Chemical Weapons Convention and the Comprehensive Test Ban Treaty; the former was agreed by consensus; the latter could not be adopted and was eventually voted upon by the General Assembly.

United Nations Department for Disarmament Affairs (DDA): A part of the United Nations Secretariat, it supports the disarmament-related work of intergovernmental organs. Under the Coordinating Action on Small Arms (CASA), it brings together all elements within the UN active in that area. Other parts of the UN dealing with aspects of disarmament are the Geneva-based UN Institute for Disarmament Research (UNIDIR) and the Mine Action Service (UNMAS) of the Department of Peacekeeping Operations in New York. DDA maintains an active outreach

program, the main components of which are liaison with non-governmental organizations, publications and a web site (<http://www.un.org/Depts/dda/DDAHome.htm>). Phone: 212-963-7706. Fax: 212-963-1121

International Atomic Energy Agency (IAEA): A Vienna-based agency that is the world's central intergovernmental forum for scientific and technical cooperation in the nuclear field. Its "safeguards" system provides the first line of defense against the diversion of nuclear fissile material from civilian to military use. <http://www.iaea.org/worldatom/>

Organization for the Prohibition of Chemical Weapons (OPCW): The Secretariat of the Chemical Weapons Convention, monitoring compliance by States Parties and overseeing the destruction of existing stocks of weapons. OPCW, Johan de Wittlaan 32, NL-2517 JR The Hague, Netherlands. Phone: +31-70-416 3300 Fax: +31-70-306 3535. E-mail: webmaster@opcw.org. Web site: <http://www.opcw.nl/ptshome.htm>

CTBTO Preparatory Commission: The secretariat supporting preparations for the coming into force of the Comprehensive Test Ban Treaty (CTBT). It is putting in place the verification system that will be necessary to monitor compliance. Contact: CTBTO Preparatory Commission, Vienna International Centre, P.O. Box 1200, A-1400 Vienna. Phone: 43 1 260 30 6210. Fax: 43 1 260 30 5897. E-mail: ctbto_webmaster@ctbto.org. Web site: <http://www.ctbto.org/ctbto/verif.shtml>

Getting Involved...

Arms production and trade constitute a big and profitable industry, with strong links to the world's political structures. The priorities they set affect all government spending decisions. If the industry and its allied politicians are not to keep the world in a perpetual state of insecurity and danger, they must be countered by ordinary people who understand what is happening and why. As this realization has grown in the period after the Cold War, ordinary people have begun to involve themselves with international security issues in unprecedented numbers. The impact has been considerable. For the first time in history, a major international treaty — the one banning land mines — was negotiated and agreed to primarily because of a non-governmental campaign. Currently, a number of non-governmental organizations are campaigning for the abolition of all nuclear weapons. Many are also engaged in the growing campaign against the proliferation and illicit trafficking of small arms and light weapons.



You need to be interested and get involved in all this for a simple and basic reason: what happens with disarmament will certainly affect your own safety and welfare. You can get involved in any number of ways — or just keep yourself informed if activism is not possible. The following list offers just a few of the options, centered mainly in North America and Europe:

NGO Committee on Disarmament: A key point for non-governmental interactions with the United Nations in New York. Publishes *Disarmament Times*. Organizes panel discussions during Disarmament Week in October every year. At: 777 United Nations Plaza, 3rd floor. Phone: 212 687 5340 Fax: 212 687 1643. E-mail: disarmtimes@igc.org. Web site: <http://www.igc.org/disarm/>

Abolition 2000: Founded by activists at the 1995 Non-Proliferation Treaty Review and Extension Conference, it is now a network of over 2,000 organizations in over 90 countries, working towards a treaty to eliminate nuclear weapons within a time-bound framework. One contact point: **Nuclear Age Peace Foundation:** PMB 121, 1187 Coast Village Road, Suite 1, Santa Barbara, California 93108-2794. Phone 805 965 3443. Fax 805 568 0466. E-mail: admin@abolition2000.org. Web site: www.abolition2000.org

Acronym Institute: A key resource for those working on disarmament, arms control and non-proliferation issues. Publishes *Disarmament Diplomacy*, which appears eleven times a year, providing in-depth coverage and analysis of all major ongoing arms control negotiations, initiatives and debates: www.acronym.org.uk/. At: 24 Colvestone Crescent, Dalston, London E 8 2LH, England Phone: +44 (0) 171 503 8857 Fax: +44 (0) 171 503 9153 E-mail: acronym@gn.apc.org.

Arms Control Association (ACA): A nonpartisan fee-based membership organization (\$30 new members, \$50

regular, \$60 international) founded in 1971, dedicated to promoting public understanding of and support for effective arms control policies. It has programs directed at the policy-makers, media and the public. It publishes Arms Control Today (10 issues a year). At: 1726 M Street, N.W., Suite 201 Washington, DC 20036 Phone: 202 463 8270. Fax: 202 463 8273. E-mail: aca@armscontrol.org

Arms Trade Resource Center (ATRC): A public education and policy advocacy program aimed at promoting preventive diplomacy and restraint in the international arms trade. Based at the World Policy Institute at the New School University in New York, it provides timely analyses of current arms control, conflict-prevention and human rights issues. Provides excellent E-mail updates. All material is available at www.worldpolicy.org/projects/arms. At: 66 Fifth Avenue, 9th Floor, New York, NY 10011. Phone 212 229 5808. E-mail: berrigaf@newschool.edu

Bonn International Center for Conversion (BICC): promotes and facilitates processes to shift people, skills, technology, equipment, and financial and economic resources from the defense sector to alternative civilian uses. At: An der Elisabethkirche 25, 53113 Bonn, Germany. Phone: +49 228 911 96 0, Fax: +49 228 24 12 15, E-mail: bicc@bicc.de. Web site: WWW.BICC.de

British American Security Information Council (BASIS): Provides topical and well-researched information on security policy, arms trade, nuclear and conventional weapons. Excellent source of information on NATO. In the USA: 1012 14th Street NW Suite 900 Washington, DC 20005 Phone: 1 202 347 8340 1266 Fax: 1 202 347

4688 E-mail: basicus@basicint.org. Web site:
www.basicint.org

Bulletin of the Atomic Scientists: Founded in December 1945 by those who developed the first nuclear bomb, it provides thoughtful, accurate information on war and peace issues, especially nuclear policy: At: 6042 S. Kimbark Avenue Chicago, IL 60637 Fax: 773 702 0725. Web site: www.bullatomsci.org

Center for Defense Information: A think tank in Washington, drawing on a staff of retired senior military officers and civilians with extensive experience in military analysis. Maintains an arms trade database, conducts on-line conferences, produces a TV show (America's Defense Monitor), a monthly newsletter (Defense Monitor), and a weekly electronic posting. At: 1779 Mass. Ave. NW Washington, DC 20036. Phone: 202 332 0600. Fax: 202 462 4559 Web site: www.cdi.org

Council For a Livable World: Deals with all weapons of mass destruction, arms sales and UN peacekeeping operations. It is host to the **Coalition to Reduce Nuclear Danger** (www.crnd.org), which advocates CTBT ratification and opposes ballistic missile defense. As a political action committee, raising funds for political candidates, CLW contributions are not tax-deductible. At: 110 Maryland Avenue NE #409, Washington DC 20002. Phone 202 543 4100. Fax 202 543 6297. E-mail: clw@clw.org.

Economists Allied for Arms Reduction: 211 East 43rd Street, Suite 1501, New York, NY 10017 USA. Phone: +1 (212) 557 2545. Fax: +1 (212) 557 2589. E-mail: ecaar@igc.org. www.ecaar.org/

Federation of American Scientists: Founded in 1945 by members of the Manhattan Project, FAS advocates on science, technology and public policy, including nuclear weapons, arms sales, biological hazards, secrecy, and space policy. At: 307 Mass. Ave, NE Washington, DC 20002 Phone: 202 546 3300. Fax: 202 675 1010. E-mail fas@fas.org. Their web site, www.fas.org, has much information, on outer space, ballistic missiles and nuclear issues.

Global Network Against Weapons & Nuclear Power in Space: Founded in 1992 to prevent the nuclearization and weaponization of space. Publishes quarterly "Space Alert" newsletter. PO Box 90083, Gainesville, FL. 32607. Phone: (352) 337 9274 Web site: <http://www.space4peace.org> E-mail: globalnet@mindspring.com

Hague Appeal for Peace: A global campaign that emerged from the gathering of peace activists at The Hague, Netherlands, (11-15 May 1999) to commemorate the centennial of the first International Peace Conference in 1899. Main focal points: disarmament, conflict resolution/transformation, international humanitarian and human rights law, and the roots of war/culture of peace. At: 777 United Nations Plaza, New York NY 10017. www.haguepeace.org. Phone 212 687 2623 Fax: 212 661 2704

Henry L. Stimson Center: Programs address a range of security challenges, focusing on nuclear, chemical and biological weapons. On-going projects are on nuclear policy and South Asia missiles. At: 11 Dupont Circle, NW,

9th floor, Washington, DC 20036; Phone: 202 223 5956.

Fax: 202 228 9604. Web site: www.stimson.org

Institute for Defense and Disarmament Studies: A think tank for research and education in ways to minimize the risk of war, reduce the burden of military spending and promote democratic institutions. It publishes the Arms Control Reporter and the Almanac of World Arms Holdings, Production and Trade, a hugely detailed collection of information. Its web site (www.idds.org) has information on Global Action (globalaction@idds.org), a program to end war. At: 675 Massachusetts Ave., Cambridge, MA 02139; Phone: 627 354 4437. Fax: 617 354 1450

International Action Network on Small Arms (IANSA): A global coalition of NGOs and individuals to address the issues of proliferation, spread and misuse of small arms and light weapons. One contact point: **Monterey Institute of International Studies** in Monterey, California, USA. Fax: 831 647 4199.

International Association of Lawyers Against Nuclear Arms (IALANA): Promotes a draft convention to outlaw nuclear weapons and another to limit and eventually abolish the international arms trade. At: Anna Paulownastraat 103, 2518 BC, The Hague, Netherlands. Phone: 31 70 363 4484. Fax: 31 70 345 5951. Web site: www.ddh.nl/org/ialana

International Campaign to Ban Landmines (ICBL): A network of NGOs that won the 1997 Nobel Peace Prize for its leading role in the conclusion of the Ottawa Convention banning land mines. It closely monitors implementa-

tion of the Convention. Web site: www.icbl.org. Phone: 292 547 2667.

International Physicians for the Prevention of Nuclear War: A federation of national groups from over 80 countries. It won the 1985 Nobel Peace Prize. At: 727 Massachusetts Ave. Cambridge, MA 02139 USA. Phone: 617 868 5050 Fax: 617 868 2560 E-mail: ippnwbos@igc.apc.org. Web site: www.healthnetorg/

International Peace Bureau: The oldest international peace networks, with 160 member organizations from over 60 countries. Its current priorities are nuclear weapons abolition, conflict prevention/resolution and international humanitarian law. It won the Nobel Peace Prize in 1910. At: 41, Rue de Zurich, CH-1201 Geneva, Switzerland. Phone: 41 22 731 64 29. Fax: 41 22 738 94 19 E-mail: info@ipb.org Web site: www.ipb.org .

Millennium Forum: As part of the UN's Millennium observances, NGOs and civil society representatives met in New York in May, 2000 on the (main) theme "The United Nations for the Twenty-First Century." Follow-up activities continue. At 866 UN Plaza, Suite 120, New York, New York 10017-1822. Phone: 212 803 2522 • Fax: 212 803 2561. E-mail: mngof@bic.org • Web site: www.millenniumforum.org.

Nonviolence Web: Home to many peace activist groups in the United States, it issues a twice monthly webzine, *Upfront*. At: P.O. Box 30947, Philadelphia, Pennsylvania 19104. Phone: 215 724 4633 E-mail: nvweb@nonviolence.org. Web site: www.nonviolence.org

Norwegian Initiative on Small Arms Transfers:

Collects and disseminates information on production and trade of small arms. Provides country profiles of small arms producers and weapons, information on national laws on arms exports and on the arms trade. Searchable database at: www.nisat.org.

Programme for Promoting Nuclear Non-Proliferation (PPNN): A UK-based international NGO structured around a Core Group of 18 acknowledged authorities (diplomats, nuclear experts, academic researchers) from 18 countries. web site: www.soton.ac.uk/ppnn. *In the United States:* P.O. Box 79, Falls Village, CT 06031. Phone: 860 824 0813. Fax: 860 824 4707. E-mail: bsppnn@bway.net.

Small Arms Survey: A project of the Graduate Institute of International Studies, Geneva, it will publish from 2001, an annual review of global small arms issues and themes. At: Avenue de Secheron 12, CH-1202, Geneva, Switzerland. Phone: 41 22 908 5777 Fax: 41 22 732 2738. Web site: <http://www.smallarmssurvey.org>

Stockholm International Peace Research Institute (SIPRI): Concentrates on arms limitation, control and reduction. Publishes well-researched data on development, production, transfers and expenditures. At: SIPRI Signalistgatan 9, S-169 70 Solna, Sweden. Phone: 46 8 655 97 00. Fax: 468 655 97 33. E-mail: sipri@sipri.se Web: www.sipri.se/

Union of Concerned Scientists: Founded at MIT in 1969 in a bid to redirect Cold War scientific priorities, it focuses now on environmental, energy, biological and

nuclear issues. At: 2 Brattle Square, Cambridge, MA 02338-9105. Phone: 617 547 5552. E-mail: ucs@ucsusa.org Web site: www.ucsusa.org

Verification Research, Training and Information Centre (VERTIC): Deals with verification issues related not only to arms control but with environmental protection. At: 15-17St. Cross Street, Baird House, London, EC1N 8UW, UK. Phone: 44 (0) 20 74406960 Fax: 44 (0) 20 7242 3266 E-mail: <info@vertic.org>. Web: <http://www.ctbtcommission.org>

Women's International League for Peace and Freedom (WILPF): Founded in 1915 during World War I, works for world disarmament, full rights for women, racial and economic justice, an end to all forms of violence, and for the conditions necessary for peace, freedom, and justice for all. At: 1213 Race street, Philadelphia PA 19107-1691. Phone 215 563 7110. Fax 215 563 5527. Web site: www.WILPF.org.

World Federalist Movement: An international citizens' movement working for justice, peace, and sustainable prosperity. Its forum at the 1989 Non-Aligned Ministerial meeting sparked the call for a UN Decade of International Law. It is the convener of the NGO Coalition for an International Criminal Court. At: 777 UN Plaza 12th Floor, New York NY 10017, USA.