SIPRI YEARBOOK 2005 ARMAMENTS

ARMAMENTS, DISARMAMENT AND INTERNATIONAL SECURITY

Stockholm International Peace Research Institute



The Stockholm International Peace Research Institute is an independent international institute for research into problems of peace and conflict, especially those of arms control and disarmament. It was established in 1966 to commemorate Sweden's 150 years of unbroken peace.

The Institute is financed mainly by a grant proposed by the Swedish Government and subsequently approved by the Swedish Parliament. The staff and the Governing Board are international. The Institute also has an Advisory Committee as an international consultative body.

The objectives of SIPRI's research are • to promote transparency in security and arms control • to contribute to conflict prevention and resolution

to disseminate information to the broader public.

SIPRI publishes its research findings in books and on the Internet at http://www.sipri.org/.

This booklet illustrates the type of facts and data to be found in the 853-page

SIPRI Yearbook 2005 Armaments, Disarmament and International Security

The SIPRI Yearbook has been published since 1969. It brings together objective data and state-of-the-art analysis, offered by SIPRI's own staff and other experts, on all major aspects of arms control, peace and security. The 2005 edition takes global security governance as its connecting theme, but it also highlights important trends and issues in both geographic and functional areas.

The Yearbook is also published in Arabic, Chinese, Russian and Ukrainian editions. This summary is available on the Internet in English, Farsi, French, German, Russian, Spanish and Swedish at http://www.sipri.org/contents/publications/ pocket/pocket vb.html

The full Yearbook can be obtained through all the main bookshops, from Oxford University Press, UK, or by ordering through the SIPRI website at http://first.sipri.org/non_first/book_order.php

For information about other recent SIPRI publications, see http://www.sipri.org/contents/webmaster/publications/

Contents

Euro-Atlantic security and institutions Major armed conflicts Multilateral peace missions: challenges of peace-building Governing the use of force under international auspices: deficits in parliamentary accountability	1 2 4 6
The greater Middle East	7
Latin America and the Caribbean: security and defence in the post-cold war era	8
Financing security in a global context	9
Military expenditure	10
Arms production	12
International arms transfers	14
Nuclear arms control and non-proliferation	16
Arms control and non-proliferation: the role of international organizations	18
Chemical and biological warfare developments and arms control	19
Libya's renunciation of nuclear, biological and chemical weapons and ballistic missiles	20
Conventional arms control and military confidence building	21
International non-proliferation and disarmament assistance	22
Transfer controls	23
US export controls	24
The Proliferation Security Initiative: international law aspects of the Statement of Interdiction Principles	25
Arms control and disarmament agreements	26
Abbreviations	30

Euro-Atlantic security and institutions

• In 2004 transatlantic partners worked to reduce the damage to their mutual relationships caused by the Iraq conflict. The USA began its return to multilateralism through various institutions, although not without hesitation and attempts to set the agenda.

• The two main reasons for the war on Iraq—alleged terrorist connections and possession of weapons of mass destruction—were revealed as unjustified. The USA has recognized that the EU is an indispensable partner in fighting terrorism, gaining effective intelligence and managing international conflicts. The result of the US presidential election focused European states on the need to find a way to work with the Bush administration.

• Resistance to making security in Iraq a NATO operation continued. NATO's challenge is to regain its role as a forum for strategic debate and decision making.

• The EU continued to develop its capacity as a credible security actor: the Headline Goal 2010 will strengthen crisis management and defence capabilities; the European Defence Agency was launched; battle groups are being established; and the new EU military mission in Bosnia and Herzegovina started.

• Russia has been back-tracking on democracy and clinging to the status quo in the face of regime changes elsewhere in the Commonwealth of Independent States. This political course risks continued, if non-violent, friction with the West.

• Reform attempts in the Organization for Security and Co-operation in Europe continued against the backdrop of a decline in its importance and its gradual marginalization.

Major armed conflicts

• All 19 major armed conflicts in 2004 were intra-state. However, intra-state conflicts often have regional or international dimensions, thus challenging the classifications 'internal' and 'external'. It is important, nonetheless, not to overstate the global dimensions of intra-state conflict.

• Many conflicts in 2004 were noteworthy for their localized nature, as was illustrated by developments in the eastern part of the Democratic Republic of the Congo and in Aceh, Indonesia.

• A multiplicity of rebel parties and grievances can complicate the management and resolution of intra-state conflict, as the situations in Burundi, Colombia and Sudan show.

• The use of unconventional tactics by warring parties, including significant violence against civilians, is another feature of contemporary conflict, as was demonstrated by events in Nepal, Russia (Chechnya) and Uganda.

• In a reversal of the classic spillover from intra- to interstate conflict, developments in Iraq during 2004 raised the prospect of an international conflict creating a fully fledged civil war.

Locations of the 19 major armed conflicts in 2004

Africa Algeria Burundi Rwanda Sudan ^{*†} Uganda [*]	Asia India (Kashmir)* Myanmar Nepal* Philippines [†] Sri Lanka	Middle East Iraq* Israel Turkey
Americas Colombia Peru USA	Europe Russia (Chechnya)*	

* Conflicts in these 6 locations caused 1000 or more battlerelated deaths in 2004. The conflict in the USA refers to that between al-Qaeda and the USA and its coalition partners.

[†] There were 2 conflicts in each of these locations.

• Three conflicts entered or re-entered the register of major armed conflicts in 2004: Iraq, Rwanda and Uganda. Both the number of conflicts and the number of conflict locations in 2004 were lower than in 2003, when there were 20 major armed conflicts in 18 locations

• Only 3 conflicts—the conflicts against al-Qaeda, in Iraq and in Darfur, Sudan—are less than 10 years old.

Multilateral peace missions: challenges of peace-building

• A total of 11 new multilateral peace missions were launched in 2004, 7 of them by regional organizations. All but 2 of these new missions followed a previous mission.

• In December 2004 over 64 000 military and civilian police personnel and 4000 civilian personnel were deployed in 21 UN missions, arguably putting the UN in danger of overstretching its institutional capacities. At the same time 35 peace missions, with a total of 225 385 military and civilian personnel, were carried out by regional organizations and UN-sanctioned non-standing coalitions of states.

• Against this backdrop, the report of the UN High-level Panel on Threats, Challenges and Change proposed the establishment of a Peace-building Commission.

• Peace-building is an ever more central component of multilateral peace missions. Its magnitude means that priorities have to be set. Consensus has emerged on what tasks are involved and the order in which they should be carried out. Re-establishing the state's ability to provide security is the first priority. The second is the establishment of functioning law and order within the society. The third—social and economic reconstruction—and fourth—governance and elections—are much more difficult to prioritize. In all of these tasks, local participation is crucial to the legitimacy and sustainability of the process, but it is often neglected.

• Events in Afghanistan, Côte d'Ivoire, Haiti, Iraq and Liberia in 2004 demonstrated the complexities of peace-building.

4

• The scope of the tasks and responsibilities of peace operations raises the question of how multiple peace operations of a multi-dimensional nature can be effectively overseen. Some argue for a minimalist approach, with the role of the international community limited to establishing security, leaving the rest to the local population. Others argue that a period of 'benevolent autocracy' from external actors offers the best chance for successful peace-building.

Multilateral peace missions, 2004

United Nations, UN	21
African Union, AU	3
Commonwealth of Independent States, CIS	3
Communauté Economique et Monétaire d'Afrique Centrale, CEMAC	1
Economic Community of West African	1
States, ECOWAS	
European Union, EU	5
North Atlantic Treaty Organization, NATO	4
Organization for Security and Co-operation in Europe, OSCE	10
Organization of American States, OAS	2
UN-sanctioned ad hoc coalitions	6
Total	56

Governing the use of force under international auspices: deficits in parliamentary accountability

• Two-thirds of all UN-authorized peace missions took place in the past decade. While there is wide debate on their legality and legitimacy, less attention is paid to democratic accountability and the role of elected assemblies. There appears to be a double deficit—at the national and international levels—in the parliamentary accountability of international peace missions.

• National parliaments vary widely in their ability to exercise control over government actions in this field. Neither the UN nor NATO has a 'parliamentary' element in its structure. The EU's European Parliament has only limited powers over the European Security and Defence Policy (ESDP) and it is hard for national parliamentarians to trace the process of ESDP decision making.

• 'Coalitions of the willing' of the kind that undertook the military actions in Afghanistan (2002) and Iraq (2003) pose the greatest structural challenges for parliamentary oversight, since the interstate component of decision making is not carried out through an established, transparent multilateral institutional process.

• In the short term, more networking among national parliaments could bring improvements, as could enhanced procedures and methods for handling information, and—at international level—more reporting to parliamentary bodies and a greater role for both the European Parliament and national assemblies in scrutinizing the ESDP.

The greater Middle East

• The greater Middle East is little penetrated by the political effects of globalization, but is highly prone to 'new-style' transnational threats as well as older-style interstate tensions. The apparent security deficit has recently drawn new efforts to enhance international engagement and 'region building'.

• Four issues cut across national and bilateral agendas: the USA's military presence and ambitions; the Israeli–Palestinian conflict; the impact of the Iraqi conflict; and terrorism.

• The Gulf Cooperation Council aims to promote integration in several dimensions including joint military capabilities, but it has made little progress. In March 2005 the Arab League made a declaration on security issues and on support for political reform. In February 2004 Algeria, Egypt, Jordan and Morocco signed the Agadir Agreement, aiming to create a free trade area.

• The EU, the USA and the G8 have highlighted themes of democracy and good governance in their latest regional initiatives. However, the EU's 'soft power' seems to have less impact than the USA's 'hard power'.

• In 2004, NATO enhanced its Mediterranean Dialogue Initiative and launched the Istanbul Cooperation Initiative, which aims to reach out to Arab partners. Its impact may be inhibited by NATO's own limited focus and competence.

• Questions remain about the interstate order in the region: in particular the form of a Palestinian state and the new Iraq. Developments in Iran's nuclear programme could increase instability in the region, but the cost of confrontation might encourage a cooperative security approach.

Latin America and the Caribbean: security and defence in the post-cold war era

• Since the 1980s, a more open economic model has been introduced in most states of Latin America and the Caribbean. New regional structures have grown in parallel with the dying out of interstate conflicts and a reduction in intra-state conflicts.

• The region's defence budgets have fallen since the 1980s and are now among the world's lowest. Initiatives have been developed for military confidence building. Cooperative security seems to be widely accepted.

• Many Latin American states contribute to international peacekeeping: the region provides 9.5% of all personnel in UN peacekeeping operations. Committing troops to such missions is economically advantageous but also helps to promote reform of the military.

• The USA is the most important external security actor in the region. Since the cold war, the level of US military support has dropped and its pattern changed. Colombia is now the largest recipient of US aid, for its struggle with insurgents linked with the drugs trade. There is sympathy in the region for the US war on terrorism, but some are concerned that anti-terrorist motives colour all US perceptions of the region.

• Regional organizations' agendas show efforts by states to assert their own concerns, e.g., on aspects of security where the USA is currently less engaged. The region's most fundamental problems may be economic vulnerability and unequal development, which feed internal unrest. Only a stronger common political will among Latin American states themselves can offer hope of mastering these challenges.

Financing security in a global context

 In the current security environment, the focus has shifted from the superpower confrontation of the cold war in the North to insecurity in the developing countries in the South; from state territorial security to broader and deeper security dimensions; and towards greater global security interdependence. All this feeds a perception of the ineffectiveness and growing irrelevance of military means for addressing security threats and challenges.

• There is a need for global action to address these threats and challenges. The North has become more receptive to the argument that it has a shared interest in addressing problems and insecurity in the South. Intra-state armed conflicts in the South are now seen as having international consequences. Economic and environmental security, organized crime and terrorism have a strong transnational dimension.

• The pattern of security financing is still focused on traditional national military security objectives. New types of public expenditure categories are needed that reflect non-military and international expenditure on peace and security.

International financing of peace and security on a fundamentally different scale from today's requires new thinking on resource allocation. A North–South shift of resources would have to be based on the self-interest of the North. That would require improved knowledge about how to promote security and prevent armed conflict. It would also require wide dissemination of such knowledge to the public in the North, to motivate investment in the future security of countries far away.

9

Military expenditure

• World military expenditure in 2004 is estimated to have been \$1035 billion. This is just 6% lower in real terms than at the 1987–88 peak of cold war world military spending. Globally, it corresponds to \$162 per capita and 2.6% of world GDP, but there is wide variation between regions and countries.

• The average annual rate of increase in world military expenditure in 1995–2004 was 2.4% in real terms. This encompasses the post-cold war reduction in military spending, which culminated around 1998, and an increasing trend since 1998.

• The rate of increase has accelerated in recent years, averaging 6% per annum over the period 2002–2004. The USA, which makes up 47% of the world total, is the major determinant of this trend. US military expenditure increased rapidly during the period 2002–2004 as a result of the 'global war on terrorism', primarily for military operations in Afghanistan and Iraq. Supplementary appropriations for these operations for 2003–2005 amounted to \$238 billion, exceeding the combined military spending of the entire developing world in 2004 (\$214 billion).

• There was growing debate in 2004 on the sustainability of the USA's current military efforts. Questions were raised about the contribution of military expenditure to the country's growing deficit and its future impact on economic growth. A related concern is whether military expenditure will crowd out non-military government expenditure. The debate has been exacerbated by uncertainties over future trends in expenditure for military operations in Iraq. • There is a recognition that security is a prerequisite for sustainable development, which has led to a debate concerning the different ways in which donors should support security sector reform.

 Some countries fear that extending the definition of official development assistance to cover security-related issues may diminish overall support for social and economic aid, and could even result in cold war-style assistance with the strategic interests of donors dictating the direction of their aid policy.

• Two ongoing support programmes for security activities in crisis-prone developing countries—US assistance to Colombia and British support for the security sector in Sierra Leone—are examples of security assistance provided in the context of development assistance but which indirectly enhances security at home.

• The combined arms sales of the top 100 companies in 2003 were \$236 billion. The top 5 companies accounted for 44% of this total. The top 100 companies increased their combined arms sales in 2003 by 25%.

• In the USA the industry is adjusting to the demands of the transformation of the armed forces, the privatization of military services and the increasing importance of the homeland security sector. In Europe the emphasis is on intra-European consolidation and gaining access to the expanding US market.

• The process of concentration in the arms industry has been slowing down since the late 1990s. Mega-mergers no longer dominate the pattern of acquisition: in 2003, 6 acquisitions took place with deal values exceeding \$1 billion; in 2004 there was only 1 deal of this size.

• In the past decade the top arms-producing companies have grown enormously in size, primarily through acquisitions. The largest have sales of a magnitude that make them major economic entities globally. The value of their arms sales exceeds the GDP of most low-income countries and their total sales compare to the GDPs of medium-sized developed or industrializing countries.

• With the increase in outsourcing by the military, a growing number of the top 100 companies specialize in services. The war in Iraq has increased the share of the arms industry held by such companies.

Arms sales of the 5 largest arms-producing companies in the world (excluding China), 2003

1 Lockheed Martin (USA)	\$24.9 billion
2 Boeing (USA)	\$24.4 billion
3 Northrop Grumman (USA)	\$22.7 billion
4 BAE Systems (UK)	\$15.8 billion
5 Raytheon (USA)	\$15.5 billion

 Attempts to consolidate the European military shipbuilding industry continued in 2004. Efforts were focused on creating a trans-European naval counterpart to EADS and on consolidating the British shipbuilding industry. However, little progress was made and the future structure of the European shipbuilding industry remains uncertain.

• Companies' reporting on the military share of their sales is rare and incomplete, and reporting on the military share of their activities is almost non-existent.

 This lack of transparency makes it difficult to establish a firm foundation for political and public discussion of arms production and arms sales. Pressure on companies to report their arms sales is weak and current reporting relies entirely on voluntary disclosure of information by the companies themselves. Comprehensive, regular and standardized reporting can be achieved only through internationally harmonized legal requirements for companies to report.

International arms transfers

• The trend in transfers of major conventional arms is changing from a downward trend after 1997 via a more or less stable trend for 2000–2002 to a slightly upward trend in 2003–2004.

• Russia was the main supplier of major conventional weapons for the period 2000–2004, replacing the USA. However, a decline in Russian sales is expected in the near future.

• China and India were the two main recipients of major conventional weapons in 2004. China continues to be almost completely dependent on Russia for its arms imports, but it now receives components and technology rather than complete weapons. India is also a major Russian client, but here Russia faces strong competition.

• EU–US relations became strained in 2004 over the issue of technology transfers. The USA has been reluctant to share technology with close European allies even in joint ventures such as the F-35 Joint Strike Fighter.

• The EU's plans to lift its arms embargo against China further strained EU–US relations. The USA has threatened the EU with sanctions if the embargo is lifted.

• Public transparency in arms transfers increased again slightly, mainly in the EU where several countries improved their reporting and where 10 new EU members are now obliged to report under the EU Code of Conduct on Arms Exports. At the international level, transfers of man-portable air defence systems and light artillery must now be reported in the UN Register of Conventional Arms.

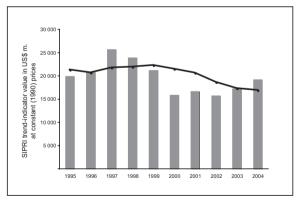
The top 5 exporters of major conventional weapons in 2000–2004*

Shares of world exports

1 Russia	32%
2 USA	31%
3 France	8%
4 Germany	6%
5 UK	5%

* Deliveries from EU states to non-EU states made up 19% of all deliveries in 2000–2004, making the EU the third largest exporter.

The trend in international transfers of major conventional weapons, 1995–2004



The histogram shows annual totals; the line denotes the 5-year moving average, plotted at the last year of each period.

Nuclear arms control and non-proliferation

• Developments in 2004 raised serious questions about the future of the nuclear non-proliferation regime and the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

• The existence was confirmed of a clandestine transnational network, centred around Pakistan's leading nuclear scientist, A. Q. Khan, that supplied nuclear technology and expertise to Iran and Libya and possibly other states. This raised concern about the diffusion of nuclear weapon capabilities to non-state as well as state actors and spurred new initiatives aimed at preventing illicit transfers.

• There continued to be controversy over Iran's nuclear programme. The International Atomic Energy Agency provided further detail about Iran's failure to declare its nuclear activities. Little progress was made in the talks on the future of North Korea's nuclear programme.

• These developments led to proposals for repairing perceived shortcomings in the non-proliferation regime. There was particular interest in reviewing the NPT's guarantee that non-nuclear weapon states can import and develop materials and technologies for civil nuclear energy programmes. This prompted interest in multinational approaches to managing the global nuclear fuel cycle.

• There was some good news in 2004 for non-proliferation efforts: Libya implemented its pledge to verifiably abandon and dismantle its WMD and ballistic missile programmes (see page 20).

World nuclear forces: numbers of warheads as of January 2005

Country	Year of first nuclear test	Deployed warheads
USA	1945	4 896
Russia	1949	7 360
UK	1952	185
France	1960	348
China	1964	<i>c.</i> 400
India	1974	30–40
Pakistan	1998	30–50
Israel	_	<i>c</i> . 200
Total		c. 13 470

• The USA's active deployed nuclear weapon stockpile consists of 4216 strategic and 680 non-strategic warheads. Russia's active deployed stockpile consists of 3980 strategic and 3380 non-strategic warheads. The nuclear arsenals of India, Israel and Pakistan are thought to be only partly deployed.

• As of early 2005 an estimated total of about 13 470 warheads were deployed. If all nuclear warheads are counted including spares and those in active and inactive storage the 8 states with nuclear weapons possess a total of *c*. 27 600 warheads.

Arms control and non-proliferation: the role of international organizations

• The use of force to compel Iraqi compliance with UN resolutions—intended to prevent illegal nuclear, biological and chemical (NBC) weapon programmes as well as missile delivery systems for such weapons—was deeply divisive. The military action and its aftermath underlined that a stable and peaceful international order requires effective controls on NBC weapons. A failure to establish effective controls through negotiation could lead to further conflict in the future.

• There has been little recent progress in multilateral arms control. Efforts to achieve arms control have been undertaken mainly through informal political cooperation. However, in 2004 some new international efforts were made to strengthen global processes.

• In April 2004 the UN Security Council adopted Resolution 1540. This instructed member states to adopt and enforce laws prohibiting non-state actors from manufacturing, acquiring, possessing, developing, transporting, transferring or using NBC weapons and their means of delivery. States were also instructed to put in place national laws controlling export and trans-shipment of proliferation-sensitive items.

• The report of the UN High-level Panel on Threats, Challenges and Change highlighted the need to establish effective controls on nuclear weapons and materials and the pressing need for measures to reduce the threat of nuclear terrorism. UN Secretary-General Kofi Annan stated that the global nuclear non-proliferation regime was in a precarious state and argued for urgent action on the report's recommendations (see also page 16).

Chemical and biological warfare developments and arms control

 In 2004 the states parties to the Biological and Toxin Weapons Convention (BTWC) held their second annual expert and political meetings. The meetings considered enhancements to international capabilities for responding to alleged use of biological or toxin weapons or suspicious outbreaks of disease. They also considered how to strengthen means for the surveillance, detection, diagnosis and combating of infectious diseases.

• In response to concern about the BTWC's lack of compliance mechanisms, some states parties suggested making use of the authority of the UN Secretary-General to investigate alleged use of biological weapons. Addressing this subject at BTWC meetings was resisted by other states parties.

• Destruction of chemical weapons continued. Of 71 373 agent tonnes declared by parties to the Chemical Weapons Convention, 10 698 tonnes had been verifiably destroyed as of 31 January 2005. Further international assistance for the destruction of Russian stocks was agreed in 2004 (see page 22).

• Controversy continued over what had, or had not, been known about Iraqi nuclear, biological and chemical weapon activities and capabilities before the Iraq war. A number of official inquiries into the handling of intelligence reported during 2004. A common theme of the inquiries' findings was that pre-war assessments were inaccurate and unsupported by the available evidence.

• The US-led Iraq Survey Group completed its inspections and published a report on its investigation activities.

Libya's renunciation of nuclear, biological and chemical weapons and ballistic missiles

• In December 2003 Libya publicly renounced nuclear, biological and chemical (NBC) weapons and agreed to restrict itself to the possession of ballistic missiles with a range less than 300 km. In September 2004 the USA announced that the dismantling of Libya's NBC weapon programmes was 'essentially complete'.

• A number of factors have been suggested to explain Libya's decision. The USA portrays it as a vindication of its robust approach to combating the spread of NBC weapons. Some observers have described it as part of Libya's longterm efforts to end its political and economic isolation.

• The verification process has shown that previous public information about Libya's biological and nuclear weaponrelated activities did not reflect the actual situation; information regarding its missile programme and its chemical weapon programme was more accurate.

• Libya received considerable foreign assistance to procure sensitive nuclear materials, technologies and components, much of which was provided by the Khan network (see page 16).

• No concrete evidence of an offensive biological weapon programme was uncovered. Libya declared its chemical weapon holdings and stated that it had never transferred such weapons.

• The bulk of Libya's ballistic missile inventory consisted of ageing missiles imported from the Soviet Union. Libya's missile development was hampered by UN sanctions.

Conventional arms control and military confidence building

• NATO admitted 7 new members in 2004, increasing Russia's concerns that it is at a growing security disadvantage. However, Russia made the conciliatory gesture of ratifying the 1999 Agreement on Adaptation of the 1990 Treaty on Conventional Armed Forces in Europe (CFE Treaty). NATO members and others refused to do so until Russia complies with commitments to pull out forces from Georgia and Moldova.

• The conventional 'hard' arms control regime successfully weathered NATO enlargement and the associated problem of a CFE 'black hole' along the new NATO–Russia border (the Baltic states are not covered by the treaty).

• Regional arms control developed smoothly in 2004. Progress made allowed the Organization for Security and Co-operation in Europe (OSCE) to suspend the Agreement on Confidence- and Security-Building Measures in Bosnia and Herzegovina. The OSCE states continued to focus on certain norm- and standard-setting measures in order to better respond to the risks and challenges that face Europe.

• Croatia and Slovenia ratified the 1992 Treaty on Open Skies in 2004. The treaty's review conference in February 2005 showed that, despite the failure to agree on a final document, many states parties value the treaty's achievements.

• The problem of inhumane weapons also continues to engage the international community. In 2004 the major humanitarian and military security frameworks gained more support and importance, which helped to reduce the scourge of mines worldwide.

International non-proliferation and disarmament assistance

 As part of the international anti-proliferation effort, a growing number of countries offer practical help to secure or eliminate nuclear, biological and chemical (NBC) weapons, their delivery systems and capacities that might contribute to NBC weapon programmes. The provision of international non-proliferation and disarmament assistance (INDA) is evolving from an emergency programme following the break-up of the Soviet Union to a broader international programme involving new donor states, new recipient states and new activities.

• Most INDA activities have been carried out in Russia. The USA in particular has developed important bilateral programmes with Russia, but other countries make significant contributions and programmes undertaken by the Russian Government itself are very important.

• INDA is increasingly seen as a significant element of the wider anti-proliferation effort, reducing the risk that NBC materials can be used to carry out acts of terrorism.

• The most important initiatives continue to be bilateral, but some programmes currently being evaluated are too costly and complex to be undertaken bilaterally. The G8, which has been engaged in organizing INDA since 2002, reinforced its activities in 2004. The EU, with its member states, is trying to become more coherent and effective in INDA.

• Expansion of the geographic and functional scope of INDA may bring forward the 'moment of truth' for a number of long-standing projects—such as plutonium disposal—whose non-proliferation significance is clear but which have so far proved impossible to implement.

Transfer controls

• In 2004 evidence continued to accumulate that more countries recognize the strong self-interest in maintaining effective national transfer controls. The failure of states to put in place such controls contributed to Iraqi weapon programmes in the past. Uncertainty about the status of these programmes became a critical factor contributing to the crisis that led to war in Iraq.

• Concern about the emergence of new suppliers of technologies that are relevant to the development or production of NBC weapons was heightened by the public disclosure of the activities of the Khan network (see page 16).

• Strengthening national export controls is an important aspect of enhancing the wider non-proliferation regime. In 2004 the need for well-funded and targeted assistance programmes to help countries put in place effective export controls emerged as a theme in the EU, the G8, the UN and the Wassenaar Arrangement. There is a growing desire to improve the coordination of assistance programmes.

• In 2004 the EU member states reviewed the national implementation of the common legal basis for controlling exports of dual-use items. The EU also reviewed its 1998 Code of Conduct on Arms Exports; as a result, changes will be made to the Code of Conduct in 2005.

• One way to enhance the consistency of export controls for dual-use and defence-related items across the EU would be to pool technical capacities and intelligence on end-use, and to establish joint training of licensing and enforcement officers. Such a training capacity could also be used in assistance programmes for neighbouring countries. • The USA is the world's largest arms exporter and has great influence over the global arms trade.

• Arms transfers from the USA are governed by a combination of legislation, regulations and presidential directives. Transfers are administered by the departments of State and Defense, which are also responsible for end-use monitoring.

• Oversight is undertaken by the US Congress and the US Government Accountability Office (GAO). A January 2004 GAO report criticized the State Department's end-use monitoring of exports of cruise missiles and unmanned air vehicles.

• Recent controversies include a proposal to waive licence requirements for certain British and Australian companies and the role of arms sales in the 'international war on terrorism'.

The Proliferation Security Initiative: international law aspects of the Statement of Interdiction Principles

• Concern about proliferation of WMD to state and nonstate actors has led to a growing consensus on the need for more robust action against proliferators. Such action includes the interception of goods and technologies in transit.

• The So San incident in 2002 demonstrated that international law places important limits on interception activities. In response, US President George W. Bush announced in May 2003 a new multilateral initiative for the interception and seizure of illegal weapon and missile technologies: the Proliferation Security Initiative (PSI). Only a limited number of states participate in the 'core group' of this initiative, but a significant number have expressed support.

• The PSI developed quite rapidly in 2003 and 2004. Its Statement of Interdiction Principles establishes principles on the interdiction of vessels suspected of carrying WMD and related items. The majority of the statement complies with international law. The development of the PSI seems to have resulted in a change in emphasis—from changing international and domestic legislation to actions that can be taken under existing law.

• The PSI states have tried to acquire legal authority by means of UN Security Council resolutions or amendments to conventions that do not directly deal with the fundamental rules and principles of the law of the sea. In order to gain legitimacy, however, the PSI needs to include more participants and should directly focus on the most relevant treaty the UN Convention on the Law of the Sea.

Arms control and disarmament agreements and agreements on humanitarian law of armed conflict in force as of January 2005

- 1925 Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (Geneva Protocol)
- 1948 Treaty for Collaboration in Economic, Social and Cultural Matters and for Collective Self-defence among Western European states (Brussels Treaty)
- 1948 Convention on the Prevention and Punishment of the Crime of Genocide (Genocide Convention)
- 1949 Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War
- 1954 Protocols to the 1948 Brussels Treaty (Paris Agreements on the Western European Union)
- 1959 Antarctic Treaty
- 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (Partial Test Ban Treaty, PTBT)
- 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies (Outer Space Treaty)
- 1967 Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco)
- 1968 Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT)

- 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Sub-soil thereof (Seabed Treaty)
- 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (Biological and Toxin Weapons Convention, BTWC)
- 1974 Treaty on the Limitation of Underground Nuclear Weapon Tests (Threshold Test Ban Treaty, TTBT)
- 1976 Treaty on Underground Nuclear Explosions for Peaceful Purposes (Peaceful Nuclear Explosions Treaty, PNET)
- 1977 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (Enmod Convention)
- 1977 Protocol I Additional to the 1949 Geneva Conventions, and Relating to the Protection of Victims of International Armed Conflicts
- 1977 Protocol II Additional to the 1949 Geneva Conventions, and Relating to the Protection of Victims of Non-International Armed Conflicts
- 1980 Convention on the Physical Protection of Nuclear Material
- 1981 Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be Deemed to be Excessively Injurious or to have Indiscriminate Effects (CCW Convention, or 'Inhumane Weapons' Convention)

- 1985 South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga)
- 1987 Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles (INF Treaty)
- 1990 Treaty on Conventional Armed Forces in Europe (CFE Treaty)
- 1991 Treaty on the Reduction and Limitation of Strategic Offensive Arms (START I Treaty)
- 1992 Treaty on Open Skies
- 1992 The Concluding Act of the Negotiation on Personnel Strength of Conventional Armed Forces in Europe (CFE-1A Agreement)
- 1993 Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (Chemical Weapons Convention, CWC)
- 1995 Treaty on the Southeast Asia Nuclear Weapon-Free Zone (Treaty of Bangkok)
- 1996 Agreement on Confidence- and Security-Building Measures in Bosnia and Herzegovina, the Federation of Bosnia and Herzegovina and the Republika Srpska
- 1996 Amended Protocol II to the 1981 CCW Convention, on Prohibitions or Restrictions on the Use of Mines, Boobytraps and Other Devices
- 1996 Agreement on Sub-Regional Arms Control concerning Yugoslavia (Serbia and Montenegro), Bosnia and Herzegovina, and Croatia (Florence Agreement)

- 1997 Inter-American Convention against the Illicit Manufacturing of and Trafficking in Firearms, Ammunition, Explosives, and Other Related Materials
- 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (APM Convention)
- 1999 Inter-American Convention on Transparency in Conventional Weapons Acquisitions
- 1999 Vienna Document 1999 on Confidence- and Security-Building Measures
- 2001 Concluding Document of the Negotiations under Article V of Annex 1-B of the 1995 General Framework Agreement for Peace in Bosnia and Herzegovina
- 2002 Treaty on Strategic Offensive Reductions (SORT)

Treaties not in force as of January 2005

- 1972 Treaty on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty): no longer in force as of 13 June 2002
- 1993 Treaty on Further Reduction and Limitation of Strategic Offensive Arms (START II Treaty)
- 1996 African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba)
- 1996 Comprehensive Nuclear Test-Ban Treaty (CTBT)
- 1999 Agreement on Adaptation of the 1990 Treaty on Conventional Armed Forces in Europe

Abbreviations

- BTWC Biological and Toxin Weapons Convention
- CCW Certain Conventional Weapons (Convention)
- CFE (Treaty on) Conventional Armed Forces in Europe
- ESDP European Security and Defence Policy
- EU European Union
- G8 Group of Eight
- GAO Government Accountability Office
- GDP gross domestic product
- INDA international non-proliferation and disarmament assistance
- km kilometre
- NATO North Atlantic Treaty Organization
- NBC nuclear, biological and chemical
- NGO non-governmental organization
- NPT Treaty on the Non-Proliferation of Nuclear Weapons
- OSCE Organization for Security and Co-operation in Europe
- PSI Proliferation Security Initiative
- UK United Kingdom
- UN United Nations
- USA United States of America
- WMD weapon(s) of mass destruction



Governing Board

Ambassador Rolf Ekéus, Chairman (Sweden) Sir Marrack Goulding, Vice-Chairman (UK) Dr Alexei G. Arbatov (Russia) Dr Willem F. van Eekelen (Netherlands) Dr Nabil Elaraby (Egypt) Rose E. Gottemoeller (USA) Professor Helga Haftendorn (Germany) Professor Ronald G. Sutherland (Canada) The Director

Director

Alyson J. K. Bailes (UK)

© SIPRI 2005 Printed by Ingeniörskopia, Solna, 2005

SIPRI YEARBOOK 2005 ARMAMENTS, DISARMAMENT AND INTERNATIONAL SECURITY

The 36th edition of the SIPRI Yearbook analyses developments in 2004 in

- security and conflicts
- military spending and armaments
- non-proliferation, arms control and disarmament

with extensive annexes on arms control and disarmament agreements and a chronology of security- and arms control-related events.

For further information, contact



Stockholm International Peace Research Institute

Signalistgatan 9 SE-169 70 Solna Sweden

Telephone: +46 8/655 97 00 Email: sipri@sipri.org URL: http://www.sipri.org Fax: +46 8/655 97 33

SIDF