

16. Transfer controls

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I. Introduction

This chapter surveys the main efforts to strengthen multilateral export control cooperation in 2005, both in informal arrangements and in the formal arrangements of the European Union (EU). The countries that participate in multilateral export control cooperation have placed a growing emphasis on the need for strong and effective export controls to be adopted and enforced by the largest possible number of states in order to reinforce the international non-proliferation effort. The adoption in April 2004 by the United Nations (UN) Security Council of Resolution 1540,¹ which is discussed below, was one indicator of the high priority attached to the adoption of modern and effective export controls.

In 2005 the tendency for more states to take part in multilateral efforts to strengthen national export controls continued with new states participating in the Australia Group (AG), the Nuclear Suppliers Group (NSG) and the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies (WA). While 11 countries attended the first meeting of the Proliferation Security Initiative (PSI), in 2003, over 100 states participated in the second anniversary meeting, in 2005—a remarkable expansion in what was regarded at first as a controversial undertaking.

Section II of this chapter focuses on transfer control cooperation through the AG, the Missile Technology Control Regime (MTCR), the NSG and the WA. The participating states in these arrangements as well as the Zangger Committee are identified in table 16.1.² Section III examines supply-side measures in the EU, including dual-use and defence items. It also examines a new regulation concerning trade in certain equipment and products which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment that was adopted in June 2005. International efforts to strengthen controls on high-activity radioactive sources are discussed in section IV. The conclusions are presented in section V.

¹ UN Security Council Resolution 1540, 28 Apr. 2004, URL <http://www.un.org/Docs/sc/unsc_resolutions04.html>

² The Zangger Committee is not formally a part of the 1968 Treaty on the Non-proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT) regime, but its participants seek to take account of the effect of changing security aspects on the NPT and to adapt export control conditions and criteria in that light.

Table 16.1. Membership of multilateral weapon and technology transfer control regimes, as of 1 January 2006

State	Zangger Committee ^a 1974	NSG ^b 1978	Australia Group ^a 1985	MTCR 1987	Wassenaar Arrangement 1996
Argentina	x	x	x	x	x
Australia	x	x	x	x	x
Austria	x	x	x	x	x
Belarus		x			
Belgium	x	x	x	x	x
Brazil		x		x	
Bulgaria	x	x	x	x	x
Canada	x	x	x	x	x
China	x	x			
Croatia		x ^c			x ^c
Cyprus		x	x		
Czech Republic	x	x	x	x	x
Denmark	x	x	x	x	x
Estonia		x	x		x ^c
Finland	x	x	x	x	x
France	x	x	x	x	x
Germany	x	x	x	x	x
Greece	x	x	x	x	x
Hungary	x	x	x	x	x
Iceland			x	x	
Ireland	x	x	x	x	x
Italy	x	x	x	x	x
Japan	x	x	x	x	x
Kazakhstan		x			
Korea, South	x	x	x	x	x
Latvia		x	x		x ^c
Lithuania		x	x		x ^c
Luxembourg	x	x	x	x	x
Malta		x	x		x ^c
Netherlands	x	x	x	x	x
New Zealand		x	x	x	x
Norway	x	x	x	x	x
Poland	x	x	x	x	x
Portugal	x	x	x	x	x
Romania	x	x	x		x
Russia	x	x		x	x
Slovakia	x	x	x		x
Slovenia	x	x	x		x
South Africa	x	x		x	x ^c
Spain	x	x	x	x	x
Sweden	x	x	x	x	x
Switzerland	x	x	x	x	x
Turkey	x	x	x	x	x
UK	x	x	x	x	x
Ukraine	x	x	x ^c	x	x
USA	x	x	x	x	x
Total	35	45	39	34	40

NSG = Nuclear Suppliers Group; MTCR = Missile Technology Control Regime

Note: The years in the column headings indicate when the export control regime was formally established, although the groups may have met on an informal basis before then.

^a The European Commission participates in this regime.

^b The European Commission is an observer in this regime.

^c These countries joined in 2005.

II. International transfer control cooperation in 2005

Prior to 1990 international cooperation in export control was defined by the cold war. The Coordinating Committee for Multilateral Export Control (COCOM) was an embargo through which the United States and its allies sought to deny the Soviet Union, its allies and like-minded countries access to items that could be of strategic relevance. The Soviet Union operated a system of planning through which it could direct the industrial capacities for the development, production and transfer of strategic products in other Warsaw Treaty Organization (WTO) participating states. The Soviet planning system (of which the Council for Mutual Economic Assistance, COMECON, was an important part) was dissolved in 1991 and the decision to end COCOM was made in March 1994.

In the first half of the 1990s, after the end of the cold war, there was extensive discussion of how to modify export controls among the group of roughly 30–35 countries (a number of which were former targets for the COCOM embargo) that wanted to cooperate in this area. In the changed circumstances of the time there was no simple approach comparable to the denial of technology to an enemy around which all countries could coalesce.

The idea of keeping the COCOM instrument but aiming it at a different target was first addressed at a time when the need to respond to Iraq's August 1990 invasion of Kuwait was fresh in every mind. Iraq had built the world's fourth-largest army with foreign arms acquisitions. Moreover, the discovery by post-war inspection teams that Iraq had easily obtained a broad range of Western industrial equipment for use in illegal weapon programmes was disquieting. The administration of US President George H. W. Bush launched two initiatives to remedy these problems. The first sought agreement from the five permanent members of the UN Security Council (the P5) to restrain arms transfers to the Middle East. The second sought agreement from the Group of Seven (G7)³ industrialized states on limiting exports of sensitive industrial and civil goods to Iran, Iraq, Libya and North Korea. Preliminary discussions suggested that agreeing on the target countries to be denied technology would have been impossible in the absence of decisions taken in the UN framework. It quickly emerged that each supplier state had its own lists of countries that should be targeted by, and countries that should be exempt from, a strategy of denial, and that these lists were not harmonized.⁴ Moreover, the extensive

³ The G7 states are Canada, France, Germany, Italy, Japan, the UK and the USA.

⁴ The P5 (China, France, Russia, the United Kingdom and the USA) began consultations on the implications of arms proliferation for international security with special attention to conditions in the Middle East in 1991. Principles and guidelines to be applied to conventional arms transfers were elaborated.

sanctions regime imposed on Iraq under the auspices of the UN suggested that a global framework could be a more effective setting in which to discuss this issue than a self-selecting group of states.

The small plot of common ground identified at that time was first, that export controls should aim to stop proliferation of nuclear, biological and chemical (NBC) weapons and of missile delivery systems for them; and second, that a system based on technology denial should be replaced by the evaluation of potential exports against agreed criteria, with the possibility to approve or deny exports depending on the outcome of the assessment. The multilateral export control regimes have found it difficult to progress beyond this agreement in the 1990s, and it has been left to other types of cooperation arrangement (notably the EU) to develop more ambitious common efforts—such as using a single law to control dual-use exports from 25 states, and a common approach to arms export policy contained in a code of conduct.

It is recognized that the proliferation of NBC weapons and missiles that could be used to deliver them is only taking place in a few locations, rather than being a general phenomenon. A return to the COCOM approach of denying technology to these few locations while permitting transfers to other countries is unlikely for political reasons, even though it would bring a clarity that would aid implementation and enforcement. In practice, too, since standards for export control implementation and enforcement are not uniformly high within the international community, the risk of unauthorized re-export or diversion to the country subject to denial from an intermediate party is too great. However, in what might be a sign of a change in thinking, the NSG—while underlining that its guidelines are to be applied to all exports of controlled items—has begun to name two countries (Iran and North Korea) whose nuclear programmes it regards as ‘proliferation challenges’.

In chapter 12 of this volume, the case is made that the group of states participating in discussions of export control needs to be extended because of the growing number of sources of supply for proliferation-sensitive materials, technologies, equipment and knowledge. In recent years, outreach efforts towards non-members have become more prominent on the agenda of the international export control regimes. However, given the pace at which the number of sources of supply has increased, the process of expanding regime participation may be too slow to assure the effectiveness of approaches carried out by groups with limited participation.

In these circumstances, a number of influential actors have pointed to the possible need to apply legal agreements in the area of export control, and to move away from the current more ad hoc approach based on understandings reached between officials and experts at the working level. Creating a global system of export control that conforms to the highest standards has become

recognized as a major priority.⁵ Efforts in this direction, such as UN Security Council Resolution 1540 and the evolution of the Proliferation Security Initiative, have made this an area of innovation within arms control as well as an arena for potential future cooperation.⁶

Resolution 1540 and the PSI were both first suggested by the United States as part of a wider set of measures intended to slow the spread of nuclear weapons in the wake of the public disclosure of the illicit nuclear trafficking network led by Pakistani nuclear scientist Abdul Qadeer Khan.⁷ In the past, the USA has been recognized to have a critical role in maintaining cohesion in international export control cooperation. While the USA has placed a high value on strengthening such cooperation, it has also found it difficult at times to harmonize this with wider national foreign and security policy interests. The USA currently faces this dilemma in regard to India, where the development of civil nuclear cooperation is inconsistent with US commitments under the NSG but is being promoted as part of a wider effort to improve bilateral cooperation and partnership, including on strategic issues.⁸ This has led to a discussion of the reverse side of the differentiated treatment of destinations under export control cooperation regimes: namely, preferential treatment for certain countries.

Forty years ago this discussion was focused on China, when the US foreign and security policy interest to improve relations with China clashed with the commitment to deny technology under COCOM. The USA argued that China should be treated as an exception from the general embargo applied by the committee. This exceptional status was agreed within COCOM in 1972. The technology that could be supplied to China was reviewed regularly and the licensing status of China was adjusted on a number of occasions to give further preferential treatment in comparison with other communist countries.

The USA has raised the possibility that India might also be seen as an exception to the general application of NSG Guidelines. In this regard the Chinese experience is perhaps of interest in that it contributed to a reduction in the coherence of COCOM. The granting of an exception to China made it more difficult for the USA to argue against the requests of other countries with a special interest in trading with communist countries—notably, requests from

⁵ University of Georgia, Center for International Trade and Security, 'Strengthening multilateral export controls: a nonproliferation priority', Athens, Ga., Sep. 2002, URL <<http://www.uga.edu/cits/>>.

⁶ Through their Chairs, export control regimes expressed their readiness to respond to calls for assistance in a 2004 letter to the Security Council's 1540 Committee. On PSI see Ahlström, C., 'The Proliferation Security Initiative: international law aspects of the Statement of Interdiction Principles', *SIPRI Yearbook 2005: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2005), pp. 741–65. The PSI Statement of Interdiction Principles is reproduced in *SIPRI Yearbook 2005*, pp. 766–67. The members of the PSI are listed in the glossary in this volume.

⁷ Progress on this set of measures proposed by President George W. Bush has been mixed. One proposal led to the adoption of UN Security Council Resolution 1540 in Apr. 2004. Another proposal, to create a special committee at the International Atomic Energy Agency (IAEA) to discuss safeguards verification and made up of governments in good standing with the IAEA, was acted on in June 2005. The White House, 'Statement on progress in achieving the President's nonproliferation proposals', News release, Washington, DC, 17 June 2005, URL <<http://www.whitehouse.gov/news/releases/2005/06/20050617-6.html>>.

⁸ This issue is discussed further below and in detail in appendix 13B in this volume.

the Federal Republic of Germany to treat trade with the German Democratic Republic as an exception to the COCOM embargo.

The Australia Group

The Australia Group was established in 1985 following international concern about the use of chemical weapons (CWs) in the 1980–88 Iraq–Iran War. The participating states in this informal group initially cooperated to maintain and develop their national export controls to prevent the further spread of chemical exports that might be used for, or diverted to, CW programmes. The participating states seek to prevent the intentional or inadvertent supply by their nationals of materials or equipment to CW or biological weapon (BW) programmes. The AG is currently also developing measures that seek to prevent the acquisition of BW or CW by non-state actors, with a particular focus on measures aimed at individuals or groups planning to carry out terrorist attacks. When the AG first convened in Brussels in 1985, it had 15 participating states. In 2005 membership rose to 39 states (as well as the European Commission) when Ukraine participated in the group for the first time.

In April 2005 the AG marked 20 years of its activities at the plenary meeting held in Sydney. At that meeting Australian Foreign Minister Alexander Downer outlined the main challenges that participating states face in sustaining the effectiveness of export controls. Downer drew attention to the greater sophistication of efforts by proliferators to evade export controls through strategies such as the trans-shipment and re-export of items as well as the use of front companies and intermediaries to mask the true end-use of dual-use exports. He also noted that ‘the rapid pace of technological change, including the spectacular growth of the biotechnology sector, makes the task of keeping lists of controlled items up to date increasingly challenging’. Finally, he pointed out that traditional approaches to export control have been challenged by the growing tendency to transfer technical data and know-how through intangible means to centres of production located close to markets, rather than to transfer materials and finished products across international borders. As Downer pointed out, ‘such transactions cannot be monitored by traditional means’.⁹

The AG has agreed a series of lists that define dual-use precursor chemicals, biological agents, chemical and biological equipment, and related technology. The participating states are informally committed to ensure that these items are subject to national export controls, and they have agreed a set of guidelines to consider when assessing export licence applications. In 2005 the AG made changes to the Control List of Dual-Use Chemical Manufacturing Facilities and Equipment and Related Technology by revising the entry that controls certain pumps that can be used to make chemical weapons or AG-controlled

⁹ Speech of the Hon. Alexander Downer, Minister for Foreign Affairs, ‘Twentieth anniversary plenary of the Australia Group’, 18 Apr. 2005, URL <http://www.foreignminister.gov.au/speeches/2005/050418_ag.html>. See also the AG website at URL <<http://www.australiagroup.net>>.

precursor chemicals. The AG also amended the Control List of Dual-Use Biological Equipment by adding certain spraying or fogging systems, spray booms or arrays of aerosol-generating units. The understanding of the technical note related to the AG Control List of Biological Agents, the AG Control List of Animal Pathogens and the AG Control List of Plant Pathogens was clarified.¹⁰

The AG has undertaken a wide range of outreach and assistance efforts. The AG Chair briefs a number of non-participating states with non-confidential information after plenary meetings every year. In addition, regional seminars on export licensing practices have been held dealing with issues such as intangible technology transfers, end-user verification and industry outreach. In 2005 outreach visits by the AG Chair included China, Singapore and Taiwan.

The Missile Technology Control Regime

The Missile Technology Control Regime is an informal arrangement in which countries that share the goal of preventing proliferation of unmanned delivery systems for NBC weapons cooperate to exchange information and coordinate their national export licensing processes.¹¹ The MTCR was formed in 1987, at which time the primary focus of its activities was on ballistic missiles able to deliver a payload weighing 500 kilograms to a range of 300 kilometres. These technical parameters were considered to be consistent with missiles likely to be used to deliver first-generation nuclear weapons. The MTCR participating states have subsequently expanded the scope of their activities to include any unmanned air vehicles (UAVs) capable of delivering NBC weapons. At present 34 states are MTCR participants.

At their annual plenary meetings the MTCR participating states make a general assessment of proliferation risks, including a discussion of missile programmes of concern to the regime. However, the participating states have stressed that the MTCR Guidelines are for general application and do not ‘target’ particular states. The role of export control in combating terrorism continues to be discussed in the MTCR as in other export control cooperation arrangements. The question of how to share information and intelligence—an activity that normally takes place on a bilateral basis—more effectively in order to provide the most critical information to the people that need it in real time is one important issue in this context.

A number of missile producing countries are outside the regime. A country can choose to adhere to the MTCR Guidelines without participating in the regime. A number of countries, such as China and Israel, have done so, and the MTCR participating states have encouraged all non-participating countries to take this approach. In order to further this objective, the MTCR participating states have carried out a broad dialogue on missile proliferation issues with a range of countries. The Chair has the main responsibility for outreach.

¹⁰ The AG control lists are available on the AG website (note 9).

¹¹ See the MTCR website at URL <<http://www.mtc.info/english/>>.

In 2005 the MTCR Chair visited India, Israel, Pakistan and the United Arab Emirates.

Allegations of non-compliance

In August 2005 the United States issued a report on compliance with arms control, non-proliferation and disarmament agreements that included a separate section on compliance with missile-related undertakings.¹² Although this report, known as the Non-compliance Report, is required annually under the US Arms Control and Disarmament Act, the 2005 report was the first to be submitted since 2003. It included two specific findings related to non-compliance with missile proliferation commitments by states.

While China does not participate in the MTCR—its application to join having been blocked by the USA—in November 2000 the Chinese Government gave the USA a specific undertaking on missile proliferation which included a commitment not to assist ‘in any way, any country in the development of ballistic missiles that can be used to deliver nuclear weapons’.¹³ The Non-compliance Report found that ‘items transferred by Chinese entities contributed to Category I missile programs contrary to the Chinese Government’s November 2000 missile nonproliferation commitments’.¹⁴ The report drew attention to transfers by China of controlled materials and technology to Iran, North Korea and Pakistan.

Russia has been a participant in the MTCR since 1995. The Non-compliance Report found that ‘Russian entities have engaged in transfers that, although not directly precluded by Russia’s commitments under the MTCR Guidelines, raise serious missile proliferation concerns and call into question Russia’s ability to implement controls on missile-related technologies. To date, Russia’s efforts to prevent further transfers have been inadequate’.¹⁵ The report drew particular attention to the supply of missile-applicable technologies to China, India and Iran by Russian entities.

The Nuclear Suppliers Group

The aim of the NSG is to prevent the proliferation of nuclear weapons through export controls of nuclear and nuclear-related material, equipment, software and technology. The export controls, which are implemented by the participating states through national legislation and procedures, are not intended to prevent or hinder international cooperation on peaceful uses of nuclear energy. At the 2005 plenary meeting of the NSG the participating states, which operate by consensus, agreed that Croatia would participate in the activities of the

¹² US Department of State, Bureau of Verification and Compliance, ‘Adherence to and compliance with arms control, nonproliferation, and disarmament agreements and commitments’, Washington, DC, 30 Aug. 2005, URL <<http://www.state.gov/t/vci/rls/rpt/51977.htm>>.

¹³ US Department of State (note 12), p. 104.

¹⁴ US Department of State (note 12), p. 106.

¹⁵ US Department of State (note 12), p. 108.

group. The NSG now includes 45 countries with the European Commission as an observer.¹⁶

The NSG participating states have agreed two sets of guidelines that they apply when assessing applications to export controlled items. One set of guidelines is applied to items that were specially designed or developed for nuclear use, while the other set of guidelines is applied to exports of nuclear dual-use items. The NSG participating states include states in which the main exporters of nuclear technology are located, and the group recognizes that peaceful nuclear cooperation is both legitimate and necessary. The participating states share the view that its guidelines ‘facilitate the development of trade in this area’ by ‘providing the means whereby obligations to facilitate peaceful nuclear cooperation can be implemented in a manner consistent with international nuclear non-proliferation norms’.¹⁷

In 2005 the NSG participating states agreed on three new elements that should be incorporated in national export control decision making. First, the NSG agreed to establish a procedure to suspend nuclear transfers to countries that are non-compliant with their bilateral safeguards agreements with the International Atomic Energy Agency (IAEA). Second, the NSG agreed that it would be desirable for the supplier and the recipient states to elaborate ‘fall-back safeguards’ that would be invoked if the IAEA could no longer carry out safeguards in a recipient state. Third, the NSG agreed an important change to its guidelines: namely, that the existence of effective export controls in the recipient state should be introduced as a criterion of supply for nuclear material, equipment and technology and as a factor for consideration for dual-use items and technologies. In addition, the participating states agreed to continue discussing two other proposals: the existence of an Additional Protocol¹⁸ as a condition of nuclear supply, and the further strengthening of the NSG Guidelines with respect to enrichment and reprocessing technologies.

The proposals to strengthen guidelines for enrichment and reprocessing technologies that have been discussed would require nuclear suppliers to deny transfers of these items to an end-user that was the object of an active denial by more than one NSG party, and to make a determination that the country of final destination had a credible nuclear energy requirement and no alternative solution to fuel supply/waste management available. The failure to agree on these changes reflected reservations about prohibiting the further spread of sensitive technologies (in particular uranium enrichment) in the light of the potential demand for such technologies in the future from the civil nuclear power sector. At least some NSG participating states prefer to examine effect-

¹⁶ Nuclear Suppliers Group (NSG), ‘NSG Plenary Meeting, Oslo Norway, 23–24 June 2005’, Press Statement, URL <<http://www.nuclearsuppliersgroup.org/public.htm>>.

¹⁷ The latest versions of the NSG Guidelines as well as a statement on how they are to be applied are available at URL <<http://www.nuclearsuppliersgroup.org/guide.htm>>.

¹⁸ Article 2.a.ix of the model Additional Protocol contains an export control component. A supplier state that concludes a bilateral agreement with the IAEA commits itself to report exports of trigger list items to the IAEA, and recipient states that conclude such an agreement must confirm the receipt of trigger list items to the IAEA on request.

ive controls over the end-use of nuclear items rather than adopting a prohibition on transfer.

Nuclear cooperation with and nuclear supplies to India have been discussed extensively in the NSG in the past, and the group has taken the view that such cooperation is inconsistent with elements of the NSG Guidelines. Cooperation on civil nuclear matters was one element in the Next Steps in the Strategic Partnership Initiative agreed during the Indian–US Summit in Washington, DC, on 18 July 2005.¹⁹ In exchange for a number of measures to be undertaken by India, the USA promised, among other things, to work ‘to adjust international regimes to enable full civil nuclear energy cooperation and trade with India’.²⁰

The impact of the Indian–US cooperation on the application of the NSG Guidelines was discussed on 16–17 October 2005, although no specific proposal was under discussion. It was later reported that France, Russia and the United Kingdom offered conditional support to developing civil nuclear cooperation with India, provided India first took the steps outlined in its bilateral agreement with the USA. Canada is reported to have asked for an exploration of additional steps which India should be asked to take prior to any change in current NSG policy and practice, including a declaration by India that no further fissile material is being produced for nuclear weapons. Other states—Austria, Sweden and Switzerland among them—reportedly registered strong reservations to modification of the NSG Guidelines.²¹

The Wassenaar Arrangement

The decision to establish the WA was taken by 33 states in December 1995 at a meeting in Wassenaar, the Netherlands. The objective of the WA is to promote transparency, exchange of information and exchange of views on transfers of an agreed range of items with a view to promoting responsibility in transfers of conventional arms and dual-use goods and technologies and to preventing ‘destabilizing accumulations’ of such items.

In 2004 the WA was enlarged for the first time since its establishment with the admission of Slovenia; and five more countries (Croatia, Estonia, Latvia, Lithuania and Malta) were admitted to the WA in the spring of 2005 following inter-sessional consultations. This leaves Cyprus as the only EU member state outside the WA. During the 2005 WA plenary session, held in December, South Africa was admitted as a member, expanding membership to Africa for the first time.²² At present 40 states participate in the WA.

¹⁹ The White House, ‘Joint statement between President George W. Bush and Prime Minister Manmohan Singh’, News release, Washington, DC, 18 July 2005, URL <<http://www.whitehouse.gov/news/releases/2005/07/20050718-6.html>>.

²⁰ The wider implications of the Indian–US agreement for nuclear arms control and export control are examined in appendix 13B and the international fusion energy consortium is examined in appendix 13C.

²¹ Boese, W., ‘Suppliers weigh Indian nuclear cooperation’, *Arms Control Today*, Nov. 2005.

²² Wassenaar Arrangement, ‘Public Statement, 2005 Plenary Meeting of the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-use Goods and Technologies’, Vienna, 14 Dec. 2005, URL <<http://www.wassenaar.org/publicdocuments/public131205.html>>.

Any decision to expand WA participation is taken by consensus among existing participants and is based on an assessment of various criteria: whether the applicant state 'is a producer/exporter of arms or industrial equipment respectively'; whether the country adheres to 'fully effective export controls'; whether the country has 'non-proliferation policies and appropriate national policies'; and whether a country has adopted the WA control lists as a reference in its national export controls.²³

At the 2005 plenary session, the participating states agreed an 'indicative list' of 'end-use assurances commonly used', which was based on a survey. The document lists essential and optional elements referring to: (a) 'parties involved in the transaction', (b) 'goods', (c) 'end-use', (d) 'location', (e) 're-export/diversion', (f) 'delivery verification', and (g) 'documentation'.²⁴ The WA control lists were amended to take into account technical and security developments. A number of amendments related to items of potential interest to terrorists, such as jamming equipment and certain UAVs. Changes to the WA control lists are prepared at technical meetings during the year and formally approved at the December plenary session.

In October 2005 the WA held its second outreach seminar, this time addressed to industry, in which representatives from over 50 companies participated. Speakers included government officials, academics and industry representatives.²⁵

During two rounds of talks in Vienna, in April 2004 and May 2005, the WA and China exchanged views on the principles of export control of conventional weapons and related dual-use items and technologies, control lists and best practice. The two sides agreed to have a regular dialogue in the future.²⁶

The possible role of the PSI in enforcing export controls

The USA has proposed extending the scope of the Proliferation Security Initiative, an initiative launched in 2003 to track and interdict proliferation-sensitive cargoes during international transport. President George W. Bush proposed expanding the PSI to include more participating states and also to expand its functional scope to address more than shipments and transfers. Bush suggested that, building on the means developed to fight terrorists, states could take direct action against proliferation networks through cooperation in law enforcement. He suggested that 'PSI participants and other willing nations should use the Interpol and all other means to bring to justice those who traffic

²³ Wassenaar Arrangement, 'Purposes, Guidelines & Procedures, including the Initial Elements, as adopted and amended by the Plenary of December 2003', URL <<http://www.wassenaar.org/2003Plenary/2003PlenaryDocs.htm>>.

²⁴ Wassenaar Arrangement, 'End-use assurances commonly used, consolidated indicative list', updated at the 2005 WA plenary session, URL <<http://www.wassenaar.org/publicdocuments/>>.

²⁵ Wassenaar Arrangement, 'Wassenaar Arrangement outreach seminar', Press statement, Vienna, Oct. 2005, URL <<http://www.wassenaar.org/publicdocuments/press031005.html>>.

²⁶ Chinese Information Office of the State Council, 'China's endeavors for arms control, disarmament and non-proliferation', Sep. 2005, URL <<http://www.china.org.cn/english/features/book/140320.htm>>.

in deadly weapons, to shut down their labs, to seize their materials, to freeze their assets.²⁷

The initial meeting of the PSI in May 2003 was attended by 11 countries (Australia, France, Germany, Italy, Japan, the Netherlands, Poland, Portugal, Spain, the UK and the USA). More than 60 states, as well as representatives from the EU and NATO, participated in the first anniversary meeting of the PSI. More than 100 states were represented at the second anniversary meeting, a rapid expansion. Moreover, the functional scope of the PSI is changing. The participating states have agreed to identify law enforcement authorities and other tools or assets that could be used in support of efforts to stop proliferation facilitators and to share that information. In addition, at the meeting of Operational Experts in Omaha, Nebraska, the participants agreed on the need 'to ensure greater involvement of law enforcement agencies from all partner states' in the PSI.²⁸ In this regard the PSI could evolve into a practical mechanism with which to implement the commitments contained in UN Security Council Resolution 1540 requiring all states to criminalize proliferation by non-state actors and to enact effective export controls.

III. Supply-side measures in the European Union

In 2005 the EU focused on efforts to complete the revision of its 1998 Code of Conduct on Arms Exports²⁹ and to make the implementation of dual-use export controls more effective. Working groups under the Council of the European Union also continued to discuss a number of issues that are relevant in both the dual-use and the conventional export control context. These include controls of intangible technology transfers, a common approach to criminal sanctions for illegal export, brokering and smuggling as well as more coordinated and comprehensive export control outreach and capacity building.

Dual-use export control

The December 2003 EU Strategy against Proliferation of Weapons of Mass Destruction (WMD) identified export controls as part of the first line of defence against proliferation and committed the EU to strengthen export control policies and practices 'within its borders and beyond'.³⁰ The imple-

²⁷ The White House, 'President announces new measures to counter the threat of WMD', Remarks by the President on weapons of mass destruction proliferation, Fort Lesley J. McNair, National Defense University, News release, Washington, DC, 11 Feb. 2004 URL <<http://www.whitehouse.gov/news/releases/2004/02/20040211-4.html>>.

²⁸ Stephen G. Rademaker, 'The Proliferation Security Initiative (PSI): a record of success', Assistant Secretary of State for Arms Control, Testimony before the House International Relations Committee, Subcommittee on International Terrorism and Nonproliferation, Washington, DC, 9 June 2005 URL <<http://www.state.gov/t/ac/rls/rm/47715.htm>>.

²⁹ Council of the European Union, European Union Code of Conduct on Arms Exports, Brussels, 5 June 1998, URL <<http://ue.eu.int/uedocs/cmsUpload/08675r2en8.pdf>>.

³⁰ Council of the European Union, EU Strategy against Proliferation of Weapons of Mass Destruction, Brussels, 12 Dec. 2003, URL <http://ue.eu.int/cms3_applications/Applications/newsRoom/LoadDocument.asp?directory=en/misc/&filename=78340.pdf>.

mentation of EU Council Regulation 1334/2000 (the common and uniform legislative basis for dual-use export control in all member states) in an enlarged EU was reviewed in 2004.³¹ The review revealed discrepancies regarding implementing legislation, industrial awareness programmes, the technical capacities available to national authorities to evaluate licence applications and classify items, and as regards the intelligence infrastructure. The review also found that the application of the dual-use regulation differed with regard to *inter alia* the use of the catch-all clause, the implementation of denial exchanges, intangible technology transfer controls, and transit and trans-shipment controls.

The General Affairs Council meeting of 13–14 December 2004 decided that recommendations put forward to address these discrepancies should be ‘acted upon without delay’, making strengthening export controls a key priority for 2005.³² The recommendations, grouped in nine broad areas, were to: (a) ‘ensure transparency and awareness of legislation implementing the EU system’; (b) ‘minimise any significant divergence in practices amongst Member States’; (c) ‘investigate the possibilities for adding controls on transit and transshipment’; (d) ‘provide assistance in recognition of dual-use items subject to control’; (e) ‘improve exchanges of information on denials, and consider the creation of a data base to exchange sensitive information’; (f) ‘agree best practices for the enforcement of controls’; (g) ‘improve transparency to facilitate harmonisation of implementation of controls on nonlisted items (catch-all)’; (h) ‘enhance interaction with exporters’; and (i) ‘agree best practices for controlling intangible transfers of technology’.

The Council Working Party on Dual-Use Goods was charged with taking forward the follow-up to the review,³³ but implementation falls to the responsible authorities of the EU member states. To minimize divergences in national licensing practices, the member states have discussed the conditions that each of them attaches to various kinds of export authorizations.

UN Security Council Resolution 1540, which the EU has strongly endorsed, requires states to establish effective transit and trans-shipment controls. However, these are not currently contained in Regulation 1334/2000. In 2005 the Commission began to gather the information needed to assess the impact of modifying Regulation 1334/2000 to include controls on dual-use goods in transit or trans-shipment.

Exporters often request advice from licensing authorities about whether or not their products require authorization prior to export. If an export has taken place that is suspected to violate export control laws and regulations, subse-

³¹ The first stage of the peer review was described in Anthony, I. and Bauer, S., ‘Transfer controls’, *SIPRI Yearbook 2005* (note 6), pp. 699–719.

³² Council of the European Union, 2630th Council Meeting General Affairs and External Relations, Brussels, 13 Dec. 2004, General Affairs, Press release no. 15460/04 (Presse 343), URL <<http://www.consilium.eu.int>>.

³³ On progress made in 2005 see Council of the European Union, ‘Implementation of the recommendations of the peer review of member states’ export control systems for dual use goods’, Document 15826/05, Brussels, 15 Dec. 2005, URL <<http://register.consilium.eu.int/pdf/en/05/st15/st15826.en05.pdf>>.

quent legal proceedings require an authoritative statement of whether or not the item that was exported (or to be exported) was licensable. For these reasons it is necessary for governments to have a source of technical advice available to them on an 'as needs' basis. For larger countries that export many dual-use items this almost certainly requires maintaining a dedicated cadre of technical experts within the export control establishment. For smaller countries, which may need to call on such advice infrequently and at irregular times, the cost of maintaining a permanent technical resource nationally may not be justifiable. The Council Working Party on Dual-Use Goods has established a pool of technical experts who are available to assist colleagues in other countries with recognition of dual-use items subject to control. This demonstrates trust among the member states in that such a pool inevitably involves sharing information, some of which could be commercially sensitive.

Before any EU member state authorizes an export that has been denied by another member state or states for an essentially identical transaction within the previous three years, it must first consult each of the member states that issued a denial. Member states have been responsible for collecting and storing information on licence denials. The EU is establishing an electronic database to collect and record denial notices made by member states under Regulation 1334/2000 and in the international export control regimes. The design of the database has been agreed, and its construction is scheduled to be completed by mid-2006. Once it is functioning, the database is expected to enhance the capability of the member states to access and exchange information quickly.

In recent years the discussion of strengthening dual-use export control has increasingly focused on the need for effective enforcement. As one part of the response to the peer review the EU member states initiated a comprehensive review of licensing and customs practices regarding enforcement. Under Regulation 1334/2000 exporters are obliged to apply for authorization for exports that do not appear on lists of controlled items:

if the exporter has been informed by the competent authorities of the Member State in which he is established that the items in question are or may be intended, in their entirety or in part, for use in connection with the development, production, handling, operation, maintenance, storage, detection, identification or dissemination of chemical, biological or nuclear weapons or other nuclear explosive devices or the development, production, maintenance or storage of missiles capable of delivering such weapons.

Industry has drawn attention to differing interpretations of this 'catch-all' control between member states and, in response, the administration of the catch-all control was examined during the peer review and as part of its follow-up.

More broadly, it is increasingly recognized that close engagement with industry must become a more central feature of modern export controls since exporters have adopted new working practices based on greater international cooperation. The EU member states have developed a checklist that they can

use to benchmark their existing practices on interaction with industry in order to achieve a higher level of awareness by the private sector and to ensure its full support and active cooperation in the fight against the proliferation of WMD.³⁴

Customs security initiatives of the EU

Since 2003 the European Commission has brought together the elements of a new security-management model for the external borders of the enlarged EU based on two pillars: a set of common control standards to be used as the basis for customs procedures throughout the EU and a set of trade facilitation measures that will be available to exporters that can demonstrate a responsible approach to exporting. The elements of the model were the basis for security amendments to the Community Customs Code contained in EC Regulation 648/2005 of 13 April 2005.³⁵

With these amendments the European Union introduced three important changes to the Customs Code. First, the new regulation requires traders to provide customs authorities with pre-arrival and pre-departure declarations containing information on goods prior to import to or export from the EU. Second, the new regulation introduces the status of authorized economic operator that will, once conferred, provide reliable traders with the right to receive certain trade facilitation measures. Third, the new regulation introduces a mechanism for setting uniform Community risk-selection criteria for controls, supported by computerized systems.

Subsequently, the Commission has drafted implementing provisions (published in July 2005) and managed an open consultation in order to prepare a final draft provision for discussion by EU member states in the EU Customs Code Committee.³⁶ It is hoped that revised implementing regulations for the Community Customs Code could enter into force in 2006. The new system is intended to help protect the internal market of the EU as well as help to secure international supply chains.³⁷ However, the new mechanisms being developed as part of this process can also strengthen the implementation of dual-use export controls by helping customs authorities to recognize sensitive shipments, stop them at the border and inspect them more closely. The pre-arrival and pre-departure declarations required under the new system could

³⁴ Council of the European Union, 'Outreach to industry checklist', Council document 15291/05, 5 Dec. 2005, available at URL <<http://register.consilium.eu.int/>>.

³⁵ 'Regulation (EC) No. 648/2005 of the European Parliament and of the Council of 13 April 2005 amending Council Regulation (EEC) No 2913/92 establishing the Community Customs Code', *Official Journal of the European Union*, L113 (4 May 2005), pp. 13–19.

³⁶ 'Preliminary Draft Commission Regulation laying down provisions for the implementation of Council Regulation (EEC) No 2913/92 establishing the Community Customs Code', Working document TAXUD/1250/2005. REV.3, Brussels, 2006.

³⁷ The approach being adopted by the EU is compatible with the Framework of Standards to Secure and Facilitate Global Trade being developed within the World Customs Organization (WCO). A High Level Strategic Group within the WCO has been developing global security and facilitation measures concerning the international trade supply chain since June 2004.

also provide the information needed to control the transit and trans-shipment of dual-use goods across the EU.

EU controls over trade in goods that could be used for capital punishment, torture or other cruel, inhuman or degrading treatment

The EU internal market presents a legal and practical challenge to maintaining and implementing national export controls, and there are occasions when the EU will want to place collective restrictions on exports to further its strategic and political objectives. In one example of this approach, work is ongoing to introduce EU-wide controls on the export of paramilitary equipment. In another example, in June 2005 the EU adopted Council Regulation 1236/2005, to enter into force on 30 July 2006, concerning trade in certain goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment.³⁸ Whereas several EU member states already had national bans or controls on exports of equipment used in torture, the aim of the regulation, a law that directly applies in all member states, is to ensure a harmonized, agreed approach to exports of such items.

The regulation bans the export of goods that have no practical use other than for the purposes of capital punishment, torture and other cruel, inhuman or degrading treatment or punishment in certain types of trade. The regulation also introduces a requirement to control exports of certain identified items that could be used for such purposes. Its annexes include a list of goods and the supply of technical assistance related to those goods that will be banned for both import into and export from the EU; and a list of goods that may not be exported without authorization by the responsible national authorities of the member states. Each application to export is to be evaluated on a case-by-case basis, and general or global licences may not be used to authorize exports. A separate annex contains a model licence document, but the regulation also envisages that authorization may be issued by electronic means according to specific procedures established on a national basis.

Regulation 1236/2005 requires the member states to inform each other and the Commission within 30 days of licence applications that are denied. The regulation contains a ‘no undercut’ procedure by which a competent authority must consult a counterpart that has denied authorization for an essentially identical transaction within the previous three years. An authority may subsequently authorize the transaction, but it must then inform the EU partners of the reasons why the authorization was granted.

The regulation includes criteria for assessing applications to export goods listed in annex III. Authorization may not be granted for an export when there are reasonable grounds to believe that listed goods ‘might be used for torture or other cruel, inhuman or degrading treatment or punishment, including

³⁸ ‘Council Regulation (EC) no. 1236/2005 of 27 June 2005 concerning trade in certain goods which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment’, *Official Journal of the European Union*, L200 (30 July 2005), pp. 1–19.

judicial corporal punishment, by a law enforcement authority or any natural or legal person in a third country'. In addition, the competent authority must take two other factors into account: (a) any relevant available international court judgements; and (b) the findings of the competent bodies of the UN, the Council of Europe and the EU, including reports of the Council of Europe's European Committee for the Prevention of Torture and Inhuman or Degrading Treatment and Punishment and of the UN Special Rapporteur on Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment. The regulation draws attention to other relevant information (e.g., available national court judgements, reports or other information prepared by civil society organizations and information on restrictions on exports of listed goods applied by the country of destination) that may be taken into account when considering an export application.

The 2005 regulation was based on a proposal made by the Commission in December 2002 but not all parts of the proposal were retained.³⁹ For example, the original Commission proposal included several chemicals on the list of goods that may not be exported without authorization that are also controlled for export by EU member states as part of their system for controlling exports of military items. The chemicals in question are contained in the Wassenaar Arrangement Military List, and Cyprus is still outside the Wassenaar Arrangement. However, the WA Military List is reproduced as the EU Common Military List, which is used by all member states as a reference list to ensure common application of the EU Code of Conduct on Arms Exports. The Code of Conduct also includes a relevant general criterion requiring export decisions to take account of the degree of respect for human rights in the country of final destination. During the discussion of the draft regulation in the EU member states the utility of a list-based approach to control was questioned given that many everyday items could in theory be misused, but practical difficulties of implementation effectively rule out compiling a very extensive control list.⁴⁰

The Commissioner for External Relations and European Neighbourhood Policy, Benita Ferrero-Waldner, has stressed that the regulation should not be seen in isolation but judged as one of many steps that the EU is taking 'to encourage all countries that have not yet done so to abolish the death penalty, outlaw torture and follow the EU's lead in controlling trade in goods used for these purposes'.⁴¹

³⁹ 'Proposal for a Council Regulation concerning trade in certain equipment and products which could be used for capital punishment, torture or other cruel, inhuman or degrading treatment or punishment', COM(2002) 770 final, 30 Dec. 2002.

⁴⁰ British House of Lords, European Union Committee, 'Proposal to ban trade in products used for capital punishment or torture: report with evidence', HL paper 75, London, 22 Mar. 2005. URL <<http://www.publications.parliament.uk/pa/ld200405/ldselect/lducom/lducom.htm>>.

⁴¹ European Commission, 'EU curbs trade of torture equipment', Press release IP/05/819, Brussels, 30 June 2005. E.g., where considered necessary, actions against torture and ill-treatment are to be reflected in relations with third countries as an element in the political dialogue with the country concerned, through démarches and public statements and as a component of bilateral and multilateral cooperation for the promotion of human rights. EU Heads of Mission in countries around the world are asked to analyse the occurrence of torture and ill-treatment and the measures taken to combat it in the country where they are located and report their findings. The Council Working Group on Human Rights (COHOM) is to combine these reports with other relevant information in order to identify situations

The European Union Code of Conduct on Arms Exports

The EU Code of Conduct on Arms Exports was adopted in June 1998.⁴² Beyond its application to the 25 members of the EU, Bosnia and Herzegovina (BiH), Bulgaria, Canada, Croatia, the Former Yugoslav Republic of Macedonia (FYROM), Iceland, Norway and Romania have aligned themselves with its criteria and principles.⁴³ Of these states, Norway has been granted official adherent status, which *inter alia* involves some access to information about denials of export licences. In addition, a number of countries in South-Eastern Europe (BiH, Serbia and Montenegro and FYROM) have included an obligation to apply the EU Code criteria when assessing licence applications in their new export control laws adopted in 2004 and 2005. Acceding countries Bulgaria and Romania have participated in the meetings of the Council Working Party on Conventional Arms (COARM) since May 2005.

The EU Code of Conduct contains eight criteria for export licensing and operative provisions, which outline reporting procedures and mechanisms for intergovernmental denial notification and consultation. In 2000 the EU member states agreed a list of military equipment to which the Code is applied. That list has been revised several times. The 2006 version takes into account the changes to the WA Munitions List agreed in December 2005.⁴⁴

In 2004 the EU member states initiated a review of the 1998 Code of Conduct. COARM prepared a revised Code, which includes changes to its operative provisions, eight criteria and legal status.⁴⁵ A draft 'Council Common Position defining common rules governing the control of exports of military technology and equipment' was agreed at technical level in the spring of 2005, but was still awaiting ministerial approval at the beginning of 2006.⁴⁶ This was not because of substantive objections to the revised Code but owing to a political link to the controversial arms embargo against China and the proposal for a 'toolbox'—complementing the EU Code—to enhance the transparency of transfers to countries on which arms embargoes have been lifted.⁴⁷ On 30 June

where EU actions are called for and then either to agree on further steps or to make recommendations to EU ministers. 'Guidelines to EU policy towards third countries on torture and other cruel, inhuman or degrading treatment or punishment', Adopted by the General Affairs Council, Luxembourg, 1 Sep. 2004, URL <<http://ue.eu.int/uedocs/cmsUpload/TortureGuidelines.pdf>>.

⁴² Bauer, S. and Bromley, M., *The European Union Code of Conduct on Arms Exports: Improving the Annual Report*, SIPRI Policy Paper no. 8 (SIPRI: Stockholm, Nov. 2004), URL <<http://www.sipri.org/>>.

⁴³ 'Seventh annual report according to operative provision 8 of the European Union Code of Conduct on arms exports', *Official Journal of the European Communities*, C 328 (23 Dec. 2005), pp. 1–288.

⁴⁴ 'Common Military List of the European Union (equipment covered by the European Union Code of Conduct on Arms Exports) adopted by the Council on 27 February 2006', *Official Journal of the European Union*, C66 (17 Mar. 2006), pp. 1–28.

⁴⁵ For a summary of changes see Anthony and Bauer (note 31), pp. 715–18.

⁴⁶ Unlike a Council Declaration, a Common Position is an instrument of the Common Foreign and Security Policy, which politically obliges member states to bring their legislation and policies in line with the agreed Common Position. While a Common Position would not transform the Code of Conduct into European law or make it subject to the jurisdiction of the European Court of Justice, a Common Position has national legal implications for some member states.

⁴⁷ See Anthony and Bauer (note 31); and Anthony, I., 'Militarily relevant EU–China trade and technology transfers: issues and problems', Paper presented at the Conference on Chinese Military

2005, the EU Committee of Permanent Representatives (Coreper) endorsed the agreement reached at technical level on a draft revised Code,⁴⁸ but it failed to agree ‘additional transparency and mutual control measures to be applied upon the lifting of an arms embargo, for inclusion in the User’s Guide to the Council Common Position defining common rules governing the control of exports of military technology and equipment’.⁴⁹

The User’s Guide to the EU Code, first published in November 2003, has been updated at least once per year. It further defines and interprets the terms and procedures outlined in the 1998 Code of Conduct. The October 2005 version outlines best practice for the application of criterion 8, which obliges the member states in the licensing process to consider the compatibility of arms exports with the technical and economic capacity of the recipient country. Work on best practice guides for criterion 2 (human rights) and criterion 7 (end-use controls) is ongoing.⁵⁰ The latest edition, published in January 2006, introduces a common template for information to be included in national reports, and updates the list of websites for national reports on arms exports.⁵¹

The development of the EU Code’s implementation during 2005 is documented in the seventh annual report.⁵² While much of COARM’s work focused on the review process, other areas of work included implementation of the 2003 Common Position on Brokering. According to the seventh annual report, legislation in 19 of the 27 member states and acceding countries was in full compliance with the Common Position.

Among COARM’s stated priorities for the near future are both outreach to promote the Code’s principles and criteria, and the provision of practical and technical assistance for this purpose. The EU member states are also seeking to enhance the coordination of national outreach and assistance efforts.

IV. Exports of radiological materials

Radioactive sources are in widespread use throughout the world in medicine, agriculture, research and industry. While the great majority of sources are relatively harmless—since the activity levels and the potential radiological dose hazards are relatively small—poorly protected sources that have a high level of radioactivity and a physical form that facilitates dispersion could be

Modernization: East Asian Political, Economic, and Defense Industrial Responses, Maui, Hawaii, 19–20 May 2005, URL <<http://www.sipri.org/contents/expcon/euchinapaper>>.

⁴⁸ ‘EU/armaments: towards new common rules for arms export control’, *Atlantic News*, no. 3693 (5 July 2005), p. 4.

⁴⁹ Dombey, D., ‘EU considers binding rules on arms sales’, *Financial Times*, 18 Apr. 2005, p. 2.

⁵⁰ Council of the European Union, ‘User’s Guide to the European Union Code of Conduct on Arms Exports’, Document 5179/05, Brussels, 11 Jan. 2006, URL <http://ue.eu.int/cms3_fo/showPage.asp?id=408&lang=en&mode=g>.

⁵¹ Council of the European Union (note 50).

⁵² ‘Seventh annual report according to operative provision 8 of the European Union Code of Conduct on arms exports’ (note 43).

acquired by terrorists and used to construct a 'dirty bomb'.⁵³ Furthermore, radioactive sources account for a far larger number of detected cases of illicit nuclear trafficking than nuclear materials that could be used to make a nuclear explosive device. Against this background, there have been a number of international efforts to counter radiological terrorism, including the development of high standards that reduce the vulnerability of radioactive sources to acquisition by terrorists.

Brian Dodd has pointed out that the number of international bodies, groups, agencies and organizations that contribute to the goals of preventing the acquisition of radioactive materials by terrorists, detecting and responding to any attempts to acquire relevant materials or responding to their actual acquisition or use is very large.⁵⁴ One initiative was the process of revising and updating the 2001 IAEA Code of Conduct on the Safety and Security of Radioactive Sources. This non-binding Code of Conduct was approved by the IAEA Board of Governors on 8 September 2003.⁵⁵

The Code seeks to create a 'cradle-to-grave' system of regulation and safe custody for radiological sources that pose 'a significant risk to individuals, society and the environment' and to do this 'through the development, harmonization and implementation of national policies, laws and regulations, and through fostering the international co-operation'.

As part of this system for control the Code establishes specific requirements for controlling the export and import of high-risk radioactive sources in the form of a set of guidelines. These guidelines are contained in the Guidance on the Import and Export of Radioactive Sources in accordance with the IAEA Code of Conduct on the Safety and the Security of Radioactive Sources, which was approved in September 2004.

The IAEA Guidance on the Import and Export of Radioactive Sources

The IAEA Guidance on the Import and Export of Radioactive Sources was developed to supplement the import and export provisions contained in the IAEA's Code of Conduct.⁵⁶ It represents the first global framework for the control of radioactive source exports. On 24 September 2004, the IAEA General Conference endorsed the Guidance and noted that more than 30 countries had stated their intention to work towards effective import and export controls

⁵³ There have been instances of the use of radiological weapons by sub-state groups. For a discussion see Zarimpas, N., 'The illicit traffic in nuclear and radioactive materials', *SIPRI Yearbook 2001: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2001), pp. 503–11,

⁵⁴ Dodd, B., 'International efforts in countering radiological terrorism', *Health Physics*, vol. 89 (2005), pp. 556–65.

⁵⁵ IAEA, Code of Conduct on the Safety and Security of Radioactive Sources, GOV/2000/34-GC (44)/7, 8 Sep. 2003. This code replaced the version published by the IAEA in Mar. 2001.

⁵⁶ Sowder, A. G., 'The IAEA Code of Conduct and Import/Export Control Guidance: strengthening global safety and security of radioactive sources through international coordination and assistance', 37th National Conference on Radiation Control, Conference of Radiation Control Program Directors, Kansas City, Mo., 25–28 Apr. 2005, URL <<http://www.crcpd.org/AnnualMeeting-05/Abstracts/Sowder.htm>>.

by 31 December 2005. The conference encouraged all states to act in accordance with the Guidance on a harmonized basis.⁵⁷

The IAEA Guidance states that high-activity radioactive sources should only be exported to states that have an effective system for regulating their possession and use and only after the responsible authorities in the recipient country have given their assent to the transaction. A system of notification is proposed to ensure that the responsible authorities know when and where sources are entering the country and to verify receipt by the end-user. Limited exceptional circumstances are suggested under which sources can be provided to countries that do not meet the authorization criteria.⁵⁸

In June 2005 the EU and the USA restated their objective of having effective controls applied by the end of 2005 in accordance with the IAEA Guidance.⁵⁹ However, in spite of this political commitment to a self-imposed deadline this objective was widely considered to be unrealistic in the absence of a common approach within the EU for the implementation by member states of the IAEA Guidance.⁶⁰ At an international conference held in Bordeaux, France, in mid-2005 it was noted that, although more than 30 countries had made clear their intention to work towards effective import and export controls by 31 December 2005, only three IAEA member states had subsequently notified the IAEA Director General about national measures.⁶¹

The EU member states have been working to implement a 2003 Council Directive on the control of high-activity sealed radioactive sources and orphan sources.⁶² However, this directive establishes modern and effective controls for radioactive sources within the EU and not for exports or transfers to other parties. According to the 'progress report' on the implementation of the December 2003 EU Strategy against Proliferation of Weapons of Mass Destruction, supplementary Community legislation concerning the import and

⁵⁷ IAEA General Conference, Resolution GC(48)/RES/10.D, 24 Sep. 2004.

⁵⁸ The guidance is consistent with the Statement on Securing Radioactive Sources agreed by the Group of Eight (G8) industrialized states at their summit meeting in Evian, France in 2003. G8 Summit, 'Non proliferation of weapons of mass destruction: securing radioactive sources, a G8 statement', Evian, 2003, URL, <<http://www.g8.fr/evian/english/>>.

⁵⁹ The White House, 'Joint Statement by the European Union and United States on the Joint Programme of Work on the Nonproliferation of Weapons of Mass Destruction', News release, Washington, DC, 20 June 2005, URL <<http://www.whitehouse.gov/news/releases/2005/06/20050620.html>>.

⁶⁰ It can be noted that the US Nuclear Regulatory Commission amended Title 10, part 110 of the Code of Federal Regulations (Export and Import of Nuclear Equipment and Material) on 1 July 2005 to give expression to this commitment.

⁶¹ International Atomic Energy Agency, 'Findings of the President of the Conference', International Conference on the Safety and Security of Radioactive Sources: Towards a Global System for the Continuous Control of Sources Throughout their Life Cycle, 27 June–1 July 2005, Bordeaux, available at URL <<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=134>>.

⁶² 'Council Directive 2003/122/EURATOM of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources', *Official Journal of the European Union*, L346 (31 Dec. 2003), p. 57. At the end of 2005 the EU member states were still working to introduce the elements of this regulation into their national legislation. Council of the European Union, 'Six-monthly report on the implementation of Chapter III of the EU Strategy against the Proliferation of Weapons of Mass Destruction', Council document no. 14520/05, Brussels, 5 Dec. 2005, p. 12.

export of radioactive sources was being prepared.⁶³ While the requirements of the IAEA Guidance are partly met in EU law,⁶⁴ aspects related to practical implementation (including who would authorize exports and who would seek the consent of the countries of destination prior to shipment) would have to be decided nationally.

The EU and the USA have offered support to ‘efforts to assist countries that need such assistance to establish effective and sustainable controls’.⁶⁵ International assistance efforts have largely been organized under the umbrella of the IAEA and financed using external contributions made into the IAEA Nuclear Security Fund.⁶⁶

V. Conclusions

The states that participate in informal multilateral groups to enhance the effectiveness of their national export controls acknowledge that more effort is still needed to combat and, if possible, reverse the proliferation of weapons of mass destruction and their delivery systems. There is growing sensitivity to the need to include the widest possible participation in these efforts to strengthen export control, and to base future efforts on cooperation to implement agreed international standards. There is increasing recognition that the work accomplished in the past in the self-selecting export control arrangements has established a solid platform on which an international set of standards can be built.

There are indications that export controls are likely to be applied in new functional areas as part of the wider effort to adapt arms control to a changing security environment. Two efforts are reported in this chapter. The new EU regulation on trade in goods that could be used for capital punishment, torture or other cruel, inhuman or degrading treatment extends export controls beyond the realm of military or strategic products in pursuit of human rights objectives. Many of the member states of the IAEA are examining how export controls might help reduce the risk of acquisition and use of radiological weapons by non-state actors.

The need to accelerate the adoption of the highest international standards through national laws and regulations continues to stimulate demand for export control outreach and assistance. The export control regimes have all

⁶³ In contrast, by early 2006 the USA is only at the initial stage of discussing strengthened regulations to control high-activity radioactive sources as an aspect of homeland security.

⁶⁴ Hallemans, J.-M. and Tricas Aizpún, A., ‘The European legislation on transport of radioactive materials’, *International Journal of Radioactive Materials Transport*, vol. 12, no. 4 (2001), pp. 193–96.

⁶⁵ The White House (note 59).

⁶⁶ E.g., financial support from the EU has helped the IAEA carry out projects to strengthen the security of radioactive materials in non-nuclear applications, and the capabilities of states for detection and response to illicit trafficking. These projects are primarily focused on countries in South-Eastern Europe and in the Central Asia region (Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan). ‘Council Joint Action 2004/495/CFSP of 17 May 2004 on support for IAEA activities under its Nuclear Security Programme and in the framework of the implementation of the EU Strategy against Proliferation of Weapons of Mass Destruction’, *Official Journal of the European Union*, L182 (19 May 2004), pp. 46–50.

continued their active outreach efforts, and both the European Union and Japan have been considering how best to help the USA finance and deliver assistance in the quantities needed and to the locations where there is demand.

The need for a broader participation in the development and implementation of international standards has been accompanied by a growing discussion of the need for discrimination, both negative and positive, between recipient countries. The long-standing support for closer scrutiny of exports to countries widely recognized to represent proliferation challenges may, at some point, tip into support for technology denial. At the same time, calls for greater efficiency in implementing export controls and for closer cooperation with industry may generate support for simplified procedures in cases of trade with countries acknowledged to have a high level of commitment to non-proliferation and control.

The high level of support in 2005 for two recent initiatives—UN Security Council Resolution 1540 and the PSI—suggests a growing awareness of the need to pay the same attention to enforcement of controls that has been paid to the development of modern and comprehensive legislation. In this regard a number of serious challenges are on the horizon for those charged with the development, management and implementation of export control. Two such issues for the immediate future appear to be how to control intangible technology transfer, and how to link export control enforcement with other parts of the effort to combat organized cross-border crime.

