III. The export control regimes

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In 2015, participants in the four multilateral export control regimes—the Australia Group (AG), the Missile Technology Control Regime (MTCR), the Nuclear Suppliers Group (NSG) and the Wassenaar Arrangement (WA) on Export Controls for Conventional Arms and Dual-use Goods and Technologies—updated their trade controls on goods and technologies that have uses in connection with chemical, biological, nuclear and conventional weapons. and discussed or agreed a revision of the items and activities subject to control.1 These politically binding agreements operate by consensus and are implemented and enforced through national laws. For European Union (EU) member states, they are also legally binding through the EU Dual-use Regulation, although not all EU member states participate in all the regimes.² The regimes also have an important norm-setting function, particularly regarding the types of items made subject to some form of control at the national and, in the EU, also the regional level. An increasing number of non-members apply the regimes' control lists. A few states outside the regimes, in particular those seeking membership, have committed themselves to follow regime principles and guidelines.

Government representatives from policy, licensing, enforcement, technical and intelligence backgrounds meet annually in different groupings within the regimes and report to the respective plenary, which decides on list changes, and issues guidelines and good practice documents. The regime chair rotates among participating states on an annual basis, except for the AG which has always been chaired by Australia. The chairs of the various sub-bodies for licensing and enforcement officers, and for technical experts tend to serve for a number of years and are agreed by consensus or rotate alphabetically. The WA is the only regime with a standing permanent secretariat with a head and support staff.

The formal guidelines and corresponding control lists of the different regimes are focused on export controls. However, other elements of trade controls, most notably on brokering, transit and trans-shipment, are increasingly becoming a focus of discussion. The AG added a brokering element to its guidelines in 2012. In 2014, the NSG adopted a good practice guide on

² Council Regulation (EC) no. 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items, *Official Journal of the European Union*, L134, 29 May 2009.

¹ For descriptions of these regimes and lists of states participating in them, see the website of each regime: Australia Group (AG), http://www.australiagroup.net/; Missile Technology Control Regime (MTCR), http://www.mtcr.info/; Nuclear Suppliers Group (NSG), http://www.nuclear-suppliersgroup.org/; and Wassenaar Arrangement (WA), http://www.wassenaar.org/.

brokering and transit/trans-shipment, while the WA adopted brokering guidelines in 2002 and 2003 and transit/trans-shipment guidelines in 2015.

In 2015, the dominant cross-regime theme remained engagement with non-participating states and exploring forms of engagement that can act as an alternative to membership. Regimes also continued their efforts to address the challenge of emerging technologies through amendments to their respective control lists.

India abandoned its attempt to achieve accession to all four export control regimes at the same time. The effort faced significant obstacles linked to the different memberships of the regimes and regime-specific obstacles to and requirements for membership, Instead, India sought to prioritize MTCR membership. India's acceptance into the MTCR had been 'expected to be the first step in having India join the four main export control regimes'. 3 However, the application was unexpectedly blocked.

The Australia Group

The 42 AG participants seek to 'counter the spread of technologies and materials used for chemical and biological weapons (CBW) through coordinated export controls, information sharing and outreach'. The AG was created as a result of international concern about the use of chemical weapons in the 1980-88 Iran-Iraq War.⁵ Its coverage has since been expanded to materials, equipment and technology that have uses in connection with biological weapons. However, unlike the Chemical Weapons Convention, it covers both chemicals and production equipment and technology.

After many years without the use of chemical weapons, since the Iran-Iraq War, the 2015 AG plenary took place in the shadow of chemical weapon use in Syria and concerns about further use.⁶ The plenary urged Syria to facilitate 'the complete and verified destruction of its entire chemical weapons programme' and to resolve 'all ambiguities in its declaration to the Organization for the Prohibition of Chemical Weapons'. For the first time in an AG chair's statement, specific concern was raised about chemical and biological activities in the Democratic People's Republic of Korea (DPRK, or North Korea) and in the Middle East.7

To mark the regime's 30th anniversary, the 2015 plenary took place in Perth, Australia. Meetings are usually held in Paris. The June plenary gath-

³ Stewart, I. J., 'Export controls at the crossroads', Bulletin of the Atomic Scientists, 15 Oct. 2015; and coverage of the relationship between the NSG and India in the SIPRI Yearbook since 2009.

⁴ Australia Group, 'Statement by the chair of the 2015 Australia Group plenary', Press release, AG/ Jun15/Press/Chair/40, 5 June 2015.

⁵ Australia Group, 'The origins of the Australia Group', [n.d.].

⁶ See chapter 18 in this volume.

⁷ Australia Group (note 4).

ered 41 participating states with the EU as the 42nd participant. The plenary discussed specific countries' interest in membership as well as fundamental questions regarding the AG's approach to expansion and engagement, but no new members were admitted in 2015.8 The group formally acknowledged Kazakhstan's adherence to AG guidelines, following a model similar to that of the MTCR where adherence status has existed for some time (see below). Such a model has also been informally explored in the NSG (see below). In order to encourage unilateral adherence, the AG promised adherents access to 'a broader range of information from AG participants to assist them in observing global best practice'. Its website states explicitly that adherence is 'not subject to any acceptance decision by the AG membership' but a consequence of countries informing the AG chair 'in writing of their political commitment to adhere to the AG Guidelines and Common Control Lists and any subsequent changes'. A new category of AG adherents was created on its website, complementing the list of AG participants.

As part of its engagement with non-participating states, two table-top enforcement exercises were held with six non-AG countries 'to share best practices and methods'. These were China, India, Myanmar, the Philippines, Singapore and Viet Nam. For the first time, this AG dialogue was scheduled in parallel with the plenary in order to facilitate interaction. In addition, the AG made outreach visits to India, Indonesia, Kazakhstan and Viet Nam in 2015.

On outreach to industry and academia, participants agreed to: (*a*) share information on their national outreach activities; (*b*) alert non-members to the importance of such activities; and (*c*) conduct direct outreach to 'international industry and academic forums to raise awareness of proliferation issues'.¹⁴

The previous plenary's decision to amend the AG guidelines was implemented in 2015. The guidelines now explicitly require states to consider 'the risk of controlled items falling into the hands of terrorist groups and individuals' when assessing export applications. ¹⁵

The 2015 plenary continued previous discussions on emerging technologies which could contribute to biological or chemical weapons development, such as additive printing or advances in biotechnology. It also further

⁸ Australia Group (note 4).

⁹ Australia Group (note 4).

¹⁰ Australia Group, 'Australia Group adherents', [n.d.].

¹¹ Australia Group (note 4).

¹² Australian Ministry for Foreign Affairs, Bishop, J., 'Address to Australia Group plenary', Perth, 5 June 2015.

¹³ Hardy, J., 'The Australia Group', Presentation at the 23rd Asian Export Control Conference, Tokyo, 23 Feb. 2016.

¹⁴ Australia Group (note 4).

¹⁵ Australia Group, 'Guidelines for transfers of sensitive chemical or biological items', June 2015.

explored ways to strengthen controls on intangible technology transfers through means such as email transmission and sharing of know-how in person. The annual revision of the list of chemical and biological items by technical experts resulted in the addition of P3/P4 laboratory equipment and Diethylamine.

AG participants also met in an informal setting at Wilton Park in the UK in October 2015 to further explore challenges and future directions. The conference discussed outreach to non-members, including membership and adherence, outreach to academia and industry, technological challenges and the AG structure.16

The Missile Technology Control Regime

The MTCR was established in 1987 to prevent the proliferation of unmanned systems capable of delivering nuclear weapons. Its scope was later extended to include all unmanned aerial vehicles (UAVs) capable of delivering nuclear, biological or chemical weapons.¹⁷ At its 29th plenary meeting held in Rotterdam in October 2015, the Netherlands and Luxembourg jointly assumed the rotating chair. 18 This new model makes it easier for smaller countries to participate in a chairing role. Piet de Klerk of the Netherlands will hold the chair on behalf of Luxemburg and the Netherlands until the 2016 plenary in the Republic of Korea (South Korea). He was already NSG chair in 2010–11. South Korea will chair the MTCR in 2016-17.

In Rotterdam, the 34 participating states discussed and exchanged information on existing and potential missile proliferation developments since the last plenary in Oslo. As in 2014, North Korea and Iran were specifically mentioned, and concerns were also expressed regarding 'ongoing missile programs in the Middle East, Northeast Asia, and South Asia'. 19 While in distinction to the other three export control regimes, the MTCR does not have an international treaty reference, participants highlighted the regime's relevance for the implementation of United Nations Security Council Resolution 1540 (2004) and also the explicit mentions of the MTCR control list in UN sanctions resolutions.²⁰ For the first time, a licensing and enforcement operational exercise was organized in the context of an MTCR plenary meeting.²¹ The 2015 technical working group meeting in Bern, Switzerland

¹⁶ 'The Australia Group: challenges and future directions', Programme, Wilton Park, UK, 14-16 Oct. 2015.

¹⁷ For further detail see the Missile Technology Control Regime (MTCR) website, http://www.

¹⁸ Missile Technology Control Regime, 'Public Statement from the Plenary Meeting of the Missile Technology Control Regime (MTCR), Rotterdam, 9 Oct. 2015'.

¹⁹ Missile Technology Control Regime (note 18).

²⁰ Missile Technology Control Regime (note 18).

²¹ Dutch Government official, Personal communication with the author, 14 Mar. 2016.

agreed to add solid propulsion and related technologies to the control list together with pneumatic systems.

Expansion of membership and engagement with non-members

Individual membership applications were 'thoroughly discussed' but no decisions taken.²² India formally applied for MTCR membership in 2015 and invested considerable diplomatic effort in advance of the meeting to secure support.²³ Some states with reservations about India joining the NSG have publicly supported India joining the MTCR (e.g. Norway).²⁴ However, India's application for membership was reportedly vetoed by Italy because of a legal dispute between India and Italy over the arrest of two Italian marines in connection with the killing of an Indian fisherman.²⁵

Nine other applications for MTCR membership have been pending for a number of years. These include applications from European countries such as Estonia and Latvia, which have reportedly been vetoed by Russia. ²⁶ China's membership is also still pending. ²⁷ Estonia and Latvia have declared unilateral adherence to the guidelines and the MTCR control list, which was welcomed by the plenary. ²⁸ The outgoing chair, Roald Naess from Norway, conducted an outreach mission to Indonesia in February 2015. ²⁹

The Hague Code of Conduct against Ballistic Missile Proliferation

The MTCR is complemented by the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC), which originated in the MTCR in 2002 but has developed into a separate initiative, comprising 137 countries. No new countries joined in 2015. Annual meetings take place in Vienna, Austria. The most recent took place in May 2015, with 63 registered delegations. Canada took over as chair from Peru and declared 'full and comprehensive implementation' and 'strengthening outreach activities for advancing the process of HCOC universalization' as its objectives.³⁰

²² Missile Technology Control Regime (note 18).

²³ Bagchi, I., 'India to be part of elite anti-missile grouping next week', *Times of India*, 2 Oct. 2015; 'No decision at MTCR meeting', *The Hindu*, 10 Oct. 2015; and New Delhi Television (NDTV), 'US supports India's membership to Missile Technology Control Regime', updated 23 Sep. 2015.

²⁴ Haidar, S., 'India pushes for NSG membership', *The Hindu*, 3 Nov. 2015.

²⁵ Davenport, K., 'India's bid to join missile regime fails', *Arms Control Today*, Nov. 2015.

²⁶ Davenport (note 25).

²⁷ Huang, C., "Bridging the gap": Analysis of China's export controls against international standards', 25 May 2012.

²⁸ Missile Technology Control Regime (note 18).

²⁹ Roald Naess (@Roald_Naess), 'Very productive meeting between #MTCR and Indonesia on how to prevent proliferation of weapons of mass destruction', Twitter, 9 Feb. 2016.

³⁰ US State Department, '14th regular meeting of the subscribing states to the Hague Code of Conduct Against Ballistic Missile Proliferation', Washington, DC, 29 May 2015.

The Nuclear Suppliers Group

The NSG aims to prevent the proliferation of nuclear weapons by controlling transfers of nuclear and nuclear-related material, equipment, software and technology 'without hindering legitimate trade and international cooperation on peaceful uses of nuclear energy'. 31

Argentina held the chair of the NSG and hosted the plenary for two consecutive years, with Ambassador Rafael Mariano Grossi as chairperson. Subsequent chairs will be South Korea (chairing both the MTCR and the NSG in 2016-17) and Switzerland (2017-18).

In 2015, the Consultative Group and the Information Exchange Meeting continued to be chaired by the United States and the Technical Experts Group by Sweden. 32 The NSG's 2015 plenary in Bariloche, Argentina on 4–5 June brought together the 48 participating states, as well as the European Commission and the chair of the Zangger Committee, both of which are permanent observers.33

At the 2015 plenary, the annual exchange of information and practices on licensing and enforcement issues included concerns associated with proliferation activities. In contrast to previous years, Iran was not mentioned in the public statement alongside North Korea in the context of proliferation concerns. Rather, reference was made to the 2 April Lausanne Understanding on the Key Parameters for the Joint Comprehensive Plan of Action. The plenary also continued discussions on streamlining government assurances for transfers of NSG-listed items in accordance with the guidelines.34

The NSG reconfirmed its commitment to the 1968 Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty, NPT), Argentina gave a national statement on behalf of the NSG to Main Committee II of the NPT Review Conference, and the NSG chair organized a side event during the 2015 NPT Review Conference.³⁵ At the side event, the presentation by the NSG chair and the chair of the Consultative Group highlighted the links between the NSG and the UN institutional and treaty system by referring

³² Nuclear Suppliers Group, 'Nuclear Suppliers Group, 2015–2016: chair information', [n.d.].

³¹ Nuclear Suppliers Group (NSG), Public statement, Plenary meeting of the Nuclear Suppliers Group, Buenos Aires, Argentina, 26-27 June 2015. For more information, see the NSG website, http://www.nuclearsuppliersgroup.org/>.

³³ For a brief description of the Zangger Committee see http://www.zanggercommittee.org. The Zangger Committee meets once per year and it maintains a complementary function to the NSG through its explicit link to the NPT and its slightly differing membership, although its utility has been questioned on occasion. Since Nov. 2015 it has been chaired by Louise Fluger Callesen of

³⁴ Nuclear Suppliers Group, 'Public statement, Plenary meeting of the Nuclear Suppliers Group, Bariloche, Argentina, 3-5 June 2015'. On developments regarding Iran and North Korea, see chapter 17 in this volume.

³⁵ Statement by Rafael Mariano Grossi, Delegation of the Argentine Republic, Main Committee II, Review Conference of the Parties to the Treaty on Non-Proliferation of Nuclear Weapons, New York, May 2015.

to: the NPT 2010 Action Plan, in which the Review Conference 'encourages States parties to make use of multilaterally negotiated and agreed guidelines and understandings in developing their own national export controls'; UN Security Council Resolution 1540; the IAEA Model Additional Protocol; and NSG Watch Lists adopted by UN sanctions committees.³⁶

Expansion of membership and engagement with non-members

Regarding engagement with non-NSG governments, the 2015 plenary statement contained 'options for enhancing outreach'. These included: (a) 'briefings for non-NSG partners'; (b) 'increased visibility of the NSG' at international meetings; and (c) 'a dedicated response to non-NSG partners seeking assistance and practical experience on developing, updating, strengthening and implementing national export control systems'.³⁷

Participating governments also discussed ways to engage with states that, although not members, have declared their adherence to the NSG guidelines. According to the NSG, 15 states have harmonized their national provisions with the NSG guidelines and control lists.³⁸ The Consultative Group is discussing possible benefits for adherent countries. The group meets at least twice per year in Vienna and during the plenary meetings. It was established by the 2013 Prague plenary.³⁹

At the plenary, participating states discussed India's relationship with the NSG. In 2015, India conducted considerable diplomatic efforts to persuade sceptical countries such as Austria, China and Switzerland, which see India's continued refusal to sign the NPT as a barrier to NSG participation. ⁴⁰ In this context, India made high-level visits to Sweden, Switzerland and Ireland, during which the issue of NSG membership was discussed. ⁴¹ During a visit to India in November 2015, NSG chair Grossi stated that India has 'all the elements in place for membership' and that he was trying to make the accession process 'more dynamic'. ⁴²

Several NSG members continued to expand their civilian nuclear trade with India. Australia finalized an agreement on civil nuclear cooperation with India in December 2015, while Japan reached a preliminary agreement in the same month.⁴³ A number of other countries had already resumed or

³⁶ Grossi, R. and Goorewich, R., 'Nuclear Suppliers Group', Presentation, New York, 6 May 2015.

³⁷ Nuclear Suppliers Group (note 34).

³⁸ Grossi, R., 'Nuclear Suppliers Group', Presentation at the 23rd Asian Export Control Conference, Tokyo, 23 Feb. 2016.

³⁹ Grossi and Goorewich (note 36).

⁴⁰ Busvine, D., 'Nuclear club eyes Indian inclusion, but risks Pakistan's ire', Reuters, New Delhi, 24 Nov. 2015; and 'China calls for talks among NSG members to admit India', *Indian Express*, 25 Dec. 2015.

⁴¹ Haidar (note 24).

⁴² Haidar (note 24).

⁴³ 'India, Japan seal agreement for civil nuclear cooperation', *Dna India*, 12 Dec. 2015.

entered into nuclear commerce with India following the 2008 'NSG exemption', bringing the total number of such agreements with India to 13.44 In this context, Japan removed six of India's space- and defence-related entities from its Foreign End User List.45

Controversy also continued over China's supply of nuclear technology to Pakistan. In 2015, China officially confirmed for the first time that it is involved in the construction of six nuclear reactors in Pakistan. It had reported its involvement in the first two on joining the NSG in 2004, but argued subsequently that two additional reactors for Pakistan fell under the so-called grandfather clause which permits countries to respect commitments made prior to joining the NSG, and had not previously confirmed media reports about two further reactors. 46 With reference to the grandfather clause, the US Assistant Secretary of State stated that when China joined the NSG, 'there was not agreement that that was an open-ended clause'.47

The Wassenaar Arrangement

The WA promotes 'transparency and greater responsibility' regarding transfers of conventional arms and related dual-use goods and technologies. 48 It thus seeks to prevent 'destabilising accumulations' of such items and also their acquisition by terrorists.⁴⁹ The annual plenary was held on 2-3 December 2015 in Vienna—where it meets every year—with Spain holding the rotating chair. Finland will take over the chair for 2016. The usual working groups met during the year to prepare the plenary: the General Working Group, the Licensing and Enforcement Officers Meeting and the Experts Group.50

⁴⁴ On the Indian exemption see Anthony, I. and Bauer, S., 'Controls on security-related international transfers', SIPRI Yearbook 2009. The countries that have agreements with India are Argentina, Australia, Canada, Czech Republic, France, Japan (preliminary agreement), Kazakhstan, South Korea, Mongolia, Namibia, Russia, the UK and the USA. World Nuclear Association, 'Nuclear power in India', updated 26 Feb. 2016.

^{45 &#}x27;India, Japan to accelerate civil nuclear deal', The Hindu, 1 Sep. 2015.

⁴⁶ Parameswaran, P., 'China confirms Pakistan nuclear projects', *The Diplomat*, 10 Feb. 2015. On previous developments see Bauer et al., 'Dual-use and arms trade controls', SIPRI Yearbook 2015,

⁴⁷ Countryman, T. M., Assistant Secretary, US Department of State, 'The President's submission to the Congress of the US-China Agreement for Peaceful Nuclear Cooperation (123 Agreement)', Testimony before the Senate Foreign Relations Committee, 12 May 2015.

⁴⁸ For a brief description of the regime see the Wassenaar Arrangement website, http://www. wassenaar.org/>.

⁴⁹ Wassenaar Arrangement, 'Guidelines and procedures, including the initial elements',

⁵⁰ Wassenaar Arrangement, 'Statement issued by the Plenary Chair on the 2015 outcomes of the Wassenaar Arrangement on export controls for conventional arms and dual-use goods and technologies', Vienna, Dec. 2015.

At the 2015 plenary, the WA adopted best practice guidelines on transit or trans-shipment.⁵¹ A document on transit, trans-shipment and brokering had been adopted by the NSG the previous year, reflecting the fact that at the national level, control systems for different types of dual-use items and even conventional arms overlap. 52 However, the documents differ in terms of substance. Most notably, beyond the legal elements that are recommended, the WA document refers to a range of practical steps such as 'focused outreach to manufacturers, distributors, brokers, and freight forwarders' and the need to 'encourage industry to develop internal compliance programs', to 'provide training for Customs and enforcement officers' and 'increase cooperation between enforcement agencies and licensing authorities': and to 'exchange information on policies and practices' among WA partners.53 In terms of the scope of transit and trans-shipment controls, the WA guidelines refer to listed and unlisted items, 'where there is reliable information that the items are intended to be used in prohibited military or terrorist uses, or that otherwise pose a security concern'. It also specifies that the authority to control items in transit or trans-shipment should 'extend fully to activities taking place in special Customs areas located within a sovereign state's territory, such as free-trade zones, foreign trade zones and export processing zones', thus going beyond the NSG document. The WA's best practice includes establishing a legal basis for authorities to stop, inspect and seize shipments and to require permits for transit cases on a risk-based approach. These measures should be flanked by industry outreach and information-sharing measures among the authorities.

The WA also agreed and published 'Elements for the effective fulfilment of national reporting requirements', which is 'intended to assist all countries in meeting their international reporting obligations related to conventional arms transfers'. The guidelines recommend that states draft a national 'procedure document' that contains: (a) details of the state's different reporting obligations and their content; (b) key deadlines for the compiling and submission of reports; (c) the methods used for compiling and submission of reports; (d) where appropriate, systems for facilitating the submission of the same information to different reporting instruments; and (e) systems for ensuring that qualified personnel are engaged in the process of classifying items. ⁵⁴

⁵¹ Wassenaar Arrangement, 'Best practice guidelines for transit and trans-shipment', 4 Dec. 2015.
⁵² Bauer, S. et al., 'Dual-use and arms trade controls', SIPRI Yearbook 2015; and Nuclear Suppliers Group, 'Good practices for the implementation of brokering and transit/transshipment controls', 2014.

⁵³ The Nuclear Suppliers Group document only makes brief reference to the need to provide enforcement agencies with adequate training and resources and to encourage internal compliance programmes.

⁵⁴ Wassenaar Arrangement, 'Elements for the effective fulfilment of national reporting requirements (agreed at the 2015 plenary)'.

During 2015, participating states agreed a number of changes to the WA control lists. Most of the significant changes made were to the dual-use list rather than the military list and reflected efforts to keep pace with advances in a range of controlled technologies. New controls were added, including on explosive material. Some controls were relaxed, such as for 'specific types of machine tools and computers, technologies used in consumer industries (e.g. car production, domestic medical devices), optical mirrors for solar power installations, battery cells, underwater still cameras and equipment incorporating information security'. Some existing controls were clarified on biological agent protection and detection equipment, electronic devices for military helmets and equipment that performs analogue-to-digital conversion 55

A special commemoration will be held at the December 2016 plenary on the occasion of the Wassenaar Arrangement's 20th anniversary. 2016 will also be an assessment year, following a four to five-year cycle. The General Working Group will be chaired by Paul Beijer (Sweden) during the fifth annual assessment, which will review and evaluate the overall functioning of the WA

Expansion of membership and engagement with non-members

The WA has 41 members. No additional states were admitted in 2015. Applications by states such as Cyprus and Kazakhstan are still pending. The plenary announced plans to continue engagement with non-members through collective briefings and bilateral dialogue, including through in-country visits. A 'technically-focused Practical Workshop' will be held in Vienna on 27-28 June 2016, to which some 50 non-member countries have been invited. This is a substantial expansion in the number of countries with which the WA formally engages. The WA also plans to engage with industry and academia, and exchange further information on such engagement at the national level and on the issue of internal compliance programmes.

⁵⁵ Wassenaar Arrangement, 'Summary of changes to the list of dual-use goods and technologies and munitions list', 3 Dec. 2015.