THE DUAL-USE EXPORT CONTROL POLICY REVIEW: BALANCING SECURITY, TRADE AND ACADEMIC FREEDOM IN A CHANGING WORLD

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I. INTRODUCTION

Dual-use items are goods and technologies that may be used for both civilian and military purposes.[1] The 2009 European Union (EU) Dual-use Regulation provides a common legal basis for dual-use export controls across the EU and is applied by the 28 member states through their national implementation and enforcement systems.[2] Through their export control systems governments seek to control a vast range of dual-use items, including certain types of nuclear material, chemicals, biological agents, information technology (IT) software, components and technology (in both tangible and intangible forms). Items can be subject to controls because they are included on the EU Dual-use Regulation's control list or because they are being shipped for a particular end use or to a particular end user and are covered by 'catch-all' or 'end-use' controls.[3] In addition to the act of exporting items, other activities are also controlled, such as transit, trans-shipment, brokering and financing. Controls are

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[1] Dual-use items can also refer to items that have nuclear and non-nuclear applications, or weapons of mass destruction (WMD) and non-WMD applications. See Michel, Q., 'Dual-use exports require a common definition', in 'Dual-use technologies in the European Union: prospects for the future', Friends of Europe, 2015, <http://www.friendsofeurope.org/media/uploads/2015/09/FoE-Dual-use-Discussion-paper-WEB.pdf>.

[2] Council Regulation 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, as amended most recently through Commission Delegated Regulation (EU) 2015/2420 of 12 Oct. 2015, *Official Journal of the European Union*, L340, 24 Dec. 2015. The 2009 Dual-use Regulation was preceded by regulations adopted in 1994 and 2000.

[3] Based on Article 4 of the EU Dual-use Regulation, the current catch-all controls have two elements: (*a*) authorities can make non-listed items subject to control for a specific end user or end-use destination; and (*b*) if the exporter has positive knowledge or reason to believe that a specified end use may occur, it must notify the authorities. In the UK the 'catch-all' controls are referred to as 'end-use' controls.

SUMMARY

The 2009 European Union (EU) Dual-use Regulation, which provides a common legal basis for dual-use export controls across the EU, is currently undergoing a detailed review. Concrete proposals on how it could be modified are due to be produced by the European Commission in the first half of 2016. These will then be discussed with the EU Council and the European Parliament before adoption.

This paper aims to inform the ongoing process by providing a detailed analysis of the review options currently being discussed and the key considerations that will need to be addressed. In particular, it details the range of generic and EU-specific challenges that confront the implementation of dual-use export controls. It also lays out concrete options for how the EU could address these challenges while strengthening the Dual-use Regulation in ways that promote both security and human rights, without generating unnecessary regulatory burden.

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imposed through licensing systems, using various types of licence depending on the sensitivity of the items and the destinations involved. Some activities are covered by individual licences for single shipments, which specify the item, destination and end user involved. Others are covered by general or global licences for multiple shipments, which may be applicable to a range of different items, destinations and end-users.

According to the European Commission's Export Control Review Roadmap, a wide range of industry sectors and actors are involved in the production of dual-use items: 'energy, aerospace, defence and security, lasers and navigation, telecommunications, life sciences, chemical and pharmaceutical industries, manufacturing and material-processing equipment, electronics, semiconductor and computing industries'.[4] The Roadmap thus recognises that there is no such thing as a single 'dual-use industry' with its own narrow set of affected entities. In fact, the notion of a 'dual-use industry' is potentially misleading. Rather, dual-use export controls cover a range of products and technologies as diverse as wind turbines and telecommunications networks, and not only manufacturers but also transport providers, academics and academic institutions can be affected. How they are affected depends on the items involved, the activities carried out and the way in which the member state where they are based administers export controls. Moreover, the EU Dual-use Regulation forms just one part of a broader framework of export controls in which these companies, individuals and institutions might interact. The other elements are the EU and United Nations sanctions regimes, controls on the export of military items and United States export controls, which place restrictions on the re-export of certain products and technologies of US origin.

The key contribution that the EU Dual-use Regulation makes to security is preventing or disrupting supplies of goods and technologies that may contribute to illegal weapons of mass destruction (WMD) programmes or to the military capabilities of states subject to an EU or a UN arms embargo. As such, the EU Dual-use Regulation is a major component of the EU's 2003 Strategy on the Non-proliferation of Weapons of Mass Destruction (EU WMD Strategy) and the complementary 2008 New Lines for Action by

the European Union in Combating the Proliferation of Weapons of Mass Destruction and their Delivery Systems (New Lines for Action). However, in recent years there has been both an expansion in the range of items that are subject to dual-use export controls and a continued blurring of the distinction between civilian and military technologies. This has contributed to an expanded notion of the contribution to security that can be made by dual-use export controls including, in certain cases, preventing human rights abuses.[5]

The EU dual-use export control system is currently undergoing a review. Concrete proposals on how the EU Dual-use Regulation could be modified are due to be produced by the European Commission in the first half of 2016. These will be adopted after negotiations among the European Commission, the EU Council and the European Parliament. This is unlikely to happen before the end of 2016. This paper aims to inform the review process by providing a detailed analysis of the issues under discussion and the key challenges that will need to be overcome. Section II presents background information on the review process and highlights the generic and EU-specific challenges that currently confront the application of dual-use export controls. Section III analyses each of the main priorities and proposals that have been put forward by the European Commission to date as well as the key issues that the Commission, the Council and the Parliament will need to consider as the process moves forward. Section IV presents key findings and conclusions.

II. THE REVIEW PROCESS AND THE CHALLENGES IT FACES

Article 25 of the 2009 EU Dual-use Regulation foresees a three-yearly review process. In 2011 the European Commission published a green paper reviewing the EU's dual-use export controls.[6] EU member states, the European Parliament, industry associations and economic operators (including law firms and consultancies), civil society organizations and academia provided views in response to the green

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[4] European Commission, 'Review of the EU dual-use export control regime: Regulation 428/2009', Roadmap, Directorate-General Trade F1, 15 July 2014, <http://ec.europa.eu/smart-regulation/impact/planned_ia/docs/2014_trade_014_dual_use_en.pdf>, p. 3.

[5] The range of controlled activities has been expanded beyond exports to brokering, transit and trans-shipment. In EU policy discussions, the term 'export control' continues to be used as an overarching term encompassing these closely related activities. Therefore, the term 'export control' is used here in the broader sense of controlling exports and related activities.

[6] European Commission, 'The dual-use export control system of the European Union: ensuring security and competitiveness in a changing world', Green Paper, COM (2011) 393, 30 June 2011.

paper.[7] In 2013 the European Commission presented its conclusions to the European Council and the European Parliament, stating that a broader review was required.[8] In April 2014 the Commission presented a range of review options in an official communication, 'for the modernisation of EU export controls and their adaptation to rapidly changing technological, economic and political circumstances'.[9] Before proposing specific amendments to the legislation and complementary measures such as guidelines, the European Commission is consulting stakeholders.[10] The Commission is due to present an impact assessment report in the first half of 2016. This will be followed by a legislative proposal, which will go through the regular consultation process in the relevant EU bodies and thus be subject to detailed discussions with EU member states before adoption by the Council. A revised regulation also requires the approval of the European Parliament, since it falls under the co-decision procedure outlined in the Lisbon Treaty.[11] This process is unlikely to be completed before the end of 2016.

The review of the EU Dual-use Regulation will need to address or overcome the broad set of challenges that confront the effective implementation of dual-use controls. Some of these challenges relate to export controls per se, while others arise from the specific context of policy formation and implementation within and through EU frameworks. Generic problems include the increasingly complex and volatile security environment that currently exists in the world. There are a range of WMD proliferation challenges and threats, from state-run programmes to the risk of non-state actors gaining access to WMD-relevant goods and technologies. These challenges also include technological changes that have affected patterns of production and transfer. In particular, the broader availability of advanced dual-use goods and the emergence of a range of new technologies for transmitting information electronically have increased the ease and speed at which transfers can take place. In addition, developments in bio-technology have greatly reduced the cost and complexity of carrying out scientific research in areas that have potential WMD-related applications. At the same time, governments face a range of pressures pushing them towards greater facilitation of legitimate trade and reductions in red tape. Global supply chains in dual-use industries and transnational company structures, combined with technological developments, have made traditional approaches to export control—based on border control—increasingly insufficient. In addition, budget cuts as part of broader austerity measures have affected resource allocations for dual-use licensing and enforcement, leading to resource constraints.[12] Meanwhile, the workload for the authorities charged with enforcing dual-use export controls continues to increase, most notably through expansions in the range, scope and number of sanctions regimes and other restrictive measures.[13]

Some challenges are unique to the EU context. For example, creating links between the EU Dual-use Regulation and other areas of EU policymaking relevant to export controls has long proved challenging. At the national level, sanctions regimes and controls on the export of both military and dual-use items are often implemented by the same authorities, using the

[7] European Commission, 'Strategic export controls: enduring security and competiveness in a changing world', Report on the public consultation launched under the Green Paper COM (2011) 393, 17 Jan. 2013, <http://trade.ec.europa.eu/doclib/docs/2013/february/tradoc_150459.pdf>.

[8] European Commission, Report from the Commission to the Council and the European Parliament on the implementation of Regulation (EC) no. 428/2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items, COM (2013) 710 final, 16 Oct. 2013.

[9] European Commission, Communication from the Commission to the Council and the European Parliament on the review of export control policy: ensuring security and competitiveness in a changing world, COM (2014) 244 final, 24 Apr. 2014.

[10] European Commission (note 4); and European Commission, 'Impact assessment for the review of the dual-use export control regime: consultation strategy', [n.d.], <http://trade.ec.europa.eu/doclib/docs/2015/july/tradoc_153627.pdf>.

[11] Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed 13 Dec. 2007, entered into force 1 Dec. 2009, <http://europa.eu/lisbon_treaty/>.

[12] E.g. in the UK the number of staff at the Export Control Organisation (ECO) was cut from 146 to 115 between 2003 and 2006. Since 2008 there have been further cuts in staffing levels, as there have been in all branches of the British Government. Nonetheless, the British Government maintains that staffing levels at ECO are 'adequate' and that 'the Government is meeting its export licensing targets'. British Parliament, 'Quadripartite Select Committee First Report', 19 July 2006, <http://www.parliament.the-stationery-office.co.uk/pa/cm200506/cmselect/cmquad/873/87307.htm>, para. 54; and British Government, 'Strategic export controls: Her Majesty's Government's Annual Report for 2012, quarterly reports for 2012 and 2013, and the Government's policies on arms exports and international arms control issues', Oct. 2014, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364529/The_Committees_on_Arms_Export_Controls__CAEC__First_Joint_Report_of_Session_2014-2015.pdf>, para. 30.

[13] See the EEAS, 'Consolidated list of persons, groups and entities subject to EU financial sanctions', <http://www.eeas.europa.eu/cfsp/sanctions/consol-list/index_en.htm>.

same national regulations. At the EU level, however, different branches of the Commission and the Council are responsible, making it difficult to develop joined-up policies or set up shared forums to discuss implementation and enforcement issues. In addition, the EU's goal of promoting economic growth and preventing distortions in competition, combined with the fact that the Dual-use Regulation is an EU trade instrument, creates a strong emphasis on minimizing the accompanying economic burden while ensuring the uniformity of its application in different EU member states.[14] The issue is given added importance because many of the industrial sectors affected by dual-use controls, such as the aerospace and Information and Communications Technology (ICT) sectors, are seen as particularly important for maintaining the EU's capabilities in key technologies and ensuring the EU's economic growth.[15] There has also been a growing emphasis on the issue of academic freedom, which is enshrined as a core value in Article 13 of the EU's Charter of Fundamental Rights.[16] In recent years a number of academics have argued that the freedom to carry out and publish certain types of research has been restricted by the application of dual-use export controls to Intangible Technology Transfer (ITT).[17]

[14] The review process has been largely framed by the need to balance the Regulation's contribution to security with its economic impact. A joint statement by the European Parliament, Council and Commission attached to Council Regulation 599/2014 also highlights the importance of 'enhancing the effectiveness and coherence of the EU's strategic export controls regime, ensuring a high level of security and adequate transparency without impeding competitiveness and legitimate trade in dual-use items'.

[15] A number of studies have emphasized the importance of 'dual-use technologies' to the EU's economic growth and the need to minimize unnecessary restrictions on their manufacture and trade. See Arnould, C. F., 'Three ways to reindustrialise Europe with dual-use technologies', in 'Dual-use technologies in the European Union: prospects for the future', Friends of Europe, 2015, <http://www.friends ofeurope.org/media/uploads/2015/09/FoE-Dual-use-Discussion-paper-WEB.pdf>; and European Commission, 'EU funding for dual use: a practical guide to accessing EU funds for European regional authorities and SMEs', Directorate-General Enterprise and Industry, Oct. 2014, <http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=8133&lang=en&title=Guide-on-dual-use-for-Regions-and-SMEs%3A-Helping-SMEs-tap-into-EU-funding-for-dual-use-projects>.

[16] Charter of Fundamental Rights of the European Union, *Official Journal of the European Communities*, C364, 18 Dec. 2000, pp. 1–22.

[17] ITT is the transmission of intangible technology (e.g. the oral transfer of know-how in meetings) and the transmission of technology through intangible means (e.g. emails; software uploads or downloads). On the controversy see Charatsis, C., 'Setting the publication of dual-use research under the export authorisation process: the H5N1 case', Strategic Trade Review, vol. 1, issue 1, autumn 2015, pp. 56–72; and Biercuk, M., 'Science and the slammer: the consequences of Australia's

The April 2014 European Commission Communication outlined four priorities for the review: (*a*) to 'adjust to the evolving security environment and enhance the EU contribution to international security'; (*b*) to '[promote] export control convergence and a global level-playing field'; (*c*) to 'develop an effective and competitive EU export control regime'; and (*d*) to 'support effective and consistent export control implementation and enforcement'. However, there is a certain level of overlap in the coverage of these priorities.

This paper is structured around five objectives that have been highlighted as potential outcomes of the review process: (*a*) enhancing effectiveness and creating convergence in policy implementation; (*b*) adopting a 'human security approach'; (*c*) modernizing the licensing architecture; (*d*) engaging with the private sector and other stakeholders; and (*e*) improving engagement with non-EU states and export control regimes.

Structuring the paper in this way does not completely eliminate duplication. For example, actions aimed at modernizing the licensing architecture and building links with the private sector can also act as means for enhancing effectiveness and creating convergence in policy implementation. However, the framework does capture all of the main proposals that have been put on the table during the process to date. Each subsection explores the specific proposals that have been discussed in relation to these objectives as well as key issues that will need to be considered as the process moves forward.

III. KEY ISSUES FOR THE REVIEW PROCESS

Enhancing effectiveness and creating convergence in policy implementation

EU policy documents frequently contain references to the need to enhance the effectiveness of dual-use export controls across the EU and create an EU-wide 'level playing field' for the companies and individuals affected.[18] Work in these areas has been ongoing for several years and was a key focus of a peer review of the dual-use export control systems of EU member

new export control regime', 16 Oct. 2012, <http://sydney.edu.au/news/84.html?newsstoryid=10295>.

[18] European Commission (note 4).

states and acceding countries conducted in 2004.[19] The 2014 Commission Communication highlights several areas where standards could be improved or greater convergence is possible, including the decision-making procedures for granting or denying licences, the processing times for licence applications and the implementation of catch-all controls. At the national level, differences in these areas may be linked to variations in resource allocation, national practices, policy priorities, access to information, and the mechanisms through which risk assessments are carried out.

Standardizing decision-making procedures for export licences

Although poorly documented, there is anecdotal evidence indicating that there are differences in the way in which applications for licences for similar exports are assessed by different EU member states. In order to tackle these inconsistencies—and to raise overall standards—the Commission has highlighted the need for a 'risk-based approach' to licensing decision making, 'based on the development of a common risk management framework'.[20] Article 12 of the EU Dual-use Regulation lists the range of issues that member states should 'take into account' when considering licence applications. However, the exact scope of these commitments and the way in which they should be implemented in practice is not clearly defined. The development of common risk-management frameworks for licensing procedures would generate greater clarity in these areas and be a potentially useful outcome of the review process. But the frameworks would need to be adaptable in order to meet the particular concerns associated with different items covered by the dual-use control list. EU-level discussions on common risk-management frameworks for customs procedures are already taking place. However, the risk-management issues that need to be addressed by customs procedures differ from those related to licensing. Moreover, the customs-related discussions are taking place under the auspices of the Directorate General for Taxation and the Customs Union (DG TAXUD) and not the

Directorate General for Trade (DG Trade), which is responsible for the EU Dual-use Regulation.[21]

One way to help harmonize decision-making procedures for export licences would be to improve the mechanisms for information sharing between EU member states. States currently share information on licensing denials through the Dual-Use Electronic System (DUeS), but little information is shared in other areas, such as licences granted, actual exports, sensitive destinations and actual or prevented export control violations. Sharing information in these areas could help to improve national risk assessment procedures and harmonize policy outcomes. However, increases in information sharing would have to overcome national constraints on sharing intelligence or commercially sensitive information, and would have to be accompanied by the development of systems and allocation of resources for processing the information received. In the short term, achieving greater convergence in the time it takes to process licence applications may be more realistic than focusing on the outcomes of the decisions themselves. Indeed, processing times rather than denials appear to be of greater concern to companies.[22] Setting agreed targets for routine cases, making it obligatory to create an electronic licensing system, and clearly communicating the potential economic consequences of insufficient staff and delayed licensing decisions could assist licensing authorities in obtaining the resources necessary for their work.[23] In this, as in other areas of export licensing, member states would be likely to benefit from access to EU funds for training and capacity building. The 2014 Commission Communication raises the need for a 'targeted EU-wide capacity-building programme and training for relevant officials, including customs and border agencies'.[24] The EU has invested substantial financial and human resources in capacity building in other countries and regions, but no funding is currently available for the

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[21] Even in those few countries where the customs authority issues export licences (notably in the Netherlands and Portugal), this unit is organizationally distinct from those that conduct risk management, audits and investigations.

[22] SIPRI and Ecorys, 'Final report: data and information collection for EU dual-use export control policy review', European Commission, Brussels, 6 Nov. 2015, <http://www.sipri.org/pdfs/final-report-eu-dual-use-review>.

[23] Bauer, S., 'Improvement of EU dual-use export controls in the context of the European Commission's reform proposal', *Workshop: Dual Use Export Controls* (European Parliament, Policy Department, Directorate-General for External Relations: Brussels, Oct. 2015).

[24] European Commission (note 9).

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[19] Council of the European Union, 2630th Council Meeting, General Affairs and External Relations, Press Release 15460/04, 13 Dec. 2004, <http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/gena/83083.pdf>.

[20] European Commission (note 9), p. 9.

training of staff in EU member states. Instead, the US State Department's Export Control and Related Border Security (EXBS) Programme has filled the void for some member states, and the US Department of Energy has provided commodity identification training (CIT) for many EU member states.[25]

Standardizing interpretation of key terms and concepts, catch-all controls and control lists

One reason for the differences in EU member states' implementation of the EU Dual-use Regulation is that there are variations in the way certain terms and concepts are understood and applied at the national level. There is no EU-wide agreement on what is meant by several key concepts in the field of dual-use export controls, such as 'Intangible Technology Transfer', 'public domain', 'basic scientific research', 'transit' and 'trans-shipment', which leads to differences in the activities that are subject to controls. In some cases, there are definitions but these are contradicted by alternative definitions in other EU instruments. For example, the EU Dual-Use Regulation and the Union Customs Code define the term 'transit' differently.[26] In other cases, either no EU-wide definition exists or it is framed in very general terms. For example, differences in what constitutes 'basic scientific research' have contributed to variations in whether particular activities in academia are subject to export controls.[27] Developing and applying detailed guidance on how

these different terms should be understood and applied would help to promote greater clarity and convergence.

Another area where there is potential scope for greater convergence is catch-all controls. Article 4 of the EU Dual-use Regulation creates controls on non-listed items that may be supplied to a military end user in an embargoed state, or used in connection with a WMD programme or as spare parts for illegally supplied military items. National authorities can place controls on non-listed items and companies are obliged to notify their national authorities if they are aware that they are exporting non-listed items that will be used in a proscribed manner. Member states can also expand these provisions to cases where the exporter has 'grounds for suspecting' that items may be used in a WMD programme. Anecdotal evidence indicates that there are significant differences in how member states apply catch-all controls.

The European Commission proposes to 'harmonise the notion of catch-all controls across the EU'. A first step would be to develop a common interpretation of the way in which catch-all controls are operationalized at the national level and the mechanisms through which information about them is shared with companies.[28] A second step would be to increase the amount of information that is exchanged between member states. At present, some member states issue licences for items covered by catch-all controls if they are satisfied that there are no concerns about a particular export. Other member states take a different approach, returning applications to exporters with the message that no licence is required when they have no concerns. Member states share information on denials issued under the catch-all controls but not about licences granted or cases where no licence is required. The extension of information sharing to cover these cases would help all states to have a similar approach to when the controls apply and when they do not.

A further challenge to policy convergence is differences regarding whether a particular item is covered by the dual-use control list. Companies and individuals need to have timely information about whether they are subject to dual-use export controls, and the ultimate responsibility for providing or confirming this information lies with national licensing authorities. However, the range of goods and

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[25] On the EXBS programme see US Department of State, 'The EXBS Program', <http://www.state.gov/t/isn/ecc/c27911.htm>; and on CIT training see Pal, D., 'INECP export control system development and capacity building', International Nonproliferation Export Control Program, National Nuclear Security Administration, US Department of Energy, [n.d.], <http://www.state.gov/strategictrade/documents/organization/190364.pdf>.

[26] The Union Customs Code entered into force in 2013, replacing the 2008 Community Customs Code. Regulation (EU) no. 952/2013 of the European Parliament and of the Council of 9 Oct. 2013 laying down the Union Customs Code, *Official Journal of the European Union*, L69, 10 Oct. 2013, p. 1. Its substantive provisions are applicable from 1 May 2016, once the corresponding Commission acts are in force, see European Commission, 'The Union Customs Code: a recast of the Modernised Customs Code', <http://ec.europa.eu/taxation_customs/customs/customs_code/unioncustoms_code/index_en.htm>.

[27] The EU Dual-use Regulation exempts basic or fundamental research (as opposed to applied research) from licensing requirements. However, 'this term has been open to interpretation and has become the central issue in disputes regarding the publication of controversial Influenza A research', SIPRI and Ecorys (note 22), p. 38; and Enserink, M., 'Dutch appeals court dodges decision on hotly debated H5N1 papers', Science, 16 July 2015, <http://www.sciencemag.org/news/2015/07/dutch-appeals-court-dodges-decision-hotly-debated-h5n1-papers>.

[28] E.g. member states may apply catch-all controls to an entire destination country or to a specific end user, and either narrowly based on specific information (usually on intelligence) or more broadly as a precautionary or awareness-raising measure with industry.

technologies subject to dual-use export controls means that some authorities, particularly those in smaller EU member states, may be unable to respond to enquiries or that the product ratings or classifications provided may vary from state to state. The 2014 Commission Communication refers to the possibility of creating an 'EU technological reaction capacity' that could help to draft future control-list language and produce guidance on how particular control-list entries should be interpreted. Such a capacity would need to have expertise across the full spectrum of technologies covered by dual-use export controls and to harness inputs from both industry and academia.

One area not highlighted by the Commission, but where there is clear scope for greater convergence, is enforcement mechanisms and resources. Article 24 of the EU Dual-use Regulation states that 'each member state shall take appropriate measures to ensure proper enforcement of all the provisions of this Regulation', 'shall lay down the penalties applicable to infringements of the provisions of this Regulation or of those adopted for its implementation' and that such penalties must be 'effective, proportionate and dissuasive'. However, no significant efforts have been made to develop agreed standards on what is meant by 'appropriate measures' or 'effective, proportionate and dissuasive' in this context. Nor is there any EU forum for enforcement officers to discuss national practices regarding detection, investigation and prosecution of suspected violations and share information about recently completed cases of violations. While the establishment of offences and penalties is a national competence, creating a forum could help to develop common perceptions regarding what penalties are considered appropriate and awareness of the penalties states impose for different offences. It would also allow information to be exchanged about specific cases and generic challenges, such as the enforcement of extraterritorial controls—an issue that is mentioned in the 2014 Commission Communication but not further elaborated.

Adopting a human security approach

In recent years dual-use export controls have been expanded to include certain types of ICT surveillance systems.[29] In 2011 and 2012 the EU arms embargoes

on Iran and Syria were expanded to include a wide range of ICT surveillance systems.[30] In 2012 and 2013 'mobile telecommunications interception or jamming equipment', 'Internet Protocol (IP) network surveillance systems' and 'intrusion software' were added to the Wassenaar Arrangement's dual-use control list.[31] In December 2014 these items were added to the EU's dual-use control list. Also in 2014, the EU's Dual-Use Coordination Group (DUCG) established a Surveillance Technology Expert Group (STEG) to examine issues related to controls on the export of ICT surveillance systems. These developments have fed into a larger discussion about the need to better reflect the range of human rights and security risks posed by the export and use of both controlled and non-listed dual-use goods. In response, the Commission has discussed the possibility of applying a human security approach to the EU Dual-use Regulation. This would potentially involve a further expansion in the range of goods subject to controls and the development of new guidelines for states to use when assessing licence applications.[32] It could also lead to a shift beyond the civilian-use or military-use paradigm that frames the range of goods controlled by dual-use export controls to encompass systems used by intelligence agencies and law enforcement agencies (LEAs).

Expanding the range of goods controlled

A number of EU member states, members of the European Parliament and non-governmental organizations (NGOs) have called for additional ICT surveillance systems to be made subject to dual-use export controls. These include so-called 'monitoring

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[29] ICT surveillance systems are used for the monitoring and exploitation of data or content that is stored, processed or transferred via information and communications technologies. This includes devices such as computers and mobiles phones but also telecommunications networks.

[30] Council Decision 2011/782/CFSP of 1 Dec. 2011 concerning restrictive measures against Syria and repealing Decision 2011/273/CFSP, *Official Journal of the European Union*, L319, 2 Dec. 2012; and Council Decision 2012/168/CFSP of 23 Mar. 2012 amending Decision 2011/235/CFSP concerning restrictive measures directed against certain persons and entities in view of the situation in Iran, *Official Journal of the European Union*, L87, 24 Mar. 2012, p. 85.

[31] Bauer, S. et al., 'Dual-use and arms trade controls', *SIPRI Yearbook 2013: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2013); and Bauer, S. et al., 'Dual-use and arms trade controls', *SIPRI Yearbook 2014: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2014). The Wassenaar Arrangement seeks to prevent 'destabilizing accumulations' by states of conventional arms and related dual-use goods and technologies and to prevent the acquisition of such items by terrorist groups, organizations and individuals. See <www.wassenaar.org>.

[32] European Commission (note 9).

centres'—which are used by LEAs and intelligence agencies to collect, store and analyse communications data— and the systems used by communications network operators to comply with laws on communications data collection and retention.[33] They also include voice-recognition systems, location-tracking devices and systems for collecting data as it passes through a communications network.[34] This could be achieved by promoting their inclusion on the Wassenaar Arrangement's dual-use control list or by creating a set of EU-level controls. Both approaches have advantages and disadvantages. To date, the inclusion of ICT surveillance systems on the Wassenaar Arrangement's list has been based—at least in part—on the national security concerns associated with their use.[35] However, many of the technologies currently under discussion are only of interest because of human rights concerns. Adding technologies to the Wassenaar Arrangement's list on these grounds would probably be opposed by other participating states. However, adopting EU-level controls on items that are not included on the control lists of the various multilateral export control regimes is something that industry and EU member states seek to avoid. This is due to the impact it might have on the competitiveness of EU-based companies and the confusion it could generate for non-EU states that value the EU dual-use control list as a synthesis of the multilateral regimes' control lists and implement it nationally.

One EU-level option under discussion is the adoption of a dedicated catch-all control for exports of unlisted ICT surveillance systems that might play a role in human rights abuses. The European Parliament proposed such a control in October 2012 but it was not adopted.[36] A catch-all control might potentially be better able to keep pace with technology developments in the ICT surveillance sector than an exclusively list-based approach. Moreover, existing regulations mean that most ICT surveillance systems of interest are sold exclusively to national governments, making it possible to target controls effectively.[37] However, there may be differences in national implementation and confusion among companies about which products and transactions are covered. These are already issues for the military and WMD catch-all clauses, even though agreed practices and shared standards have been developed over several years (as noted above). Concerns have already been raised about the unintended side effects of the controls on 'intrusion software' adopted in 2013 and whether they create licensing obligations for companies and individuals working in certain areas of ICT security.[38] Regardless of whether these concerns are justified, they highlight the need for clarity when drafting control-list language and careful attention to the precise wording of a potential catch-all provision. They also underline the possible need for the EU to play a greater role in producing or coordinating implementation guidelines (see above).

Expanding the range of concerns during the licensing process

Article 12 of the EU Dual-use Regulation requires member states to take into account 'all relevant considerations' when assessing export and brokering licences for dual-use goods, including those covered by Council Common Position 2008/944/CFSP defining common rules governing control of exports of military technology and equipment.[39] Many of the human rights and security concerns associated with the export and use of ICT surveillance systems are addressed in the Council common position and its user's guide.[40] In particular, criterion 2 of the Council common position makes reference to human rights concerns and requires

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[33] Monitoring centres and data retention systems were added to Germany's national control list in 2015. German Federal Ministry for Economic Affairs and Energy (BMWI), 'Gabriel: Export von Überwachungstechnik wird stärker kontrolliert' [Gabriel: export of surveillance technology under stronger controls], 8 July 2015, <http://www.bmwi.de/DE/Presse/pressemitteilungen,did=719188.html>.

[34] Coalition Against Unlawful Surveillance Exports (CAUSE), 'A critical opportunity: bringing surveillance technologies within the EU Dual-use Regulation', June 2015, <https://privacyinternational.org/sites/default/files/CAUSE%20report%20v7.pdf>.

[35] E.g. controls on intrusion software aimed at addressing the human rights and national security concerns associated with their use were proposed by the British Government. British Department for Business Innovation & Skills (BIS), 'Intrusion software tools and export control', 10 Aug. 2015, <http://blogs.bis.gov.uk/exportcontrol/uncategorized/eco-issues-guidance-on-intrusion-software-controls/>.

[36] European Parliament, Legislative resolution on the proposal for a regulation of the European Parliament and of the Council amending

Regulation (EC) no. 428/2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items, COM (2011), 23 Oct. 2012.

[37] Privacy International, 'Privacy International BIS submission', [n.d.], <https://www.privacyinternational.org/sites/default/files/Privacy%20International%20BIS%20submission.pdf>.

[38] Gallagher, S., 'US to renegotiate rules on exporting "intrusion software"', Ars Technica, 2 Mar. 2016, <http://arstechnica.com/tech-policy/2016/03/us-to-renegotiate-rules-on-exporting-intrusion-software-under-wassenaar-arrangement/>.

[39] Council of the European Union, User's guide to Council Common Position 2008/944/CFSP defining common rules governing the control of exports of military technology and equipment, 10858/15, 20 July 2015.

[40] Council of the European Union (note 39).

member states to deny an export licence if 'there is a clear risk that the military technology or equipment to be exported might be used for internal repression'.[41] Meanwhile, criterion 5 requires member states to take into account the impact of the potential export on their own and other member states' defence and security interests.[42] However, potential threats to the right to privacy and freedom of expression, and the need for recipient states to have effective regulatory and oversight mechanisms in relation to the use of ICT surveillance systems are not mentioned. Nor are there any references to the specific security threats associated with the use of ICT surveillance systems, such as the theft of government and commercial secrets and attacks on critical infrastructure.

Establishing a set of criteria that cover the full range of human rights and security concerns associated with the export and use of ICT surveillance systems would help to create agreed EU-wide standards on how exports of these technologies should be assessed. It would also contribute to greater coherence between dual-use export controls and other areas of EU policymaking where commitments have been made to restrict exports of ICT surveillance systems that might be used in human rights violations.[43] However, grounding these criteria in the concept of human security carries potential risks. Unlike human rights and international humanitarian law (IHL), human security has not been integrated into regional or international legal instruments and lacks any universally agreed definition.[44] Industry associations and NGOs have voiced concerns about its application to decision making within export licensing.[45] Moreover,

any attempt to establish a broad range of human rights and security considerations for states to take into account when assessing dual-use exports may generate calls for further additions to the range of items that are subject to dual-use export controls. These include systems for Internet content filtering and blocking that are used for censorship purposes. These systems also raise concerns in connection with the right to privacy and freedom of expression and are not currently subject to dual-use export controls. However, the technology they use also has a range of non-censorship uses, such as ensuring that harmful websites are not accessed through publicly accessible networks, which would make their inclusion in dual-use export controls potentially problematic.

Modernizing the licensing architecture

There is an ongoing discussion within the export control community about how best to reduce the barriers to non-sensitive transactions in order to free up the resources within companies and administrations to monitor more risky transfers. The Commission has highlighted a number of areas where steps could be taken in this area as part of a broader process of modernizing the licensing architecture. Proposed steps include expanding the number and coverage of EU General Export Authorisations (EUGEAs) and updating the control framework for ITT—which covers transfers of technical information through electronic means or the personal delivery of know-how—and technical assistance.[46]

Expanding the range and coverage of EUGEAs

An EUGEA allows companies to export a range of goods to a range of destinations over a prolonged period. Unlike other forms of general licence, such as National General Export Authorisations (NGEAs), EUGEAs are agreed at the EU level. They are key to facilitating non-sensitive exports in a way that promotes an EU-wide level playing field for affected companies. There are currently six EUGEAs, covering exports: (*a*) to Australia, Canada, Japan, New Zealand, Norway, Switzerland and the USA; (*b*) of certain dual-use items to certain destinations; (*c*) for repairs, or of replacement parts; (*d*) of a

[41] Council Common Position 2008/944/CFSP of 8 Dec. 2008 defining common rules governing control of exports of military technology and equipment, *Official Journal of the European Union*, L335, 13 Dec. 2008.

[42] Council Common Position 2008/944/CFSP (note 41).

[43] See Council of the European Union, EU Strategic Framework and Action Plan on Human Rights and Democracy, 11855/12, 25 June 2012, <http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/131181.pdf>; and Council of the European Union, EU Human Rights Guidelines on Freedom of Expression Online and Offline, 12 May 2014, <http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/foraff/142549.pdf>.

[44] Gomez, O. A. and Gasper, D., 'Human security: a thematic guidance note for regional and national human development report teams', United Nations Development Programme, [n.d.], <http://hdr.undp.org/sites/default/files/human_security_guidance_note_r-nhdrs.pdf>.

[45] AeroSpace and Defence Industries Association of Europe (ASD), 'ASD position paper on the review of the dual-use export control system of the European Union', 22 Oct. 2014, <http://www.asd-europe.org/fileadmin/user_upload/Client_documents/

ASD_Contents/5_DEFENCE/ASD_Position_Paper_Export_Control_Dual_Use_October_2014.pdf>; and Coalition Against Unlawful Surveillance Exports (note 33).

[46] European Commission (note 9), p. 7.

temporary nature for exhibitions or fairs; (*e*) of certain types of telecommunications equipment; and (*f*) of certain types of chemicals.[47] The 2014 Commission Communication includes a number of options for increasing the number of EUGEAs and expanding their coverage. Some of these, particularly replacing NGEAS with EUGEAs, are likely to be unpopular among companies and member states that view NGEAs as a useful tool for tailoring dual-use export controls to specific national contexts. The Commission also proposes the creation of a range of new EUGEAs, including for low-value shipments, encryption, intra-company technology transfers, intra-EU transfers of Annex IV items, and large projects.[48] Other proposals are rather technical and will need to be discussed very specifically, such as the review of licence types and definitions, and harmonization of the conditions and modalities of licences.[49]

Larger companies are likely to be particularly keen on the creation of an EUGEA for intra-company technology transfers. Travelling to meetings often requires cross-border travel outside the EU and may involve importing, exporting and transiting controlled technology stored on portable electronic devices such as laptops. A large project licence would also prove attractive if it permitted licensable activity with the supply chain, project partners and intra-company transfers directly associated with the execution of the project. Meanwhile, companies in the nuclear industry are likely to favour the adoption of an EUGEA for intra-EU transfers of Annex IV items, particularly if Annex IV continues to include nuclear reactors and associated specially designed equipment, components and technology. As part of a wider review of the coverage of Annex IV, the Commission has proposed the introduction of an EUGEA for intra-EU transfers combined with some form of post-shipment verification. However, while such a change seems straightforward, concerns may be raised about compliance with international nuclear controls, particularly those imposed by the International Atomic Energy Agency (IAEA) and by non-EU supplier states, particularly the USA, with regard to areas not covered by US general authorizations that permit exports to all EU member states.

Enhancing controls on ITT and technical assistance

The evolving challenges posed by ITT have been the subject of discussion in expert forums on dual-use export controls for many years. ITT can occur via email attachments, server uploads or downloads, cloud computing and other Internet-sharing platforms. A large multinational company engaged in producing dual-use items carries out ITT numerous times per day, involving transfers between different branches of the company and transfers between itself and other companies in a supply chain. This can generate significant costs for both companies and governments, particularly in terms of the wide variety of compliance procedures and verification mechanisms required. Meanwhile, modern advances in technology are increasing the ease with which ITT can occur and ITT is becoming increasingly common. Additive or 3D printing in particular is expected to transform production and transport practices in a range of sectors, including the biological sector, as technology is transferred electronically and items are manufactured in the destination country. At the same time, ITT is incredibly difficult to detect, making enforcement a significant challenge, particularly for customs controls that are still focused on dealing with transfers of physical goods. This highlights the importance of preventive measures and industry compliance.

Some sections of industry have frequently underlined the need for legal clarifications of the coverage of ITT controls and practical guidelines to help with compliance. The 2014 Commission Communication highlights options for enhancing ITT controls, including within 'Dual-use Research of Concern', but also recognizes 'the need to avoid undue obstacles to the free flow of knowledge'.[50] These options include enhanced outreach to the scientific community as a preventative measure (see above) and clarifying the term 'fundamental research', which is exempt from licensing requirements but not clearly defined in the EU Dual-use Regulation (see above). The Commission Communication also mentions the introduction of an EUGEA for intra-company research and development. In order to qualify, companies would need to register, carry out self-auditing and be subject to compliance visits. While companies would welcome such an

[47] BIS, 'Guidance: EU General Export Authorisations', 14 Aug. 2012, <https://www.gov.uk/guidance/european-union-general-export-authorisations>.

[48] Unlike other goods on the EU dual-use control list, Annex IV items are subject to licensing controls when they are exported to other EU member states. Most Annex IV items cover nuclear-related materials.

[49] European Commission (note 9).

[50] European Commission (note 9).

EUGEA, record-keeping measures and compliance visits would generate costs for companies and national authorities, particularly those that do not currently devote resources to these areas. Authorities would also need to ensure that creating an EUGEA that authorizes all ITT to foreign subsidiaries did not mean that they would lose the ability to restrict cases where a company had established a subsidiary outside the EU in order to produce and export dual-use technologies without being subject to the EU Dual-use Regulation. This could, at least partly, be achieved by having the licence clearly state that it does not permit the transfer of technology for production or use, although enforcement challenges would remain. A global licence that allowed for multiple transactions of specified items to a specific end user could also be a suitable compromise between security and economic considerations. Finally, in order to address compliance issues, customs services need to dedicate additional resources to company audits of dual-use export controls and build up the technical capabilities to screen computers and email transactions as part of these audits.

Technical assistance is generally defined as a manual or physical service or the oral transfer of know-how.[51] Although a type of ITT, technical assistance is a legally distinct concept in the EU due to the fact that it involves the cross-border movement of people and is therefore considered to be outside the scope of the EU Dual-use Regulation. Instead, technical assistance is covered by Joint Action 2000/401/CFSP, which requires member states to impose controls on technical assistance through a prohibition or an authorization requirement.[52] Joint Action 2000/401/CFSP applies to WMD programme-related assistance provided by a legal or natural EU person outside of the EU.[53] Most, but not all, EU member states have implemented corresponding provisions in national law. Technical assistance is therefore another area in which consideration is required about how to enhance convergence between the different elements of the EU export control regime. Moreover, in the context of EU restrictive measures on Iran, North Korea and Syria,

technical assistance measures have been included in a number of Council decisions and Council regulations, together with controls on a range of activities involving dual-use items and financial sanctions. This raises two important questions: whether technical assistance falls within Community competence, which the European Court of Justice would have to clarify or decide on; and whether there are any legal avenues to encourage or oblige all EU member states to implement a common position that is 15 years old.[54]

Engagement with the private sector and other relevant stakeholders

The 2014 Commission Communication highlights a range of areas where engagement with the private sector and other relevant stakeholders could be improved and strengthened. Indeed, many of the priorities highlighted in the Communication require some level of engagement with the private sector. For example, ITT controls can only be effectively implemented if the companies that produce or have access to controlled dual-use technology are fully aware of their obligations under dual-use export controls and actively take steps to comply with national and EU regulations. At the same time, engagement with the private sector is proving increasingly challenging, not least because of the expanding range of items and activities subject to control, and increases in the number and types of actor involved in the dual-use supply chain. This is due to technological developments, as well as the design and expansion of EU and UN sanctions.[55] Thus, stakeholders today are not only exporters in the classic sense, but also academics and other 'exporters' of technical information, the transport sector, and a wide range of suppliers that produce dual-use items and provide them to exporters.

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[51] Jankowitsch-Prevor, O. and Michel, Q. (eds), European Dual-use Trade Controls: Beyond Materiality and Borders (Peter Lang: Brussels, 2013).

[52] Council Joint Action 2000/401/CFSP of 22 June 2000 concerning the control of technical assistance related to certain military end-uses, *Official Journal of the European Communities*, L159, 30 June 2000, pp. 216–17.

[53] Joint Action 2000/401/CFSP (note 52).

[54] See Bauer (note 23), p. 61.

[55] Although UN and EU sanctions are not strictly speaking part of the EU Dual-use Regulation, they are intrinsically linked, not least because of the 8 criteria of Council Common Position 2008/944/CFSP. Criterion 1 obliges EU member states to respect UN and EU sanctions, and deny an export licence if its approval would be inconsistent with its obligations under UN, EU, or OSCE arms embargoes. These obligations apply both to exports of military items and dual-use goods. Moreover, both governments and the private sector use a single entity to deal with both aspects of trade controls—restrictive measures or sanctions and regular foreign trade controls.

Engagement with the private sector

The 2014 Commission Communication proposes 'structured engagement with industry' and partnership with the private sector. While some steps have been taken through stakeholder consultations to engage with industry, those who have participated represent only part of the broad range of sectors and actors affected by the EU Dual-use Regulation. This is partly due to a general lack of awareness in certain sectors (e.g. biological) and the fact that many EU-wide industry associations do not focus on dual-use or export control issues, but also because few small to medium-sized enterprises (SMEs) have a direct voice in the process, mostly due to issues of language or capacity. One way to further develop the partnership with the private sector would be to establish technical advisory groups with a focus on potential control list changes or trends in business and trading practices in order to provide input from industry. This is the approach taken in the USA, where eight technical advisory committees advise the Department of Commerce on the technical parameters for export controls and the administration of those controls.[56] Ideally, such a dialogue would involve all of the key stakeholders affected by dual-use export controls—both large companies and SMEs, and from all parts of the EU. A private sector partnership could also benefit security interests by encouraging companies to communicate suspicious inquiries and transactions. The IAEA has a similar programme in place, but this is limited to nuclear trafficking. The Nuclear Suppliers Group's 'Good practices for corporate standards to support the efforts of the international community in the non-proliferation of WMD' also recommends such a dialogue.[57]

Finally, the 2014 Commission Communication also raises the importance of guidance, support tools and electronic licensing systems for industry. When drafting both compliance standards and guidance, regular exchanges with industry are essential, not only within the scope of a technical advisory group but also

through stakeholder consultations and inviting specific input. Again, it is very important that SMEs, not just multinational corporations, are represented in this feedback loop and that a broad range of sectors' and stakeholders' perspectives and particularities are taken into account. The Dual-use Working Party's subgroup on convergence between Internal Compliance Programmes (ICPs) and Authorised Economic Operator (AEO) status has already gathered industry input into the process. One of the practical suggestions raised during the December 2015 stakeholder consultation meeting in Brussels was experience sharing, particularly to enable SMEs and newcomers to draw on the experience of larger companies and the expertise of those that have been involved in ICP implementation for some time.[58]

Most of the companies affected by dual-use export controls have an ICP in place, either formally or informally. The costs of ICP processes include not only the staff involved in licence applications, but also the classification of all items, introducing and maintaining training on compliance procedures, licensing and classification databases and gaining access to denied party screening tools. Depending on the size of the company, this may also involve a cascade of export control compliance requirements through the supply chain. The data collected by SIPRI and Ecorys in 2014 suggests that the amount and types of costs, both direct and indirect, are determined primarily by the size of the company rather than the sector in which it operates.[59]

Broadening industry awareness across all the affected sectors will require sustained engagement with the relevant industry associations representing all the different sectors affected. The industry associations responsible for certain affected sectors, such as biotechnology and the transport sector, have to date had only limited engagement with dual-use trade control-related issues in the EU. More challenging is the fact that other affected sectors have no industry association or no cross-association working group dedicated to dual-use trade issues at the EU level.[60]

[56] See US Department of Commerce, Bureau of Industry and Security, 'BIS Technical Advisory Committees (TAC)', <https://tac.bis.doc.gov/>.

[57] See the Nuclear Suppliers Group, <http://www.nuclearsuppliersgroup.org/en/national-practices/132-good-practices-for-corporate-standards-to-support-the-efforts-of-the-international-community-in-the-non-proliferation-of-weapons-of-mass-destruction>.

[58] 2015 Export Control Forum, Brussels, 5 Dec. 2015, <http://trade.ec.europa.eu/doclib/docs/2015/december/tradoc_154041.pdf>.

[59] SIPRI and Ecorys (note 22).

[60] With the exceptions of the export control working group of Business Europe and the newly emerging Botticelli initiative (first meeting in Brussels in Sep. 2014), which seeks to promote and coordinate industry support for United Nations Security Council Resolution 1540. See Zero, S., 'Botticelli Project', Presentation at the conference 'Private sector engagement in strategic trade controls:

For example, there are no EU or national industry associations that represent all of the companies that are, or may be, affected by the ongoing expansion in controls on ICT surveillance systems.[61]

Engagement with academia

The engagement of the academic community with export controls has always been limited. However, the security implications of certain areas of academic research are slowly entering the discussion on export controls. In the biological, chemical and nuclear fields, in particular, research may involve transfers of physical items subject to export controls and create avenues for proliferation to take place. The 2008 New Lines for Action, which complemented the EU's 2003 WMD Strategy, highlighted the issue of raising awareness about export controls within academia but only brought about limited changes.[62] Nevertheless, even EU-funded academic projects can potentially be subject to dual-use export controls without the researchers involved being aware of it. Some guidelines have been drawn up to make applicants and evaluators more aware of their obligations under dual-use export controls, but such efforts could be conducted more broadly and systematically.[63] The barriers to developing policies that reflect security needs without burdening academics are significant. ITT is an essential aspect of academic research, exchange and publication, and there is likely to be resistance to any measures that restrict freedoms in this area. Constraints on foreign researchers through visa-vetting programmes— designed to limit the risks of unlicensed transfers of

sensitive technologies—can run counter to academic culture, which favours the open exchange of ideas.

The 2014 Commission Communication proposes providing guidance for, and carrying out outreach to, the academic research community, and developing codes of conduct for scientists. Developing these tools, identifying the actors concerned, establishing contact points in relevant institutions and building up a dialogue on these issues will require effort and resources. A number of EU member states, such as Croatia, Germany, Hungary and the United Kingdom, have undertaken specific initiatives to reach out to academia. Compared to industry outreach, however, this type of stakeholder outreach is still in its initial stages—and it will require dedicated funding. Only a limited number of universities and research institutes in Europe have developed ICPs or guidelines, including Cambridge University, UK, and the Leibnitz Institute, Germany. In addition, codes of conduct are in development in a small number of research communities. However, awareness across the EU is still low, and it seems likely that the number of dual-use export licence applications from academic and research bodies across the EU is very small. The precise number would be an interesting question for licensing authorities to explore and compare.[64]

Engagement with third parties

The 2014 Commission Communication goes beyond regulatory change to consider issues related to EU and EU member-state engagement with countries outside the EU and the various multilateral export control regimes.

Engagement with export control regimes

One key aspect of ensuring more effective engagement with the relevant export control regimes is to develop improved mechanisms for agreeing and proposing control-list amendments. Such discussions would need to take place in a focused format, involving licensing officials and relevant non-governmental stakeholders with a particular expertise in a certain control-list area. The Commission Communication proposes increasing the EU's active contribution to the discussion on the control list within the export control regimes. Making progress in this regard faces several challenges. In particular, not all EU member states participate in all

recommendations for effective approaches on United Nations Security Council res. 1504 (2004) implementation, a contribution the UNSCR 1540 Comprehensive Review 2016', Wiesbaden, 19–20 Nov. 2015; and Zero, S., 'Towards smarter nuclear export controls', *World Nuclear News*, 6 Oct. 2015. At the national level, some countries such as Germany, Sweden and the UK have industry associations or sub-groups on export control issues.

[61] Some companies are members of ICT-focused associations (e.g. Digital Europe) or defence industry associations (e.g. ASD), while others have not joined an association. SIPRI and Ecorys (note 22).

[62] Council of the European Union, New Lines for Action by the European Union in Combating the Proliferation of Weapons of Mass Destruction and their Delivery Systems, 17172/08, 17 Dec. 2008.

[63] European Commission, 'Explanatory note on the control of "export" for "dual-use items", including technology transfers, under Council Regulation (EC) No 428/2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items', <https://ec.europa.eu/research/participants/portal/doc/call/h2020/h2020-drs-2015/1645163-explanatory_note_on_the_control_of_export_for_dual-use_items_en.pdf>.

[64] Bauer (note 23), p. 59.

four regimes, and there is only partial expertise in the different aspects of the control list in most EU member states.[65] Furthermore, there are concerns about institutional competence and the representation of EU governments through EU institutions in the regimes. Such an approach would also need to be cleared by consensus with the non-EU regime members. The EU is currently a member of the Australia Group and the European Commission is an observer at the Nuclear Suppliers Group, but it has no formal status in either the Wassenaar Arrangement or the Missile Technology Control Regime. Coordinated input into the control list is closely linked to the Commission's proposal to promote EU representation in the regimes that is 'coherent, comprehensive [and] unified'.

Engagement with states outside the EU

The issue of engaging with states outside the EU contains two elements that are interlinked and overlap both conceptually and in relation to the partner countries. First, there is cooperation and dialogue with external partners for the purposes of regulatory convergence, mutual recognition of assessments and post-shipment verification. Second, there is external outreach through EU-funded capacity-building programmes in third countries.[66] Both issues contribute to convergence and to more effective export controls globally. The 2014 Commission Communication highlights the desirability of global convergence from both an economic/competition and a security/non-proliferation perspective. Given that the creation of a level playing field within the EU has not been achieved to date, a global level playing field should be considered a desirable direction but not a concrete goal for the near future. Nevertheless, both dialogues with trading partners and capacity-building activities could contribute to achieving this goal, for example by enhancing convergence on key terms that continue to create confusion such as 'Intangible Technology Transfer', 'public domain', 'basic scientific research', 'transit' and 'trans-shipment' (see above).

Since 2005 the EU has developed the world's second-biggest dual-use trade-control capacity-building programme after the USA, involving countries in Europe, Africa, Asia and the Middle East. For the

first 10 years, the programme was implemented by the German export licensing authority, the German Federal Office of Economic Affairs and Export Control (BAFA), with a pool of legal, licensing, industry-outreach and enforcement practitioners drawn from member states across the EU. A consortium led by Expertise France has been managing the successor programme since September 2015.[67] BAFA implements the cooperation with Jordan and Kazakhstan, and also a range of capacity-building projects in the area of conventional arms export control. While the EU has played a leading role internationally in export control capacity building, there are only a limited number of licensing and enforcement officers, and legal and technical experts, within EU member states that are available to take part in international activities. This again highlights the importance of in-reach and enhancing staff capacities.

IV. CONCLUSIONS AND RECOMMENDATIONS

There are clearly many ways in which the effectiveness of the current system of dual-use export controls could be enhanced via the review process. Most of these steps would require the mobilization of political will at different levels and across different institutions within the EU and its member states, as well as further human and financial resources, cooperation and capacity building. Engaging with the whole range of stakeholders involved in the supply chain will be crucial to success, and this must include different types of actor (suppliers, transport providers and academia), a broad range of dual-use sectors (not just those that have been particularly visible or proactive to date) and both SMEs and multinational corporations. This will mean building an understanding of the underlying purpose and concept of export control across these different stakeholders and the identification of constructive and practical solutions to ever-evolving security, technological and economic challenges.

In discussing policy options, it is important to keep the political realities of what is achievable in mind and focus efforts on areas that already have significant buy-in among companies, the EU and its member states. There is significant work that could be done without seeking to address areas that may generate friction or substantial resistance. For

[65] The four regimes are the Australia Group, the Missile Technology Control Regime, the Nuclear Suppliers Group and the Wassenaar Arrangement.
[66] European Commission (note 9); and 2015 Export Control Forum (note 58).
[67] See the EU Outreach in Export Control website, <https://export-control.jrc.ec.europa.eu/>

example, a strong focus on achieving a truly level playing field for dual-use export controls will always face significant challenges as long as EU member states are committed to retaining national control of policy implementation. Many companies prefer their national licensing authority, have negotiated suitable facilitation measures and do not want to move to, for example, a central authority based in Brussels. This has been recognized by the European Commission, which is not pursuing the centralization option mentioned in its 2014 Communication, and was made evident at the December 2015 stakeholder consultation meeting in Brussels. In several areas it is apparent that states are as keen as ever—if not more so—to retain national implementation exemptions and standards, particularly where dual-use export controls are of more limited relevance to WMD proliferation, such as ICTs and dual-use items for use in the production or use of conventional weapons.

It will also be particularly important to move away from the notion that balancing security and economic considerations is a zero-sum game, where benefits in one area generate costs in the other. A well-designed and effectively implemented export control system can enhance both security and economic and trade interests at the same time. The review process will also need to reflect the current financial reality facing EU member states. General resource constraints combined with specific budget cuts for national export licensing authorities and competing priorities in enforcement agencies constitute major impediments to the effective and consistent implementation of export controls in the EU. Clearly, a wide range of steps could be taken, such as staff increases and an EU-funded in-reach programme. However, there is also a need to focus efforts on what can be achieved with the resources available. The following recommendations concern some of the areas where the review process could best focus its attention.

Create an institutionalized peer-review process

The 2004 peer review revealed a number of discrepancies in the interpretation, implementation and enforcement of dual-use export controls by EU member states. While some of the actions recommended by the peer review task force have been implemented, at least to some extent (improved information exchange), others have either not been fully tackled (minimizing 'any significant

divergence in practices amongst member states') or not yet been addressed (agreeing best practices for enforcing controls and for ITT controls, and improved transparency of catch-all implementation). A follow-up peer review process was initiated in 2010. This has enhanced mutual understanding of implementation approaches and enabled the sharing of effective practices, but a peer review process needs to be institutionalized through regular informal meetings and systematically broadened.

Focus on effective implementation and enforcement

One of the areas that has been discussed in detail under previous review processes has been implementation and enforcement issues. A peer review on enforcement issues, which could include short-term exchanges, would: (*a*) enhance mutual understanding of implementation and thus create a platform for mutual learning; (*b*) reinforce personal contacts that are essential for cooperation and coordination; and (*c*) enhance both capacity and convergence. Even though it would facilitate the agreement of best practices and create a forum for enforcement practitioners to enhance information exchange, coordination and operational cooperation, there has been no peer review process dedicated to solely enforcement issues to date.

Focus on transparency and information exchange

One difference in the implementation of the EU Dual-use Regulation at the national level that is worth exploring is how national authorities determine when to use individual, global or general licences to control exports of particular dual-use items. Similarly, it would be worth examining how they decide which licence to use in order to authorize exports to particular destinations. The review process could suggest shedding more light on these differences and making them the subject of more open debate. This could, in part, be achieved by publishing more detailed information on the issuing, coverage and use of NGEAs. Initially, information about these issues could be discussed in an informal workshop atmosphere and the conclusions used to inform and educate about different member states' national practices.

Reflect the needs of SMEs

Companies have the potential to play a stronger and more proactive role in dual-use export controls. A further devolution of powers to companies seems likely, through a shift towards a greater use of global and general licences combined with post-shipment audits, standard setting and verification of compliance systems. This could favour larger companies with the resources to implement complex ICPs, potentially at the expense of SMEs. This problem could be partly remedied by systematically involving the associations and sectors that primarily represent SMEs, where they have the capacity and willingness to become involved, in the drafting of new licences. It would also be worth exploring ways to gather SME input, through flow down in the supply chain and identifying companies that could contribute to the development of export control compliance guidelines and tools suitable for SMEs to adopt.

Combine customs issues into export control discussions

Concrete efforts are needed to link up policy discussions at the EU level on the implementation and enforcement of dual-use export controls. Trade and customs aspects are only loosely linked at present either legally, where they are given contradictory or inconsistent legal definitions, or organizationally, particularly at the EU level, as is evident from the division of responsibilities between DG Trade and DG TAXUD but also partly at the member-state level. Customs and other enforcement bodies need to be systematically and structurally involved in policy discussions at the EU level, since they form an essential and indispensable element of an effective trade control system, albeit one which continues to be little understood by policy and licensing colleagues.

Develop targeted guidelines for licensing

There is a clear need to draw up more detailed guidelines, spelling out the criteria that member states should apply when assessing licences for the export of dual-use goods. Currently, there is a requirement to apply the criteria of Council Common Position 2008/944/CFSP when assessing export licences. However, many of the issues that arise in connection with the export of dual-use goods are not adequately covered in either the Council common position or its accompanying user's guide, which primarily focus on exports of military items to military end users. The issue is particularly important given the expansion of dual-use export controls to include certain ICT surveillance systems. One approach would be to develop a user's guide for the EU Dual-use Regulation, laying out detailed, technology-specific guidelines and risk-assessment tools for exports of all types of dual-use goods.

Develop joined-up policy solutions

One clear message that should emerge from the review process is the need to think more imaginatively about breaking down the barriers between different areas of EU policymaking in order to develop joined-up solutions that can tackle the range of challenges that export controls are intended to address. Recent debates about the export of ICT surveillance systems demonstrate the need for a policy response that encompasses the application of dual-use export controls and a range of other mechanisms. These include military export controls, sanctions regimes and industry self-regulation, as well as focused research efforts aimed at gaining better oversight of the companies involved and the issues at stake. The EU has capacities in all these areas but currently lacks the ability to harness and target them in a focused and coherent manner.

ABBREVIATIONS

DG TAXUD	Directorate General for Taxation and the Customs Union
DG Trade	Directorate General for Trade
EUGEA	European Union General Export Authorisation
IAEA	International Atomic Energy Agency
ICP	Internal Compliance Programme
ICT	Information and Communications Technology
ITT	Intangible Technology Transfer
LEA	Law enforcement agency
NGEA	National General Export Authorisation
NGO	Non-governmental organization
SME	Small to medium-sized enterprise
WMD	Weapon(s) of mass destruction

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EU NON-PROLIFERATION CONSORTIUM

The European network of independent non-proliferation think tanks

A EUROPEAN NETWORK

In July 2010 the Council of the European Union decided to create a network bringing together foreign policy institutions and research centres from across the EU to encourage political and security-related dialogue and the long-term discussion of measures to combat the proliferation of weapons of mass destruction (WMD) and their delivery systems.

STRUCTURE

The EU Non-Proliferation Consortium is managed jointly by four institutes entrusted with the project, in close cooperation with the representative of the High Representative of the Union for Foreign Affairs and Security Policy. The four institutes are the Fondation pour la recherche stratégique (FRS) in Paris, the Peace Research Institute in Frankfurt (PRIF), the International Institute for Strategic Studies (IISS) in London, and Stockholm International Peace Research Institute (SIPRI). The Consortium began its work in January 2011 and forms the core of a wider network of European non-proliferation think tanks and research centres which will be closely associated with the activities of the Consortium.

MISSION

The main aim of the network of independent non-proliferation think tanks is to encourage discussion of measures to combat the proliferation of weapons of mass destruction and their delivery systems within civil society, particularly among experts, researchers and academics. The scope of activities shall also cover issues related to conventional weapons. The fruits of the network discussions can be submitted in the form of reports and recommendations to the responsible officials within the European Union.

   It is expected that this network will support EU action to counter proliferation. To that end, the network can also establish cooperation with specialized institutions and research centres in third countries, in particular in those with which the EU is conducting specific non-proliferation dialogues.

http://www.nonproliferation.eu

FOUNDATION FOR STRATEGIC RESEARCH

FRS is an independent research centre and the leading French think tank on defence and security issues. Its team of experts in a variety of fields contributes to the strategic debate in France and abroad, and provides unique expertise across the board of defence and security studies.
http://www.frstrategie.org

PEACE RESEARCH INSTITUTE IN FRANKFURT

PRIF is the largest as well as the oldest peace research institute in Germany. PRIF's work is directed towards carrying out research on peace and conflict, with a special emphasis on issues of arms control, non-proliferation and disarmament.
http://www.hsfk.de

INTERNATIONAL INSTITUTE FOR STRATEGIC STUDIES

IISS is an independent centre for research, information and debate on the problems of conflict, however caused, that have, or potentially have, an important military content. It aims to provide the best possible analysis on strategic trends and to facilitate contacts.
http://www.iiss.org/

STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE

SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament. Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.
http://www.sipri.org/