

Locating India within the Global Non-Proliferation Architecture: Prospects, Challenges and Opportunities*

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Introduction

India is seeking to join the four export control regimes – Nuclear Suppliers Group (NSG), Missile Technology Control Regime (MTCR), Australia Group (AG) and Wassenaar Arrangement (WA), with the objective of integrating itself with the global non-proliferation architecture. These regimes are informal mechanisms wherein participating governments, more commonly referred to as members, coordinate their national export controls in order to ensure that no supply of sensitive items contributes to proliferation of weapons of mass destruction (WMD) and that transfers of strategic items are not destabilising.

NSG coordinates export controls on items which can be used to build nuclear weapons directly, listed in its Trigger List, and indirectly, listed in its Dual-Use List. MTCR coordinates export controls on items, listed in its Annex, which can be used in the development of systems that can be used to deliver WMD. AG maintains Common Control Lists that include items which could be used to develop chemical and biological weapons. WA, meanwhile, coordinates controls on exports of munitions and dual-use items and technology. Coordination of export controls and their implementation by members of these regimes are voluntarily done. These regimes function on consensus and are voluntary associations that do not have any mechanism to ensure compliance by their members to the export control guidelines issued by them.

India has since the 1950s acknowledged the need to control exports of sensitive items, unchecked transfer of which could have been destabilising for the international order. While India set up export controls on various categories of these items separately, it was in the 1990s that it decided to merge all of its export control policies and practices under one roof. This was accompanied by efforts to bring them in line with the international best practices on export controls. Simultaneously, the US government, as one of the key founding members of these regimes, recognised the role India could play in strengthening these regimes. With integrating India into the global non-proliferation architecture as one of the objectives, Washington initiated civil nuclear cooperation with New Delhi, which led to altering of the global rules of engagement on nuclear commerce with the latter. This was captured in the waiver that India got from NSG in 2008, in particular on sections 4 (a), 4 (b) and 4 (c) of the NSG guidelines – granted only to nuclear weapon states under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

Having accomplished the first stage of India's integration into the global non-proliferation architecture, both India and the US identified New Delhi's accession to the four export control regimes as the next logical step in completing the integration process. India's interest in becoming member to these export control regimes is multi-faceted. Membership to these regimes would reflect India as a "like-minded" partner on issues of non-proliferation. It would allow New Delhi to proactively contribute to global efforts on managing threats of proliferation of WMDs. Meanwhile, by joining these regimes, India will be in a better position to negotiate trade of sensitive items from supplier countries who are also members of these regimes.

India's entry into these export control regimes will be significant for the global non-proliferation architecture for a couple of reasons. Firstly, given that India has in the past been one of the targets of these regimes, in particular the NSG and MTCR, India's accession would reflect a major change in both India's and these regimes' approach to each other. Secondly, if India gets into the NSG, it will be the only member of the Group which will not be a signatory to the NPT.

There are technical parameters which India will be required to meet in order to join these regimes. These include harmonisation of its national export control list with the lists issued by these regimes and adherence to their guidelines through its national export control system, among others. Apart from these technical requirements, there exist political challenges to India's entry addressing which will be important in facilitating India's accession. Much of these political challenges emerge from the fact that India is not a signatory to the NPT, especially with the case of India's membership to the NSG. An objective assessment of the relationship between the NPT and the NSG is important in addressing these political challenges. Also important would be to weigh the implications and benefits of India's inclusion for these regimes.

In this context, it is important to highlight the various steps New Delhi has already taken. As part of the US-India nuclear deal, India undertook separation of its nuclear facilities, placed its civil nuclear facilities under IAEA safeguards, ratified Additional Protocol to its Safeguards Agreement with the IAEA, tightened the domestic export control regimes, reviewed and updated its Special Chemicals, Organisms, Materials, Equipment and Technology (SCOMET) list to harmonise with those of the export control regimes. Additionally, India has joined the Hague Code of Conduct (HCoC) against Ballistic Missile Proliferation, which not only goes to directly impact India's membership application to MTCR, but also, at a broader level, creates a positive momentum as member countries consider India's inclusion into the other three regimes.

This report attempts to objectively assess the prospects of India's inclusion to the export control regimes. It begins by analysing the technical parameters for membership and whether India already meets or not. This includes an examination of India's domestic export control system – both control list and legal framework. The following chapter delves into the political debates on India's membership to the four export control regimes. This takes into consideration the objections that a few members of these regimes raise to India's accession. The report finally lays out a set of recommendations for the Indian government as well as member countries of these regimes on both technical and political factors assessed, consideration of which could facilitate India's entry into the export control regimes.

Technical Requirements

The four export control regimes – Nuclear Suppliers Group (NSG), Missile Technology Control Regime (MTCR), Australia Group (AG) and the Wassenaar Arrangement (WA) – have all had the objective of controlling horizontal proliferation of items which, if left unchecked, could destabilise the international system. Mandate and scope of export controls of all these four bodies have been different.

	NSG	MTCR	AG	WA
Year of Inception	1974	1987	1985	1995
Items Controlled	Items required in the making of a nuclear weapon under the Trigger List and the Dual-Use List	Items used in the development of systems which can be used to deliver WMDs	Items used as or in the making of chemical and biological weapons	Munitions and dual-use items and technology
Number of Members as of June 01, 2016 ¹	48	34	42	41

Given the varying scope of each of these groups, they have developed and continue to update their respective lists of items on which their members coordinate export controls. However, there are certain overlaps between their lists, details of which are described in this chapter. In order to assess the prospects of India's entry into these groups, this chapter assesses how harmonised is India's national export control list, called the Special Chemicals, Organisms, Materials, Equipment and Technology (SCOMET) list, with that of each of the four export control regimes.

Even as scopes of these regimes differ, they issue guidelines for their members that recommend similar ways to meet their respective objectives. Most important of these guidelines is having a legally based and rigorously enforced national export control system. In order to assess India's status on adherence to the guidelines of these regimes, the following section of the chapter studies India's national export control system, presenting a brief of all pertinent legislations and assessing the level of their enforcement.

Finally, these four export control regimes either consider factors or have set up criteria to admit new members. This chapter discusses what these factors and criteria are and examines the prospects of India gaining entry into these four export control regimes.

¹ Thirty countries are members of all the four regimes which is a significant majority. These include Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Republic of Korea, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom and United States.

Export Control Lists and SCOMET

Origins of India's SCOMET List

India's first formal list of strategic items on which export controls were to be applied was called the Special Materials, Equipment and Technology (SMET) list. The Government of India had set up a small group on strategic export controls. While identification of items by the group, which would be placed in this list, began in 1993, it was only by April 1, 1995 that the list was announced and license regime on these items was enforced.² In the meanwhile, the Department of Atomic Energy (DAE) was working to prepare a list of equipment and substances which would be subject to export licensing by the Department. This list was issued publically and the DAE licensing was enforced from April 1, 1995. By January 1993, New Delhi had also signed the Chemical Weapons Convention (CWC), thereby undertaking a commitment to notify dual-use chemicals from the three schedules annexed to the CWC. To fulfil its commitment, the Directorate General of Foreign Trade (DGFT), India issued a public notice on March 31, 1993 that included a list of dual-use chemicals, whose exports were either prohibited or permitted under the license regime.

In order to assess the effectiveness of the then existing national export control system, a second group on strategic export controls was set up in 1999. To further enhance the system, the group made certain recommendations which the DGFT then incorporated. Of them was the decision to establish a list of Special Chemicals, Organisms, Materials, Equipment and Technology (SCOMET). SCOMET list was issued by the DGFT through a notification dated April 01, 2000 in Appendix 3 to Schedule -2 of the Indian Trade Clarification (Harmonised System) (ITC (HS)) Classification of Export and Import Items, 2009-14.³ Export of items that were placed in this list was either prohibited or permitted under license regime. SCOMET list includes eight categories: Category 0 - nuclear material, nuclear-related other materials, equipment and technology; Category 1 - toxic chemical agents and other chemicals; Category 2 - micro-organisms, toxins; Category 3 - material, materials processing equipment, and related technologies; Category 4 - nuclear-related other equipment, assemblies and components, test and production equipment, and related technology, not controlled under Category 0; Category 5 - aerospace systems, equipment including production and test equipment, related technology and specially designed components and accessories thereof; Category 6 – [Reserved]; and Category 7 - electronics, computers, and information technology including information security. Over the years, India has updated the SCOMET list to bring it in harmony with the export control lists issued by each of the four export control regimes, assessment of which follows.

NSG Control Lists

NSG has issued two sets of guidelines. First set is of the guidelines for nuclear transfers. This was first published by the International Atomic Energy Agency (IAEA) in 1978 as document INFCIRC/254 Part 1. List of items on which this set of guidelines is applicable is called the Trigger List. Trigger List includes nuclear material; nuclear reactors and equipment therefor; non-nuclear material for reactors; plant and equipment for the reprocessing, enrichment and conversion of nuclear material and for fuel fabrication and heavy water production; and technology associated with each of the above.

² Public Notice 68EXP(PN)/92-97.

³ http://www.nacenkanpur.gov.in/admin/media_images/5476e06e4bd9117.pdf

Following India's peaceful nuclear explosion, called the Smiling Buddha, of 1974, the original seven members of the Group decided to set up guidelines which would ensure that nuclear cooperation for peaceful purposes does not lead to nuclear weapons proliferation. The Trigger List issued in 1978 therefore included all items which were directly required for the establishment and operation of nuclear facilities.

However, following detection of clandestine nuclear activities of Iraq in early 1990s, it was realised that there were certain dual-use items that were primarily used for non-nuclear purposes, but they could also be used for developing a nuclear weapon. To address proliferation through acquisition of these dual-use items, NSG setup the second set of guidelines for nuclear-related dual-use equipment, materials, software and related technology. This list was first published by the IAEA in 1992 as document INFCIRC/254 Part 2. The list of items on which this set of guidelines applies is called the Dual-Use List. This List includes industrial equipment; materials; uranium isotope separation equipment and components; heavy water production equipment; test and measurement equipment for the development of nuclear explosive devices; and components for nuclear devices.

MTCR Annex

While NSG was established to cover the shortcomings of the NPT in controlling exports of nuclear items, it was recognised that neither NPT nor NSG addressed concerns on proliferation of missile systems which could deliver nuclear weapons. In the attempt of addressing this gap, MTCR was set up. MTCR Annex has two tiers of items labelled under Category I and II. Category I items include "...complete rocket and unmanned aerial vehicle systems (including ballistic missiles, space launch vehicles, sounding rockets, cruise missiles, target drones, and reconnaissance drones), capable of delivering a payload of at least 500 kg to a range of at least 300 km, their major complete subsystems (such as rocket stages, engines, guidance sets, and re-entry vehicles), and related software and technology, as well as specially designed production facilities for these items."⁴

Category II, on the other hand, includes dual-use items which have potential usage in the construction of or as sub-components to the items placed under Category I.⁵ Some of the broad set of items from Category II include propulsion components, propellants, structural materials, communications equipment, and avionics equipments.⁶

"Strong presumption of denial" is applied under the MTCR guidelines on export of items listed under Category I. Exceptions to this strong presumption of denial are given on "rare occasions". On such cases, recipient state is required to provide a statement on end use, which has to understandably be peaceful. The state must also give binding assurance that "the item will only be used for purposes stated." The exporting state, meanwhile, must "assume[s] the responsibility for taking all steps necessary to ensure that the item is put

⁴MTCR, "Frequently Asked Question: No. 13," <http://www.mtcr.info/english/FAQ-E.html>.

⁵MTCR, "Frequently Asked Question: No. 13."

⁶Canada-France-Federal Republic of Germany-Italy-Japan-United Kingdom-United States: Agreement on Guidelines for the Transfer of Equipment and Technology Related to Missiles [hereinafter MTCR Guidelines and MTCR Equipment and Technology Annex], exchange of letters announced Apr. 16, 1987, 26 I.L.M. 599 (1987).

only to its stated end-use.”⁷ Items falling under Category II can be exported if the export is deemed to not contribute to a “project of concern.”⁸ Members of the MTCR consider factors such as “the status of the recipient state’s missile and space programmes, probability of the export contributing to the missile development programme, and the stated end-use of the item being exported” in deeming it a project of concern or otherwise.⁹

Like under NSG, inclusion of dual-use items in its Annex diminishes MTCR’s ability to differentiate between exports for peaceful purposes and that for the acquisition of missile systems. For instance, the technology and equipment involved in the construction of a space launch vehicle and that of an inter-continental ballistic missile are similar. Hurewitz captures this difficulty in differentiation, noting that “[t]he dual-use nature of space launch technology ensures that virtually all national space launch vehicle programs may be found to contribute to nuclear weapons delivery systems.”¹⁰ In the same vein, Richard H Speier notes that “[MTCR] makes no exceptions for so-called peaceful vehicles, alleged to be for military purposes other than weapons delivery, or vehicles sought by nations which do not currently have nuclear weapons programs.”¹¹ End-user licenses are therefore again relied upon to confirm that export does not contribute to proliferation of delivery systems that could deliver weapons of mass destruction. There, however, have been instances when countries have been found to be in violation of the terms agreed in the end-user licenses.

AG Common Control Lists

Similar to the NSG vis-a-vis nuclear weapons, the Australia Group (AG) was set up in 1985 to harmonise members’ national export controls to ensure that exports of chemicals and biological agents, and related equipment, technologies and know-how, do not contribute to development of chemical or biological weapons. The Group was established in 1985 following the use of chemical weapons in the Iran-Iraq war and thus its initial mandate was to limit chemical weapons-related exports. Later, in 1990, AG expanded its scope to include biological weapons-related exports as well. Items, whose exports are controlled as per AG’s guidelines are listed in five categories: Chemical Weapons Precursors; Dual-Use Chemical Manufacturing Facilities and Equipment and Related Technology and Software; Dual-Use Biological Equipment and Related Technology and Software; Human and Animal Pathogens and Toxins; and Plant Pathogens.

One of the objectives of the AG has been to assist its members meet their obligations under the Chemical Weapons Convention (CWC) – Article 1 (a) and (d), and Biological and Toxins

⁷ Barry J. Hurewitz, “Non-Proliferation and Free Access to Outer Space,” p.226.

⁸ Richard H. Speier, “The Missile Technology Control Regime,” in Trevor Findlay (ed.) *Chemical Weapons and Missile Proliferation* (Boulder, CO: Lynne Rienner Publishers, 1991), p. 120.

⁹ Deputy Assistant Secretary for Export Admin, US Department of Commerce, James M. LeMunyon, had noted at a hearing before the Subcommittees on Arms Control, International Security and Science, and on International Economic Policy and Trade of the House Committee on Foreign Affairs, 101st Congress, 1st Session (1989) that the considerations for Category II transfers will include “whether the item is within the technical parameters of the Annex,” “whether the country of destination is actually developing its missile capability,” “whether the end-user is a project of concern,” and whether the transfer would “make a significant contribution to a missile development program.” Cited by Barry J. Hurewitz, “Non-Proliferation and Free Access to Outer Space,” p.226-27.

¹⁰ Barry J. Hurewitz, “Non-Proliferation and Free Access to Outer Space,” p.227. Also see Arthur M. Dula, “Export Controls Affecting Space Operations,” *Journal of Air Law and Commerce*, 1985-86, pp. 937-38.

¹¹ Richard H. Speier, “The Missile Technology Control Regime,” p. 116.

Weapons Convention (BTWC) – Article I and III. All members of AG are parties to CWC and BTWC. The control lists of the AG, however, are beyond that of CWC and BTWC. For instance, since AG’s objective is to restrict supply of chemical weapons precursors to a small number of nations of concern, its lists do not include the toxin chemicals but instead the precursors and technologies and equipment used for their development. Consequently, many reactants, which have major industrial utility and which are not included in CWC, are placed in the control lists of AG.

WA Control Lists

Wassenaar Arrangement was set up in 1995 with the objective of controlling exports of conventional arms and munitions, and dual-use items used in the production of WMD. However, soon thereafter, members of the WA decided to expand the scope by including encryption software and related technology into its control lists.

WA maintains two main lists of items on which its guidelines for export control apply. They are the list of dual-use goods and technology, and the munitions list. Items placed in the list of dual-use goods and technology, formally labeled the “General Technology, General Software and General Information Security” list, are sub-divided under nine categories: Special Materials and Related Equipments, Materials Processing, Electronics, Computers, Telecommunications (Part 1 of Category 5) and Information Security (Part 2 of Category 5), Sensors and Lasers, Navigation and Avionics, Marine, and Aerospace and Propulsion. These items are further assigned labels based on their sensitivity and are thus recognized as either “sensitive” or “very sensitive.”¹² Munitions List has a total of 22 sub-lists of items. These are items of (in)direct military utility, including and not limited to small arms and weapons, ammunitions, bombs, explosives, rockets, missiles, chemical and biological toxic agents, riot control agents, radioactive material, energetic materials and their precursors, armored and armed vehicles or carriers, vessels of war, aircrafts and UAVs. Some of the items placed under the WA controls lists also fall in the control lists of the other export control regimes like MTCR and NSG.¹³

In December 2013, WA brought surveillance and intelligence gathering “intrusion software” under its control lists.¹⁴ The purpose of this was to restrict the ability of oppressive regimes in spying desktops and remote devices of their political opponents and human rights activists, which otherwise resulted in gross violation of human rights, as demonstrated in case of DaVinci system, developed by Hacking Team of Italy, and FinFisher, developed by Gamma Group of the UK.¹⁵ This introduction has, nonetheless, created much confusion as many of the penetration-testing software which are used by cyber security professionals to detect and resolve system vulnerabilities may also fall under the WA control lists. There has

¹²“List of Dual-Use Goods and Technologies And Munitions List,” The Wassenaar Arrangement, available at <http://www.wassenaar.org/wp-content/uploads/2015/08/WA-LIST-15-1-2015-List-of-DU-Goods-and-Technologies-and-Munitions-List.pdf>, accessed 14 March 2016.

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[http://www.dft.go.th/Portals/2/ContentManagement/Document_Mod638/3.%20Walker%20Day%201%201015%20-%20Overview%20of%20the%20EU%20Control%20List%20\(Walker\)%2025571017-1456518262.pdf](http://www.dft.go.th/Portals/2/ContentManagement/Document_Mod638/3.%20Walker%20Day%201%201015%20-%20Overview%20of%20the%20EU%20Control%20List%20(Walker)%2025571017-1456518262.pdf)

¹⁴InnokentyPyetranker, “An Umbrella in a Hurricane: Cyber Technology and the December 2013 Amendment to the Wassenaar Arrangement,” *Northwestern Journal of Technology and Intellectual Property*, Vol. 13, No. 2, Fall 2015, pp.153-80.

¹⁵Kim Zetter, “Why an Arms Control Pact has Security Experts up in Arms,” *Wired*, June 24, 2015.

thus been the demand to replace “intrusion” with “exfiltration” in the definitions so as to allow differentiation between tools used to test systems and the ones to siphon data and intelligence.¹⁶

SCOMET List Harmonisation

As US and India began negotiations for an agreement on civil nuclear cooperation, India committed itself to work towards harmonising its policies with the guidelines of the NSG and the MTCR. The 18 July 2005 joint statement given by US President George W Bush and Indian Prime Minister Manmohan Singh had noted that India would ensure that “the necessary steps have been taken to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines.”¹⁷

As has been noted earlier, the larger objective has been to enhance India’s ability in strengthening global non-proliferation architecture. Harmonising SCOMET List with NSG control lists and the MTCR Annex formed a part of New Delhi’s initial set of commitments. Between 2005 and 2008, when India received the waiver from the condition of full-scope safeguards from the NSG to participate in global nuclear commerce, India updated the SCOMET list multiple times.¹⁸ On 05 September 2008, the then Foreign Minister, Pranab Mukherjee “reinforced” India’s commitment made in the 18 July 2005 joint statement, stating that “India has taken the necessary steps to secure nuclear materials and technology through comprehensive export control legislation and through harmonisation and committing to adhere to the MTCR and the NSG guidelines.”¹⁹ India informed the MTCR point of contact in Paris on 09 September 2008 of its adherence to the guidelines of the regime.²⁰ Meanwhile, the US President had notified the US Congress that, as per the requirements under Section 104(b)6(B) of the Hyde Act of 2006, India had harmonised its export controls to the guidelines stipulated by the NSG and the MTCR.²¹

Having met the initial set of commitments, India expressed its interest in joining the four export control regimes, to which it received support from the US administration, captured in the joint statement issued by the US President Barack Obama and Indian Prime Minister Manmohan Singh in 2010. To facilitate India’s entry into the four export control regimes,

¹⁶ Kim Zetter, “Why an Arms Control Pact has Security Experts up in Arms,” *Wired*, June 24, 2015.

¹⁷ “Joint Statement by President George W. Bush and Prime Minister Manmohan Singh,” White House Press Release, Office of the Press Secretary, Washington, DC, July 18, 2005, <http://2001-2009.state.gov/p/sca/rls/pr/2005/49763.htm>.

¹⁸ See, <http://dgft.gov.in/exim/2000/not/not07/indexn07.htm>. Numerous updates and amendments were introduced in the Appendix 3 to Schedule 2 of ITC (HS) Classification of Export & Import Items (SCOMET List).

¹⁹ “Statement by External Affairs Minister of India Shri Pranab Mukherjee on the Civil Nuclear Initiative,” Ministry of External Affairs, last modified September 05, 2008, <http://www.mea.gov.in/in-focus-article.htm?18806/Statement+by+External+Affairs+Minister+of+India+Shri+Pranab+Mukherjee+on+the+Civil+Nuclear+Initiative>.

²⁰ “Report Pursuant to Section 104(c) of the Hyde Act Regarding Civil Nuclear Cooperation with India,” accessed June 26, 2015, <https://www.hsdl.org/?view&did=233795>.

²¹ “India’s Adherence to the NSG and MTCR Guidelines,” last modified September 11, 2008, <http://2001-2009.state.gov/r/pa/prs/ps/2008/sept/109500.htm>. Also see Paul K. Kerr, “U.S. Nuclear Cooperation with India: Issues for Congress,” CRS Report for Congress, Congressional Research Service, Washington, D.C., September 30, 2010, p. 29, <http://www.fas.org/sgp/crs/nuke/RL33016.pdf>.

harmonisation of SCOMET with the control lists issued by these regimes became important. While India had completely aligned its SCOMET list with the NSG control lists and continued updating it to keep it in sync with NSG control lists' updates, there still remained certain gaps vis-a-vis the MTCR annex. These gaps essentially related to "minor non-standardization of item descriptions."²² The Directorate General of Foreign Trade (DGFT) of India issued Notification No. 37 (RE-2012)/2009-2014 on 14 March 2013, the annex to which included the amendments to Category 3 and 5 of the SCOMET List that deals with items from MTCR Annex. The SCOMET updates were acknowledged by the US as vital in facilitating entry of India into the MTCR.²³ To incorporate the updates made by MTCR in its Annex in October 2014, the DGFT issued Notification No. 116 (RE-2013)/2009-2014²⁴ on 13 March 2015 that amended the SCOMET List further.²⁵ An official from the US Department of State's International Security and Nonproliferation Bureau affirmed that India's SCOMET List update of March 2015 covers all the amendments made in the MTCR Annex post the plenary meeting of October 2014.²⁶

With regard to the AG, it is important to note that as signatory to the CWC and BTWC, New Delhi has fulfilled its commitments made under the two conventions. However, given that AG's control lists go beyond those of the two conventions, there are certain items which have not yet been listed by India in the SCOMET List. For instance, as of 29 April 2016, when India introduced the latest set of amendments to the SCOMET List, the List does not include toxic gas monitoring systems and their dedicated detecting components mentioned in AG's control list of dual-use chemical manufacturing facilities and equipment and related technology and software. Furthermore, 25 chemical weapons precursors have not yet been brought under the SCOMET List, including MethylphosphonylDifluoride, 3-Hydroxy-1-Methylpiperidine, 3-Quinuclidinol, 2-Chloroethanol, Dimethylamine and Potassium Fluoride.²⁷ Similarly, on items related to biological weapons, SCOMET list does not include P3 or P4 containment facilities (equivalent to BSL3 or BSL4 labs), fermenters, centrifugal separators, cross flow filtration equipment, freeze-drying equipment, aerosol inhalation chambers, and spraying/flogging systems.²⁸

²² Shawna Russo, "India's Export Controls: A Diversion Risk of WMD Materials," December 14, 2009, accessed July 24, 2015, http://csis.org/images/stories/poni/141209_RUSSO.pdf. "India's Export Controls: Current Status and Possible Changes on the Horizon," last modified July 10, 2011, http://www.securustrade.com/India's%20Export%20Controls_Article_July_10_2011_FINAL.pdf.

²³ "U.S.-India Joint Statement साँझाप्रयास - सबकाविकास" – "Shared Effort; Progress for All", last modified January 25, 2015, <https://www.whitehouse.gov/the-press-office/2015/01/25/us-india-joint-statement-shared-effort-progress-all>.

²⁴ "Notification No. 116 (RE-2013)/2009-2014," last modified March 13, 2015, <http://dgft.gov.in/Exim/2000/NOT/NOT13/not11613.pdf>.

²⁵ For the complete update of the MTCR annex of 2014, see "MTCR: Equipment, Software And Technology Annex," last modified October 02, 2014, http://www.mtc.info/english/MTCR-TEM-Technical_Annex_2014-10-02_rev%20-%20Updated%20cover%20page.pdf.

²⁶ The comment was made by the official in a closed-door interaction with the authors.

²⁷ Based on primary research.

²⁸ "Guidelines for Exports of SCOMET Items," Directorate General of Foreign Trade, Ministry of Commerce and Industry, Government of India, <http://dgft.gov.in>; "India's Export Controls: Current Status and Possible Changes on the Horizon," SECURUS Strategic Trade, LLC. July 10, 2011, pp 3-4, www.securustrade.com.

Given wide industrial usage of these precursors, their inclusion in SCOMET List may affect involved businesses in short term.²⁹ But the Indian government has made it clear that it seeks to be a responsible stakeholder in the global non-proliferation architecture and it will take all necessary steps to contribute to restrict proliferation, in this case, of chemical weapons. It is therefore a matter of when, and not if, these precursors get added to the SCOMET List.

Simultaneously, though with less vigour, India has begun making efforts to bring its national export controls to the standards of the WA. For instance, in August 2015, India announced a list of 16 categories of defence equipment on which its domestic export controls would be applicable.³⁰ Though it is a positive start, there remain a few issues. As noted earlier, one of the issues with the WA control lists is that many of its items are also included in the NSG control lists and the MTCR Annex. To deal with this overlap, the European Union Dual-Use Control List, for instance, places all WA dual-use items in its list first and those that overlap with the lists of the NSG and MTCR are not repeated. Remaining NSG and MTCR items are placed as 200-series and 100-series, respectively, in the EU dual-use control list. In India's case, however, given that it has already brought items from NSG control lists and the MTCR Annex into the SCOMET List, it will have to identify non-overlapping items from the WA control lists and place them, say, in a separate category.

Another challenge would be with regard to inclusion of "intrusion software", which was placed under category 4.A.5 of the General Technology, General Software and General Information Security list of the WA in December 2013. Assessment of the updates in WA control lists with regard to intrusion software reveals that the update does not restrict the export of intrusion software per se, but the controls are to be applied on the command and delivery systems and implant or correspond with the intrusion software. The Department of Commerce of the US interpreted this WA control lists update as that while "the exploit codes, which are used to implant malicious tools including intrusion software in vulnerable systems, would be controlled, the exploits themselves would not be."³¹ Interpretation of this particular update of the WA control lists has, consequently, been a subject of heated debate worldwide. In India as well, subject experts have argued the update to be counter-productive.³² As India begins harmonising the SCOMET List with the WA control lists, it will be important for New Delhi to define these items in a way that is not counter-productive.

²⁹Rajiv Nayan, "Indian Chemical Export Controls System and the Australia Group," IDSA, http://www.idsa.in/cbwmagazine/IndianChemicalExportControlsSystemand%20theAustraliaGroup_RajivNayan.

³⁰ Manu Balachandran, "India is Finally Walking the Talk on Becoming A Global Arms Exporter," Quartz India, September 02, 2015, <http://qz.com/489410/india-is-finally-walking-the-talkon-becoming-a-global-arms-exporter/>.

³¹Kim Zetter, "Why an Arms Control Pact has Security Experts up in Arms," *Wired*, June 24, 2015.

³² Arun Mohan Sukumar, "Wassenaar's web: a threat to technology transfer," *The Hindu*, August 5, 2015, <http://www.thehindu.com/opinion/columns/wassenaars-web-a-threat-to-technology-transfer/article7499748.ece>.

Legal Framework for Export Controls

Legislations

India has a legally-based and strongly enforced national export control system. There are numerous legislations pertaining to export control, including Foreign Trade (Development and Regulations) Act of 1992 and 2010 amendment; Atomic Energy Act of 1962; Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act of 2005; Chemical Weapons Convention Act of 2000 and 2010 amendment; Customs Act of 1962; Environment Protection Act of 1986; Narcotic Drugs and Psychotropic Substances Act of 1985; and Arms Act of 1959 and the Arms Rule of 1962.

One of the key legislations on export control is the Atomic Energy Act of 1962. This Act provides “for the development, control and use of atomic energy for the welfare of the people of India and for other peaceful purposes and for matters connected therewith.” This Act enables the Department of Atomic Energy to control exports of nuclear goods, technology and services.

Second key legislation is the Foreign Trade (Development and Regulations) (FTDR) Act of 1992 and its 2010 amendment.³³ The key objective of the Act is to facilitate general imports and exports. Under the 1992 version, the licensing regime imposed by this Act applied on limited items. The 2010 amendment, however, expanded the scope of the Act by widening “the ambit of dual-use controls.”³⁴

Another key legislation has been the Chemical Weapons Convention Act of 2000 and its 2010 amendment. This Act provides for the legal framework to impose controls on export of all sensitive chemicals. Through this Act and its amendment, India has implemented its commitments under the CWC.

The most recently introduced legislation in the Indian national export control system has been the Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act of 2005, more commonly known as the WMD Act.³⁵ This Act was passed to implement India’s obligations to the UNSC Resolution 1540,³⁶ the objective of which is to prevent proliferation of sensitive technologies which may get used for the development of WMD by non-state actors. As noted in a speech given by former Foreign Secretary of India at the National Export Control Seminar on 18 April 2012, “WMD Act of 2005 incorporated

³³ DGFT, “The Foreign Trade (Development And Regulation) Amendment Act, 2010,” <http://dgft.gov.in/exim/2000/download/Appendix/38D.pdf>.

³⁴ “Keynote Address by Foreign Secretary Shri Ranjan Mathai at the Ministry of External Affairs – Institute for Defence Studies and Analyses (IDSA) National Export Control Seminar,” last modified April 18, 2012, <http://www.mea.gov.in/Speeches-Statements.htm?dtl/19341/Keynote+Address+by+Foreign+Secretary+Shri+Ranjan+Mathai+at+the+Ministry+of+External+Affairs++Institute+for+Defence+Studies+and+Analyses+IDSA+National+Export+Control+Seminar>.

³⁵ “Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act of 2005,” last modified June 06, 2005, http://www.mea.gov.in/Uploads/PublicationDocs/148_The-Weapons-Mass-destruction-And-Delivery-Systems-Act-2005.pdf.

³⁶ “Resolution 1540 (2004) Adopted by the Security Council at its 4956th meeting, on 28 April 2004,” last modified April 28, 2004, [http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1540\(2004\)](http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/1540(2004)).

into national legislation key international standards in export controls, covering technology transfers, end-user or "catch-all" controls, brokering, transshipment and transit controls".³⁷

To enforce export controls, India has passed the Customs Act of 1962. This Act gives the Customs Department the authority to enforce export controls at India's international borders. Section 113 of the Customs Act gives the Department officials the authority to confiscate goods from the SCOMET List that are being exported in violation of the provisions of FTDR Act, CWC Act and WMD Act.

License Regime and Enforcement

The DGFT is the nodal agency that coordinates implementation of export controls and issuance of licenses for export of items from the SCOMET List through coordination with government agencies including the Ministry of External Affairs (MEA), Ministry of Defence (MoD), Defence Research and Development Organisation (DRDO), Department of Space, Indian Space Research Organisation (ISRO), Department of Atomic Energy (DAE), National Authority of the Chemical Weapons Convention (NACWC), Department of Chemicals and Petrochemicals, Department of Biotechnology, and intelligence agencies.³⁸

A license application submitted by the exporter is first forwarded to the concerned government agency. After the concerned agency grants no objection certificate (NOC), the application is then sent to the Inter-Ministerial Working Group (IMWG). IMWG's core group is composed of representatives from the MEA, DGFT, DRDO, DAE, Department of Space, and Department of Customs. The decision of the IMWG, which is consensus-based, is issued as an export license. There are conditions associated with the license issues which the prospective exporter needs to fulfil, including an end user certificate. This must certify that "the item will be used only for stated purpose and that such use will not be changed, nor items modified or replicated without consent of Government of India; neither the items nor replicas nor derivatives thereof will be re-transferred without consent of Government of India; and end-user shall facilitate such verifications as are required by Government of India."³⁹ If IMWG fails to reach consensus on a particular export license application, then the case is referred to a "higher-level committee" for final verdict.

This licensing mechanism applies on items from all categories of SCOMET List with the only exception of Category 0 (nuclear items). All export license applications for Category 0 items are submitted directly to the DAE, which in turn issues NOC and export license having considered factors like exporter's track-record and end-user information provided by the exporter.

³⁷ "Keynote Address by Foreign Secretary Shri Ranjan Mathai at the Ministry of External Affairs – Institute for Defence Studies and Analyses (IDSA) National Export Control Seminar," last modified April 18, 2012, <http://www.mea.gov.in/Speeches-Statements.htm?dtl/19341/Keynote+Address+by+Foreign+Secretary+Shri+Ranjan+Mathai+at+the+Ministry+of+External+Affairs++Institute+for+Defence+Studies+and+Analyses+IDSA+National+Export+Control+Seminar>.

³⁸ Yann Aubin and Arnaud Idiart, *Export Control Law and Regulations Handbook: A Practical Guide to Military and Dual-Use Goods Trade Restrictions and Compliance* (Second Edition), (Kluwer Law International: The Netherlands, 2011), pp. 205-06.

³⁹ NACEN, "Export Control System in India and Role of Customs Officers," http://www.nacenganpur.gov.in/admin/media_images/5476e06e4bd9117.pdf.

As explained earlier, Indian Customs is responsible for the enforcement of export controls, under the mandate given by the Customs Act of 1962. Section 113 of the Act gives Customs officials the authority to confiscate goods if they are being exported in violation of export control provisions applicable to SCOMET List items through the legislations discussed above. Moreover, exporter found to be violating India's export controls will be subject to penalty as per the provisions under Section 114 of the Customs Act. Custom officials are stationed at all exit points of the country. In order to ensure effective enforcement of export controls, Indian Customs Department has created a Risk Management System, which "is an IT driven system with the primary objective to strike an optimal balance between facilitation and enforcement and to promote a culture of self compliance in customs clearances."⁴⁰

Factors and Criteria for Memberships

The four export control regimes have defined parameters based on which their members make the decision of admitting new members. Of these four, NSG and MTCR have defined factors which members of these groups consider in making their decision on including new members, whereas AG and WA have defined criteria for membership.

Factors defined by NSG, set forth in its procedural arrangement, are "the ability to supply items (including items in transit) covered by the Annexes to Parts 1 and 2 of the NSG Guidelines"; "adherence to the Guidelines and action in accordance with them"; "enforcement of a legally based domestic export control system which gives effect to the commitment to act in accordance with the Guidelines"; "adherence to one or more of the NPT, the Treaties of Pelindaba, Rarotonga, Tlatelolco, Bangkok, Semipalatinsk or an equivalent international nuclear non-proliferation agreement, and full compliance with the obligations of such agreement(s)"; and "support of international efforts towards non-proliferation of weapons of mass destruction and of their delivery vehicles."⁴¹

Meanwhile, MTCR members consider factors, such as "whether a prospective new member would strengthen international non proliferation efforts, demonstrates a sustained and sustainable commitment to non proliferation, has a legally based effective export control system that puts into effect the MTCR Guidelines and procedures, and administers and enforces such controls effectively," in making membership decisions.⁴²

AG, on the other hand, has defined criteria for membership. These criteria include, but are not limited to: "A commitment to prevent the spread of CBW proliferation, including being a party, in good standing, to the Biological and Toxins Weapons Convention and the Chemical Weapons Convention; Being a manufacturer, exporter or transshipper of AG controlled items; Adopting and implementing the AG Guidelines for Transfers of Sensitive Chemical or Biological Items; Implementing an effective export control system which provides national controls for all items on the AG common control lists and is supported by adequate licensing and enforcement regimes; Creating legal penalties and sanctions for contravention of controls and being willing to enforce them; Creating relevant channels for the exchange of

⁴⁰ Government of India, Ministry Of Finance, Office of The Commissioner of Customs, "Implementation of Risk Management System (RMS) in Exports – regarding," November 26, 2013, http://www.vizagcustoms.gov.in/vch_content/pn_so/so4_2013.pdf.

⁴¹ Nuclear Suppliers Group, <http://www.nuclearsuppliersgroup.org/en/participants1>.

⁴² Missile Technology Control Regimes, <http://www.mtcr.info/english/partners.html>.

information including: accepting the confidentiality of the information exchange; creating liaison channels for expert discussions; and creating a denial notification system protecting commercial confidentiality; and Agreeing to participate in the AG in a way that will strengthen the effectiveness of the AG in preventing CBW proliferation.”⁴³

Similar to the AG, the eligibility of a country to become a member to the WA is based on criteria that including: “whether it is a producer/exporter of arms or industrial equipment respectively”; “whether it has taken the WA Control lists as a reference in its national export controls”; “its non-proliferation policies and appropriate national policies, including adherence to non-proliferation policies, control lists and, where applicable, guidelines of the Nuclear Suppliers Group, the Zangger Committee,(Q) the Missile Technology Control Regime and the Australia Group, and through adherence to the Nuclear Non-Proliferation Treaty, the Biological and Toxicological Weapons Convention, the Chemical Weapons Convention and (where applicable) START I, including the Lisbon Protocol”; and “its adherence to fully effective export controls.”⁴⁴

Irrespective of whether admission is based on consideration of factors or on criteria, all of the four export control regimes functions on consensus – all members of these regimes must agree on admitting a new member, which essentially is a political decision. These factors and criteria are used to inform those political decisions. As the following chapter analyses, there are numerous non-related factors too that affect the political decisions of members of these regimes of admitting new members.

For an assessment of where India stands against these factors/criteria, a table (below) has been prepared. Language of the parameters considered by these regimes, whether as factors or as criteria, has been simplified to make the assessment easier.

Sl. No.	NSG	MTCR	AG	WA
	Factors	Factors	Criteria	Criteria
1	Ability to produce/export items controlled by the body	Ability to produce/export items controlled by the body	Ability to produce/export items controlled by the body	Ability to produce/export items controlled by the body
2	Adhere to the guidelines issued by the body	Adhere to the guidelines issued by the body	Adhere to the guidelines issued by the body	Adhere to the guidelines issued by the body
3	Legally based and enforced domestic export control system	Legally based and enforced domestic export control system	Legally based and enforced domestic export control system	Legally based and enforced domestic export control system

⁴³ The Australia Group, <http://www.australiagroup.net/en/membership.html>.

⁴⁴ “Initial Elements – Appendix 4: Participation Criteria,” The Wassenaar Arrangement, available at <http://www.wassenaar.org/wp-content/uploads/2016/01/Initial-Elements-2015.pdf>, accessed 16 March 2016. Also see “Guidelines for Applicant Countries,” The Wassenaar Arrangement, available at <http://www.wassenaar.org/wp-content/uploads/2016/01/11Guidelines-for-Applicant-Countries.pdf>, accessed 16 March 2016.

4	Support international efforts on non-proliferation of WMD and their delivery systems	Support international efforts on non-proliferation of WMD and their delivery systems	Support international efforts on non-proliferation of WMD and their delivery systems	Support international efforts on non-proliferation of WMD and their delivery systems
5	Adherence to, in good standing, the NPT	-	Adherence to, in good standing, the BTWC and CWC	(where applicable) Adherence to NSG, Zangger Committee, MTCR, AG, NPT, BTWC and CWC

Four parameters, whether stated as factors, in the case of NSG and MTCR, or as criteria, as with AG and WA, remain common. First of them is the ability of produce and/or export items controlled by each of these regimes. As far as production and supply of items controlled by the NSG is concerned, India has already made it clear that it intends to rise up in the global supply chains of nuclear and related items. As noted by Srikumar Banerjee in his address to the 55th General Conference of the IAEA on 21 September, India “has rich experience in the entire gamut of activities related to nuclear power plants, which places it in a position to export reactors, equipment and components, as well as services, to the global nuclear energy market.” Items pertinent to the NSG that India could export include “all technologies and infrastructure relevant to small and medium sized [Pressurised Heavy Water Reactors] PHWRs of 220 MWe, 540 MWe and 700 MWe capacities.”

Similarly, India’s ability to indigenously produce missile systems and their components has been well established. It has a strong space programme, run by the Indian Space Research Organisation (ISRO), and has the ability to launch satellites into outer space. Meanwhile, its missile programme, in particular the Integrated Guided Missile Development Programme operated by the Defence Research and Development Organisation (DRDO), has been a success. India has produced ballistic missiles of short-ranges, under the series *Prithvi*, and long-ranges, under the series *Agni*, surface-to-air missiles *Akash* and *Trishul*, and cruise missiles as well. A recent example of India’s interest in becoming a missile supplier is the DRDO’s decision of transferring technology to develop “a reusable subsonic aerial target system,” called *Lakshya*, to a private sector defence manufacturer Larsen and Toubro (L&T).⁴⁵ Indian Ministry of Defence has actually given a nod for L&T to sell these missiles to foreign militaries, after they receive clearance from it.

As far as items controlled by AG are concerned, India is an established exporter of many of the chemicals and producer of biological agents (for defensive purposes) covered by the Group. Its chemical industry is, in fact, a major sector of the Indian economy that includes

⁴⁵Sushant Singh, “In a first, DRDO transfers technology to private player,” *The Indian Express*, July 19, 2015, <http://indianexpress.com/article/india/india-others/in-a-first-drdo-transfers-technology-to-private-player/2/>.

trade in dual-use chemicals.⁴⁶ Many chemicals, including from the precursor list of the AG, falls in India's chemical trade. For instance, the Triveni Chemical Group sells several chemicals including Pinacolyl Alcohol and Saxitoxin.⁴⁷ Meanwhile, India boasts an expansive and advanced dual-use pharmaceutical industry that involves many of the items placed in the Common Control Lists of the AG, with specific regard to biological weapons.⁴⁸ In order to address concerns from the threat of biological attacks, India has set up the Defence Research and Development Establishment (DRDE) under the DRDO, based out of Gwalior, in the Indian state of Madhya Pradesh.⁴⁹ DRDE conducts studies in "toxicology, biochemical pharmacology, and the development of antibodies against several bacterial and viral agents," to counter threats of diseases like anthrax, brucellosis, cholera, plague, smallpox, viral haemorrhage fever, and botulism.⁵⁰

With regard to the WA, considering that many of the items controlled by the Arrangement also fall in the list of MTCR and the NSG, India, as supplier of items covered by the latter two becomes, a producer/exporter of the items covered by WA as well. This includes items from both the Munitions lists as well as the dual-use lists.

Second parameter which the four export control groups have in common is the need for adherence to the guidelines issued by each of the bodies. As has been examined in the previous sections, India has already adhered to the export control guidelines on items controlled under the NSG and the MTCR. However, with respect to the AG and the WA, there remain certain items that have not yet been included in the SCOMET List, like 25 chemical weapons precursors and intrusion software. Therefore as of yet, India has not fully adhered to the export control guidelines issued by AG and WA on items covered by them.

The third common parameter is having a legally based and enforced export control system that puts into effect the guidelines of these regimes. As examined in the previous section, India has in place an effective export control system which is legally based and is rigorously implemented. Given that certain items from the Common Control Lists of the AG and the control lists of the WA remain outside the SCOMET List, the domestic export controls of India do not apply on these items. However, the framework for implementation of export controls on them is in place and it is a matter of when these missing items get included in the SCOMET List that India will have met both the second and the third parameters vis-à-vis the AG and the WA.

⁴⁶ Directorate General of Foreign Trade, Government of India, "Guidelines for Export of SCOMET Items," <http://dgft.gov.in>.

⁴⁷ Triveni Aromatics & Perfumery Private Limited (Group of Triveni Chemical), "Guanidines," www.trivenichemicals.com; Triveni Aromatics & Perfumery Private Limited (Group of Triveni Chemical), "Alcohol Stubs," www.trivenichemicals.com

⁴⁸ Nuclear Threat Initiative, "India – Biological," <http://www.nti.org/learn/countries/india/biological/>.

⁴⁹ Basrur, Rajesh M., Joseph, Mallika, "Chemical Biological, Radiological and Nuclear Terrorism Threats: A case Study on India," Landau Network- Centro Volta South Asia Security Project: Case Study 1/2007, December 2007, pp 14, www.centrovolta.it.

⁵⁰ Basrur, Rajesh M., Joseph, Mallika, "Chemical Biological, Radiological and Nuclear Terrorism Threats: A case Study on India," Landau Network- Centro Volta South Asia Security Project: Case Study 1/2007, December 2007, pp 14, www.centrovolta.it.

On the fourth parameter, India's support to international efforts on nuclear non-proliferation has been well recognised. India has signed and ratified BTWC and CWC. It has also ratified the Vienna Convention on the Physical Protection of Nuclear Material (CPPNM), including the amendment of 2005.⁵¹ New Delhi has further fulfilled its obligations under the UNSC Resolution 1540 through its Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act of 2005.⁵²

In a food for thought paper on India's NSG membership prospects, for instance, the US government noted that one of the most important factors in consideration of a new member is its support for international efforts on nuclear non-proliferation and that the US government's assessment on the same allows it to call India a "like-minded" partner.⁵³ Recently, at the final Nuclear Security Summit held in Washington DC from 31 March to 01 April 2016, Indian Prime Minister Narendra Modi committed to undertake certain steps that will further enhance the level of nuclear security in India and help strengthen international standards on the related fronts. For instance, India signed onto the IAEA's INFCIRC/869, which institutionalises "an effective and sustainable international nuclear security regime, based on national commitments and action plans to strengthen the effectiveness of nuclear security measures in general." While signing onto INFCIRC/869 will certainly assist New Delhi in meeting the intent of IAEA's nuclear security recommendations, it is also being viewed as a measure that would strengthen nuclear security internationally.⁵⁴

Final parameters are that of adherence to international treaties and convention related to the mandate of each of the export control bodies respectively. With the case of NSG, the parameter here refers to the "adherence to one or more of the NPT, the Treaties of Pelindaba, Rarotonga, Tlatelolco, Bangkok, Semipalatinsk or an equivalent international nuclear non-proliferation agreement, and full compliance with the obligations of such agreement(s)." India has not signed the NPT and thus does not meet this parameter. It must be noted here, however, that though India does not meet this parameter, it is not required to meet every parameter because the NSG Procedural Arrangement notes them as *factors for consideration*. As has been succinctly captured by certain members of the Group, these factors should not be looked upon as mandatory criteria. Thus, if required consensus is built, then India may be brought into the Group, irrespective of whether it meets all parameters. There have been attempts made by some members of the nuclear non-proliferation community to convert these factors into mandatory criteria, which brings to fore questions on NSG's mandate, objectives and its relationship to the NPT. These and other related political issues have been examined in the next chapter.

⁵¹ "Statement of India by Minister of State in the Prime Minister's Office, HE Mr V. Narayanasamy," International Atomic Energy Agency, July 1, 2013, <http://www-pub.iaea.org/iaeameetings/cn203p/India.pdf>, accessed 20 February 2015.

⁵² "Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act of 2005," Ministry of External Affairs, June 06, 2005, http://www.mea.gov.in/Uploads/PublicationDocs/148_The-Weapons-Mass-destruction-And-Delivery-Systems-Act-2005.pdf, accessed 21 February 2015.

⁵³ Nuclear Suppliers Group, "United States Communication — "Food for Thought" Paper on Indian NSG Membership," May 23, 2011, <https://www.armscontrol.org/system/files/nsg1130.pdf>.

⁵⁴ Rajeswari Pillai Rajagopalan, "India and the Nuclear Security Summit," *Nuclear Security Matters*, Belfer Center for Science and International Affairs, Harvard University, April 26, 2016, <http://nuclearsecuritymatters.belfercenter.org/blog/india-and-nuclear-security-summ>.

As with the AG, the parameter requires India to be “party, in good standing, to the Biological and Toxins Weapons Convention and the Chemical Weapons Convention.” India ratified BTWC on 15 July 1974 and has since fulfilled all its commitments under the convention. It signed the CWC in 1993 and ratified the convention in 1996. Fulfilling its commitments under CWC, India declared its chemical weapons stockpile in 1997 and by 2009 it completed the destruction of the entire stockpile, becoming only the third country to do so.

The final parameter listed in the table under WA though is a criteria, it acts more as a factor for consideration given the use of “where applicable” in the language. Against this parameter, India fares well as it an adherent to the guidelines of the NSG and MTCR. It has signed and ratified the BTWC, and CWC. With regard to the NPT and the Zangger Committee, the parameter begins with the “where applicable” and since India is not a signatory to the NPT, this part of the parameter does not apply on India. Also the reference to the NPT is regarding “adherence” to the Treaty and does not talk of “being party” to it.

Political Aspects

Basis for India's Membership

India formally began its journey in the domain of export controls in 1990s, especially after signing the Chemical Weapons Convention (CWC) in 1992. It must be highlighted here that controls on strategic items were separately implemented under the mandate of various legislations described in the previous chapter. It was since the 1990s, however, that India started bringing its export controls under one roof.

At the same time, India's approach to the global non-proliferation architecture, of which export control regimes have been part, started shifting. The most notable shift was in the nuclear realm. For instance, in 2000, the then Indian Minister for External Affairs, Jaswant Singh, while addressing the Indian Parliament on NPT review conference, established India's open support to the NPT.⁵⁵ He noted that though India could not join the Treaty, it would continue to adhere to the principles enshrined in the Treaty as a nuclear weapon state and that it would extend its support to the Treaty in the objectives of nuclear non-proliferation. This was significant, given that for decades, India was vocal about its dissatisfaction with the NPT.

Another critical factor which furthered India's integration with the global non-proliferation architecture was the growing strategic convergence between India and the US. Talks on the "Next Steps in Strategic Partnership" in 2003-04⁵⁶ laid initial grounds for civil nuclear cooperation between the two democracies. A condition which the US President was required to fulfil under the Hyde Act, 2006 – formalising the civil nuclear agreement – was to ensure that India harmonises its export controls with the guidelines of the NSG and the MTCR.⁵⁷

Thus, the first step of India's integration with the global non-proliferation architecture was completed in 2008 when India received the waiver from NSG on the condition of full-scope safeguards for engaging in global nuclear commerce. These exemptions were made on sections 4(a), (b) and (c) of the NSG guidelines, which are applicable on all non-nuclear weapon states.⁵⁸ In return, India was required to separate its civilian nuclear facilities and

⁵⁵For an assessment of Jaswant Singh's address to the Indian Parliament, see C Raja Mohan, *India and the Nonproliferation Institutions: Addressing the 'Expectations Gap'* (Washington DC: CSIS South Asia Program and NTI, 2010), p. 5.

⁵⁶"United States - India Joint Statement on Next Steps in Strategic Partnership," US Department of State, September 17, 2004, <http://2001-2009.state.gov/r/pa/prs/ps/2004/36290.htm>, accessed 30 May 2016.

⁵⁷"India's Adherence to the NSG and MTCR Guidelines," US Department of State, September 11, 2008, <http://2001-2009.state.gov/r/pa/prs/ps/2008/sept/109500.htm>, accessed 30 May 2016.

⁵⁸"Communication dated 10 September 2008 received from the Permanent Mission of Germany to the Agency regarding a "Statement on Civil Nuclear Cooperation with India", International Atomic Energy Agency, September 19, 2008, <https://www.iaea.org/sites/default/files/publications/documents/infcircs/2008/infcirc734c.pdf>, accessed 30 May 2016.

put them under IAEA safeguards – an understanding that applies to nuclear weapon states of the NPT as well.

Having fulfilled its commitments for the NSG waiver, India gaining entry into the four export control regimes – Nuclear Suppliers’ Group, Missile Technology Control Regime (MTCR), Australia Group (AG), and Wassenaar Arrangement (WA) was identified as the next step in India’s integration process. This objective was noted in the India-US joint statement issued during US President Barack Obama’s visit to New Delhi in November 2010.⁵⁹

While India has made significant progress in bringing its national export controls at par with the guidelines issued by the four export control regimes, getting membership into them continues to remain challenging for New Delhi. The NSG will possibly be the most challenging for several different reasons. For one, the presumed NSG-NPT relationship may make it tough for India. The fact that the NSG was formed in response to India’s 1974 peaceful nuclear explosion is also used by those opposed to India’s inclusion as an argument. Although gaining entry into the WA and the AG might be easier for India politically, New Delhi, however, seeks clarity on the prospects of its inclusion into NSG and MTCR prior to it applying for membership to WA and the AG. Despite the political challenges confronting India’s prospective entry into the NSG, New Delhi continues to view its membership to the four regimes in an incremental manner.

Being aware of the political challenges to its membership to the four export control regimes, New Delhi has accordingly been reaching out to the members of these regimes with an objective of assuaging some of their apprehensions. Target of these outreach efforts from both the political leadership as well as the bureaucracy has been the few specific members of these regimes that have remained opposed to India’s inclusion. Given the sensitivity involved, the agenda has been to establish a more nuanced approach to the case of India’s membership to these export control regimes. For instance, President Pranab Mukherjee’s visit to Sweden and Foreign Secretary S Jaishankar’s visit to Switzerland in 2015 were undertaken with this objective.⁶⁰ Similarly, Prime Minister’s visit to Ireland in September 2015 was meant for the same purpose. As per media reports, India’s accession to the NSG dominated much of these state-level visits and discussions. Visits such as these have been useful in creating an understanding that though India remains outside the NPT, it has remained supportive of the objectives of non-proliferation. Meanwhile, China continues to oppose India’s entry into the NSG – a position derived from political factors which are not related to the non-proliferation objectives which the Group is designed to serve. India is nonetheless making efforts to reach out to China – that India’s NSG membership was a key item on the agenda of President Pranab Mukherjee’s visit to China in May 2016 is a testament.⁶¹

⁵⁹“Joint Statement by President Obama and Prime Minister Singh of India,” The White House, November 08, 2010, <https://www.whitehouse.gov/the-press-office/2010/11/08/joint-statement-president-obama-and-prime-minister-singh-india>, accessed 30 May 2016.

⁶⁰Suhasini Haider, “India Pushes for NSG Membership,” *The Hindu*, November 03, 2015.

⁶¹Indrani Bagchi, “President Pranab Mukherjee to push for India’s membership in NSG during China visit,” *The Times of India*, May 18, 2016.

US Role in India's Integration

The US, having played an important role in the establishment of these multilateral export control regimes, continues to retain significant influence within these bodies. Consequently, the US government has been able to play a major role in India's integration process and it continues to retain the political clout in these export control regimes to see India through as a member to these regimes. There have been a couple of major factors that particularly motivated the US government to ink the civil nuclear deal with India and negotiate the India-specific waiver with NSG members. First was the anticipation of multiple business opportunities within India that would open up for the US civil-nuclear industry. Indeed, commercial gain was one of the most important factors in generating domestic political momentum for civil nuclear cooperation with India. There was a realisation that as India grows, so will its demand for energy, to meet which reliance on nuclear energy would expand significantly. That in turn would open up a huge market for the American nuclear industry. The second factor was that of facilitating strategic partnership between India and the US. Over the last two decades, New Delhi's and Washington's strategic interests have aligned well, especially in the Asia-Pacific where uncertainty over the implications of China's growing power has raised concerns in both the capitals. From that perspective, the civil nuclear cooperation agreement between India and the US was an indication of the strides the two democracies were taking in strengthening their partnership and furthering their common strategic interests. These factors provided strong impetus for the US government to pursue both the civil nuclear deal and the subsequent NSG waiver.

The US government has continued with its support for the next stage of India's integration with the global non-proliferation architecture. In all the joint-statements issued between India and the US since 2010, including in 2011, 2012, 2013, 2014 and 2015, the US government has acknowledged India's efforts towards strengthening non-proliferation architecture and has noted that India is ready to be member of the NSG and MTCR. Interviews conducted with serving as well as former officials from the US Department of State, however, revealed a sense of pragmatism wherein it was felt that securing India's membership into these regimes, in particular the NSG, will not be as easy as it was for the US to facilitate the NSG waiver in 2008. This is especially because some of the members of these regimes remain upset over the pressure that the US had exerted on them in 2008.

Nevertheless, as the key founding member of these export control regimes, the US continues to retain significant political clout, which can be used to further the prospects of India's accession to these regimes. India could motivate the US government in this process by providing the incentives which drove the US efforts up until 2008. While the two have established strong partnership and continue to make progress on strategic issues, there is scope for opening up business opportunities in the civil nuclear sector in India. Issues over liability dampened the momentum, but its resolution along with active engagement with the US civil nuclear industries could motivate the US government in pursuing India's membership into the export control regimes with greater vigour.

Political Challenges

The India-US nuclear agreement of July 2005 is a solid foundation, both political and technical, for India's integration into the global export control regime. The clean waiver that was provided to India at the NSG has opened doors for India, though there are several

hurdles, which are explained below. A few states in particular are unhappy by the US pressure for the 2008 waiver and thus are quite uncomfortable to make yet another exemption for India and facilitate its entry into the NSG and other groupings. A couple of countries are even more forthright in stating that the 2008 waiver was granted to India, not in recognition of the political reality of accepting India as a nuclear weapons state but for New Delhi to meet its growing energy demands. These political realities as well as other bilateral issues will feed into the member countries' decision on India's membership.

As explained in the previous chapter, these export control regimes function on the principle of consensus. Thus, it could be the case that even if a prospective membership applicant fares well on all factors for consideration with NSG and MTCR or meets all criteria with AG and the WA, any of the members of these regimes could block entry of that applicant not because it does not meet the technical requirements but due to any other bilateral political issue. This is because apart from factors or criteria, which are derived from the principles and objectives of these regimes, there have been other non-related political factors which have demonstrably influenced membership decisions in these regimes. Before substantiating this argument, however, it would be important to analyse the political issues over factors or criteria defined by these regimes on which India does not fare well.

NPT and Non-Proliferation

The only concern flagged over India's entry into the four export control regimes emerges from the fact that India is not party to the NPT. While it is only the NSG that appears to have any relationship with the NPT at all, given that some members of the NSG are also members of other regimes, they tend to look at the four regimes with a single broad understanding and thus NPT-factor has gained important traction in their membership-decisions.

While there is near total endorsement to India's membership issue among the great powers including the US, UK, France and Russia, this is not good enough. Some of the member countries that have raised concerns over India's inclusion in the NSG without it being party to the NPT are Austria, Ireland⁶², the Netherlands, and Switzerland. Norway that had earlier maintained reservations on India is now in full support of India's membership. The Norwegian Foreign Minister Borge Brende who travelled to India in November 2015 endorsed India's candidature. Brende underlined the fact that there was "broad consensus for Indian membership ... but regrettably no consensus yet." A statement from the Ministry of External Affairs issued at that time also said Mr. Brende confirmed Norway's support for India's entry into the NSG and MTCR. Still, many European countries argue that while India's membership to these regimes would be welcome, there are prerequisite steps for New Delhi to take.

Interviews conducted with government officials from these countries revealed three primary concerns. The main concern that these governments raise is with regard to India's non-NPT signatory status. They argue that "since it is the Group which is upholding the Treaty, including a country that is not party to the NPT into the Group may weaken the

⁶² Field visits and interviews were conducted in four European countries – Austria, The Netherlands, Norway, and Switzerland. Ireland was not covered during the visit although we discussed the issue with Indian officials who were privy to negotiations with the Irish government. .

Treaty.”⁶³ The second concern raised by these governments is that if India is to be admitted into the NSG without it being party to the NPT, then New Delhi must undertake additional commitments like signing the Comprehensive Test Ban Treaty (CTBT), pushing the negotiations for the Fissile Material Cutoff Treaty (FMCT) and actively pursuing nuclear disarmament. Thirdly and consequently, these governments raise objections to the US President Obama’s assurance to India of bringing it into nuclear clubs such as NSG without any additional commitments or conditions. They stress that NSG runs on consensus and that the US government cannot unilaterally assure India’s membership on behalf of other members of the Group. This objection is built upon their disgruntlement with the US for the pressure it exerted on them for the waiver in 2008.

An objective assessment of these arguments and objections is a must if this gridlock over India’s accession to the NSG and other export control regimes is to be broken down. The concern over India’s entry into the Group being detrimental to the Treaty raises question on the relationship between the Group and the Treaty. Unfortunately, there has been no real debate on this issue, especially with the governments of The Netherlands, Austria and Ireland. Interestingly, one of the seven founding members of the NSG, France, was not a NPT signatory until August 1992. Article III.2 of the Treaty already provides the mandate for export controls of nuclear and related sensitive items. The Zangger Committee was then set up in 1972 with the responsibility to prepare a Trigger List of items whose exports were to be controlled and issue guidelines which would dictate terms of such exports. In essence, NPT already had the provision and mechanism for export controls. The need for the NSG arose from NPT’s shortcomings on memberships, which was quite limited in the 1970s. The case of France succinctly illustrates the argument since France was not a party to the NPT until two decades after the treaty entered into force. Though NPT membership has expanded remarkably, there are still states outside the NPT which have the ability to supply nuclear and related items. The NSG is thus uniquely placed in the non-proliferation architecture to keep a check on export-related activities of countries which are not covered by Article III.2 of the NPT and the Zangger Committee.

On the contrary, the argument to keep the NSG membership limited to NPT signatories is hypocritical. It has been noted that the NSG and the Zangger Committee’s export control guidelines differ in nature and scope. But if the objective is to retain NPT’s primacy on all nuclear non-proliferation activities, then why not hand NSG’s mandate over to the Zangger Committee and dissolve the Group. This way NPT would have the entire mandate of controlling exports of nuclear and related items. This, however, will not be in the interest of global non-proliferation as these export controls would not be applicable on countries outside the Treaty. Given that the very idea of setting up NSG was to go beyond NPT in controlling exports of supplier countries which were not obliged to abide by the guidelines issued by the Zangger Committee, the argument to keep NSG membership restricted to NPT parties is weak and flawed.

Thus the argument against granting India NSG membership because India is not a party to the NPT does not hold much water. The other arguments are even less convincing. New Delhi has been supportive of negotiations for FMCT based on the Shannon Mandate, which

⁶³ Ibid.

has been blocked by Pakistan. India has also continued to call for nuclear disarmament and a Nuclear Weapons Convention. Even on CTBT, India's basic objection was from the fact that CTBT was another tool of non-proliferation and did not contribute in moving towards global nuclear disarmament. Nevertheless, should the CTBT gain some traction and come up for signature, India may find it in its interest to consider signing the treaty. This is particularly because since 1996, when CTBT opened for signature, to date, much has changed in both India's non-proliferation objectives and its national security imperatives. The fact that India now seeks to support the existing non-proliferation architecture and that it is now a declared nuclear weapon state makes reassessment of New Delhi's stand toward CTBT timely and important.

Other Political Issues

As argued earlier in this section, unrelated bilateral political motivations appear to be influencing membership decisions of the parties to these regimes, which is unfortunate. There are numerous cases to substantiate this argument. In the Indian context itself, two cases have featured in the last one year, which can succinctly illustrate this argument.

The first was with regard to India's membership application to the MTCR which was reportedly blocked by Italy during the October 2015 annual plenary of the Regime. The bilateral political dispute between India and Italy over the case of two Italian marines figured as the reason behind Italy's decision. Italy was not required to justify its stand and its representative at the plenary had merely noted that Rome needed more time to take a decision on India's membership application to the Regime. Media reports prior to the plenary had noted that Italy was expecting India "to go easy on the marines issue in lieu of support for MTCR membership."⁶⁴

The second was China's approach to India's prospective membership application to the NSG. Though Beijing claims to be concerned over the ramifications for the NPT if a non-NPT-signatory is admitted to the Group, it is its quest to block India's membership due to non-related political issues which are driving Beijing's approach. To further worsen India's prospects of joining NSG, Beijing has tagged the case of India's membership to that of Pakistan's. It argues that if a non-NPT-signatory is to be included, then that must be based on criteria which could also apply on other such states, with direct reference to its ally – Pakistan. With poor non-proliferation credentials, it is unlikely for other NSG members to agree on including Pakistan into the Group and China can then justify its blocking of India's membership. The fact that China is justifying its objection to India's inclusion into NSG as a "principled" decision is ironical given that Beijing itself has repeatedly flouted the NSG guidelines through its supplies of nuclear reactors to Pakistan. For instance, in 2009 China signed agreements to construct two additional reactors – Chashma 3 and 4, justifying it as grandfathering the old agreement, under which Chashma 1 and 2 were constructed.⁶⁵

⁶⁴ Anchal Vohra, "Italy blocking India's entry into elite missile tech group MTCR, bargaining over marines issue: Sources," *News 18*, September 29, 2015, <http://www.news18.com/news/india/italy-blocking-indias-entry-into-elite-missile-tech-group-mtcr-bargaining-over-marines-issue-sources-1121836.html>, accessed 10 March 2016.

⁶⁵ Ananth Krishnan, "China involved in six nuclear projects in Pakistan, reveals official," *India Today*, February 8, 2015, <http://indiatoday.intoday.in/story/china-pakistan-nuclear-projects-beijing-chashma-atomic-energy/1/417661.html>.

Thereafter in 2013, China agreed to build two nuclear reactors in Karachi and it did not offer any explanation for violating NSG guidelines.⁶⁶

There have been other similar incidents over membership to these export control regimes, where unrelated political factors and interests have driven membership decisions. For instances, a leaked cable published by the Telegraph over Latvia's quest for entry into the MTCR had noted that "Russia is lobbying for Kazakhstan's acceptance into the Australia Group, and that there had been talk about a trade – E.U. support for Kazakhstan in return for Russian support for remaining E.U. countries joining the MTCR."⁶⁷

Thus, it can be concluded that as long as these bodies function on the basis of consensus, any of their members can block entry of an applicant on an unrelated political issue without having to justify its decision. In the case of Italy blocking India's accession as well, interactions with officials from Indian and the US government revealed that "nobody was expecting Italy to stand and block India's application," as India met all technical requirements and fared well on factors established by the Regime for admitting new members.

This raises questions on how "like-minded" the existing members of these regimes are on non-proliferation objectives. If these regimes are to maintain and strengthen their credibility, then their members should prioritise the non-proliferation objectives that form the basis of these export control regimes. In India's case, therefore, an objective assessment of how these regimes may gain by admitting India into their fold will be vital in shaping political understanding over New Delhi's membership applications to these regimes.

Implications of India's Accession

Both India and the global non-proliferation regime stand to gain from India's membership. As India grows in its influence and as its capacity to export advanced sensitive technology expands, it is in the interest of the regime to keep India within the tent. And India too stands to benefit, and we consider these first before turning to the benefits that the regime can expect from India's membership.

For India, most importantly it will reflect greater recognition of India as a responsible partner of the global non-proliferation architecture. India's objections to the NPT regime reflected not so much an objection to the principles of the regime as much as India's place in it. India's political dithering in the 1960s prevented India from testing and joining the treaty as a nuclear weapon state. But India's national security concerns prevented it from signing on as a Non-Nuclear Weapon State. It was this contradiction that led to India's anomalous status in the regime, not any objection to the idea of non-proliferation itself. India's record on non-proliferation – better than most NWS's – bears this out. By being member of these regimes, it will also be able to more effectively contribute to the cause of

⁶⁶ "China to build \$10 billion N-plants in Pakistan," PTI, *The Hindu*, August 20, 2015, <http://www.thehindu.com/news/international/10-billion-pak-nuclear-power-plant-to-be-built-by-china/article7561473.ece>.

⁶⁷ "Latvia Seeks Membership in MTCR," *The Telegraph*, February 01, 2011, <http://www.telegraph.co.uk/news/wikileaks-files/nuclear-wikileaks/8297114/LATVIA-SEEKS-MEMBERSHIP-IN-MTCR.html>, accessed 09 March 2016.

non-proliferation. For instance, India could add to the process of identifying sensitive items whose exports could lead to proliferation of WMD and be a threat to international peace. It will further be able to recognise entities, exports to which could again destabilise global order.

A second benefit will be with regard to the access New Delhi would have, to items controlled by these regimes. A caveat, however, is that membership, by itself, does not guarantee access to all items controlled by these regimes. As noted in the case of MTCR, the regime does not differentiate between exports to partners and to non-partners. Entry into these regimes would only enhance the probability of India getting access to some of the items controlled, based on the reflection of India as a responsible power, who has a like-minded approach on non-proliferation issues. Any probable transfer to India and exemptions from the guidelines of these regimes would be subject to a prospective supplier's final decision based on whether that transfer to India would be stabilising or not.

On the other hand, India would impose on itself restrictions over its exports of sensitive items. It already continues to do so, even without subjecting itself to the regime rules, and albeit without any benefits. As India grows as an exporter in the global supply chains of strategic goods, it may find it in its interest to supply certain items that fall in the ambit of these regimes for strategic reasons. One recent example of this has been the call for India to supply Brahmos missiles to Vietnam. Though for now India has chosen not to, it may proceed with such transfers if New Delhi is convinced that such transfers will not be a threat to international security and thus a project of concern.

It is here that an assessment of what these regimes would gain by including India into their fold becomes important. After staying outside these regimes for several years, New Delhi is willing to subject its understanding of "projects of concern" to the perspective of partners of the global non-proliferation architecture. Without India gaining entry into these regimes, India could still pursue exports which it does not find destabilising but that may or may not be in the interest of the regimes. Given India's growing status as an influential power with advanced technologies, accession of India into these regimes will strengthen the credibility of these mechanisms. Since the export control regimes also stand to benefit from India's inclusion, members of these regimes must weigh these benefits over their political considerations. In the absence of such an approach, the credibility of these regimes could be hit.

Major Conclusions

India has maintained a strong anti-proliferationist stand despite not being a signatory to the Nuclear Non-Proliferation Treaty (NPT). Despite not being a member of the NPT, India has lived by the two key principles that are enshrined in the treaty – not to transfer nuclear weapons technology or know how to countries, which do not possess them and to further the cause of nuclear disarmament. On both these counts, India scores far better than even countries that are signatories of NPT. The fact that India did have opportunity to proliferate in the past and yet it chose not to do so is a testament to this Indian commitment. It is this clean track record of India that has aided New Delhi in getting finally the India-specific waiver at the Nuclear Suppliers Group (NSG).

Despite India's strong interests in and adherence to the cause of non-proliferation, New Delhi's role in actively tackling proliferation cases such as North Korea and Iran has been limited because it remains outside the tent. But given India's record on non-proliferation and also the potential for New Delhi to emerge as a major supplier of advanced nuclear and other sensitive technologies, it should be in the interests of the regime to include India within it, including these global technology control clubs. On the other hand, India also has interests in joining these clubs because it is already compliant with the rules and regulations of these regimes but to formally become part of these regimes could strengthen New Delhi's credibility in the area of global governance.

Several conclusions can be drawn from this study. The first major conclusion is that India has a fairly robust domestic export control regime which is legally based and is rigorously implemented. India has made continuous effort to review and update its SCOMET list to keep it in harmony with the NSG Trigger and Dual-Use lists and the MTCR Annex. With regard to AG and WA, India is still to harmonise the SCOMET list with their respective control lists. In the case of AG, there remain some chemical weapons precursors which are not included in the SCOMET list as of now. Given their heavy industrial utility, chemical industry lobbies have raised objections to their inclusion into the scope of export controls. Meanwhile, on the WA control lists, the challenge for India will be to separate out items which are already covered in the SCOMET lists, through its harmonization with NSG and MTCR control lists. Another and important challenge would be to define "intrusion software" before it is added to the SCOMET list as that would have serious implications for many defensive penetration tools used for vulnerability assessments. However, New Delhi has made it clear that it would completely align its domestic export controls with those of the regimes. It has been the recognition of political challenges to India's entry into NSG and MTCR which has driven New Delhi to prioritize its accession into these two. It is only a matter of time before India harmonises its SCOMET list to meet the technical requirements for membership to AG and WA.

A second major conclusion is regarding the NPT relationship with the NSG. As against the popular perception, being party to the NPT is not a prerequisite for gaining membership into the NSG. As far as the NSG is concerned, the Group remains closely associated with the Treaty owing to an overlap of their end-goal – nuclear non-proliferation. While being signatory to the NPT is certainly noted as one of the factors considered for the inclusion of a

new member, it is not mandatory. For the other three groups such as the MTCR, AG and WA, NPT is not related at all if one were to go by the technical requirements. Nevertheless, given the overlap in the membership in these clubs (30 countries are common across the four regimes), countries are being unduly influenced by India's NSG membership and its relationship to the NPT.

The third conclusion is that in all these issues, the US role is critical. Having played a central role in the establishment of the multilateral export control regimes, the US continues to retain significant political clout within these regimes to influence decisions one way or the other. Unless the US makes a serious political investment, it is going to be difficult for India to gain membership into these regimes. The US has to be able to work with some of the troublesome countries in Europe as well as China in conveying a more nuanced approach about India's non-proliferation credentials. Given that these regimes work on the principle of consensus, it is not good enough for India that a majority of countries support India's candidature but every single country counts.

A fifth major conclusion is that India must strengthen its outreach efforts in conveying a better and clearer sense of its export control policies and practices. While reaching out to participating governments of these regimes is important, it must also be recognised that much of the political challenges and opposition to India's accession are raised by non-proliferation civil society actors. Given the influence these actors have had in the decision making of participating governments, it is vital that India makes efforts to effectively engage with them to create a nuanced understanding on the implications and benefits of India's accession.

Last major conclusion is that India attaches great importance to integrate itself with the global non-proliferation architecture, including its accession into the four technology export control regimes. Accordingly, it has taken several steps, in addition to the mandated technical requirements, that would improve the atmosphere around India's candidature. India joining the Hague Code of Conduct against Ballistic Missile Proliferation (HCoC) recently is a case in point. While India's adherence to HCoC would positively impact its membership application to MTCR, it is also likely to improve India's overall non-proliferation credentials, thereby strengthening the case for its inclusion into the other three regimes as well. On the other hand, it should be in the interests of these regimes to bring India into their fold, as that would allow these regimes to keep a track on India's supplies of sensitive items controlled by these regimes. India has begun establishing itself as a potential major supplier of strategic goods and technology and it aims to rise up in the global supply chain of these items. India already adheres to the guidelines of these regimes and would continue to abide by even after gaining membership. However, if it stays outside, members of the regimes will not have any say in determining whether India's future supplies are "projects of concern" or not. Thus, these regimes stand to gain by including India as a member.

Major Recommendations

Based on the primary and secondary research conducted and drawing from the major conclusions laid out in the previous chapter, a set of recommendations have been derived at. These recommendations are for the consumption of the Indian government, participating governments of the four export control regimes and the international non-proliferation community.

1. In meeting technical parameters to be able to join AG and WA, the Indian government should proceed with harmonisation of the SCOMET List with the Common Control Lists of the AG and Control lists of the WA. As mentioned previously, it is a matter of time before India proceeds in this harmonisation process.

2. Soon after meeting the technical parameters mentioned in the previous point, New Delhi must apply for membership to AG and WA. As has been noted, it was India's concern over the political challenges to its inclusion into NSG and MTCR which drove New Delhi to prioritise them over AG and WA. Now that India has applied for membership to NSG and MTCR, it will be important to pitch in its membership application to the remaining two regimes as well. As has been flagged, 30 countries are members to all four export control regimes. Though these regimes have their own standalone objectives, a majority of members tend to look at them in a single overarching framework on non-proliferation. Gaining entry into AG and WA is likely to strengthen the political understanding of India as a like-minded partner on non-proliferation issues among the leadership in these 30 common countries.

3. Critical for the Indian government, participating governments of the regimes, in particular of the NSG, and international non-proliferation community will be to objectively assess the relationship of memberships to NSG and NPT. Both the Treaty and the Group has the same objective of nuclear non-proliferation. To that end, the natural understanding which members of the Group have is that the two must support each other. While currently all members of the NSG are signatories to the NPT, one of the founding members of the Group – France was not a signatory to the Treaty for nearly two decades since the Group's inception. A related point to consider is that NPT in itself has the provision for regulating exports of its signatories under Article III.2 and the Zangger Committee established in 1971 has since been maintaining and updating both Trigger List and Guidelines. Thus, if NPT already have had the provision to implement export control on its parties then the need to establish NSG and thereby the objective of the Group must be questioned. Analysis presented in this report in Chapter III and the Conclusion should inform the debate on the relationship between memberships to NPT and NSG.

4. The US government, as key founder of these export control regimes, continues to retain significant political clout in the decision making at these regimes. While it has continued to remain supportive of India's inclusion into the export control regimes, New Delhi can provide incentives to Washington to further motivate the latter into pursuing its case for integration into the non-proliferation architecture. India and the US have made remarkable

progress in strengthening their strategic partnership in the last one decade. American civil nuclear enterprises, however, have not gained any business opportunity in India, the prospect of which had driven them to lobby hard for civil nuclear cooperation between the US and India. If the Indian government is able to resolve the ambiguity around its liability provisions and if it actively engages with civil nuclear entities from the US, offering them mutually beneficial business opportunities, then it would certainly motivate the US government to push for India's inclusion into the four export control regimes with greater rigour.

5. Government of India will benefit by actively engaging with members of the export control regimes, in particular those who have remained unsure of the implications of India's inclusion into these regimes. It has been reaching out actively in the recent times, but engaging with government of the Netherlands, Ireland, Austria and Switzerland directly on the issues they may have and how to best resolve them could play an important role in signalling how serious New Delhi is in its commitment to the norms and principles of non-proliferation.

6. Signing CTBT is often raised by aforementioned members of these regimes, in particular NSG, as a step which India could take in order to strengthen its case for membership. Government of India and the US on the other hand have taken the position that India will not take on additional commitments in order to gain membership. The best solution to this issue could be for the Indian government to reconsider its position vis-a-vis CTBT. Indeed, it will be two decades since the time the CTBT opened for signature. India had then decided to not sign the treaty for two reasons. Firstly, the treaty was a stand-alone non-proliferation tool and it was not conceived in a larger framework with the end goal of nuclear disarmament. Secondly and consequently, it did not take into consideration India's national security which had to be the priority for New Delhi. However, in the last two decade, India has conducted nuclear tests and declared itself as a nuclear weapon state. It now has a nuclear doctrine which it could use to successfully deter nuclear threats from its neighbour which is a recognised nuclear weapon state. Its position on the existing nuclear non-proliferation architecture too has changed. From once calling to replace NPT with a nuclear weapons convention, it now has extended its support to the NPT and its objectives, while simultaneously calling to move towards global nuclear disarmament. The time, therefore, is ripe for India to relook its position on CTBT. Even if it chooses not to sign the treaty, it could support it by becoming an observer. It could also get access to enormous data generated from the monitoring stations of the CTBTO by allowing the latter to set up few in the country. The recommendation thus is to objectively assess its position on CTBT.

7. There is a need to acknowledge that non-related political factors affect membership decisions at these export control regimes. Numerous examples have been cited in this report to that end. Considering the same, New Delhi may find it in its interest to explore non-related political and economic avenues through which it could influence the decision of the members of these regimes on its accession.

8. Though slightly unrelated, India must make progress in clearing the Nuclear Safety Regulatory Authority (NSRA) Bill and strengthening its nuclear security practices. It must also highlight its nuclear security practices to the world in order to change perception of India.

9. Also of particular consequence is the manner in which the different ministries/departments of government of India coordinate their efforts on the subject of India's membership into the four export control regimes. While items from the SCOMET list fall under the purview of different ministries, such as Ministry of Commerce, Ministry of Defence, etc., yet the external interface on India's membership is coordinated by the Ministry of External Affairs. This calls for greater engagement between all the ministries involved so as to have a unified position that takes into consideration various implications of membership into these regimes.

10. Finally, members of these regimes must take into consideration what they are to gain by including India. India already adheres to the guidelines issued by these regimes. But any decision to supply sensitive items taken by New Delhi is subject to its interpretation of whether that supply is detrimental to international stability or not. By including India into their fold, members of these regimes would have the ability to monitor India's supplies and influence New Delhi's perceptions on the implication of those supplies.