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# **Pakistan's Export Control Regime**

**Malik Qasim Mustafa**

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**Tahir Mahmood Azad**



**Institute of Strategic Studies Islamabad (ISSI)**

# **THE INSTITUTE OF STRATEGIC STUDIES ISLAMABAD, PAKISTAN**

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**Malik Qasim Mustafa \***

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**August 2016**

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## ACRONYMS

AG	Australia Group
BTWC	Biological and Toxin Weapons Convention
CACNARE	Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency
CAMB	Centre for Advanced Molecular Biology
CBDC	Chemo-Bio-Defence-Cell
CBMs	Confidence Building Measures
CBW	Chemical and Biological Weapons
CENNA	Convention on Early Notification of a Nuclear Accident
CIT	Commodity Identification Training
COMSETCH	Committee on Scientific & Technological Cooperation
CPPNM	Convention on the Physical Protection of Nuclear Material
CPRL	Chemical Protection Research Laboratory
CWC	Chemical Weapons Convention
DESTO	Defence Science and Technology Organisation
ENDC	Eighteen Nations Disarmament Committee
EPA	Environmental Protection Authority
FCC	Forman Christian College University, Lahore
GMOs	Genetically Modified Organisms
HEC	Higher Education Commission
IAEA	International Atomic Energy Agency
IBC	Institutional Biosafety Committees
ICP	Internal Compliance Programme
ISU	Implementation Support Unit
MTCR	Missile Technology Control Regime
NACWC	National Authority on Chemical Weapons Convention
NBC	National Biosafety Committee
NCA	National Command Authority
NCGLS	National Core Group of Life Sciences

NDMA	National Disaster Management Authority
NIBGE	National Institute for Biotechnology and Genetic Engineering
NIH	National Institute of Health
NOC	No Objection Certificate
NPT	Nuclear Non-Proliferation Treaty
NSAP	National Security Action Plan
NSAP	Nuclear Security Action Plan
NSG	Nuclear Suppliers Group
NSS	Nuclear Security Summit
OIC	Organization of Islamic Conference
OPCW	The Organisation for the Prohibition of Chemical Weapons
OSB	Oversight Board
PAEC	Pakistan Atomic Energy Commission
PBSA	Pakistan Biological Safety Association
PCENS	Pakistan's Centre of Excellence for Nuclear Security
PNE	Peaceful Nuclear Explosion
PNRA	Pakistan Nuclear Regulatory Authority
PNSRPR	Pakistan Nuclear Safety & Radiation Protection Regulations
PSI	Proliferation Security Initiative
RCWCAPC	Regional CWC Assistance and Protection Centre
RevCon	Review Conference
SCOMET	Special Chemicals, Organisms, Materials, Equipment, and Technologies
SECA-2004	Strategic Export Control Act – 2004
SECDIV	Strategic Export Control Division
SLIMS	Licensing and Information Management System
SPD	Strategic Plans Division
SRO	Statutory Notification Order
TAC	Technical Advisory Committee
UN	United Nations
UNGA	United Nations General Assembly



UNSC	United Nations Security Council
UNSCR	United Nations Security Council Resolution
WA	Wassenaar Arrangement
WeBOC	Web Based One Customs
WMD	Weapons of Mass Destruction
ZA	Zanger Committee



## INTRODUCTION

Proliferation of the Weapons of Mass Destruction (WMD)-related know-how and associated technology has long been an international concern. To address these proliferation concerns, the international community has devised many legally binding tools and instruments like the Nuclear Non-Proliferation Treaty (NPT); international nuclear safeguards under the International Atomic Energy Agency (IAEA); Chemical Weapons Convention (CWC) and Biological and Toxin Weapons Convention (BTWC); and establishment of multilateral export control regimes like the Nuclear Suppliers Group (NSG), Missile Technology Control Regime (MTCR) and Australia Group (AG). All these measures constitute the international non-proliferation regime. Initially, these international non-proliferation efforts were limited to prevent the proliferation of WMD components and associated technology between states. But when these proliferation concerns were overshadowed by proliferation by non-state actors and terrorists, the international community started to adopt new measures and tools to strengthen the existing international non-proliferation regime, such as United Nations Security Council Resolution (UNSCR) 1540.

In order to prevent the WMD proliferation, the international non-proliferation regime also entails certain non-proliferation measures at the national level. Among other measures, establishment of a stringent export control system is a key obligation and responsibility of a nuclear state to control and regulate materials associated with WMD. Pakistan, as a responsible nuclear weapons state also recognises its obligations and responsibilities to strengthen international non-proliferation efforts. Development of an effective export control regime has been at the forefront of Pakistan's non-proliferation efforts since its inception. During the last decade or so it has enacted an export control regime which is not only at par with that of any developed country, but also with existing multilateral export control regimes. Pakistan is constantly updating its export control regime to meet existing and future challenges.

The aim of this paper is to examine Pakistan's export control regime in detail. It argues that this regime fulfils the international criteria as well as its national requirements. Pakistan has completed all the pre-requisites for full access to the international nuclear trade for peaceful purposes. Pakistan is ready for its inclusion into the multilateral export control regimes like the NSG, as its export control lists are compatible with those of NSG, MTCR, and AG. The paper concludes that Pakistan has built a strong case for entering the international export control regime.

# PART 1

## EVOLUTION OF INTERNATIONAL EXPORT CONTROL

*Ghazala Yasmin Jalil*

### **1.1: History and Current Structure**

Globally, there are five major multilateral export control groups or arrangements. All of these are informal and their membership is voluntary. These include the Zangger Committee (ZC), the AG, the MTCR, the NSG, and the Wassenaar Arrangement (WA). . The main aim of these regimes is to prevent the proliferation of materials and components and their diversion to WMD development.

#### *Zangger Committee*

The Committee was created in the 1970s in order to implement the export control provisions of Article III (2) of the NPT which states that:

“Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this article.”<sup>1</sup>

Therefore, the purpose of the committee is to prevent the use of nuclear technology and materials for weapons use.

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<sup>1</sup> The text of “The Treaty on the Non-Proliferation of Nuclear Weapons (NPT),” <http://www.un.org/en/conf/npt/2005/npttreaty.html>

The Zangger Committee has a list of controlled items known as the “Trigger List” since the export of those items, triggers IAEA safeguards. The Zangger Committee requirements for exports of Trigger List items are that they should not be used for nuclear explosives, it should be subject to IAEA safeguards in the recipient non-nuclear weapon state, and are not to be re-exported unless they are subject to safeguards in the new recipient state.<sup>2</sup> The list was first adopted in 1974 and published as IAEA document *INFCIRC/209*. The list has been revised six times, the latest in March 2000, to provide greater detail and clarity in all areas of the nuclear fuel-cycle. New member states are admitted by invitation and must accept the “understandings” of the Committee through a confidential exchange of notes with all existing members. Presently, the Committee has 39 members.<sup>3</sup>

### *Nuclear Suppliers Group*

The NSG is a group of nuclear supplier countries that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports. It first met in 1975, in London, and was thus initially called the “London Club.” The NSG was established in the wake of the 1974 Indian “Peaceful Nuclear Explosion,” following three years of discussion among seven nuclear supplier countries (Canada, France, Germany, Japan, the UK, the USA and the USSR). The 48-member group is aimed at preventing civil nuclear trade from being used for military purposes. India had used nuclear trade with Canada and the US to divert and successfully conduct its first nuclear explosion. The Group was specifically formed to prevent future misuse of nuclear cooperation for weapons development.

The NSG has developed Guidelines for Nuclear Transfers and Guidelines for Nuclear-Related Dual Use Equipment, Materials,

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<sup>2</sup> Zangger Committee, <http://fas.org/nuke/control/zangger/>

<sup>3</sup> Zangger Committee (ZAC), <http://www.nti.org/learn/treaties-and-regimes/zangger-committee-zac/>

Software and Related Technology that participating states apply in making decisions about export authorization. It has also issued lists of items to which these guidelines apply that are published by the IAEA.<sup>4</sup>

Prospective members are evaluated on several factors and new membership has to be approved by consensus of all member states. Factors taken into account for membership include the following: 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. One major criterion for admission has been the adherence to the NPT or a nuclear weapons free zone treaty. This effectively means that any non-NPT nuclear weapon state does not fulfil the admission criteria. India has not signed either of the treaties and is, thereby, not eligible for membership to the NSG under this criteria.<sup>5</sup>

NSG is the backbone of the nuclear export control regime at present. Its membership is considered prestigious and a prerequisite if a state wants to do civil nuclear trade with major suppliers who are all members of NSG. India has been trying to get into the NSG. The US signed a civil nuclear agreement in India in 2005 and needed a waiver from the NSG to do nuclear trade with India. As a result of US pressure, the NSG agreed to India-specific exemption in September 2008. However, despite US support, India's bid for the NSG membership in the 2016-NSG Plenary was blocked by China, including eight other members, on the grounds that India is a non-NPT signatory state. India's prospects of inclusion into the Group are therefore, brighter, since India presents a lucrative nuclear business opportunity for major nuclear supplier states including the US.

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<sup>4</sup> Ian Anthony, "Multilateral Export Controls," *SIPRI Yearbook 2014*

<sup>5</sup> Nuclear Suppliers' Group (NSG), <http://www.nti.org/learn/treaties-and-regimes/nuclear-suppliers-group-nsg/>

Pakistan has protested the waiver of 2008 and India's 2016 application for membership to the NSG and has argued that membership to the NSG should be criteria-based and not country specific. Although Pakistan's 2016 application to the NSG Plenary did not yield any positive results, yet Pakistan is determined to continue lobbying for its case of inclusion into the NSG. On May 19, 2016 when Pakistan formally applied for the membership of the NSG, it made it explicit that decision to seek participation in the export control regime reflected Islamabad's strong support for international efforts to prevent proliferation of WMD and their means of delivery. Its application further stated that Pakistan has the expertise, manpower, infrastructure, as well as the ability to supply NSG-controlled items, goods and services for a full range of nuclear applications for peaceful uses.<sup>6</sup> Pakistan's Foreign Office stated that Pakistan's export control regime is underpinned by strong legislation, regulatory and enforcement mechanisms. Pakistan has also informed the Director General IAEA of its adherence to the objectives of NSG and its decision to act in accordance with NSG guidelines with regard to transfer of nuclear material, equipment and related technology, including related dual-use equipment, materials, software and related technology.<sup>7</sup> Pakistan is thus fully qualified to become part of the NSG.

### Australia Group

Established in 1985, the AG is a voluntary and informal export-control group through which members coordinate their national export controls to limit the supply of chemicals and biological agents as well as related equipment, and technologies to countries and non-state actors suspected of pursuing chemical or biological weapons (CBW) capabilities.

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<sup>6</sup> "Pakistan applied for accession to the NSG," *The Express Tribune*, May 21, 2016.

<sup>7</sup> Ibid.



All states participating in the Group are parties to the CWC and the BTWC, and strongly support efforts under those Conventions to rid the world of CBW. The AG admits new members only by consensus. Membership criteria include proven compliance with the CWC and the BTWC, and an established, effective national export control and enforcement mechanism for all the items on the Group's control lists.<sup>8</sup> Presently it has 32 members.

The Group has no legally binding obligations, but the effectiveness of members' cooperation depends solely on a shared commitment to CBW non-proliferation goal. Key considerations in guiding members' export licensing measures are: they should be effective in impeding the production of chemical and biological weapons; they should be practical, and reasonably easy to implement, and they should not impede the normal trade of materials and equipment used for legitimate purposes.

### Missile Technology Control Regime

The Missile Technology Control Regime (MTCR) is an informal and voluntary association of countries which share the goals of non-proliferation of unmanned delivery systems capable of delivering WMD. These countries seek to coordinate national export licensing efforts aimed at preventing proliferation. The MTCR was originally established in 1987, by Canada, France, Germany, Italy, Japan, the United Kingdom and the US. Presently, there are 35 countries that are part of the regime and all have equal standing.<sup>9</sup> The members include most of the world's key missile manufacturers and aim to restrict their exports of missiles and related technologies capable of carrying a

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<sup>8</sup> "Australia Group at a Glance," Factsheet, Arms Control Association, updated October 2012,

<https://www.armscontrol.org/factsheets/australiagroup>

<sup>9</sup> Missile Technology Control Regime, <http://www.mtcr.info/english/>

500 kg payload at least 300 km or delivering any type of WMD.<sup>10</sup> The regime has a Material and Technology Annex that expects members to establish national export control policies in line with the list. This annex is further divided into Category I, which includes complete missiles and rockets, major sub-systems, and production facilities, and Category II, which includes specialized materials, technologies, propellants, and sub-components for missiles and rockets.

### *The Wassenaar Arrangement*

This is also an informal arrangement in which the participating states aim to contribute to regional and international security by promoting transparency and greater responsibility with regard to transfers of conventional arms and dual-use goods and technologies, in order to prevent destabilizing accumulations. Participating states seek to prevent transfer of agreed items from contributing to the development or enhancement of military capabilities that undermine regional and international security, and to ensure that transferred items are not diverted to support such capabilities.<sup>11</sup>

## **1.2: Why Do We Need Export Controls**

The need for stringent export controls arose in order to prevent the proliferation of WMDs to state and non-state actors. In the wake of 2001 terrorist attacks on the US, the need to prevent proliferation of the world's most dangerous weapons acquired greater urgency. For the US, the need to restrict the export of goods and technology that could aid unfriendly nations or cause proliferation to terrorists became an overwhelming security concern. In the international environment that subsequently ensued, the threat of terrorists getting hold of

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<sup>10</sup> "Missile Technology Control Regime at a Glance," Factsheet, Arms Control Association, updated November 2015, <https://www.armscontrol.org/factsheets/mtr>

<sup>11</sup> SIPRI year book 2014, 755

WMDs became a global concern. Pakistan as well as most other countries share this concern and have made efforts to tighten their national export control systems so that the threat of proliferation of WMDs or its components can be eliminated.

## **PART 2**

### **UNSCR-1540**

*Ghazala Yasmin Jalil*

#### **2.1: Background**

United Nations Security Council Resolution (UNSCR) 1540 was adopted unanimously on April 28, 2004. It establishes an obligation under Chapter VII of the United Nations (UN) Charter for all member states to develop and enforce appropriate legal and regulatory measures against the proliferation of WMDs and their means of delivery. The particular focus of the Resolution was to prevent the spread of WMDs to non-state actors. It recognized non-state proliferation as a threat to the peace under the terms of Chapter VII of the UN Charter, and created an obligation for states to modify their internal legislation.<sup>12</sup>

All UN Member States have three primary obligations under the Resolution:

- To prohibit support to non-state actors seeking WMD and their means of delivery;
- To adopt and enforce effective laws prohibiting activities involving the proliferation of WMD and their means of delivery to non-state actors; and
- To enforce effective measures to reduce the vulnerability of many legitimate activities to be misused in ways that

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<sup>12</sup> UN Security Council Resolution 1540 (2004), [www.un.org/Docs/sc/unsc\\_resolution04.html](http://www.un.org/Docs/sc/unsc_resolution04.html)

would foster the proliferation of WMD and their means of delivery to non-state actors.<sup>13</sup>

The Resolution requires states to criminalize various forms of non-state actor's involvement in WMD and its related activities in its domestic legislation and, once in place, to enforce such legislation. It also encourages enhanced cooperation in anti-proliferation efforts, and promoting universal adherence to existing non-proliferation treaties.

The Resolution was passed in the post 9/11 international environment, whereby terrorism was perceived to be the biggest threat to world peace and stability. The Resolution closes gaps in non-proliferation treaties and conventions to help prevent terrorist and criminal organisations from obtaining the world's most dangerous weapons and components. It is mandatory in nature and has a universal scope. Previously, the three treaties dealing with WMD – NPT, CWC and BTWC were applicable to states, while this Resolution targets non-state actors. The states could also choose whether to sign these treaties or not.. Therefore, they are not legally binding on all states. Moreover, since individuals are not subject to international law, states are required to enact national framework of laws, controls and regulations. Similarly, the MTCR exists for the delivery of WMD, which again is not a legally binding treaty, but a regime with a voluntary membership. The Resolution 1540, thereby, marks a departure from previous non-proliferation arrangements and adds a novel layer to the non-proliferation regime. In essence, it seeks to plug the loopholes in the existing non-proliferation regime, but also in the export control regimes.

The adoption of the Resolution under Chapter VII of the UN Charter is significant since it requires enforcement. It also emphasizes the role that the states are expected to play to halt

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<sup>13</sup> UN Security Council Resolution 1540,  
<http://www.state.gov/t/isn/c18943.htm>

proliferation (Article 10), since it hints at the possibility of sanctions in case of non-compliance.

The Resolution 1540 also established a Security Council Committee called the 1540 Committee which requires the states to report on the measures they have taken or intend to take in the future in order to implement the resolution.

## **2.2: Pakistan's Position**

The Resolution has faced some criticism. The major criticism it has incurred is that it gave legislative powers to UNSC which is dominated by the P5 and is not a fully representative body. There is also a concern that the Resolution has introduced a propensity to contravene existing provisions of international law.

Pakistan also had a number of concerns over the Resolution: the question over the desirability of giving the UNSC member states the right to assume the role of prescribing legislative action, it also questioned the viability of the Resolution given that the existing conventions prescribe most of the legislation on proliferation by state and non-state actors; and if the existing regimes worked and could be improved, it was inappropriate to give UNSC the authority to oversee matters of non-proliferation.<sup>14</sup> However, the Resolution was adopted because the US successfully lobbied for it.

Many states have started adjusting their export control laws and domestic legislation in compliance with the Resolution 1540. Pakistan is also committed to the implementation of the Resolution. It has also offered assistance to the 1540 Committee. Further, in compliance with the Resolution, Pakistan has submitted four reports since October 2004, on the legislative,

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<sup>14</sup> Zahir Kazmi, "UN Security Council Resolution 1540: achievements and challenges," Research Paper No. 35, June 2010, p. 3, <http://www.sassi.org/wp-content/uploads/2012/05/RP-35-Zahir-Kazmi-UN-Security-Council-Resolution-1540-June-2010.pdf>

regulatory and administrative framework to fulfil its commitments to the non-proliferation regime. The fifth report is being finalized and is expected to be submitted soon. Pakistan has also introduced legislation and taken extensive steps to tighten its export control regime. The subsequent sections of the paper discuss Pakistan's extensive export control regime and legislation in detail.

## PART 3

### PAKISTAN'S EXPORT CONTROL SYSTEM

*Malik Qasim Mustafa*

In recent years, the international recognition and appreciation of Pakistan's emergence as a responsible nuclear state is a testimony to the country's steady efforts in the nuclear field. Pakistan has taken several steps to enhance safety and security of its nuclear assets. These steps range from building institutional capability under the National Command Authority (NCA) to the adoption of its doctrine of Credible Minimum Deterrence and from practical steps to enhance physical safety and security of nuclear assets to the formulation of comprehensive export controls through legislative frameworks, mechanisms, and regulations. Pakistan not only developed and enhanced nuclear safety and security measures to ensure its survival against its traditional nuclear rival, India, but it also took these steps to fulfil its international obligations and to promote strategic stability in the South Asia region. During the 2016 Nuclear Security Summit (NSS), Pakistan assured the international community that nuclear and radioactive materials and all related facilities are secured in all places.<sup>15</sup> Pakistan also highlighted that its "...export control regime is at par with the standards followed by Nuclear Suppliers Group (NSG), Missile Technology Control Regime (MTCR) and Australia Group."<sup>16</sup> As a result of these positive steps, Pakistan has earned the reputation of a responsible nuclear state, and has committed to continue its cooperation with the international community. In this regards, the purpose of this section is to highlight some of the important steps, taken by Pakistan, to develop and strengthen its export control system.

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<sup>15</sup> "Pakistan's National Statement: Nuclear Security Summit Washington, March 31 - April 1, 2016," April 2, 2016, <http://www.mofa.gov.pk/pr-details.php?mm=MzYwNA>

<sup>16</sup> Ibid.



### 3.1: Historical Perspective

On September 30, 1947 when Pakistan, as a newly independent state, was admitted to the UN system, it embarked upon the path of progress and development with a support for nuclear non-proliferation and disarmament.<sup>17</sup> Pakistan's normative approach towards nuclear technology resulted in its support for the 1949 United Nations General Assembly (UNGA) proposal for disarmament and 1951 call for disarmament; support for UN Disarmament Commission and its services at the Commission and its continued support for non-proliferation and disarmament in the subsequent years. When the 1953 "Atoms for Peace"<sup>18</sup> proposal, at the UNGA, brought the benefits of nuclear energy to the notice of the world community, Pakistan welcomed this proposal and initiated its peaceful nuclear programme. During the initial phase of its peaceful nuclear programme, Pakistan was a recipient of international nuclear assistance for peaceful purposes, and it was not in a position of exporting any nuclear related technology and know-how to any other entity or state. Pakistan started to regulate its basic imports and exports control measures through its Imports and Exports (Control) Act of 1950.

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<sup>17</sup>. In 1949, at the Fourth United Nations General Assembly (UNGA) Session, Pakistan urged great powers to reach such an agreement. In 1951, in the Sixth Session of the UNGA, Pakistan reiterated its call for nuclear disarmament, which resulted in establishment of UN Disarmament Commission. 1 From 1952-54, Pakistan served as an active member of the Commission. Malik Qasim Mustafa, Ghazala Yasmin Jalil, and Tahir Mahmood Azad, "Pakistan and India: Non-Proliferation Credentials," *Islamabad Papers* 2016, Nuclear Paper Series (Islamabad: The Institute of Strategic Studies Islamabad, 2016), <http://issi.org.pk/wp-content/uploads/2016/02/Nuclear-Paper-Series-No.-2.pdf>.

<sup>18</sup> "Atoms for Peace Speech," Address by Mr. Dwight D. Eisenhower, President of the United States of America, to the 470th Plenary Meeting of the United Nations General Assembly, (Text, July 16, 2014), <https://www.iaea.org/about/history/atoms-for-peace-speech>.

To benefit from peaceful nuclear technology Pakistan started to establish its nuclear related infrastructure.<sup>19</sup> In 1956, to regulate various aspects of its peaceful nuclear programme, Pakistan Atomic Energy Commission (PAEC) was established. In 1957, to fulfil its international obligations, Pakistan signed the IAEA Statute and also became the member of this prestigious international organisation. In order to promote further the peaceful use of nuclear technology and to fulfil its international obligations, Pakistan issued the Atomic Energy Commission Ordinance 1965.<sup>20</sup> When the international nuclear proliferation concerns started to grow, the international community started to adopt several non-proliferation instruments, starting from the NPT, as a base for the international nuclear non-proliferation regime. However, Pakistan citing its security concerns vis-à-vis India did not become a part of the NPT. Nuclear proliferation concerns further enhanced, when India exploited missing safeguard clauses of its Canadian reactor and utilised plutonium produced by this reactor to conduct its so-called Peaceful Nuclear Explosion (PNE) in 1974. France assisted Israel in the construction of its Dimona reactor.

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<sup>19</sup> The initial steps taken by Pakistan were the establishment of High Tension and Nuclear Research Laboratory by the Government College Lahore; In October 1954, Pakistan announced plans to establish an atomic research body, and by January 1955, the government announced to have an atomic energy institute. As a result, in March 1956 Pakistani government established the Atomic Energy Council, for the purpose of utilising nuclear technology for peaceful purposes. S. J. Burki, 'High Tension and Nuclear Laboratory', *Pakistan Quarterly*, X: 2, Special Science Number, Autumn 1960, p. 116, cited in, Ashok Kapur, '*Pakistan's Nuclear Development*' (Croom Helm: USA, 1987), p. 36, and Dr. Nasir Ahmed, 'The Atomic Energy Commission', *Pakistan Quarterly*, VII: 3, Autumn, 1957, p. 14, cited in Ashok Kapur, '*Pakistan's Nuclear Development*' (Croom Helm: USA, 1987), p. 36.

<sup>20</sup> *The Pakistan Atomic Energy Commission Ordinance, 1965, Ordinance No. XVII of 1965, 1965*,  
[http://www.vertic.org/media/National%20Legislation/Pakistan/PK\\_Atomic\\_Energy\\_Commission\\_Ordinance\\_1965.pdf](http://www.vertic.org/media/National%20Legislation/Pakistan/PK_Atomic_Energy_Commission_Ordinance_1965.pdf).

The international community also realised the need to control the unauthorised export of WMD components and technology, and evolved a multilateral export control regime. They took several steps, which includes; the establishment of 1971 ZC by major nuclear suppliers; the Indian PNE led to the creation of NSG in 1974; the establishment of AG in 1985; and the establishment of MTCR in 1987. These multilateral export control groups defined their own export control lists, trigger lists, and guidelines to prevent the unauthorised spread of WMD technology. Traditionally, Pakistan has been against the spread of nuclear weapons technology and has put forward several proposals to keep the nuclear weapons out of South Asia.

Pakistan's overall past efforts and non-proliferation credentials are well documented, but despite its track record, its peaceful nuclear programme suffered due to the discriminatory policies of the multilateral export control regime.<sup>21</sup> When Pakistan was compelled to develop its own nuclear weapons programme, as a matter of its national security concerns against India, it suffered a regime of sanctions against its peaceful nuclear programme. Despite the discriminatory nature of international non-proliferation regime and multilateral export control regime, Pakistan continued to strengthen its export control system. Pakistan along with its nuclear safety and radiation protection measures and regulations identified its export control measures and issued related statutory notifications, even before and after becoming a nuclear weapon power. (Details would be explained in the next section). After becoming a nuclear weapons state Pakistan's national and international obligations increased, specifically to control the export of sensitive dual-use nature technologies. The A.Q. Khan episode added pressure on Pakistan to develop a robust export control system. Finally, Pakistan consolidated all of its previous legislations into a single export control act known as *Export Control Act on Goods, Technologies, Material and Equipment*

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<sup>21</sup> Mustafa, Jalil, and Azad, "Pakistan and India: Non-Proliferation Credentials."

*related to Nuclear and Biological Weapons and their Delivery Systems-2004* or commonly known as SECA-2004.

The SECA-2004 gave a new life to Pakistan's export control system. As a responsible nuclear weapon state, Pakistan has made a tremendous effort to streamline its policy to control the export and re-export (transshipment and transit) of sensitive and dual use goods, technologies and equipment. The SECDIV, an administrative body established pursuant to the SECA-2004 under Ministry of Foreign Affairs, Pakistan, takes into account following policy guidelines to strengthen country's export control policy;<sup>22</sup>

- Exports from Pakistan should be consistent with its international obligations and commitments, national laws, foreign policy and security objectives.
- Exports from Pakistan should not make a significant contribution to the military capability of countries that pose a threat to international security.
- They should not contribute to the proliferation of WMDs and their means of delivery to state or non-state actors.
- They should contribute towards efforts to combat the threat of international terrorism;
- It should not hamper international cooperation and trade for peaceful uses, technology and application.

Pakistan also believes that the pillars of an effective export control system are;

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<sup>22</sup> For official policy guidelines see the official website of Strategic Export Control Division (SECDIV) website, <http://www.mofa.gov.pk/secdiv/>, also see, Nazir Hussain, "Pakistan Export Control Regime: Legislative Framework," presentation made at Brussels Export Control Conference, November 16-17, 2006.

- National Commitment
- Legislation
- Enforcement
- Licensing process
- Government and Industry cooperation

Pakistan has notified detailed policy guidelines on Strategic Export Controls, which are in line with international best practices and the guidelines of other international export control regimes. With these policy guidelines, Pakistan not only strengthened its export control regime, but also enhanced its engagement with multilateral export control regime and brought its own export control regime at par with the standards followed by the NSG, MTCR, and AG.<sup>23</sup> Overall, these efforts of Pakistan, to develop its stringent export control system, are based on its commitments to fulfil its national security requirements and international obligations to promote international peace and security by controlling the spread of WMD, nuclear non-proliferation, and nuclear safety and security as a responsible nuclear state.

### **3.2: Legislative and Regulatory Framework**

It is Pakistan’s policy to provide clear and efficient export control policies, legislative frameworks, guidelines, procedures and enforcement mechanisms. In this regard, Pakistan’s export control system consists of the following legislative and regulatory frameworks:

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<sup>23</sup> Adviser to the Prime Minister, Mr. Sartaj Aziz’s Address at ISSI on Pakistan’s Non-Proliferation Efforts & Strategic Export Controls Seminar on, “Pakistan’s Non-Proliferation Efforts & Strategic Export Controls,” May 3, 2016, <http://www.mofa.gov.pk/secdiv/content.php?pageID=news>

- **The Imports and Exports (Control) Act, 1950 (Act No. XXXIX of 1950):**<sup>24</sup> The 1950 Act is a basic guiding act and provides a legal framework to prohibit or control exports from Pakistan and extends to the whole of Pakistan. It covers exports from Pakistan through land, sea, and air. The Act allows restricting or controlling export of goods of any specified description, or regulating generally all practices and procedures, connected to the export of all goods.<sup>25</sup> The Act further elaborates that no goods of the specified description shall be imported or exported except in accordance with the conditions of a license and violation of any provisions of this Act will be punishable with imprisonment for a term which may extend to one year, or with fine up to rupees one million or with both.<sup>26</sup>
- **Pakistan Nuclear Safety and Radiation Protection (PNSRP) Ordinance, 1984, IV of 1984:** The 1984 Ordinance, extending to the whole of Pakistan, provides regulations for nuclear safety and radiation protection and requires license for export of any nuclear substance or nuclear material or other prescribed substances.<sup>27</sup> The Ordinance also gives powers to control and regulate radiation safety aspects during export of nuclear substance and radioactive material.<sup>28</sup> The penalty for violation of Ordinance or conditions of license shall be imprisonment extended to seven years or with fine

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<sup>24</sup> *The Imports and Exports (Control) Act, 1950 (Act No. XXXIX of 1950)*, 1950, Ministry of Law Government of Pakistan, April 19, 1050, <http://molaw.gov.pk/laws/>.

<sup>25</sup> *Article 3 (1)*, Ibid.

<sup>26</sup> *Article 3 (2) and Article 5 (1)*, Ibid.

<sup>27</sup> *Article 5 (b), The Pakistan Nuclear Safety and Radiation Protection Ordinance, 1984, IV of 1984*, accessed May 18, 2016, <http://nasirlawsite.com/laws/pnsr.htm>.

<sup>28</sup> *Article 4 (c)*, Ibid.

extending up to one hundred thousand rupees, or with both.<sup>29</sup>

- **Pakistan Nuclear Safety & Radiation Protection Regulations (PNSRPR), 1990:** In 1990 PAEC in exercise of powers conferred under PNSRP Ordinance of 1984 promulgated PNSRP Regulations. The 1990 PNSRPR requires “No Objection Certificate (NOC)” for exporting radioactive material or radiation apparatus and no application of license for export until obtained NOC.<sup>30</sup>
- **Statutory Notification No. SRO-782 (1), 1998:** Prohibits export of fissionable materials.
- **Statutory Notification No. SRO-23 (1)/1999:** Prohibits the export of Anti Personnel Landmines.
- **Statutory Notification No. SRO-124 (1)/ 1999:** Requires a NOC from the Defence Ministry for export of arms, ammunitions, explosives and ingredients.
- **Statutory Notification No. SRO-482 (1)/2000 and SRO 111 (1)/2004:** Issued by the Ministry of Commerce and lays down the Export Policy Procedures.
- **Chemical Weapons Convention Implementation Ordinance, 2000 (Ordinance No. LIV of 2000).** This legislative framework regulates and controls the import and export of chemicals in accordance with the provisions of CWC and provides for criminal penalties in case of violations. The guilty of an offence to the Ordinance is

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<sup>29</sup> Article 9 (1), Ibid.

<sup>30</sup> *Pakistan Nuclear Safety & Radiation Protection Regulations 1990*, 1990, [http://www.pnra.org/upload/legal\\_basis/Regulations-90-For%20website.pdf](http://www.pnra.org/upload/legal_basis/Regulations-90-For%20website.pdf).

punishable with imprisonment extending up to twenty five years.<sup>31</sup>

- **Pakistan Nuclear Regulatory Authority Ordinance, 2001.** Under this Ordinance, Pakistan Nuclear Regulatory Authority (PNRA) regulates and issues NOC for import and export of any radioactive material or radiation sources.<sup>32</sup>
- **Statutory Notification No. SRO. 836 (I)/2004** known as **Regulations for the Licensing of Radiation Facility(ies) other than Nuclear Installation(s) - PAK/908.** Issued by PNRA made it mandatory for any licensee to export radiation generator and/or radioactive material to obtain an NOC from the PNRA.<sup>33</sup>
- **Export Control Act on Goods, Technologies, Material and Equipment related to Nuclear and Biological Weapons and their Delivery Systems-2004:** In 2004, Pakistan consolidated most of the previous regulations in a single legislation in its SECA-2004. The SECA-2004 is aimed at strengthening controls on the exports, re-exports, transshipment and transit of goods and technologies, material and equipment related to nuclear and biological weapons and missiles capable of delivering such weapons. It extends to the whole of Pakistan and any Pakistani visiting or working abroad. The Act prohibits

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<sup>31</sup> *Chemical Weapons Convention Implementation Ordinance, 2000*, 2000, [https://www.icrc.org/ihl-nat.nsf/0/4495f72d2b28cfd2c125754c003c3956/\\$FILE/Chemical%20Weapons%20Convention%20Implementation%20Ordinance,%202000.PDF](https://www.icrc.org/ihl-nat.nsf/0/4495f72d2b28cfd2c125754c003c3956/$FILE/Chemical%20Weapons%20Convention%20Implementation%20Ordinance,%202000.PDF).

<sup>32</sup> *Pakistan Nuclear Regulatory Authority Ordinance, 2001, No. 2(2)/2001-Pub*, 2001, [http://www.vertic.org/media/National%20Legislation/Pakistan/PK\\_PNRA\\_Ordinance\\_2001.pdf](http://www.vertic.org/media/National%20Legislation/Pakistan/PK_PNRA_Ordinance_2001.pdf).

<sup>33</sup> *Regulations for the Licensing of Radiation Facility (ies) Other than Nuclear Installation(s)- PAK/908, S.R.O. 836(I)/2004*, 2004, [http://www.pnra.org/upload/legal\\_basis/Pak-908.pdf](http://www.pnra.org/upload/legal_basis/Pak-908.pdf).



diversion of controlled goods and technologies and its Control Lists includes a catch-all provision. Penalties for violation of this Act can be imprisonment extending up to 14 years, fine up to five million rupees with confiscation of assets/property.<sup>34</sup>

- **Statutory Notification No. SRO 1078(I)/2005, National Control List:** In 2005, Pakistan issued its export control list, and later revised it in 2011 and amended it in 2015.
- **The National Command Authority Ordinance, 2007:** This ordinance empowers the NCA to exercise complete command and control over all nuclear and space related technologies, systems and matters. It mandates the NCA to assist the Federal Government pursuant to any obligation on Pakistan related to non proliferation. It was promulgated into the National Command Authority Act in 2010.
- **Statutory Notification No. S.R.O. No.693 (I)/2007:** Government of Pakistan established the Oversight Board to monitor the implementation of SECA-2004, including the formation and functioning of SECDIV.<sup>35</sup>
- **S.R.O. 449(I)/2009:** In exercise of the powers conferred by clause (c) of sub-section (1) of section 3 of the SECA-2004, Pakistan notified the SECDIV to be the government

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<sup>34</sup> Government of Pakistan, *The Export Control on Goods, Technologies, Material and Equipment Related to Nuclear and Biological Weapons and Their Delivery Systems Act, 2004*, vol. 812(2004)/Ex. Gaz., 2004, <http://www.mofa.gov.pk/secdiv/documents/Doc-1%20Export%20Control%20Act-2004.pdf>.

<sup>35</sup> *Establishment of the Oversight Board to Monitor the Implementation of the Export Control on Goods, Technologies, Materials and Equipment Related to Nuclear and Biological Weapons and Their Delivery Systems Act (Act No. V) 2004, S.R.O. No.693 (I)/2007*, 2007, <http://www.mofa.gov.pk/secdiv/documents/Doc-4%20SRO%20Oversight%20Board%20of%20SECDIV.pdf>.

authority to administer export controls under the said Act. The SEDIV was established with a mission statement of “contributing towards non-proliferation and security through effective export management of sensitive goods and technologies.”<sup>36</sup>

- **S.R.O. 450(I)/2009, The Export Control (Licensing and Enforcement) Rules, 2009:** It regulates the registration, licensing and other related procedures for the export of goods and technology specified in the SECA-2004 and in the national control lists.<sup>37</sup>
- **S.R.O. 699(I)/2011:** In 2011, Pakistan revised its export control list.
- **National Command Authority Act 2010:** Section 12 considers that whosoever commits, attempts or abets breach of national security will have committed an offence under this Act and shall be liable to punishment of imprisonment of either description for a term which may extend up to twenty-five years.<sup>38</sup>
- **No.2(24)/2013-SECDIC(P), Internal Compliance Programme (ICP) Guidelines:** The ICP provides a method of routinely screening transactions, contacts, and dealings etc, in order to eliminate suspicious approaches, thereby ensuring that only legitimate transactions proceed and the risk of breaching the law is minimized. As per our system, ICP is not a legally binding requirement, nonetheless; entities are encouraged to set up ICP, and

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<sup>36</sup> *Strategic Export Control Division Notification, S.R.O. 449(I)/2009, 2009, <http://www.mofa.gov.pk/secdiv/documents/Doc-2,%20Setting%20UP%20of%20SECDIV.pdf>.*

<sup>37</sup> *The Export Control (Licensing and Enforcement) Rules, 2009, S.R.O. 450(I)/2009, 2009, <http://www.mofa.gov.pk/secdiv/documents/Doc-3,Licensing%20&%20Enforcement%20Rules.pdf>.*

<sup>38</sup> *National Command Authority Act, 2010, 2010, [http://www.senate.gov.pk/uploads/documents/1363266864\\_393.pdf](http://www.senate.gov.pk/uploads/documents/1363266864_393.pdf).*

declare information on their compliance programme in export license. As part of the export control practice, ICP involves risk detection, solving problems, and exporting in a responsible manner.<sup>39</sup>

- **S.R.O. 192 (I)/2013, Export Policy Order 2013:** Prohibits the exports of all goods which are banned and restricted in the control list notified by the Ministry of Foreign Affairs.<sup>40</sup>
- **S.R.O. 276(I)/2015:** In exercise of the powers conferred by section 4 of the SECA-2004, Pakistan notified the amended Control Lists of Goods, Technologies, Material and Equipment related to Nuclear and Biological Weapons and their Delivery Systems.<sup>41</sup> The Control Lists notified earlier vide **S.R.O. 699(I)/2011**; Islamabad dated July 6, 2011 ceases to exist.
- **Pakistan Export Policy Order 2016:** Regulates export of goods, materials, technology and equipment useable in nuclear and biological weapons and their delivery systems, which have commercial applications. Any exports of goods shall be subject to NOC from SECDIV.<sup>42</sup>

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<sup>39</sup> *Internal Compliance Programme (ICP) Guidelines, No. 2(24)/2013-SECDIV(P)*, 2014, <http://www.mofa.gov.pk/secdiv/documents/ICP-Guidelines.pdf>.

<sup>40</sup> *Export Policy Order 2013, S.R.O. 192 (I)/2013*, 2013, <http://www.mofa.gov.pk/secdiv/documents/Export-Policy-2012-15.pdf>.

<sup>41</sup> *Amended Control Lists of Goods, Technologies, Material and Equipment Related to Nuclear and Biological Weapons and Their Delivery Systems.*, 2015, [http://www.mofa.gov.pk/secdiv/documents/Control-Lists\(S.R.O.%20276%20\(I\)2015\).pdf](http://www.mofa.gov.pk/secdiv/documents/Control-Lists(S.R.O.%20276%20(I)2015).pdf).

<sup>42</sup> *The Export Policy Order, 2016, S.R.O. 344(I)/2016*, 2016, [http://www.commerce.gov.pk/wp-content/uploads/2016/04/EPO\\_2015-18\\_27042016.pdf](http://www.commerce.gov.pk/wp-content/uploads/2016/04/EPO_2015-18_27042016.pdf).

### 3.3: Enforcement of SECA-2004

Over the years, Pakistan's efforts to strengthen its strategic export control system particularly the SECA-2004 were aimed "to safeguard its national security and foreign policy objectives and to fulfil its international obligations as a responsible nuclear weapons state."<sup>43</sup> The enforcement of SECA-2004 is very significant because through this Act, Pakistan consolidated most of its previous legislation into a single one. The salient features of the 2004 Act are:<sup>44</sup>

*Purpose:* To strengthen controls on the export, re-export, transshipment and transit of goods and technologies, material and equipment related to nuclear and biological weapons and missiles capable of delivering such weapons.

*Scope:* It extends to the whole of Pakistan and applies to any Pakistani within the country or visiting or working abroad, any foreign national within Pakistani territory and any ground transport, ship or aircraft registered in Pakistan wherever it may be.

*Authority:* Empowers to establish an authority to administer all activities under this Act; makes rules and regulations to implement this Act; to administer exports control under this Act; designate authorised agencies to enforce this Act; establish an oversight board to monitor the implementation of this Act; requires license to export and re-export goods and technologies and authority to inspect export consignments and review and acquire or confiscate record.

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<sup>43</sup> Government of Pakistan, *Pakistan Export Control Act-2004*.

<sup>44</sup> For full text of the SECA-2004 see, *Ibid*.

*Control Lists:* To maintain Control Lists of goods, technologies, materials and equipment which may contribute to the designing, development, production, stockpiling, maintenance or use of nuclear biological weapons and their delivery systems. The Control Lists shall be reviewed, revised or updated, periodically. The Federal Government should notify all licensing requirements and procedures to not to restrict scientific research for peaceful application.

*Licensing:* Federal Government will issue notifications of licenses required under this Act, and notification of relevant procedures for licensing. Approval of licenses for peaceful applications will be determined after this assurance that export will not contravene the Act. And export would be under legal obligation to notify the Authority if the exporter is aware or suspect that goods or technologies are connected with nuclear and biological weapons and their means of delivery.

*Diversion:* Diversion of controlled goods or technologies is strictly prohibited. If a recipient of control goods or technologies, knowingly, diverts these goods and technologies for unauthorised use, then it will be considered a violation of license and will invoke denial of further exports.

*Catch-All Control:* “Catch-All” control apply if there are end user concerns or the goods or technologies could be used in any aspect including designing, development, production, stockpiling, maintenance or use of nuclear and biological weapons and their delivery systems. And export would be under legal obligation to notify the Authority if the exporter is aware or suspects that

goods or technologies are intended for nuclear and biological weapons and their means of delivery.

In 2005, Pakistan issued its first export Control List of goods and technologies. To further enforce and implement the SECA-2004, Pakistan, initially established an Oversight Board (OSB) in 2007, “to monitor the implementation of the Export Control on Goods, Technologies, Materials and Equipment related to Nuclear and Biological Weapons and their Delivery Systems under SECA-2004, including the formation and functioning of SECDIV.”<sup>45</sup> The OSB consists of Foreign Secretary, Ministry of Foreign Affairs as Chairman of the OSB, Director General SECDIV as Member/Secretary of OSB, and remaining nine members would be ex-officio members from different ministries, boards, and authorities.<sup>46</sup>

The second important step, taken by Pakistan in 2007, to implement the SECA-2004 was the establishment of SECDIV in pursuance with the 2004 Act. The SECDIV was established as an administrator to export control; as a licensing and enforcement coordinating authority; rules and regulating authority; review and Control Lists revising/ updating authority; interagency coordinator; outreach and capacity building authority and recommendation making authority. The SECDIV took up its obligations responsibly, and issued its Export Control (Licensing and Enforcement) Rules, 2009; revised its export Control Lists in 2011; issued ICP Guidelines in 2014 and completed the latest review process of its export Control Lists in 2015. The SECDIV also undertook to create awareness and build capacity through Commodity Identification Training (CIT) and other programmes.

The SECDIV is strengthening enforcement of SECA-2004 through its licensing and enforcement rules. After registration

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<sup>45</sup> *Establishment of the Oversight Board to Monitor the Implementation of the Export Control on Goods, Technologies, Materials and Equipment Related to Nuclear and Biological Weapons and Their Delivery Systems Act (Act No. V) 2004.*

<sup>46</sup> For complete list and their designations see, Ibid.

application, the SECDIV issues a registration number, which enables the applicant to apply for its license. After verifying its classification, technical and policy review, interagency review is carried out, and the final decision is made. In addition to SECDIV licensing and enforcement rules, National Security Action Plan (NSAP) under the PNRA regulates entry and exit points at major entry points in Pakistan. These entry and exit points are equipped with radiation detection equipment under NSAP. The SECDIV ICP guidelines help to strengthen enforcement of SECA-2004 by routinely screening transactions, contacts, and dealings to eliminate suspicious approaches, thereby ensuring that only legitimate transactions proceed and the risk of breaching the law is minimized. The ICP guidelines are not legally binding requirements but entities are encouraged to set them up and declare information on their compliance programme in export license. The SECDIV has also trained Customs, Border Agencies and Pakistan Post officials under CIT. The SECDIV has also conducted special training session on gamma, neutron and trace detection equipment to further strengthen the enforcement of SECA-2004.

SECDIV capacity-building and awareness programmes are also helping to implement and enforce SECA-2004. It is also a success of SECDIV enforcement and implementation efforts that Pakistan's export Control Lists are consistent with the lists of the NSG, MTCR, and the AG. The effective enforcement of SECA-2004 makes Pakistan's export control system robust and brings it at par with international standards. The SECDIV is constantly devoting all its efforts to strengthen Pakistan's export control regime further. This makes Pakistan a suitable candidate to become part of existing multilateral export control regimes, especially the NSG.

### **3.4: Capacity Building and Raising Awareness**

Capacity building and awareness programmes hold a key for the future success of any export control system. Capacity building and awareness raising programmes for industry and

relevant stakeholder is necessary for the effective enforcement and implementation of Pakistan's export control system. In this regard, SECDIV plays an important role. It not only administers export controls but it also makes necessary rules and regulations for the implementation of the Act. It reviews, revises and updates Control Lists and it is also tasked with outreach and capacity building of relevant industry and stakeholders. It not only shares information and promotes compliance culture within Pakistan, but it also cooperates and interacts with international organisations to keep its programmes and approaches modern and up to date. The SECDIV chalks out an annual comprehensive plan which includes:<sup>47</sup>

- Seminars and meetings with enforcement officials, exporters' associations, chambers of commerce and industries.
- Interaction with academia/research institutes, in all major/industrial cities of Pakistan.
- CIT at selected locations are carefully tailored to the needs of enforcement agencies and their training programmes which have been widely acclaimed.

The SECDIV has implemented its outreach and capacity building programmes very seriously and reached out to major cities, industrial hubs, research and academic institutes. Based on its comprehensive plan, the SECDIV has conducted following activities in recent years:<sup>48</sup>

- SECDIV officials participated in International Defence Exhibition and Seminar-2014 (IDEAS-2014).

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<sup>47</sup> For further details see official website of SECDIV, 'Strategic Export Control Division (SECDIV)', accessed 23 May 2016, <http://www.mofa.gov.pk/secdiv/content.php?pageID=secdiv>.

<sup>48</sup> Ibid.



- ICP Guidelines have been notified through the Gazette of Pakistan No. 2(24)/2013-SECDIV (P) dated October 3, 2014.
- Under its CIT the SECDIV has so far trained more than 200 officials from Customs, Border Agencies, and Pakistan Post. A recent CIT was conducted at Sust Dry port in November 2014 and ECO Postal Staff College Islamabad on June 16-17, 2015.
- SECDIV access to Pakistan Customs Web Based One Customs (WeBOC) has been principally agreed. Work on the project is in progress.
- Control Lists of Goods, Technologies, Material and Equipment related to Nuclear and Biological Weapons and their Delivery Systems have been revised and notified in the Gazette of Pakistan vide S.R.O. 276 (I)/2015 dated March 28, 2015.
- On May 18, 2015 and June 12, 2015 the SECDIV organised training workshops on ICP at Forman Christian College (FCC) University, Lahore and NED University of Engineering and Technology, Karachi under the auspices of Higher Education Commission (HEC), Pakistan. Experts/researchers from various universities participated in the workshops.

### **3.5: Inter-Agency Coordination**

Pakistan export control system is governed by various organisations, regulatory, enforcement and administrative bodies. Each one has its own rules and procedures. Therefore, to ensure effective implementation of relevant legislative and regulatory export control measures, interagency cooperation is essential to strengthen Pakistan export control system. Inter-agency coordination is also needed to address systemic loop holes and

responsibility gaps. The SECDIV regularly interacts with other regulatory authorities such as National Authority on Chemical Weapons Convention (NACWC) and PNRA, Pakistan Customs, Border Enforcement Agencies, Law Enforcement Agencies, industry and other related stakeholders.

The SECDIV plays a central role in promoting interagency coordination. The SECDIV being the administrator of the SECA-2004 performs the export control evaluation process and consults policy matters with Ministry of Foreign Affairs, Ministry of Commerce, Ministry of Defence, Strategic Plans Division (SPD) or any other relevant government ministries and agencies. These policy recommendations are approved OSB which consists of 8 to 9 different agencies. Similarly for training, outreach, awareness, and capacity building purposes, SECDIV engages relevant governmental and non-governmental entities. For enforcement purposes, the SECDIV establishes interagency coordination with customs, boarder control and other law enforcement agencies.

There are many methods and tools, which SECDIV employ to enhance interagency coordination. CIT is one of the tools which not only help to build capacity of related organisations, but it also enhances interagency coordination. So far the SECDIV has trained more than 200 officials from Pakistan Customs, border control agencies, and Pakistan Post.<sup>49</sup>

One of the best examples of the interagency coordination is the establishment of online interface WeBOC.<sup>50</sup> The SECDIV in collaboration with Pakistan Customs has devised this interface. WeBOC is an online Customs filling and clearance system. This interface will help to provide real time information sharing between Customs and the SECDIV. Red flag and risk assessment

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<sup>49</sup> Zafar Ali, “Pakistan’s Strategic Export Controls: Latest Developments” (Pakistan’s Non-Proliferation Efforts and Strategic Export Control System, Institute of Strategic Studies, Islamabad (ISSI), May 3, 2016).

<sup>50</sup> Ibid.

of dual use items, goods, and technologies are the inbuilt features of the WeBOC.

Another advance feature of interagency coordination is SECDIV Licensing and Information Management System (SLIMS). The SLIMS is an electronic licensing and data management system for streamlining registration and licensing process.<sup>51</sup> The SLIMS will serve as a back-end licensing officers assistance tool for record management and risk assessment tool. On the front-end it will serve as a user online application portal and will provide a real time data validation and issues electronic licenses. The SECDIV will soon setup an interface between SLIMS and WeBOC.<sup>52</sup>

As far as international engagement is concerned, on July 14, 2011 the NCA reiterated “Pakistan’s desire to constructively contribute to the realization of a world free of nuclear weapons and to the goals of non-proliferation on the basis of equality and partnership with the international community. Accordingly, Pakistan was keen to join the four export control arrangements.”<sup>53</sup> With this objective to strengthen Pakistan’s export control system, the SECDIV considers its engagement with international community, organisations and agencies as an essential part for sharing and learning. Over the years Pakistan has established good relations with multilateral export control regimes. Pakistan’s interaction with the NSG and MTCR are longstanding and over a decade old. In 2013, Pakistan hosted a delegation of MTCR and AG, took part in a trilateral meeting with the Chairmanship Troika of the NSG.<sup>54</sup> Pakistan has also been participating in the outreach meetings of WA since 2012. To benefit from the best practices of others, Pakistan has an

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<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> “Press Release: 19th National Command Authority (NCA) Meeting,” July 14, 2011, [https://www.ispr.gov.pk/front/main.asp?o=t-press\\_release&id=1796](https://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1796).

<sup>54</sup> “SECDIV Boucher,” accessed May 23, 2016, <http://www.mofa.gov.pk/secdiv/documents/Broucher.pdf>.

active programme of cooperation with the IAEA and many countries including US, UK, EU, Japan, Germany and China.<sup>55</sup>

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<sup>55</sup> Ibid.

## PART 4

### PAKISTAN'S CHEMICAL WEAPONS CONVENTION (CWC) IMPLEMENTATION

*Malik Qasim Mustafa*

#### 4.1: Brief Overview of CWC and OPCW

Use of Chemical weapons, as a means of war, is a practice that is centuries old. Initially, the international community was focused on prohibiting the use of chemicals weapons such as the 1675 French-German Strasbourg agreement to prohibit the use of poison bullets; the 1874 Brussels Convention to prohibit the use of poison and poisoned weapons; the 1899 Hague agreement to prohibit the use of projectiles filled with poison gas; the 1925 Geneva Protocol for the prohibition of the use of Asphyxiating, Poisonous or Other Gases, and Bacteriological Methods of Warfare.<sup>56</sup> None of these measures were meant to bar the development, production or possession of chemical weapons. Development, possession and use of chemical weapons continued during the World War II. In 1968, when the Eighteen Nations Disarmament Committee (ENDC) placed chemical and biological weapons on their agenda, the efforts of the international community succeeded in the entry into force of the BTWC in 1975, and international deliberations continued on prohibiting the development and use of chemical weapons.<sup>57</sup> On January 13, 1993, when the Chemical Weapons Convention (CWC) was finally opened for signature, Pakistan immediately signed it. On April 29, 1997 the CWC entered into force with 87 State parties, and Pakistan ratified it on November 28, 1997.

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<sup>56</sup> “Genesis and Historical Development,” *Organisation for the Prohibition of Chemical Weapons (OPCW)*, accessed May 21, 2016, <https://www.opcw.org/chemical-weapons-convention/genesis-and-historical-development/>.

<sup>57</sup> Ibid.

Currently there are 192 State Parties to the Convention, which represent around 98 per cent of global population and landmass and 98 per cent of the world wide chemical industry.<sup>58</sup> The CWC has been reviewed three times. First Review Conference (RevCon) was held from April 28 to May 9, 2003 in The Hague. The first RevCon focused on the issues of universalization, to bring every nation under the Convention, while the scientific and technological development falls outside the preview of the Convention, and the issue to ensure the effective verification regime.<sup>59</sup> The Conference also raised concerns over continued threat of the possible use of chemical weapons and ways to enhance the effectiveness against terrorism. The Second RevCon was held from April 7-18, 2007 in The Hague.<sup>60</sup> The Third CWC RevCon was held from April 9-19, 2013 at The Hague. Pakistan participated in all three CWC RevCon. In addition to three RevCons, the State Parties have held around 20 general sessions and 3 special sessions.<sup>61</sup>

The Organisation for the Prohibition of Chemical Weapons (OPCW) is the implementing body of the CWC. The OPCW is tasked to work with member states to strengthen international security in the following key areas of the CWC;

- Destruction of all existing chemical weapons and their international verification under the OPCW;

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<sup>58</sup> “Member States of the Organisation for the Prohibition of Chemical Weapons (OPCW),” *Organisation for the Prohibition of Chemical Weapons (OPCW)*, accessed May 21, 2016, <https://www.opcw.org/about-opcw/member-states/>.

<sup>59</sup> “First Review Conference,” *Chemical Weapons Convention Archive*, accessed May 21, 2016, <http://cwc.fas.org/about-the-cwc/first-review-conference>.

<sup>60</sup> “Second Review Conference,” *Organisation for the Prohibition of Chemical Weapons (OPCW)*, April 7, 2008, <https://www.opcw.org/?id=629>.

<sup>61</sup> For complete reports and related documents see, “Conference of the States Parties,” accessed May 21, 2016, <https://www.opcw.org/documents-reports/conference-states-parties/>.

- Monitoring of chemical industry to prevent production of new weapons and their re-emergence;
- To provide assistance and protection to States Parties against chemical threats; and
- To foster international cooperation to strengthen implementation of the CWC and to promote the peaceful use of Chemistry.<sup>62</sup>

The OPCW, in close collaboration with the UN, is carrying out demilitarisation of chemical weapons; non-proliferation of chemical weapons and related verification and implementation measures. It also provides assistance and protection against chemical weapons; focuses on international cooperation programmes; capacity building and peaceful use; helping to promote universalization of the CWC and helps the State Parties in implementing national measures.<sup>63</sup> The Organisation has been awarded 2013 Nobel Peace Prize. Between entry into force of the CWC and December 31, 2014, the Secretariat verified the destruction of 61,444.607 MTs of declared Category 1 chemical weapons, representing 87% of the declared global amount. This includes a recent joint OPCW-UN mission. The OPCW completed its mission in Syria and verified the destruction of 98% chemical weapons declared by Syria.<sup>64</sup>

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<sup>62</sup> “About OPCW,” *Organisation for the Prohibition of Chemical Weapons (OPCW)*, accessed May 21, 2016, <https://www.opcw.org/about-opcw/>.

<sup>63</sup> “The Work of the Organisation for the Prohibition of Chemical Weapons (OPCW),” *Organisation for the Prohibition of Chemical Weapons (OPCW)*, accessed May 21, 2016, <https://www.opcw.org/our-work/>.

<sup>64</sup> “Report of the OPCW on the Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and use of Chemical Weapons and on their Destruction in 2014” (Organisation for the Prohibition of Chemical Weapons (OPCW)), accessed May 21, 2016, [https://www.opcw.org/fileadmin/OPCW/CSP/C-20/en/c2004\\_e\\_.pdf](https://www.opcw.org/fileadmin/OPCW/CSP/C-20/en/c2004_e_.pdf).

## 4.2: Pakistan's Policy

Pakistan's policy towards the Convention can be understood in following points.<sup>65</sup>

- Acceding to the general statement on non-possession of WMD, Pakistan has declared that it does not possess chemical weapons.
- Pakistan believes that there is need to remove the underlying security concerns of States which motivate them to seek WMD and other advanced weapons systems.
- Pakistan considers CWC, a comprehensive and non-discriminatory disarmament instrument and assures its full cooperation and support for it.
- Pakistan believes that the implementation of the obligations under the Convention should be achieved through the OPCW.

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<sup>65</sup> Pakistan's policy on CWC is derived from various national statements and reports. For reference see, "Statement by Ambassador Munir Akram, Leader of the Pakistan Delegation in the General Debate of the First Committee of the 58th UNGA," October 10, 2003, <http://www.un.int/pakistan/00home0810OCT>; "Pakistan's National Report on National Measures on the Implementation of Security Council Resolution 1540 (2004)," November 5, 2004; "1540 Committee of Pakistan," August 27, 2010, <http://www.un.org/en/sc/1540/docs/matrices/Pakistan%20revised%20matrix.pdf>; "Statement by Ambassador Aizaz Ahmad Chaudhry Additional Foreign Secretary Ministry of Foreign Affairs Islamabad and Leader of Pakistan Delegation At the Third Review Conference," Third Review Conference (Organisation for the Prohibition of Chemical Weapons (OPCW), April 8, 2013), [https://www.opcw.org/fileadmin/OPCW/CSP/RC-3/national-statements/rc3nat34\\_e\\_.pdf](https://www.opcw.org/fileadmin/OPCW/CSP/RC-3/national-statements/rc3nat34_e_.pdf); "Statement by H.E. Ambassador Moazzam Ahmad Khan Permanent Representative of Pakistan to the OPCW At the Twentieth Session of the Conference of the States Parties" (Organisation for the Prohibition of Chemical Weapons (OPCW), December 1, 2015).



- Pakistan believes that the use of chemical weapons by anyone under any circumstances would be reprehensible and contrary to the legal norms and standards of the international community.
- Pakistan supports universalization and chemical weapons disarmament goals of the CWC and desires for an equally security for all approach.
- Pakistan attaches priority to secure the verified destruction of chemical weapons, especially those declared by India when it ratified the CW Convention.
- Pakistan fully supports appropriate and effective measures to prevent non-state actors from gaining access to WMD and their means of delivery.
- Pakistan supports the efforts to promote the effective implementation of *Article VII* of the Convention on the domestic implementation to strengthen the overall effectiveness of the Convention.
- Pakistan supports all activities and initiatives of the OPCW under *Article X*.
- Pakistan attaches great importance to the provisions of the Convention on international cooperation and assistance.

#### **4.3: National Implementation Measures**

Over the years, Pakistan being a responsible State party to the CWC, has taken its responsibilities and obligations seriously, to implement the Convention effectively. Through its national measures, Pakistan has not only fulfilled its obligations towards the CWC, but it has also fulfilled its broader international

obligations.<sup>66</sup> Following are some important CWC national implementation measure taken by the Pakistan;

#### **4.3.1: Major Legislative, Regulatory, Administrative, Measures to Implement CWC**

- **The Environmental Protection Act, 1997:** This act prohibits the generation, collection, consignment, transport, treatment, disposal, storing, handling, and import of “hazardous substances.”<sup>67</sup> It prohibits the production of substances which adversely impacts environment and damage to human health and safety.
- **Anti-Terrorism Act 1997:** This act defines chemical weapons as “illicit weapon.” It penalizes individuals, their accomplices and those who assist and finance in possession of illicit weapons that may include biological weapons. It also outlines measures for the involvement of non-state actors.<sup>68</sup>
- **Chemical Weapons Convention Implementation Ordinance, 2000 (Ordinance No. LIV of 2000).** This legislative framework regulates and controls production, development, acquisition, possession, premises and equipment for producing chemical weapons, stockpile, use, import and export of chemicals in accordance with the provisions of CWC. It also provides for criminal penalties in case of violations. The guilty of an offence to

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<sup>66</sup> “Statement by Ambassador Aizaz Ahmad Chaudhry Additional Foreign Secretary Ministry of Foreign Affairs Islamabad and Leader of Pakistan Delegation At the Third Review Conference.”

<sup>67</sup> *Section 2 (i), (a), (XVIII) and 14, Pakistan Environmental Protection Act, 1997, 1997*, <http://www.environment.gov.pk/act-rules/envprotact1997.pdf>.

<sup>68</sup> *The Anti Terrorism Act, 1997, 1997*, <http://www.molaw.gov.pk/gop/index.php?q=aHR0cDovLzE5Mi4xNjguNzAuMTM2L21vbGF3L3VzZXJmaWxlczEvZmlsZS9BbnRplVVRlcnJvcmlzbSUyMEFjdC5wZGY%3D>.

the Ordinance is punishable with imprisonment extending up to twenty five years.<sup>69</sup>

- **Hazardous Substance Rules 2003 and Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2016:** These rules make provisions for the granting of licences for the collection, treatment, storage, importation, transportation, etc. of hazardous substances. Substances prescribed as hazardous substances are listed in *Schedule I*. An environmental impact assessment (EIA) of the project involving hazardous substances shall accompany the application to obtain a licence.<sup>70</sup>
- **National Command Authority Act 2010:** Section 12 considers that whosoever commits, attempts or abets a breach of national security shall deem to have committed an offence under this Act and shall be liable to punishment of imprisonment of either description for a term which may extend up to twenty-five years.<sup>71</sup>
- **Anti Money Laundering Act 2010:** According to the report of 1540 Committee Matrix of Pakistan, financing for chemical weapons is punishable under the Section 4 of the Act. Punishment can extend up to 10 years fine up to one million rupees and liable to forfeiture of property involved.<sup>72</sup>
- **S.R.O. 192 (I)/2013, Export Policy Order 2013:** *Schedule I and II* chemicals cannot be exported to states

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<sup>69</sup> Article 3, *Chemical Weapons Convention Implementation Ordinance, 2000*.

<sup>70</sup> *Hazardous Substances Rules, 2003*, accessed May 21, 2016, <http://faolex.fao.org/docs/pdf/pak64438.pdf>.

<sup>71</sup> *National Command Authority Act, 2010*, 2010, [http://www.senate.gov.pk/uploads/documents/1363266864\\_393.pdf](http://www.senate.gov.pk/uploads/documents/1363266864_393.pdf).

<sup>72</sup> *Anti Money Laundering Act, 2010*, 2010, [http://www.senate.gov.pk/uploads/documents/1363266009\\_767.pdf](http://www.senate.gov.pk/uploads/documents/1363266009_767.pdf).

which are not party to the Convention. A prior permission is required from NACWC Ministry of Foreign Affairs.<sup>73</sup>

- **The Protection of Pakistan Act 2014:** This act prohibits the use of chemical weapons as “Scheduled Offence” with a punishment extending up to twenty years, with fine and confiscation of property. The Act also outlines measures for the involvement of non-state actors in these activities.<sup>74</sup>
- Pakistan CWC National Authority organised a national seminar on chemical safety and security in Islamabad in June 2015 which was attended by a senior OPCW expert and all relevant national stakeholders.
- **Establishment of Regional CWC Assistance and Protection Centre (RCWCAPC) in Pakistan in 2015:** This Centre was formally inaugurated by the Director General OPCW, Ahmet Üzümcü, during his visit to Pakistan in 2015.
- **Establishment of Chemical Protection Research Laboratory (CPRL):** This laboratory was established by Defence Science and Technology Organisation (DESTO).
- **Handling, Manufacture, Storage, Import of hazardous waste and hazardous substances Rules, 2016:** These rules regulate the overall handling of hazardous substances.
- Pakistan regularly conducts mock inspection exercises and emergency response exercise these exercises are conducted for all Pakistani CWC declared industries.

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<sup>73</sup> *Export Policy Order 2013.*

<sup>74</sup> See Section 2 and 16 of *Protection of Pakistan Act, 2014*, 2014, [http://www.na.gov.pk/uploads/documents/1409034186\\_281.pdf](http://www.na.gov.pk/uploads/documents/1409034186_281.pdf).

- **Establishment of CWC National Authority** - Disarmament Coordination Cell - Ministry of Foreign Affairs Pakistan.
- **Pakistan Export Policy Order 2016: Schedule I and II** chemicals cannot be exported to states which are not party to the Convention. A prior permission is required from National Authority CWC.<sup>75</sup>

#### 4.3.2: Pakistan's Engagement with OPCW

- On June 4, 2002 Pakistan, including 12 other countries signed the *Almaty Act*, and pledged to support efforts to destroy chemical, nuclear, and biological weapons and to cooperate in combating international terrorism.<sup>76</sup>
- On September 30, 2002 Pakistan announced permission to allow inspections at five different chemical facilities for the first time since it joined the OPCW.<sup>77</sup> On April 30, 2003, The OPCW conducted its first inspection in Pakistan, at the Fauji Jordan Fertilizer plant in Karachi. Pakistan welcomes the inspection, claiming that it does not possess chemical weapons. The inspection certifies that the facility is indeed “below weapons capability.” Routine inspections of such facilities are mandated under the CWC.<sup>78</sup>
- Pakistan is among the first States Parties to the Convention which has shown support to the National Authority Mentorship Programme and has committed to

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<sup>75</sup> *The Export Policy Order, 2016.*

<sup>76</sup> “WMD 411 Chronology - 2002” (Centre for Non-Proliferation Studies, Monterey Institute, May 14, 2003).

<sup>77</sup> “WMD 411 Chronology – 2002.”

<sup>78</sup> “WMD 411 Chronology - 2003” (Centre for Non-Proliferation Studies, Monterey Institute, July 2003).

share its experiences with State Parties to implement the Convention.

- In 2011, Pakistan took the initiative to develop the sub-regional assistance and protection centre in light of the concept floated by OPCW, to meet essential needs of the region.<sup>79</sup>
- In 2014, OPCW conducted a three-component cycle (basic, advanced, exercise) assistance and protection training in Pakistan.<sup>80</sup>
- In 2014, the OPCW Secretariat organised and conducted international and regional assistance and protection training courses related to offers made under paragraph 7 of *Article X* of the Convention, Pakistan along with other members participated in these courses.
- The OPCW hosted a number of high-level visitors at the Organisation in 2014, the Foreign Secretary of Pakistan, Mr. Aizaz Chaudhry, also visited the OPCW.
- Over the years, Pakistan has participated in many courses, training exercises, regional and international seminars and participated in related OPCW activities under OPCW International Cooperation, Protection and Assistance programmes. Pakistan also organised several conferences and seminars, served several times in the executive councils of the OPCW.

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<sup>79</sup> “Statement by Ambassador Aizaz Ahmad Chaudhry Additional Foreign Secretary Ministry of Foreign Affairs Islamabad and Leader of Pakistan Delegation At the Third Review Conference.”

<sup>80</sup> “Report of the OPCW on the Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction in 2014.”

- Pakistan submitted its Declarations of National Protection Programme to the OPCW in September 2005, September 2006, December 2007, May 2008, April 2009, May 2010, and April 2011.<sup>81</sup>

Pakistan, as a responsible state, is fully determined to support the effective universal implementation of the CWC through the OPCW. The OPCW including all the State Parties to the Convention should fully address the future challenges related to threats of use of chemical weapons and other related chemical hazards. Pakistan is making every effort to fulfil all its CWC obligations. However, international assistance and cooperation is a key to utilise the discipline of Chemistry for peaceful purposes.

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<sup>81</sup> Data has been compiled from the annual reports of the OPCW for complete details see, “Conference of the States Parties.”

## PART 5

### PAKISTAN'S BIOLOGICAL TOXIN WEAPONS CONVENTION (BTWC) IMPLEMENTATION

*Malik Qasim Mustafa*

#### 5.1: Brief Overview of BTWC

The Biological Weapons Convention (BWC) or Biological and Toxin Weapons Convention (BTWC), a successful multilateral disarmament treaty prohibiting the development, production and stockpiling of an entire category of weapons was opened for signature on April 10, 1972 and came into force on March 26, 1975.<sup>82</sup> Currently, there are 174 States Parties and eight signatories, and 14 states have neither signed not ratified the Convention.<sup>83</sup> Pakistan is also a State Party to the BTWC and it signed the Convention on April 10, 1972 and ratified it on September 25, 1974. According to the BTWC each State Party undertakes to:

- Never in any circumstances to develop, produce, stockpile or otherwise acquire or retain biological agents, toxins, weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.<sup>84</sup>

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<sup>82</sup> "Biological Weapons: The Biological Weapons Convention," *United Nations Office for Disarmament Affairs (UNODA)*, accessed May 19, 2016, <https://www.un.org/disarmament/wmd/bio/>.

<sup>83</sup> "Membership of the Biological Weapons Convention," *The United Nations Office at Geneva (UNOG)*, accessed May 19, 2016, [http://www.unog.ch/80256EE600585943/\(httpPages\)/7BE6CBBEA0477B52C12571860035FD5C?OpenDocument](http://www.unog.ch/80256EE600585943/(httpPages)/7BE6CBBEA0477B52C12571860035FD5C?OpenDocument).

<sup>84</sup> *Article I*, "Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction," United Nations Office for Disarmament Affairs (UNODA), 1972, <http://disarmament.un.org/treaties/t/bwc/text>.



- To destroy or divert to peaceful purposes all agents, toxins, weapons, equipment and means of delivery and will take all necessary safety precautions to protect populations and the environment.<sup>85</sup>
- Not to transfer to any recipient whatsoever, directly or indirectly, and not in any way to assist, encourage, or induce any state, group of states or international organisations to manufacture or otherwise acquire any of the agents, toxins, weapons, equipment or means of delivery.<sup>86</sup>

In addition to these important provisions, the Convention also encourages State Parties to cooperate and provide support and assistance to each other to resolve related problems, can launch a complaint against violation of this convention and will take effective prohibitive and preventive measure within its territory or areas under its jurisdiction. The State Parties will review the operation of the Convention after five years from the entry into force of this convention, and by exercising its national sovereignty can withdraw from the convention under extraordinary events.

Since last four decades, the progress of the Convention has been reviewed seven times and its Eighth RevCon will be held by the end of 2016. The Second RevCon held in 1986, highlighted the need to enhance Confidence Building Measures (CBMs) and to improve international cooperation in the field of peaceful biological activities.<sup>87</sup> In the Third RevCon held in 1991, State Parties established a group of governmental experts to strengthen verification measures, and later formed an Ad-Hoc Group to make a legally binding verification regime for the Convention. In the Fourth RevCon in 1996, State Parties failed to achieve their desired results of making a legally binding verification regime for

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<sup>85</sup> *Article II, Ibid.*

<sup>86</sup> *Article III, Ibid.*

<sup>87</sup> "Biological Weapons: The Biological Weapons Convention."

the Convention. During the Fifth RevCon in 2001, State Parties adopted a decision to hold annual meetings of State Parties and expert group meetings.<sup>88</sup>

Pakistan was elected as President of the Sixth Review Conference in 2006. Ambassador Masood Khan, Permanent Representative of Pakistan to the UN, Presided the Sixth RevCon. He was also nominated as Chairman for the 2007 meetings. In the Final Declaration, State Parties agreed to adopt measures to promote universal adherence of the convention, measures to streamline CBMs, and an agreement to establish an Implementation Support Unit (ISU) to help implement the convention.<sup>89</sup>

In the Seventh RevCon, which was held in Geneva from December 5-22, 2011, all State Parties, in the Final Declaration, agreed that the Convention is essential for international peace and security, prohibition and elimination of all weapons of mass destruction universal adherence and State Parties, which are not in compliance with the Convention pose a fundamental challenge. It also highlighted that terrorism is a major challenge therefore; terrorists must be prevented from developing, producing and stockpiling agents or toxins and their means of delivery.<sup>90</sup> The Seventh RevCon also recognised the full and effective implementation of UNSCR Resolution 1540 and UNGA Resolution 60/288.

Overall, the Convention has played an important role to make this world a safer place by using life sciences only for benign

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<sup>88</sup> Ibid.

<sup>89</sup> Ibid.

<sup>90</sup> "Final Document of the Seventh Review Conference," Seventh Review Conference of the States Parties to the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, *The United Nations Office at Geneva (UNOG)*, January 13, 2012, [http://www.unog.ch/80256EDD006B8954/\(httpAssets\)/3E2A1AA4CF86184BC1257D960032AA4E/\\$file/BWC\\_CONF.VII\\_07+\(E\).pdf](http://www.unog.ch/80256EDD006B8954/(httpAssets)/3E2A1AA4CF86184BC1257D960032AA4E/$file/BWC_CONF.VII_07+(E).pdf).

purposes.<sup>91</sup> The international community has committed itself to continue their efforts against present and future threats arising out of the destructive toxin and biological agents, and their application in biological warfare and bioterrorism.<sup>92</sup> After more than 41 year of entry into force of the Convention, the use of biological weapons has become illegal. However, scientific and technological advances have made it clear that the Convention needs a continued support by all the State Parties. Highlighting the nature of threat from biological weapons, the President-Designate of the Eighth RevCon of the BTWC, Ambassador Dr. Gyorgy Molnar, has stated that bio-weapons together with autonomous weapons and cyber war are three technologies that could transform warfare and impact both our individual and collective security.<sup>93</sup> In today's world the BTWC is challenged by its verification regime and advances in biotechnology and life sciences. Therefore, a universal adherence to the BTWC will help reinforce the existing norms against the biological weapons.

## **5.2: Pakistan's Policy**

Four decades ago, Pakistan joined the BTWC as a non-possessor of biological weapons state and never made these weapons part of its national security measures. It has developed its biotechnology research and development infrastructure for scientific and peaceful purposes only. Pakistan's policy with reference to the BTWC revolves around following important principles:<sup>94</sup>

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<sup>91</sup> Masood Khan, "Biological Weapons Convention - a Successful Regime," *The Nation*, April 8, 2015, <http://nation.com.pk/columns/08-Apr-2015/biological-weapons-convention-a-successful-regime>.

<sup>92</sup> Ibid.

<sup>93</sup> "Statement by Ambassador Dr. György Molnár, Special Representative for Arms Control, Disarmament and Non-Proliferation, Hungarian Ministry of Foreign Affairs, President-Designate of the Eighth Review Conference of the Biological Weapons Convention" (Annual NATO Conference on Arms Control, Disarmament and Non-Proliferation, Ljubljana, 2016).

<sup>94</sup> Pakistan policy towards BTWC is mainly derived out of official statements given at different occasion at the BTWC forum, at the UN and

- Accessing to the general statement on non-possession of WMDs, Pakistan has declared that it does not possess biological weapons;
- Pakistan considers BTWC as an important pillar of global security architecture and has committed to its full and effective implementation to preserve and strengthen this convention;
- Pakistan has always opposed development, production or stockpiling of biological weapons and agents and believes in a stringent biosafety and biosecurity regime;
- Pakistan emphasises the universalisation and effective and balanced implementation of the Convention including multilateral negotiations to conclude a legally binding protocol and verification mechanism;
- Pakistan attaches great importance to strengthening the implementation of *Article X* on cooperation and assistance, *Article VII* for timely assistance to the affected

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other related forums; “Statement by Ambassador Tehmina Janjua, Permanent Representative of Pakistan, at the Biological Weapons Convention (BWC) Preparatory Committee for the Eighth Review Conference, Geneva,” April 22, 2016, [http://www.pakistanmission-un.org/2005\\_Statements/CD/ecwbtwc/ecwbtwcmain.htm](http://www.pakistanmission-un.org/2005_Statements/CD/ecwbtwc/ecwbtwcmain.htm); “Statement by Ambassador Zamir Akram, Permanent Representative of Pakistan to the United Nations at the Seventh BWC Review Conference, Geneva,” December 6, 2011, [http://unog.ch/80256EDD006B8954/%28httpAssets%29/CCC93586E11F46C8C125795E0051E285/\\$file/Pakistan.pdf](http://unog.ch/80256EDD006B8954/%28httpAssets%29/CCC93586E11F46C8C125795E0051E285/$file/Pakistan.pdf); “Pakistan’s Statement on National Implementation of BTWC, Meeting of the States Parties, Geneva,” December 10, 2007, [http://www.pakistanmission-un.org/2005\\_Statements/CD/ecwbtwc/stbwcpak\\_10dec07.html](http://www.pakistanmission-un.org/2005_Statements/CD/ecwbtwc/stbwcpak_10dec07.html); “Statement by Ms. Tehmina Janjua, Deputy Permanent Representative of Pakistan at the Sixth Review Conference of the Biological and Toxin Weapons Convention, Geneva,” November 20, 2006; “Pakistan’s National Report on National Measures on the Implementation of Security Council Resolution 1540 (2004).”

States Parties to the Convention and to hold regular reviews of developments in science and technology;

- Pakistan firmly believes the potential dual-use technology should not be used as a pretext for proscribing or restricting their availability to developing countries for permitted purposes;
- Pakistan is equally concerned about the possible use of biological weapons, including by non-state actors. It fully supports appropriate and effective measures to prevent non-state actors from gaining access to WMD and their means of delivery;
- Nationally, Pakistan has instituted comprehensive administrative, legislative and security measure to ensure the safety and security of sensitive materials, facilities, technologies and equipment;
- Internationally, Pakistan remains a partner in the efforts to stem proliferation and illicit trafficking of WMD-related materials;
- Non-discriminatory and multilateral cooperative effort is necessary to promote objectives of non-proliferation of WMD. It will participate constructively in the discussions on the various agenda items to track progress where consensus is possible by focusing on areas that unite us.

Over the years, Pakistan has worked diligently with the other member states to strengthen the BTWC regime. Pakistan has also advocated the rights of states to access biological and toxin materials and technology for research and peaceful purposes, and for medicine, agriculture and industry.<sup>95</sup> Pakistan is investing in the development of the life sciences and biotechnology and has

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<sup>95</sup> Khan, “Biological Weapons Convention - a Successful Regime.”

developed a good institutional base, a sound infrastructure, and a pool of scientists to sustain this effort. Pakistan has also reinforced stringent biosecurity and biosafety measures and export controls and will keep playing a constructive role to streamline the Convention.<sup>96</sup>

### **5.3: National Implementation Measures**

Pakistan is fully committed to the obligations under the BTWC. Over the years, Pakistan's efforts to implement its obligations under the BTWC cover a wide spectrum. It implemented comprehensive legal and administrative measures to prevent the development and use of biological agents and toxins. Following are some existing national legislative, regulatory, administrative and biosafety and biosecurity measures Pakistan adopted to fulfil its commitments made under the BTWC;<sup>97</sup>

#### **5.3.1: Major Legislative, Regulatory, Administrative, Biosafety and Biosecurity Measures**

- **Pakistan Penal Code (Act of XLV of 1890), Section 270 and 107:** Whoever malignantly does any act which is likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both. *Section 107* also penalises their accomplice and those who assist.<sup>98</sup>

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<sup>96</sup> Ibid.

<sup>97</sup> These measures are compiled from different national statements presented at the BTWC review conferences; "Pakistan's National Report on National Measures on the Implementation of Security Council Resolution 1540 (2004)"; "Pakistan's Statement on National Implementation of BTWC, Meeting of the States Parties, Geneva"; "Statement by Ambassador Zamir Akram, Permanent Representative of Pakistan to the United Nations at the Seventh BWC Review Conference, Geneva."; Ibid.; "Pakistan's Statement on National Implementation of BTWC, Meeting of the States Parties, Geneva," ; "1540 Committee of Pakistan."

<sup>98</sup> *Pakistan Penal Code (Act XLV of 1860)*, 1860, <http://www.pakistani.org/pakistan/legislation/1860/actXLVof1860.html>.

- **The Drugs Act 1976:** This Act applies, inter alia, to drugs that may have been rendered injurious to health and prescribes specific penalties on individuals exporting, importing and manufacturing spurious drugs.<sup>99</sup>
- **Planet Quarantine Act 1976:** This Act enacted to safeguard national crop wealth from destructive pests and diseases which are not known to occur in Pakistan.<sup>100</sup>
- **Animal Quarantine Act 1979:** This Act regulates the import, export and quarantine of animals and animal products in order to prevent the introduction or spread of diseases and to provide for matters connected therewith or incidental thereto.<sup>101</sup>
- **Anti-Terrorism Act 1997:** This Act defines biological weapons as “illicit weapon.” Penalizes individuals, their accomplices and those who assist and finance in possession of illicit weapons that may include biological weapons. The Act also outlines measures for the involvement of non-state actors.<sup>102</sup>
- **The Environmental Protection Act, 1997:** This Act prohibits the generation, collection, consignment,

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<sup>99</sup> *The Drugs Act, 1976*, 1976,

<http://www.ppma.org.pk/pdf/The%20Drugs%20Act,%201976.pdf>.

<sup>100</sup> *Pakistan Plant Quarantine Act, 1976*, 1976,

<http://plantprotection.gov.pk/wp-content/uploads/Act%20and%20Rules%20PDF/Plant%20Quarantine%20Act%201976.pdf>.

<sup>101</sup> *Pakistan Animal Quarantine (Import and Export of Animal and Animal Products) Ordinance, 1979*, 1979,

[http://www.vertic.org/media/National%20Legislation/Pakistan/PK\\_Animal\\_Quarantine\\_Ordinance\\_1979.pdf](http://www.vertic.org/media/National%20Legislation/Pakistan/PK_Animal_Quarantine_Ordinance_1979.pdf).

<sup>102</sup> *The Anti Terrorism Act, 1997*.

transport, treatment, disposal, storing, handling, and import of hazardous substances.<sup>103</sup>

- **SECA-2004:** Aimed to strengthen controls on the exports, re-exports, transshipment and transit of goods and technologies, material and equipment related to nuclear and biological weapons and missiles capable of delivering such weapons. It extends to whole of Pakistan and any Pakistani visiting or working abroad. The Act prohibits diversion of controlled goods and technologies and its control lists covers a catch-all provision. Penalties for violation of this Act can be imprisonment extending up to 14 years, fine up to five million rupees with confiscation of assets/property.<sup>104</sup>
- **Statutory Notification No. SRO 1078(I)/2005 as amended S.R.O. 276(I)/2015, National Control List:** In 2005 The SECDIV issued National Control List, revised in 2011 and amended in 2015 also covers biological weapons pursuant to the SECA-2004.<sup>105</sup>
- **Pakistan Biosafety Rule 2005 and Biosafety Guidelines 2005:** These guidelines deal with safety aspects of bio-related materials and facilities, which includes, micro organism, gene technological products, genetically manipulated plants, cells, imports, exports, sale and purchase of living modified organisms. Whereas Biosafety Guidelines are aimed to control laboratory research, field studies and commercial release of Genetically Modified Organisms (GMOs) and products thereof.<sup>106</sup>

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<sup>103</sup> *Pakistan Environmental Protection Act, 1997.*

<sup>104</sup> Government of Pakistan, *Pakistan Export Control Act-2004.*

<sup>105</sup> *Amended Control Lists of Goods, Technologies, Material and Equipment Related to Nuclear and Biological Weapons and Their Delivery Systems.*

<sup>106</sup> *Pakistan Biosafety Rules, 2005, 2005,*  
[http://www.fao.org/fileadmin/user\\_upload/gmfp/docs/Biosftyrules.pdf](http://www.fao.org/fileadmin/user_upload/gmfp/docs/Biosftyrules.pdf);



- **Strategic Export Control Division (SECDIV):** It also regulates exports of biological weapons and their means of delivery pursuant to the SECA-2004.
- **National Command Authority Act 2010:** *Section 12* of the Act is equally applicable to the use of biological weapons.<sup>107</sup>
- **Anti Money Laundering Act 2010:** According to the report of 1540 Committee Matrix of Pakistan financing for biological weapons is punishable under the Section 4 of the Anti Money Laundering Act of 2010. Punishment can extend up to 10 years fine up to one million rupees and liable to forfeiture of property involved.<sup>108</sup>
- **2010 “Code of Conduct for Life Scientists” Guidelines:** For implementation, compliance and sharing with the BTWC community, Pakistan emphasizes the need for formulating a Code of Conduct for the scientists. A draft Code of Conduct has been prepared and necessary consultations are undergoing for its final approval and implementation.
- **S.R.O. 192 (I)/2013, Export Policy Order 2013:** This order prohibits the exports of all goods which are banned and restricted in the control list notified by the Ministry of Foreign Affairs.<sup>109</sup>
- **The Protection of Pakistan Act 2014:** This Act prohibits the use of biological weapon as “Scheduled Offence” with a punishment extending up to twenty years, with fine and confiscation of property. The Act also outlines measures

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*National Bio Safety Guidelines, 2005, 2005,*  
[http://dbtbiosafety.nic.in/act/BiosftyGlines2005\\_Pakistan.pdf](http://dbtbiosafety.nic.in/act/BiosftyGlines2005_Pakistan.pdf).

<sup>107</sup> *National Command Authority Act, 2010.*

<sup>108</sup> *Anti Money Laundering Act, 2010.*

<sup>109</sup> *Export Policy Order 2013.*

for the involvement of non-states actors in these activities.<sup>110</sup>

- **Pakistan Export Policy Order 2016:** This Order regulates export of goods, materials, technology and equipment useable in nuclear and biological weapons and their delivery systems which have commercial applications shall be subject to NOC from SECDIV, Ministry of Foreign Affairs.<sup>111</sup>
- **Draft BTWC Legislation:** It aims to comprehensively prohibit designing, development, manufacturing, stockpiling, transport, import and export, sale, acquisition, and possession of biological agents and toxins including their means of delivery.
- **Establishment of National Focal Point at Ministry of Foreign Affairs:** Ministry of Foreign Affairs was established a national focal point for BTWC implementation.
- **Establishment of Pakistan's National Institute for Biotechnology and Genetic Engineering (NIBGE) in 1994:** The NIBGE is one of the pioneer biotechnology institutes of the four bioscience centres of PAEC. The institute is a focal point of modern biotechnology and provides a technology receiving unit to help the development of country through applications of modern biotechnology and genetic engineering.<sup>112</sup>
- **Establishment of Centre for Advanced Molecular Biology (CAMB) and The Nuclei Institute for Agriculture and Biology (NIAB):** CAMB and NIAB are

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<sup>110</sup> See Section 2 and 16 of *Protection of Pakistan Act, 2014*.

<sup>111</sup> *The Export Policy Order, 2016*.

<sup>112</sup> "National Institute for Biotechnology and Genetic Engineering (NIBGE)," accessed May 20, 2016, <http://www.nibge.org/>.

pioneer institutions for research in medicine and agriculture.

- **Establishment of Intern Agency Working Group (Task Force):** It comprises representatives from concerned policy making bodies, ministries and organisations and life scientists from both public and private sector. They work under the national focal point of the BTWC and promote awareness regarding biosafety, biosecurity and non-proliferation of biological threats.
- **Establishment of a National Biosafety Centre:** This centre regulates GMOs.
- **Establishment of Institutional Biosafety Committees (IBC), Technical Advisory Committee (TAC), and National Biosafety Committee (NBC):** it's a three tier structure to monitor biological research activities and implementation of national biosafety guidelines.
- **Establishment of National Bio-Ethics Committee:** This committee works under Pakistan Medical Research Council and deals with all aspects of bio-ethics in health sector.
- **Establishment of Epidemic Investigation Cell, Public Health Laboratories Network, Provincial Veterinary Research Institutes, National Veterinary Laboratory, National Institute of Biotechnology and Genetic Engineering, Crop Disease Research Programme, and National institute of Agricultural Biology:** All these efforts are aimed at protecting human, animal, and plant life and to respond to challenges from biological agents.
- **National Disaster Management Authority (NDMA):** It acts as a first responder.

- **Defence Science and Technology Organisation (DESTO):** This organisation established a Chemo-Bio-Defence-Cell (CBDC).
- **Establishment of a Committee at the HEC:** It is meant to develop curriculum on biosafety and biosecurity. The HEC has compiled a Directory of National Resource Persons on life sciences. The directory will facilitate coordination and better harmonisation of national efforts for strengthening of biotechnology regulatory framework. A number of institutions like Quaid-i-Azam University Islamabad, University of Karachi, Pakistan Institute of Engineering and Applied Sciences (PIEAS) Islamabad, and Aga Khan University Karachi have already revised their syllabi and are implementing it.<sup>113</sup>
- **The Environmental Protection Authority (EPA) Hospital Waste Management Rules.**
- **Establishment of the Biological Control Authority under Ministry of Health:** The Authority elaborates import procedures for bio-related medicines.
- **The National Control Laboratory for Biological Substances at the National Institute of Health (NIH) Islamabad:** It is involved in testing and lot release of biological drugs.
- **Establishment of National Core Group of Life Sciences (NCGLS)**
- **Establishment of Pakistan Biological Safety Association (PBSA):** It works under the umbrella of NCGLS, HEC and in collaboration with Committee on

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<sup>113</sup> Dr. Riaz Hussain Qamar, "Pakistan's National Efforts to Mitigate Biological Threats," n.d.

Scientific & Technological Cooperation (COMSTECH),  
Organization of Islamic Conference (OIC).

Along with the above mentioned measures, Pakistan is actively working on creating awareness for the full and effective implementation of the BTWC. All related bodies and organisations are holding regular meetings with all the stakeholders regarding the BTWC. Awareness raising programmes and capacity building programmes have been initiated with the related public and private sector organisations, universities, and law enforcement agencies.<sup>114</sup> Overall, Pakistan firmly believes that national implementation measures of the BTWC can be enhanced further through international cooperation and technological transfers.

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<sup>114</sup> Ibid.

## PART 6

### PAKISTAN'S STRATEGIC EXPORT CONTROL SYSTEM: A COMPARATIVE PERSPECTIVE

*Tahir Mahmood Azad*

Above section on “Pakistan’s Export Control System” clearly highlights that Pakistan, under its SECA-2004, has significantly developed and strengthened its export control structure. This structure is composed of practical administrative and legislative measures. Pakistan export control system has adopted both pre-emptive and preventive measures to control the proliferation of WMD related components, technologies and their means of delivery. This structure has also adopted advanced methods and modern technologies and is constantly updating its administrative and legal mechanism to counter any kind of future illicit trafficking of fissile materials and sensitive technology. It has also made it clear that Pakistan’s export control system is at par with the export control systems of other nuclear states and multilateral export control regime. In this regard, the purpose of this section is to give a comparative analysis of those multilateral export control arrangements with export control system of Pakistan.

#### **6.1: Technical Overview of International Export Control Regimes and Membership Criteria**

Pakistan has already endorsed various international nuclear non-proliferation efforts and conventions. Pakistan’s export control lists are based on the international best practices available and follow the EU model and incorporate items controlled by the NSG, AG, MTCR and WA. All these regimes have different scopes and areas to control. However, they have some common features:

- To maintain lists of controlled items (to feed into Strategic Export Control Lists)
- To share information
- To hold regular meetings
- International Delegations

As far as membership criteria is concerned the NSG has designed various guidelines for states to become its member. The NSG follows a consensus based approach and considers following salient features for its membership:<sup>115</sup>

- 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;
- Full compliance with the obligations of one or more of the following: the NPT, the Pelindaba, Rarotonga, Tlatelolco, and Bangkok treaty, or an equivalent international nuclear non-proliferation agreement; and
- Support of international efforts towards non-proliferation of WMDs and of their delivery vehicles.

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<sup>115</sup> *NTI*, “The Nuclear Suppliers Group,” March 08, 2016, <http://www.nti.org/learn/treaties-and-regimes/nuclear-suppliers-group-nsg/>, Accessed on June 12, 2016.

The AG has following regulations to become its member:<sup>116</sup>

- Commitment to prevent the spread of CBW proliferation, including being a party, in good standing, to the BTWC and CWC;
- Being a manufacturer, exporter or trans-shipper 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 information including: accepting the confidentiality of the information exchange; creating liaison channels for expert discussions; and creating a denial notification system protecting commercial confidentiality;
- Agreeing to participate in the AG in a way that it strengthens the effectiveness of the AG in preventing CBW proliferation.

Decisions in MTCR are usually taken by mutual consensus. In making membership decisions, the partners tend to consider whether a prospective new member would strengthen international non-proliferation efforts and demonstrate a

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<sup>116</sup> *The Australia Group*, “Australia Group Membership,” <http://www.australiagroup.net/en/membership.html>, Accessed on June 15, 2016.



sustained and sustainable commitment to non-proliferation. It also considers a legally based effective export control system that puts into effect the MTCR Guidelines and procedures and administers and enforces such controls effectively. The regime's dialogue with prospective partners is conducted through the MTCR Chair, visits to capitals by teams comprised of representatives of four MTCR partners and bilateral exchanges. The group does not have an observer category.

Membership in the WA is universal and non-discriminatory for countries meeting the following established criteria:<sup>117</sup>

- Produce/export arms or associated dual-use goods and technologies;
- Implement national policies that do not permit the sale of arms or sensitive dual-use items to countries whose behaviour is a cause for concern;
- Adhere to the international non-proliferation norms and guidelines;
- Implement fully effective export controls.

## **6.2 A Comparative Analysis of Regime's Lists and National Export Control Lists**

### **Comparative Analysis**

Following are some details of restricted items and categories from international export control regime: The Wassenaar Arrangement Control Lists is meant to control export of

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<sup>117</sup> *NTI*, "Wassenaar Arrangements," March 7, 2016, <http://www.nti.org/learn/treaties-and-regimes/wassenaar-arrangement/>, June 20, 2016.

conventional weapons, military and dual-use goods. Main features of the WA lists are:<sup>118</sup>

- *Controls based on two lists (which feed updates to the Strategic Export Control Lists):*
  - Munitions List
  - List of Dual-Use Goods and Technology
- *Approximately 70% of ECO licenses derives from the items that Wassenaar have agreed to control*

The MTCR Control Lists are aimed to prevent proliferation of delivery systems of WMD and related transfers and covers following areas:<sup>119</sup>

- *Maintains list of goods, software and technology in Technical Annex:*
  - Category I deals with long range missiles, UAVs and sub-assemblies;
  - Category II is a mix of dual-use and military goods (listed on EU Dual Use List)
- *Annex Controlled Items are:*
  - Rocket engines & small gas turbines
  - Metal powders for propellants
  - Ceramics and carbon fibre
  - Accelerometers and gyroscopes
  - Inertial navigation equipment
  - Precision tracking systems

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<sup>118</sup> Nigel Gibbons, "International Export Control Regimes," Department for Business and Innovation Skills, UK., <http://www.egadd.org.uk/wp-content/uploads/sites/25/2015/07/EGAD-MM-International-Regimes-Overview-Update-Nov14.pdf>.

<sup>119</sup> Ibid.

- Vibration test equipment
- Telemetry equipment
- Wind tunnels
- Isostatic Presses

The NSG Control Lists cover nuclear weapons components and technologies and related dual use items<sup>120</sup>

- *Two lists of goods (which feed into updates to the EU Dual Use List, listed in Annex I and Trigger List also in Annex IV):*
  - Trigger List (i.e., items “triggered” need for IAEA safeguards)
  - Dual-Use List
- *Controlled Items:*
  - Machine tools
  - Isostatic Presses
  - Neutron generators
  - Maraging steel
  - Crucibles
  - Filament Winding Machines
  - Zirconium
  - Hafnium
  - Mass Spectrometers
  - Pressure sensors/transducers
  - Lithium/Boron/Beryllium
  - Capacitors (high energy)

The AU Control Lists focus on exports which can contribute to the development of CBW;<sup>121</sup>

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<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

- *CWC contains a detailed list of chemicals. These are not considered dual-use and appear in ML7 in the UK's Military List*
- *Controlled Items are:*
  - Chemicals used as precursors for toxic chemical agents
  - Certain human pathogens
  - Certain animal and plant pathogens
  - Certain genetically modified micro-organisms
  - Pumps and valves
  - Double or multi-walled piping
  - Fermentation vessels
  - Distillation columns
  - Vessels/equipment – corrosion resistant
  - Biological containment facilities
  - Freeze drying equipment
  - Continuous flow cartridges
  - Incinerators designed to destroy chemicals

## **Pakistan**

According to SECDIV, Pakistan's Strategic Export Control Lists are prepared in-line with the lists of the international export control regimes. The salient features of these Control Lists are as follow:<sup>122</sup>

- Pakistan's Export Control Lists, initially notified in October 2005, were based on the Control list classification of the EU;
- The review process is carried out on routine basis. Pakistan's Export Control Lists were reviewed in July 2011 and in March 2015;
- Control Lists carry a "catch-all" provision.

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<sup>122</sup> Ali, 'Pakistan's Strategic Export Controls: Latest Developments'.

Currently Pakistan's Export Control Lists are in complete harmony with the Control Lists maintained by the NSG, MTCR, and AG. SECDIV carries out a regular assessment of technological advancements and amendments done by international export control regimes and updates and amends Pakistan's export Control Lists accordingly. The details of Pakistan's Export Control Lists are as following:<sup>123</sup>

*Nuclear Materials, Components, System, Facilities, and Equipment:* According to the Control Lists the categories are as following:

- a) "Nuclear reactors" capable of operation so as to maintain a controlled self-sustaining fission chain reaction;
- b) Metal vessels or major shop-fabricated parts specially designed or prepared to contain the core of a "nuclear reactor", including the reactor vessel head for a reactor pressure vessel;
- c) Manipulative equipment specially designed or prepared for inserting or removing fuel in a "nuclear reactor";
- d) Control rods specially designed or prepared for the control of the fission process in a "nuclear reactor", support or suspension structures, rod drive mechanisms and rod guide tubes;
- e) Pressure tubes specially designed or prepared to contain fuel elements and the primary coolant in a "nuclear reactor" at an operating pressure in excess of 5,1 MPa;

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<sup>123</sup> SECDIV, MOFA, Pakistan, "Control Lists," April, 06, 2015, [http://www.mofa.gov.pk/secdiv/documents/Control-Lists\(S.R.O.%20276%20\(I\)2015\).pdf](http://www.mofa.gov.pk/secdiv/documents/Control-Lists(S.R.O.%20276%20(I)2015).pdf), Accessed on May 15, 2016.

- f) Zirconium metal tubes or zirconium alloy tubes (or assemblies of tubes) specially designed or prepared for use as fuel cladding in a “nuclear reactor” and in quantities exceeding 10 kg;

NOTE: Zirconium metal tubes or zirconium alloy tubes for use in a nuclear reactor consist of zirconium in which the relation of hafnium to zirconium is typically less than 1:500 parts by weight.

- g) Coolant pumps or circulators specially designed or prepared for circulating the primary coolant of “nuclear reactor”;
- h) h. ‘Nuclear reactor internals’ specially designed or prepared for use in a “nuclear reactor”, including support columns for the core, fuel channels, calandria tubes, thermal shields, baffles, core grid plates, and diffuser plates;
- i) Neutron detectors specially designed or prepared for determining neutron flux levels within the core of a “nuclear reactor”;
- j) ‘External thermal shields’ specially designed or prepared for use in a “nuclear reactor” for the reduction of heat loss and also for the containment vessel protection.

*Test, Inspection and Production Equipment:* Plant for the separation of isotopes of “natural uranium”, “depleted uranium” and “special fissile materials”, and specially designed or prepared equipment and components, as follows:

- a. Plant specially designed for separating isotopes of “natural uranium”, “depleted uranium”, and “special fissile materials”, are as follows:

1. Gas centrifuge separation plant
  2. Gaseous diffusion separation plant
  3. Aerodynamic separation plant
  4. Chemical exchange separation plant
  5. Ion-exchange separation plant
  6. Atomic vapour “laser” isotope separation (AVLIS) plant
  7. Molecular “laser” isotope separation (MLIS) plant
  8. Plasma separation plant
  9. Electromagnetic separation plant
- b. Gas centrifuges and assemblies and components specially designed or prepared for gas centrifuge separation process, as follows:
1. Gas centrifuges
  2. Complete rotor assemblies

*Materials:* “Natural uranium” or “depleted uranium” or thorium in the form of metal, alloy, chemical compound.

*Software:* “Software” specially designed or modified for the “development”, “production” or “use” of goods specified in this Category.

*Technology:* “Technology” according to the Nuclear Technology Note for the “development”, “production” or “use” of goods specified in this Category.

*Materials, Chemicals, “Microorganisms” & “Toxins”:* Re-saturated pyrolyzed carbon-carbon components designed for and useable in the complete rocket systems.

*Test, Inspection and Production Equipment:* Equipment for the “production” of structural composites, fibres, prepares or performs usable in systems and specially designed components and accessories.

## PART 7

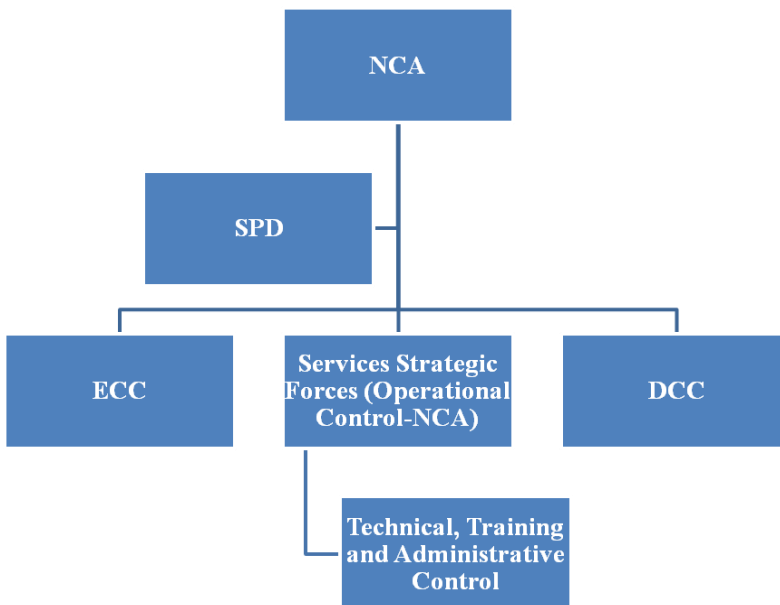
### OTHER MEASURES TO ENHANCE SECURITY AND STRENGTHENING EXPORT CONTROL

*Tahir Mahmood Azad*

Pakistan has extensively worked on establishing robust nuclear export control systems and introduced various strategic institutions in this regard. In addition, international assistance has been taken to improve the effectiveness and efficiency of these institutions.

#### 7.1 National Command Authority

NCA is the supreme institution to control all strategic organizations in Pakistan. Pakistan's National Security Council (NSC) established NCA in February 2000. Prime Minister of Pakistan is its executive head.





Strategic Plans Division (SPD) is the Secretariat of NCA. SPD has following functions to perform:

- Development of nuclear strategy, policy and doctrine.
- Formulation of development strategy and force goals within the ambit of national power potential, doctrine and international arms control regimes, and overseeing its systematic implementation.
- Formulation of all strategic/operational plans, deployment and employment.
- Creation of a chain of command and development of redundancies in communications and assuring safety and security of the strategic assets.
- To assist NCA in exercising control over strategic organizations, and coordinate financial and administrative aspects.
- To provide military inputs on international/regional arms control regimes, disarmament and related strategic issues.
- To coordinate and ensure the establishment of Strategic C<sup>4</sup>I<sup>2</sup>SR system for NCA for command and control of strategic assets.

## **7.2: Nuclear Security Action Plan**

A robust NSAP has been established in collaboration with the IAEA to handle radioactive sources, secure orphan sources, detect radiation and prepare for emergencies. Collaboration with IAEA is in process for upgrading physical protection of a nuclear power plant at Karachi.<sup>124</sup>

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<sup>124</sup> Pakistan's Statement in NSS 2014, <http://www.state.gov/documents/organization/235403.pdf>.

### **7.3: Centre of Excellence for Nuclear Security**

Pakistan's Centre of Excellence for Nuclear Security (PCENS), has been established to conduct specialized training courses in physical protection of nuclear materials and facilities, material control and accounting, personnel reliability, transport security and other security related areas.<sup>125</sup> In coordination with IAEA, the PCENS conducted a Regional Training Course on security of radioactive sources in November, 2014.

Pakistan has also established a Nuclear Emergency Management System to handle nuclear and radiological related emergencies. This system covers all related activities including training courses and exercise.<sup>126</sup>

### **7.4: Emergency Response and Mitigation Measures**

PNRA is obliged under the Ordinance to ensure preparation and implementation of emergency plans for actions to be taken by the relevant plant management and offsite authorities following a radiological emergency.

In the last several years, Pakistan has invested heavily in nuclear safety at the plant, corporate and regulatory levels. Following the Fukushima Incident, it conducted a detailed assessment of the safety parameters, emergency preparedness and response, and operators' training protocols and procedures. All authorisations since then require from the licensees to implement lessons learnt from the Fukushima accident. In collaboration with the IAEA, Pakistan is also implementing its NSAP to manage

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<sup>125</sup> 58<sup>th</sup> IAEA General Conference, 22-26 September, 2014 Statement by the Leader of the Pakistan Delegation  
<https://www.iaea.org/sites/default/files/pakistan.pdf>.

<sup>126</sup> Khalid Ahmed Kidwai, "Pakistan's Role in Nuclear Security Summit (NSS) Process," Inaugural statement in a Roundtable Discussion at ISSI on March 25, 2016, Available at <http://issi.org.pk/wp-content/uploads/2016/03/Inaugural-statement-by-Lt-Gen-Khalid-Ahmed-Kidwai.pdf>.

radioactive sources, secure orphan sources, detect radiation, and prepare for emergencies. Pakistan has also established a Nuclear Emergency Management System to handle nuclear and radiological emergencies. Covering the entire range of activities, the mechanism has state-of-the-art equipment, mobile labs, technical guidance and countrywide connectivity. Several training courses and exercises for the first responders, emergency response personnel and front line officers have been conducted for emergency preparedness.

Legally speaking, nuclear security is a national responsibility, and Pakistan has been fulfilling it primarily in pursuance of its own national interest. At the same time, Pakistan has been proactively engaging in the international forums to promote norms and good practices for fostering nuclear security.

## PART 8

### PAKISTAN AND INDIA – A COMPARATIVE ANALYSIS

*Tahir Mahmood Azad*

#### Pakistan-India Strategic Export Control Lists

Category	Pakistan <sup>127</sup>	India <sup>128</sup>
Category 0:	Nuclear Materials, Facilities, and Equipment	Nuclear Materials, Facilities and Related Equipment
Category 1:	Materials, Chemicals, “Microorganisms” & “Toxins”	Toxic Chemical Agents and Other Chemicals
Category 2:	Materials Processing	Micro-Organisms and Toxins
Category 3:	Electronics	Special Materials, Materials Processing Equipment, and Related Technologies
Category 4:	Computers	Avionics And Navigation

<sup>127</sup> SECDIV, Ministry of Foreign Affairs, Pakistan, “Strategic Export Control List,” March, 28, 2015, [http://www.mofa.gov.pk/secdiv/documents/Control-Lists\(S.R.O.%20276%20\(I\)2015\).pdf](http://www.mofa.gov.pk/secdiv/documents/Control-Lists(S.R.O.%20276%20(I)2015).pdf), Accessed on June 02, 2016.

<sup>128</sup> Ministry of External Affairs, Government of India, August 01, 2014, “India’s System of Controls over Exports of Strategic Goods and Technology,” <http://mea.gov.in/in-focus-article.htm?18843/Indias+System+of+Controls+over+Exports+of+Strategic+Goods+and+Technology>, Accessed on June, 02, 2016.

Category 5:	Telecommunications and “Information Security”	Aerospace Materials, Equipment, Systems and Related Technologies
Category 6:	Sensors and Lasers	Reserved
Category 7:	Navigation and Avionics	Electronics, Computers, and Information Technology Including Information Security
Category 8:	Marine	--
Category 9:	Propulsion Systems, Space Vehicles and Related Equipment	--

Pakistan and India have classified export control lists in various categories. Pakistan has classified export control items into 10 categories from 0 to 9. On the other side, India’s national dual-use export control list, the Special Chemicals, Organisms, Materials, Equipment, and Technologies (SCOMET) has 8 categories from 0 to 7.

Pakistan and India are obliged to maintain export controls in accordance with UNSCR 1540. Three relevant legislations or amendments which were passed after 2004 are:

1. The Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act of 2005, popularly known as the Weapons of Mass Destruction (WMD) Act.

2. The amended Foreign Trade (Development & Regulation) Act 2010.
3. The Chemical Weapons Convention (Amendment) Act of 2012.

There are four essential elements for implementation of export controls:

1. Legal and regulatory mechanisms
2. Licensing
3. Enforcement
4. Private sector engagement

Pakistan has systematically developed its strategic export control laws and principals. Its nuclear industry is very small and works under strict regulatory systems. On other side, India has a large nuclear industry and it is rapidly growing. India has to do various improvements to control its rapidly expanding nuclear industry.

However, Pakistan and India both have almost same strategic export control systems and both have not signed the NPT. In addition, they have also not signed CTBT or support FMCT negotiations. Since 1998, after conducting their nuclear tests, both Pakistan and India have taken measures to improve their strategic export control systems.

**Table: Pakistan-India Adherences to International Non-proliferation Treaties and Conventions**

<b>Export Control Regimes</b>	<b>Focus/ Treaty/ Convention</b>	<b>Pakistan</b>	<b>India</b>
<b>NSG</b>	Non-proliferation/ NPT	Non-signatory of NPT	Non-signatory of NPT
<b>AG</b>	Biological & Chemical/ BTWC/CWC	Signatory of BTWC/ CWC	Signatory of BTWC/ CWC
<b>MTCR</b>	Missile	Non-member state	Member state
<b>WA</b>	Conventional Arms	--	--
<b>Non-proliferation Regimes</b>			
<b>NPT</b>	Control. Disarmament and for peaceful purpose	Non-signatory	Non-signatory
<b>CTBT</b>	Ban on nuclear test	Non-signatory	Non-signatory
<b>FMCT</b>	Fissile material	Non-signatory	Non-signatory

Pakistan has laws, regulations, advanced technology and institutions to impose export controls for strengthening and safeguarding Pakistan's national security, and promoting international non-proliferation and export control efforts. International best export control practices have been commuted into national strategic export control practices. As of now, control lists are in complete harmony with the lists maintained by NSG, MTCR, and AG.<sup>129</sup> Technological advancements and

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<sup>129</sup> Zafar Ali Director (Policy) Strategic Export Control Division (SECDIV), Ministry of Foreign Affairs, Pakistan, "Latest Developments," Presented

amendments done by international export control regimes are regularly monitored. Pakistan can further harmonise its system more comprehensively if it is granted membership of all the four export control regimes.

Special waiver like the one granted to India by the NSG in 2008 would have negative implications for non-proliferation and export control regimes and especially for South Asian region. That will ultimately disturb the strategic stability in the region.

Pakistan has an export control regime that is at par with that of India. Yet only creating an exception for India for inclusion into the export control regime undermines the very principles of the regime. It would be much better to include states on the basis of criteria rather than creating an exception for one country that presents a lucrative business opportunity. Mainstreaming both states Pakistan and India into NSG and other export control regimes would have positive implications for global export control efforts as well as for the region.

Pakistan has a small civil nuclear programme with robust safety and security. India has a rapidly expanding civil nuclear programme. This would require more human resources to be trained and to run the programme. It would, thus, be very difficult to ensure the safety and security of such a rapidly growing programme.

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at Seminar at ISSI, May 03, 2016, <http://issi.org.pk/wp-content/uploads/2016/05/Zafar-Ali-ISSI-Seminar-XC-NP-3-May-2016.pdf>, Accessed on May 05, 2016.



## PART 9

### THE CHALLENGES TO PAKISTAN'S EXPORT CONTROLS

*Ghazala Yasmin Jalil*

The biggest challenge that Pakistan faces is legitimacy and international recognition of its nuclear status. Over the years, Pakistan has developed a robust export control regime and harmonized its export control list with international export control regime. Pakistan has been an active champion of non-proliferation cause and has participated in many non-proliferation initiatives. It has taken extensive measures to improve its nuclear safety and security. It has taken all possible steps to prove that it is a responsible nuclear state, with well institutionalised export control system and robust safety and security record. Pakistan is, thereby, ready to be integrated into mainstream nuclear club as a responsible partner for international nuclear trade for peaceful purposes.

There is a wide recognition on the part of US President Obama and other top officials in US administration of the steps Pakistan has taken. In October 2013, in a joint Pakistan-US statement, President Obama “appreciated Pakistan’s constructive engagement with the Nuclear Security Summit process... while acknowledging Pakistan’s efforts to improve its strategic trade controls and enhance its engagement with multilateral export regimes... President Obama reiterated his confidence in Pakistan’s commitment and dedication to nuclear security and recognized that Pakistan is fully engaged with the international community on nuclear safety and security issues.”<sup>130</sup> Again in January 2015, US Secretary of State, John Kerry, said that “The

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<sup>130</sup> Joint Statement by President Obama and Prime Minister Nawaz Sharif, October 23, 2015, <https://www.whitehouse.gov/the-press-office/2013/10/23/joint-statement-president-obama-and-prime-minister-nawaz-sharif>

United States welcomes Pakistan's ongoing efforts to harmonize its strategic trade controls with those of the multilateral export control regimes. Furthermore, the United States has full confidence in nuclear security in Pakistan and appreciates Pakistan's proactive engagement with the international community including through its hosting of IAEA training activities at its Nuclear Security Center of Excellence and its active participation in the Nuclear Security Summits.<sup>131</sup> President Obama again noted “Pakistan’s efforts to improve its strategic trade controls and enhance its engagement with multilateral export control regimes.”<sup>132</sup> These official statements indicate US confidence in the steps Pakistan has taken to promote a tight export control regime at home, integrate with the international export control regime, advance the non-proliferation efforts internationally, and strengthen nuclear safety and security. However, this confidence does not translate into US support for Pakistan’s membership to the NSG or its nuclear mainstreaming. Pakistan approached the US for support to its membership to the NSG, but got a response that it should put the request to the NSG where the matter would be decided by consensus. This is a clear indication that the US is not willing to support Pakistan’s membership while it is explicitly endorsing India by lobbying with the NSG members and indicating that they should all endorse India as well.

Pakistan already fulfils many of the criteria required of India for the 2008 NSG waiver. These steps were:

- Separating civil and military facilities
- Declaring civil facilities to the IAEA and placing them under safeguards

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<sup>131</sup> “U.S.-Pakistan Strategic Dialogue Joint Statement,” January 13, 2015, <http://www.state.gov/r/pa/prs/ps/2015/01/235881.htm>

<sup>132</sup> “Joint Statement By President Barack Obama And Prime Minister Nawaz Sharif,” October 22, 2015, <https://www.whitehouse.gov/the-press-office/2015/10/22/2015-joint-statement-president-barack-obama-and-prime-minister-nawaz>

- Signing and implementing an Additional Protocol for civil facilities
- Maintaining a nuclear test moratorium
- Refraining from transferring enrichment and reprocessing technologies to the states that do not possess them  
Securing nuclear materials and technologies through comprehensive export controls
- Harmonizing and adhering to the MTCR and the NSG<sup>133</sup>

Here is what a paper by Toby Dalton et al has to say about Pakistan having taken the same measures as India: “Pakistan has already taken several of these steps in whole or in part. Its separation of civil and military facilities, though fewer in number, is much more distinct than India’s, as all existing “civilian” nuclear facilities (the Karachi nuclear power plant, Chashma-1 and -2, and the two PARR research reactors) are under IAEA safeguards. Pakistan also does not have a fast reactor programme or civil reprocessing capabilities, which were critical issues for India as it weighed its separation plan. Pakistan also has passed WMD export control law and is in the process of harmonizing its control lists with the international strategic trade control regimes. And it maintains a test moratorium, though in practice this is contingent on India continuing its testing freeze.”<sup>134</sup> This is significant because Pakistan fulfills all the criteria that India was given a waiver over, perhaps even exceeds that criteria.

Another argument used by the NSG for granting an exception to India was that it would “affect positively the non-proliferation commitments and actions of those outside the traditional nuclear non-proliferation regime. The NSG recognized India’s voluntary actions to become “a contributing partner in the non-proliferation

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<sup>133</sup> Toby Dalton, Mark Hibbs, and George Perkovich, “A Criteria Based Approach to Nuclear Cooperation with Pakistan,” *Policy Outlook*, June 22, 2011, Carnegie Endowment for International Peace, p. 8, [http://carnegieendowment.org/files/nsg\\_criteria.pdf](http://carnegieendowment.org/files/nsg_criteria.pdf)

<sup>134</sup> *Ibid*, p.8-9.

regime.” Pakistan has also taken important steps to advance the non-proliferation cause. In 1989, Pakistan acceded to the Convention on Early Notification of a Nuclear Accident (CENNA). In 1989, Pakistan acceded to the Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency (CACNARE). In 1994, Pakistan signed the Convention on Nuclear Safety (CNS) and later ratified it in September 1997. Pakistan acceded to the Convention on the Physical Protection of Nuclear Material (CPPNM) on September 12, 2000 and also signed its 2005 amendment. In 2009, Pakistan participated in Proliferation Security Initiative (PSI) as an observer. Pakistan has participated in the Global Initiative to Combat Nuclear Terrorism. It has participated in all four Nuclear Security Summits (NSS) in 2010, 2012, 2014 and in 2016 and has offered to provide nuclear fuel cycle services under the IAEA safeguards.

Nuclear safety and security are paramount concerns for the operation of nuclear power plants in Pakistan—as well as globally especially after Fukushima accident. Toby et al suggest some possible criteria for inclusion into the NSG in the realm of nuclear safety:

- Signing, ratifying, and implementing the CNS, including making public annual national reports under the convention. Inviting peer review of safety planning and conducting regular performance testing of nuclear safety and disaster management preparations;
- Establishing a legally and financially independent nuclear regulator;
- Signing and ratifying the Conventions on Assistance in Case of a Nuclear Accident and Early Notification of a Nuclear Accident;
- Establishing cooperative agreements with the IAEA Department of Nuclear Safety and Security, to include

inviting IAEA operational safety review and related teams.<sup>135</sup>

It is important to note that Pakistan has taken most of these steps already

Some additional criteria Tobey et al suggest are:

- Adhering to all four (Australia Group, Wassenaar, NSG, and MTCR) control regimes.
- Harmonizing multilateral and national control lists concurrently;
- Adhering to United Nations Security Council Resolution 1540, to include submitting a national report and working with the 1540 Committee to resolve deficiencies;
- Criminalizing proliferation activities in national law and prosecuting violations.<sup>136</sup>

Pakistan already meets most of this criteria as well. It has harmonised its export control lists with AG, NSG, and MTCR. It has already submitted four reports to the 1540 Committee and is working on a fifth one. It has already introduced laws that criminalise proliferators.

Pakistan has also taken some steps to augment the security of its nuclear assets. The most significant development is that of the NCA Security Division. The organization has grown exponentially over the years from a very modest beginning and currently has over 27000 personnel in the division. This division is responsible for the physical security of all sensitive nuclear sites through a layered system of defence with inner and outer perimeters augmented by electronic sensors and counterintelligence teams. Division screens all personnel inducted into any component of the strategic programme in concert with other intelligence agencies in the country. It has set

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<sup>135</sup> Ibid

<sup>136</sup> Ibid

up a state-of-the-art training academy in Kalar Kahar, which is comparable to the US Department of Energy's National Nuclear Security Administration's academy in Albuquerque, New Mexico. It provides specially selected Pakistani recruits with training similar to that given to the special forces. These recruits have become the backbone of the nuclear security. Pakistan regularly tests the capabilities of the upgraded security force through field exercises and war games.<sup>137</sup>

Pakistan takes its nuclear security seriously. It has collaborated with the US on best practices, training, and personnel screening. It is participating in all the international forums devoted to preventing nuclear terrorism and improving nuclear security. Domestically, it has improved the legal and regulatory system for preventing proliferation of sensitive materials and technologies.<sup>138</sup>

Despite the impressive array of steps Pakistan has taken so far, Pakistan has failed to achieve the international recognition that it seeks. Part of the problem is that Pakistan's efforts to provide information about all these developments domestically and internationally have not been adequate. Secondly, Pakistan has an image problem. It needs to keep promoting its positive steps and achievement in order to project a positive image, that of a responsible nuclear state, one that is ready to be included into the elite club of nuclear trading states.

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<sup>137</sup> Naeem Salik and Kenneth N. Luongo, "Challenges for Pakistan's Nuclear Security," *Arms Control Today*, February 28, 2013, [https://www.armscontrol.org/act/2013\\_03/Challenges-for-Pakistans-Nuclear-Security](https://www.armscontrol.org/act/2013_03/Challenges-for-Pakistans-Nuclear-Security)

<sup>138</sup> Ibid.



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