

Significance of UNSCR 1540 and Emerging Challenges to its Effectiveness

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Abstract

As the threat of Weapons of Mass Destruction (WMDs) proliferation and terrorism emerged in the early 21st century, the International non-proliferation regime began to face several challenges. Adopted in 2004, the United Nations Security Council Resolution (UNSCR) 1540 came as a response to such threats. The resolution makes it binding on all the UN members to institute effective checks against WMDs proliferation within their borders through international collaboration. The record of states' compliance with the resolution is appreciable and it represents the success in standardising state behaviour by harmonising international and national export controls. However, a decade and a half later, the threat still exists and has not been tackled to the core, which is attributable largely to the evolving nature of the threat itself. To address this gap, this article suggests that it is imperative for the UNSCR 1540 to make necessary amendments and revisions to its mandate and mechanisms if it aims to retain its relevance.

Keywords: UNSCR 1540, WMDs, Proliferation, Terrorism, Non-State Actors, Export Controls.

Introduction

The proliferation of Weapons of Mass Destruction (WMDs) and of related expertise and associated technologies has long been a looming threat to international peace and security. Despite a number of concerted efforts, the threat has grown manifold due to the constant strategic flux in the international system. At the outset, international non-proliferation efforts focused on preventing the proliferation of both components and technology

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of WMDs to and between states. With the emergence of Non-state Actors (NSAs), this danger has become more acute. The spread and penetration of NSAs (terrorists, extremists and illicit trafficking networks) have become a global concern and a challenge to international security as well. This is primarily attributable to transnational and non-conventional nature of the threat, thus, it requires new and improved strategies in response.

Probable access of NSAs to WMDs, which might result in unprecedented destruction, has become an ever-looming fear. It is evident from the continued debate over nuclear-radiological terrorism and the various forms it might be manifested in. Both the fear and the threat are real as the debate over ‘is WMD terrorism a myth or reality?’ is not relatable anymore and has become obsolete given many precedents where NSAs got their hands onto WMDs. One mostly cited example is of Aum Shinrikyo – the Japanese cult that gained international notoriety for the deadly Tokyo subway train attack in 1995.¹ Similarly, the catastrophic events of 9/11 changed the nature of threats that may emerge at the individual, national and the global level. The realisation of these evolving threats brought a shift in the domain of security studies and policy planning. This shift was much called for, since the audacity and sophistication of hijacking four aeroplanes wreaked havoc on the US soil and led to killing of around 3000 people and questioned the credibility of the superpower’s presumably invincible defence mechanisms.² Afterwards, Anthrax attacks further reinforced how grave this threat was.³

The War on Terrorism was, thus, inevitable as the threat posed by NSAs potential to access WMD-related materials had turned into reality. These and related incidents made NSAs a central factor in the states’ threat calculus. This realisation and sensitivity regarding the issue needed cooperative responses within and among states. Cooperation was imperative as the threat was of non-traditional in nature. The uniqueness of the threat compelled the states to deliberate and negotiate a legally binding instrument, under the UN mandate, to check NSAs and their role in WMDs

¹ Holly Fletcher, “A Report on Aum Shinrikyo: A profile of the Japanese Religious Cult that Carried out the 1995 Subway Sarin Attack,” Council on Foreign Relations, June 19, 2012, <https://www.cfr.org/backgrounder/aum-shinrikyo>

² “Timeline: How the Anthrax Terror Unfolded,” Non-Proliferation Review, February 15, 2011, <https://www.npr.org/2011/02/15/93170200/timeline-how-the-anthrax-terror-unfolded>

³ Scott Shane, “FBI, Laying Out Evidence, Closes Anthrax Case,” *New York Times*, February 19, 2010.

proliferation and terrorism. Hence, the United Nations Security Council Resolution 1540 (UNSCR 1540) was adopted on April 28, 2004.

The UNSCR 1540 filled a major gap in the international non-proliferation regime which lacked the legal basis to counter and prosecute NSAs that were engaged in the proliferation of WMDs-related materials and technologies. The resolution called on all the UN members to enact legally-binding measures for criminalising proliferation. Two successful comprehensive reviews of the resolution, conducted in 2009 and 2016, bore witness to the fact that the international community has complied with the UNSCR 1540 by creating effective regulatory regimes. However, the issue has not been tackled to the core, therefore, the UNSCR 1540 needs improvements in the face of constantly evolving non-traditional threats. The numbers, capabilities and transnational linkages of NSAs are rising along with greater availability of desired materials across the globe (larger quantities being consumed in development sectors). Given this context, this paper asserts that the UNSCR 1540 needs to be changed according to the changing threats. A brief timeline of evolution and progress is followed by an account of the significance of the resolution's mandate. A detailed analysis of the evolving nature of the threat that hinders the resolution's ultimate goals is then given, followed by a way forward for improving the UNSCR 1540.

Origins and Evolution of UNSCR 1540

9/11 and the Anthrax attacks clearly manifested the threat that was posed by NSAs. A realisation of this threat was accompanied by one of unfolding proliferation tsunami which appeared associated with the claims over proliferation efforts by North Korea, Iran and Iraq. By late 2002, the revelation of A Q Khan Network and the issue of illicit nuclear trafficking added to the prevailing complexity of the problem. Another issue was the 2002 interdiction of the North Korean flagged ship, 'So San,' carrying SCUD missiles to Yemen, which was later relinquished due to lack of legal grounds for seizure. All these factors reinforced the threat. The 2003 Proliferation Security Initiative (PSI) came up as an initial and immediate response. It was a legally non-binding, informal commitment of capable, prepared and willing states to interdict the proliferation-related shipments. However, a more inclusive, legal, formal and a less flexible structure was needed due to the limitations of PSI.

The idea of a UNSC resolution was first proposed by the US, based on the belief that nuclear proliferation must face opprobrium similar to slavery and piracy by declaring it as non-permissible international behaviour.⁴ Stephen Hadley, the Deputy National Security Advisor, drafted the UNSC resolution which was further deliberated upon and revised. After the approval of the American policy community, at the General Assembly session on September 23, 2003, the US President, George W Bush proposed a Security Council resolution that would “call on all members of the UN to criminalise the proliferation of weapons of mass destruction, to enact strict export controls consistent with international standards and to secure any and all sensitive materials within their own borders.”⁵ Next month, the draft was circulated among all the permanent members of the UNSC, whose approval was a pre-requisite for building consensus and passing the resolution.

Of the P-5, Britain and France got aligned and supported the resolution. Russia came in easy despite its concerns over placing the resolution under Chapter VII of the UN Charter. China’s concerns, linked with its desires of having civil-nuclear trade with Pakistan and protecting North Korea, were the greatest.⁶ John Bolton, the US Under Secretary of State for Arms Control and International Security, convinced China by replacing the term ‘interdict’⁷ with the resolve to peacefully settle the differences. Pakistan, a non-permanent UNSC member then, realised the costs of staying out and got involved in the diplomatic engagement to demonstrate responsible behaviour and good faith over the matter. As a result, on April 28, 2004, the UNSCR 1540 was unanimously passed.⁸

⁴ Henry Sokolski, “Taking Proliferation Seriously,” *Hoover Institution Policy Review*, no. 121 (October-November 2003), http://www.npolicy.org/article_file/Taking_Proliferation_Seriously-Policy_Review.pdf

⁵ Peter Crail, “Implementing UN Security Council Resolution 1540 a Risk-Based Approach,” *Nonproliferation Review* 13, no. 2 (July 2006), <http://www.nonproliferation.org/wp-content/uploads/npr/132crail.pdf>

⁶ Daniel Salisbury, Ian J Stewart and Andrea Viski, eds., *Preventing the Proliferation of WMDs: Measuring the Success of UN Security Council Resolution 1540* (Switzerland: Palgrave Macmillan, 2018), 22.

⁷ *Ibid.*, 23.

⁸ Olivia Bosch and Peter Van Ham, *Global Non-Proliferation and Counter-Terrorism: The Impact of UNSCR 1540* (Brookings Institution Press: Washington, D.C., 2007), 8-11.

Implementation and Progress

The 1540 Committee of the UNSC was created to implement the resolution. Operational Paragraph (OP) 4 of the text mandated the committee to examine and report states' degrees of compliance to the UNSC.⁹ This committee streamlined specific actions as the yardstick for compliance. To evaluate the progress in implementation, it relied on the country reports (as demanded by the resolution), submitted by the UN members by 2007. Using the data in the first set of national reports, the committee developed its 'implementation matrices' in 2005,¹⁰ which served two functions: to clearly interpret what resolution's requirements meant in practice (otherwise having vague wordings) and secondly, to specify how the information in the country reports will be categorised for analysing compliance levels. To address complexities, the matrix template was later revised in 2013.¹¹

The measures listed in the matrices are used for studying two broader indicators: the patterns of legislation and enforcement measures. The 1540 matrices are so far the only formal barometer for measuring compliance and analysing implementation trends in the UN member states. The mandate of the 1540 Committee was extended by the UNSCR 1673 (2006) which called for outreach at international, regional and sub-regional levels. Afterwards, the UNSCR 1810 (2008), extended the committee's mandate for another three years and called for developing funding mechanisms to overcome resource inadequacy. The UNSCR 1977 (2011), following the resolution's first comprehensive review in 2009, extended the committee's mandate for another ten years (till 2021).¹² As reported, 140 states adopted the prescribed measures by 2011, compared to 65 in 2006.¹³ After the second review in 2016, the UNSCR 2325 was passed which reaffirmed the resolution and gave clear guidelines for the remaining five years of the committee's mandate.

⁹ United Nations Security Council Resolution 1540 (2004), Operational Para 7.

¹⁰ Salisbury, Stewart and Viski, eds., *Preventing the Proliferation of WMDs*, 40.

¹¹ *Ibid.*, 41.

¹² Full text of the UNSCR 1540 is available at:

<http://www.un.org/en/sc/1540/resolutions-committee-reports-and-SC-briefings/security-council-resolutions.shtml>.

¹³ Yasemin Balci, "UNSCR 1540 Ten Years On: Challenges and Opportunities," Chatham House, November 2014,

http://www.vertic.org/media/assets/Presentations/UNSCR1540_Statement_5nov14.pdf

Significance of Resolution 1540

Although the resolution 1540 is an unprecedented move in the realms of non-proliferation and counter-terrorism, it does not bring up something entirely new nor is it the only tool to address the issue: it filled the gaps in the existing non-proliferation frameworks — which hindered the legality of prosecuting those involved in illicit transfers of WMD materials and components. Since its adoption, the 1540 Committee, having played its part in legalising criminalisation of proliferators, has become a cornerstone in the over-all global non-proliferation regime. Initially, the states had a lot of reservations as the resolution required them to do many things they had never done before, by making states legally bound to take action against NSAs by enacting domestic control systems.

Despite the challenges, the resolution has sustained its track and also complements other initiatives such as the PSI, the Convention on Physical Protection of Nuclear Material (CPPNM) and the International Convention to Suppress Acts of Nuclear Terrorism (ICSANT). The UNSCR 1540 is a connecting dot in the web of UNSCRs, bridging those dealing with counter-terrorism and non-proliferation. The 1540 Committee considerably overlaps with the committees that were established as pursuant to resolutions 1267 (1999), 1989 (2011) and 2253 (2015) concerning the Islamic State of Iraq and the Levant (ISIL), al-Qaeda and their associated entities and those which were established after resolution 1373 (2001), concerning counter-terrorism.¹⁴ The UNSCR 1540 also reassures the spirit to counter terrorism as envisioned in the UNSCR 1377, by assisting in the implementation of provisions of criminalising the financing of terrorism to the fullest.¹⁵

The resolution 1540 is significant as it applies to all the states regardless of their membership in multilateral non-proliferation regimes. Since it is a UNSC resolution under Chapter VII of the UN Charter, it is binding for all the UN member states. This was done to devise a legal basis for acting against or prosecuting NSAs, which was missing so far. Therefore, the states cannot simply remain unaccountable for their actions by opting to stay out, or not acknowledging the resolution. The UNSCR 1540 is binding

¹⁴ See the text of UNSCR 2325,
[http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/2325\(2016\)](http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/2325(2016))

¹⁵ See Counter-Terrorism Committee Document,
[http://www.un.org/Docs/sc/committees/1373/submitted reports.html](http://www.un.org/Docs/sc/committees/1373/submitted%20reports.html)

on all the UN members irrespective of their status in the non-proliferation regime and their (in)convenience regarding the resolution's standards.

Secondly, the resolution is significant in its scope as it covers the entire spectrum of WMDs including chemical, biological and nuclear/radiological weapons. It gives the states a binding implementation mandate for all WMDs types by supplementing and, at times, overriding the lax commitments and bureaucratic hurdles of the individual frameworks that deal with each weapons category. In terms of activities and controls covered, it includes comprehensive obligations ranging from non-proliferation to material protection and physical security to border/export controls.¹⁶ This contrasts the previously existing treaties requiring specific measures for specific weapons category. For example, the Nuclear Non-Proliferation Treaty (NPT) calls for safeguards on nuclear materials and facilities while not making them obligatory over chemical or biological weapons facilities.

The UNSCR 1540 is particularly beneficial in curbing the proliferation of biological agents/weapons. Unlike the International Atomic Energy Agency (IAEA) and the Organisation for the Prohibition of Chemical Weapons (OPCW) — organisations ensuring states' compliance with NPT and CWC respectively — the Biological Weapons Convention (BWC) lacks any such implementation and verification body.¹⁷ The UNSCR 1540 serves to strengthen the BWC by requiring the states to adopt specific measures to prohibit NSAs' access to biological materials.¹⁸ It is the only instrument that integrates proliferation concerns about delivery means with those about nuclear, chemical and biological agents.¹⁹

Evolving Challenges

The resolution 1540 has succeeded in instituting international and national level checks against WMDs proliferation and terrorism. Despite this relative success, the challenges to the implementation of the UNSCR 1540 persist

¹⁶ Ibid.

¹⁷ Bosch and Ham, *Global Non-Proliferation and Counter-Terrorism*, 30-33.

¹⁸ Angela Woodward, "The Biological Weapons Convention and UNSCR 1540," in *Global Non-Proliferation and Counter-Terrorism*, 96-99.

¹⁹ "UNSCR 1540 Resource Collection," Nuclear Threat Initiative, <http://www.nti.org/analysis/reports/1540-reporting-overview/>.

and, in fact, are constantly evolving both in scope and nature. A few important challenges are discussed in this part.

Implementation of the Text and Measuring Compliance

Implementing the mandate of the UNSCR 1540 to its fullest was in itself a big challenge as the text is full of prescriptions and proscriptions and that too, with ambiguous wording making exact interpretations hard. Therefore, the 1540 Committee was established to interpret and suggest practical steps for ensuring compliance and to report back to the Security Council. The greatest confusion is posed by the terms ‘appropriate’ and ‘effective’ which have been used in different contexts throughout the text. Primarily, the OP-2 obliges the states to adopt and enforce ‘appropriate effective laws’²⁰ for curtailing NSAs’ access to WMDs-related materials and equipment.²¹ The terms ‘appropriate’ and ‘effective’ both have subjective undertones implying what is appropriate for one state and effective in one situation, might be viewed differently by other states in a different situation. Similarly, clarity about control related to radiological materials (other than nuclear material) is also essential.

The challenge in determining the degree of compliance persists because it is the national reports which the committee relies on. These reports are compiled and submitted by the states and thus, will always be biased towards highlighting the tendency for compliance by trying to mask the areas of non-compliance. Moreover, many of the national reports do not meet the standard — they have varied length, content and often are poorly written. Even though all the reports serve the information function, the credibility gets questionable since these might give an incomplete and at times a false picture. Therefore, the mere submission of the report cannot be equated to compliance.

There are two sets of data that the 1540 Committee has compiled: legislative developments and enforcement compliance in the states. Although significant improvement is shown from the data sets but the question once again is the extent to which it presents a realistic picture of the implementation progress. This issue exists because merely passing the relevant legislation does not always amount to actual compliance on the

²⁰ Salisbury, Stewart and Viski, eds., *Preventing the Proliferation of WMDs*, 37.

²¹ Crail, “Implementing UN Security Council Resolution 1540.”

ground. The passing of legislation and its effective implementation are two different things. For example, passing the legislation related to border control does not mean that all border-control best practices are actually in place. For instance, compliance in terms of legislation exists in Russia and the states in Caucasus and Asia but the large numbers of seizures of illicitly trafficked WMDs-related materials manifest the gaps in enacting the legislation and its practical implementation.²² Talking of verifying the actual implementation, the committee's hands are tied as the task of verifying countries' judicial and executive systems individually is a huge, resourceful and time-consuming task. Therefore, the committee has no option but to rely on the national reports for determining the degree of compliance.

Another issue, regarding the implementation, is related to legitimacy. Despite its need and effective scope, the resolution was initially seen with scepticism by smaller and developing states and thus, lacked broad-based legitimacy. It was felt that the UNSC had imposed a resolution on its members without their consent and participation in the drafting process, bypassing the General Assembly, where issues could be deliberated to build support. Likewise, smaller states felt that the resolution was an attempt to curtail their development as it would greatly hinder their easy access to nuclear-related technologies and materials for civilian and alternate energy purposes.

Need for 'Specific' rather than 'General' Terms

In the resolution, use of general terms pose a great challenge as, in time of action, they fail to address calibrated responses required by specific situations or cases. This generality exists in terms of relevance, feasibility and evaluation of states' adoption of the measures required by the resolution. General terms with respect to 'Relevance' mean that the UNSCR 1540 fails to prioritise the need for immediate action by states that are 'more vulnerable' to the threats of WMDs proliferation and terrorism. For example, the states having advanced nuclear programmes like Japan and South Korea, are more important than the states like Guatemala in the context of nuclear safety and security — the former being at a higher risk than the latter. A more appropriate arrangement would suggest varied

²² "Russia, the Northern Caucasus and Central Asia 1540 Reporting," Nuclear Threat Initiative, October 17, 2017, https://www.nti.org/analysis/reports/russia_caucasus_asia/

responses — calling for urgent and extensive measures by more vulnerable states, while not putting excessive pressures on those less relevant in the given context.

Similarly, while making itself binding on all states, the resolution 1540 fails to give due consideration to the varying levels of development, resources, technological advancement and the related technical expertise of states.²³ Unequal availability of human resources and funds is a major reason for varying levels of compliance of different regions and states with the UNSCR 1540.²⁴ The universal applicability of the resolution 1540's mandate ignores the difficulties that the resource-strapped countries face when trying to take measures entrenched in the implementation matrices. Although outreach and assistance encouraged to help developing world build capacity, it still faces unequal distribution across regions. Therefore, either preferential assistance or easing of standards must be promoted to specifically address problems of states having lesser resources and capability.

Additionally, the resolution has a general approach when evaluating states' performance from the country reports according to the matrices. This is so because the time lapses in the implementation timelines of states are not considered, leading to a faulty estimate of compliance. This means that the extent of legislation and enforcement should not be the sole focus when measuring compliance but the dates of the actual implementation of measures must be accounted in. Noting the dates of implementation can tell the time it took for the states to put legislation into practice, which in turn would give an estimate of the difficulties faced by different states in implementing each distinct measure suggested by the resolution 1540 matrices. The committee must understand that compliance cannot be and therefore, should not be measured in black and white terms since states' problems cannot simply be overlooked.²⁵

Also, the resolution does not cover the role of NSAs (although it targets them), important regional and supra-national authorities that might help

²³ Salisbury, Stewart and Viski, eds., *Preventing the Proliferation of WMDs*, 38.

²⁴ Merav Datan, "Security Council Resolution 1540: WMD and Non-state Trafficking," *Disarmament Diplomacy*, no. 79 (2005), <http://www.acronym.org.uk/old/archive/dd/dd79/79md.htm>

²⁵ Salisbury, Stewart and Viski, eds., *Preventing the Proliferation of WMDs*, 39

early implementation of required measures in some states and not in others. Addressing such actors requires a better understanding of the forces that constrain or facilitate compliance but a gap exists as the committee lacks the mandate to gather such relevant information.²⁶ Lastly, the resolution's general approach fails to account for actions of states outside the UN which lie beyond its jurisdiction. This implies that the UNSCR 1540 stays silent for cases where NSAs might exploit the resources of the non-UN-member states, thus, undermining the resolution's objectives.²⁷

Evolving Terrorist Threats

In recent times, the international scene has been dominated by the incidents of terrorism. The dreadful terrorist attacks in Paris, Mogadishu, Istanbul, Brussels and London have been carried out by terror outfits like Al-Shabaab, Boko Haram and Daesh — the self-proclaimed ISIL.²⁸ All such attacks are alarming enough to reinforce the need for initiatives like the UNSCR 1540. Since the significant threat lies in the fallout, one can foresee the repercussions of any of these groups carrying out a major attack using nuclear, biological or chemical weapons. The risk is grave because some groups may have substantial resources under control that could be utilised for the acquisition and use of WMDs. Especially, the likelihood of relatively unsophisticated, small-scale attacks involving nuclear, biological or chemical components enabled by wider availability of equipment and information is the matter of vital concern.²⁹

Furthermore, cyber-related threats have increased considerably in recent years, with a series of damaging/sabotaging, high-profile attacks making sensational headlines around the world. The possibility of a planned malicious cyber-attack on nuclear facilities and critical Command and

²⁶ Ibid., 45.

²⁷ Taiwan, the Holy See and Kosovo are non-member states of the UN. Other entities exist with limited recognition as states, such as the Republic of South Ossetia, the Republic of Abkhazia, etc.

²⁸ Gabriel H Oosthuizen and Elizabeth Wilmshurst, "Terrorism and Weapons of Mass Destruction: United Nations Security Council Resolution 1540," *Chatham House Briefing Paper*, September 2004, 3-5.

²⁹ "UNSCR 1540 Civil Society Forum: A Dialogue with Academia and Civil Society," United Nations University Centre for Policy Research, April 11-12, 2016, <https://i.unu.edu/media/cpr.unu.edu/attachment/2187/Meeting-Report-UNSCR-1540-Civil-Society-Forum.pdf>

Control (C&C) systems is a grave concern, largely because the way the crisis might unfold and its immediate consequences are highly uncertain. Such an attack could facilitate the theft of weapons-grade nuclear materials or may lead to a calamitous act of sabotage.³⁰ Another crucial point is the possibility of disrupting or compromising nuclear weapons C&C systems. The states are working to reduce these vulnerabilities but cyber threats are becoming more sophisticated with each passing day and the concerned authorities need to accelerate the efforts to keep pace with these.

The resolution 1540 needs to be changed according to the evolving nature of the threats. A bigger challenge is posed by increasing numbers of terrorist/extremists while NSAs are seeking their parochial or messianic goals in a world having ever-greater quantities of WMDs-related materials in possession of states. Additionally, where previously these actors were concentrated in specified zones, now their broad spectrum has been facilitated due to continued conflict, strife, displacement and migration. The problem is alarming because, with the improved defence of the facilities, NSAs are also having improved access to information on how best to breach these defences; all due to the pace of change in today's globalised world. It must be understood that NSAs have both motivation and potential for not only accessing WMDs-related material but also for using these — for them, it is just another unconventional way to seek the set ends. This evolving threat, therefore, is a major challenge faced by all non-proliferation and counter-terrorism frameworks.

Changing Regional Security Dynamics

Another challenge is the complex security dynamics existing in different regions of the world. Some regions are more prone to intervention by NSAs: troubled regional states with shared-porous borders in South Asia, the Middle East etc., are more vulnerable to exploitation by these actors, multiplying the possibility of illicit trafficking. This situation further worsens where hostile states lack communication and shared understating, for example in South and Central Asia. Similarly, a large number of states including Bahamas, Malta, Oman, Panama, Sri Lanka and the United Arab

³⁰ Page Stoutland, "Technical Paper: Reducing the Cyber Threat to Digital Systems: Minimising," Nuclear Threat Initiative, December 7, 2016, <http://www.nti.org/analysis/articles/technical-paper-reducing-cyber-threat-digital-systems-minimizing-complexity/>.

Emirates (UAE) are transit states that may invite high risk.³¹ To understand this challenge of regional complexities, variations in regional compliance patterns show diverse capacities representative of available resources and political will across regional states.

The Western European and Other Group (WEOG) comprises of North America, the EU and Israel, which are advanced industrial countries that have well-developed nuclear programmes and rich experience with export controls. The WEOG States are strongly committed to non-proliferation (by being signatories to the NPT, CWC and BWC) and have implemented the resolution to the greatest extent. Many of them already had those frameworks and export controls in place which the resolution called for. After the resolution 1540 came, new laws strengthening the security of nuclear facilities were adopted by many WEOG states.³² This region has also done much for enhancing the outreach efforts to other states and regions, either through bilateral or direct financial assistance to the 1540 Committee.

Moving on to the Eastern Europe, many states adhered to the non-proliferation norms prior to the resolution 1540: all states have signed the NPT, CWC and BWC, with some having joined international export control regimes. Their record of reporting to the 1540 Committee is relatively good. These states have adopted the international best practices required for enacting the legislation required in the field. A shared regional perspective exists due to experience under a unified, central command economy of the former Soviet Union. However, this group lags behind the first one in successful implementation, primarily due to resource constraints and organised criminal networks, making it harder to police borders.³³

Then comes the non-homogenous Asia Pacific region, having sub-regions displaying different patterns of politics, security and overall interaction.³⁴ China, North Korea, Pakistan and India are the states that have

³¹ Peter Crail, "Implementing UN Security Council Resolution 1540."

³² Salisbury, Stewart and Viski, eds., *Preventing the Proliferation of WMDs*, 75.

³³ A Heyes, "The Global Partnership on WMD: A Work in Progress," *Arms Control Today*, no. 4 (2013), https://www.armscontrol.org/act/2013_04/The-Global-Partnership-on-WMD-A-Work-in-Progress

³⁴ T Kassenova, "A Regional Approach to WMD Nonproliferation in the Asia-Pacific," Carnegie Endowment for International Peace,

nuclear weapons and Japan and South Korea have advanced nuclear programmes. The region houses vital trans-shipment hubs in Hong Kong, Singapore and Taiwan and is taken as the centre of a civil nuclear renaissance.³⁵ Regional strategic rivalries have contributed to divisiveness in places like the South China Sea, further obstructing unified responses. Evidence of influential NSAs operating here reinforce the threat. Given the sheer size and diversity, no single regional organisation exists to ensure uniform implementation of the resolution. However, the regional states now adhere to non-proliferation norms (except North Korea) despite the initial apprehensions.³⁶ In the absence of over-riding security architecture, deepening economic linkages have made the countries harmonise their customs and trade practices and ensure their actions are least contribute to proscribed activities. Where India, Pakistan and Afghanistan have legislated new export controls, many in Southeast Asia (e.g. Malaysia and Singapore) have struggled with legislation anew, thus, adopting the frameworks or control lists of advanced states.³⁷ External actors' outreach and assistance have enabled limited regional cooperation³⁸ but regional levels of implementation still vary according to varying levels of development.

In this context, Central Asia lacks both resources and awareness, whereas outreach efforts by Japan and Korea have played an important role.³⁹ The Middle East also lacks a unified regional security organisation due to continued tensions, conflicts, civil wars (as of late) and competing interests of regional and extra-regional players. The region's familiarity with clandestine (Syria and Iraq), alleged (Iran) and undeclared (Israel) cases of proliferation and experience with illicit shipments (through trans-shipment hubs like the UAE), have remained a concern. The ongoing conflicts in Syria, Yemen and Iraq, plagued by the continued threat from Islamic State

<http://carnegieendowment.org/2012/08/14/regional-approach-to-wmd-nonproliferation-in-asia-pacific/dele>

³⁵ Salisbury, Stewart and Viski, eds., *Preventing the Proliferation of WMDs*, 63.

³⁶ Ibid.

³⁷ M Kareem and M Yusof, "Implementing the Strategic Trade Act in Malaysia," *The 1540 Compass*, <http://cits.uga.edu/1540compass/article/implementing-the-strategic-trade-act-in-malaysia>

³⁸ George Tan, "Export Controls in the ASEAN Region," *The 1540 Compass*, <http://cits.uga.edu/uploads/compass/compass2-05-tan.pdf>

³⁹ Centre for Information on Security Trade Control (CISTEC) and Korea Strategic Trade Institute (KOSTI) are the domestic institutions in Japan and Korea respectively which play a role in outreach efforts.

(IS), has heightened the threat perception of WMDs proliferation and terrorism. The region's compliance record is mixed: with most states having signed the non-proliferation treaties, the idea of a Middle Eastern WMDs-free-zone has not come to fruition despite continued efforts.⁴⁰ The Arab League and the Gulf Cooperation Council (GCC) have important roles to play in this regard.

In the African continent, South Africa is well-known for developing and dismantling its nuclear arsenal. Along with Libya, it was also accused of conniving with the Khan's network.⁴¹ Despite meagre civil-nuclear infrastructure and commitment to non-proliferation, a regional approach lacks due to the challenges posed by underdevelopment and resource scarcity. The pattern of implementation and reporting to the 1540 Committee has improved by 10 per cent between the first and second review reports; interactions with the committee and requests for implementation assistance have increased, too,⁴² but complaints regarding the quality of country reports remain.⁴³ Having called the UNSCR 1540 a significant part of the global security architecture and the threats identified by resolution as 'real,' the African Union (AU) can play a bigger role in this regard.⁴⁴ The AU needs to direct more effort and resources in capacity building for domestic implementation as a handful of regional states follow global best practices. This is imperative because of an impending threat of proliferation, posed by 'ungoverned spaces,'⁴⁵ considerable uranium reserves and the presence of NSAs like Boko Haram and Al-Shabab in the region.

⁴⁰ G Mukhatzhanova, "2014 NPT Action Plan Monitoring Report," April 23, 2014, <http://www.nonproliferation.org/2014-nptaction-plan-monitoring-report/>

⁴¹ R Grossman-Vermaas, "Proliferation and Development — Exposing the Link," <http://www.nato.int/docu/review/2007/issue3/english/art3.html>

⁴² "Report of the Security Council Committee Established Pursuant to Resolution 1540," United Nations, http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2016/1038.

⁴³ A Brookdryk and N Stott, "Challenges and Solutions for 1540 Implementation in the African Region," *The 1540 Compass*, <http://cits.uga.edu/1540compass/article/challenges-and-solutionsfor-1540-implementation-in-the-african-region>

⁴⁴ Workshop on the Implementation of UNSCR 1540 (2004), November 21-22, 2012 Pretoria, South Africa, Statement by Mr. El-Ghassim Wane, Director, Peace and Security, African Union, <http://www.peaceau.org/uploads/auc-speech-dps-1540-pretoria-conference-21-11-2012.pdf>

⁴⁵ Ibid.

Latin America and the Caribbean (LAC) is a diverse region having considerably large as well as small island states. Argentina and Brazil are the states having nuclear-related history.⁴⁶ Proliferation risks exist in relation to challenges of illegal narcotics and arms trade and violent organised crimes. Smaller regional states were initially sceptical of the UNSCR 1540 and found WMDs proliferation an alien idea but regional organisations including CARICOM and Organisation of American States (OAS) have furthered the resolution's mandate. The country reports show a gradually evolving regional approach towards resolution since 2008.⁴⁷ All states have signed the NPT, BWC and CWC and the Treaty of Tlatelolco has created a regional nuclear weapons-free zone (NWFZ). The international actors have helped in overcoming the dearth of resources for diplomatic engagements without which this progress would be non-existent.⁴⁸

This overview of regional trends regarding the resolution 1540 implementation suggests that despite varying levels of compliance, progress has been certain, making export controls and nuclear safety and security integral components of non-proliferation efforts. Even though advanced states have fared better than resource-stressed states, the journey has been equally demanding for the former. The non-uniformity of compliance is a challenge that the UNSCR 1540 must address by adopting a specific approach to specific problems.

The Way Forward

These progressive implementation patterns of the resolution have been an outcome of collaboration among states, with the support of relevant international, regional and sub-regional organisations. In such continued cooperation lies the key to addressing many of the emerging challenges. The important issues that emerge due to porous borders, unique geography large coastlines and brewing tensions with neighbouring states, may also be

⁴⁶ Both Argentina and Brazil were intent upon nuclearisation in late 1980s but reversed the programmes in the 1990s as the context transformed.

⁴⁷ "United Nations Seminar on Implementing UNSCR 1540 in Latin America and the Caribbean," *ODA Occasional Papers*, no. 13 (2007): 69, http://www.un.org/disarmament/WMD/1540/pdf/OP-13-Latin_America.pdf

⁴⁸ O'Neil Hamilton, "Non-proliferation in the Caribbean Basin," in *Southern Flows: WMD Non-proliferation in the Developing World*, ed., Brian Findlay (Stimson and the Stanley Foundation, 2014), 39.

resolved with effective group or regional level assistance of the 1540 Committee.

The states that share troubled borders in Asia, the Middle East, Africa and Europe (outside EU's borders) are more vulnerable to the threat of WMDs terrorism from NSAs, since porous borders are hard to manage and weak patrolling can leave some crossing points unaddressed. In such cases, the committee needs to help the adjacent states build collective border security mechanisms in addition to the regular outreach activities. Cooperation can include practical aspects including operational and enforcement collaboration and assistance for putting in place legislative, regulatory and administrative measures for checking terrorist activities.

The committee can promote trans-national coordination in WMDs security measures by facilitating intelligence sharing between border-control-working groups, information exchanges for seizure incidents, joint response exercises and drills and joint investigation teams for threat analysis. Establishing regional centres of excellence and promoting track-II dialogue can further enhance regional cooperation, thus, helping states to adopt global best practices.

Besides, functionally effective regional bodies have a great role to play in filling the gaps in levels of compliance to the UNSCR 1540; regional groupings of states should therefore but put to greater use to meet the set ends in a more viable manner. Aside from creating new regional bodies where they are non-existent, the existing ones are to be imbued with implementation power and resolve to take collective punitive measures against the perpetrators of the proscribed acts. The regional level personnel reliability programmes and checking the performance of border control employees must also be adopted.

The context in which the resolution 1540 was concluded and the resulting challenges highlighted there is a need for enhancing cooperation regarding interaction, assistance, education and training at international, regional and sub-regional levels. The experienced states, at each level, should work through international organisations for regional implementation of the resolution 1540 while improving the technological and verification capabilities of regimes dealing with individual weapons types.

Also, the resolution 1540 needs to work by consent to ensure sustainability; this requires moving beyond the Security Council to other multilateral consensus-based platforms. Moreover, the committee needs to have a certain time-bound goals for increasing efficiency but only after proper and consistent funding mechanisms have been worked out. Public awareness campaigns in vulnerable societies must be initiated, citizens must be sensitised to threat and to reporting authorities of any suspicious conduct happening around.

Containing the threat is becoming more tenuous as the threat is being complicated due to the increase in numbers of NSAs with a corresponding increase in the availability of WMDs-related materials across the globe in ever-greater proportions. Therefore, a long term approach to curbing WMDs terrorism and proliferation at the hands of NSAs must be comprehensive in terms of checking not only the spread of WMDs but their existence, too. This approach implies revitalising the arms control, particularly the disarmament components of the non-proliferation regime.

Eventually, it is well-realised that it is the existence of WMDs that underlies the entire problem. Therefore, if long term solution is to sought, it must integrate the non-proliferation initiatives with renewed arms control efforts, thereby setting the stage for gradual but time-bound progress towards universal disarmament. Though idealistic, this idea appears to be the only path to a stable future amidst a face-paced changing system, threatened by forces capable of inflicting devastation through WMDs proliferation and terrorism.

Conclusion

The resolution 1540 gives the UNSC a concrete mandate for non-proliferation and counter-terrorism. Its implementation is still in process and is maturing by learning from past experiences. States' levels of compliance have increased but full implementation remains a long-term task. Member states, regional and sub-regional organisations need to take appropriate measures towards this end. Many of the provisions still need to be operationalised and enforced across the broader spectrum to make the resolution truly effective.

As technologies change rapidly, developing and enacting strong cybersecurity system has become a necessity for the resolution 1540's successful implementation. The 1540 Committee may tap new sources of expertise to increase awareness regarding software authentication challenges, to identify and mitigate potential sources and targets and develop a set of principles for the future development of software for verification applications. In this way, the cybersecurity framework will play a role in preventing terrorists' access to sensitive materials and facilities.

The UNSCR 1540 has tried hard to achieve its mandate and contributes to the overall goals of global security with a set of ambitious measures, priorities and recommendations to reduce and prevent against the risk of WMDs proliferation and their use in terrorist activities. However, the significant challenges a rising along with the changing international context hinder its comprehensive enforcement and compliance. In order to address the challenges ahead, the global non-proliferation regime and the UNSCR 1540 need to revamp their approach in accordance with emerging threat dynamics, so to ensure their continued contemporary relevance and efficacy.