

Not that bad: Looking back on 65 years of nuclear non-proliferation efforts

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Introduction

From the moment that their enormous destructive capacity was first shown to the world, when used by the United States to bomb the Japanese cities of Hiroshima and Nagasaki in August 1945, nuclear weapons have been universally considered to be the cruellest weapons that exist. When used, nuclear weapons kill large numbers of non-belligerents immediately and cause a great deal of long-term harm to people and the environment by their radiation effects.

Although the unprecedented cruelty of nuclear warfare resulted in a global aversion to these weapons, several other countries also developed or tried to develop nuclear weapons after 1945. The weapons were also considerably improved — compared to modern atomic weapons like the hydrogen bomb, the ones that destroyed Hiroshima and Nagasaki had relatively little power. At the same time, much international efforts have been put into stopping the spread of nuclear weapons and, eventually, reaching complete nuclear disarmament. While the media are nowadays reporting on alarming topics like the (supposed) nuclear weapons programmes of Iran and North Korea, the tensions between the nuclear weapons possessor states India and Pakistan, and the (assumed) black market in nuclear materials in some former Soviet states, one could easily overlook these efforts. Looking retrospectively, how successful have the international nuclear non-proliferation efforts been in the last 65 years?

Pessimistic forecasts

Since the invention and first use of nuclear weapons, predictions on the spread of these weapons have been traditionally pessimistic. Especially during the Cold War, from 1945 to 1991, the persistent pessimism among experts and policymakers is — with the knowledge of looking backwards — surprising. During the first decades of the Cold War it was generally expected that far more countries would acquire a nuclear weapons arsenal rather soon. This pessimism was not that strange, considering that nuclear weapons were generally seen as acceptable, desirable and even necessary among political and military elites in many nations during the 1950s and early 1960s.² Nuclear weapons are considered

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² Joseph Cirincione, *Bomb Scare. The History and Future of Nuclear Weapons*, New York: Columbia University Press, 2007, 61.

as the ultimate weapon that would deter any enemy from attacking. Moreover, nuclear weapons offer not only military power: they are also considered to increase a state's political power internationally. Having nuclear weapons grants a state — and its leadership — international prestige, and a nuclear weapon state will automatically be considered and treated as a (regional) superpower.

Based on this positive attitude towards nuclear weapons, forecasts in these years were therefore easily predicting that 20 to 25 states would become nuclear weapon powers within the next few decades; countries like Sweden, West Germany and Japan are examples of countries that were often considered would soon cross the nuclear threshold, but they never did. One of the reasons for the alarming forecasts during much of the Cold War period was the failure of many estimates to distinguish between the capacity of states to develop nuclear weapons and the desire of these states to do so.³ Even nowadays, however, political and academic forecasts often tend to be rather pessimistic, predicting nuclear domino effects, or chain reactions, when new nuclear weapon powers (for example, Iran) will emerge and cause other states to develop nuclear weapons too.⁴

Despite all the pessimistic forecasts, however, only nine states nowadays possess nuclear weapons.⁵ Although more states have employed nuclear weapons programmes at some point in the past 65 years, most of them have sooner or later ended their ambition to acquire these weapons. Some states even destroyed their nuclear arsenal (South Africa) or gave up inherited arsenals (Ukraine, Belarus and Kazakhstan). Especially since the second half of the 1980s the number of states with nuclear weapons-related activities has become very marginal.⁶

Multilateral Success: the NPT

The relatively very slow increase in nuclear weapon states during the last 65 years is for an important part caused by the international efforts to limit the spread of nuclear weapons as much as possible. After some global showdowns that brought the world close to nuclear war, such as the Cuban Missile Crisis in 1962, during the 1960s the public and political opinion in many countries

³ Moeed Yusuf, *Predicting Proliferation. The History of the Future of Nuclear Weapons*, Policy Paper No. 11, Washington DC: Brookings Institution, 2009.

⁴ Which is signalled and criticized in: William C. Potter and Gaukhar Mukhatzhanova, 'In Search of Proliferation Trends and Tendencies', in: William C. Potter and Gaukhar Mukhatzhanova (eds.), *Forecasting Nuclear Proliferation in the 21st Century*. Volume 2: A Comparative Perspective, Stanford: Stanford University Press, 2010, pp. 337-353.

⁵ The five NATO countries that have stored U.S. nuclear weapons on their soil are not counted here, because they do not own or control these weapons themselves. Nevertheless, this 'nuclear sharing' by Belgium, Germany, Italy, the Netherlands, and Turkey may be considered as legally not completely against the letter of the non-proliferation regime, but certainly against its spirit.

⁶ Harald Müller and Andreas Schmidt, 'The Little-Known Story of Deproliferation. Why States Give Up Nuclear Weapon Activities', in: William C. Potter and Gaukhar Mukhatzhanova (eds.), *Forecasting Nuclear Proliferation in the 21st Century*. Volume 1: The Role of Theory, Stanford: Stanford University Press, 2010, pp. 124-158.

changed to being even more anti-nuclear. While the majority of governments in the world came to view nuclear weapons as dangerous and unnecessary, multilateral action to end the proliferation of nuclear weapons, and eventually even to reach complete nuclear disarmament, actively started.

The most important success in the struggle against nuclear weapons is without doubt the Nuclear Non-Proliferation Treaty (NPT) that was opened for signature in 1968. To summarize, the treaty prohibits the possession and spread of nuclear weapons, but guarantees that all signatories have the right to use nuclear technology for peaceful purposes and will be assisted in this by other member states. The International Atomic Energy Agency (IAEA) verifies the commitments of the signatory states. An exception, which is often referred to as being discriminatory, has been made in the NPT for the five states that were already in the possession of nuclear weapons in 1968: the United States, Russia, China, the United Kingdom and France. They are the only states that are allowed to have nuclear weapons, although they are required to reduce and in the end to eliminate their arsenals (without, unfortunately, a clear deadline being mentioned).

Although the NPT has a history of being heavily criticized, it has been very successful in seriously slowing down the spread of nuclear weapons. The treaty is nowadays signed and ratified by all states of the world except three: Israel, India and Pakistan. Moreover, since the existence of the NPT only five states have obtained nuclear weapons. Of these five, three are the non-signatory states of Israel, India and Pakistan, as well as one state that was not a member state at the time of its nuclear weapon production, but later dismantled its nuclear arsenal and joined the NPT: South Africa. The only state that signed the NPT and still acquired nuclear weapons is North Korea, although serious doubts exist as to the usability of its nuclear weapons.⁷

The main success of the NPT is in general explained by the norm-setting function of the treaty: because of the broad, almost universal support for the treaty a moral taboo against nuclear weapons has been created, which shapes international and domestic debates about this category of weapons. Violating these international norms will result in severe constraints to any state, such as political, economic and possibly even military reactions.⁸

⁷ It is also still unclear whether the Democratic People's Republic of Korea (DPRK) has withdrawn from the NPT or not — the state itself claims it has, but the IAEA denies this because the required withdrawal procedures have not been met. See for example: Jan Lodding and Tariq Rauf, 'IAEA & NPT — The Verification Challenge. Challenging Nuclear Issues Point the Way Forward', *IAEA Bulletin* Vol. 46, No. 2, 2005, p. 1-4.

⁸ For example: Maria Rost Rublee, *Nonproliferation Norms. Why States Choose Nuclear Restraint*, Athens & London: University of Georgia Press, 2009; T.V. Paul, *Power versus Prudence. Why Nations Forgo Nuclear Weapons*, Montreal etc.: McGill-Queen's University Press, 2000.

Despite its success in slowing down proliferation, the NPT is still being heavily criticized by many of its member states. The main points of this criticism are: the discriminatory division between the 'haves' and 'have nots' and the failure of the five 'acknowledged' nuclear weapon states to eliminate their nuclear arsenals; the experienced unwillingness to support (developing) states that want to start nuclear programmes for peaceful uses; and the more or less 'acceptance' of the nuclear weapons status of the non-signatory states of Israel, India and Pakistan. The criticism of the NPT makes every Review Conference (to be held every five years by the member states) a daunting experience, often causing predictions of 'the end' of the NPT regime. Nevertheless, the NPT survived the most recent Review Conference in May 2010 again without any damage to its broad international support.

Although the NPT played an important role in slowing the spread of nuclear weapons, it should be mentioned that the disarmament agenda of the treaty has so far been less successful. Although the existing stockpiles of the five acknowledged nuclear weapon states have been decreasing for some decades, these states together still possess some estimated 25,000 nuclear warheads (actively deployed as well as in storage). Some 95 percent of these warheads are in the possession of the United States and Russia. Considering the destructive power of nuclear weapons, the size of these stockpiles may be labelled as worrisome to say the least.

Other initiatives

Next to the NPT, which can be considered as the main international treaty in the struggle against nuclear weapons, some other important treaties should also be mentioned. The most promising treaty in this regard is the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which prohibits nuclear test explosions — a crucial step in the development of nuclear weapons, yet not prohibited by the NPT as such. The CTBT has already been signed and ratified by many states, but has not yet entered into force because this will only happen after some important state parties like the United States, China, India, Pakistan and Israel will have ratified. The prospects are not very hopeful that this will occur in the short term. Nevertheless, much has already been achieved, especially in setting up an impressive verification system of 337 monitoring facilities all over the world which makes secret nuclear tests almost impossible.⁹

⁹ International Group on Global Security, *A New Look at the Comprehensive Nuclear-Test-Ban Treaty (CTBT)*, Clingendael Security Paper No. 6, The Hague: Netherlands Institute of International Relations 'Clingendael', 2008.

Also important are regional treaties like the Nuclear-Weapon-Free Zones that exist in Latin America and the Caribbean; the South Pacific; South East Asia; Africa; and Central Asia. Next to these five regional treaties, Mongolia declared itself as a single-state Nuclear-Weapon-Free Zone.¹⁰

Last but not least, bilateral treaties such as the Strategic Arms Reduction Treaty (START) between the United States and Russia are important for nuclear arms control. These kinds of bilateral arms control treaties became common use in the last phase of the Cold War, but their usefulness was only recently re-acknowledged when the expired START was renewed and the 'New START' entered into force on 5 February 2011. The successive START treaties consist of reductions in deployed strategic nuclear weapons — an important step when realizing the large amounts of nuclear weapons that Russia and the United States still possess.

Next to multilateral or bilateral treaties, also some other arms control initiatives have proven successful measures in the struggle against the spread of nuclear weapons. A ban on trading nuclear weapon-sensitive materials to trade partners that are suspected of having nuclear weapon ambitions has been imposed since decades by the Nuclear Suppliers Group, a group consisting of most countries with advanced nuclear technology facilities. These export limitations have proven quite effective in slowing down the spread of the knowledge and materials needed to produce nuclear weapons. Since the NSG in 2008 ended the ban on trading in nuclear-related materials with India — one of the three non-signatories to the NPT — the reputation of the group has been somewhat damaged, however.¹¹

A rather recent multilateral initiative is United Nations Security Council Resolution 1540 of April 2004. This legally binding resolution requires all UN member states to implement measures, especially domestic legislation and export controls, aimed at preventing the proliferation of Weapons of Mass Destruction (WMD) in general. Although there is no enforcement of this resolution, it is helpful in raising awareness and bringing partners (at state and non-state level) together to improve national legislation and export controls. Regional organizations are considered to have a crucial role in this effort.¹²

Also influential in the struggle against nuclear weapons proliferation is the Proliferation Security Initiative (PSI), a multilateral project launched by the United States in 2003. This initiative aims at bringing together a 'coalition of the willing' into an unofficial and informal partnership of states that cooperate and coordinate efforts to prevent (illegal) transports of WMD -related materials by sea, air or land, all over the world. PSI is not an organization, only a network for

¹⁰ Jeffrey Lewis, 'Regional Restraint. The Uses of Nuclear Weapons-Free Zones', *Jane's Intelligence Review*, February 2010, pp. 48-53.

¹¹ For example: Sharon Squassoni, 'Missed Opportunity: Nuclear Suppliers Group', *Proliferation Analysis*, 10 September 2008.

¹² Lawrence Scheinman (ed.), *Implementing Resolution 1540. The Role of Regional Organizations*, Geneva: United Nations Institute for Disarmament Research (UNIDIR), 2008.

cooperation, but as such is considered a rather effective contribution to the international struggle to prevent illegal proliferation.¹³

An actual U.S. project is also the Container Security Initiative (CSI), launched in 2002, to monitor container transports in harbours all over the world for the illegal transport of both WMD-related and terrorist-related materials. Even though the CSI is meant to examine only containers with the United States as their destination, because of the fact that some fifty large harbours all over the world cooperate in the initiative it can be considered an important project in creating awareness concerning the proliferation risks by container transport.

The nuclear taboo

Probably the most crucial contribution to preventing nuclear warfare itself — apart from the proliferation of nuclear weapons — has, however, not been any treaty or initiative. Rather, it is a ‘tradition’ or a ‘taboo’ that has become globally supported without any clear, outspoken reasoning: the tradition of the non-use of nuclear weapons.¹⁴ Since the nuclear bombing of Hiroshima and Nagasaki, nuclear explosions have only taken place as test explosions. No state has ever really used these weapons after 1945.

Although it is difficult to determine and controversial how this ‘nuclear taboo’ came into effect and whether it will prevent future use, the idea that nuclear weapons are too horrific to use has been an indirect but strong support for the struggle against the spread of nuclear weapons. Because of the ‘tradition of non-use’, the military value of nuclear weapons is often seen as secondary to their political value. States do not develop nuclear weapons with the intention to use them on the military battlefield, but to use them in other ways: to deter adversaries, to gain prestige, or to increase the political power of the leading elite, both nationally and internationally.¹⁵

This nuclear taboo may have helped in saving the world from nuclear warfare so far, but because of its indirect existence no guarantees for its future influence can be given. Nevertheless, it can be safely assumed that any state using nuclear weapons will cause a worldwide shock in public opinion and will be heavily condemned — and possibly retaliated against — by the international community.

¹³ Jeffrey Lewis and Philip Maxon, ‘The Proliferation Security Initiative’, *Disarmament Forum*, No. 2010- 2, pp. 35-43.

¹⁴ Nina Tannenwald, *The Nuclear Taboo. The United States and the Non-Use of Nuclear Weapons Since 1945*, Cambridge etc.: Cambridge University Press, 2007; T.V. Paul, *The Tradition of Non-Use of Nuclear Weapons*, Stanford: Stanford University Press, 2009.

¹⁵ On the role of domestic elites, see: Jacques E.C. Hymans, *The Psychology of Nuclear Proliferation. Identity, Emotions, and Foreign Policy*, Cambridge etc.: Cambridge University Press, 2006; Etel Solingen, *Nuclear Logics. Contrasting Paths in East Asia and the Middle East*, Princeton etc.: Princeton University Press, 2007.

Slow but ongoing proliferation

Due to all these formal and informal efforts to counter the spread of nuclear weapons, the actual speed of proliferation has been relatively slow during the past 65 years. Comparing the current number of nuclear weapon states — only nine out of the more than 190 states — with the forecasts that were made during the past 65 years, most estimates have been too pessimistic. Although it is difficult to judge to what extent non-proliferation efforts as such have been influencing the slow pace of nuclear weapons proliferation — economic and technological barriers will also have played a role — there can be little doubt that the multiple efforts have been of considerable influence.

It is important to notice, however, that the proliferation of nuclear weapons may be slow, but it has not yet stopped. Currently, the Iranian nuclear programme receives a great deal of international attention because of the signals that it may not have only peaceful aims, as the regime in Teheran claims. The IAEA complains about a serious lack of transparency from the Iranian side, and several international experts qualify parts of the Iranian nuclear programme as being uncommon for civil purposes only.¹⁶ Syria also has problems with the IAEA, because of its unwillingness to cooperate with an IAEA inquiry on a possible secret nuclear installation that was destroyed by the Israeli air force in 2007. Although the bombardment of this installation probably ended any Syrian nuclear programme, at least for some period, the fact that Syria was willing and able to build this kind of secret facility is worrisome.¹⁷ Speculations that Myanmar is also trying to start a nuclear weapons programme have so far not been confirmed by reliable sources.¹⁸

More than for possible new nuclear weapon states, however, the policy and intelligence community nowadays fear for the dangers of non-state actors, especially terrorists, obtaining nuclear devices.¹⁹ Although no historical examples exist, it may be possible that terrorist organisations will come into the possession of nuclear weapons — by theft or as a ‘donation’ by any state party. The production of nuclear weapons by non-state actors seems impossible, considering the extreme technological difficulties involved. Especially when nuclear weapon states become seriously instable or are actively supporting terrorism, non-state actors may profit. The problem with the non-state use of nuclear weapons, as is often argued, is that the threat of retaliation is no longer a realistic deterrence, because terrorist groups generally have no clear territorial base. Nevertheless,

¹⁶ A detailed analysis is offered by: Mark Fitzpatrick, *Iran's Nuclear, Chemical and Biological Capabilities. A Net Assessment*, London: International Institute for Strategic Studies, 2011.

¹⁷ Graham Allison and Olli Heinonen, ‘Break the Silence on Syria's Nuclear Program’, *Wall Street Journal*, 6 December 2010.

¹⁸ David Albright, Paul Brannan, Robert Kelley and Andrea Scheel Stricker, *Burma: A Nuclear Wannabe, Suspicious Links to North Korea and High-Tech Procurements to Enigmatic Facilities*, ISIS Imagery Brief, Washington DC: Institute for Science and International Security, 2010.

¹⁹ Bob Graham et al., *World at Risk. The report of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism*, New York: Vintage Books, 2008.

nuclear forensics is very developed nowadays, so the origins of any nuclear device can be traced within a relatively short time. A nuclear terrorist attack of which the nuclear material can be traced back to any country may be retaliated against if the country of origin cannot account for the loss of the nuclear weapon. Any state will thus think twice before handing over nuclear weapons to terrorists. The theft of nuclear weapons in unstable states, however, will always remain a dangerous possibility. Even then, it will still be very difficult to use a nuclear weapon in such a way that it will be most effective, because of the technical difficulties and complicated security procedures of these weapons. Probably, a stolen nuclear weapon can only be used as a 'dirty bomb', by using conventional explosives to bring radiological material into the air, causing the feared radiation. Even this, however, is easier with radiological material from hospitals or industry than with stolen nuclear weapons. Dirty bombs, also called radiological weapons, are also terrible weapons, but they are usually considered to be weapons of mass disturbance instead of weapons of mass destruction, because of their relatively contained destructive effect.

Comparison with other WMD

When studying the success of nuclear non-proliferation efforts, it is worthwhile to make a comparison with the same efforts in the field of other Weapons of Mass Destruction (WMD). The non-proliferation regime for chemical weapons, to start with, can be considered more successful, even though its multilateral treaty, the Chemical Weapons Convention (CWC), only entered into force in 1997. The CWC resembles the NPT, but with one important difference: all signatories that own chemical weapons are obliged to destroy these weapons before a certain date. Although this date has already been extended and the new date — April 2012 — will probably not be achievable due to the difficult and expensive procedures required to destroy chemical weapons safely, this deadline for disarmament is something which is lacking in the NPT. Like in the nuclear field, there are also a few states that have not joined the CWC: Angola, Egypt, North Korea, Somalia, Syria, Israel and Myanmar. Some of these states are suspected of possessing chemical weapon arsenals. Nevertheless, the fact that the CWC sets a clear disarmament date and that the treaty is supported almost universally is a success for such a 'young' WMD regime. The verification regime of the CWC, through the Organisation for the Prohibition of Chemical Weapons (OPCW), is generally considered very effective, even though verification is a difficult task because of the gigantic amount of chemical plants in the world and the 'dual-use' technologies that make it possible to produce chemical weapons while using materials and technologies that are commonly used for peaceful applications.²⁰

The non-proliferation efforts focussed on biological weapons have so far been less successful. That is to say, there is an NPT-like treaty: the Biological and

²⁰ J.P. Perry Robinson, 'Difficulties facing the Chemical Weapons Convention', *International Affairs*, Vol. 84, No. 2, 2008, p. 223-239.

Toxin Weapons Convention (BTWC), which entered into force in 1975. This treaty is comparable to the NPT and CWC regarding the prohibition of biological weapons production, ownership or proliferation. What makes this treaty ineffective, however, is the complete lack of any verification mechanism. There is no organization like the IAEA or OPCW in the biological field, so it is not being verified whether countries that signed and ratified the treaty behave like the treaty demands.²¹ The main reason for the lack of a verification regime is the widespread scope that a verification system should have, since bioscientific research is taking place in a multitude of laboratories, both governmental and private, and the economic importance of biotechnical research for medical, food and other purposes is, after all, still increasing. Verification is also complicated because of the rather easy way in which inspectors can get hold of samples in laboratories they inspect, being a possible way of costly industrial espionage. Although the BTWC is sometimes referred to as a worthless piece of paper (which, in a strict sense, may be true) it has, however, become quite a successful kind of code of conduct that seems to be generally adhered to by commercial and non-commercial laboratories in the signatory states, because everyone is profiting from it: while refraining from tight restrictions on commercial and medical (including military research to find countermeasures for biological weapons) laboratories, at least some common standards have been established concerning what is allowed and what is prohibited with regard to biological weapons research.

The nuclear non-proliferation efforts, in short, may be less successful than their chemical counterparts because of the lack of any disarmament agenda; compared to the biological field the existence of an effective verification regime may be characterized as a more positive result.

New dynamics

During the past two decades, nuclear non-proliferation has more or less faded from the political and public debate. After the end of the Cold War, in which nuclear weapons were a major topic of discussion, these Cold War-style weapons were gradually 'forgotten' in public opinion. Although (suspected) nuclear weapons programmes in North Korea and Iran received some political and media attention in the 2000s, it was actually the newly elected U.S. President Barack Obama who brought nuclear weapons back into the public debate. Backed by several former high-level politicians in his own country as well in other parts of the world, in 2009 he made nuclear disarmament — a very long-term process — a new priority, as well as improving nuclear security to prevent nuclear attacks by terrorists and nuclear accidents. His practical policy in this regard has actually not been very effective so far: a mostly symbolic Nuclear Security Summit and the (domestically difficult) ratification of the New START Treaty with Russia have been his major, though humble, accomplishments. Other goals, like

²¹ Nicolas Isla, 'Challenges to the BTWC, and Some Reasons for Optimism', *INESAP Information Bulletin*, No. 28, April 2008, p. 70-74.

ratifying the CTBT, have so far proved to be too difficult. Nevertheless, his public statements on the dangers of nuclear weapons have resulted in some new international attention being given to the subject. One could speculate that this also contributed to a rather successful NPT Review Conference in 2010, for which the prospects were less optimistic beforehand.

How long these new dynamics in the nuclear weapons debate will remain is difficult to predict. Some analysts consider the international non-proliferation and disarmament efforts to have entered a new phase, in which new actors are increasingly playing important roles: next to the traditional inter-governmental efforts, new actors from industry, scientific communities and civil societies — cooperating in international networks — are becoming more and more important.²² In this regard, regional multilateral security organisations such as the OSCE can also play an increasing role, next to civil organisations such as NGOs, in security and disarmament.

There are quite some challenges ahead, that is certain. Moreover, with still some 25,000 nuclear warheads in the world (actively deployed as well as in storage) and far more stockpiles of weapons-grade highly enriched uranium and plutonium, the proliferation of nuclear weapons is only one danger, next to accidents, theft, and the unintentional use of existing weapons. Disarmament efforts by the existing nuclear weapon states are also of high importance to stop the erosion in the support for what many states have called the ‘discriminatory’ NPT and the ‘half-hearted’ non-proliferation policies of some Western countries.

Final remarks

Despite the current media attention for several kinds of assumed nuclear weapons proliferation dangers, the situation in this regard is not as bad as it could have been. Looking back on 65 years of nuclear non-proliferation efforts, the results are actually rather positive. Compared with the expectations in the first decades of the nuclear era, the proliferation of nuclear weapons has been much slower. Even more recent forecasts have been too pessimistic with regard to the spread of these weapons. It may be difficult to judge what impact each of the different non-proliferation efforts has had in itself, but the combination of instruments — multilateral and bilateral treaties, as well as the rise of a ‘nuclear taboo’ — has surely contributed to this trend.

Some analysts consider the slow pace of nuclear weapons proliferation to be even a reason for downscaling the international efforts in this regard — over-committing to nuclear proliferation, they claim, may result in the adverse effect of actually increasing the perceived value of nuclear weapons. If there is so much concern with regard to these weapons, so to say, they must be attractive in some way.²³ Nevertheless, the threat of the use of nuclear weapons — on purpose or accidental — is still so worrisome that any commitment to reduce this threat may

²² Jan Pascal Zanders, *A New Farewell to Arms. Viewing Disarmament in a New Security Environment*, Policy Brief No. 6, Paris: European Union Institute for Security Studies, 2010.

²³ Justin Alger, ‘Prioritizing Nuclear Proliferation’, *ISN Insights*, 7 December 2010.

be welcomed, although a discussion on how to attain this goal will always be relevant.