

G8 Global Partnership Expansion and Extension

A Report for the Department of Foreign Affairs and Trade

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Introduction

In 2002, under Canada's leadership, the G8 launched the Global Partnership against the Spread of Weapons and Materials of Mass Destruction (GPP). The 2002 Kananaskis Summit defined the mission of the Global Partnership as being to prevent 'terrorists, or those that harbour them, from acquiring or developing nuclear, chemical, radiological and biological weapons; missiles; and related materials, equipment and technology'.¹ Under this broad rubric the focus of the Partnership was to be a ten-year, \$20 billion commitment by the G8 to work together to reduce the dangers posed by the legacy of the Soviet Union's nuclear, chemical and biological weapons programs. The rationale was that materials, technologies and personnel from these programs might proliferate to non-state actors (or other states), enabling them to acquire or at least facilitate their acquisition of so-called weapons of mass destruction (WMD). The threat was clear and present. There was also a strong argument that the threat was global and thus required a cooperative global approach. Reliance solely on the United States' cooperative threat reduction (CTR) programs, which had been initiated after the end of the Cold War, however successful and well resourced, was unsustainable. Free-riding on the United States had to end, not least because other countries could bring resources, relationships and unique national capacities to bear that the United States for all its power and influence could not.

To date the Partnership has, as intended, concentrated on Russia and other successor states of the former Soviet Union (FSU), notably Ukraine, but latterly Georgia, Kazakhstan and Kyrgyzstan. It has focused on the destruction of chemical weapons, the dismantlement of nuclear submarines, improving nuclear and radiological security and the redirection of former weapons scientists to peaceful pursuits. An additional focus on biological weapons issues was added to the Program at a later date. Other states besides the G8 members have increasingly collaborated with the GPP in providing assistance, making the Program much more than just a G8 exercise.

These activities have, by all accounts, yielded considerable benefits to global peace and security. What was once a major threat has been considerably attenuated. Work remains to be done with Russia and the former FSU states however. Not all targets have been met, or are likely to be met by 2012. The disposition of excess plutonium has not, for instance, proceeded at all, although a new US-Russia agreement just signed may facilitate that process. The Russians have resisted close cooperation on biological weapons issues. Moreover, not all objectives are tangible ones that can be definitively met. Nuclear and radiological security, for example, requires constant vigilance and attention. Moreover, it is important that the achievements of the Partnership over the past eight years be sustainable beyond its potential expiration in 2012. There are doubts that

¹ G8 Leaders, 'Statement at Kananaskis Summit: The G8 Global Partnership Against the Spread of weapons and Materials of Mass Destruction,' <http://www.g7.utoronto.ca/summit/2002kananaskis/arms.html>, accessed 6 March 2010.

Russia and Ukraine will devote the necessary resources to maintaining and further improving the measures put in place by the GPP. Finally, a large number of former Soviet states, especially in Central Asia (the ‘Stans’) and in the Caucasus have remained largely unaffected by the Global Partnership. Even though none of them had WMD in the past or have it now they were all part of the Soviet military system and may have remaining legacy issues as well as dual-use capabilities that need to be considered.

There are thus many reasons for making the case that the GPP should continue working in the FSU beyond 2012, although the financial commitment required is unlikely to match that needed in 2002. Since future work in the FSU in itself justifies a renewal of the GPP this issue will not be considered further in this report.

Notwithstanding the clear need for further work with the states of the FSU, the future of the GPP beyond its expiry date in 2012 is uncertain, although the United States, for one, has expressed a desire to extend it for another 10 years. Canada has the opportunity at the 2010 G8 Summit to continue the leadership that it showed in the Partnership’s creation in 2002. This requires demonstrating that the WMD proliferation threat remains, even though it might be in different forms to that represented by the Soviet WMD legacy. The case also needs to be made that the GPP is the appropriate program for dealing with such threats. Bearing these requirements in mind, this paper is intended to contribute to Canadian thinking about how and where the GPP should be expanded if it is to be extended beyond 2012.

A Current Threat Assessment: what is different from 2002?

The current threat from WMD proliferation differs from that faced in 2002 for at least five reasons.

First, on the negative side, there has been growing alarm, at least among some observers, that the threat of WMD terrorism remains high. Revelations that Al Qaeda and perhaps other terrorist groups have considered, if not attempted, the acquisition of WMD, have ramped up concerns that such a threat is real. One of the most alarmist voices, Harvard scholar Graham Allison, predicted in 2004 that ‘On the current course, nuclear terrorism is inevitable. Indeed, if the United States and other governments keep doing what they are doing today, a nuclear terrorist attack on America is more likely than not in the decade ahead’.² A 2004 joint study on nuclear terrorism by the Monterey Institute and Nuclear Threat Initiative (NTI), argued that the US must ‘alter dramatically its ranking of threats to its national security’ and to that end advocated a Plan for

² Graham Allison, ‘Nuclear Terrorism: The Ultimate Preventable Catastrophe’, Owl Books, New York, 2004, p. 203.

Urgent Action against Nuclear Terrorism.³ The 2008 Report of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, alarmingly sub-titled ‘World at Risk’, claimed that ‘unless the world community acts decisively and with great urgency, it is more likely than not that a weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013’.⁴

Studies initiated by US weapons laboratories indicating that well-financed terrorist groups may be able to make and detonate a crude nuclear device given the necessary fissionable material and technical know-how have added to the concern.⁵ The possibility of terrorists using nuclear or radiological material in a radioactive dispersal device (RDD) compounds the threat. Even though the damage from an RDD would be much less than the use of a nuclear weapon, the political, social and economic consequences, depending on the location of an attack, could be significant. Terrorist manufacture of chemical weapons and the use of biological pathogens for terrorist attacks are even more technically feasible.

The revelation of extensive nuclear procurement and smuggling by the A.Q. Khan network has alerted the non-proliferation community to the dangers of such activity, whether they are officially sanctioned (as in the Khan case) or not. In the A.Q. Khan case it is assumed that materials, components and blueprints only ended up in the hands of other states—Libya, Iran and North Korea. However, they could have just as easily ended up in the hands of terrorists and indeed may have been so widely and carelessly distributed as to have already reached such actors. It is not clear even today that the Khan network has been completely shut down. Given the lack of direct access to him granted by the Pakistani government the complete details are still not known. This emphasizes the need for better tools for dealing with illicit procurement and smuggling networks in all WMD areas.

Hence, as we approach the end of the first 10 years of the Global Partnership the general WMD terrorism threat assessment seems mixed. While there have been a series of alarmist public reports, no attacks, not even minor or failed ones, have occurred. There is no evidence, at least in the public domain,⁶ that a terrorist group has come close to acquiring or using a nuclear weapon. Nor have there been incidents of terrorist use of chemical or biological weapons (there have been amateurish plots in the UK to use the relatively unsophisticated ricin in an unspecified attack).

³ Charles D. Ferguson and William C. Potter, ‘The Four Faces of Nuclear Terrorism’, Center for Nonproliferation Studies, Monterey, 2004, p. 318.

⁴ The Report of the Commission on the Prevention of WMD Proliferation and Terrorism, ‘World at Risk’, Vintage Books, New York, 2008, p. xv.

⁵ Oliver Burkeman, ‘How two students build an A-bomb,’ *The Guardian*, <http://www.guardian.co.uk/world/2003/jun/24/usa.science>, 2003.

⁶ This report is perforce written without the benefit of access to intelligence information from Canadian or other sources.

Yet the potentially catastrophic consequences of a successful use of WMD by terrorists are so great as to make efforts to deal with the threat (however remote) a continuing imperative. In political terms the fact that the United States, an ally and/or partner of all the G8 countries considers itself sufficiently threatened by the most determined of terrorist enemies, Al Qaeda, is reason enough for attention to be paid by the G8. As long as Al Qaeda remains undefeated and can find safe havens in unstable states like Afghanistan, Pakistan and Yemen this is likely to remain the case.

A second, more positive difference in the current situation compared with 2002 is precisely the progress made internationally in seeking to deal with the global terrorism threat. Neither the US nor any other country has completely altered its ranking of threats to its national security—due in large part to the persistence of ‘traditional’ security challenges such as the wars in Iraq and Afghanistan, and the state-based proliferation threats posed by Iran and North Korea. Yet significant strides have been made in international cooperation in tackling the threat of global terrorism generally. There is certainly heightened international awareness, increased cooperation between national intelligence agencies, especially among the Western countries, increased airline and port security, and efforts to strangle the financing of terrorist groups. UN Security Council resolution 1373 for the first time has imposed a legally binding requirement on states to end financial support for terrorist groups, to put in place effective measures to disrupt financing by others and to report to the Council on their efforts. China and Russia, subject to terrorist threats of their own, have joined these activities.

A third difference from 2012, also on the positive side, is that the Soviet WMD legacy has been attended to by the international community, not least through the GPP itself, as well as the enormous contribution by the United States through its innovative and prescient CTR programs and other activities. The downside is that, in response, terrorists seeking WMD capabilities are likely to turn to the weakest link in the non-proliferation and counterproliferation defences. Many of these are now to be found outside the FSU.

Fourth, since the GPP was established new players and new measures have emerged to deal specifically with the WMD threat beyond the legacy issues of the FSU. These include Security Council resolution 1540 of April 2004 and subsequent elaborations, the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the Global Initiative to Combat Nuclear Terrorism (GICNT), the Proliferation Security Initiative (PSI), as well as various programs put in place by the International Atomic Energy Agency (IAEA), such as its Nuclear Security Plans and Nuclear Security Fund; the Organization for the Prohibition of Chemical Weapons (OPCW); the parties to the Biological Weapons Convention; and non-governmental initiatives such as the World Institute of Nuclear Security (WINS). The question for the GPP and its future is whether it is still a valid tool for dealing with the remaining or newly emerging

threats, to what extent it complements the new tools and how it can collaborate or integrate with them.

Fifth, the nature of the Global Partnership has itself changed since its inauguration, with increased financial contribution and participation by Russia itself. This has moved the model from being one of ‘supplicant and provider’ towards one characterized by a genuine security partnership. The expectation of new partners in any extension of the Program would presumably be that the new model would prevail.

Finally, in terms of making the case for a continuation of the GPP the threat is not as stark or as obvious as it was in 2002, and neither are its solutions. Hard evidence of the existence of vast amounts of unsecured nuclear materials, unknown numbers of nuclear devices, deteriorating chemical weapons and ageing nuclear submarines docked in northern ports made the threat tangible and the need for ‘saleable’ both to treasuries and taxpayers. Today’s threats, while no less real, are less tangible, less easy to characterize in terms of facts and figures and often based on intelligence or other information not readily shared or publicly advertised. The solutions to these new threats are also less dramatic and thus less newsworthy than the cutting up of submarines, the building of a sarcophagus for the Chernobyl nuclear reactor or the destruction of bomb-grade nuclear materials. This will be a challenge for securing an extension of the GPP and funding commensurate with the threat. A similar challenge is of course facing not just the GPP but other cooperative threat reduction programs.

Categories of threat

Since the GPP necessarily has to deal cooperatively with and through states, rather than tackling WMD threats directly, this paper will consider the threats according to the type of state involved, the characteristics that are likely to make them a threat and their willingness to cooperate with the Global Partnership. Three types are identifiable:

- 1. States with nuclear weapons or other types of WMD**—such states may themselves proliferate to others or facilitate such proliferation; at the very least their own programs may be vulnerable to insider infiltration and/or unauthorized access by outsiders, notably terrorists; the outstanding cases are North Korea and Pakistan.
- 2. States without WMD but with WMD-related materials and technologies**—these states may have the remains of former weapons programs that they have given up or have dual-use capabilities; such states are, on the whole, likely to be compliant and cooperate with the various non-proliferation regimes, but may have poor control over WMD materials or technology of concern due to lack of awareness of the risks or lack of resources.

- 3. States with no identifiable WMD materials or technology of their own**—such states may, for a variety of reasons, have even less ability, interest or motivation when it comes to implementing nonproliferation measures, making them particularly vulnerable as transshipment or smuggling points or the site of illicit manufacture of WMD components or precursors or even weapons themselves.

This report will analyze each of the three levels of threat outlined above and suggest where the Global Partnership may have the potential to contribute.

States with WMD and related materials

States with WMD programs can be the greatest proliferation concern because their political, technical and financial resources enable them to proliferate in sophisticated and surreptitious fashion. In these cases the state may itself be the source of proliferation or it may shelter or turn a blind eye to those who are doing so. The forms these threats can take include:

- State transfer of WMD knowledge or technology to another state
- State transfer of WMD knowledge or technology to a non-state actor
- State complicity in or wilful tolerance of proliferation networks functioning within its boundaries
- Internal instability resulting in a loss of control of its WMD.

Fortunately these cases are rare. In any case the Global Partnership is ill-suited to addressing these state-level threats since the Program is quintessentially dependent on the cooperation of the state. Significant political headway would be necessary in relations with such states before cooperative threat reduction could even be contemplated. Unless the political objectives of the potential partners are aligned, there is effectively no room for engagement. The following country studies will explain why in the cases of North Korea and Pakistan.

Democratic People's Republic of Korea

The Democratic People's Republic of Korea (DPRK) is the only state currently widely suspected of exporting sensitive WMD knowledge and technology. Its own WMD capabilities and ambitions are well known, as is the difficulty in persuading it to give them up. North Korea has known nuclear and chemical weapon programs, and a suspected biological weapon program. It is also suspected to have been involved in selling or bartering a variety of technologies, including nuclear assistance to Iran, missile technology to Pakistan, missiles to Yemen and helping Syria build a clandestine nuclear reactor before it was bombed by Israel in 2007. One commentator

goes so far as to describe North Korea as a potential ‘‘Nukes R’ Us’ for developing nations, ‘rogue states,’ and terrorist groups.’⁷ The roadblock to cooperative threat reduction activities with the DPRK is thus that the threat stems from the state itself.

More than sixteen years of negotiations, in the context of the 1994 Framework Agreement and the Six-Party Talks, to achieve the dismantlement of the DPRK’s nuclear program have yielded no permanent results so far, despite some temporary successes along the way. Although it dramatically destroyed a cooling tower at its Yongbyon nuclear site, North Korea has conducted two nuclear tests and continues to periodically conduct long-range missile tests. Throughout this period, its enigmatic leaders have seemed relatively indifferent to increased threats of international isolation. The poverty of his country seems to be of little concern, making the regime particularly difficult to deal with, although leader Kim Jong-II’s recent apology for misguided currency reforms indicates that the regime is not entirely impervious to domestic and international criticism.

The potential for the GPP to expand to North Korea is remote in the absence of broader political or international developments paving the way. The regime likely perceives the G8 as a predominantly Western forum, and therefore not the preferred partner in any activity, much less one as sensitive as cooperative threat reduction. Even an approach by Russia in the context of the Global Partnership is unlikely to succeed at present.

The only real hope for CTR activities in North Korea would be after a breakthrough in the Six-Party Talks. Were the talks ever to reach the stage of implementation, involving verified dismantlement of the country’s nuclear weapons program, it is possible that technical and financial assistance may be sought beyond the five negotiating partners (some of which are also G8 members). When previous negotiating breakthroughs occurred in the Six-Party Talks there was a concern that North Korea’s disarmament could not be undertaken with the necessary speed and effectiveness due to the lack of resources available during the brief ‘window of opportunity, (before the mercurial North Korean leader once more changed his mind). If there is a future breakthrough, the Global Partnership, given its expertise and experience, and the involvement of Russia, could be an effective mechanism for assisting in the dismantlement process quickly and efficiently. China could also be engaged, as other non-G8 partners have.

One could imagine a special role for the GPP in respect of programs to ensure that North Korean weapons scientists and technologists were gainfully employed, that dismantlement occurs in an environmentally sensitive way and that any peaceful nuclear activities that the North is permitted to pursue are undertaken with the necessary safety and security measures in place. It would be

⁷ Allison, p. 80.

fascinating if Russia were to lead this effort under the GPP banner, drawing on its experience as a recipient of GPP and other CTR assistance. One could imagine, for example, the conversion by the GPP of the Yongbyon nuclear facility into a peaceful nuclear research institution with international involvement. Such developments would of course require a significant change in North Korean attitudes towards its relationship with the outside world generally and with the great powers, to the extent that they are represented by the G8, in particular.

Pakistan

Pakistan, another ‘unofficial’ nuclear weapon possessor state, continues to raise proliferation concerns. The reasons are multiple.

First is Pakistan’s history as the source of the nuclear knowledge and technologies distributed via the A.Q. Khan network in the 1990s. Though the Pakistani government still claims it had no knowledge of the network, Khan was a high-ranking scientist and it seems unlikely the government was completely ignorant of his activities. There is no evidence that the current democratically elected government is continuing on the same path, but this cannot be ruled out entirely given the fractious nature of Pakistani governance and certainly cannot be ruled out entirely in the future.

A second source of concern is indeed the stability of the Pakistani state in the future, including the possibility that its nascent democracy will collapse and that Muslim extremists will gain control of government or at least over some of its nuclear assets. There is a fear that extremist elements may already have infiltrated the governance structure, notably the Inter-Service Intelligence (ISI)—the country’s largest intelligence agency and a conduit of support and supply, at least in the past, of the Taliban. Traditionally the Pakistani military has intervened to take over the state when instability threatened. However even the military has not been immune to extremist penetration. There have been reports that the US has plans in place to directly intervene to secure Pakistani nuclear weapons and facilities to stop them falling into terrorist or extremist hands.⁸

Third, even without these factors, the endemic corruption and overall shaky governance of Pakistani institutions raise concern about Pakistan’s capacity, even with the best will and intention, to ensure the security of its WMD-related materials and expertise. Pakistani leaders have repeatedly claimed that their security measures are robust and have denied the possibility of scenarios in which extremists would be able to seize control of WMD assets. The subject is hotly debated internationally and the credibility of the threat difficult to measure due to a lack of transparency and public accountability. Little is known publicly about the security of the

⁸ Paul K. Kerr and Mary Beth Nikitin, *‘Pakistan’s Nuclear Weapons: Proliferation and Security Issues’*, CRS Report for Congress, Congressional Research Service, Washington DC, 2009.

country's nuclear weapons and related material and it is unlikely that this information, beyond general reassurances, has been shared with foreign governments.

The Global Partnership is not well suited to addressing many of these issues at their source. If the Pakistani government is still knowingly complicit in proliferating to another state or involved in illicit trafficking, there is little point in the G8 seeking to partner with it. Different forms of political pressure would need to be brought to bear. Nor is the GPP able to address the endemic political instability that may result in unauthorized access to Pakistan's nuclear and associated assets. Governments need other tools, such as support for civil society, electoral and human rights groups and development assistance generally.

However, to the extent is that the physical security of such assets is not yet adequate, despite government efforts, there may be an opening for the GPP. The country's nuclear weapons program and peaceful nuclear energy program have produced, in addition to the weapons themselves, several sensitive nuclear facilities, nuclear reactors for both military and peaceful purposes, stocks of nuclear material and a cadre of nuclear scientists. The country also has a latent chemical and biological weapons capability in the form of materials and scientists as a result, at the very least, of its commercial industries in those fields.

The challenge with assisting or cooperating with Pakistan in securing these assets is its hypersensitivity about its sovereignty and its pride in being able to take care of the problem without outside assistance. Expanding the Global Partnership to a state like Pakistan that, unlike the successor states to the Soviet Union, denies there is much of a problem, if any, would be a first. Despite its public stance that all is well, the Pakistani government has responded to some extent to international concern and pressure and gone to some lengths to improve its nuclear security in some areas since the A.Q. Khan scandal broke.⁹ A 2009 report by the Congressional Research Service (CRS) on 'Pakistan's Nuclear Weapons: Proliferation and Security Issues' suggests that many steps have been taken. These steps are confirmed in Pakistan's reports to the UN Security Council's 1540 Committee.

Export controls is one area where Pakistan has acted. In 2004 the government introduced new national export control legislation. This provided for periodically updated control lists and a catch-all clause, which even some G8 countries lack. The legislation also mandates end-use and end-user certificates for exports as well as new, increased penalties for violators. As the CRS report points out, however, 'because Khan conducted his proliferation activities as a government official, they do not necessary indicate a failure of Islamabad's export controls'. The US has

⁹ Kerr and Nikitin, pp. 5-16.

been providing bilateral export control assistance to Pakistan since 2007, an indication that Pakistan is not entirely averse to outside assistance.

In 2007 Pakistan announced a new National Security Action Plan, drawing on assistance from the IAEA, and joined the Global Initiative to Combat Nuclear Terrorism. Pakistan, unlike India, also participates fully in the peer review processes for nuclear safety run by both the IAEA and the World Association of Nuclear Operators (WANO). With regard to personnel security, Pakistani officials acknowledge that while they are working to improve the reliability of the country's nuclear personnel, the system must 'continue to improve'.

On the other hand, Pakistan is facing increasing numbers of deadly terrorist attacks using conventional means such as car bombs and suicide bombers as the Taliban and their allies seek vengeance for increased Pakistani military action against them in the Afghan border regions. In October 2009 a suicide bomber killed at least seven people in an attack on a 'security station' outside a facility believed to be connected to the country's nuclear program.¹⁰ Although the fact that the bomber did not penetrate past the security station could indicate that security measures were effective, it is not clear that general conclusions can be drawn from this case. It would seem only a matter of time before there is an attempted terrorist attack on nuclear facility itself.

The question, then, is whether the Pakistanis have done enough so far to improve nuclear and related security, and whether or not the announced legislative, regulatory and practical measures already announced are being implemented and enforced effectively. Publicly the US has expressed its satisfaction. Last year US Secretary of State Hillary Clinton affirmed that the Obama administration has a 'high degree of confidence' that Pakistan's nuclear weapons are secure, while acknowledging that there is always more that can be done.¹¹ A former US national security advisor investigating the issue, Stephen Hadley, stated that 'Whenever we checked in with our military and intelligence people, we said, 'Is this a nuclear arsenal at risk?' The answer so far has always been, 'No.''¹² US Defence Secretary Robert Gates, at least publicly, supports this claim, stating 'We are comfortable with the security of their weapons.'¹³ An Arms Control Association report, 'Nuclear Security in Pakistan: Separating Myth from Reality' concludes:

¹⁰ 'Bomb Detonated Outside Suspected Pakistani Nuclear Aircraft Site', *Global Security Newswire*, http://www.globalsecuritynewswire.org/gsn/nw_20091023_8442.php, accessed 17 March 2010.

¹¹ 'Pakistan Must Deal With Nuclear Treats, Clinton Says', *Global Security Newswire*, http://www.globalsecuritynewswire.org/gsn/nw_20091028_7439.php, accessed 18 March 2010.

¹² 'Pakistan Says U.S. Should Ease off Nuke Security Worries', *Global Security Newswire*, http://www.globalsecuritynewswire.org/siteservices/full_edition.php?Edition=11/23/2009, accessed 18 March 2010).

¹³ 'Gates Backs Pakistani Nuclear Security', *Global Security Newswire*, http://gsn.nti.org/gsn/nw_20091207_3953.php, accessed 18 March 2010.

Despite widely known limitations, Pakistan has done remarkably well in establishing a nuclear security regime and an evolving nuclear security culture that requires encouragement and support. It has been quite liberal in briefing U.S. officials, academics, and even journalists about its nuclear management. Over several years, Pakistan has sent officials, technicians, and administrators to receive training on modern technical solutions and management under the aegis of mutually acceptable arrangements that cater to each side's sensitivities.¹⁴

Nonetheless, part of a good security culture is continued improvement and adaptation, so there is no reason why cooperative threat reduction activities could not be pursued with Pakistan. It would have to be done in an appropriately sensitive way, rather than one that implies that Pakistan is incapable of managing its own security. There may, for example, be room for a small collaborative program to strengthen security of biological pathogens that might be of interest to terrorists. However, it is also clear that the GPP cannot pin its hopes on Pakistan for a credible extension beyond 2012.

States with suspected WMD programs

In addition to the known nuclear weapon capabilities of the DPRK and Pakistan, Iran of course has suspected nuclear weapons intentions (and suspicious activities). There are several countries that are also suspected of having illicit chemical weapons stockpiles or programs. These include the DPRK and Pakistan, as well as Iran (despite the fact that the latter two states are parties to the Chemical Weapons Convention). Syria is also suspected of some sort of chemical weapons program or stockpile. However the nature of these suspected, secretive programs makes them impossible targets for cooperative threat reduction. If and when such capacities are renounced openly there would be a possible role for the GPP in dismantling and destroying them, although experience under the CWC indicates that it is quite possible for states (like India and South Korea) to renounce their previous capabilities and deal with them entirely domestically, albeit with ultimate verification by the OPCW.

Far fewer states are suspected of currently having biological weapons programs, although such programs are inherently difficult to distinguish from legitimate biotechnology research efforts. Countries suspected of such programs include, again, North Korea, Syria and Israel. Again, these are not likely to represent opportunities for the Global Partnership unless voluntary renunciation occurs. Even then, such programs are so ambiguous that there would be little to verifiably destroy and currently no international organization to provide verification services. In the unlikely event that such a state did seek a cooperative threat relationship this is likely to be more

¹⁴ Feroz Hassan Khan, 'Nuclear Security in Pakistan: Separating Myth From Reality', *Arms Control Today*, 2009, <http://www.armscontrol.org/print/3725>, accessed 11 February 2010.

in the form of confidence-building measures that provided reassurance that a weapons program had ended rather than the traditional verification found in the nuclear and chemical weapons areas. Russia has itself not yet fully admitted the nature and extent of the Soviet BW program. If and when this changes in the future the Global Partnership may be able to expand its efforts in Russia to that field.

States without WMD but with WMD-related materials and technologies

These states fall into two categories. First are those states which previously had WMD and which have renounced them, but which may retain remnants of their programs that need to be destroyed or dealt with in some other fashion. The number of these states is small and shrinking and includes the following with the following former weapon types or programs:

Albania – chemical

Belarus – nuclear

India – chemical

Iraq – nuclear, chemical, biological

Kazakhstan - nuclear

Libya – nuclear, chemical

South Africa – nuclear, chemical, biological

South Korea – chemical

Ukraine – nuclear.

It would appear that all of these, with the exceptions of India, South Korea and South Africa, have received international assistance, whether from the US and UK or from the IAEA and OPCW, in dealing with their legacy issues. There would not appear to be much scope for the Global Partnership in respect of these states.

It may be, of course, that there are further surprise revelations of secret WMD programs that would need to be dealt with urgently. Had Syria been discovered or have admitted to have been building a plutonium production reactor for nuclear weapons before the suspected facility was destroyed by Israel, the Global Partnership could have been of assistance. While Syria might have been loathe to accept US bilateral assistance, a combined operation by Russia and Canada, for instance, could have dismantled the facility in a verifiable and environmentally sound

fashion. This raises the question of whether the Global Partnership should have a contingency plan and/or fund for such eventualities (the DPRK is another potential customer).

Perhaps the best example to date of effectively flexible CTR is the dismantlement of Libya's fledgling nuclear and chemical weapons programs. When Libya's leader, Muammar al-Gaddafi, agreed to give up his nascent WMD capabilities under pressure from the US and UK in 2003, an ad hoc partnership between Libya, Russia, the US and the UK, along with the IAEA, was effectively able to carry out the dismantling of Libya's centrifuge enrichment program and convert its research reactor core from high- to low-enriched uranium.¹⁵ The initiative also facilitated the destruction of 23 tons of mustard blister agent and 600 tons of precursor chemicals, in cooperation with the OPCW.¹⁶ According to the US National Academy of Sciences, 'The Libyan example shows the need for and importance of a robust, fast and flexible CTR capability to meet new challenges when they arise'.¹⁷

The second category of states, those with significant dual-use capabilities, whether resulting from a previous weapon program or not, could be a major target of an extended GPP. All states with a reasonable industrial capacity will have such capabilities in the form of dual use technology, facilities and/or materials. The term dual-use implies that such capabilities may be used for peaceful or military purposes. These are ubiquitous, by their nature ambiguous and therefore difficult to track, monitor and control, both on a national basis and internationally. As the US National Academy of Sciences report on Global Security Engagement rather breathlessly notes:¹⁸

The global spread of advanced technologies, the rise of asymmetric warfare, and the growing global interdependence of peoples, economies and politics have made discerning an adversary's intentions more important than ever before. The footprints of weapons-producing laboratories and the size of today's 'strategic' weapons grows smaller every day and their 'delivery systems' may be individuals or commercial cargo carriers.

Such a situation applies to all three types of WMD: nuclear, chemical and biological. Some of the specific threats are outlined below.

¹⁵ The National Academies, *Global Security Engagement: A New Model for Cooperative Threat Reduction*, The National Academies Press, Washington, DC, 2009, p. 36.

¹⁶ National Academies, p. 36.

¹⁷ National Academies, p. 37.

¹⁸ National Academies, p. 10.

Nuclear

A peaceful nuclear program, while not necessarily the precursor of a nuclear weapons program, may provide opportunities for terrorists and other unauthorized actors to acquire key components and capabilities for a nuclear weapon or, more particularly, an RDD. While nuclear power reactors in most of the 31 countries that currently have them are reportedly relatively secure, there may be exceptions. The difficulty in this area is the understandable unwillingness of governments and utilities to reveal their security plans and mechanisms and thus their implied weaknesses.

There is naturally concern, as increasing numbers of states consider the acquisition of nuclear power reactors, that among these will be states without the necessary security traditions or culture, regulatory frameworks and systems or overall governance capacities to manage a peaceful nuclear program safely and securely. Security is required not only for nuclear power plants but for the transport and storage of nuclear materials, including natural and enriched uranium at the front end of the nuclear fuel cycle and spent fuel and nuclear waste at the back end.

The IAEA and WINS are both working with states and nuclear power plant operators to improve nuclear security, but need more funds and support to do so. This is an area where the Global Partnership could help, especially in cases where the IAEA and WINS have difficulties persuading governments and/or utilities to take the necessary steps. The Partnership could also team up with the IAEA in respect of its 3-year Nuclear Security Plans, in the same way as the European Union does through its Strategy against Proliferation of Weapons of Mass Destruction. The EU not only contributes financially to the IAEA's Nuclear Security Fund but integrates some of its programmatic work into that of the three-year plans. Clearly the EU is able to participate in this way and gain international credit for it without having its contribution simply swallowed up by the Agency. Presumably this sort of 'brand recognition' is also something that the G8 partners would be interested in achieving. One specific initiative that the IAEA has foreshadowed but not yet implemented is helping states establish Nuclear Security Support Centres, designed to foster a 'systematic, business-oriented approach' to nuclear security.¹⁹ This seems perfect for the GPP, given its funding resources and own experience. It could offer to pair its members with IAEA member state recipients under such a program.

All of these issues are considered in detail in the 2010 report by the CCTC and the Centre for International Governance Innovation (CIGI) on *The Future of Nuclear Energy to 2030 and its*

¹⁹ International Atomic Energy Agency, Nuclear security – measure to protect against nuclear terrorism, Annual Report 2007, IAEA document GC(52)/9, March 2008, p. 17.

Implications for Nuclear Safety, Security and Nonproliferation, in particular Part 3 of the main report that deals with nuclear security (see www.cigionline.org).

There are many other states with peaceful nuclear programs that do not involve nuclear power plants but that are also vulnerable to illicit access. A particular vulnerability that the US has long been concerned about is the use of high-enriched uranium (HEU) in research reactors. African states alone have several such reactors. The US government has already expended great effort and resources in converting research reactors to low-enriched uranium (LEU) and repatriating the HEU either to the US or Russia, with the cooperation of the IAEA. Remarkably, in at least one case a non-governmental organization, the Nuclear Threat Initiative (NTI), has been involved in providing funding. This would seem to be an obvious area for the G8 to step in to assist, both with finance and technical assistance. Given the Partnership's considerable experience in the FSU with securing and consolidating holdings of nuclear materials, this would seem to be a perfect fit for the GPP.

The Obama administration has increased the sense of urgency by proposing that all such material be dealt with within four years. The Nuclear Security Summit being held in Washington DC in April 2010 was designed, at least in part, to secure international dedication to and cooperation in achieving this goal. The Global Partnership could respond with its own conversion and repatriation program for HEU in close coordination with the efforts of the US and the IAEA.

A sensitive issue for Canada is the fact that it currently imports HEU from the US for use as targets in producing radioisotopes at Chalk River. A Canadian announcement that it would forego such a practice by a certain date would enhance Canada's credibility in assisting others to forswear the civilian use of HEU.

A third area of concern in the nuclear field is the use of radioactive sources that may be seized for use in RDDs. There is a continuing need for strengthening systems worldwide for the proper registration, monitoring and protection of such sources. Every country, no matter how unsophisticated, uses such sources and hence the challenge is vast. The IAEA currently runs several regional programs designed to assist states with radiological security, but its capacities and resources are not matched by the demand from states that are aware of the need for improvement. This does not take account of states which are unaware and are doing little to seek assistance. A role for the Global Partnership may be found here, particularly in difficult cases where states lack both the motivation and the resources. Canada has been in recent years tightening its own radiological security measures and so is in a good position to enter partnerships with others based on its own experience and expertise.

Chemical

Although adherence to and compliance with the Chemical Weapons Convention is now almost universal, any country with a reasonably advanced chemical or petrochemical industrial sector has a latent capability to develop chemical weapons. This is why the Convention provides for verification of the civilian chemical industry to ensure that it is not misused for weapons production. Indeed, as destruction of existing stockpiles is increasingly achieved and verified, the verification resources of the OPCW will be increasingly diverted to the civilian chemical industry. However it is unlikely today that any state would seek to violate the convention by acquiring weapons that are so widely perceived as violating an international norm, that are definitively banned by such a nearly universal legal instrument and which represent such old technology. A greater threat today is that terrorists will see the use of chemical weapons as a shocking advance on their traditional weapon of choice, conventional explosives.

There has been concern for years over the lack of security at chemical facilities that could be the target of terrorists seeking acquisition of materials or simply releasing toxic industrial chemicals as a weapon. Given the ubiquity of key ingredients for chemical weapons in industry, agriculture and even domestic use, governments face an impossible task in controlling all possible avenues of terrorist access.

The OPCW has since 9/11 ramped up its program to assist states in having the requisite national implementation measures in place, as required explicitly by the CWC (and latterly by UN Security Council resolution 1540). However the task remains incomplete and many states struggle to even adopt measures to criminalize efforts by individuals and groups to attempt to misuse chemicals for weapons purposes. There could be a role for the Global Partnership here, although, as in the case of nuclear security, the G8 would presumably not be content to simply provide additional funding to the OPCW for its efforts but would want a GPP label attached

Although the OPCW is able to provide legislative support it is not funded to support physical protection measures for improving the security of transport and storage of dangerous chemicals and chemical precursors. Unlike the nuclear industry, the chemical industry is almost entirely privately owned and operated, which complicates the provision of direct assistance. The role of government is thus to oblige industry to improve security at its manufacturing plants and in transport and storage, rather than applying improved security measures directly (as in the case of nuclear weapons establishments for example). Governments also need to monitor and enforce compliance with any new requirements they impose. Ideally all states will want to establish a national critical infrastructure protection program that encompasses, in addition to military facilities, airports, ports and key government installations, such facilities as chemical and petrochemical plants. The Global Partnership could play a role in strengthening governments'

abilities to legislate, plan, regulate, monitor, police and enforce security for the chemical industry in states where these areas are below acceptable international standards.

Biological

The October 2001 anthrax attacks in the US, fears about global pandemics like SARS, avian flu and H1N1, and rapid advances in the biosciences, have raised fears that biological weapons may be chosen by terrorists for maximum impact when nuclear weapons are unavailable and conventional attacks have insufficient shock value. It is easy to exaggerate the BW threat. Hyperbole characterizes a great deal of American popular discussion and even some academic and policy literature on the subject.

There are concerns that the official response to fears of biological weapons, at least in the United States, may have made the situation worse. Paradoxically, it appears that the anthrax spores used in the 2001 US attacks emanated from a US research laboratory and the attacks carried out by an insider, not a foreign terrorist. Since then, the US has constructed numerous new facilities for biological defence research which some worry may also become the source of either accidental or deliberate outbreaks of disease.

Terrorists would face enormous difficulties in successfully mounting a biological weapons attack in the traditional military sense of a mass attack using missiles or other delivery vehicles. Governments have devoted many decades of research to seeking pathogens that have the precise attributes of robustness, longevity and contagiousness to be successfully used in such a traditional military manner and by all accounts have failed. This is one reason why President Nixon was willing have the US unilaterally renounce biological weapons in the 1970s, a move that ultimately led to the negotiation of the 1972 Biological Weapons Convention.

On the other hand terrorists, as in the case of nuclear weapons, are unlikely to seek a traditional path to biological weapons delivery but are much more likely to seek to expose humans, by whatever means are available, to the chosen pathogen and let nature take its course. It is thus essential that the highest standards of security are applied to facilities where research is being carried out using such pathogens or when they are in storage or transport. As the biotechnology industry grows, as more university and other research institutes gain access to pathogens, so must security be ensured. There is a role for the Global Partnership to work collaboratively to ensure that all countries that have such facilities and such access apply the highest standards of physical security. High-level containment facilities are expensive capital investments and may require the same levels of funding and the type of project management expertise that the Partnership has demonstrated in the case of the FSU.

There is also a threat from the spread of biotechnology expertise and training. This has drawn the security and life sciences communities together in some countries to ensure that education and training in the biosciences do not proliferate dual-use knowledge to suspect individuals or groups. Given the worldwide availability of information on the internet and through other sources this represents an enormous challenge. The United Kingdom has attempted to set up mechanisms to screen foreigners seeking education in 'sensitive' technologies such as biotechnologies. However such measures start to impinge on other values such as academic freedom and programs such as international development assistance through educational exchanges. The Global Partnership is unlikely to have a role to play here as such initiatives would also start to encroach on the area of national intelligence.

One aspect where the Partnership might contribute is in global monitoring of suspicious disease outbreaks. While this is not preventive in the way that other CTR measures are, it can contribute towards detecting illicit research that results in unintended releases of pathogens. The World Health Organization has been seeking to establish a comprehensive global monitoring system for natural outbreaks of disease and several states have been strengthening their own monitoring systems. This could be a useful basis for collaborating with the majority of states, which currently have non-existent or poorly developed systems.

Unlike the CWC, the BWC does not include a verification regime, so the net benefit of greater international collaboration on bio-security is potentially greater than for chemical security. A tiny Implementation Support Unit (ISU) for the BWC has been established in Geneva. Its role is in part to promote the effective implementation of the BWC, including the adoption of effective national implementation measures. These are also required, even of non-state parties to the BWC, by UN Security Council resolution 1540. The Global Partnership could assist the ISU by providing additional personnel and resources to permit it to work more effectively and broadly. Its advantage is that it is a multilateral initiative supported by the parties to the BWC.

The biggest challenge faced by Global Partnership involvement in biological security is that it may not be obvious to most states that biological weapons are a threat and that they have a role to play in their emergence. In addition, some of the measures involved in cooperative threat reduction in this area may involve too much transparency and be too intrusive for some potential partners. Improving the security of biological research facilities may, for instance, involve a level of transparency that many states are uncomfortable with. The extent to which cooperation is possible would need to be evaluated on a state-by-state basis. If cooperation can be linked to global health issues this may pave the way to more BW-specific activity

States with no identifiable WMD materials or technology

A third category of states comprises those with no identifiable WMD materials or technology. Given that most countries today have some latent WMD capability in at least one of the three main areas, these states are among the poorest, least developed and least aware of and concerned by the WMD proliferation threat—although they may be willing to be compliant to the extent that they can. Here the challenge is to convince such states they are vulnerable to being used by terrorists for a variety of illicit activities, most notably:

- Transshipment and smuggling of WMD-related materials and technology
- The use of their territory for secret manufacture and assembly of WMD.

Since the Global Partnership was inaugurated several international initiatives have been launched to deal with these threats, most notably Security Council resolution 1540; the PSI, increased attention by the IAEA to detect illicit nuclear trafficking networks, and campaigns by various international bodies to help states improve their national implementation measures, export controls, border security and surveillance, and customs and immigration. The Global Partnership has itself been involved in this type of activity in Georgia. There may be further opportunities for the GPP in this area.

Security Council Resolution 1540

UN Security Council Resolution 1540 of April 2004 requires that states:²⁰

In accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them.

In seeking better national measures to protect WMD related materials and technologies from access by terrorists, the initiative is both a security and a non-proliferation measure. The resolution requires all states to develop and maintain: measures to account for and secure such items; ‘appropriate and effective’ physical protection measures; ‘appropriate and effective’ border controls and law enforcement agencies; and national export and trans-shipment controls. Unfortunately the Council did not prescribe the characteristics of the measures that states were required to adopt, nor did it define ‘appropriate’ or ‘effective’.

²⁰ UN Security Council Resolution 1540, S/RES/1540(2004), <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N04/328/43/PDF/N0432843.pdf?OpenElement>, accessed 18 March 2010.

Adopted under Chapter VII of the UN Charter, which makes it legally binding on states, the resolution requests periodic reports by states on their progress in implementing the requirements. The Council has extended the resolution twice, in 2006 (resolution 1673) for two years and in 2008 (resolution 1810) till 2011.

To ensure implementation and facilitate compliance, the resolution established a 1540 Committee comprised of Security Council members. The Committee has reviewed the reports submitted and called on states that have not answered questions adequately or have not yet submitted a report to do so.²¹ Thus, implementation of Resolution 1540 has focused on compliance with the requirement by states to submit reports, rather than in implementing the substantive measures called for. Initially the Committee was hampered by not having the support of a dedicated secretariat or technical experts like those furnished to the Counter-Terrorism Committee established by Security Council resolution 1373 in 2001. The 1540 Committee has belatedly acquired such support, including a 1540 Committee of Experts.

While the initial mandate of the Committee was to last only two years, universal implementation of the supposedly binding resolution has taken much longer than anticipated. Consequently the Committee has had its mandate renewed when the resolution itself was renewed. By July 2008, four years after the passage of the initial resolution, only 155 UN member states had submitted a national report, while 37 still had never submitted a report at all.²² In response to the Committee's request for new reports in 2007, 103 states responded and 102 of these subsequently provided additional information.

These figures overstate compliance, since some of the reports submitted have been inadequate, ranging from the incomplete to the farcical. The most often cited example is Yemen's, submitted only after prompting by the Chair of the 1540 Committee. Just five lines long, it consisted of the statement that Yemen does not possess WMD. This is an especially problematic case given the prevalence of terrorist entities in Yemeni territory and its potential degradation into a failed state.²³

A 2007 study by Princeton University's Woodrow Wilson School of Public and International Affairs concluded that no country is in full compliance with the resolution's nonproliferation

²¹ George Bunn, 'Enforcing International Standards: Protecting Nuclear Materials From Terrorists Post-9/11', *Arms Control Today*, January/February 2007.

²² United Nations, 'Report of the Committee established pursuant to Security Council Resolution 1540 (2004)', Un Security Council document S/2008/423, 2008, p. 6

²³ Lars Olberg, 'Implementing Resolution 1540: What the National Reports Indicate', *Disarmament Diplomacy*, 2006; Deborah West, 'Combating Terrorism in the Horn of Africa and Yemen', *World Peace Foundation, Report No. 40*, John F. Kennedy School of Government, Harvard University, Cambridge, 2005.

requirements.²⁴ Based on discussions with members of the Resolution 1540 Committee and support personnel, the authors observed that by some measures even countries considered leaders in nonproliferation efforts would be no more than 50% compliant.²⁵ Many states lack sufficient capacity and expertise to effectively implement 1540. Sub-Saharan African countries, which are ‘little inclined to divert scarce resources for implementing nonproliferation obligations’, face technical problems even in compiling a report of their intended steps to implement it, much less in carrying out any of the practical steps required.²⁶ Developing countries have much more immediate and vexing problems to deal with than the remote threat of WMD terrorism. Many which could become transshipping points, such as small island states for instance, simply do not have the resources or desire to implement and enforce effective border controls.

A comprehensive review of the implementation of 1540 released in December 2009 by the Stanley Foundation, also based on intensive discussions among the 1540 Committee members, the 1540 Committee of Experts and representatives of regional and international organizations concluded that ‘One of the most positive and noticeable developments of the past few years has been the growing acceptance of 1540 as a legitimate international security instrument’.²⁷ But it also reaffirmed that implementation remains slow and uneven, ‘in part due to the incredible diversity of different national circumstances and the lack of rationalized machinery at the global level’.

In terms of assessing the threat posed by this category of states, one advantage of the national reporting required under 1540 is that it provides a roadmap of states in need of assistance (unfortunately it also provides an indication to terrorists of where the weak spots are in the global non-proliferation chain). The following chart indicates states that have self-identified as needing assistance for fulfil their 1540 obligations in several specific areas or are ‘generally interested’ in receiving assistance.²⁸

Country	Legislation and Regulatory Assistance	Import/Export Licensing and Controls	Border or Customs Assistance	Detection Training or Detection Hardware	Police, Border, Customs, Military	Generally Interested
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²⁴ Joseph C. Bristol, ‘A New Urgency for Nonproliferation: Implementing United Nations Security Council Resolution 1540’, Woodrow Wilson School of Public and International Affairs, Princeton University, 2007, p. 10.

²⁵ Bristol, p. 10.

²⁶ Monika Heupel, ‘Implementing UN Security Council Resolution 1540: A Division of Labor Strategy’, *Carnegie Endowment for International Peace*, Washington DC, 2007, pp. 6-7.

²⁷ Stanley Foundation, ‘Implementing UNSCR 1540: next steps towards preventing WMD terrorism,’ http://www.stanleyfoundation.org/publications/policy_memo/ImplementUNSCR15401209PM.pdf, 2009, p. 2.

²⁸ Reproduced from *Global Security Engagement* report, p. 82.

	Training					
Albania	X	X	X			
Angola						X
Armenia						X
Bahamas	X		X	X	X	
Belize						X
Benin	X		X			
Bolivia						X
Cambodia	X			X	X	
Columbia	X		X	X	X	
Guatemala				X	X	
Jamaica						X
Lebanon	X					X
Lithuania				X		
Marshall Islands		X	X	X		
Morocco	X				X	X
Philippines	X		X	X	X	X
Serbia	X		X	X	X	
Syria						X
Thailand	X	X		X	X	
Uzbekistan	X	X			X	

It has been suggested that the most important role for the 1540 Committee should be as ‘matchmaker’ between willing donors and states needing assistance in capacity building, especially in crafting legislation and regulations. This is a role that the Committee unfortunately currently struggles to fulfil due to lack of resources. One encouraging development is the extent to which regional and sub-regional organizations have begun playing a significant role in assisting in 1540 implementation.²⁹ The IAEA and OPCW have also been helpful. But this is also likely to be an opportunity for the GPP. At least part of the Partnership’s function in respect of the FSU has been to match partners in terms of capacity to provide and willingness to receive, so it is quite used to the process and skilled in the delicate diplomacy often involved. If the G8 can muster the resources and personnel to assist developing countries with national implementation of 1540 it can potentially make a noticeable contribution to counter-proliferation. As the chart indicates above it could be pushing on an open door, as to some extent it was in the former Soviet states in terms of their recognition of their need for assistance.

²⁹ Lawrence Scheinman, ‘Implementing Resolution 1540: The Role of Regional Organizations, United Nations Institute for Disarmament Research, New York, 2008.

The GPP could do this not necessarily in terms of a direct WMD security-oriented approach, which may have little resonance with developing countries, but in the context of their developmental and governance needs. A report by the Henry L. Stimson Center, *The Next 100 Project: Leveraging National Security Assistance to Meet Developing World Needs*, proposes ways in which the US and others can meet counter-proliferation objectives while at the same time helping developing countries to meet their development needs.³⁰ For example, piracy in East Africa is a problem identified by both the G8 and East African governments, and it has potential WMD proliferation implications. Joint efforts under the banner of the Global Partnership could be mutually beneficial. As another example, investments in public health can serve the joint purpose of improving the health infrastructure of a country as well as improving its ability to monitor the use of biological agents.

One particular area of great need in the developing world is export control assistance. Improving export control systems not only helps states to raise more revenue from exports but also has non-proliferation implications. Some assistance to states is already underway in some regions, particularly that provided by the EU under its Strategy against Proliferation of Weapons of Mass Destruction to the states of the Caucus and Central Asia. However there is a shortage of personnel and funding for other regions, notably Africa, and there are currently no structures or organization dedicated specifically towards improving export controls worldwide. The Global Partnership could, beyond 2012, work towards putting that infrastructure in place.

Illicit trafficking

Since revelations surfaced about the extent and nature of the A.Q. Khan nuclear smuggling network there has been increased recognition that this is a potential threat in all areas of WMD. Part of the challenge in preventing illicit trafficking networks is that many states have no capacity to identify WMD materials or even dual-use materials passing through their territories. The process may be complicated by the fact that illicit trafficking can begin with a perfectly legal export of a dual-use item, often from a G8 country, which is then diverted from its putative legal destination through several transshipping points before ending up with an end user not originally specified. Transshipment points may be in countries that do not even have legislation banning such activities, much less the customs and enforcement and seizure capacities needed.

An example is the United Arab Emirates (UAE), often criticized as being a hub for the illicit transfer of nuclear technology despite its professed efforts to combat it. Iran used UAE ports to 'evade international restrictions by transshipping goods from there' and AQ

³⁰ Brian Finlay and Elizabeth Turpen, *The Next 100 Project: Leveraging National Security Assistance to Meet Developing World Needs*, Henry L. Stimson Center, Washington DC, 2009.

Khan 'relied on the UAE as a key hub in assisting clandestine uranium-enrichment programs in Iran and Libya'.³¹ The UAE has since joined the US National Nuclear Security Administration's Megaports Initiative, a program that seeks to install radiation detecting equipment.

The GPP could establish a program of assistance for states with ports that have proven particularly vulnerable to transshipping but which may be reluctant to accept assistance from the US. Unlike some of the other WMD threats listed, this is again one in which willing partners are likely more readily available, if approached respectfully. Countries with ports identified as a hub for illicit transfers are generally no more pleased about the situation than the rest of the world, and would likely readily accept assistance, financial or otherwise. There are undoubtedly ports in the Middle East, Africa and the Caribbean that would make likely candidates. Port security is not a current emphasis of the Global Partnership, but it is one problem that the program may be well suited to address.

In term of multilateral endeavours, another way in which the GPP could assist in combating WMD and dual-use trafficking would be to provide the IAEA with more funding and technical assistance for its Illicit Trafficking Database and for its Trade and Technology Analysis Unit (which is seeking to establish patterns of refused export applications for weapons-related and dual-use technologies).

Conclusion

Continuation of the Global Partnership beyond 2012 and beyond the boundaries of the FSU can further reduce the already remote chances of a terrorist organization acquiring a nuclear, biological or chemical weapon. The challenge, however, is identifying which threats remain priorities. The nuclear, chemical and biological weapons and materials left over after the collapse of the Soviet Union surpassed that of the rest of the world's combined and was an obvious and present danger, even if no particular terrorist candidates for misusing these assets could be identified. Today, both the source of the weapons and materials that are vulnerable to terrorist seizure and misuse and the identity of terrorist groups or individuals willing and able to perpetrate such acts are more obscure and less easily identified. Pakistan and the DPRK are the two most often cited countries about which there is concern about the security of WMD and associated materials. Both are, however, notoriously challenging for Western states to work with, limiting the opportunities for a renewed Global Partnership.

The Global Security Engagement report by the US National Academy of Sciences argues that a 'new, equally creative set of integrated and coordinated global security engagement programs is

³¹ Miles Pomper, 'U.S., UAE Sign Nuclear Cooperation Pact', *Arms Control Today*, March 2009, p. 44.

now required to address a broader range of WMD and terrorist threats on a global scale'.³² The report stresses that cooperative threat reduction needs to be flexible and adaptive in the years to come to take advantages of opportunities as they arise. The Global Partnership will need to emulate this approach and be more opportunistic and creative in order to be effective in new regions. This study has identified several areas where the GPP could both identify a threat and a needed response and where it could make a convincing case that it has the resources and expertise to make a critical difference. These are:

- Establishing a contingency plan and fund for situations in which a state suddenly decides to forgo its WMD capabilities, is willing to accept foreign assistance in doing so but prefers mixed multilateral involvement rather than relying on the most obviously capable state in these circumstances, the United States; in the case of North Korea the G8, as a way of encouraging the Six-Party process, could signal its willingness to help in advance
- Providing financial assistance to the IAEA in fulfilling its 3-year Nuclear Security Plan and Nuclear Security Fund (one specific initiative could be to support exclusively the proposed National Security Support Centres to be established in member states)
- Play a major collective role in the Obama plan for securing all nuclear material within 4 years, including the 'claw back' of HEU from civilian research reactors (the plan is wildly optimistic and needs all the support it can get)
- Establish a program to assist states in registering, tracking and securing radioactive sources
- Assist states, via the OPCW, with developing security plans and systems for the use, handling, transport and storage of toxic chemicals useful for chemical weapons
- Establish a program to assist states using pathogens for peaceful purposes, but that are likely candidates for biological weapons, to ensure that proper containment facilities and procedures are in place for handling them
- Assist states in establishing national disease monitoring systems and linking them to the World Health Organization's efforts to establish a truly global system
- Contribute personnel and resources to the Implementation Support Unit for the Biological Weapons Convention

³² National Academies, p. 35.

- Offer to assist the 1540 Committee in matching donors to recipients to help the latter implement both their reporting and substantive obligations under resolution 1540
- Establish a program to assist states in putting in place proper export control systems, including customs and border capacities
- Assist the IAEA to improve its Illicit Trafficking Database and Trade and Technology Analysis Unit.

While none of these initiatives separately would justify a continuation and extension of the Global Partnership and are not in the same league as some of the expensive and dramatic activities of the current 10-year program, they do illustrate that the next generation of cooperative threat reduction activities will require greater flexibility, ingenuity and a more subtly argued case than the first round. The greatest challenge will not be in having experts identify discrete areas where the Program really can do useful work, but in persuading publics and purse-string holders that a package of such undramatic, obscure and often painstaking efforts will truly be able to make a difference to global security in a way that dispatching the Soviet weapons legacy to history surely did.