An Action Plan to Counter the Proliferation of Weapons of Mass Destruction in the Asia Pacific

by Brad Glosserman

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Executive Summary

The threat posed by the proliferation of weapons of mass destruction (WMD) continues to grow. The possibility of deliberate or accidental use of those weapons by governments remains uncomfortably high. The growing stockpiles of nuclear materials and the diffusion of related technology and know-how make the prospect of WMD use by nonstate actors appallingly real. It is with good reason that nonproliferation now tops most lists of national security concerns.

The global nuclear inventory includes more than 30,000 nuclear weapons, and enough HEU (highly enriched uranium) and plutonium for 240,000 more. Twenty-nine countries have previous, current, probable or suspected chemical weapons programs; 27 have either previous, current, probable or suspected biological weapons programs. The diffusion of dual-use biotechnology ensures that biowarfare capabilities are likely to spread. The nexus of technology and terrorism is the 21st century security planner's nightmare.

The international community has developed a wide range of instruments to stem WMD proliferation, including treaties on nuclear, chemical, and biological weapons, United Nations resolutions, "coalitions of like-minded states" such as the Proliferation Security Initiative and the Nuclear Supplies Group, and regional initiatives, such as nuclear weapons free zones and the European Union Action Plan to Counter the Proliferation of WMD.

East Asia has real reasons to be concerned about WMD and their proliferation. Several states in the region have WMD arsenals; the radioactive materials needed to build a "dirty bomb" can be found in just about every country. It is one of the fastest growing producers of nuclear energy. Deepening economic links and integration have made it easier to move WMD or associated know-how around the region. Once a consumer of strategic goods, Asian nations are increasingly able to produce them on their own. As a result, there is the danger that East Asian nations can actively contribute to WMD proliferation.

Asian governments are beginning to recognize the need to take proliferation seriously. All the countries in East Asia have joined the NPT and the Biological Weapons Convention; North Korea is the only holdout from the Comprehensive Test Ban Treaty and the Chemical Weapons Convention. WMD proliferation is on the security agenda at meetings of the ASEAN Regional Forum, APEC, and in ASEAN meetings with its dialogue partners. There are other official and nongovernment initiatives, too, including the work of the Council for Security Cooperation in the Asia Pacific (CSCAP). Still, there is a gap between the region's rhetorical commitment to fight WMD proliferation and its actions. Concerns about sovereignty, national capacity, and the "fairness" of the global nonproliferation order (to name three issues) have limited the effectiveness of regional nonproliferation programs.

Flaws in the nonproliferation regimes have become increasingly obvious. The NPT has loopholes and ensuring that they are not exploited is difficult. The spread of knowledge regarding WMD means technical barriers to designing weapons and to mastering the processing steps have eroded. International law itself has not kept pace with new security threats and the rising importance of nonstate actors. Steps have been taken to fill gaps, but they are only first

steps. Governments, international organizations, and nongovernmental bodies have proposed remedies to the problem of WMD proliferation, but they have encountered resistance.

Asia's rising international role and influence afford it an opportunity to strengthen the nonproliferation regime. This paper proposes an Asia Pacific Action Plan to counter WMD proliferation. It is modeled after the EU Action Plan, but it's tailored to the region's political, economic, and technical realities. The Action Plan rests on a set of basic principles. They include recognition of the WMD threat, a commitment to embrace a wide range of measures, nationally, regionally, and globally, that cross the spectrum of concerns from conflict prevention to consequence management. Export controls are a key component of the plan, as is the right to the use of peaceful nuclear technology.

The Action Plan includes a statement identifying the WMD threat and a declaration of Asia's intent to become a key player in the global nonproliferation order. States would commit to universal compliance with elements of the global nonproliferation order; commit to halting all illegal trafficking in WMD and WMD components; and commit to take all possible measures to control nuclear and radioactive sources. It promotes cooperation with other regulatory bodies fighting WMD proliferation, and calls on ASEAN to expand its nuclear weapons free zone to include the terms of the Additional Protocol and prohibit the reprocessing and/or enrichment of uranium. It also endorses a regional export controls regime and national capacity building to that end.

An Asia Pacific Action Plan would support, strengthen, and solidify nonproliferation norms. Statements by governments in support of these norms can help transform them from international legal commitments to preemptory norms of state behavior. It would also focus on grassroots capacity building, helping East Asian nations develop the knowledge, skills, or resources needed to implement nonproliferation programs.

A successful nonproliferation regime must rest on a consensus about security threats. Despite growing attention to the nexus of terrorism and technology, there is little real agreement on the seriousness of that threat. Developing nations tend to focus on small arms, domestic threats, or challenges to economic growth. Finding common ground has been exacerbated by a sense of inequality about the NPT regime. Nonnuclear weapons states charge that nuclear weapons states have ignored their responsibility to reduce and eliminate their arsenals. There is concern that attention has focused on the supply side of the equation rather than factors that encourage states to acquire WMD. There must be more attention to causes of instability, conflict prevention, and dispute resolution.

It is yet unclear if we are at a nuclear tipping point, but complacency would be a mistake. Eighteen industrialized states can produce nuclear weapons; six others have renounced nuclear weapons or weapons development programs. Norms can change. Four decades ago, nuclear weapons were considered a status symbol. Now, they are considered a taboo. That pendulum can swing once again.

An Action Plan to Counter the Proliferation of Weapons of Mass Destruction in the Asia Pacific

By Brad Glosserman

The threat posed by the proliferation of weapons of mass destruction (WMD) continues to grow. The possibility of deliberate or accidental use of those weapons by governments remains uncomfortably high. The growing stockpiles of nuclear materials and the diffusion of related technology and know-how make the prospect of WMD use by nonstate actors appallingly real. It is with good reason that nonproliferation now tops most lists of national security concerns.

A multilayer regime has been fashioned to cope with proliferation dangers. A web of treaties and multilateral organizations has been complemented by regional and ad hoc initiatives and buttressed by national laws. Nevertheless, this thick weave has gaps and they have become increasingly apparent. This paper looks at the threat posed by WMD proliferation and the components of the global response to this danger, with particular attention to the East Asian dimension of this problem. It is derived from the work accomplished thus far by the Council of Security Cooperation in the Asia Pacific (CSCAP) Study Group on Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific, which is striving to develop an Asia Pacific Handbook and Action Plan for Nonproliferation (Appendix A). The paper closes with thoughts about prerequisites for the realization and success of an Action Plan to counter the proliferation of WMD in East Asia.

The WMD Threat

Weapons of mass destruction are an age-old threat.[1] Histories of ancient Greece record the use of roots to poison water supplies and the Chinese have been called "the original masters of chemical warfare," dating back to the 7th century BC.[2] Nuclear and radiological weapons are the newest components of the WMD arsenal, but they have seized the imagination in the post-World War II world. Fortunately, after the atomic bombings of Hiroshima and Nagasaki, governments have refrained from using nuclear weapons. There have been threats and periodic resorts to brinksmanship, but the moral stigma attached to the use of nuclear weapons – and the prospect of retaliation – has thus far kept them from being used in a conflict.

Stigma and the seeming lack of utility have not kept nations from acquiring and expanding WMD arsenals. It is estimated that the global nuclear inventory includes more than 30,000 nuclear weapons, and enough HEU (highly enriched uranium) and plutonium for 240,000 more.[3] Five countries – China, France, Great Britain, Russia, and the United States – are recognized as "nuclear weapons states" (NWS) under the Nuclear Non-Proliferation Treaty (NPT). Three others – India, Israel, and Pakistan – are considered "gray" states: possessors of nuclear devices

[1] Some question the utility of the phrase "weapons of mass destruction." As shorthand for three classes of weapons, it works. But the three types of weapons are very different and, as the historical record shows, they have been treated differently by states and the international community. The treaties developed to deal with them differ considerably and the responses required to control their spread are also very different. Nonetheless, all represent very real threats.
[2] "A Brief History of Chemical and Biological Weapons," at www.cbwinfo.com/History/ancto19.shtml
[3] Graham Allison, "How to Stop Nuclear Terror," *Foreign Affairs*, January/February 2004, p. 66.

(in the case of Israel, presumed; for India and Pakistan, declared and demonstrated) but not recognized by the NPT as nuclear weapons states. A number of other countries are suspected of pursuing nuclear weapons programs, North Korea and Iran most prominent among them.

The other components of the WMD arsenal are more widespread. One authoritative source lists 29 countries with previous, current, probable or suspected chemical weapons programs; 27 have either previous, current, probable or suspected biological weapons programs.[4] The diffusion of dual-use biotechnology ensures that biowarfare capabilities are likely to spread.[5]

The use of weapons of mass destruction has been constrained by moral concerns and by military utility: chemical and biological weapons are considered unreliable and their impact is uncertain.[6] A powerful constraint on the use of nuclear weapons has been deterrence: the prospect of "mutually assured destruction" (MAD) following the use of a nuclear device prevented governments from choosing the nuclear option in a crisis. (The prospect of a nuclear response to the battlefield use of chemical or biological weapons has deterred most governments from using those arsenals in a conflict as well.) While MAD is no longer a serious concern, the cost of a nuclear exchange remains unacceptably high to most, if not all, governments.

The threat environment has changed considerably in the post-Cold War world, however. The prospect of superpower conflict has diminished considerably. Now, the primary danger is accidental use or the theft of nuclear materials from a poorly guarded arsenal. Former U.S. Ambassador to Japan Howard Baker, a leading proponent of more aggressive actions to clean up nuclear arsenals, complained that "it really boggles my mind that there could be 40,000 nuclear weapons, or maybe 80,000 in the former Soviet Union, poorly controlled and poorly stored, and that there is not a near state of hysteria about the danger."[7]

It is estimated that a crude nuclear weapon requires only 25 kilograms of highly enriched uranium; a more sophisticated design would require only 12 kilograms of HEU or 4 kilograms of plutonium. HEU is used in over 100 research reactors worldwide; the U.S. and Russia have hundreds of tons of military and civilian HEU; a number of other countries have large stockpiles of plutonium for use in nuclear power reactors.[8] As noted, it is estimated that there is sufficient plutonium and highly enriched uranium to produce 240,000 nuclear weapons.[9]

The nexus of technology and terrorism – the prospect of Osama bin Laden with a nuclear device – is the 21st century security planner's nightmare.[10] As U.S. President George W. Bush explained, "The greatest threat before humanity today is the possibility of secret and sudden attack with

[4] Monterey Institute of International Studies, Chemical and Biological Weapons Resource Page, at http://cns.miis.edu/research/cbw/possess.htm
[5] See "A Double-Edged Sword: Globalization and Biosecurity," by Kendall Hoyt and Stephen G. Brooks, *International Security*, Vol. 28, No. 3, Winter 2003/04, p. 123-149.
[6] Biological and chemical weapons have been used in conflict in modern times. Iraq is alleged to have used chemical weapons during its war with Iran in the 1980s.
[7] Quoted in Allison, op cit.
[8] "Global Security: Preventing Nuclear Terrorism," Union of Concerned Scientists, at www.ucsusa.org/global_security/nuclear_terrorism/index.cfm
[9] Allison, op cit.
[10] *The National Security Strategy of the United States*, September 2002.

chemical or biological or radiological or nuclear weapons. … These terrible weapons are becoming easier to acquire, build, hide, and transport. Armed with a single vial of a biological agent or a single nuclear weapon, small groups of fanatics, or failing states, could gain the power to threaten great nations, threaten the world peace."[11]

"Loose nukes" are just one of the dangers. Security officials are increasingly concerned that terrorists could attack nuclear facilities. Alternatively, there are fears that such groups could get their hands on materials to construct a "radioactive dispersion device," or RDD. Such a device is not considered a weapon of mass destruction, but its use would create mass panic. By one count, there were over 600 incidents of nuclear smuggling from 1992 to 2002, affecting over 50 countries on all five continents.[12]

The diffusion of increasingly sophisticated technology and know-how has facilitated WMD proliferation. The revelations surrounding Pakistani scientist Abdul Qadeer Khan's "nuclear K-mart" have alerted the world to the scale and complexity of trafficking by nuclear "entrepreneurs." Mohamed ElBaradei, director general of the International Atomic Energy Agency (IAEA), was stunned by Khan's nuclear network. "When you see things being designed in one country, manufactured in two or three others, shipped to a fourth, redirected to a fifth, that means there's lots of offices all over the world. The sophistication of the process, frankly, has surpassed my expectations."[13] Khan, the father of Pakistan's atomic bomb, has been linked to nuclear weapons development programs in Libya, Iran, and North Korea. The danger extends to other WMD programs. A recent study concludes that bioweapons "have become one of the key security issues of the twenty-first century," attributing this danger, in part, to "the global diffusion of dual-use biotechnology."[14] It should be remembered that the extremist religious group Aum Shinrikyo developed and used sarin gas in its March 1995 attack on the Tokyo subways.

It should come as no surprise, then, that Mr. ElBaradei considers the threat of nuclear terrorism as "real and imminent."[15] William Trotter, a U.S. expert on proliferation, warns that the world is a crucial juncture: decisions being contemplated by governments today could determine whether nuclear weapons are used in our lifetime. [16]

The World's Response

New proliferation threats have not arisen as a result of indifference to the problem. The international community first tackled WMD concerns in 1972, when the Biological and Toxic

[11] Remarks by the President on Weapons of Mass Destruction Proliferation, Feb. 11, 2004.
[12] Andrew Prosser, "Nuclear Trafficking Routes: Dangerous Trends in Southern Asia," Nov. 22, 2004, available at www.cdi.org
[13] Quoted in "UN Official Warns of 'Wal-Mart' in Nuclear Trafficking," by Mark Landler, *The New York Times*, Jan. 23, 2004. See also, "Individuals Supplying Nuclear Trade, Officials Say," by Douglas Frantz and Maura Reynolds, *Los Angeles Times*, Jan. 29, 2004.
[14] "Pathogens as Weapons: The International Security Implications of Biological Warfare," by Gregory Koblenz, *International Security*, Vol. 28, No. 3, Winter 2003/04, p. 84-122.
[15] "Nuclear Nonproliferation: Global Security in a Rapidly Changing World," speech to the Carnegie International Nonproliferation Conference, 21 June 2004.
[16] Cited in Brad Glosserman, "Nuclear Sword of Damocles," *The Japan Times*, Aug. 3, 2004.

Weapons Convention opened for signature; it was the first multilateral disarmament treaty banning the production and use of an entire category of weapons.[17] In the last decade, "the international community has made strenuous efforts to either stem or reverse weapons proliferation. Significant progress has been made in recent years, most noticeable in this regard have been the indefinite extension of the Treaty on the Nonproliferation of Nuclear Weapons (NPT) (Appendix D), the conclusion and entry into force of the Convention on Chemical Weapons (CWC), and the adoption by the United Nations General Assembly of the Comprehensive Test Ban Treaty (CTBT)."[18]

In addition to these treaties, there are multilateral initiatives designed to fill the more obvious gaps in the nonproliferation regime. Export control regimes aim at controlling the supply of nuclear, chemical, and biological weapons and their components that can be used in the design and development of weapons of mass destruction and their delivery systems. The four principal groups are the Australia Group[19], the Nuclear Suppliers Group[20], the Missile Technology Control Regime[21], and the Wassenaar Arrangement[22]. These export controls have proven to be essential elements of any effective nonproliferation strategy, but they are controversial: the members of these groups tend to be developed countries (since they possess the technology that is of concern) and developing countries complain that export controls are discriminatory and establish obstacles to the transfer of technology. Nonetheless, effective export control regimes are of rising importance given the diffusion of WMD technologies and know-how, and the increasing integration of regional economies, which facilitates trade and the spread of such technology.[23]

These initiatives are part of a growing number of "coalitions of the willing" that bring together like-minded states to tackle shared concerns. One high-profile effort is the Proliferation Security Initiative (PSI), which is designed to halt the spread of WMD by sea, ground, and air. First suggested in a speech by President Bush in Krakow, Poland on May 31, 2003, the PSI comprised a "core group" of 18 nations (no longer identified as such); another 60 have voiced support for the PSI Statement of Principles. It is "a global initiative with global reach, under which participants agree "to move quickly on direct, practical measures to impede the trafficking in

[17] The treaty entered into force March 26, 1975. Critics complain that the absence of a formal verification regime to monitor compliance has limited its effectiveness.
[18] Jing-dong Yuan, "Asia and Nonproliferation after the Cold War: Issues, Challenges and Strategies," University of British Columbia, Institute of International Relations, Working Paper 27, February 1999, p. 1.
[19] Details at www.australiagroup.net. As of Feb. 1, 2006, there are 40 members, of which seven – Australia, Canada, the European Commission, Japan, the ROK, New Zealand, and the U.S. – are CSCAP members.
[20] Details at www.nuclearsuppliersgroup.org. As of Feb. 1, 2006, there are 45 members, of which eight – Australia, Canada, Japan, the ROK, New Zealand, Russia, and the U.S. – are in CSCAP (several EU countries are members as well).
[21] Details at www.mtcr.info. As of Feb. 1, 2006, there are 34 members, of which seven – Australia, Canada, the PRC, Japan, the ROK, New Zealand, Russia, and the U.S. – are in CSCAP (several EU countries are members as well).
[22] Details at www.wassenaar.org. As of Feb. 1, 2006, there are 39 members, of which seven – Australia, Canada, Japan, Russia, the ROK, New Zealand, and the U.S. – are in CSCAP (several EU countries are members as well).
[23] For an excellent discussion of the role of export controls, see "Introduction to Nonproliferation Export Controls," by Michael D. Beck and Seema Gahlaut, in *To Supply or to Deny: Comparing Export Controls in Five Key Countries*, by Michael D. Beck, et al, Kluwer Law International, 2003, p. 1-22.

weapons of mass destruction, missiles and related items."[24] The U.S. has also launched the Container Security Initiative (CSI), which aims at tightening security at ports and shipping facilities. The voluntary initiative is designed to screen containers that pose a high risk for terrorism. It currently targets only the millions of containers being shipping into the United States. After a majority of the world's 20 mega ports joined the CSI, it has been opened to any country that wishes to join.[25]

A new and potentially significant piece of the puzzle is United Nations Security Council Resolution 1540, passed unanimously on April 28, 2004.[26] (Appendix E) The resolution was intended to fill a gap in existing international law. It creates a legal obligation for all member states "to take cooperative efforts to prevent illicit trafficking in nuclear, chemical, or biological weapons, their means of delivery and related materials."[27] It specifically calls on them to refrain from supporting nonstate actors' attempts to acquire such weapons or materials, and to pass appropriate effective national laws to facilitate that effort, including export and transshipment controls.

UNSCR 1540 follows up on commitments made by the Group of Eight (G8) leading industrialized nations. The G8 has used its annual summits to highlight the threat posed by the proliferation of WMD and established frameworks for action. In 2002, the group launched the Global Partnership against Weapons and Materials of Mass Destruction, which supports cooperative programs, initially in Russia, to address nonproliferation, disarmament, counterterrorism and nuclear safety issues.[28] A year later, the G8 recognized the proliferation of WMD and their delivery systems, together with international terrorism, as "the pre-eminent threat to international peace and security," invited other nations to join the Global Partnership, and endorsed an Action Plan to secure radioactive sources.[29] In 2004, the group adopted a G8 Action Plan on Nonproliferation.[30] The Action Plan called for a host of measures to reduce the risk of nuclear proliferation and the possibility that terrorists will acquire nuclear technology and materials, while ensuring that the world would still enjoy the benefits of peaceful nuclear technology. It endorsed the PSI and the Global Partnership; called for implementation of the Evian Initiative on Radioactive Source Security; it affirmed the need to handle critical nonproliferation challenges such as that posed by the North Korean and Iranian nuclear programs; it recognized the dangers posed by chemical and biological weapons; and it called for more international efforts to secure the Chernobyl reactor site. At the 2005 summit, the G8

[24] Quoted in "Introduction," by Ralph Cossa, *Countering the Spread of Weapons of Mass Destruction: the Role of the Proliferation Security Initiative*, Pacific Forum CSIS Issues & Insights, Vol. 4, No. 5, July 2004, p. 1.
[25] For more information on the CSI, see *Ports in a Storm: The Nexus Between Counterterrorism, Counterproliferation, and Maritime Security in Southeast Asia*, by Tamara Renee Shie, Pacific Forum CSIS Issues & Insights, Vol. 4, No. 4, July 2004.
[26] Text available at http://www.state.gov/t/np/rls/other/31990.htm
[27] Gabriel H. Oosthuizen and Elizabeth Wilmshurst, "Terrorism and Weapons of Mass Destruction: United Nations Security Council Resolution 1540," Chatham House International Law Programme Briefing Paper, September 2004, p. 2.
[28] The statement is available at http://www.state.gov/e/eb/rls/othr/11514.htm
[29] Available at http://www.g8.fr/evian/english/navigation/2003_g8_summit/summit_documents/non_proliferation_of_weapons_of_mass_destruction_securing_radioactive_sources_-_a_g8_action_plan.html
[30] Available at http://www.g8usa.gov/d_060904d.htm

released a statement on nonproliferation that reiterated earlier concerns, endorsed previous action plans, and called on all nations to join those efforts.[31]

Another component of the nonproliferation order consists of nuclear weapons free zones (NWFZs) that completely ban the presence of nuclear weapons in member states. NWFZs go beyond the commitments in the NPT, which only require signatories to reject the acquisition or use of nuclear weapons. Members of a NWFZ preclude others from producing, storing, installing, testing, or deploying nuclear weapons on their territories. There are five NWFZs: Antarctica; Latin America, covered by the Treaty of Tlatelolco; South Pacific Nuclear Weapon Free Zone, created by the Treaty of Rarotonga; the South East Asia Nuclear Weapon Free Zone includes ASEAN (established by the Treaty of Bangkok); and an Africa NWFZ was created by the Treaty of Pelindaba (although not enough states have ratified the treaty for it to go into effect). Additional nuclear weapons free zones are being contemplated in Central Asia, Central Europe, the Middle East, and the Korean Peninsula.

The role of Nuclear Weapons Free Zones underscores the importance of regional efforts to shore up nonproliferation norms. Regional initiatives can be more effective than global initiatives as they are created by groups that have a more cohesive identity – or at least more common interests and concerns – which should make it easier to reach agreement on key issues. That, in turn, should facilitate compliance with any eventual agreement. The fact that such initiatives are generated internally – and are seen as triggered by or responding to local concerns – is also important. It is often difficult (if not impossible) to muster support for initiatives imposed from outside a region. Indeed, that provenance can be a critical obstacle in its own right.

The European Union has developed a Strategy against Proliferation of Weapons of Mass Destruction.[32] The strategy consists of Basic Principles (Appendix B) that serve as pillars of an EU strategy against WMD proliferation and an action plan (Appendix C) that follows from them. On June 16, 2003, the EU foreign ministers adopted the strategy.

The Basic Principles begin by pointing out that WMD proliferation and their means of delivery are a threat to international peace and security, not only because they threaten death on a large scale, but because they threaten to destabilize the international order. They note that the acquisition of WMD or related materials by terrorists represents an additional threat "with potentially uncontrollable consequences." They call for a common assessment of global proliferation threats and "a broad approach" to address them. Political and diplomatic preventative measures form the first line of defense, but coercive measures are not ruled out. While all competent international organizations should be enlisted in this effort, the UN Security Council "should play a central role."

The Basic Principles stress multilateralism, and call for the implementation and universalization of existing disarmament and nonproliferation norms. The EU is called on to enforce compliance with treaties, through use of the UN Security Council and the establishment of additional international verification instruments if needed. Significantly, the Basic Principles call for

[31] Gleneagles Statement on Nonproliferation, available at http://www.sgpproject.org/resources/Gleneagles/NonproliferationStatementG82005.pdf
[32] Available at http://www.nti.org/e_research/official_docs/eu/eu0603.pdf

political solutions to eliminate the reasons governments seek to obtain such weapons. Conflict resolution, regional security arrangements, arms control and disarmament processes are to be encouraged; the role of security assurances is to be explored. The EU also commits to working with key partners.

The Action Plan that follows consists of 21 measures. Key planks include:

1. rapid ratification and implementation of the IAEA Additional Protocol.
2. promoting challenge inspections in the framework of the Chemical Weapons Convention.
3. promoting nonproliferation policies in EU relations with third countries.
4. adoption by EU members of common policies related to criminal sanctions for illegal export or brokering of WMD-related material.
5. improving the control of high-activity radioactive material.
6. halting the export of nuclear related materials and equipment to countries that have not ratified the IAEA Additional Protocol.
7. reinforcing the efficiency of export controls among EU member countries.

East Asia's Rising Importance

East Asia has very real reasons to be concerned about weapons of mass destruction and their proliferation. The region is home to two nuclear weapons states – China and Russia – while North Korea claims to have a nuclear deterrent; the U.S. has significant interests and presence in the region; and India, which yearns to be part of the region, has its own nuclear arsenal and has long-standing tensions with a nuclear-armed neighbor. The People's Republic of China, Russia, and the U.S., also possess chemical weapons stockpiles, although they are scheduled to be destroyed under the Chemical Weapons Convention. The DPRK is reputed to have chemical weapons and it is not a CWC signatory. Those countries also have biological weapons capabilities, although those programs are much more opaque and some are claimed to be defensive in nature.

The region is the fastest growing producer of nuclear energy. According to the World Nuclear Association, as of Jan. 1, 2006 there are 99 nuclear reactors generating power in the region, 12 more under construction, 30 planned, and 29 proposed.[33] There are 54 research reactors in 12 countries of East Asia; the only major Pacific Rim countries without any research reactors are Singapore and New Zealand.[34]

The IAEA believes that the radioactive materials needed to build a "dirty bomb" can be found in just about every country.[35] This is especially alarming given the presence of extremist groups in South and Southeast Asia that have not hesitated to use indiscriminate terror and have signaled their desire to acquire WMD. Al-Qaeda has tried (and is presumably still trying) to get WMD; a Jemaah Islamiyah hideout in the Philippines had manuals on biowarfare; and a man was arrested

[33] http://www.world-nuclear.org/info/reactors.htm
[34] "Asia's Nuclear Energy Growth," Nuclear Issues Briefing Paper 2, August 2005, available at http://www.uic.com.au/nip02.htm
[35] "Inadequate Control of World's Radioactive Sources," IAEA press release, 25 June 2002.

in Thailand in October 2003 trying to sell radioactive cesium 137.[36] One expert calls the region "a potential target for terrorists intent on acquiring CBNR (chemical, biological, nuclear, radiological) materials."[37]

East Asia is becoming an increasingly important player in international politics. The region is home to about one-third of the world's population, several of the richest states, and is increasingly a locus of style, creativity and innovation. Much of the region's rising prominence reflects its economic vitality. East Asia is one of the drivers of international economic growth: the Asian Development Bank predicts 6.7 percent growth in 2005, 7 percent in 2006, and 7.2 percent in 2007.[38] (By contrast, the major industrialized countries are projected to grow 2.5 percent in 2005 and 2006, and 2.4 percent in 2007.[39])

The region has worked its way into the heart of the global economy. Emerging Asia's share of global trade has more than doubled from 8 percent in 1978 to 19 percent in 2002. Between 1990 and 2001, Asia's share of global merchandise and commercial services exports rose from 21.8 percent to 25 percent and 16.8 percent and 20.8 percent respectively.[40] Emerging Asia accounted for 44 percent of world GDP growth in 2002 and for 24 percent of export growth in the rest of the world.[41] By one estimate 50 percent of intraregional intermediate exports end up in products that are shipped to the rest of the world.[42] Eleven of the world's 20 "mega ports" are in Asia; the top four are all Asian. More than 50 million containers pass through Southeast Asian ports annually.

East Asia's international significance will increase as the region continues to integrate. The emergence of an "East Asian" political and economic identify will magnify the region's influence. The process of forging this regional identity is well underway. There are still plenty of skeptics – Asians prime among them – but the march forward is unmistakable. Trade is driving the process. Exports among the countries in the region have risen steadily from about 20 percent of total exports in the 1970s to about 40 percent in 2002. [43] Exports among the three nations of Northeast Asia – China, Japan, and South Korea – reached $224.5 billion in 2003, up from $171 billion from the year before. Trade between the three accounted for 20 percent of their total overseas shipments in 2003, up from 14 percent five years ago.[44]

Economic realities are promoting political interaction between Northeast and Southeast Asia. The primary expression of this integration is the ASEAN Plus Three (APT) process. Having emerged in the last 1990s, APT is now the primary dialogue forum for the countries of East Asia.

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[36] Tanya Ogilvie-White, "Preventing Nuclear and Radiological Terrorism: Nuclear Security in Southeast Asia," The Australian Centre for Peace and Conflict Studies Occasional Paper Series, The University of Queensland, April 2004, p. 22-23. Prosser, op cit., p. 9-10.
[37] *Ibid*., p. 19.
[38] Asian Development Bank, "Asian Development Outlook 2005."
[39] *Ibid.*
[40] "Current and Future Challenges for Asian Nonproliferation Export Controls," by Scott A. Jones, *East Asian Review*, Summer 2003, Vol. 15, No. 2, pp. 4.
[41] International Monetary Fund, "World Economic Outlook," April 2004, p. 35.
[42] Ibid, p. 36.
[43] Ibid.
[44] "Regional Trade Soars in Northeast Asia," by Andrew Ward, *Financial Times*, Feb. 6, 2004.

Although the process is likely to be slow, there appears to be a growing consensus that the goal of the APT dialogue is an East Asian Free Trade Area.[45]

Economic development has pushed Asia up the production ladder. Once a consumer of strategic goods, Asian nations are increasingly able to produce them on their own. As a result, there is the danger that East Asian nations can actively contribute to WMD proliferation, rather than merely serve as a transshippment point.

The region's history is not especially encouraging on this point. China has long been criticized for its readiness to turn a blind eye to the proliferation of WMD or its delivery technologies by Chinese companies.[46] (Most experts now give China considerable credit for trying to tighten its export controls.) Japan has also been linked to WMD programs[47] as has South Korea.[48] The investigation into A.Q Khan's network revealed the involvement of a Malaysian firm. Scomi Precision Engineering was publicly identified in President Bush's Feb. 11, 2004 speech as a key link in the Pakistani scientist's nuclear smuggling network and tied to proliferation efforts in Libya and Iran.[49] U.S. companies have been fined for violating export control regulations in shipments to Singapore and Malaysia; Singapore has fined its own companies for violating export control laws in shipments to undisclosed third countries.[50] Radioactive krypton-85 was reported lost during the looting of an abandoned paper manufacturing plant in Valenzuela City, the Philippines,[51] scrap dealers in Thailand inadvertently irradiated themselves when cutting up a stolen cancer treatment machine,[52] and radioactive sources have been stolen in Indonesia.[53] And as previously noted, individuals have been arrested while trying to sell radioactive materials in Thailand (which allegedly came from Laos) while terror groups in Southeast Asia are actively pursuing the acquisition of WMD. The intent here is not to point fingers at companies or countries, but to emphasize that regional governments should be concerned and that they can play a role in fighting this problem.

Asian governments are beginning to recognize the need to take proliferation seriously. The war on terrorism that was launched in the wake of the Sept. 11, 2001 attacks on the United States has

[45] "ASEAN Plus Three: Towards the World's Largest Free Trade Agreement," Commonwealth of Australia, Department of the Parliamentary Library Research Note, No. 19, 12 Nov. 2002.
[46] See the CIA Director of Intelligence's recurring series of Unclassified Reports to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Conventional Munitions, available at www.cia.gov/cia/reports/
[47] Recent revelations have linked Japanese companies to Libya's nuclear weapons program 20 years ago. See, "Japan linked to Libya nuclear arms effort," *The Japan Times*, March 14, 2004. There are periodic reports of Japanese companies illegally exporting to North Korea (see the *Asian Export Control Observer*, Issue 2, June 2004) and in one especially contentious incident during the Cold War, Japanese companies were charged with illegally exporting to the Soviet Union.
[48] *Asian Export Control Observer*, Issue 1, April 2004.
[49] Ibid.
[50] See for example, BIS Export Enforcement, Major cases list, August 2005, U.S. Dept. of Commerce, (www.bis.doc.gov/complianceandenforcement/majorcases050505.pdf), *Asian Export Control Observer* 5 (Dec. 2004-Jan. 2005), (cns.miis.edu/pubs/observer/asian/pdfs/aeco_0412.pdf), and *Export Control Newsletter* 58, July 2005, Center for International Trade and Security, (www.uga.edu/cits/documents/pdf/xcnewsletter58.pdf)
[51] International Export Controls Observer, Nov. 2005, p. 15.
[52] "The Evolving New International Security Dimensions of Radioactive Sources," *IAEA Bulletin*, 43/4/2001, p6.
[53] "Proliferation Issues in the Region: Indonesia's Plan to Build Nuclear Power Plant Raised Security Concerns," *Asian Export Control Observer*, 5 Issue 7, April/May 2005.

proved that no country is immune from this scourge. Terrorist cells have been uncovered across the region, from Japan to Singapore. Bombings in Indonesia and the Philippines have made clear the severity of the danger. WMD is a threat to all nations. The growth of civilian nuclear power industries throughout the region – triggered by growing concerns about energy security – will make the dangers even greater.

On one level, the region has responded. All the countries in East Asia have joined the NPT and the Biological Weapons Convention; North Korea is the only holdout from the Comprehensive Test Ban Treaty and the Chemical Weapons Convention. There have also been a number of regional initiatives. Heads of state and other leading officials have put WMD proliferation on the top of the regional security agenda. The issue has been an item in the Chairman's Statement at every ASEAN Regional Forum (ARF) meeting since 2002, as well as in statements from APEC Leaders Summits since 2003, and in ASEAN meetings with its dialogue partners.[54] For example, the Chairman's Statement for the 2005 ARF meeting notes that "The Ministers stated that the proliferation of weapons of mass destruction (WMD) and their delivery vehicles remain a serious security challenge of our time and the most dangerous one as they might fall into terrorist hands," and calls on regional countries to join relevant international treaties and conventions, to support the NPT, and to fully implement UNSCR 1540, among other things.[55]

Tokyo has been a key player in East Asian efforts to stem WMD proliferation. The atomic bombings of Hiroshima and Nagasaki have been formative influences on Japan's security thinking; disarmament and strengthening nonproliferation measures have been pillars of postwar Japanese foreign policy. In addition to sponsoring annual U.N. resolutions on disarmament, Tokyo has pushed regional nonproliferation initiatives as well. Prime Minister Koizumi Junichiro used the occasion of the November 2001 Japan-ASEAN summit to propose nonproliferation policy dialogues with ASEAN governments. Japan has organized the Asian Senior Level Talks on Nonproliferation (ASTOP), which met for the third time Feb. 13, 2006. In those meetings, ASEAN Plus Three members meet with the U.S. and Australia to raise awareness of nonproliferation issues, to reaffirm their commitment to keep terrorists or those who harbor them from acquiring or developing WMD, to work toward a nuclear-weapon free Korean Peninsula, to express support for various multilateral initiatives, such as the NPT Additional Protocol, the MTCR, PSI, and UNSCR 1540, and to call for further national efforts against proliferation.[56]

Tokyo has also been instrumental in pushing export controls in the region. It has hosted an annual export controls seminar (12 as of this writing) for Asian governments, held Asian Export Control Policy Dialogues, and seminars for companies operating in the region.[57] In 2004, the Japanese government launched another initiative to help stem WMD proliferation. Under the new policy, Tokyo will organize Asian ODA recipients into four groups based on their level of

[54] See statements available at the ARF website, www.aseanregionalforum.org, and the ASEAN website, www.aseansec.org.
[55] *Ibid.*
[56] See http://www.infojapan.org/announce/event/2006/2/0203-3.html
[57] For details, see http://www.cistec.or.jp/englishindex.html

export controls. Japan will work with those countries to raise their level of awareness and their national capabilities to enact and enforce such laws.[58]

Finally, there are track-two initiatives to promote nonproliferation in East Asia. The Council for Security Cooperation in the Asia Pacific (CSCAP) has devoted considerable attention to nonproliferation issues in the Confidence and Security Building Measures (CSBM) working group and its successor, the Study Group on Countering the Proliferation of Weapons of Mass Destruction in the Asia Pacific.[59] USCSCAP has been instrumental in driving these initiatives, which aim to raise regional awareness of proliferation issues, terrorism, and other security concerns. The working group and study group sponsored preventive diplomacy workshops, a Nuclear Energy Experts Group that focuses on backend problems associated with the nuclear fuel cycle,[60] examination of the Proliferation Security Initiative[61] and export controls (which has its own experts group), among other topics.[62]

Nonetheless, there is a widening gap between the region's rhetorical commitment to fight WMD proliferation and its actions. Concerns about sovereignty, national capacity, and the "fairness" of the global nonproliferation order (to name but three issues) have kept Asian governments from putting more effort into nonproliferation programs. At CSCAP WMD Study Group meetings, participants have conceded that many Southeast Asian governments just don't see WMD proliferation as an urgent threat.[63]

Fixing the System

Despite these many programs, the flaws in the nonproliferation regimes have become increasingly obvious in recent years. The NPT gives countries access to peaceful nuclear technologies if they abandon ambitions to develop nuclear weapons. Those technologies can be exploited for military purposes if a government is determined to build a bomb, however.[64] A would-be proliferator can either openly break away from its NPT commitments or hide a clandestine program. This risk is not theoretical. North Korea threatened to withdraw from the NPT after being accused of cheating both in 1993 and claimed to have done so in 2002. Iran is playing the same high-stakes game.[65] The ability of the IAEA to monitor peaceful programs is constrained by the terms of the NPT itself, which provides only limited authority for inspections. The Additional Protocol was developed in the aftermath of the discovery of Iraq's clandestine program in the context of efforts to strengthen the safeguards system. Among other things it give the IAEA expanding inspection rights among signatories.[66] More than half (107) of NPT

[58] "Japan's ODA to Promote Export Controls in Other Asian Nations," *Asian Export Control Observer*, Issue 1, April 2004, p. 8.
[59] In the interest of full disclosure, Pacific Forum CSIS serves as the secretariat of USCSCAP and the author spends considerable time on this project.
[60] For details, see *CSCAP'S NEEG: Exploring Nuclear Energy Transparency as a Regional Confidence and Security Building Measure*, by Kazuko Hamada, Pacific Forum CSIS Issues & Insights, Vol. 3 No. 7, September 2003.
[61] *Countering the Spread of Weapons of Mass Destruction: the Role of the Proliferation Security Initiative*, Pacific Forum CSIS Issues & Insights, Vol. 4, No. 5, July 2004,
[62] For study group and experts group reports, go to www.csis.org/pacfor/cscap
[63] *Ibid*.
[64] President Bush highlighted this problem in his Feb. 11, 2004 speech on WMD proliferation.
[65] "Tehran threatens to abandon nuclear treaty," The Guardian Online, Feb. 14, 2006.
[66] For details, see http://www.armscontrol.org/factsheets/IAEAProtocol.asp

signatories have signed the Additional Protocol, but only 74 have entered the AP into force; among them are eight CSCAP members – Australia, Canada, China, Indonesia, Japan, South Korea, Mongolia, and New Zealand. Six CSCAP members – Malaysia, the Philippines, Russia, Singapore, Thailand, and the U.S. – have signed the AP, but it has not entered into force.[67]

The NPT shortcomings are exacerbated by the spread of knowledge regarding WMD. IAEA Director General ElBaradei explained, "The technical barriers to designed weapons and to mastering the processing steps have eroded with time. …the sheer diversity of technology has made it harder to control both procurement and sales. … In 1970 it was assumed that relatively few countries knew how to acquire nuclear weapons. Now, with 35-40 countries in the know by some estimates, the margin of security under the current nonproliferation regime is becoming too slim for comfort."[68]

International law has not kept pace with new security threats. It has tended to focus on states, but, as has become appallingly clear, nonstate actors are increasingly important in international security. Moreover, there is the failure to keep up with modern threats. To give but one example, nations have the right to stop vessels on the high seas if they are involved in piracy or human smuggling; trafficking in WMD is not banned. UNSC Resolution 1540 and the PSI are steps in the right direction toward filling this gap, but they are still only first steps.

There are a number of proposals to remedy these problems. Three will be mentioned here. The first is a package of proposals by Mr. ElBaradei.[69] He focuses on three sets of measures. The first is designed to ensure that the peaceful nuclear technology is not used to further weapons proliferation. To that end, he calls for binding, tightened controls over the export of sensitive nuclear material and technology; the restriction of reprocessing and enrichment technology to facilities under multinational control; a halt to the use weapon-useable material in civilian nuclear programs; the elimination of weapon-useable material in existence; and better protection of existing nuclear materials.

A second set of measures involves strengthening the commitment of all governments to the basic tenets of arms control and disarmament. These measures include: a concrete roadmap with timetable to verifiable, irreversible, nuclear disarmament; the inclusion of India, Israel and Pakistan to any adjustment to the NPT regime; restored integrity to the NPT by curtailing use of the withdrawal clause or ensuring that such action triggers an automatic review by the UN Security Council; adoption of the Additional Protocol as the NPT verification standard.

The third set of measures concerns reforms to the international security system. Mr. ElBaradai endorses UN reform that facilitates "a functional system of collective security" that could include, in certain circumstances, the authorization of preemptive measures to address extreme threats to international peace and security. In addition, the legal regime related to nuclear weapons should become a "peremptory norm" of international law, such as the ban on slavery or

[67] Data from the IAEA website, www.iaea.org, as of Feb. 17, 2006.
[68] Mohamed ElBaradei, "Towards a Safer World," *The Economist*, 16 Oct. 2003.
[69] See, "Nuclear Nonproliferation: Global Security in a Rapidly Changing World," speech to the Carnegie International Nonproliferation Conference, 21 June 2004. A shortened, earlier version of his thinking is available in "Towards a Safer World."

genocide, rather than one that relies on treaties for its force. Third, the international community must work together to address the root causes of insecurity and instability. Finally, there needs to be expanded dialogue between experts, governments, and the public to facilitate global understanding of the risks involved and the need to mobilize to take action.

President Bush unveiled a second set of recommendations in a high-profile speech at the National Defense University in February 2004.[70] Mr. Bush endorsed seven measures. They include:

1. expansion of the PSI. The initiative should handle more than just shipments and transfers. Cooperation should expand to include law enforcement agencies.
2. national action to strengthen laws and international controls that govern proliferation.
3. expanded efforts to secure Cold War weapons and other WMD materials. The president endorsed expansion of the Nunn-Lugar Nuclear Threat Reduction program to include scientists from other would-be proliferators, such as Libya and Iraq. Other countries are encouraged to contribute to the program and governments are urged to end the use of weapons-grade uranium in research reactors.
4. commitment by the members of the Nuclear Suppliers Group to refuse to sell enrichment and reprocessing equipment and technologies to any state that does not possess full-scale, functioning enrichment and reprocessing plants. Governments that renounce those facilities will be given reliable access at reasonable cost to fuel for civilian reactors.
5. restriction of the right to import equipment for civilian nuclear programs to countries that have signed the Additional Protocol.
6. creation of a special committee of the IAEA board to focus intensively on safeguards and verification.
7. refusal to allow any government under investigation for proliferation violations to serve on the IAEA Board of Governors or the new special committee.

A third set of proposals has been advanced by the Carnegie Endowment for International Peace (CEIP). "Universal Compliance: A Strategy for Nuclear Security"[71] aims to reinvigorate the nuclear nonproliferation regime in light of its recently exposed weaknesses. As the authors note, "despite major nonproliferation successes, the spread and potential use of nuclear weapons remains all too real. …much more needs to be done to reduce the possibility of nuclear war."[72] The authors highlight the distinctive characteristics of their approach: "compliance" calls for actual performance, rather than mere declarations, and "universal" means all actors, nuclear weapons states and those that are not even members of the NPT. They identify five obligations at the heart of their strategy:

1. There should be no new nuclear weapons states. All nonnuclear weapon states must reaffirm their commitment to never acquire nuclear weapons. This commitment will evolve into a further commitment to abjure the acquisition of enrichment and

[70] Available at www.whitehouse.gov/news/releases/2004/02/20040211-4.html
[71] "Universal Compliance: A Strategy for Nuclear Security," by George Perkovich, Joseph Cirincione, Rose Gottemoeller, Jon B. Wolfsthal, and Jessica Mathews, Carnegie Endowment for International Peace, June 18, 2004.
[72] Ibid, p. 9.

reprocessing facilities. A guaranteed supply of fuel and services for nuclear energy will be provided in return.
2. All nuclear materials must be secured.
3. Illegal transfers of nuclear materials must be stopped.
4. The political and military utility of nuclear weapons must be devalued. This requires an end to testing and the role of such weapons in security policy and international politics. Governments must identify and strive to create the conditions that allow for the verifiable elimination of nuclear arsenals.
5. States with nuclear weapons must commit to conflict resolution to eliminate the conflicts that give other nations the excuse to resort to WMD to protect national security.

An Asia Pacific Action Plan for Nonproliferation

Asia's rising international role and influence offer an opportunity to fill gaps in the nonproliferation regime. East Asia is increasingly central to international economic activity, has access to the knowledge and technology that are essential to proliferation, and is developing the institutions and identity that allow it to take meaningful collective action. It is time for the nations of the Asia Pacific to develop their own Action Plan for Nonproliferation. This proposal could be modeled after – or draw from – the EU Action Plan, while ensuring that it is tailored to the political, economic, and technical realities of the region.

The Asia Pacific Action Plan for Nonproliferation would rest on a set of basic principles:

1. Recognition of the threat posed by weapons of mass destruction.
2. A commitment, by individual nations and the region as a whole, to take action to fight WMD proliferation.
3. A commitment to support multilateral nonproliferation efforts. This commitment would put the United Nations at the core of global nonproliferation work, but would include regional, subregional, and ad hoc initiatives as well.
4. A commitment to a wide spectrum of measures, ranging from the elimination of conditions that compel nations to develop WMD to consequence management if WMD are used. Prevention, counter- and nonproliferation measures would be included.
5. A commitment to peaceful dispute resolution and other mechanisms to prevent disputes from threatening regional peace and security. Governments should investigate the role of security assurances in this regard.
6. Recognition of the centrality of export controls in any effort to stem the proliferation of WMD and the creation of a regional export control regime.
7. Recognition of the importance of free trade within the region and its role in fostering regional growth and development.
8. Recognition of the right of all countries to the peaceful use of nuclear technology.
9. These principles would be embodied in a structured agenda – an Action Plan – that spells out critical objectives and the time frame within which they are to be realized. Several of the objectives could be tied to other regional initiatives and their deadlines, such as the realization of the ASEAN Free Trade Area, the ASEAN Economic Community, or the ASEAN Security Community.

10. A commitment to cooperate within the region and beyond to realize these principles. Active efforts will be made to reach out to build capacity and overcome obstacles to the realization of these principles and the action plan.

The plan itself should consist of:

1. A definitive statement that identifies weapons of mass destruction as a serious threat to all nations and peoples of the Asia Pacific. Therefore, all Asia Pacific governments should commit to active efforts to help stop the proliferation of WMD.
2. A declaration that the region aims to become a key player in upholding and strengthening the global nonproliferation order.
3. A commitment to universal compliance with core elements of the global nonproliferation regime: the NPT, the Additional Protocol, the CTBT, the Convention on the Physical Protection of Nuclear Material, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, the IAEA Safeguards Agreement, the IAEA Nuclear Security Advisory Service, the CWC, the BWC, and United Nations Security Council Resolution 1540. All members should sign and ratify these and any other treaty or convention, and meet all relevant obligations.
4. A commitment to take all possible measures to halt illegal trafficking in WMD and WMD components.
5. A commitment to take all possible measures to improve control over, secure and regulate all nuclear and radioactive sources. Governments should survey all radioactive sources within their national boundaries.
6. Expand the Southeast Asia Nuclear Weapons Free Zone to include the terms of the Additional Protocol and prohibit the reprocessing and/or enrichment of uranium.
7. The promotion of greater interaction with other regulatory bodies concerned with WMD proliferation to draw on their experience, expertise, and develop a guide to best practices.
8. Create a regional export control regime. This will create a regional standard, harmonize national standards, and facilitate information sharing. Peer review should be employed to establish these standards and peer review should be used to build national capacity. These standards should be embedded in every mechanism that promotes regional economic integration such as the ASEAN Free Trade Area, The ASEAN Economic Community, the ASEAN Security Community, and APEC.
9. Encourage outreach to build national capacity and promote technical assistance to facilitate that goal. A “virtual” experts group should be to disseminate knowledge and provide assistance.
10. Encourage outreach to national industries to facilitate compliance with national, regional, and global nonproliferation programs.
11. Regional governments will promote greater integration of track-one and track-two efforts to increase knowledge and awareness of the WMD threat, and options and responses.

An Asia Pacific Action Plan should operate on two levels. At the declaratory level, it would provide international support to strengthen and solidify nonproliferation norms. Statements by governments in support of these norms can help create transform them from international legal commitments to preemptory norms of state behavior. They provide support for individuals fighting for these objectives: it gives them reference points as they battle for resources or priority

on domestic political agendas. An Asia Pacific Action Plan, proposed, developed and implemented by regional governments, will help deflect criticism that WMD is not a regional concern.

At the same time, the Action Plan should focus on grassroots capacity building. Many East Asian nations do not have the knowledge, skills, or resources to implement effective nonproliferation programs. Malaysia, for example, has said that a lack of qualified personnel (among other things) precludes its adoption of the NPT Additional Protocol.[73] There must be a concerted effort to provide assistance to help those governments. The creation of a regional nonproliferation network can help spread information and disseminate best practices.

Final Thoughts

A successful nonproliferation regime must rest on a consensus regarding 21st century security threats. That is proving difficult to establish. Despite the increasing attention to the nexus of terrorism and technology – the prospect of Osama bin Laden with a nuclear bomb – there is still little real agreement on the seriousness of that threat. Developing nations see it as a problem for the developed world. That is a terrible mistake: The World Trade Center and the Pentagon were the targets on Sept. 11, 2001, but many of the victims of terrorism in recent years have been citizens of the developing world, as the bomb blasts in Kenya, Tanzania, Pakistan, Indonesia, Turkey, and Morocco attest (to name just a few). Nor should we forget that there were more than 20 nationalities among the victims of Sept. 11.

The attention of developing nations tends to be focused elsewhere. For them, small arms are a more pressing threat than that posed by weapons of mass destruction. "More people are killed per year on average as a result of wars fueled by small arms and light weapons (including the AK-47) than were killed in the nuclear blasts at Hiroshima and Nagasaki in Japan in 1945. In the Democratic Republic of Congo alone, it is estimated that more than a million people have died in that country's recent civil war, fought primarily with small arms."[74] Even more pressing is the need to lift their citizens out of the grinding poverty in which some 40 percent of the world's population lives on less than $2 a day, and yields desperation, war, mass refugee movements, and other breakdowns in social order.

Finding common ground has been exacerbated by the growing sense of inequality about the NPT regime. There are in fact *two* bargains within the NPT. In one, nonnuclear states give up their nuclear weapons ambitions in exchange for access to peaceful nuclear technology. Considerable attention has been focused on the difficulties in seeing that bargain honored. Equally important is the second bargain, in which the nuclear weapon states commit to nuclear disarmament in exchange for permanent nonnuclear status among the nuclear "have nots." From the perspective of the nonnuclear weapons states, the NWS have not taken this obligation seriously; they prefer to focus on the need to keep the nuclear club restricted. Many nations see this as perpetuating a system of nuclear apartheid, a permanent division of nuclear "haves" and "have nots." The effects of this seeming lack of action by the nuclear weapons states are becoming increasingly

[73] *Asian Export Control Observer*, Issue 2, June 2004, p. 4.
[74] "Hired Guns," by William Hartung and Rachel Stohl, *Foreign Policy*, May/June 2004, p. 29.

obvious. The 2005 Review Conference of the NPT foundered on just this shoal.[75] U.S. efforts to get the Nuclear Suppliers Group to tighten export controls on nuclear materials were similarly harmed by concerns that the moves would only widen the gap between nuclear "haves" and "have nots."[76] There will be little agreement on the need to halt WMD proliferation when many, if not most, states do not see themselves as threatened by such weapons or permanently disadvantaged by the instruments of the international order. As the authors of the CEIP "Universal Compliance" study explain, "nonproliferation is a set of bargains whose fairness must be self-evident if the majority of countries are going to support its enforcement."[77]

This inequality is also prominent when the nonproliferation problem is approached from another perspective. Dealing with the supply-side of the nuclear equation is a formidable assignment, but it has received considerably more attention than has the demand component. Nuclear proliferation would be less of a concern if governments did not still seem to value nuclear weapons. Yet for reasons of status or misguided thinking about national security, many governments continue to see nuclear weapons as having real utility. The persistent modernization of nuclear arsenals has reinforced the message that such weapons have military uses. That currency must be devalued. Governments must be dissuaded from the proposition that WMD is a legitimate security option. They must be persuaded that such weapons diminish national security rather than enhance it.

One way to do that would be to ensure that nations that proliferate pay a cost. By and large, the international community has failed to "punish" NPT violators or states that chose to ignore the treaty. North Korea, which has twice violated its NPT obligations, as well as numerous other bilateral and multilateral agreements, has yet to be sanctioned by the IAEA. Iran has yet to feel the "bite" of international censure. No wonder then that nuclear "have nots" are questioning the bargain that the overwhelming majority of them continue to honor. Why bother?

It is yet unclear if we are at a nuclear tipping point. The inadequacies of the NPT are plain, yet it is worth remembering that the forecasts four decades ago of a world with more than two dozen nuclear powers were wrong. Still, it would be a mistake to be complacent. Eighteen industrialized states are sufficiently advanced to produce nuclear weapons; six others have renounced nuclear weapons or major nuclear weapons development programs.[78] Norms can change. Four decades ago, nuclear weapons were considered a status symbol. Now, they are considered a taboo. That pendulum can swing once again.

More important, as Mr. ElBaradei and the EU recognize, preventing the spread of WMD requires addressing the insecurities that encourage governments to proliferate. There must be a meaningful attempt to eliminate the root causes of instability. There must be more attention to conflict prevention and peaceful dispute resolution. These may require governments to venture

[75] See, for example, Harald Muller, "The 2005 NPT Review Conference: Reasons and Consequences for Failure and Options for Repair," The WMD Commission, No. 31, August 2005.
[76] "Nuclear Suppliers Pass on U.S. Proposals," by Wade Boese, *Arms Control Today*, July/August 2004.
[77] "Universal Compliance, *op cit*., p. 13.
[78] William Hartung, "Prevention, Not Intervention: Curbing the New Nuclear Threat," *World Policy Journal*, Winter 2002/03, p. 7. The first group includes Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, Germany, Hungary, Italy, Japan, the Netherlands, Norway, Slovakia, Spain, Sweden and Switzerland. The second includes Argentina, Brazil, South Africa, Belarus, Kazakhstan, and Ukraine.

into uncharted territory – conflict prevention and preventive diplomacy are poorly understood – but we know the potential risks that are courted by failing to understand why nations want WMD and then failing to address those concerns.

Appendix A

An Asia-Pacific Handbook and Action Plan to Counter the Proliferation of Weapons of Mass Destruction

Index of Core Components

1. **Statement of Objectives:** Weapons of mass destruction (WMD) are a serious threat to all nations and peoples of the Asia Pacific. Therefore, all Asia-Pacific governments should commit to active efforts to help stop the proliferation of WMD and should declare that East Asia aims to become a key player in upholding and strengthening the global nonproliferation order.

2. **Basic Principles.** The Action Plan will rest on a set of basic principles that would guide the development of recommended actions. These include:

    - recognition of the unique threat posed by weapons of mass destruction;
    - a commitment, by individual nations and the region as a whole, to take action to fight WMD proliferation;
    - a commitment to support multilateral nonproliferation efforts that puts the United Nations at the core of global nonproliferation work, but would include regional, subregional, and ad hoc initiatives as well; and
    - a commitment to a wide spectrum of measures, ranging from the elimination of conditions that compel nations to develop WMD to consequence management if WMD are used. Prevention, counter- and nonproliferation measures should be included.

These principles should also include:

- a commitment to peaceful dispute resolution and other mechanisms to prevent disputes from threatening regional peace and security;
- recognition of the centrality of export controls in any effort to stem the proliferation of WMD and a commitment to a regional export control regime;
- recognition of the importance of free trade within the region and its role in fostering regional growth and development;
- and recognition of the right of all countries to the peaceful use of nuclear technology.

These principles will be embodied in a structured agenda – an Action Plan – that spells out critical objectives and the time frame within which they are to be realized. Members of the Asia-Pacific community should demonstrate their commitment to cooperate within the region and beyond to realize these principles. As part of this effort, active efforts will be made to reach out to build capacity and overcome obstacles to the realization

3. **Compliance with Global Regimes**. Asia-Pacific nations should commit to universal compliance with core elements of the global nonproliferation regime. This section should

catalogue and briefly describe the various international regimes and status of Asia-Pacific participation in these initiatives, including, where possible, an examination of reasons for nonparticipation and/or noncompliance.

A. In the nuclear field, these include:

- the Nuclear Nonproliferation Treaty (NPT);
- the Additional Protocol;
- the Comprehensive Test Ban Treaty (CTBT);
- the IAEA Safeguards Agreement;
- the Convention on the Physical Protection of Nuclear Material;
- the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management; and
- the IAEA Nuclear Security Advisory Service;
- others?

B. Other WMD nonproliferation treaties and conventions include:

- the Chemical Weapons Convention (CWC);
- the Biological Weapons Convention (BWC);
- others?

C. In addition, all governments should comply with United Nations Security Council Resolution 1540.

D. All ASEAN Regional Forum (ARF) members should be encouraged to sign and ratify these and any other relevant treaty or convention, meet all obligations, and commit to taking all possible measures to halt illegal trafficking in WMD and WMD components.

Chapter 4. Regional Nonproliferation Initiatives. This section should catalogue Asia- Pacific attempts to support global nonproliferation norms and standards. It will include statements from meetings of regional leaders, regional organizations, and institutions and programs, such as the Southeast Asia Nuclear Weapons Free Zone (SEANWFZ), that have been introduced to shore up the nonproliferation regime. Consideration should be given to expanding the terms of the SEANWFZ to include the terms of the Additional Protocol and prohibit the reprocessing and/or enrichment of uranium.

Chapter 5. Ad Hoc Initiatives with Regional Implications. An examination of various ad hoc initiatives and "coalitions of the willing" aimed at countering the proliferation of WMD and how they apply to and are perceived by East Asia. These should include:

- the Proliferation Security Initiative (PSI);
- the Six-Party Talks;
- the Nuclear Suppliers Group (NSG);
- others?

Chapter 6. Cooperation with other regulatory bodies concerned with WMD proliferation. This section should identify the various organizations, both track one and track two, that work on nonproliferation issues and develop ways to institutionalize cooperation and to draw on their experience, expertise, and develop a guide to best practices. Encourage outreach to build national capacity and promote technical assistance to facilitate that goal. Consideration should be given to developing a "virtual" experts group to disseminate knowledge and provide assistance. Efforts should be made to ensure that minimum duplication of effort occurs.

Chapter 7. Create a regional export controls regime. Export controls are critical to the success of any nonproliferation order. At the same time, however, the need for such controls must be balanced by the need to facilitate trade to encourage economic growth and development. This section will create a regional export controls template, harmonize national standards, and facilitate information sharing. Building national capacity should be a priority. Peer review should be employed to establish these standards and to build national capacity. The standards should be embedded in every mechanism that promotes regional economic integration such as the ASEAN Free Trade Area, The ASEAN Economic Community, the ASEAN Security Community, and APEC. In addition, active efforts should be made to reach out to national industries to facilitate compliance with national, regional, and global nonproliferation programs. The CSCAP Export Controls Experts Group, a subgroup of the WMD Study Group, should be tasked with developing this section.

Section 8. Nuclear Energy and Security Issues. While nonproliferation is a global and regional concern, all NPT signatories also have the right to the peaceful use of nuclear technology. A survey of the Asia-Pacific energy outlook and the current and anticipated status of the Asia-Pacific nuclear energy industry are required. There should be an assessment of all security issues affiliated with the development of civilian nuclear industries and the dissemination of those findings as well as a catalogue of best practices to minimize and eliminate the risks of proliferation. Special attention should be paid to concerns arising in the back-end of the fuel cycle, and on regional solutions to those issues. The CSCAP Nuclear Energy Experts Group, a subgroup of the WMD Study Group, should be tasked with developing this section.

Section 9. Action Plan. Recommended unilateral and multilateral actions that East Asian and neighboring or partner nations can take to counter the proliferation of WMD in East Asia and the broader Asia-Pacific region.

Appendix B

Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction

On 14 April 2003 the Council instructed the Secretary General/High Representative, in association with the Commission, and the Political and Security Committee, to pursue work on proliferation of weapons of mass destruction with a view to making proposals for submission to the European Council. Member States have contributed a number of specific proposals.

Drawing on these, as well as on the targeted initiative to respond effectively to the international threat of terrorism, adopted by the Council on 15 April 2002, the Council Secretariat and the Commission have drawn up a set of basic principles defining the broad lines for an EU strategy against proliferation of WMD. In addition to these basic principles an Action Plan has also been elaborated. It contains a series of short and medium term specific measures for action in the months to come.

Basic Principles

1. The proliferation of all weapons of mass destruction (i.e. biological, chemical and nuclear weapons) and means of delivery such as ballistic missiles constitutes a threat to international peace and security. These weapons are different from other weapons not only because of their capacity to cause death on a large scale but also because they could destabilize the international system.

2. The acquisition of WMD or related materials by terrorists would represent an additional threat to the international system with potentially uncontrollable consequences. Armed with weapons or materials of mass destruction terrorists could inflict damage that in the past only states with large armies could achieve.

3. An EU strategy against the proliferation of WMD needs to be based on a common assessment of global proliferation threats. The EU Situation Centre has prepared and will continuously update a threat assessment using all available sources; our intelligence services should keep this issue under review and remain engaged in this process.

4. To address the new threats, a broad approach is needed. Political and diplomatic preventative measures (multilateral treaties and export control regimes) and resort to the competent international organizations (IAEA, OPCW, etc.) form the first line of defene. When these measures (including political dialogue and diplomatic pressure) have failed, coercive measures under Chapter VII of the UN Charter and international law (sanctions, selective or global, interceptions of shipments and, as appropriate, the use of force) could be envisioned. The UN Security Council should play a central role.

5. The EU is committed to the multilateral system. We will pursue the implementation and universalisation of the existing disarmament and non-proliferation norms. With regard to biological and chemical weapons, we will work towards declaring the bans on these weapons to be universally binding rules of international law. We will work towards the universalisation of the NPT. We will also promote measures to ensure that any possible misuse of civilian nuclear programmes for military purposes will be effectively excluded.

6. We are committed to the multilateral treaty regime, which provides the normative basis for all non-proliferation efforts. If the regime is to remain credible it must be made more effective. This means working with those who share our interest in preventing proliferation; and it also means dealing with those who cheat. At the same time we should consider carefully the position of those who do not belong. The EU will place particular emphasis on defining a policy reinforcing compliance with the multilateral treaty regime. Such a policy must be geared towards enhancing the detectability of significant violations and strengthening enforcement of the norms established by this treaty regime. In this context, the role of the UN Security Council, as the final arbiter on the consequences of non-compliance as foreseen in multilateral regimes needs to be effectively strengthened.

7. To ensure effective detectability of violations and thereby deter non-compliance we will make best use of existing verification mechanisms and systems. We will also support the establishment of additional international verification instruments and, if necessary, the use of non-routine inspections under international control beyond facilities declared under existing treaty regimes.

8. The best solution to the problem of proliferation of WMD is that countries should no longer feel they need them. If possible, political solutions should be found to the problems which lead them to seek WMD. The more secure countries feel, the more likely they are to abandon programmes: disarmament measures can lead to a virtuous circle just as weapons programmes can lead to an arms race. To this end, we must actively foster the establishment of regional security arrangements and regional arms control and disarmament processes. Our dialogue with the countries concerned should take account of the fact that in many cases they have real and legitimate security concerns, with the clear understanding that there can never be any justification for the illegal development of WMD. We will encourage these countries to renounce the use of technology and facilities which might cause a particular risk of proliferation.

9. We are aware that finding political solutions to all of the different problems, fears and ambitions of countries in the most dangerous regions for proliferation will require persistent efforts. Our policy is therefore to contain proliferation while dealing with its underlying causes.

10. Positive and negative security assurances can play an important role: they can serve both as an incentive to forego the acquisition of WMD and as a deterrent. These security assurances need to be further explored.

11. Proliferation of WMD is a global threat, which needs a global approach. However, as security in Europe is closely linked to security and stability in the Mediterranean, we should pay particular attention to the issue of proliferation in the Mediterranean area.

12. An common approach and co-operation with key partners such as the US and the Russian Federation is essential in order to effectively implement WMD non-proliferation regime, and constitute an important ground for reinforcing transatlantic relations.

13. Our strategy against proliferation will therefore be based on the following key elements:

- Pursuing universalisation of disarmament and non-proliferation agreements while stressing the importance of effective national implementation thereof;

- Ensuring compliance with non-proliferation commitments by making best use of, and, when appropriate, strengthening international inspection/verification mechanisms;

- Strengthening export control policies;

- Introducing a stronger non-proliferation element in relationships with some partners;

- Having a focused dialogue both with countries suspected of proliferation activities and with those whose co-operation is vital to effective policies against proliferation;

- Expanding co-operative threat reduction initiatives and assistance programmes;

- Ensuring that appropriate resources and support are allocated to international organizations and arrangements active in non-proliferation such as the IAEA, the OPCW, the CTBTO PrepCom and the HCOC;

- Promoting close co-ordination with the United States;

- Pursuing an international agreement on the prohibition of the production of fissile material for nuclear weapons;

- Considering, in case political and diplomatic measures have failed, coercive measures, including as a last resort the use of force in accordance with the United Nations Charter.

Appendix C

Action Plan for the Implementation of the Basic Principles for an EU Strategy against Proliferation of Weapons of Mass Destruction

This action plan is intended to provide an initial work programme to allow a practical implementation of the basic principles. It is not exhaustive. Building an EU strategy for nonproliferation of WMD will take some time and, as a result, it might appear worthwhile to add further actions to this plan. This action plan is a first base to start without delay and will have to be adapted in the course of its implementation.

The action plan complements and is consistent with the list of concrete measures adopted by the Council on 15 April 2002 in implementing the targeted initiative, launched on 10 December 2001 by the EU Foreign Ministers, to respond effectively in the field of non-proliferation, disarmament and arms control to the international threat of terrorism.

The first section of the action plan contains a set of measures for immediate action. The second section contains measures for the coming months or even the longer term. For each of the proposed measures for immediate action there is also an indication of the timeframe expected, of the legal instrument required and of the costs (if any) expected.

A. Measures for immediate action

In General:

1. Detailed plan of diplomatic action

This will involve prioritising our diplomatic strategy and action, defining and disseminating master messages, developing a programme of demarches on key issues of concern, as well as using more effectively planned meetings.

Expected timeframe: start immediately

Required instrument: political agreement by Member States

Expected costs: limited

2. Adoption of a firm engagement for the promotion of the universalisation and reinforcement of multilateral agreements

Such an engagement represents one of the main tenets of the EU policy in this field. The EU as such and its Member States should promote at political level universal adherence to instruments relating to weapons of mass destruction and their means of delivery (Biological Weapons Convention, Chemical Weapons Convention, Nuclear Non-Proliferation Treaty, Comprehensive Test Ban Treaty, Safeguards Agreements and Additional Protocols with the International Atomic

Energy Agency, Convention on the Physical Protection of Nuclear Materials, Hague Code of Conduct). The restatement of this policy would serve as a yardstick in the negotiations of EU positions in international fora. In addition, the EU will address the WMD proliferation situations of immediate concern.

Expected timeframe: by end of 2003

Required instrument: Common Position or Council declaration

Expected costs: nil

3. Prolongation of the Programme on disarmament and non-proliferation in the Russian Federation

The EU Co-operation programme launched in 1999 supports through project-orientated actions the overall co-ordination of EU programmes at large, including Member State and Community activities. This Joint Action expires in June 2003 and the Programme should be extended. The extension should contain a political signal of EU engagement over a longer period of time.

Expected timeframe: July 2003

Required instrument: Joint Action

Expected costs: 7.5 MEURO (from the CFSP budget line)

On nuclear weapons proliferation:

4. Rapid ratification and implementation by all Member States and acceding countries of the IAEA Additional Protocols

At present some Member States, as well as some acceding States have yet to ratify and/or notify the IAEA of the completion of their procedures for ratification. The Commission will notify the IAEA that the additional protocols are in force once all Member States will have fulfilled their obligations. At that time, the Commission will have a responsibility for the implementation. This will only be possible after the clarification of outstanding issues, e.g. agreement by the Council of the corresponding new Euratom Regulation and the decision on the ways and means for cost coverage for the implementation.

Expected timeframe: end of 2003 (ratification by all Member States and Acceding States)

Required instrument: Member States' ratification, Euratom Regulation and Decision on the coverage of additional implementation costs

Expected costs: to be determined

5. Providing the IAEA with adequate budget increase for implementing its safeguard tasks

The EU supports an adequate increase in the IAEA safeguards budget to ensure the credibility of the IAEA's verification systems on an urgent and exceptional basis, taking into account the increase in the Agency's workload in this area. The increase should go in parallel with the continuation of the process of implementing integrated safeguards which will lead to a more effective and efficient safeguards system.

Expected timeframe: September 2003

Required instrument: political agreement between Member States.

Expected costs: nil for the Community. (To be covered nationally by the Member States).

On chemical weapons proliferation:

6. Promotion of challenge inspections in the framework of the Chemical Weapons Convention

Challenge inspections are already part of the verification and inspection regime of the Chemical Weapons Convention. In order to more effectively address cases of suspected non-compliance with the Convention the EU should discuss activating the challenge inspection instrument. Each Member State and acceding country should agree to support any challenge made by another Member State, acceding country or other States or Groups of States within the CWC, in the absence of specific information disproving the basis for the challenge.

Expected timeframe: immediately

Required instrument: Political agreement by Member States

Expected costs: nil for the Community. To be covered nationally by the Member States in the frame of the CWC/OPCW.

On export controls:

7. Make the EU a leading co-operative player in the export control regimes by:

- Ensuring co-ordinated EU positions, i.a. on the items to be put on the lists.

- Supporting the membership of acceding countries and considering the involvement of the Commission in the regimes;

- Promoting a catch-all clause (i.e. end-user oriented export control of non-listed items) in the export control regimes when appropriate.
- Promoting a further strengthening of the information exchange in the regimes, in particular with respect to sensitive destinations, sensitive end-users and procurement patterns.

Expected timeframe: start immediately

Required instrument: political agreement by Member States

Expected costs: limited

B. Measures for the coming months or the longer term

In General:

8. Mainstreaming non-proliferation policies into the EU's wider relations with third countries

The EU will consider the introduction of an effective stick and carrot policy linked to nonproliferation commitments in its relations with third countries. This will be done in particular in the context of co-operation agreements or assistance programmes. Relevant working groups will be tasked to review EU policy towards particular countries. In this context combined sessions of regional working groups and the working group on non-proliferation could be organised to promote cross-fertilisation of regional and non-proliferation policies.

9. Increase in EU co-operative threat reduction funding in the light of financial perspectivesbeyond 2006

At the G8 Summit of Kananaskis, the European Community committed 1 billion Euro over ten years to the G8 Global Partnership against the spread of weapons and materials of mass destruction. Financial commitments will have to be secured in the next budget cycle starting in 2007, focusing on the main priorities. The creation of a specific Community budget line for non proliferation and disarmament of WMD should be envisaged. Member States should be encouraged to contribute also on a national basis. These efforts should include measures aimed at reinforcing the non-proliferation of WMD related expertise, science and technology.

10. Special focus on the WMD proliferation at the Mediterranean Level

Proceed to a WMD threat assessment focused on the Mediterranean area, include specific non proliferation issues in the EU dialogue with Mediterranean countries with a view to a wider adherence to the main non-proliferation and arms control treaties, study implications for the Mediterranean area of the proposal for a WMD free area in the Middle East.

11. Adoption by Member States of common policies related to criminal sanctions for illegal export or brokering of WMD-related material

An EU common approach regarding criminalisation of illegal export of WMD-related material should be considered to complement the existing national legislation. A legal framework for criminalisation of illegal brokering of WMD-related items at EU level would also have to be examined.

12. Retaining the verification and inspection expertise of UNMOVIC

The EU will consider how the unique verification and inspection competence of UNMOVIC regarding biological weapons and missiles could be retained/maintained and utilised. For example, a roster of experts could be set up within the framework of the UN. These experts could be utilized in inspection and verification activities after decision by the UNSC. The EU will further develop its own thinking on verification and inspection in general and especially on UNMOVIC.

13. Support for a stronger role for the UN Security Council in handling the threat of WMD

The EU should explore a resolution in the UN Security Council to identify the spread of WMD and their means of delivery, as a threat to international peace and security. The EU should support a UN Security Council resolution requiring, when appropriate, countries to prevent shipments and overflights of materials for use in WMD.

14. Setting up of a monitoring centre on WMD disarmament and non-proliferation

The EU should set up a monitoring centre entrusted with the monitoring of the consistent implementation of the Action Plan, the collection of information and intelligence, including in relation with the flow of WMD-related materials, and ensure the necessary interaction with other international bodies. This monitoring centre would be set up at the Council Secretariat and fully associate the Commission. It would keep the Council regularly informed on countries presenting medium and high risk, and propose measures for prevention and combat of proliferation of WMD. It would also establish relations with other key international actors with a view to acting as a focal point and a clearing house. It would work in close co-operation with the Presidency and the PSC.

On nuclear and radiological weapons proliferation:

15. Improve the control of high activity radioactive sources

At EU level, the Proposal for a Council Directive on the control of high activity sealed radioactive sources (COM/2003/0018 final), adopted by the Commission on 24th January 2003 and which is being discussed at the Council, aims to harmonize and strengthen controls in place in the Member States by setting out specific requirements ensuring that radioactive sources are always kept under control. Such an enhanced traceability of sources will reduce the risk of radioactive sources being misused, e.g. for criminal purposes and will prevent sources from becoming lost from regulatory control. The Council should adopt this directive as soon as possible, and Member States should assure its fast national implementation.

The EU should urge all third countries to take measures to strengthen regulatory control of high-risk sources within their territory in accordance with the recent G-8 statement on securing radioactive sources. To that end it should give full support to the plan of action attached to that statement and the specific role the IAEA can play.

16. A policy not to export nuclear related materials and equipment to countries not having ratified the IAEA Additional Protocol

The EU will pay particular attention to the risk that civilian nuclear programmes are misused for military purposes; in this regard it will explore procedures on how to address this risk inter alia by effectively controlling or limiting the use of technology and facilities which might be of particular relevance to the goal of nuclear non-proliferation.
This should be done in the frame of the consideration of stick and carrot mentioned above.

The Member States should have a common view when discussing this issue in the frame of the Nuclear Suppliers Group. The Commission is directly concerned when it comes to the Euratom Supply Agency.

On biological and chemical weapons proliferation:

17. Reinforcing the BTWC and the CWC

The BTWC does not contain at present a verification mechanism. The EU must find ways to strengthen compliance. A group of experts to give advice on how this could be done could be established. The EU will take the lead in efforts to strengthen regulations on trade with material that can be used for the production of biological weapons. The EU will also take the lead in supporting national implementation of the BTWC (e.g. in providing technical assistance).The EU will work to ensure concrete outcomes from the three experts meetings to be held between 2003-2005 before the sixth review conference in 2006. The EU will also consider giving support to states with administrative or financial difficulties in their national implementation of the Chemical Weapons Convention and to the OPCW in its implementing work.

18. Strengthening of national legislation and control over pathogenic micro-organisms and toxins (both in Member States and in Acceding Countries)

The forthcoming annual meeting of experts and meeting of States Parties – drawing from a comparative analysis of domestic legislation aimed at implementing the prohibitions set forth in the BTWC and establishing/maintaining the security and oversight of pathogenic micro-organisms and toxins – could consider the possibility of drafting – best practices guidelines – in order to promote the enactment of effective national legislation and the compliance with the BTWC provisions.

A high level Health and Security Committee made of representatives of the Member States Health Ministries and a Task Force of national experts and Commission officials serve as the instrument for co-operation and planning in countering deliberate releases of biological (and chemical) agents. Co-operation between the public health and the non proliferation structures should be reinforced.

The creation of an EU Centre for Disease Control should be analyzed.

19. EU-US (biological) industry dialogue

The EU will initiate a dialogue with the biotech industry in Europe, on inter alia control of dangerous pathogens. Dialogue between EU and US industry should be encouraged in the context of the Transatlantic Business Dialogue. This should serve to enhance awareness of the issues involved, spread best practices and help overcome transatlantic suspicions about discriminatory trade restrictions.

On export controls:

20. Reinforcement the efficiency of export controls in an enlarged Europe by:

- Developing a system for easier identification of items under control (A joint effort by Member States and the Commission should be undertaken to establish equivalence between EC customs classification and the lists of the Dual Use Regulation 1334/2000).

- Establishing improved channels of communication between Member States to reinforce exchange of information, in particular on decisions on denials.

- Establishing a formal dialogue with industry at EU level.

- Developing guidelines for a harmonized implementation of the Community Dual Use Regulation.

21. "Peer Review" of Member States' and Acceding Countries export control systems

In order to better co-ordinate EU's export control activities and to learn from each other's experience a Peer Review in all Member States and Acceding countries should be conducted. Peer review teams of two to three countries in each, consisting both of Member States and Acceding countries could examine the national legislation and its implementation in order to establish the best practices in the enlarged Union. The Commission could be asked to co-ordinate the Peer Review and be assisted by a Task Force, that shall prepare a set of concrete steps to be taken for an effective implementation.

22. Setting up of a programme of assistance to States in need of technical knowledge in the field of export control

This programme will be part of the co-operative threat reduction budget line described above (under "general").

Way Forward

Work should begin without delay on the measures for immediate action. The Presidency, the Secretary General/High Representative and the Commission will act in close co-ordination with the Political and Security Committee for the elaboration and adoption by the competent bodies of these measures, which should be in place by the end of 2003.

The Presidency, the Secretary General/High Representative and the Commission will report to the Political and Security Committee by the end of 2003 on the state of preparation of the measures for the longer term, by indicating, where appropriate, an approximate timeframe for their adoption.

Appendix D

Treaty on the Non-Proliferation of Nuclear Weapons

Notification of the entry into force

1. By letters addressed to the Director General on 5, 6 and 20 March 1970 respectively, the Governments of the United Kingdom of Great Britain and Northern Ireland, the United States of America and the Union of Soviet Socialist Republics, which are designated as the Depositary Governments in Article IX. 2 of the Treaty on the Non-Proliferation of Nuclear Weapons, informed the Agency that the Treaty had entered into force on 5 March 1970.

2. The text of the Treaty, taken from a certified true copy provided by one of the Depositary Governments, is reproduced below for the convenience of all Members.

The States concluding this Treaty, hereinafter referred to as the "Parties to the Treaty",

Considering the devastation that would be visited upon all mankind by a nuclear war and the consequent need to make every effort to avert the danger of such a war and to take measures to safeguard the security of peoples,

Believing that the proliferation of nuclear weapons would seriously enhance the danger of nuclear war,

In conformity with resolutions of the United Nations General Assembly calling for the conclusion of an agreement on the prevention of wider dissemination of nuclear weapons,

Undertaking to co-operate in facilitating the application of International Atomic Energy Agency safeguards on peaceful nuclear activities,

Expressing their support for research, development and other efforts to further the application, within the framework of the International Atomic Energy Agency safeguards system, of the principle of safeguarding effectively the flow of source and special fissionable materials by use of instruments and other techniques at certain strategic points,

Affirming the principle that the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be available for peaceful purposes to all Parties to the Treaty, whether nuclear-weapon or non-nuclear-weapon States,

Convinced that, in furtherance of this principle, all Parties to the Treaty are entitled to participate in the fullest possible exchange of scientific information for, and to contribute alone or in co-operation with other States to, the further development of the applications of atomic

energy for peaceful purposes, Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament,

Urging the co-operation of all States in the attainment of this objective,

Recalling the determination expressed by the Parties to the 1963 Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water in its Preamble to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to this end,

Desiring to further the easing of international tension and the strengthening of trust between States in order to facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all their existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant to a Treaty on general and complete disarmament under strict and effective international control,

Recalling that, in accordance with the Charter of the United Nations, States must refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations, and that the establishment and maintenance of international peace and security are to be promoted with the least diversion for armaments of the world's human and economic resources,

Have agreed as follows:

ARTICLE I

Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.

ARTICLE II

Each non-nuclear-weapon State Party to the Treaty undertakes not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.

ARTICLE III

1. Each Non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency in accordance with the Statute of the International Atomic Energy Agency and the

Agency's safeguards system, for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Procedures for the safeguards required by this Article shall be followed with respect to source or special fissionable material whether it is being produced, processed or used in any principal nuclear facility or is outside any such facility. The safeguards required by this Article shall be applied on all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere.

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

3. The safeguards required by this Article shall be implemented in a manner designed to comply with Article IV of this Treaty, and to avoid hampering the economic or technological development of the Parties or international co-operation in the field of peaceful nuclear activities, including the international exchange of nuclear material and equipment for the processing, use or production of nuclear material for peaceful purposes in accordance with the provisions of this Article and the principle of safeguarding set forth in the Preamble of the Treaty.

4. Non-nuclear-weapon States Party to the Treaty shall conclude agreements with the International Atomic Energy Agency to meet the requirements of this Article either individually or together with other States in accordance with the Statute of the International Atomic Energy Agency. Negotiation of such agreements shall commence within 180 days from the original entry into force of this Treaty. For States depositing their instruments of ratification or accession after the 180-day period, negotiation of such agreements shall commence not later than the date of such deposit. Such agreements shall enter into force not later than eighteen months after the date of initiation of negotiations.

ARTICLE IV

1. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty.

2. All the Parties to the Treaty undertake to facilitate, and have the right to participate in. the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also cooperate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

ARTICLE V

Each Party to the Treaty undertakes to take appropriate measures to ensure that, in accordance with this Treaty, under appropriate international observation and through appropriate international procedures, potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty on a non-discriminatory basis and that the charge to such Parties for the explosive devices used will be as low as possible and exclude any charge for research and development. Non-nuclearweapon States Party to the Treaty shall be able to obtain such benefits, pursuant to a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States. Negotiations on this subject shall commence as soon as possible after the Treaty enters into force. Non-nuclear-weapon States Party to the Treaty so desiring may also obtain such benefits pursuant to bilateral agreements.

ARTICLE VI

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.

ARTICLE VII

Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories.

ARTICLE VIII

1. Any Party to the Treaty may propose amendments to this Treaty. The text of any proposed amendment shall be submitted to the Depositary Governments which shall circulate it to all Parties to the Treaty. Thereupon, if requested to do so by one-third or more of the Parties to the Treaty, the Depositary Governments shall convene a conference, to which they shall invite all the Parties to the Treaty, to consider such an amendment.

2. Any amendment to this Treaty must be approved by a majority of the votes of all the Parties to the Treaty, including the votes of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency. The amendment shall enter into force for each Party that deposits its instrument of ratification of the amendment upon the deposit of such instruments of ratification by a majority of all the Parties, including the instruments of ratification of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency. Thereafter, it shall enter into force for any other Party upon the deposit of its instrument of ratification of the amendment.

3. Five years after the entry into force of this Treaty, a conference of Parties to the Treaty shall be held in Geneva, Switzerland, in order to review the operation of this Treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty are being realized. At intervals of five years thereafter. A majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depositary Governments, the convening of further conferences with the same objective of reviewing the operation of the Treaty.

ARTICLE IX

1. This Treaty shall be open to all States for signature. Any State which does not sign the Treaty before its entry into force in accordance with paragraph 3 of this Article may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the United Kingdom of Great Britain and Northern Ireland, the Union of Soviet Socialist Republics and the United States of America, which are hereby designated the Depositary Governments.

3. This Treaty shall enter into force after its ratification by the States, the Governments of which are designated Depositaries of the Treaty, and forty other States signatory to this Treaty and the deposit of their instruments of ratification. For the purposes of this Treaty, a nuclear weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January, 1967.

4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. The Depositary Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or of accession, the date of the entry into force of this Treaty, and the date of receipt of any requests for convening a conference or other notices.

6. This Treaty shall be registered by the Depositary Governments pursuant to Article 102 of the Charter of the United Nations.

ARTICLE X

1. Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

2. Twenty-five years after the entry into force of the Treaty, a conference shall be convened to decide whether the Treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. This decision shall be taken by a majority of the Parties to the Treaty.

ARTICLE XI

This Treaty, the English, Russian, French, Spanish and Chinese texts of which are equally authentic, shall be deposited in the archives of the Depositary Governments. Duly certified copies of this Treaty shall be transmitted by the Depositary Governments to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF the undersigned, duly authorized, have signed this Treaty.

DONE in triplicate, at the cities of London, Moscow and Washington, the first day of July, one thousand nine hundred and sixty-eight.

Appendix E

Resolution 1540 (2004)
Adopted by the Security Council at its 4956th meeting, on 28 April 2004

The Security Council,

Affirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery,[79] constitutes a threat to international peace and security,

Reaffirming, in this context, the Statement of its President adopted at the Council's meeting at the level of Heads of State and Government on 31 January 1992 (S/23500), including the need for all Member States to fulfill their obligations in relation to arms control and disarmament and to prevent proliferation in all its aspects of all weapons of mass destruction,

Recalling also that the Statement underlined the need for all Member States to resolve peacefully in accordance with the Charter any problems in that context threatening or disrupting the maintenance of regional and global stability,

Affirming its resolve to take appropriate and effective actions against any threat to international peace and security caused by the proliferation of nuclear, chemical and biological weapons and their means of delivery, in conformity with its primary responsibilities, as provided for in the United Nations Charter,

Affirming its support for the multilateral treaties whose aim is to eliminate or prevent the proliferation of nuclear, chemical or biological weapons and the importance for all States parties to these treaties to implement them fully in order to promote international stability,

Welcoming efforts in this context by multilateral arrangements which contribute to non-proliferation,

Affirming that prevention of proliferation of nuclear, chemical and biological weapons should not hamper international cooperation in materials, equipment and technology for peaceful purposes while goals of peaceful utilization should not be used as a cover for proliferation,

Gravely concerned by the threat of terrorism and the risk that non-State actors* such as those identified in the United Nations list established and maintained by the Committee established

[79] Definitions for the purpose of this resolution only: Means of delivery: missiles, rockets and other unmanned systems capable of delivering nuclear, chemical, or biological weapons, that are specially designed for such use. Non-State actor: individual or entity, not acting under the lawful authority of any State in conducting activities which come within the scope of this resolution. Related materials: materials, equipment and technology covered by relevant multilateral treaties and arrangements, or included on national control lists, which could be used for the design, development, production or use of nuclear, chemical and biological weapons and their means of delivery.

under Security Council resolution 1267 and those to whom resolution 1373 applies, may acquire, develop, traffic in or use nuclear, chemical and biological weapons and their means of delivery,

Gravely concerned by the threat of illicit trafficking in nuclear, chemical, or biological weapons and their means of delivery, and related materials,* which adds a new dimension to the issue of proliferation of such weapons and also poses a threat to international peace and security,

Recognizing the need to enhance coordination of efforts on national, subregional, regional and international levels in order to strengthen a global response to this serious challenge and threat to international security,

Recognizing that most States have undertaken binding legal obligations under treaties to which they are parties, or have made other commitments aimed at preventing the proliferation of nuclear, chemical or biological weapons, and have taken effective measures to account for, secure and physically protect sensitive materials, such as those required by the Convention on the Physical Protection of Nuclear Materials and those recommended by the IAEA Code of Conduct on the Safety and Security of Radioactive Sources,

Recognizing further the urgent need for all States to take additional effective measures to prevent the proliferation of nuclear, chemical or biological weapons and their means of delivery,

Encouraging all Member States to implement fully the disarmament treaties and agreements to which they are party,

Reaffirming the need to combat by all means, in accordance with the Charter of the United Nations, threats to international peace and security caused by terrorist acts,

Determined to facilitate henceforth an effective response to global threats in the area of non-proliferation,

Acting under Chapter VII of the Charter of the United Nations,

1. *Decides that* all States shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery;

2. *Decides also* that all States, 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;
3. *Decides also* that all States shall take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery, including by establishing appropriate controls over related materials and to this end shall:

a) Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage or transport;

b) Develop and maintain appropriate effective physical protection measures;

c) Develop and maintain appropriate effective border controls and law enforcement efforts to detect, deter, prevent and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items in accordance with their national legal authorities and legislation and consistent with international law;

d) Establish, develop, review and maintain appropriate effective national export and trans-shipment controls over such items, including appropriate laws and regulations to control export, transit, trans-shipment and re-export and controls on providing funds and services related to such export and trans-shipment such as financing, and transporting that would contribute to proliferation, as well as establishing end-user controls; and establishing and enforcing appropriate criminal or civil penalties for violations of such export control laws and regulations;

4. *Decides* to establish, in accordance with rule 28 of its provisional rules of procedure, for a period of no longer than two years, a Committee of the Security Council, consisting of all members of the Council, which will, calling as appropriate on other expertise, report to the Security Council for its examination, on the implementation of this resolution, and to this end calls upon States to present a first report no later than six months from the adoption of this resolution to the Committee on steps they have taken or intend to take to implement this resolution;

5. *Decides* that none of the obligations set forth in this resolution shall be interpreted so as to conflict with or alter the rights and obligations of State Parties to the Nuclear Non-Proliferation Treaty, the Chemical Weapons Convention and the Biological and Toxin Weapons Convention or alter the responsibilities of the International Atomic Energy Agency or the Organization for the Prohibition of Chemical Weapons;

6. *Recognizes* the utility in implementing this resolution of effective national control lists and calls upon all Member States, when necessary, to pursue at the earliest opportunity the development of such lists;

7. *Recognizes* that some States may require assistance in implementing the provisions of this resolution within their territories and invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure, implementation experience and/or resources for fulfilling the above provisions;

8. *Calls upon* all States:

a) To promote the universal adoption and full implementation, and, where necessary, strengthening of multilateral treaties to which they are parties, whose aim is to prevent the proliferation of nuclear, biological or chemical weapons;

b) To adopt national rules and regulations, where it has not yet been done, to ensure compliance with their commitments under the key multilateral nonproliferation treaties;

c) To renew and fulfill their commitment to multilateral cooperation, in particular within the framework of the International Atomic Energy Agency, the Organization for the Prohibition of Chemical Weapons and the Biological and Toxin Weapons Convention, as important means of pursuing and achieving their common objectives in the area of non-proliferation and of promoting international cooperation for peaceful purposes;

d) To develop appropriate ways to work with and inform industry and the public regarding their obligations under such laws;

9. *Calls upon* all States to promote dialogue and cooperation on nonproliferation so as to address the threat posed by proliferation of nuclear, chemical, or biological weapons, and their means of delivery;

10. Further to counter that threat, *calls upon* all States, in accordance with their national legal authorities and legislation and consistent with international law, to take cooperative action to prevent illicit trafficking in nuclear, chemical or biological weapons, their means of delivery, and related materials;

11. *Expresses* its intention to monitor closely the implementation of this resolution and, at the appropriate level, to take further decisions which may be required to this end;

12. *Decides* to remain seized of the matter.

About the Author

Brad Glosserman is Executive Director at Pacific Forum CSIS in Honolulu. He is editor of *Comparative Connections*, the Pacific Forum's quarterly electronic journal, and writes the chapter on U.S.-Japan relations. He directs the Pacific Forum's Young Leaders program. He is co-author of many monographs on U.S. foreign policy and Asian security relations. Other articles have appeared in scholarly journals throughout the region, and he has contributed several chapters to various books on regional security. He is the editor (with Tae-hyo Kim) of *The Future of U.S.-Korea-Japan Relations: Balancing Values and Interests* (CSIS Press 2004). His opinion articles and commentary have appeared in The Japan Times, South China Morning Post, the International Herald Tribune, The Asian Wall Street Journal, The Index on Censorship, Japan Digest, and The Straits Times, as well as other publications. Mr. Glosserman has been a regular commentator for the BBC and other Asian radio programs.

Prior to joining Pacific Forum, Mr. Glosserman was, for 10 years, a member of The Japan Times editorial board. He has a JD from George Washington University, an MA from Johns Hopkins University's School of Advanced International Studies (SAIS) and a BA from Reed College.