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Enter the Dragon! Dealing with WMD proliferation in the Asia-Pacific

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ABSTRACT

The end of the Cold War brought with it the demise of a stable arms market in the Asia-Pacific. At the same time burgeoning economies with high volume maritime trade, territorial claims, and the realisation by nations a new security independence sparked an arms build-up in the Asia-Pacific, in stark contrast to the downsizing and reduced military budgets of other regions. In the last decade however the Asia-Pacific region has benefited from new levels of trust and confidence, with most of the region's member states choosing to take an active role in non-proliferation treaties and practices.

A key result of the improved trust has been a commitment by most Asia-Pacific nations to both actively support existing treaties such as the Nuclear Non-Proliferation Treaty (NPT), and to develop new mechanisms, protocols and procedures to broaden the scope of non-proliferation commitment across the spectrum of weapons of mass destruction (WMD). In part these actions have been the result of broader global initiatives, but the Asia-Pacific region itself has developed proposals that have gained wide appeal among both member states and further afield. The essay examines four countries in detail (China, North Korea, Singapore and Australia) to highlight the effects of trust building and positive example-based non-proliferation behaviour.

The essay argues that existing international treaties and agreements will at best slow the transfer of WMD technologies given existing suppliers and an ever-present demand for military development. It concludes that a series of complementary "soft" regional approaches are required but that these approaches

must be pragmatic enough to recognise the re-emergence of China within the Asia-Pacific, the uneasy acceptance of China and the US with each other in the region, and the fragile state of the West's relations with North Korea. The essay also highlights that diplomatic negotiations on proliferation and security issues have greatest result when de-linked from other concerns such as human rights.

Enter the Dragon! Dealing with WMD proliferation in the Asia-Pacific.

“Proliferation begets proliferation”

George Schultz¹

INTRODUCTION

The end of the Cold War brought with it the demise of a stable arms market in the Asia-Pacific.^{2,3} While there was an initial period of strategic inertia following the Former Soviet Union’s (FSU) collapse, most Asia-Pacific nations quickly surmised that new and potentially independent security responsibilities existed.⁴ A security vacuum exacerbated fears about both the potential for a US drawdown within the region, and also what affect that would have on China’s ambitions. Tensions were already raised over North Korea’s continuing association with the development and supply of technologies related to nuclear weapons of mass destruction (WMD) programs.⁵

At the same time three major factors contributed to a changed and increasingly external outlook in the Asia-Pacific. Firstly, the United Nations Convention on the Law of the Sea (UNCLOS) increased both the pressure of competing territorial claims and the desire for credible maritime forces to protect offshore resources.⁶ Secondly, a number of nations in the region were consolidating their political systems in terms of either their democratic outlook (e.g. Philippines) or tenure of government (Myanmar),

¹ George Schultz, “Preventing the Proliferation of Nuclear Weapons” cited in Scott D. Sagan, “Why Do States Build Nuclear Weapons?”, *International Security*, Vol. 21, No. 3. 1997, 57.

² David Mussionton, ‘Understanding Contemporary International Arms Transfers’, *Adelphi Paper 291*, International Institute of Strategic Studies, London, September 1994, 57.

³ In this paper Asia-Pacific is defined as the land and littoral areas of the ASEAN nations, those to join in 2012 and observers (see Table 1.)

⁴ US interest has since been re-invigorated by the Global War on Terror.

⁵ For the purpose of this paper WMDs will be defined as nuclear, biological, chemical and radiological weapons that can kill large numbers of humans and/or cause catastrophic damage to man-made or natural structures, or the biosphere in general.

⁶ Paul Dibb, “Defence Modernisation in Asia: Towards 2000 and Beyond”, *Contemporary South East Asia*, Vol. 18, No. 4, March 1997, 351.

which brought a higher stability to domestic concerns and a move by many Asia-Pacific nations to review foreign policy and reprioritise international commitments.⁷ Thirdly, and most importantly, however, was the unprecedented economic boom in the region which established or cemented trade links while providing extra capital for defence spending.⁸

In stark contrast to the downsizing and reduced military budgets of other regional environments an Asia-Pacific arms build-up ensued,⁹ in most cases with little transparency over either force funding or capabilities. Collectively these issues contributed to an environment characterised by a rapid modernisation of regional industrial capacities and a marked increase in their technological standing,¹⁰ yet with some of the greatest challenges in terms of demographic make up, quantities of trade and potential regional fault lines.¹¹

In the last decade however the Asia-Pacific region has benefited from new levels of trust and confidence, with most of the region's member states choosing to take an active role in non-proliferation treaties and practices. While some of this is due to security fears not materialising from the immediate post-Cold War environment, there has also been an active non-proliferation agenda in the Asia-Pacific driven by member states such as Singapore and Australia. The desired outcome has been to both actively support existing treaties such as the Nuclear Non-Proliferation Treaty (NPT), and to develop new mechanisms, protocols and procedures to broaden the scope of non-proliferation commitment across the spectrum of WMD and conventional arsenals. In part these desired outcomes have been part of

⁷ Carl A. Thayer, 'Arms Control in South East Asia', *Defense Analysis*, Vol. 12. No. 1., 1996, 76.

⁸ Ralph A. Cossa, 'Bilateralism versus Multilateralism; An American Perspective', *The Korean Journal of Defense Analysis*, Vol. 8, No. 2., Winter 1996, 78.

⁹ Ethan B. Kapstein, "Allies and Armaments", *Survival*, Vol. 44, No. 2, (Summer 2002), 143-144

¹⁰ Reinhard Driete, 'The Role of Arms Control in North East Asia', *Defense Analysis*, Vol. 12 No. 1, 1996, 90.

¹¹ Alexander Downer, "Countering Proliferation: New Threats and Practical Responses", http://www.foreignminister.gov.au/speeches/2005/051207_cscap.html

broader global initiatives, but the region itself has developed proposals that have gained wide appeal among both Asia-Pacific member states and further afield.

It is in the context described above that this essay will examine proliferation in the Asia-Pacific of WMD weapons and technology, including delivery systems. It will not examine small arms trade or ammunition production. The essay begins by delivering an outline of the major non-proliferation treaties, controls and initiatives impacting on the region. The second area of examination will be consideration of the concepts of supply and demand, including analysis of the effect of proliferation of weapons and military technology on regional stability. In order to effectively frame current measures, baseline historical perspectives will be incorporated.

Thirdly, the essay will examine four key regional nations. Notwithstanding the strong US presence in the region the two Asia-Pacific based countries that find themselves often at odds with the US and posing the greatest proliferation concern are China and North Korea. These two nations will therefore be examined in detail within the essay. For contrast Singapore and Australia, two nations who are also arms suppliers but act as mediators and overt supporters of counter-proliferation measures will also be examined.¹² The essay will then discuss how technologies are transferred, and whether treaties and control mechanisms can have any real effect in either physically stopping proliferation or enforcing a physical compliance.

The essay argues that existing international treaties and agreements will at best slow the transfer of technologies given an ever-present demand for arms development. It maintains that a series of complementary “soft” regional approaches are required but that these approaches must be pragmatic enough to recognise the re-emergence of China within the Asia-Pacific, the uneasy acceptance of China and the

¹² Proliferation can be measured vertically and horizontally. Vertical proliferation is growth in the size of current holdings while horizontal proliferation is the spread of technology to states or actors not previously in possession. This essay addresses both forms.

US with each other in the region, and the fragile state of the West's relations with North Korea. The essay highlights that diplomatic negotiations on proliferation and security issues have greatest result when dealt with as individual topics, rather than being linked to other concerns such as human rights.

The diversity of Asia-Pacific nations and their differing governing structures, capabilities and expectations suggests that the greatest utility of regional forums such as ASEAN are the abilities to demonstrate example-based leadership in proliferation policy and controls, and to reaffirm the mutual benefits afforded by regional economic and governmental stability. The essay concludes that there is no single path to successful WMD non-proliferation in the Asia-Pacific. Only a combination of member state actions within a framework of regional and international negotiations, controls and verifications, offers the opportunity for continued peace and stability.

TREATIES AND AGREEMENTS

Nuclear Treaties. There are a number of treaties and agreements aimed at preventing proliferation of WMDs and associated technologies. Perhaps the best known and most important is the Nuclear Non-proliferation Treaty (NPT) which opened for signature in 1968, and entered into force in 1970. Currently 189 UN member nations have signed the treaty, including the five NPT recognized nuclear powers who are also the permanent members of the UN Security Council.¹³ The NPT is a binding multilateral commitment to the goal of nuclear disarmament by the nuclear-weapon states.

The NPT's aims are to prevent the spread of nuclear weapons and weapons technology, to promote co-operation in the peaceful uses of nuclear energy and to

further the goal of achieving nuclear disarmament and general and complete disarmament.¹⁴ Notably however India, Pakistan and North Korea are three of the four non-signatories (Israel being the other). As such, the issue of nuclear weapons is a significant and continuing concern in the Asia-Pacific. While none of the ASEAN and South Pacific nations necessarily feel a direct threat in terms of being targeted, the potential for any kind of nuclear exchange between India – Pakistan, on the Korean peninsula or across the Taiwan Strait would have extremely grave effects on the region.

After decades of relative inactivity in nuclear non-proliferation progress, negotiations began in 1993 for comprehensive restrictions on nuclear weapons and technologies, although key differences of opinion arose between those states focused on vertical proliferation (position of the Non-Aligned Movement) or horizontal proliferation (position of existing nuclear powers). As part of the debates US President Clinton addressed the UN proposing a “multilateral agreement to halt production of high-enriched uranium and separated plutonium used in nuclear explosives or outside international safeguards.”¹⁵

In response the UN General Assembly adopted resolution 48/75L in December 1993. The UN’s Conference on Disarmament (CD), a 65 member nation body charged with negotiation of multilateral arms control and disarmament agreements, which has also negotiated the Biological Weapons Convention and other disarmament protocols,

¹³ United Nations Office for Disarmament Affairs, “Status of Multilateral Arms Regulation and Disarmament Agreements” <http://disarmament2.un.org/TreatyStatus.nsf>, Internet, accessed 20 April 2008.

¹⁴ United Nations Office for Disarmament Affairs, “NPT Brief Background”, <http://www.un.org/Depts/dda/WMD/treaty/> Internet, accessed 20 April 2008

¹⁵ Federation of American Scientists, <http://www.fas.org/nuke/control/fmct/docs/fissmat.htm> Internet, accessed 26 April 2008.

is still negotiating a Fissile Material Cut Off Treaty. Negotiations remain stalled in part because of continued disagreement over verification regimes.¹⁶

What emerged was the Comprehensive Test-Ban Treaty (CTBT) which bans any nuclear explosions, for military or civil purposes. While the CTBT was opened for signature to all nations in 1996 it requires the ratification of 44 specified countries with nuclear power reactors to come into force. The seven left to ratify include the four NPT non-ratifiers plus Indonesia, China, and the United States. (*See Table 1 below*) While there has been little likelihood of the CTBT coming into force without the United States taking the lead in terms of ratification there is still a large global concern for the spread of nuclear materials and technologies.

The Biological Weapons Convention. The Biological Weapons Convention (BWC) or Biological and Toxin Weapons Convention (BTWC) seeks to ban biological weapons by prohibiting the development, production, and stockpiling of biological agents, delivery systems and agents intended for hostile use.¹⁷

The BWC entered into force in 1975, but has been hampered by the lack of an enforcement or verification regime.

The Chemical Weapons Convention. By way of contrast the Chemical Weapons Convention (CWC) has created a strict

Table 1 - ASEAN Nations and Their Treaty Status (1 May 08)

Member Nations	NPT	CTBT	BWC	CWC	Australia Group	Treaty of Rarotonga
Brunei	Ratified	Signed	Ratified	Ratified		
Indonesia	Ratified	Signed	Ratified	Ratified		
Malaysia	Ratified	Ratified	Ratified	Ratified		
Philippines	Ratified	Ratified	Ratified	Ratified		
Singapore	Ratified	Ratified	Ratified	Ratified		
Thailand	Ratified	Signed	Ratified	Ratified		
Regular Observers						
Timor Leste	Ratified		Ratified	Ratified		
Papua New Guinea	Ratified	Signed	Ratified	Ratified		Signed
Countries Joining in 2012						
Cambodia	Ratified	Ratified	Ratified	Ratified		
Laos	Ratified	Ratified	Ratified	Ratified		
Myanmar	Ratified	Signed	Signed	Signed		
Vietnam	Ratified	Ratified	Ratified	Ratified		
Observers						
Australia	Ratified	Ratified	Ratified	Ratified	Member	Signed
China (PRC)	Ratified	Signed	Ratified	Ratified		Ratified Protocols II and III
India			Ratified	Ratified		
Japan	Ratified	Ratified	Ratified	Ratified	Member	
New Zealand	Ratified	Ratified	Ratified	Ratified	Member	Signed
Pakistan			Ratified	Ratified		
South Korea	Ratified	Ratified	Ratified	Ratified	Member	
Others						
North Korea	Withdrawn		Ratified			
United States	Ratified	Signed	Ratified	Ratified	Member	Signed Protocols II and III

Sources: Compiled from: <http://www.unog.ch/> Internet; accessed 2 May 2008
<http://www.australiagroup.net/en/participants.html>, Internet; accessed 2 May 2008 and
<http://disarmament.un.org/treatystatus.nsf/>, Internet; accessed 2 May 2008

The Australia Group. The Australia Group came into being in 1985, after Iraq's use of chemical weapons on the Kurds in 1984. The Group is informal but meets annually. The Australia Group now has 41 members (including the European commission) and aims to act in support of both the CWC and BWC by controlling trade and technologies associated with those items. As the key proponent Australia permanently chairs the Group and controls the secretariat.¹⁹

South Pacific Nuclear Free Zone Treaty. The South Pacific Nuclear Free Treaty Zone or Treaty of Rarotonga came into force in 1986 and is a multilateral agreement prohibiting the manufacture, testing and storage of nuclear explosive devices or nuclear waste dumps within the specified zone which links around to the west coast of Australia and conjoins the South American Nuclear Free Zone. Other signatories in 1996 include France, the US, UK, China and Russia.²⁰

SUPPLY AND DEMAND

Supply. During the Cold War period both the United States and FSU executed conscious policies of arms transfers based on a desire for interoperability, and to increase the self-defence capabilities of their allies.²¹ Consequently a number of nations in the Asia-Pacific region entered the arms trade under license, seeking to develop and support more advanced independent military industrial complexes. In such an environment the 'political will to control their (arms) destination diminished on all sides' as they became implicitly involved with the economics of supply.²² Concurrently technological and doctrinal changes increased the impetus to modernise.

¹⁹ The Australia Group, <http://www.australiagroup.net/en/index.html>, Internet, accessed 26 April 2008

²⁰ The UK conducted nuclear testing at Maralinga, South Australia between 1955 and 1963. France conducted its last test at Mururoa Atoll, French Polynesia in 1996 prior to the CTBT coming into force.

²¹ William Keller and Janne Nolan, "The Arms Trade: Business as Usual?", *Foreign Policy*, Winter 1997-98, 112.

²² *Ibid.*, 112-3.

Most armed forces around the globe have recognised future needs to operate on a digitised battlefield, most likely in an expeditionary capacity and as part of sustained joint Coalition operations. The Asia-Pacific nations have certainly recognised these trends. At the same time the post-Cold War environment has led to a diversification in ownership of both military technology and production. Additionally the cost of weapons platforms and their associated logistic tails has increased exponentially, outstripping the capacities of virtually every nation bar the United States to independently develop and produce sophisticated weapons technology. This has resulted in three key effects on the Asia-Pacific arms market.

Firstly, in order to offset production costs the major arms producers are buying up smaller competitors and are relying more on joint ventures to tender new projects or to sub-contract orders. In the early 1990s this resulted in the horizontal proliferation of technologies, trained personnel and production or maintenance facilities, a trend which continues today.²³ In common with nations in other developing regions, Asia-Pacific countries demanded a technical offset to purchase costs plus local manufacture of global delivery programs sales.²⁴ Delivery of those offsets ensures that the level of technological competence in the region is continuing to rise.

Secondly, the high individual or programmatic cost of many platforms and the perceived post-Cold War need for independence in time of conflict has created a strong desire for the development of dual-purpose domestic industries. In the Asia-Pacific this has manifested itself as willingness to purchase small numbers of cutting edge products, often from an unregulated industry, so as to produce carbon copies or in order to reverse engineer current designs.

²³ Andrew Hull and David Markov, "Trends in the Arms Market (Part Two)", *Jane's Intelligence Review*, May 1997, 232-3.

Thirdly, during the early 1990s the post-Cold War down-sizing of Eastern bloc militaries created significant stockpiles of nuclear materials and weapons in particular, with inaccurate record keeping adding to fears of potential proliferation. The lack of transparency of weapon deals exacerbated those fears. Under a series of often complicated arrangements involving deferred payment schedules, and multi-faceted trade agreements Eastern bloc nations repaid currency debts with military hardware and the technical expertise to support it, with munitions experts readily following employment offers throughout the Asia-Pacific.²⁵ The concerns were however restricted to nuclear proliferation, rather than chemical or biological supply.

More recently China and North Korea have pushed weapons sales to other Asia-Pacific nations, offering cheaper platform cost items in exchange for both hard currency and natural resources. With each of these three nations there was concern that the potential for WMD technology to be transferred was greatly enhanced by a perceived lack of export controls or through deliberate masking of WMD technology transfers.

Of significant concern in the nuclear front was a publicly televised confession in February 2004 by Abdul Qadeer Khan, the engineering head of nuclear research in Pakistan. In the face of mounting international evidence Khan admitted that he had headed an illicit network that had supplied a number of states including North Korea, Libya, Iran and Iraq with nuclear materials, training and expertise over at least a twenty year period. While the full extent of the Khan network may never be known

²⁴ Michael Klare, "East Asia's Militaries Muscle Up", *The Bulletin of Atomic Scientists*, January / February 1997, 58.

²⁵ R.S. Clarke, "The Emergence of Strategic Missiles: A Force of Rooks for a Black King", *Paper No. 55*, Air Powers Study Centre, 7 at <http://www.fas.org/irp/threat/missile/paper55.htm>, Internet: accessed 15 Apr 2008.

both he and his associates are believed to have operated in at least ten countries, including Malaysia, Singapore and South Korea within the Asia-Pacific.²⁶

Demand. In discriminating between the ‘haves’ and ‘have nots’ of the nuclear world, the NPT conferred a degree of prestige on those nations with nuclear weapons, a situation which has been continually reinforced by the position taken by the nuclear powers on other non-proliferation measures. While many nations are content with this status quo by virtue of their alliances and friendships,²⁷ in an independent security environment nuclear weapons are often viewed as a the ultimate guarantee of state protection.²⁸ Nations such as China feel nuclear weapons are part of means to confirm its political status as dominant player in the international community,²⁹ while other nations are prone to believe that nuclear weapons provide a nexus to break the shackles of current international standing. The possession of nuclear weapons therefore is potentially seen by some ‘have nots’ as a means to improve their relative standing in the world.

In terms of threat there are two new potential users of weapons of mass destruction (WMD). The US administration coined the term ‘rogue states’, referring to a small group of nations who were deemed to be flouting international norms and treaties while clandestinely pursuing nuclear capability or advanced missiles technologies. These states (Iraq, Iran, North Korea and Libya) were also thought in some cases to be sponsoring terrorism.³⁰ While the threat of a nuclear state-on-state

²⁶ Michael Laufer, “A.Q. Khan Nuclear Chronology”, *Carnegie Endowment Issue Brief Non-Proliferation*, Vol. VIII, No. 8, 7 September 2005, <http://www.carnegieendowment.org/publications/>, Internet, accessed 27 March 2008.

²⁷ Glenn Chafetz, ‘The End of the Cold War and the Future of Nuclear Proliferation: An Alternative to the Neo-realist Perspective’, *Security Studies*, Vol. 2. Nos. 3/4, Spring/Summer 1993, 128

²⁸ Wade Boese, “Blair: Retain UK Nuclear Weapons”, *Arms Control Today*, January / February 2007, 41

²⁹ Roger Speed, “International Control of Nuclear Weapons”, *The Washington Quarterly*, Vol. 20, No. 3., MIT press, Cambridge MA, Summer 1997, 179.

³⁰ Nick Childs, “Analysis: The New Bogyman” at <http://news.bbc.co.uk/2/hi/1376425.stm>, Internet, accessed 24 April 2008

conflict has diminished since the end of the Cold War, the Gulf War and subsequent conflicts have seen both the continued use of missiles and the use of crude chemical weapons such as chlorine mixtures.³¹

In the post 9/11 environment it is unlikely that global threats such as Al Qaeda or its regional affiliation Jemiah Islamiyah (JI) will be concerned over the use of WMDs against them. There is new concern however that terrorists will use whatever means are available to cause the greatest destruction possible. The volume of trade and relative lax control in many Asia-Pacific points of entry suggest that it would be possible for a radical organisation like JI or Abu Sayyaf to acquire crude biological or chemical WMDs or missile technologies. In short while the threat of the use of nuclear may have diminished in the Asia-Pacific the potential threat from proliferation has diversified.

Over the last two decades almost every nation in the Asia-Pacific has increased its defence expenditure substantially. The region's proliferation is commonly based on a transition towards maritime strategies designed to secure future economic potential in respective EEZs, with key conventional upgrades often being in aircraft or as part of a desired expansion to blue water naval capability. Of the four nations examined in more detail in this essay, SIPRI estimates that between 1989 and 2006 Singapore increased its military expenditure from \$US 1.89B to \$US 5.86B (310 percent); Australian expenditure grew from \$US 9.08B to \$US13.79B (51 percent); China from \$US 11.2B to \$US 49.5B (441 percent) while even contested North Korean government provided figures in local currency suggest an increase in the order of 30% over the same period.³² In many cases the defence expenditures in the Asia-

³¹ Karin Bruilliard, "Chlorine Blast Kills 8, Troops Also Die in Iraq", at <http://www.washingtonpost.com/wp-dyn/content/article/2007/03/17/AR2007031700432.html>, Internet, accessed 29 April 2008

³² Stockholm International Peace Research Institute, *SIPRI Yearbook 2007*, http://first.sipri.org/non_first/milex.php, Internet, accessed 13 Apr 2008. Figures standardised in 2005 \$US.

Pacific are being supplemented by dual-use technologies; or through undeclared black market purchases. But for the 1997 economic crisis which put many capital acquisition plans on hold temporarily the figures may have been even higher!

Although the economic and purchasing figures appear striking at first look, defence expenditure on conventional capabilities should not be viewed however as purely aggressive or imitative behaviour. With the exception of China, regional expenditure levels have generally been consistent with the rates of economic growth within the Asia-Pacific region.³³ It needs also to be recognized that in many cases military hardware and materiel is required not only to protect resources or operate further afield, but also that many regional nations have a significant requirement to modernise. For example, India retired one of its two WWII vintage aircraft carriers in 1997. To answer this it bought the Admiral Gorshkov from Russia in 2004 for US\$1.5B (due in service in 2008) and started the construction of its own 37,500 tonne Vikrant class carrier in 2005, which will operate MiG 29 Fulcrums, two Indian made aircraft types plus Harrier jump jets.³⁴

FOUR ASIA-PACIFIC NATIONS – A SNAPSHOT

China. The Chinese perspective of sovereignty is founded on a distinct belief in non-intervention in the affairs of another state, with the expectation that other states should not interfere in aspects of Chinese domestic issues. China's foreign policy approach has been characterised by a desire to work within established international

³³ Richard Leaver and Graham Cheeseman, 'Trends in Arms Spending and Conventional Arms Trade in the Asia-Pacific', in Gary Klintworth (Ed.) *Asia-Pacific Security: Less Uncertainty, New Opportunities?*, 1996, 201-2

³⁴ "India begins construction of Aircraft Carrier", http://www2.chinadaily.com.cn/english/doc/2005-04/12/content_433517.htm, Internet, accessed 24 April 2008

norms as long as they remain in the national interest, as determined by the party principals (and principles).³⁵

Like most Asia-Pacific nations though the Chinese military was in significant need of modernisation.³⁶ As highlighted earlier China has recorded an over four hundred percent increase in its defence budget over the last two decades. True expenditures are believed however to be much higher due to the grey area between the military industrial complex and civilian enterprise.³⁷ Combined with the demise of what it had perceived as its greatest strategic threat (the FSU), China's economic growth and development have led to a fundamental change in strategic thinking within the Peoples' Liberation army (PLA). Gone are the Cold War concepts of a protracted war using massed armies and trading space for time. In light of the US's military dominance China now views its posture as one of quick strike and quick resolution within a limited campaign area such as the Taiwan Strait.³⁸

China has drastically overhauled its Soviet style defence industry, with significant production and quality improvements over the last decade, although the aviation and missile capability production advances lag behind their shipbuilding and conventional munitions improvements.³⁹ Notably its four services are: Army, Navy, Air Force and Missiles. China has prioritised the development of a blue water navy, and the bulk of its \$1.5B annual purchases from Russia are now naval and aerospace systems and missiles.⁴⁰

³⁵ Michael Yahuda, "China's Foreign Policy Comes of Age", *International Spectator*, Vol. 42, No 3 (Sep 2007), 341

³⁶ Oded Shenkar, "China's Economic Rise and the New Geopolitics", *International Journal*, Vol. 61. No.2 (Spring 2006), 317

³⁷ Paul Dibb, *op. cit.*, 350.

³⁸ N. Li, "New Developments in PLA's Operational Doctrine and Strategies", *Pacific Forum CSIS Issues and Insights* Vol 6. No. 20, 6.

³⁹ Dzirhan Mahadzir, "China's Defence Industry: Reform and Challenge", *Asian Defence Journal*, July/August 2007, 4 -7.

⁴⁰ *Ibid.*, 5.

While China has settled most of its territorial disputes over the last two decades, it still poses the major threat to regional stability not only because of its burgeoning military-industrial complex and vast economic development but also through its apparent lack of concern over a potential arms race with the US, Japan or India. It sees the NPT as flawed yet remains a signatory while openly trading with a number of countries. In the mid 1990s China was described by the CIA as ‘the most significant supplier’ of WMD.⁴¹ It has previously supplied Pakistan with nuclear material to balance India, delivered missiles to Iran⁴² and continues to have an opaque policy regarding missile technologies.⁴³ China has also had the ability to update its nuclear technologies through peaceful means. For instance Canada Prime Minister Jean Chretien signed a Nuclear Cooperation agreement in 1994 that led to the sale of two CANDU reactors.⁴⁴

Although Chinese and Japanese dialogue has improved over the last few years, there is long held rivalry (China still feels ‘humiliated’ by the 1868 Meiji restoration) and deep suspicions of each other’s motives.⁴⁵ China has both transited into Japanese waters with nuclear powered submarines and increased surveillance flights in disputed airspace.⁴⁶ Residual territorial disputes such as Okino Tori Shima and Japan’s support for an independent Taiwan, will ensure that China’s relations with Japan will remain an unsettling influence in the Asia-Pacific region.⁴⁷ The fact that China has nuclear weapons and intercontinental ballistic missiles only adds to the tension.

⁴¹ Paul Mann, “China Alleged Top Trafficker in Mass Destruction Weapons”, *Aviation Week and Space Technology*, 4 August 1997, 42.

⁴² Drifte, *op. cit.*, 91.

⁴³ Carlo Kopp, “Bypassing the NMD: China and the Cruise Missile Proliferation Problem”, http://www.strategycenter.net/research/pubID.112/pub_detail.asp, Internet, accessed 28 March 2008.

⁴⁴ Wenran Jiang, “Meeting the China Challenge: Developing a China Strategy”, in Andrew F. Cooper and Dane Rowlands (Eds.) *Canada Among Nations 2006: Minorities and Priorities*, McGill-Queens University Press, 2006, 254.

⁴⁵ Kent Calder, “China and Japan’s Simmering Rivalry”, *Foreign Affairs*, Vol. 85 No. 2, March / April 2006, 129-130

⁴⁶ *Ibid*, 130.

⁴⁷ Yahuda, *op. cit.*, 344.

China's relationship with the US will also continue to be closely monitored. A degree of enmity and strong suspicion over Chinese intentions was made public by the 1999 US Select Committee on National Security's "Cox Report", in which an active programme of theft from US nuclear establishments from the 1970s onwards was clearly identified. The thefts included design information on the current US nuclear inventory including delivery systems.⁴⁸

While China accepts US influence in the region, China has used the last decade of economic growth and relative security stability to try and subtly project itself as a strategic counterweight to the US by increasing its influence with other Asia-Pacific nations.⁴⁹ To date this has principally been achieved by building strong economic ties and by buying into regional markets, particularly in the energy sector in order to fuel its booming development. It has however also sought to build stronger ties and extend its influence by participating strongly in regional forums such as ASEAN, despite having only observer status. While this is in part a strategic move to shore up support within the region it also places China in an uneasy and ill-defined competition with the US for regional influence.

China has also come into conflict with the US and Asia-Pacific nations for its dealings with 'pariah' states such as Myanmar, Sudan and North Korea. For example reasonable evidence exists that Chinese conventional weapons have been used in Darfur.⁵⁰ While this in itself has not broken any treaty arrangements it is illustrative of the fact that China continues to view arms control mechanisms as inhibitors to its perceived status as a regional hegemon and to its economic well being. Although its conventional arms sales are on the decrease, China's primary objective is to ensure

⁴⁸ United States House of Representatives Select Committee Report, "U.S. National Security and Military / Commercial Concerns with the People's Republic of China, <http://www.house.gov/coxreport>, Internet, accessed 9 March 2008

⁴⁹ Jieng, *op. cit.*, 255.

⁵⁰ Stephanie Kleine-Ahlbrandt and Andrew Small, "China's New Dictatorship Diplomacy", *Foreign Affairs*, January / February 2008, 52

that it has freedom of action and respect in the Asia-Pacific. The continued development of nuclear weapons and missile technologies are a key component of this overall goal.

Over the last five years however China has taken a more active role in non-proliferation. The country published a White Paper on the topic in 2003, has enacted several laws in concerning proliferation and joined a number of dual-use committees.⁵¹ Additionally it has reluctantly taken a leadership role in negotiations with North Korea in light of US diplomatic failings.

North Korea. North Korea is both the most likely nation in the Asia-Pacific region to flaunt WMD treaties and international regimes, and also the most likely to benefit from doing so as other nations seek to offer incentives to stop nuclear development. While North Korea signed the NPT in 1985 it subsequently threatened to withdraw in the early 1990s. In order to end an eighteen month treaty crisis associated with the threatened withdrawal the US and North Korea signed an “Agreed Framework” aimed to freeze North Korea’s construction and operation of nuclear reactors suspected of being part of a covert nuclear weapons program. In exchange the US agreed to provide two light water reactor (LWR) power plants capable of generating 2,000 MW by 2003, and to supply North Korea with fuel oil pending construction of the reactors. North Korea also committed not to develop nuclear weapons.⁵²

In December 2002 IAEA inspectors discovered that North Korea was using spent rods to produce plutonium, and the country subsequently withdrew from the NPT in 2003, citing US failures to complete the LWR reactors as agreed. After

⁵¹ Denny Roy, “Going Straight, But Somewhat Late: China and Nuclear Proliferation”, *Asia-Pacific Center for Security Studies*, February 2006.

publicly announcing it had a nuclear capability North Korea conducted what was most likely a partially successful nuclear test on 9 October 2006.⁵³ Components and centrifuge designs had been sourced in part through the A.Q. Khan network.

After significant diplomatic efforts a Chinese led Six-Party agreement (China, Japan, Russia, South Korea, North Korea and the United States) was reached in Feb 2007 under which North Korea again agreed to disable its Pyongyang nuclear reactor complex, in return for economic aid.⁵⁴ Under the arrangement North Korea was supposed to disable its three primary facilities by 31 December 2007, but the efforts of the Six-Party nations in delivering only 20 percent of the agreed 1 million tons of heavy fuel oil stalled matters both physically and politically.⁵⁵ Negotiations with North Korea on its nuclear program continue, and in a positive development Chinese news agency Xinhua reported on 1 May 2008 that the DPRK has tentatively agreed to declare its nuclear programs and hand over nuclear records and toxic waste samples to the United States.⁵⁶

Like China, North Korea is a major producer of small arms and missiles, and is likely to try and keep up defence sales over the foreseeable future in order to provide some relief to an economy close to collapse. North Korea traditionally relied on the FSU as a technological and economic lifeline, a source that in an open market, has dried up over the recent years.⁵⁷ China has in part filled this void however North Korea remains open to dialogue with other 'pariah' states such as Iran.

⁵² David Albright and Kevin O'Neill (Eds.), *Solving the North Korean Nuclear Puzzle*, ISIS Press at <http://www.isis-online.org/publications/dprk/book/af.html>, Internet, accessed 25 March 2008

⁵³ Daniel A. Pinkston (Ed.), "North Korea Conducts Nuclear Test", Center for Nonproliferation Studies, Monterey Institute of International Studies at http://cns.miis.edu/pubs/week/pdf/061010_dprktest.pdf, Internet, accessed 15 March 2008.

⁵⁴ "Jane's, *Nuclear, Biological and Chemical Defence 2007-2008*, 26.

⁵⁵ Peter Crail, "North Korea Slows Nuclear Disablement", *Arms Control Today*, March 2008, 42

⁵⁶ Mu Xuequan (Ed.), "Report: DPRK to hand over nuclear files to U.S." 1 May 2008 http://news.xinhuanet.com/english/2008-05/01/content_8089236.htm Internet; accessed 2 May 2008

⁵⁷ Ian Anthony (et.al.), "The Trade in Major Conventional Weapons", *SIPRI Yearbook 1996: Armaments, Disarmaments and National Security*, 1997, 466.

Without a comparative ability to tap into other technological advances North Korea's domestic industry will not be able to sustain continued quality production and poses a reducing conventional threat. It would appear however that as its conventional supplies have diminished and sales waned, North Korea has sought to rely more on ballistic missile and nuclear technologies, resulting in a degree of nuclear subterfuge. Over the past two decades Pyongyang has consistently and deliberately been opaque with IAEA inspections; a course which ironically appears to have contributed to a reinvigorated attempt by the UN to control the trade of nuclear technology. North Korea was also deliberately provocative in conducting missile testing in the Sea of Japan on July 4, 2006 as well as nuclear testing in October of that year not surprisingly gaining the attentions of both the US and Japan.⁵⁸

North Korea continues to distrust the ROK, although the establishment of bilateral relations with a number of other nations able to provide economic support, such as the Japan and China has opened the door to potentially even greater non-proliferation steps. The key to limiting North Korea's nuclear and sophisticated weapons development lies in ensuring it does not feel unduly threatened by the developing states around it and that it has alternative sources of income. The country is marked by a degree of technological isolation and if economic pressure is maintained too strongly in order to force it to a reunification or non-proliferation table then North Korea may seek to assert its position through the continued acquisition, development and sale of both advanced conventional or nuclear technologies.

Singapore. Singapore's military development is highly unlikely to be a threat to regional security despite the advanced nature of its own current technology and weapons. The country's focus over its short history has been on self-preservation and the development of links with smaller countries in similar situations such as Taiwan

⁵⁸ Anthony H. Cordesman, "North Korea's Missile Tests: Saber Rattling or Rocket's Red Glare",

and Israel, as well as building links with many other nations in the Asia-Pacific and Europe. Unless the country's physical or resource security is threatened it will remain a solid and stable member of ASEAN and will remain a strong proponent of non-proliferation treaties and measures. It has no nuclear, chemical or biological weapon producing capability.

Singapore is however the largest ship builder in ASEAN and is committed to export.⁵⁹ It specialises in fast attack and patrol craft and has delivered to countries such as Brunei, Malaysia, Taiwan and the Philippines.⁶⁰ The government maintains a tight control on the national industrial base which will limit the capacity of transitional companies to achieve anything less than a regulated proliferation. While it is economically in Singapore's interest to supply arms, the country perhaps stands to lose the most in a regional dispute. However the state-sponsored company Singapore Technology has taken a strong position in China, providing some of the engineering and electronics expertise missing from Chinese industry.⁶¹ Together these factors shape Singapore's interest in maintaining harmony in the Asia-Pacific region.

The Singaporean government has much to gain through its all-out support of the anti-terrorism campaign associated with the 'Global War on Terror'. In contrast to the political and domestic extremist threats several other Southeast Asian governments face, Singapore's autocratic government and strong emphasis on social order has minimized the risks of home-grown terrorism. A strong non-proliferation stance on WMDs has been matched by the government's efforts to actively support counter-terrorism measures. For instance, Singapore conducted maritime exercises

http://www.csis.org/media/isis/pubs/060705_cordesman_korea.pdf, Internet, accessed 27 April 2008.

⁵⁹ Klare *op. cit.*, 57.

⁶⁰ Leaver and Cheeseman, *op. cit.*, 33.

⁶¹ Benjamin Machmud, "Singapore Defence Industry: Going Global", *Asian Defence Journal*, May 2007, 20

with 45 different nations in 2006, many of which were focused on intercept of suspect vessels.⁶² It has also launched an “Eyes in the Sky (EIS)” initiative in partnership with Thailand, Malaysia and Indonesia to increase regional surveillance.⁶³

Australia. Australia’s policy towards WMDs has been to maintain strong and overt support for their eventual elimination.⁶⁴ It is a signatory to and has ratified all major arms control protocols and treaties across the spectrum of conventional and non-conventional weapons.⁶⁵ Australia does however, maintain one nuclear facility for the storage of isotopes, consistently upgrades its military NBC defence and consequence management capability and has two defence biological research facilities. It has also embarked on an ambitious capability plan that sees a fully funded acquisition of major capital projects to the tune of \$48B over the next decade, although only the Aegis combat system being deployed on the three new air airfare destroyers will be missile capable.^{66,67}

Australia has also sponsored the Australia Group, a voluntary consortium of 41 nations focused on the elimination of biological and chemical weapons, and practically supports the South Pacific Nuclear Free Zone by not allowing warships with nuclear weapons to visit Australian harbours.⁶⁸ Australia has also been willing to undertake a number of transparency measures in order to instil confidence in the region. Some of these include open inspections, combined exercises and a

⁶² “Top Brass in Review”, *Asian Defence Journal*, May 2007, 20

⁶³ Adrienne Li-Tam, “Singapore’s Role in Global Non-Proliferation”, *Issues and Insights – China’s Evolving Military Doctrine*, December 2006, 25.

⁶⁴ *Jane’s, Nuclear, Biological and Chemical Defence 2007-2008*, 2

⁶⁵ Trevor Findlay, “Arms Control and Disarmament”, in Mohan Malik (Ed), *Asia Defence Policies-Peace and Security*, Book Three, Deakin University, Geelong 1994, 55

⁶⁶ Saad Johan, “Australian Defence Special Report”, *Asian Defence Journal*, Jul / Aug 2006, 8-10.

⁶⁷ Aegis systems are capable of engaging in simultaneous air, surface, subsurface, and strike missions.

⁶⁸ Findlay, *op. cit.*, 62-63.

willingness to allow smaller countries such as Singapore and Brunei to train on Australian soil, or observe larger joint exercises.⁶⁹

At the same time however Australia is continuing to develop its military production capabilities, albeit under licence in most cases. Australia has an indigenous ability to produce some conventional small arms and is working towards a capability to develop naval assets in line with its stated maritime strategy. It is also providing a number of smaller assets such as patrol craft and surveillance aircraft throughout the Pacific as part of its Defence Cooperation Program (DCP). While the provision of these assets creates a new capability for receiving nations, their continued reliance on outside aid for both training and logistics in the medium term ensures there will be little chance of a destabilising effect. In reality increases in training effort and support should be delivered to allow for greater independence within those nations, and standardisation of reporting mechanisms.

ARE NON-PROLIFERATION CONTROLS WORKING?

Proliferation pessimists argue that that the release from the Cold War's tight bi-polar system has caused states to seek nuclear weapons, not only as a guarantee of security but in order to pursue military objectives.⁷⁰ While most Asia-Pacific states are pursuing sophisticated conventional and missile technologies as a first recourse and welcome an increased US presence in the region it is the states at the periphery that potentially feel the most isolated and therefore most vulnerable. For a state such as North Korea the end of the Cold War has actually increased its desire for nuclear weapons, notwithstanding the long lead times required to re-process plutonium.

⁶⁹ Michael Krepon, "The 1990's: the Decade for Confidence-Building Measures", *Disarmament – A Periodic Review by the United Nations*, Vol. 18, No. 2, 1995, 98.

⁷⁰ Steven Lee, "What's Wrong with Nuclear Proliferation?", *Security Studies*, Vol. 5, No. 1, Autumn 1995, 164.

It must also be recognised that one aspect of the modern understanding of ‘security’ is energy security. Currently there are eight operating research reactors in South East Asia (Indonesia three, Thailand two, Malaysia one, Vietnam one, Philippines one)⁷¹. While weapons grade supplies are of a much higher order than those required for energy, the transfer of nuclear technology for legitimate purposes increases regional capabilities. Civil nuclear programs can also provide a potential mechanism by which the true nature or intention of those programs could be concealed to some degree.

The UN has recently provided two mechanisms of importance which have strengthened the legal framework surrounding proliferation measures. In 2004 the UN Security Council passed Resolution 1540 which was recognition of the diversified threat posed by terrorists. It effectively criminalised non-state proliferation, calling on all member states to adopt and enforce effective laws prohibiting WMD proliferation to non-state actors as well as implementing control measures in support of those laws.⁷² This was reinforced by the General Assembly’s passage of a similarly worded Convention on the Suppression of Acts of Nuclear Terrorism, which by October 2007 had been signed by 107 member countries.⁷³

Notwithstanding all threat assessments are founded on two factors: capability and intent. Proliferation of WMD components or technology is therefore just a part of the capability equation. In the short term most Asia-Pacific nations will remain reliant on technology provided by external suppliers, be they state sponsored or corporate multi-national arms suppliers. In many cases significant equipment

⁷¹ Nguyen Duong, “ASEAN and the threat of Nuclear Proliferation in Southeast Asia”, *Issues and Insights – China’s Evolving Military Doctrine*, December 2006, 37.

⁷² United Nations, *United Nations Security Council Resolution 1540*, http://www.un.org/Docs/sc/unsc_resolutions04.html, Internet, accessed 12 April 2008.

⁷³ James Martin Center for Nonproliferation Studies, “Convention on Nuclear Terrorism”, <http://cns.miis.edu/pubs/inven/pdfs/nucterr.pdf>, Internet, accessed 26 April 2008.

purchases of platforms have not been matched by state of the art targeting capabilities due to cost or the unwillingness of suppliers to sell the required systems.⁷⁴ However, as the Asia-Pacific's nations develop their military-industrial capacity, the physical potential for independent military action increases.

What is of greater concern is that the human control mechanisms associated with WMD systems will fail, particularly if a state such as North Korea is pushed into a corner. Negotiations therefore should rely more on curbing intent by offering positive incentives and options to proliferation. This has been the focus of the ASEAN Regional Forum (ARF), a 27-nation security initiative which has sought a regional security dialogue, the implementation of control measures and to build 'a stronger sense of community' among South East Asian nations.⁷⁵ While moving slowly, the ARF is incrementally heading towards a new security understanding.

For the smaller nations of the Asia-Pacific, participation in a regional body is in many ways preferable to either a unilateral US or Chinese approach,⁷⁶ however states remain wary of true transparency because of the threat of a security compromise regarding true capabilities.⁷⁷ In many cases the nations of the region must overcome what has often been centuries of mistrust or suspicion, or have leaders who culturally place high value on developing the personal relationship between themselves before developing the confidence to engage in frank discussions on non-proliferation measures.

This latter point can be frustrating for Western-style decision makers seeking quick resolutions and commitments. It must also be remembered that while ASEAN

⁷⁴ Dibb, *op. cit.*, 347.

⁷⁵ Australian Government, "ASEAN Regional Forum (ARF)", <http://www.dfat.gov.au/arf/>, Internet, accessed 22 February 2008.

⁷⁶ Dewi Fortuna Anwar, "Regionalism versus Globalism: a Southwest Asian Perspective", *The Korean Journal of Defense Analysis*, Vol VIII, No. 2, Winter 1996, 44-45.

⁷⁷ Amitav Acharya, "ASEAN and Asia-Pacific Multilateralism: Managing Regional Security" in Amitav Acharya and Richard Stubbs (Eds.), *New Challenges for ASEAN: Emergency Policy Issues*, 1995, 190.

and the ARF are now routinely considering non-proliferation measures the concepts of open dialogue between Asia-Pacific nations has taken over thirty years to develop. Closer examination of Table 1's commitment to the Australia Group also suggests that the South East Asian nations in particular are becoming increasingly conscious of China's increasing presence, and are questioning the current nuclear-weapons states intentions to honour international commitments to nuclear disarmament. The Australia Group's signatories very much reflect a Western schism, which by endorsing chemical and biological controls fail to address the larger issue.

Another limiting factor is that the theories of WMD arms control within complex regions are not as well developed as nuclear deterrence theories. Until 9/11 this was in part caused by a lack of impetus, as economic development interests have historically overshadowed security concerns. Although many new writings are emerging in the post-9/11 environment the focus has been shaped by the US' strong desire for national security measures, with the resultant focus still on stopping supply, or dealing with individual states such as North Korea.

Economic, scientific, environmental and resource concerns have driven nations in the Asia-Pacific region towards enhancing military capability. As the proliferation of nuclear and military technologies increases so does the threat to regional security. While many of the friction points regarding territorial disputes have been resolved or left in abeyance, one of the primary concerns remaining is the failure of some regional nations to articulate their strategic maritime objectives. More practically proliferation control measures face a number of other obstacles. For example, controls on naval assets (including sea-borne missiles) impinge directly on the common principle of freedom of the seas.⁷⁸ Few Asia-Pacific countries have

⁷⁸ *Ibid.*, 98.

WMD export and trans-shipment control legislation in place, and even fewer can back such legislation up with effective enforcement.

Currently the technical military capabilities of most regional nations remain limited despite a massive and ongoing upgrade in military hardware, security measures and technological competence. Most Asia-Pacific nations are still lacking in terms of integrated planning or joint training which, when combined with a lack of intelligence assets means that the region is still vulnerable to WMD proliferation without the support of the US, Japan or China. Over the last five years however confidence building measures such as open inspections, shared intelligence and joint exercises (often with a third party) are becoming more prevalent.⁷⁹ The activities of regional terrorist organisation such as Abu Sayyaf and Jemiyah Islamiyah have given fresh impetus for working together, particularly after the discovery of a terrorist manual in Mindinao outlining biological and chemical weapons use.⁸⁰

The globalisation of arms sales, production and associated technologies makes it necessary to control both supply and demand in order to restrict proliferation.⁸¹ The traditional approach to restricting nuclear weapons proliferation, through measures such as the NPT and CTBT, has been strongly weighted towards controlling supply. Even during the Cold War widespread support for supply controls was able to be garnered due to concerns with the FSU and China's ongoing supply of materials to countries such as North Korea and Pakistan. Regional suspicions are aroused when nations such as North Korea are evasive regarding full IAEA inspections and the fact that China is 'ambivalent' about a comprehensive test ban treaty.

⁷⁹ Brad Roberts, "Arms Control in the Emerging Strategic Environment", *Contemporary Security Policy*, Vol. 18., No. 1, April 1997, 70.

⁸⁰ Maria Ressa, '9/11: The Philippines Connection Part 6', <http://www.abs-cbnnews.com/storypage.aspx?StoryId=50160>, Internet, accessed 26 March 2008

⁸¹ Keller and Nolan, *op.cit.* 113.

The principal technological barrier to proliferation is the amount of plutonium or enriched uranium required for testing and production.⁸² In the five years following the end of the Cold War fissile material was suspected of being stolen from the FSU.⁸³ The discovery of Iraq's weapons program and the A.Q. Khan network confirmed suspicions that WMD technology could fall in to the hands of an undeclared recipient.

The fact that so many physical transfer incidents have occurred indicates not only that there will always be an international inability to maintain a complete track on WMD materials in spite of current treaty ratifications and significantly more expansive control measures.⁸⁴ China and North Korea maintain the political desire to acquire or maintain nuclear weapons; with biological or chemical weapons being more desirable for terrorist groups because of the relative ease of acquisition and storage. While most states in the region have addressed physical security measures regarding materials the most difficult to control remains the body of expertise relating to WMD technological experience and information. A nation with a WMD program may only require a small amount of advice to overcome a technological hurdle.⁸⁵

The reduced threat from a state-on-state nuclear conflict in the post-Cold War environment has to a large degree raised concerns over regarding ballistic missiles, advanced conventional munitions and delivery systems.⁸⁶ Changes in internal political circumstances in both Libya and South Africa caused those nations to give up their nuclear ambitions and strategic missiles capability. Within the Asia-Pacific region however initiatives such as the Missile Technology Control Regime (MTCR)

⁸² Peter Zimmerman, "Technical Barriers to Nuclear Proliferation", *Security Studies*, Vol. 2 Nos. 3 / 4, Spring/Summer 1995, 353.

⁸³ *Ibid.*, 191.

⁸⁴ e.g. The Nunn-Lugar agreements are U.S. Senate initiatives to offer technical and other non-proliferation assistance to the FSU. The programme commenced in 1991 and has been authorised to spend \$300-400 million each year since. Cited in Graham Allison (et. al.), "Avoiding Nuclear Anarchy", *The Washington Quarterly*, Vol. 20 No. 3., MIT Press, Cambridge MA, Summer 1997, 187.

⁸⁵ Zimmerman, *op. cit.*, 353.

have had little effect.^{87 88} Most Asia-Pacific nations are reticent to participate in missile control, largely because the means are there and because they are seen as the 'allowable'. In a sense they are the lesser evil. Sophisticated conventional munitions and products are now being offered by a variety of sources (supply) and with economic successes being sustained over the last decade the ability and political desire behind a regional arms build-up remain (demand). With developing industrial bases and improved domestic capability, both horizontal and vertical proliferation of missile technology can be expected to continue among nations of the Asia-Pacific.

In the current international environment, it could be argued that traditional instruments of non-proliferation policy have lost their relevance, particularly with the reticence of established nuclear weapons states such as the USA and China to change long-held positions asserting their rights to hold nuclear weapons. Consequently the effectiveness of multilateral treaties such as the NPT and regional Nuclear Weapon Free Zones (NWFZ) are called into question. However the Asia-Pacific region is largely a success story, and provides insights into what can be done when international treaties and norms are endorsed and complemented by regional and individual nation efforts. The key to the success lies in the continued energy of states such as Australia and Singapore to keep the issue of WMD proliferation on the table as a present and credible threat, and in realising that the best non-proliferation methods lie in mutually reinforcing platforms of example based state actions within regional and global frameworks.

There has been a concerted example-based push by several Asia-Pacific nations to continually assert and strengthen compliance with existing treaties. By way of example the Bangkok Treaty was signed in on December 15, 1995 creating a

⁸⁶ Keller and Nolan, *op. cit.*, 118.

⁸⁷ Findlay, *op. cit.*, 62.

nuclear weapon free zone in South-East Asia. Like its precedents, it has its roots in the Cold War but reflects the ASEAN States perception of facing political, economic and security challenges collectively. Similarly, the three APEC meetings following 9/11 all endorsed counter / non-proliferation measures.⁸⁹ At the 40th ASEAN Regional Forum in Manila in 2007 respective Foreign Ministers reviewed the implementation of the South East Asian Nuclear Weapons Free Zone, called upon the nuclear weapons states to ratify the protocols to the NPT, and for the accession of Israel, India and Pakistan to the Treaty. The Forum also discussed the need to strengthen the region's relationship with the IAEA and to develop a capacity to implement safeguards.⁹⁰ Member states also agreed to continue pursuing regional emergency response plans for both WMD accidents and natural disasters. In addition, the member states agreed to consider other relevant instruments such as the CTBT and the counter-terrorism conventions related to nuclear weapons.

On the security co-operation front there have been a number of recent initiatives. Perhaps the most important development has been the Proliferation Security Initiative (PSI) which was proposed by the US after it was discovered in 2002 that a North Korean shipment of Scud missiles to Libya could not legally be intercepted. Consequently a number of reforms have been made that allow either bi-lateral or multi-lateral board meetings to discuss nuclear weapons.

Australia both have sponsored PSI activities.⁹¹ While China has not joined the PSI due to legal concerns, and there are legitimate arguments that the real issue of US nuclear holdings has not been smoke-screened, the PSI has provided both a real function and an excellent means of developing co-operation and common standards in the Asia-Pacific.⁹²

Security of WMD materials and technology is an issue that has been a constant concern in the Asia-Pacific, particularly since the uncovering of the A.Q. Khan network. Within the region physical measures have been taken to harden sites that may prove sources of WMD materiel, however it is the G8's pledge of \$US 20 billion towards the dismantling of FSU stocks, enhanced physical security and creating employment for nuclear scientists that will by default perhaps enhance the Asia-Pacific's security most.⁹³

One issue that is fundamental to future negotiations with 'rogue' WMD states is the separation of concerns over that issue from other points of friction. For example, South Korea has deliberately adopted a path of single issue management of the nuclear question in North Korea. It has recognised that the greatest chance of success in dissuading North Korea from developing nuclear capacity is by decoupling the issue from any other topic such as human rights or border management.⁹⁴ A similar approach contributed strongly to the success of the 2007 Six-Power talks highlighted earlier. The outcome was that all parties signed an agreement to completely disable North Korean plutonium production facilities and for

⁹¹ Jacquelyn S. Porth, "Proliferation Security Initiative Activities Attract International Interest", *Asia-Pacific Defense Forum*, 2nd Quarter 2007, 1 at http://forum.apan-info.net/2007-2nd_quarter/psi/1.html, Internet, accessed 13 March 2008.

⁹² Cornelia Schneider and Erica Miller, "Interview with Hans Blix, Chairman of the WMD Commission", *The Fletcher Forum of World Affairs*, Vol 30. No. 1, Winter 2006, 89.

⁹³ Australian Government, "Security in an Uncertain World", <http://www.dfat.gov.au/publications/wmd/>, Internet, accessed 28 Mar 2008.

⁹⁴ Peter Crail, "Deadline Set for Yonbyon Disablement", *Arms Control Today*, Nov 2007, 26-28

Pyongyang to provide a full accounting of its nuclear programs.⁹⁵ While there was some linking of the disablement of Pyongyang's power with aid, success was achieved by not pushing North Korea into a corner.

Despite its status as a nuclear power China has belatedly emerged as a dominant factor in WMD non-proliferation in the Asia-Pacific. It appears to have slowly reached a pragmatic and co-operative bi-lateral relationship with the US, and it is this factor as much as any other that will provide a re-inforcing mechanism to WMD controls and other initiatives in the Asia-Pacific.⁹⁶

CONCLUSION

The end of the bi-polar Cold War balance has irrevocably changed the global arms control equation, with the central components of that equation, deterrence and proliferation becoming less clearly defined and open to independent interpretation.⁹⁷ Asia-Pacific increases in defence spending on platforms, ballistic missiles and sophisticated conventional technologies have been a political response to a changed strategic environment that is only now starting to set, and yet is in constant motion. Attempts to both modernise military capabilities and ensure self-reliance in times of uncertainty have created both a demand for technology and a desire to export the products of developing military-industrial complexes.

While relatively few WMD exports need to be controlled to limit the spread of nuclear materials, the same cannot be said for dual-use technologies and WMD delivery systems. Political will, an open arms market, continued regional suspicions and black market trading ensure that as a minimum, proliferation of technology and human capital in the Asia-Pacific will continue in spite of control measures. The

⁹⁵ *Ibid*, 27

⁹⁶ Victor Cha, "Winning Asia: Washington's Untold Success Story", *Foreign Affairs*, November / December 2008, 98

cross-pollination of technologies through transnational corporations, scientists moving to new markets and globalisation of information access all compound the effect. The potential ownership of WMD materials or delivery systems by non-state actors, has altered strategic relationships. There are only two certainties: proliferation will continue within the Asia-Pacific in a much more diverse fashion, and the need to control proliferation is an even greater one.

A comprehensive attempt at restricting proliferation must therefore focus not only on controls, but on taking positive steps to reduce the desire for weapons in the first place. Countering proliferation effectively therefore demands as broad a range of tools and measures as possible. While regional security and strength gained through economic interdependence and military transparency are being touted as ideals through forums such as ASEAN and the ARF, compliance with treaties and protocols is very much still on a voluntary basis. As such developed regional nations such as Singapore and Australia must continue to set an example based leadership on commitments to global and regional agreements, while continuing to stress economic and trade ties. This leadership must be more than words and support to treaties. Developing states of the Asia-Pacific will need to be offered practical training measures and improved surveillance equipments such as patrol craft and electro-optic sensors.

China's relationship with the so called pariah states and also with the US provides opportunity globally. Regionally those same dynamics potentially provide China the ability to reduce tensions with North Korea, at the same time providing a positive reinforcement of its own intent to other Asia-Pacific nations. It has also provided an example of countering WMD proliferation by adopting a pragmatic issue

⁹⁷ Gregory Pickell, "Strength in an Unsettled World: The Role of Nuclear Weapons in Nuclear Non-proliferation and Deterrence," *Comparative Strategy*, Vol. 15 No. 81. 1996.

by issue approach. The example though must not just be the conduct of talks and setting up of agreements. In both the non-proliferation picture and the context of Asia-Pacific relations between member states practical delivery of measures, and continued interest are fundamental to success.

The diverse nature of the WMD proliferation threat in the Asia-Pacific offers no alternative but to combat it with a range of non-proliferation measures. As this essay has identified, these need to be bi-lateral and multi-lateral; member nation based, regional and in support of global measures; plus seek to address both demand and supply. While the measures and controls that are implemented can only ever hope to achieve incremental progress, the greatest threat to Asia-Pacific security from WMDs is inaction.

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