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DIIS Brief

Chinese Missile Technology Control – Regime or No Regime?

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Abstract

Since China has an interest in delivery systems of Weapons of Mass Destruction, and the main strategic capability available to the country is missile technology, China has a range of ballistic and cruise missile capabilities. China's technology export or proliferation of ballistic missile technology is of particular and serious concern. China has not joined the *Missile Technology Control Regime* (MTCR), but has applied for membership and pledged to abide by its main control mechanisms. The Brief concludes that it seems unhelpful to deny China's accession to the MTCR on the grounds of inadequate missile export control, in stead of seeking ways to bring China's missile technology export control policy and infrastructure to the acceptable level. The MTCR in the present international situation appears increasingly less dependent on exclusively bringing likeminded countries inside the regime and more on inclusiveness.

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1. Introduction.

Missile technology is a strategic asset to The People's Republic of China (PRC – “China”). As a great power and one of the five veto powers of the UN Security Council, China possesses nuclear weapons, and the ability to develop chemical and biological weapons. Since China has an interest in delivery systems of Weapons of Mass Destruction (WMD – nuclear, chemical and biological), and the main strategic capability available to the country is missile technology, China has a range of ballistic and cruise missile capabilities. Other delivery systems than ballistic and cruise missiles include bombers and submarines. Ongoing military modernization efforts are reshaping China's strategic missile capabilities. Improvement of *Chinese missile technology* is, however, to be judged in the light of US deployments of missile defences.¹

China's *Technology export or proliferation* of ballistic missile technology is of particular and serious concern. China reportedly has exported missile components and technology to nations of critical international importance, most notably Iran, North Korea, and Pakistan, but also to Iraq, Libya, Saudi Arabia, Syria and the United Arab Emirates (as well as minor items to Albania, Argentina and Brazil).²

China has not joined the *Missile Technology Control Regime* (MTCR), but has applied for membership and pledged to abide by its main control mechanisms (see MTCR box below). In November 2000 China pledged not to assist “any country in the development of ballistic missiles that can be used to deliver nuclear weapons (i.e. missiles capable of delivering a payload of at least 500 kilograms to a distance of at least 300 kilometres)”.³ In August 2002 China issued missile export control regulations that mirror MTCR guidelines, including its annex of controlled items. Since 2004 China has been engaged in dialogue with the MTCR, the representatives of which were largely satisfied with the Chinese lists. However, China's application for membership of the MTCR was put aside during the group's October 2004 plenary meeting in Seoul, South Korea. At the September 2005 plenary meeting in Spain the participants did not reach agreement on Chinese

¹ Dyvad, Peter: “China's response to the US missile defence program” in *Missile defence*, Heurlin, Bertel and Rynning, Sten, (eds.), Routledge, London, 2005.

² Davis, Jonathan E.: “Export Controls in the People's Republic of China”, Center for International Trade and Security, Univ. of Georgia, February 2005.

³ People's Republic of China Foreign Ministry Spokesperson's Statement, Beijing, 21 November 2000.

membership. In the press release after the October 2006 plenary meeting in Copenhagen, Denmark, the issue was not mentioned.

The United States Assistant Secretary of State for verification, compliance, and implementation, in September 2006 strongly criticized China's missile export control record. "The Chinese government's irregular enforcement of the regulations meant to stop such proliferation continues to give the United States deep reservations" about China's intentions.⁴

As a result, the United States maintains its opposition to China's MTCR membership bid. Applicant countries must win the consensus of the group to join. Eleven other countries—Croatia, Cyprus, Estonia, Kazakhstan, Latvia, Libya, Lithuania, Malta, Romania, Slovakia, and Slovenia—also want regime membership but did not receive an invitation at the October 2006 plenary.⁵

⁴ Testimony of Paula A. DeSutter, before the US – China Economic Security Review Commission, September 14, 2006

⁵ Boese, Wade: "Missile Control Regime Focuses on Iran, NK", in Arms Control Today, November 2006.

The Missile Technology Control Regime

The Missile Technology Control Regime is an informal and voluntary association of countries which share the goals of non-proliferation of unmanned delivery systems capable of delivering weapons of mass destruction, and which seek to coordinate national export licensing efforts aimed at preventing their proliferation. The MTCR was originally established in 1987 by Canada, France, Germany, Italy, Japan, the United Kingdom and the United States (G7). Since that time, the number of MTCR partners has increased to a total of thirty-four countries, all of which have equal standing within the Regime (list of member countries, see Annex 1). (The MTCR is thus not an international agreement and has no legal authority, author comment).

The MTCR was initiated partly in response to the increasing proliferation of weapons of mass destruction (WMD), i.e., nuclear, chemical and biological weapons. The risk of proliferation of WMD is well recognized as a threat to international peace and security, including by the UN Security Council in its Summit Meeting Declaration of 31 January 1992. While concern has traditionally focussed on state proliferators, after the tragic events of 11 September 2001, it became evident that more also has to be done to decrease the risk of WMD delivery systems falling into the hands of terrorist groups and individuals. One way to counter this threat is to maintain vigilance over the transfer of missile equipment, material, and related technologies usable for systems capable of delivering WMD.

The MTCR rests on adherence to common export policy guidelines (the MTCR Guidelines) applied to an integral common list of controlled items (the MTCR Equipment, Software and Technology Annex). All MTCR decisions are taken by consensus, and MTCR partners regularly exchange information about relevant national export licensing issues.

National export licensing measures on these technologies make the task of countries seeking to achieve capability to acquire and produce unmanned means of WMD delivery much more difficult. As a result, many countries, including all MTCR partners, have chosen voluntarily to introduce export licensing measures on rocket and other unmanned aerial vehicle delivery systems or related equipment, material and technology.

The (2006-07) Chairman of the Regime is Special Advisor to the Minister for Foreign Affairs, Mr. Per Fischer of Denmark.

Membership

As with all MTCR decisions, the decision to admit a new partner is taken by consensus. In making membership decisions, partners tend to consider whether a prospective new member would strengthen international non proliferation efforts, demonstrates a sustained and sustainable commitment to non proliferation, has a legally based effective export control system that puts into effect the MTCR Guidelines and procedures, and administers and enforces such controls effectively. The Regime's dialogue with prospective partners is conducted through the MTCR Chair, visits to capitals by teams comprised of representatives of four MTCR partners and bilateral exchanges. The group does not have an observer category.

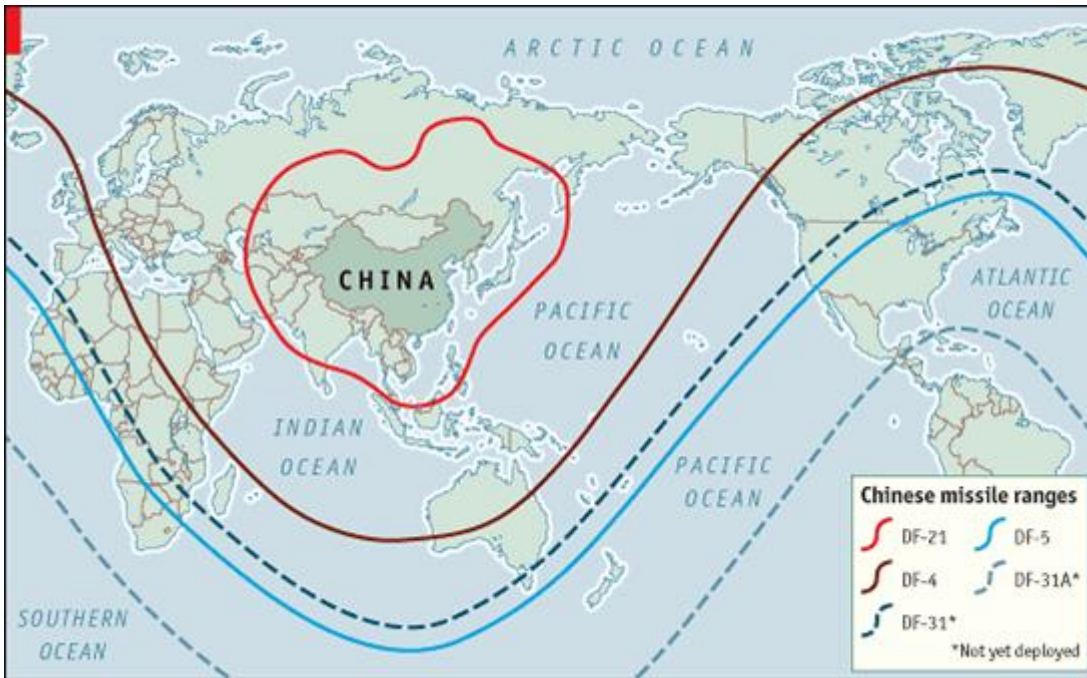
Source: MTCR Home page

2. Chinese missile technology.

The MTCR restricts the export of delivery systems and related technology for missiles capable of carrying a payload of at least 500 kilograms to a distance of at least 300 kilometres, as well as other unmanned aerial vehicles intended for the delivery of WMD. Missiles include ballistic missiles, space launch vehicles and sounding rockets. Unmanned aerial vehicles include cruise missiles, drones and remotely piloted vehicles.

China has produced and deployed a wide range of ballistic missiles, ranging from short-range missiles to intercontinental ballistic missiles (ICBMs). China's missiles include short range ballistic missiles, many deployed in the Fujian province opposite Taiwan and still increasing in numbers; several dozens of medium-range missiles that can reach Japan, India, and Russia; and ICBMs that can reach the United States and Europe. A transition is currently underway from relatively inaccurate, liquid-fuelled, silo/cave-based missiles to more accurate, solid-fuelled, mobile missiles that have shortened launch preparation times (including a new road mobile ICBM and sea launched ballistic missiles (SLBMs), which are currently under development, probably employing GPS technology for improved accuracy). China is replacing some of its older missiles with new variants, which may eventually be equipped with multiple warheads (multiple re-entry vehicles or multiple independent re-entry vehicles). In June 2005, China test fired a long-range SLBM, according to various reports fired by a nuclear submarine off the coast from the port city Qingdao, and landed in a Chinese desert several thousand kilometres away. However, such an SLBM is not expected to have operational capacity until 2008-10. An improved, longer range ICBM was test fired in September 2006. A key question is how US deployment of ballistic missile defence will affect the pace and scope of Chinese strategic modernization. The American missile defence system plans are for ground-based interceptors deployed by the end of 2009, giving the United States more interceptors than the combined Chinese ICBM and SLBM force.⁶

⁶ Nuclear Threat Initiative, China Profile; "China's ICBMs Neutralized", Strategypage.com, 5 September 2006.



Source: “China and America – Out of their silos”, The Economist, 8 June 2006.

To achieve greater precision than is currently available from ballistic missiles, China is also developing land-attack cruise missiles (LACM). Along with one to two dozen other countries China will by 2015 probably possess a LACM capability via indigenous development, acquisition, or modification of such other systems as anti-ship cruise missiles or unmanned aerial vehicles. One Chinese design is said to be based on anti-ship cruise missile technology from the 1950s and will have a range of 300 kilometres, however, neither first- or second-generation LACMs are currently reported to be under development. The 2006 Pentagon report on China’s Military Power asserts that once a nuclear payload is developed, there are "no technological bars" to placing them on LACMs having a range of a few hundred kilometres—posing primarily a theatre level threat—but with sufficient range to be forward-deployed on air- or sea- launch platforms. According to the Department of Defence January 2001 report on Proliferation, "China's research and development of LACMs is being aided by an aggressive acquisition of foreign technology and subsystems, particularly from Russia." Although China now produces most of its missiles indigenously, it receives missile-related imports and assistance from a number of other countries. While China has imported some complete systems, such as surface-to-air missiles and certain other systems from Russia, its emphasis in missile-related imports has been on expertise and technology, particularly technology that will facilitate indigenous production, which China prefers to off-the-shelf

purchases. China's highest priority is on technologies to improve the accuracy, stealth, and fuel efficiency of rocket systems.

With regards to anti-ship cruise missiles (ASCM), the 2006 Pentagon report states that the PLA Navy and Naval Air Force have or are acquiring nearly a dozen varieties of ASCMs, from the 1950s-era Chinese build to the modern Russian-made. China has purchased over 100 of ASCM from Russia for their Russian build Sovremenny-class destroyers and Kilo-class submarines. While the delivered missiles are conventionally equipped, Russia does manufacture nuclear-equipped ASCMs. This has led to some speculation that Russia might supply or China might develop technology that would enable these missiles to deliver a Chinese nuclear warhead.

The US may also unwittingly have aided China's cruise missile program. There are at least six reported cases where US Tomahawk cruise missiles have crashed without exploding. Some of these were believed to have been recovered and shipped to China. Because of this a wide range of advanced technologies associated with cruise missile design may therefore have been available to China.⁷

Summing up, American intelligence agencies project that Chinese ballistic missile forces will increase many fold by 2015, but that China's ICBM force deployed primarily against the US – which will number around 75 to 100 warheads – will remain considerably smaller and less capable than the similar forces of Russia and the United States respectively.⁸ However, it is clear that China possesses ample missile technology, which may well be in danger of being exported to third countries or non-state actors, hence constituting a threat of proliferation of WMD and their delivery systems.

⁷ Nuclear Threat Initiative, Ibid.

⁸ National Intelligence Council: "Foreign Missile Developments and the Ballistic Missile Threat Through 2015", National Intelligence Estimate, December 2001.

3. Technology export or weapons proliferation?

Chinese technology export in general and missile technology export in particular entered a new epoch when Beijing began implementing Deng Xiaoping's Open Door policy beginning in 1979. Prior to that there had been little need for Chinese export controls because only designated, state-owned enterprises had the right to export, and very few of them produced dual-use goods at that time. The economic reforms of the late 1970s and early 1980s liberalized China's centrally planned economy by opening production and trade opportunities to more entities, including private companies, thus undermining the elements that previously comprised a de facto system of export controls. Economic reform and development became the paramount objective of the Communist Party of China during this new era. As the Chinese government gradually began to implement market reforms, it placed greater burdens upon state-owned defence industries to sustain themselves with less financial support from the government, inducing state-owned enterprises to look to foreign markets for sales and to reorient production toward more marketable civilian goods.⁹

China also undertook a more proactive foreign policy beginning in the early 1980s, establishing or further developing relations with a number of countries, primarily in the developing world, and reinforcing these relationships with assistance to a handful of countries' WMD and missile programs. The manifold domestic and international constraints on sensitive exports began to give way beneath these changes and the situation was ready for transfers of WMD and missile technology.

At least two missile-related transfers in the late 1980s and the early 1990s involved the sale of complete missile systems: the sale of nuclear-capable medium-range ballistic missiles to Saudi Arabia in 1988 and the transfer of short-range ballistic missiles to Pakistan in November 1992. By the mid-1990s, China ceased its transfers of complete ballistic-missile systems. Since then it has engaged in only limited sales of dual-use technology while providing technical assistance to other nations' indigenous missile production capabilities. China refused to transfer additional missiles to Saudi Arabia when approached in 1997 for replacements of the earlier missiles. Other missile transfers during this period included a wide range of missile components, production equipment,

⁹ Davis 2005.

blueprints, and technical assistance to Pakistan; cruise missiles, missile fuel components, guidance and control technology, as well as production and testing equipment and facilities to Iran; cruise missiles and missile fuel to Iraq; missile fuel to Libya; missile production assistance and equipment to Syria; cruise missiles to the United Arab Emirates; cruise- and ballistic-missile technology to North Korea; cruise missiles, guidance systems, and assistance with indigenous missile programs to Pakistan; and minor items to Albania, Argentina, and Brazil.¹⁰

In its missile sales, as with its conventional arms sales in general, China has followed three arms export principles: (1) The weapons exported must be meant for legitimate self-defense; (2) the weapons must contribute to regional stability; and (3) the weapons must not be intended for interference in another country's internal affairs. In the past, China has stated that the focus of non proliferation efforts should be on the restriction of WMD themselves, not on their delivery systems. China further argued that if one type of delivery system is to be restricted (e.g. ballistic missiles), then other delivery systems, such as combat aircraft, ought to be restricted as well. China has previously criticized the MTCR on these grounds. China has also been sharply critical of unilateral US sanctions imposed for alleged Chinese violations of MTCR guidelines, especially with regards to its application on states that are not members of the MTCR, such as China.

In June 1991, the Bush Administration first imposed sanctions on Chinese missile technology export to Pakistan. Sanctions affected exports of supercomputers, satellites, and missile technology. The Administration later waived the sanctions in 1992. In 1993 the Clinton Administration determined that China had again transferred missile equipment for short-range missiles to Pakistan and imposed new sanctions. After China in 1994 declared that it would not export ground-to-ground missiles inherently capable of delivering a 500 kilogram warhead 300 kilometres, these sanctions were also waived.

Policy questions persisted in the 1990s and in 1998 the Rumsfeld Commission stated that China had transferred complete short range missiles to Pakistan leading to a decision on sanctions again in 1999. Upon the Chinese November 2000 pledge not to assist any country in the development of ballistic missiles that can be used to deliver nuclear weapons, the Clinton Administration later the same month determined that Chinese companies had transferred missile-related items to Pakistani partners, but sanctions would be waived on China for past transfers, given its new non proliferation

¹⁰ Nuclear Threat Initiative: China, China Missile Exports.

promise. While China promised not to transfer missiles, it has reportedly assisted Pakistan in achieving an indigenous missile capability. In 2001 a Chinese company reportedly delivered missile components to Pakistan's medium range missile program and the State Department imposed sanctions on China Metallurgical Equipment Corp. In November 2004 the CIA reported that in the second half of 2003 Chinese companies helped Pakistan developing solid-fuel short- and medium range missiles.¹¹

By the same November 2000 waiver of sanctions against Pakistan, the Clinton Administration determined that Chinese companies had transferred missile components to Iranian partners but US sanctions would be waived on China given its new missile non proliferation promise. Since then, however, Chinese proliferation activities again raised questions about sanctions. On 17 occasions, the Bush Administration has imposed sanctions on 30 Chinese companies ("entities" not the government) for transfers (related to ballistic missiles, chemical weapons, and cruise missiles) to Pakistan, Iran, or another country, including repeated sanctions on "serial proliferators."

Among those sanctions, the Administration imposed sanctions in May 2003 on the Chinese North Industry Corporation (NORINCO) and its Iranian partner. According to US officials, the Administration banned imports from this Chinese Corporation for two years (worth over \$100 million annually), because it transferred missile technology to Iran, even after China issued missile technology export controls in August 2002. American legislation requires sanctions if the Secretary of State determines that a foreign person has "materially contributed or attempted to contribute materially" to WMD or missile proliferation. Again in June 2003, the Administration imposed sanctions under the Iran Non proliferation Act on five Chinese entities (including NORINCO) and one North Korean entity. The State Department noted that it added in the Act's required report to Congress transfers of items that have the potential to make a "material contribution" to WMD, cruise missiles, or ballistic missiles, even if the items fall below the parameters of multilateral export control lists (MTCR). The CIA reported in November 2004 that, in the second half of 2003, Chinese (and former Soviet and North Korean) entities continued to supply ballistic missile-related equipment, technology, and expertise to Iran, which is pursuing longer-range missiles. The report

¹¹ Kan, Shirley A.: "China and Proliferation of Weapons of Mass Destruction and Missiles: Policy Issues", Congressional Research Service Report, updated 15 November 2006.

also said that Chinese entities provided missile-related assistance to Iran that helped it to advance toward its goal of self-sufficient production of ballistic missiles.¹²

Sceptics question whether China's cooperation in non proliferation has warranted President Bush's pursuit of stronger bilateral ties. The Administration has imposed repeated sanctions on "entities" but not the Chinese government. The House International Relations Committee held a hearing in May 2004, to question US support for China's membership in the Nuclear Suppliers Group (NSG) despite Chinese ties with Pakistan. China has not joined the Proliferation Security Initiative (PSI) pursued by the Bush Administration. Since 2002, Bush has relied on China's "considerable influence" on North Korea to dismantle its nuclear weapons. China helped with the process of the Six-Party Talks and sponsored the Joint Statement of September 19, 2005 on dismantling of North Korea's nuclear weapons and programs, but results remain to be seen. China has pursued balanced positions on Iran and North Korea, but also evolved to vote for UN Security Council resolutions on those countries that called for some sanctions. Questions remain about Chinese sanctions after Pyongyang's nuclear test in October 2006.¹³

Recent UN Resolutions 1695 (2006) after North Korean missiles tests in July 2006, and in particular after the North Korean nuclear weapons test in October 2006, 1718 (2006), intend to prevent the country from procuring "missiles or missile-related items, materials, goods and technology". The latter resolution decides that all UN member states shall prevent supply, sale or transfer to North Korea, through their territories or by their nationals, or using their flag vessels or aircraft of a wide range of weapons or equipment and adds all items, materials, equipment, goods and technology as set out in a specific list exactly mirroring the MTCR integral common list of controlled items. The MTCR October Plenary expressed strong support for these efforts to fully implement export control requirements.

¹² CIA: "Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, July - December 2003", November 2004.

¹³ CRS Report, Ibid.

4. Control Regime - or No Regime?

China issued its latest White Paper on Endeavours for Arms Control, Disarmament and Non Proliferation in September 2005, in which it stated the right of all countries to equal participation in international arms control, disarmament and non proliferation affairs. Specifically on missile technology China advocated the establishment of a fair and non-discriminatory multilateral mechanism universally accepted by the international community in the field of missile non-proliferation. China shares the non-proliferation objective of the International (Hague) Code of Conduct Against Ballistic Missile Proliferation (HCOC)¹⁴, subscribed by more than 125 states) and although China has not joined the HCOC, it has kept in touch with all parties including the subscribing states to the HCOC, making joint efforts to prevent the proliferation of ballistic missiles.¹⁵

Present Chinese missile technology control took its practical beginning in 1995 after the end of the Cold War and was formalized in 1998 by China's adherence to MTCR guidelines, formally declaring a policy of missile export control. Early export control regulations and policy documents formalized China's non proliferation pledges in national laws and political commitments, but significant gaps still remained between Chinese export controls and international standards.

In 2002, China closed much of the gap between its national export controls and international regulatory standards by promulgating missile export control regulations and a control list in August and amended arms export control regulations and an arms export control list in November of that year.¹⁶ The new regulations brought Chinese export control regulations into effective compliance with the guidelines and control lists of the Australia Group (AG – Bio and Chem Weapons), the Nuclear Suppliers Group (NSG), and the MTCR, and they heralded a new era in which Chinese export control behavior could be judged by the self-established standards of a de jure system of export controls, rather than against unclear administrative procedures and the uncertainty of bilateral non proliferation commitments.¹⁷

¹⁴ "a set of principles, commitments, confidence-building measures and incentives that could constitute a code of conduct against missile proliferation. The (MTCR) Regime also decided to approach countries outside the MTCR in order to engage them in a broader common effort to agree a multilateral instrument open to all States".

¹⁵ Chinese White Paper: "China's Endeavors for Arms Control, Disarmament and Non Proliferation", Beijing, 2005.

¹⁶ "Regulations of the PRC on Export Control of Missiles and Missile-related Items and Technologies", Beijing, 25 August 2002.

¹⁷ Davis 2005, p.9.

According to the 2005 White Paper, China's legislation on export control widely embraces such international practices as a licensing system, end-user and end-use certification as well as list control. The scope of control of the relevant regulations is basically identical with international practices. In the nuclear field, the control list is in accordance with those of the so-called Zangger (NPT) Committee and the NSG, in the biological and chemical field, the lists are basically the same as those of the AG and the missile list conforms by and large with the annex to the MTCR.

In practice the Chinese export of WMD related topics such as nuclear items, biological agents, certain chemicals, and the missile-related dual-use items and technology for civilian use is under the control of the Ministry of Commerce just as in the MTCR member countries. The Chinese export of sensitive items and related equipment and technologies that relate to foreign policy is subject to examination by the competent departments, in coordination with the Chinese Ministry of Foreign Affairs. Where the export items entail significant impact on national security and public interests, the competent departments shall submit the case to the State Council and the Central Military Commission for approval. The Chinese Administration of Customs is responsible for supervision and control of the export of controlled items and technologies, and it also participates in investigating and handling cases of illegal exports.¹⁸

Enforcement is, however, the weakest link in China's non proliferation export control mechanism. For analytical purposes the export control challenges facing China today can be divided into four categories: 1) those challenges faced almost universally by countries with international-standard export control regulations; 2) challenges related to insufficient resources, and capacity; 3) challenges unique or specific to China because of geography, history, or the current domestic political economy; and 4) challenges of demonstrating political will in the cause of non proliferation export control.¹⁹

As other countries engaged in international-standard export controls, such as controls on intangible technology transfers and suspected exports, China faces difficulties in regulating these less traditional transfers in practice. Chinese regulations, despite being relatively comprehensive, could also benefit from unification under a single, national export control law, and lingering loopholes regarding the brokering of controlled items may pose problems for export control implementation in

¹⁸ Chinese White Paper 2005, Ibid.

¹⁹ Davis 2005, Conclusions.

the future. The lack of specific provisions for the control of transits and transshipments for non proliferation purposes is also a liability of current Chinese export controls.

Insufficient resources and a limited regulatory capacity also diminish the effectiveness of the Chinese system. Despite significant infrastructural and procedural improvements in recent years, Chinese customs and border-control operations suffer in places from a lack of resources, manpower, and training, making it difficult for officials to perform adequate checks of cross border traffic and detect unauthorized transfers of controlled goods and technologies. Adequately equipping hundreds of China's customs clearance points and providing training for tens of thousands of customs officers and border guards will require a significant amount of time and resources. The licensing institution's capabilities to conduct end-use and end-user checks are rather limited, and post-shipment verifications are not conducted at all, thus increasing the risk of diversion and re-transfer of Chinese sensitive products to unauthorized users.²⁰

Given China's geographic size, the scope of the Chinese economy, and the relatively small number of industry outreach programs and personnel, the Chinese government's capacity to provide frequent educational seminars to industry on national export control requirements and compliance practices is limited. Moreover, the capacity of the Chinese government to monitor the full scope of sensitive economic and trade activities within the nation's borders is questionable. Endemic corruption compounds the problems that beset Chinese customs operations. Furthermore, loosening up state control over the country's business community has resulted in more economic freedom for enterprises. A growing number of profit-driven exporters, including those that export missile-related dual-use goods and technologies, pose a serious challenge for China's licensing agency and customs. Also, the nature of the Chinese state - with a powerful centre, yet decentralized control over provincial and local government activities - appears to inhibit the consistent application of export control regulations countrywide. Finally Chinese intelligence services seem unable to adequately identify suspicious operations, end-users, and transactions operating from or originating in China. The identification of front companies in China, particularly those of North Korea, will remain a challenge for export control enforcement operations.

²⁰ Zaborsky, Victor: "Bringing China Closer to MTCR", Center for International Trade and Security, Univ. Of Georgia, 18 October 2005.

The Chinese Government's political will to exercise strong export control enforcement has given rise to serious doubt. In 2002 was issued the abovementioned regulation which contained guidelines and a control list similar to those of MTCR. In 2003 China issued its first White Paper on non proliferation, in 2004 another on national defence and in 2005 the abovementioned White Paper on Arms Control and non proliferation. Unfortunately, the realities of China's policies seem to somewhat contradict its official declarations. Chinese companies continue exporting technologies to missile programs in countries of proliferation concern, specifically Iran and Pakistan. Politically and economically, China is interested in developing close ties with Tehran and Islamabad, and at some point China's leaders seem to have made a strategic calculation of costs and benefits and a decision to support Iran and Pakistan even if such support would trigger US sanctions — and the United States has been lavishly imposing sanctions against Chinese entities. From January 2001 through April 2005, the State Department has sanctioned foreign companies 115 times for irresponsible exports, and 80 of those sanctions were aimed at Chinese companies. Some Chinese companies, like NORINCO and the Great Wall Industry Corp., have been dubbed “serial proliferators” — they have been sanctioned repeatedly, but have continued exporting their sensitive products to problem countries.²¹

Still the Chinese Government may be expected to focus the bulk of its political will and resources on maintaining the growth and ensuring the sustainability of domestic socioeconomic development, which directly contributes to the stability of the Chinese state and the survival of the ruling party. To the extent that China identifies non proliferation policies as a component of its foreign and/or national security policy priorities, it will allocate an appropriately calibrated amount of political will and resources to export controls. In recent years, non proliferation and export controls appear to have risen in importance on the agenda of Chinese decision makers. Beijing's reversal of its longstanding opposition to reigning international non proliferation norms and institutions in the post-September 11 era indicates a greater identification with non proliferation as an important national interest for China, worthy of a significant investment of political capital on both the domestic and international stages.²²

²¹ Zaborsky 2005.

²² Davis 2005.

5. Conclusions.

While there are many buyers in the market for missiles, there are only a handful of states with the capability to be dealers in that market. China's sophistication with many of these technologies has made it possible for Chinese enterprises to become key exporters of missile technology.

China's development of missile technology export may be viewed from various points. From an economic point of view, missile development programs are explicitly acknowledged to be major sources of export earnings, and are justified as such. Furthermore, such programs may be seen as part of a comprehensive national science and technology-based economic development effort, linked to civilian space programs. From a security policy point of view, missile technology export influences regional missile-related threat/deterrence equations especially in the Korean peninsula, in the Middle East (involving Israel/Iran for example) or India/Pakistan. And from a foreign policy point of view of course, Chinese technology export acts as a factor in China's more proactive profile, developing relations with a number of countries, primarily in the developing world, and related to its growing demand for energy and raw materials.

As China continues to play a role as supplier in the market for missiles, its export control and non proliferation policies remain of great importance to the future of global non proliferation. China's embrace of the non proliferation regime, illustrated by its application for MTCR membership, Chinese support of UN Security Council resolutions on non proliferation, whether in general (res. 1540(2004)) or specifically (res. 1695 and 1718 (2006)), in addition to China's concrete export control achievements, promise to pay dividends for global security as long as China continues to adhere to its new export control obligations.

According to the latest "721 Report", published in May 2006, China continued in 2004 to take steps to educate firms and authorities on missile-related export regulations and to improve enforcement of its missile-related export controls. For example, in January 2004 Beijing promulgated an export-licensing catalog of sensitive items and technologies to help customs officials identify items of proliferation concern and the Ministry of Commerce announced in May 2004 that it had fined two Chinese companies for violating the controls. The CIA Report went on, however, to state that "Despite these efforts, in 2004 Chinese entities continued to work with Pakistan and Iran on ballistic missile-related projects and firms in China provided dual-use missile-related items, raw materials, or assistance to Libya and North Korea. Chinese entity assistance has helped Pakistan

achieve domestic serial production of solid-propellant SRBMs and has supported Pakistan's development of solid-propellant MRBMs. Chinese-entity assistance also helped Iran move toward its goal of becoming self-sufficient in the production of ballistic missiles”.

The Chinese Government faces a number of challenges in restricting unauthorized transfers of controlled items and missile technology, which offer opportunities for cooperation and constructive engagement with the international community as China builds its capacity to enforce national export controls. Such opportunities include programs for training customs, border control and enforcement officers on export control, building the capacity to detect and interdict unauthorized transfers, improving intelligence gathering and potentially sharing, cooperation on end-use and end-user verification checks and improving the transparency of Chinese export control system through information exchange and confidence-building measures.

On this background, it seems unhelpful to deny China’s accession to the Missile Technology Control Regime on the grounds of inadequate missile export control, in stead of seeking ways to bring China’s missile technology export control policy and infrastructure to the acceptable level, which eventually will make China a valuable addition to the regime. The MTCR in the present international situation appears increasingly less dependent on exclusively bringing likeminded countries inside the regime and more on inclusiveness as it happened to former communist countries such as Russia and Ukraine in the 1990s. As for China, membership of MTCR may bring less advantage than it expects. As the previous experience of other missile technology and space powers such as Brazil, Russia and Ukraine illustrate, MTCR membership does not guarantee equal treatment by the United States and the EU in civilian space programs or technology sharing.

Recommended Web-sites:

<http://www.mtcr.info/english/index.html>

http://www.nti.org/e_research/profiles/China/Missile/index_5599.html

<http://www.dfait-maeci.gc.ca/arms/missile-en.asp>

http://www.armscontrol.org/act/2006_12

Annex 1: List of MTCR Partners

Argentina (1993)
Australia (1990)
Austria (1991)
Belgium (1990)
Bulgaria (2004)
Brazil (1995)
Canada (1987)
Czech Republic (1998)
Denmark (1990)
Finland (1991)
France (1987)
Germany (1987)

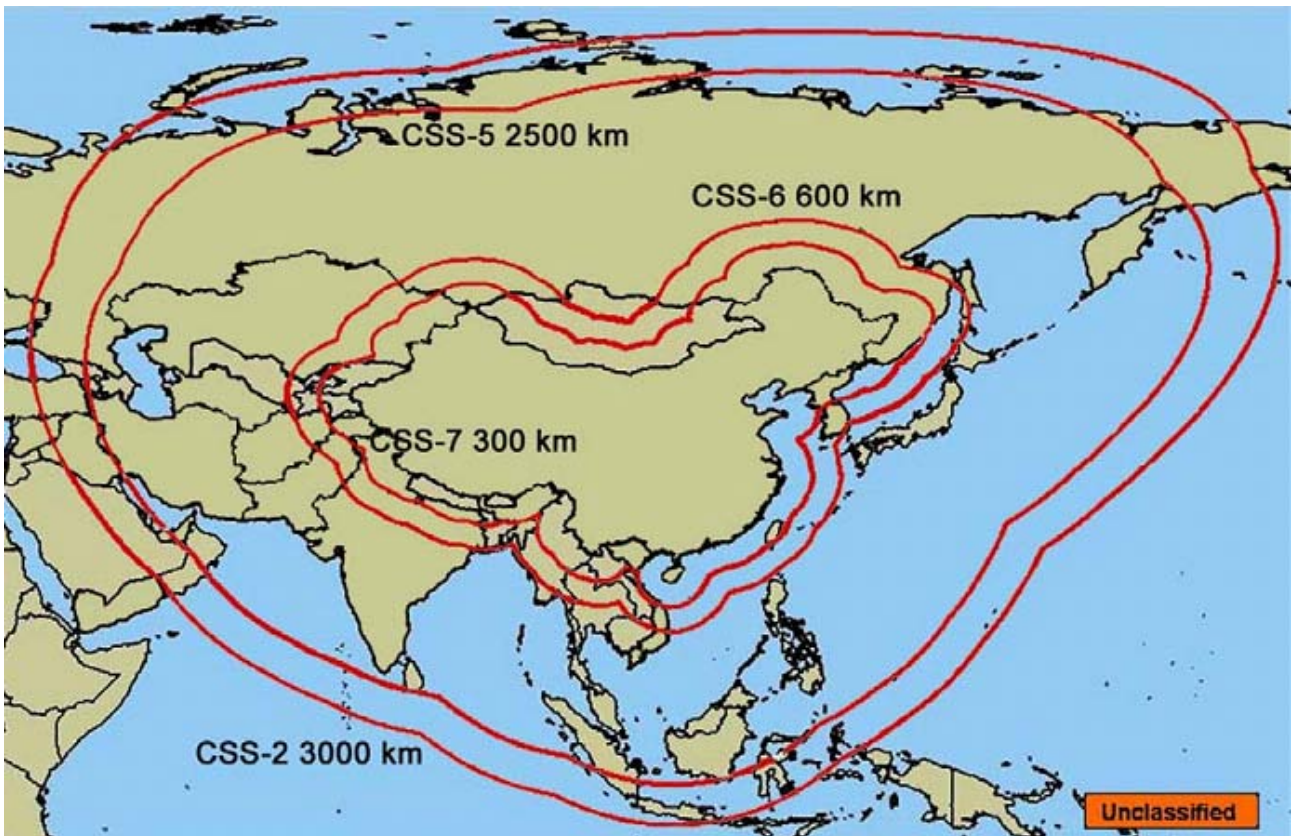
Greece (1992)
Hungary (1993)
Iceland (1993)
Ireland (1992)
Italy (1987)
Japan (1987)
Luxembourg (1990)
Netherlands(1990)
New Zealand (1991)
Norway (1990)
Poland (1998)

Portugal (1992)
Republic of Korea (2001)
Russian Federation (1995)
South Africa (1995)
Spain (1990)
Sweden (1991)
Switzerland (1992)
Turkey (1997)
Ukraine (1998)
United Kingdom (1987)
United States of America (1987)

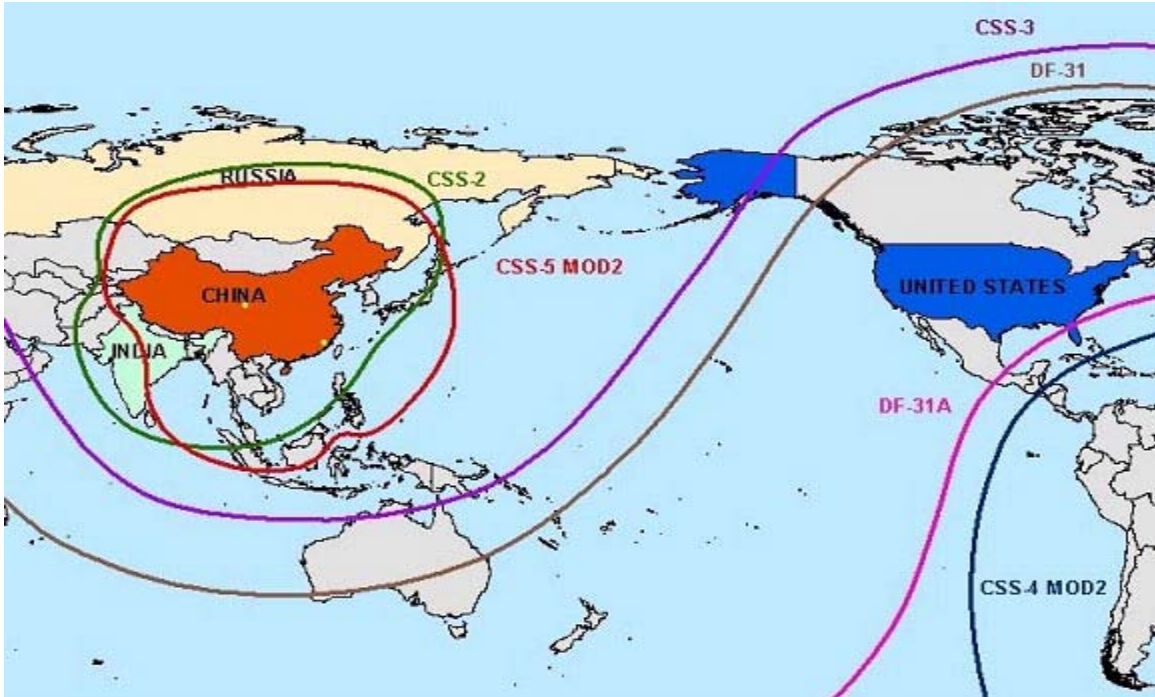
Source: MTCR Home Page

Annex 2: China's Military Power.

Source: Office of the Secretary of Defence: "Annual Report to Congress. Military Power of the People's Republic of China. 2006".



Short- Medium and Intermediate Range Ballistic Missiles.



Medium Range and Inter Continental Ballistic Missiles.

China's Missile Forces		
China's Missile Inventory Total	Launchers/ Missiles	Estimated Range
CSS-4 ICBM	20/20	8,460+ km
CSS-3 ICBM	10-14/20-24	5,470+ km
CSS-2 IRBM	6-10/14-18	2,790+ km
CSS-5 MRBM Mod 1/2	34-38/19-23	1,770+ km
JL-1 SLBM	10-14/10-14	1,770+ km
CSS-6 SRBM	70-80/230-270	600 km
CSS-7 SRBM	100-120/420-460	300 km
DF-31 ICBM	DEVELOPMENTAL	7,250+ km
DF-31A ICBM	DEVELOPMENTAL	11,270+ km

Note: China's SRBM force has grown significantly in the past few years. China's Second Artillery now has at least five operational SRBM brigades; another brigade is deployed with the PLA ground forces. All of these units are deployed to locations near Taiwan.

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