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Letter from the Editor

The recent exposure of Abdul Qadeer Khan's illicit network of covert nuclear transfers raises serious questions about the effectiveness of national export controls. It also focuses attention on the ability of the international nuclear nonproliferation regime to detect, dissuade, and deter proliferation activities. Asia continues to experience steady growth in international trade and is home to many of the world's largest container ports that handle transit commerce. These conditions present serious challenges to policy makers with respect to the proper balance between the unimpeded flow of trade and technology transfers and the control of sensitive materials and technologies that may contribute to the spread of weapons of mass destruction. Although many countries in the region have introduced domestic export control measures, they confront considerable difficulties in obtaining the information needed to support consistent progress in this field. Variations in the comprehensiveness of the export control systems and in the degree of enforcement create unwelcome opportunities for countries and non-state actors to conduct illicit activities without being detected or punished.

To better understand these issues and to monitor regional developments more consistently, the Monterey Institute's Center for Nonproliferation Studies is launching the *Asian Export Control Observer*. Every two months, the *Observer* will provide updates on a broad range of issues pertaining to export controls, border and port security, and nonproliferation in East and Southeast Asia. Information is collected through the Center for Nonproliferation Studies' main offices in Monterey and Washington, D.C.. Cooperation with research institutions in the region allows CNS to acquire local news and reports from the region. A group of in-house and external reviewers and consultants with extensive expertise and experience review and advise on content and editorial issues.

This inaugural issue features articles on North Korea's nuclear weapons program, on recent changes in Japan's export control policy, and a survey of regional developments. We hope you will find the *Asian Export Control Observer* informative and look forward to a rewarding collaboration with our readers.

Dr. Jing-dong Yuan, Editor-in-Chief

Recent Developments in the Region

Singapore Takes Part in PSI Exercise

In January 2004, the Singapore Navy took part in a U.S.-led Proliferation Security Initiative (PSI) exercise in the Persian Gulf and the Arabian Sea. The purpose of the week-long exercise, which also involved personnel from Australia, France, Germany, Britain, Spain, Italy, and the United States, was to practice intercepting, boarding, and searching vessels believed to be carrying WMD or related materials. A U.S. Navy transport ship posed as a rogue vessel carrying WMD-related materials, while other participants gathered intelligence before boarding it and halting the shipment. [1]

With the exercise, Singapore became the first Southeast Asian nation to participate in a PSI-related maritime drill. Singapore joined the PSI during the group's March 4, 2004, meeting in Lisbon. It was only the second Asian country—after Japan—to do so. [2] Speaking before Singapore's parliament, Foreign Minister Shunmugan Jayakumar explained his country's reason for joining the PSI: "the prevention of WMD proliferation is of prime concern to Singapore." He added, "Last year, we intercepted several shipments of items that could have been used in the manufacture of chemical weapons or missiles." However, he declined to go into further detail regarding these incidents. [3]

Launched in May 2003 by President George W. Bush, the PSI is designed to stop the spread of WMD, related materials, and means of their delivery by interdicting suspect shipments—at sea, in the air, or on land—from flowing to and from states or non-state actors of proliferation concern. The initiative has been

implemented by its eleven original participants (Australia, France, Germany, Italy, Japan, the Netherlands, Poland, Portugal, Spain, the United Kingdom, and the United States) as well as three additional states (Canada, Norway, and Singapore). Approximately sixty additional states have expressed support for the initiative. [4]

Singapore, strategically located on the Straits of Singapore and Malacca, is in a position to make an important contribution to the PSI. Singapore is the world's largest transshipment port and second-largest container port (after Hong Kong). One quarter of the world's maritime trade—and half of its oil—pass through these straits. However, key parts of the Malacca Strait lay in Malaysian and Indonesian territorial waters, which will limit the Singapore government's ability to authorize interdictions in those areas. Malaysia has recently expressed interest in participating in the PSI. [5]

Singapore has been a particularly cooperative partner in Washington's campaign to crack down on the illicit transport of WMD and related materials. In June 2002, the United States and Singapore signed an agreement making Singapore's port the first in Asia to come under the controls of the Container Security Initiative (CSI).

Editor's Note: The Republic of Singapore Navy (RSN) is a highly capable force, arguably the best in Southeast Asia. Built around a core of Harpoon missile-armed fast attack boats, the RSN also operates four Sjöormen class submarines (purchased from Sweden), and will soon put into service six La Fayette-class frigates with stealth technology. The RSN is composed largely of small, highly-mobile vessels, making it well-suited for operations in the crowded, often shallow waters of the Singapore and Malacca Straits. [6]

Sources: [1] "Singapore Naval Ship Joins US-led Anti-proliferation Drill," *BBC Monitoring International Reports*, January 12, 2004; [2] "Singapore Seen Joining Pact against WMD," *The Daily Yomiuri*, February 21, 2004; [3] "Singapore Discloses Seizure of Potential WMD Components," *AFX News*, 11 March, 2004; [4] "The Proliferation Security Initiative (PSI) At a Glance," *Fact Sheet*, April 2004 <<http://www.armscontrol.org/factsheets/PSI.asp>>. [5] Ng Mun Yee, "Cover Story: Regional Ports on the Rise," *The Edge*, July 14, 2003; Michael Richardson, "Singapore's Role in Guarding 'Choke Point' of World Shipping," *Straits Times*, January 19, 2004; "Singapore, U.S. Sign Pact on Container Security," *Hong Kong AFP*, September 20, 2002; [6] George Kaplan, "The Republic of Singapore Navy," *Navy League of Australia*, <http://navyleag.customer.netspace.net.au/fc_07ros.htm>.

China and the United States Agree to Strengthen Export Control Cooperation

China's Ministry of Commerce Agrees to Strengthen End-Use Inspection Procedures

The United States Department of Commerce signed an agreement with China's Ministry of Commerce aimed at strengthening cooperation for end-user inspections in China. The agreement was concluded during a meeting of the U.S.-China Joint Commission on Commerce and Trade (JCCT) in Washington, D.C., on April 21, 2004, which was chaired by U.S. Commerce Secretary Don Evans, U.S. Trade Representative Robert Zoellick, and China's Vice Premier Wu Yi. [1]

U.S. export control laws require that exported dual-use items with potential military application receive end-use inspections (also referred to as post-shipment verification) by the Department of Commerce. End-use checks are meant to ensure that sensitive products exported from the United States are used by the intended recipient for the intended purpose. End-user checks in China by Department of Commerce officials began in 1998. A central concern for U.S. officials has been assuring that items controlled for "strategic purposes" remain within China's civilian sector and are not used for military purposes. [2] In the past, Beijing has been reluctant to accommodate fully the Commerce Department's demands for end-use inspections, causing problems in U.S. high-technology trade with China. [3] According to the Department of Commerce, the new agreement "specifies procedures for conducting end-use visits, while also providing a mechanism for consultations on other end-use visit issues that may arise." [4]

China and the United States Sign Document on Nuclear Nonproliferation Cooperation

(For a more detailed version of this story, see the March 2004 issue of the NIS Export Control Observer)

On January 21, 2004, U.S. Secretary of Energy Spencer Abraham and Chairman Zhang Huazhu of the China Atomic Energy Authority (CAEA, China's nuclear regulatory body), signed a Statement of Intent for cooperation on nuclear nonproliferation and security. The Statement of Intent "establishes a process for cooperation [between the United States and China] and for collaborating with the International Atomic Energy Agency (IAEA) on a range of nuclear nonproliferation and security activities." [5] The document lays the groundwork for further cooperation in the areas of nuclear technology transfers and nonproliferation, including export controls and counterterrorism. [6] This statement is a supplement to earlier agreements between Washington and Beijing, particularly the 1985 U.S.-China Nuclear Cooperation Agreement and the 1998 Agreement on Cooperation Concerning Peaceful Uses of Nuclear Technologies. According to an official CAEA declaration, the signing of the Statement of Intent signifies that major obstacles in bilateral nuclear nonproliferation cooperation have been removed.[7] Secretary Abraham stated that the agreement was "an important step toward accelerating the global effort to reduce the threat posed by the proliferation [of] weapons of mass destruction." [8]

The Statement of Intent lays out a general framework for collaboration between the United States and China in the areas of peaceful use of energy and nonproliferation. Under the peaceful use section, the United States and China agree to cooperate in the areas of "nuclear reactor technology and nuclear application technology" and "nuclear energy management and safety." As part of the nuclear technology cooperation, this new document opens the way for transfer of reactor designs and nuclear materials. Under its nonproliferation section, the Statement of Intent pinpoints export controls, nuclear safety, and security of radioactive sources as areas for future collaboration. [6]

Editor's Note: DOE and CAEA finalized an earlier Statement of Intent on nuclear technology transfers in September 2003. That Statement of Intent, signed on the sidelines of the IAEA General Conference, contained assurances that U.S. technology transferred to China would not be retransferred to a third party. According to a statement by Zhang Huazhu after the signing in September 2003, that document came after three years of talks and would increase "the mutual trust between the government departments and nuclear industries of the two countries." [9]

Sources: [1] "U.S., China Reach Agreement on Export Controls, Trade Promotion," Commerce Department Fact Sheet on JCCT Outcomes, April 23, 2004. [2] "U.S. Completes 100th End-Use Check in China," Commerce Department Press Release, October 11, 2000, < <http://www.bis.doc.gov/News/archive2000/100thChinaEndUseCheckDone.htm>>. [3] For an assessment of post-shipment verification, see the report from the General Accounting Office "Export Controls: Post-shipment Verification Provides Limited Assurance that Dual-Use Items are Being Properly Used," January 2004, <<http://armedservices.house.gov/issues/gaoreportonpsvsJanuary2004.pdf>>. [4] "U.S.-China End-Use Visit Understanding," U.S. Commerce Department Website, viewed April 27, 2004, <<http://www.bxa.doc.gov/enforcement/PRCEndUseUnderstanding.htm>>. [5] DOE Office of Public Affairs, "Secretary Abraham and Chairman of China Atomic Energy Authority Agree to Increase Cooperation in Non-Proliferation and Security," *DOE News*, January 12, 2004, DOE website, <[http://www.nnsa.doe.gov/docs/PR_R-04-005_Beijing_NNSA_China_Cooperation_in_Non-proliferation_Security_Press_Release_\(1-12\).pdf](http://www.nnsa.doe.gov/docs/PR_R-04-005_Beijing_NNSA_China_Cooperation_in_Non-proliferation_Security_Press_Release_(1-12).pdf)>. [6] *Statement of Intent Between the Department of Energy of the United States of America and the China Atomic Energy Authority of the People's Republic of China Concerning Cooperation in the Fields of Peaceful Use of Nuclear Energy and Nuclear Non-Proliferation and Counter-Terrorism*, January 12, 2004, DOE website <<http://www.nnsa.doe.gov/docs/Nuclear%20SOL.pdf>>. [7] Gu Xinping, "Zhang Huazhu Met with Spencer Abraham, the U.S. Secretary of Energy," *News from CAEA*, <<http://www.caea.gov.cn/english/presscenter20040202-1.htm>>. [8] "Secretary Abraham, Chairman of China Atomic Energy Authority Agree to Increase Cooperation in Non-Proliferation and Security," U.S. Newswire, January 12, 2004 in Lexis Nexis, <www.lexis-nexis.com>. [9] Mark Hibbs, "U.S.-China Accord Regulates Third-Party Technology Transfers," *Nucleonics Week*, September 18, 2003, p. 1.

U.S. Authorities Make Arrests for Attempted Illegal Exports to China

(This article also appears in the April issue of the NIS Export Control Observer.)

Immigration and Customs Enforcement (ICE), the primary investigative arm of the U.S. Department of Homeland Security, recently made arrests in two high profile cases involving the attempted illegal export of sensitive technology.

On March 12, 2004, ICE agents in Orlando, Florida, arrested two men on charges of attempting to illegally export dual-use technology to China. A three-count indictment returned by the federal grand jury of Florida's Middle District charged the two—Ting-Ih Hsu, a naturalized U.S. citizen and president of Azure Systems Inc. and Atlantic & Pacific ICS Inc., and Hai Lin Nee, a Chinese citizen who worked for both companies—with attempting to violate the Export Control Act, conspiracy, and making false statements.

According to the indictment, Hsu and Nee attempted to export 25 low-noise amplifier chips to an entity in China in 1999. The chip is a key component in the U.S. Hellfire air-to-ground missile system, but also has civilian applications.

U.S. authorities learned of the 1999 export after another company, Silicon Telecom Industries Inc., purchased the chips from Lockheed-Martin Sanders, of Nashua, New Hampshire, (now Information & Electronic Warfare Systems, part of BAE Systems) with the intention of exporting them to Beijing University, China. After Silicon Telecom Industries, Inc., learned that the export required a license from the U.S. Department of Commerce, it returned the chips to Lockheed-Martin Sanders for a refund of \$6,600. More than six months later, Orlando-based Azure Systems Inc. placed an order with Lockheed-Martin Sanders for the same chips. Lockheed-Martin Sanders notified federal authorities and proceeded with the sale, warning Azure that it would need a license from the U.S. government before it could export the chips. A federal authority watching Azure Systems later saw Nee mail the chips to a Hong Kong address. The attached customs form described the contents as transistors worth \$20, and the packing list showed that the items had been sold to Beijing Ghz Electronics.

Hsu is a former employee of Lockheed Martin. Nee previously worked at a U.S. research institute designing software for warfare simulations. If convicted, the two could serve up to five years in prison for each count. [1,2,3]

Sources: [1] Mike Schneider, "Two Charged with Illegally Exporting Sensitive Technology to China," Associated Press, March 17, 2004; *Naples Daily News*, <http://www.naplesnews.com/npdn/florida/article/0,2071,NPDN_14910_2735169,00.html>. [2] "ICE Agents Arrest Two for Illegally Exporting Sensitive Technology to China," U.S. Immigration and Customs Enforcement Press Release, March 15, 2004, <http://www.ice.gov/graphics/news/newsrel/articles/IllegalExportTechChinaRel.htm>. [3] "A Brief History of Information and Electronic Warfare Systems," IEWS website, <<http://www.sanders.com/business/history.htm>>..

Asian States React to Bush Nonproliferation Initiatives

On February 11, 2004, President George W. Bush gave a major speech at the U.S. National Defense University, in Washington, D.C., calling for new efforts to combat the proliferation of weapons of mass destruction and their delivery systems. [1] Warning that "the greatest threat before humanity today is the possibility of secret and sudden attack with chemical or biological or radiological or nuclear weapons," Bush proposed confronting these challenges at their sources. His action plans include a number of initiatives:

- Expanding the work of the Proliferation Security Initiative (PSI), a U.S.-led, multilateral effort to interdict shipments of WMD materials to and from countries or destinations of proliferation concern;
- Strengthening laws and international controls that govern proliferation by passing a U.S.-proposed UN Security Council resolution that requires all states to criminalize proliferation, enact strict export controls, and secure sensitive materials within national borders;

- Expanding the Nunn-Lugar and G-8 Global Partnership programs to secure and dismantle WMD arsenals in the former Soviet Union;
- Enhancing the ability of the International Atomic Energy Agency (IAEA) to detect and address violations of the nuclear Nonproliferation Treaty ;
- Requesting the forty-member Nuclear Suppliers Group (NSG) to base exports to recipient countries on the following two conditions: (1) acceptance of tougher inspections by the IAEA by signing “Additional Protocols” to their IAEA inspection agreements; and (2) essentially agreeing to ban exports of plutonium reprocessing and uranium enrichment equipment and technologies – items that could enable recipients to produce weapons-usable nuclear materials;
- Creating a special committee on safeguards and verification within the IAEA; and
- Preventing any state under investigation for proliferation violations from serving on the IAEA Board of Governors or on the new special committee.

President Bush argued that dealing with WMD proliferation challenges in the post-September-11 environment requires “changes in thinking and strategy.” The U.S. Senate Foreign Relations Committee unanimously approved an “additional protocol” to the U.S. safeguards agreement with the IAEA on March 31, 2004. However, the U.S. proposed resolution at the United Nations to criminalize WMD proliferation to prevent non-state actors from acquiring nuclear, chemical, or biological weapons had met with some resistance from Council members. [2] (*Editor’s Note: Ultimately, the UN Security Council unanimously passed the resolution on April 28, 2004.*)

Of the seven measures Bush proposed in his NDU speech, strengthening multilateral export control cooperation and expanding the role of the PSI interdiction program have the most direct relevance for Asia. China, for example, is poised to join the NSG in May (*see relevant story on page 13 of this issue*), a major step forward in its participation in multilateral export control arrangements. [3]

The U.S.-led PSI is likely to have a far-reaching impact on the region. Currently, the PSI involves the participation of fourteen countries, including two Asian states Japan and Singapore. It continues to seek wider support in the Asia-Pacific region. (*For more on Singapore’s entry into PSI, see relevant article on page 2 of this issue.*) First announced by President Bush on May 31, 2003, in an address from the Wawel Royal Castle in Krakow, Poland, the objective of PSI is to deter potential WMD-related transfers. At their Paris meeting in September 2003, PSI member states released a statement of interdiction principles that called for states to undertake effective measures to prevent the transfer or transport of WMD items and their delivery systems. According to U.S. officials, about 60 countries currently endorse the PSI’s principles. [4]

This focused counter-proliferation strategy of pre-emptive interdiction will be primarily confined to the territorial waters and national air space of participating countries. Otherwise, consent for the interception of ships outside the participating country’s territorial areas must be obtained from the country under whose flag the ship is registered. Nonetheless, questions have been raised about the legal basis for such interdictions in international waters, and the overall effectiveness of the PSI, given the limited participation in the endeavor. [5] Some of the key countries in the region such as China and South Korea, while supporting the general principle of WMD nonproliferation, continue to remain outside of the PSI and have reservations about the initiative, which some view as a U.S. attempt to increase pressure on North Korea. [4]

Regional Responses

Responses from the region to the Bush varied widely.

China

China responded to President Bush’s speech by reiterating its “resolute opposition to the proliferation of weapons of mass destruction and their delivery systems” and highlighting measures that China has adopted in recent years, including more stringent export control regulations and applications to join both the NSG and the MTCR. With respect to the PSI, Beijing indicated that while it supports international nonproliferation efforts, it also believes that proliferation issues should be resolved through political and diplomatic means within the framework of international law. Without directly responding to Bush’s proposals for IAEA reform and for NSG member states to refuse to sell uranium enrichment or reprocessing technology to states not yet

possessing such facilities, China expressed its readiness to have earnest discussion on relevant proposals. Beijing endorsed the U.S.-proposed UN resolution to criminalize the transfer of weapons of mass destruction to non-state actors that was submitted to the UN Security Council on March 24, 2004. [6]

Japan

In general, Japan welcomed the proposals put forth in President Bush's speech. According to Chief Cabinet Secretary Yasuo Fukuda, Bush's speech "point[s] in the right direction as our country has a great interest in the nonproliferation of weapons of mass destruction from the viewpoint of security." Tokyo cites its cooperation through the IAEA, PSI, and G8 initiatives as among the many ways to fight the proliferation of weapons of mass destruction. [7]

South Korea

ROK officials mentioned President Bush's speech mostly in reference to the DPRK and the six-party talks over the North Korean nuclear weapons programs. An unnamed official from the Ministry of Foreign Affairs and Trade remarked, "Since President Bush's PSI is intended largely to strengthen the existing system rather than being a new overture, his proposals will not have any significant effect on the second round of the six-way talks." However, the same article later stated that the official was concerned about the possibility of WMD trafficking being brought to the fore. The official argued that "if the North's plan to develop nuclear arms through highly enriched uranium or the issue of nuclear technology transactions with Pakistan were continuously addressed" then the next round of the six-party talks could be more difficult. Seoul appeared concerned that focusing on North Korea could worsen the crisis. [8]

North Korea

North Korean sources dismissed the Bush's proposal as "sheer fallacy intended to reinforce the U.S.-led 'Proliferation Security Initiative (PSI)' in a bid to paralyze the function of the present international legal system and realize its ambition for world supremacy." Pyongyang viewed the proposal as based on double standards, contrary to the UN Charter calling for equality of all countries, intended to stifle the DPRK, and a "brigandish system for interfering in internal affairs of other countries." Pyongyang reminded Washington of its responsibility for WMD proliferation world-wide and called for a stop to its hostile policy toward the DPRK. [9]

Malaysia

During his speech, Bush identified B.S.A. Tahir, a Sri Lankan businessman "in Malaysia" as the "chief financial officer and money launderer" in the covert international nuclear black market. (*See relevant article on page 9 of this issue.*) Bush also referred to a factory in Malaysia that had been used to manufacture components for centrifuges, used in the enrichment of uranium for use in nuclear weapons. This section of the speech touched off a row in Malaysia. Kuala Lumpur demanded that Washington apologize for the unfounded allegations. Malaysian Foreign Minister Datuk Seri Syed Hamid Albar argued that his country was unfairly treated because it is a Muslim country. "We are disappointed that the speech appears to question the commitment of the government of Malaysia on the issue of nuclear nonproliferation," he told journalists in Rangoon while accompanying Malaysian Prime Minister Datuk Seri Abdullah Ahmad Badawi on his one-day visit (February 13, 2004) to Myanmar. [10] Both Malaysia and Indonesia rejected a U.S. offer to hold a PSI-related maritime exercise in February or March 2004, [11] but Malaysian officials have expressed interest in possible participation in PSI activities.

Sources: [1] The White House, "President Announces New Measures to Counter the Threat of WMD," Remarks by the President on Weapons of Mass Destruction Proliferation Fort Lesley J. McNair - National Defense University, Washington, D.C., February 11, 2004. [2] Miles A. Pomper, "Additional Protocol Sails Through Senate Foreign Relations Committee," *Arms Control Today*, Vol. 34, No. 3 (April 2004) <http://www.armscontrol.org/act/2004_04/AP.asp>; Colum Lynch, "U.S. Effort on Arms Opposed: Security Council Members Seek to Limit Resolution," *Washington Post*, April 20, 2004, p. A16. [3] Richard McGregor, "China Poised to Join Nuclear Supplier Group," *Financial Times*, April 12, 2004. [4] Wade Boese, "Proliferation Security Initiative Advances: But Russia and China Keep Their Distance," *Arms Control Today*, Vol. 34, No. 2 (March 2004), p. 41. [5] "The Proliferation Security Initiative: An Interdiction Strategy," *Strategic Comments*, Vol. 9, No. 6 (August 2003); "The Proliferation Security Initiative: An Interview with John Bolton," *Arms Control Today*, Vol. 33, No. 10 (December 2003), p. 37. [6] "Foreign Ministry Spokesperson's Press Conference on February 12, 2004," Ministry of Foreign Affairs of the People's Republic of China, February 12, 2004, <<http://www.fmprc.gov.cn/eng/xwfw/2510/2511/t65977.htm>>;

"China Resolutely Opposes Proliferation of WMD, Carriers," Xinhua Asia-Pacific Service, February 12, 2004, in FBIS CPP20040212000123; "Disarmament Ambassador Says China Supports Proliferation Control," Xinhua Domestic Service, February 12, 2004, in FBIS CPP20040212000162 [7] "Japan Welcomes Bush's Proposals on Curbing WMD's 'Pointing in Right Direction'," Hong Kong AFP, February 12, 2004, in FBIS JPP20040212000094; "Backing for Bush on Nuclear Curbs," *BBC News*, February 12, 2004 <<http://news.bbc.co.uk/2/hi/americas/3482087.stm>>. [8] "Bush's NDU Speech Not to Have Significant Effect on 6-Way Talks," *Seoul Tong-a Ilbo*, February 13, 2004, in FBIS KPP20040213000004. [9] "U.S. President's Proposals under Fire," KCNA, March 3, 2004 <<http://www.kcna.co.jp/item/2004/200403/news03/04.htm>>; Wade Boese, "U.S. Nonproliferation Resolution Advances at UN," *Arms Control Today*, Vol. 34, No. 3 (April 2004) <http://www.armscontrol.org/act/2004_04/UN.asp>. [10] "AFP: Malaysian Foreign Minister Protests President Bush's Nuclear Link Claim," Hong Kong AFP, February 15, 2004 in FBIS JPP20040215000019; "Foreign Minister: Malaysia Feels 'Offended' by US President's Statement," *Kuala Lumpur Bernama* (Internet Version-WWW), February 13, 2004 in FBIS SEP20040214000040. [11] John Burton and Shawn Donnan "Countries Oppose US Offer to Patrol Malacca," *Financial Times*, April 5, 2004.

Regional Cooperation

Japan's ODA to Promote Export Controls in Other Asian Nations

As part of Tokyo's effort to prevent the proliferation of weapons of mass destruction (WMD), on January 5, 2004, the Japanese government adopted a new initiative to promote enhanced export controls in other Asian countries by using Japan's Official Development Assistance (ODA). This was the first step in implementing Japan's new ODA Charter, which was revised in August 2003. [1] Implementation of this initiative began in April 2004. It is a part of Japan's efforts to curb Japanese exports of sensitive items that might be diverted to countries of proliferation concern (such as North Korea and Iran) via third countries with lax export controls.

Japan's top priority is to assist Southeast Asian countries and China to adopt more stringent export controls. Under the new policy, Japan will organize ODA recipients into four rated groups, with the rating intended as a primary factor determining the content of the recipient's ODA. These four groups are: 1) countries that lack export control systems and need to enhance their awareness of the importance of export controls; 2) countries that already have some awareness but need to establish or improve national legislation and systems regarding export controls; 3) countries with export control systems but in need of improving enforcement to ensure effective functioning; and 4) countries that are able to operate their export control systems in cooperation with Japan.

Most ASEAN countries lack any national legislation establishing export controls, and thereby fall into the first category. Those in the first group include Myanmar, Laos, Cambodia, Vietnam, Brunei, Indonesia, Mongolia, the Philippines, and Malaysia. The second group would include Thailand, while the third would include China. Finally, the fourth group would include Hong Kong, Singapore, and South Korea. [2] While Taiwan is not included in any of the above categories because of political sensitivity about the island's status, Japanese officials have been cooperating unofficially with Taiwanese authorities on export control-related matters. Japan's assistance will range from organizing export control seminars to dispatching relevant Japanese experts to recipient countries. The Japanese government also plans to train officials from countries in the second category, to assist, for example, in the education of customs personnel. [3]

Japanese officials visited all ten of the ASEAN countries in early 2004 for detailed discussions regarding how Japanese ODA could help improve their domestic export control capacities. In June 2004 Japan will begin a series of export control seminars in each of these countries, dispatching teams of Japanese officials and experts as lecturers. As states begin the process of establishing national export control legislation, the Japanese government will dispatch Japanese experts to assist in drafting this legislation. [4]

Editor's Note: While many Japanese officials believe that future ODA budget allocations should be pegged to the advancement of the recipient's export control system, it is generally assumed that implementing such a policy will be difficult at this stage because the ODA program has additional objectives such as poverty reduction and promotion of good governance. [5]

Sources: [1] According to the revised principles for ODA implementation “[f]ull attention should be paid to trends in recipient countries’ military expenditures, their development and production of (WMD) and missiles, their export and import of arms, etc., so as to maintain and strengthen international peace and stability, including the prevention of terrorism and the proliferation of (WMD)...” See Japanese Ministry of Foreign Affairs, *Japan’s Official Development Assistance Charter* (August 2003), p. 8. [2] *Yushutsu Kanri Bunya ni okeru Ajia Kakukoku, Chiiki he no Kyouryoku Puran* (A Plan for Cooperation with Asian Countries and Region in the Area of Export Control), Security Trade Division of the Japanese Ministry of Economy, Trade, and Industry, January 19, 2004. [3] “Japan to Review ODA for Developing Asian Nations to Prevent Proliferation of WMDs,” *Daily Yomiuri*, January 5, 2004. [4] Article author Katsuhisa Furukawa’s e-mail communication with senior Japanese official, April 12, 2004. [5] Author’s interview with Japanese official, April 16, 2004, Washington, D.C.

Illicit Trafficking in the Region

Politically Connected Malaysian Firm Linked to Nuclear Smuggling Network

Scomi Precision Engineering (SCOPE)—a subsidiary of the Malaysian chemical, oil, and gas conglomerate, Scomi Group—was linked publicly in President Bush’s NDU speech in February to Abdul Qadeer Kahn’s illicit nuclear smuggling network. The revelation has proven especially awkward for Malaysia’s leadership since the company’s largest shareholder is Kamaluddin Abdullah, the son of Prime Minister Abdullah Badawi, and its chairman is Asmat Kamaludin, a former General Secretary of Malaysia’s International Trade Ministry. [1]

The precision engineering company had been under investigation since November 2003, when U.S. and British intelligence informed Malaysian authorities that boxes marked with SCOPE’s name had been seized during the interdiction of 25,000 high-quality centrifuge components en route to Libya. Intelligence services believe the components were destined for Libya’s covert uranium enrichment program. [2, 3]

According to corporate and investigating officials, Scomi accepted a two-year contract in 2001 from a Dubai-based company, General Technical Industries, for a \$3.4 million order of “14 semi-finished centrifuge components.” The arrangement, negotiated by Sri Lankan middleman Buhary Syed Abu Tahir, was seen as a growth opportunity by Scomi, which established SCOPE specifically to fulfill the order. Specialized machine tools were purchased by the company from Britain, Japan, France and Taiwan and high-quality aluminum was imported from a German company’s Singapore subsidiary to produce the components. The completed items were shipped to Dubai in four consignments between December 2002 and August 2003. [2, 4]

Scomi officials have maintained that they never knew the components’ end-use and were unaware of their products’ final destination. They argued that the same items could be used in a variety of contexts, including in the petrochemical, water treatment, and health industries. According to Malaysian investigators, Tahir left the Scomi staff “with the impression” that the parts were meant for the oil and gas industry. [2, 3, 4]

A three-month investigation by the Malaysian national police cleared SCOPE and Tahir of any wrong doing. Although Tahir confessed to aiding Kahn in transferring nuclear technology to Iran and Libya, his actions were found to have violated no aspects of Malaysian law. [5] Prime Minister Abdullah has stated publicly in interviews that, “What [Tahir] did was entirely a business deal.” [6] Similarly, the investigation determined that SCOPE was “misled” into its production activities. Because the company was unaware of the purpose or intended recipient of the centrifuge components, SCOPE was exonerated of participating in nuclear trafficking. [3]

In February 2004, Ahmad Sobri Hashim, Director General of the state-run Malaysian Institute for Nuclear Technology Research, stated that Malaysia had no plans to sign an Additional Protocol to its nuclear safeguards agreement with the International Atomic Energy Agency (IAEA) which would require declarations concerning the manufacture of non-nuclear items that might contribute to nuclear weapon programs. Nor, he declared, was Malaysia prepared to adopt more rigorous export controls. He also commented that Kuala Lumpur lacks the ability to implement the protocol. Hashim noted that strengthening

export controls was impractical because it was too difficult to train personnel to recognize the military potential of some exports. [7]

U.S. officials have urged Malaysia to take a harder line on the spread of nuclear technology. In March, Assistant Secretary of State for Nonproliferation John Wolf visited Malaysia to urge Abdullah and other senior officials to tighten export controls on dual-use items and enhance nonproliferation efforts. [8] Although Malaysian authorities made no firm commitments during Wolf's visit, Abdullah has since indicated that Malaysia will cooperate fully with the IAEA in further investigations related to SCOPE and that it will allow an IAEA team to inspect SCOPE's production factory. [6]

Sources: [1] Raymond Bonner, "Libyan Nuclear Components are Traced to Malaysian Firm," *International Herald Tribune*, February 5, 2004, <<http://www.iht.com/articles/128242.html>>. [2] David Rohde, "Pakistani Who Shared Secrets is Oarioned," *International Herald Tribune*, February 6, 2004, <<http://www.iht.com/cgi-bin/generic.cgi?template=articleprint.tplh&ArticleId=128363>>. [3] "Malaysia Defends Itself Against U.S. Nuclear Allegations," *Global Security Network*, February 24, 2004, <http://www.nti.org/d_newswire/issues/2004/2/24/a6adc023-54d9-409f-9d36-46b49abe07cc.html>. [4] Raymond Bonner, "CIA Chief Wrong on Plant Closure in Malaysia," *International Herald Tribune*, February 6, 2004, <<http://www.iht.com/articles/128425.html>>. [5] "Malaysian Cleared in Nuke Scandal," CNN.com, February 22, 2004, <<http://www.cnn.com/2004/WORLD/asiapcf/02/22/nuclear.malaysia/>>. [6] Jasant Singh, "AP Interviews Malaysian Prime Minister," Associated Press, March 18, 2004, <<http://www.phillyburbs.com/pb-dyn/news/90-03182004-266644.html>>. [7] "Malaysia not to Sign More NPT Protocols Due to Lack of Capacity for Obligations," *New Straits Times* (Kuala Lumpur), February 25, 2004, <<http://www.nst.com.my/>>. [8] "US Envoy Urges Malaysia to Improve Export Rules," *Global Security Network*, March 2, 2004 <http://www.nti.org/d_newswire/issues/2004/3/2/d5bd92d3-fad9-4146-a517-60f48c521247.html>.

South Korean Firm Charged With Supplying Dual-Use Items to Libya

In February 2004, South Korea's Ministry of Commerce, Industry and Energy filed a complaint against an unidentified trading firm for shipping four South Korean-made balancing machines to Libya. The action by the ROK government followed the discovery of the equipment by IAEA personnel in Libya during a December 2003 inspection. [1, 2, 3]

The machines, which cost approximately \$190,000 each, were shipped to Libya in 2002. These machines are included on the dual-use list of the Nuclear Suppliers Group (NSG) and can be used to balance uranium enrichment centrifuges that are used in the production of weapons-usable highly enriched uranium. South Korea's International Trade Law requires that exporters obtain licenses for the sale of all such items. [2, 4]

If the company is convicted of unlawfully shipping the equipment overseas, the president of the firm will face up to five years in prison or a fine of up to three times the value of the sale. Additionally, the company would be banned by South Korean law from exporting any controlled items for up to one year.. U.S. law could impose even stiffer sanctions and prohibit American firms from dealing with the exporter for as long as 20 years. [2, 3]

This is the second time in less than a year that a South Korean company has been charged with exporting NSG-controlled items. Commerce Minister Lee Hui Pom voiced concern that more firms might be found in violation of national export controls as the IAEA conducts further inspections in Libya and Iran. [2] In an effort to prevent future violations, Lee announced that the Commerce Ministry would establish a new department based on practices in place in the United States and Japan to track and manage controlled items. "South Korea has been implementing international agreements and arrangements on prohibiting proliferation of weapons of mass destruction to prevent terror across the globe," said Lee. "We will tighten our export control system, update our customs office's HS (harmonized commodity description and coding system) to thoroughly monitor the movement of strategic goods, and educate exporters to prevent such illicit exportations." [3]

Editor's note: Part 2 of the NSG Guidelines prohibits the export of items in the dual-use list to any unsafeguarded facilities or to any recipient who might divert the item for use in proscribed activities, such as a nuclear weapons program. At the time of the export mentioned above, Libya was a party to the NPT, had a

fullscope safeguards agreement in force and was not suspected of having a clandestine centrifuge program. Therefore, while the the South Korean exporter acted in violation of national regulations, it does not appear to have violated NSG Guidelines.

Sources: [1] "South Korea Cites Firm for Illicit Sales to Libya," Reuters, February 12, 2004, <http://www.sabcnews.com/africa/north_africa/0,2172,73868,00.html>. [2] "Further on ROKG Accuses Domestic Firm of Exporting WMD-Related Equipment to Libya," *Korea Times*, February 12, 2004 <<http://times.hankooki.com>>. [3] "South Korean Firm Accused of Exporting WMD-Related Equipment to Libya," Yonhap News Agency, February 11, 2004, <<http://www.yonhapnews.net/Engservices/3000000000.html>>. [4] "South Korea Accuses Company of Shipping Nuclear Technology to Libya," *Global Security Newswire*, February 1, 2004, <http://www.nti.org/d_newswire/issues/2004_2_11.html#0AC4BD40>.

Proliferation Issues in the Region

Myanmar-North Korea Nuclear, Missile Cooperation Alleged

Testifying at the International Relations Committee hearing on March 25, 2004, U.S. Deputy Assistant Secretary of State for East Asian and Pacific Affairs, Matthew Daley, stated that the U.S. State Department had "reason to believe that the DPRK has offered surface-to-surface missiles" to Myanmar. [1] He went on to comment that the State Department "raised the issue of possible missile transfers with senior Burmese officials and registered our concerns in unambiguous language." [1] Daley also mentioned Myanmar's interest in acquiring a nuclear reactor, yet he emphasized that these "construction activities are not well founded." According to Daley, "Burmese officials have indicated that they have not accepted offers of such weapons systems." [1] Daley's statements came on the heels of comments (February 10, 2004) by Keith Luse, a senior aide to Senator Richard Lugar, the Chairman of the Senate Foreign Relations Committee. In his remarks, Luse suggested that the U.S. needed to pay "special attention" to potential North Korean nuclear and missile assistance to Myanmar. [2]

Despite the spate of recent allegations regarding illicit weapons development cooperation, relations between Myanmar and North Korea have not always been smooth. In 1983, North Korean agents attempted to assassinate former South Korean President Chun Dū Hwan with a hidden bomb during a state visit to Rangoon. The premature explosion of the bomb killed eighteen South Korean officials including four cabinet members. [3] This event led to a cessation of diplomatic relations between North Korea and Myanmar. It was not until the 1990s, once Myanmar began to find itself increasingly isolated by U.S. and European economic sanctions for human rights violations, that the impetus for cooperation with North Korea began to reemerge. [4] Since 1998, North Korea allegedly has been exporting a variety of weapons to Myanmar. [3] In September 2003, Senator Richard Lugar commented that "[t]he link-up of these two pariah states can only spell trouble. North Korea's main export is dangerous weapons technology, and there have been reports that Burma is getting missiles and other arms from Pyongyang." [5]

On November 20, 2003, the *Far Eastern Economic Review* reported that Burma had begun negotiating the purchase of a number of surface-to-surface missiles from North Korea. [5] According the article, approximately twenty North Korean technicians had been stationed at the Monkey Point naval base near Rangoon in order to install the missiles on Burmese warships. In addition to these North Korean technicians, representatives from the Daesong Economic Group, an enterprise under Bureau 39 of the Korean Workers Party, are also alleged to have established a presence in Myanmar. [5]

In terms of nuclear-related technology, speculation regarding cooperation between Burma and North Korea has developed alongside Russia's 2002 "proposal" to build a nuclear research reactor in Burma's Magway Division. In January 2002, Myanmar's Deputy Foreign Minister U Khin Maung Win stated that a deal had not yet been finalized. Win emphasized that the nuclear research reactor would be used purely for peaceful training purposes in the production of medical radioisotopes. [2] By November 2003, Russia had allegedly already begun supplying equipment for the reactor and training over 1,000 Burmese including army officers and civil engineers. [3] However, a separate report contradicted this assessment, stating that Russia had in fact already "shelved the project" earlier during 2003 due to a lack of funding. [5]

The proposed 10 MWt research reactor itself was not considered a major proliferation risk. However, speculation persists that North Korea has provided assistance in reactor construction and nuclear-related training. In November 2003, a report surfaced stating that eighty State Peace and Development Council (SPDC) military officers from Burma left for North Korea to study "nuclear and atomic energy technology." Of these eighty officers, thirty-six reportedly were from the Artillery and Air Defense Division while the remaining forty-four were from the Artillery and Armored Division. [7]

If North Korean-Burmese missile and nuclear cooperation were confirmed, questions would remain as to how Myanmar could pay for nuclear and military assistance from North Korea. Some analysts have pointed to potential financial exchanges between Myanmar and North Korea based on the transfer of Burmese heroin. U.S. officials noted that since 2002, two North Korean ships have been implicated in smuggling Burmese "Double U-O Globe" heroin to Taiwan and Australia. [5] Myanmar's ruling junta has dismissed these concerns as mere speculation. In a recent statement, Rangoon reaffirmed its commitment to the nuclear Nonproliferation Treaty, banning the development of nuclear arms. While noting that the treaty reaffirms the inherent right of parties to develop nuclear facilities for peaceful purposes, Rangoon reiterated its acceptance of International Atomic Energy Agency (IAEA) safeguards, and its conviction that the need for weapons of mass destruction runs contrary to Myanmar's primary agenda of social development. [8] As part of this development agenda, on September 19, 2003 at the "International Conference on Global Environment and Advanced Nuclear Power Plants" in Japan, Tin Hlaing, an employee of Myanmar's Atomic Energy Department, stated, "nuclear power introduction [is] desirable for [the] long term," suggesting that Myanmar should consider the introduction by 2025 of 100-400 MWt reactors. [9]

Editor's note: Myanmar is a party to the Nonproliferation Treaty (NPT), maintains a comprehensive safeguards agreement with the IAEA and is a signatory to the Treaty of Bangkok, which establishes a Nuclear Weapon Free Zone in Southeast Asia.

Sources: [1] "US Accuses North Korea of Seeking to Sell Missiles to Myanmar," *SpaceWar.com*, March 26, 2004, <<http://www.spacewar.com/2004/040325230543.i03c11pc.html>>. [2] Paul Kerr, "Bush Administration Accuses Burma of Trying to Acquire Missile and Nuclear Technology," *Arms Control Today*, Vol. 34, No. 3 (April 2004), <<http://www.armscontrol.org/aca/midmonth/april/Burma.asp>>. [3] "Burma: Journal Views Issues Driving US Policy Towards Rangoon Junta," *Bangkok Irrawaddy* in FBIS SEP20031108000006, November 7, 2003. [4] "N. Korea Tried to Export Missile Parts, Tech to Myanmar: U.S.," *Japan Economic News*, October 2, 2003. [5] Bertil Lintner and Shawn W. Crispin, "Dangerous Bedfellows," *Far Eastern Economic Review*, November 20, 2003. [6] Balbina Hwang, "Curtailing North Korea's Illicit Activities," *Heritage Foundation, Background*, No. 1679, August 25, 2003, <<http://www.heritage.org/Research/AsiaandthePacific/bg1679.cfm>>. [7] "Burmese in North Korea to Study Nuclear Technology - Opposition Radio," *BBC Monitoring International Reports*, November 26, 2003. [8] "Rangoon Clarifies Support for Nonproliferation, Rejects U.S. Nuclear Tech Remarks," Rangoon Myanmar National Homepage in FBIS SEP20040213000041, February 13, 2004. [9] "International Conference on Global Environment and Advanced Nuclear Power Plants," Kyoto Research Park, September 15, 2003, <<http://genes4-anp2003.nuclear.jp/Program.pdf>>; Tin Hlaing, "The Role of Nuclear Energy in Myanmar," GENES4/ANP2003, Presentation Materials of Plenary Sessions, September 15, 2003, <<http://genes4-anp2003.nuclear.jp/presentations.html>>.

Regional Round-up

Stolen Cesium Launches Search in China. A football-sized lead container holding cesium-137 was stolen from a construction site in China's Shaanxi Province in early February 2004. The incident sparked the deployment of troops and authorities equipped with Geiger counters. Detection of radiation at a nearby steel plant in Fuping County led to the discovery that the stolen container had been smelted, contaminating the smelter and slag with the radioactive material. Officials believe local villagers mistook the canister for scrap metal and sold it to a recycling vendor, who subsequently passed it to the steel plant. [1]

Arms Regulations Stall U.S.-Japan Student Science Project. A joint initiative to launch a small experimental satellite, undertaken by students at Kyushu University and the University of Tokyo in Japan and Santa Clara University and Washington University in the United States, was stalled in January 2004 by U.S. restrictions on arms-related technology transfers. Under U.S. International Traffic in Arms Regulations, Santa Clara University was not allowed to send to Japan the data-processing equipment it developed to manage

movement of the satellite's parts unless the university is designated as an "arms merchant" by the U.S. government. University officials have stated that such a designation would run counter to its mission as an educational institution. [2]

Work to Strengthen Export-Related Security Controls. As part of the East ASEAN Growth Area (EAGA) initiative, officials from Brunei, Indonesia, Malaysia, and the Philippines participated in a workshop in late-January in Davao City, the Philippines, to discuss ways to improve security and facilitate the safe movement of people and goods between their countries. Malaysia and the Philippines were particularly instrumental in focusing attention on the need to enhance documentation of cargoes between ports and to harmonize customs procedures and exit clearances of ships. [3, 4]

PSI-Related Security Initiative for the Strait of Malacca Opposed. In March, Malaysian and Indonesian officials voiced opposition to an American proposal to deploy U.S. Marines to guard the Malacca Straits as part of the Proliferation Security Initiative. A quarter of the world's trade passes through the strait every day, making it one of the busiest shipping lanes on the planet. Security experts have long feared that terrorists might seek to blow up an oil or gas tanker passing through the strait in an effort to block the route or devastate a port. Both the Malaysian and Indonesian governments have declined the U.S. offer, noting that it is their responsibility to maintain the strait's security. While explaining his government's criticism of the U.S. proposal, Najib Razak, Malaysia's Deputy Prime Minister and Defense Minister noted, "This touches on the question of our national sovereignty." [5]

Sources: [1] "Cesium-Filled Container Stolen in China," *NIS Export Control Observer*, CNS, March 2004, p 11, <http://www.cns.miis.edu/pubs/nisexcon/pdfs/ob_0403e.pdf>. [2] "U.S. Weapons Laws Stymie School Satellite," *Japan Times*, January 14, 2004, <<http://www.japantimes.co.jp/cgi-bin/getarticle.pl5?nn20040114b5.htm>>. [3] "Philippines, Indonesia Cite Need to Coordinate Port Security," *Asia Pulse*, January 16, 2004, <<http://au.news.yahoo.com/040116/3/nbdu.html>>. [4] "Philippines, Malaysia Agree to Improve Procedures in Moving People, Goods," *Manila Business World*, January 4, 2004. [5] John Burton and Shawn Donnan, "Countries Oppose US Offer to Patrol Malacca," *World News*, April 5, 2004, <<http://www.malaysiapost.com/>>.

International Export Control Regimes

China Applies to Join the Nuclear Exporters Group; Begins Discussion with Missile Control Group Members

(An earlier version of this story appeared in the March 2004 issue of the NIS Export Control Observer)

On January 26, 2004, China's Ambassador to the United Nations Office in Vienna, Zhang Yan, submitted China's application to join the Nuclear Suppliers Group (NSG) to the Group's current president, Cho Chang Pom, of the Republic of Korea. Zhang also informed International Atomic Energy Agency (IAEA) Director General Mohamed M. ElBaradei of China's application for NSG membership. [1] Three weeks later, Chinese Ambassador for Disarmament Affairs, Hu Xiaodi, announced in a February 12, 2004 statement to the Conference on Disarmament in Geneva that China intended to join the Missile Technology Control Regime (MTCR), and that discussions were already underway with the MTCR. [2]

In the past several years, China has made significant progress in strengthening its export control system, including the adoption of regulations and control lists that mirror the lists of multilateral export control regimes. While the two announcements were the first significant public acknowledgements of Beijing's intention to join the NSG and MTCR, Chinese officials had been indicating interest in joining these groups for some time. However, until recently Chinese officials had been reluctant to commit publicly for fear that the United States or other member states would block their entry. [3] Nonetheless, in the latter part of 2003 China's intentions became clearer, particularly with regard to MTCR membership. During his February 12 speech to the Conference on Disarmament, Ambassador Hu announced that in September 2003 Chinese Foreign Minister Li Zhaoxing sent a letter to the then-Chair of the MTCR, Ambassador Mariusz Handzlik, indicating that Beijing was ready to consider applying for MTCR membership. [2] On January 27, 2004, in a joint statement between China and France, France welcomed "the development by China of national regulations on the control of sensitive exports and expresse[d] its support for China's accession as soon as possible to the MTCR and, when the time comes, to the other multilateral export control regimes." [4]

China's potential entrance to both the NSG and the MTCR are notable developments both for the supplier regimes and for China's nonproliferation policy. China is currently the only major supplier and the only nuclear weapons state party to the NPT that is not a member of the NSG. China is also a major supplier of missile related technology. China's application to the NSG indicates a change in Beijing's policy regarding the requirement of full-scope safeguards for its nuclear exports. Under the current export control regulations, Chinese nuclear exporters need only to assure that recipient facilities are subject to IAEA inspections. China did not require that *all* nuclear facilities in the recipient country be under such monitoring so as to preclude that country from developing nuclear arms. The Chinese practice thus permitted continuing nuclear trade with Pakistan, which has a number of facilities that are not monitored by the IAEA. The NSG has made acceptance of such comprehensive inspections, known as "full-scope safeguards," a condition of supply since 1992. China's joining the NSG will mean that it, too, will condition its nuclear exports on such wider inspections.

Questions remain, however, as to how China plans to deal with preexisting contracts. NSG rules permit new members to exempt nuclear sales contracts that are signed before the member's formal induction into the group. China could potentially invoke this "grandfather" clause if accepted into the NSG, in order to honor any previously signed contracts, including a preexisting agreement it may have to assist Pakistan with building a second nuclear power reactor at Chashma. In that case, however, China would be required to have the new facility placed under IAEA inspection, precluding its use in Pakistan's nuclear weapon program.

China is expected to face little opposition to its entry to the NSG, which could occur as early as May 2004, when the NSG has its annual meeting in Sweden. However, their application for the MTCR is less assured. [5] During a February 4, 2004, briefing in Washington D.C., Ambassador Handzlik announced that the first of a series of three rounds of talks between MTCR member states and China were to begin on February 15, 2004. According to Handzlik, the first meeting was to focus on comparing the MTCR Annexes with China's own missile technology control lists. Subsequent meetings would focus on China's export control system and nonproliferation policy. [6] According to U.S. officials involved in the discussions, the first meeting went well, although there was no clear indication of whether an invitation to join the regime would be forthcoming. [7]

The two announcements were significant steps for Beijing, considering the continued uncertainty about member state reactions, as well as China's previously highly critical attitude towards multilateral export control regimes. Until relatively recently, China officially viewed export control regimes with suspicion. Beijing considered these regimes, including the NSG and the MTCR, to be discriminatory and exclusive. However, in Beijing's most recent statements on arms control and nonproliferation, export control regimes are instead portrayed as an important element of international nonproliferation efforts.[8] While the United States and other regime members have pressed Beijing to accept guidelines for the NSG and MTCR, skepticism remains regarding China's official entrance into these multilateral mechanisms. Supporters of export control regimes warn that inclusion of states not fully committed to curbing proliferation could severely weaken these institutions. Some analysts in the United States also note that membership "would exempt China from certain sanctions, provide it with intelligence, give it a potentially obstructionist role in decision-making, and relax missile-related export controls to China." [9] This fear has apparently been behind the low-key reaction from the U.S. government to China's announcements. Officials from member states of the regimes have indicated that Beijing's accession to these regimes is not a foregone conclusion, and that questions remain about China's export control mechanisms, particularly enforcement and implementation. [10]

Sources: [1] "China Applies to Join Nuclear Suppliers Group," Xinhua News Service, January 26, 2004. [2] "Statement by Mr. Hu Xiaodi, Ambassador for Disarmament Affairs of China, at the Plenary of the 2004 Session of the Conference on Disarmament (February 12, 2004, Geneva)," Permanent Mission of the People's Republic of China to the United Nations Office at Geneva website, <<http://www.china-un.ch/eng/>>. [3] Jennifer Bulkeley, "Making the System Work: Challenges for China's Export Control System," (forthcoming) *Nonproliferation Review*, (Spring 2004.) [4] "Franco-Chinese Declaration of Cooperation signed on January 27 in Paris," website of the President of the French Republic; in FBIS EUP20040127000463. [5] Richard McGregor, "China Poised to Join Nuclear Export Group," *Financial Times*, April 13, 2004, p 1. [6] Mike Nartker, "China Seeks to Join Missile Nonproliferation Regime," *Global Security Newswire*, February 6, 2004, <http://www.nti.org/d_newswire/issues/2004_2_5.html#AAF5DE58>. [7] Discussion with U.S. government official, March 4, 2004. [8] "White Paper on China's Non-Proliferation Policy," China's State Council

Information Office, December 3, 2003, <<http://www.china.org.cn/english/2003/Dec/81312.htm>>. For more information on the White Paper, see Kathleen Walsh, "China White Paper Reflects Evolving PRC Views on Nonproliferation; Bodes Well for Future Progress," *NIS Export Control Observer*, No. 13, February 2004, pp. 17-19, <<http://cns.miis.edu/nis-excon>>. [9] Shirley A. Kan, "China and Proliferation of Weapons of Mass Destruction and Missiles: Policy Issues," *Report for Congress*, Congressional Research Services, updated February 26, 2003, p. 23. [10] Paul Kerr and Wade Boese, "China Seeks to Join Nuclear, Missile Control Groups," *Arms Control Today*, Vol 34, No. 2 (March 2004), <http://www.armscontrol.org/act/2004_03/China.asp>.

International Developments

A.Q. Khan's Clandestine Nuclear Market

(The following is an excerpt from a CNS Research Story of the Week by Gaurav Kampani. See <http://cns.miis.edu/pubs/week/040223.htm> for the complete version and sources.)

After years of denials, Pakistan's government admitted that between 1989 and 2003 Pakistani nuclear scientists and entities assisted in the proliferation of nuclear weapons-related technologies, equipment, and know-how to Iran, North Korea, and Libya. The Pakistani government's denials ended after Libya formally decided to terminate its clandestine weapons of mass destruction (WMD) programs in October; and after Iran, in fall 2003, agreed to cooperate with the International Atomic Energy Agency (IAEA) and provide details of its clandestine uranium enrichment programs that originated in the mid-1980s.

The Iranian and Libyan revelations have exposed a vast black market in nuclear-related items comprised of middlemen and shell companies, clandestine procurement techniques, false end-user certifications, transfers of blueprints, manufacture of nuclear equipment in third countries, and transshipments to avoid detection. The investigations of Iranian and Libyan centrifuge-based uranium enrichment efforts have exposed the central role of the former head of Pakistan's Khan Research Laboratories (KRL), Dr. Abdul Qadeer Khan, in the covert trade. Uranium enrichment centrifuges can be used to produce highly enriched uranium suitable for use in nuclear weapons. Detailed information has surfaced about transfers of technical drawings, design specifications, components, and complete assemblies of Pakistan's P-1 and P-2 centrifuge models, including the blueprint of an actual nuclear warhead, from KRL. In addition to these items, Khan and his top associates reportedly imparted sensitive know-how in secret technical briefings for Iranian, Libyan, and North Korean scientists in Pakistan and other locations.

Three decades ago, Khan, with the support of Pakistan's government at the time, set out to create a new model for developing nuclear weapons. To launch Pakistan's nuclear weapons program, Khan used centrifuge design blueprints and lists of supplier companies that he had taken from the German-, Dutch-, and British-owned URENCO uranium enrichment facility in the Netherlands. In the process, he perfected a clandestine model of trade in forbidden technologies outside formal government controls. By the end of the 1980s, after KRL acquired the wherewithal to produce highly-enriched uranium for a nuclear weapons program, it reversed course and began selling its services to international clients. KRL's first client was Iran; but the list gradually expanded to include North Korea and Libya. Starting in the late 1980s, Khan and some of his top associates began offering a one-stop shop for countries that wished to acquire nuclear technologies for a weapons program. Khan's key innovation was to integrate what was earlier a disaggregated marketplace for such technologies, along with design, engineering, and consultancy services, a process that allowed clients the possibility of reducing the time required to develop a nuclear weapons capability.

President Pervez Musharraf's government has publicly denied that it or past Pakistani state authorities ever authorized transfers or sales of sensitive nuclear weapons-related technologies to Iran, Libya, or North Korea. Alarmed that Khan's past indiscretions might directly implicate the Pakistani military and state authorities, the Musharraf government also launched an internal probe apparently to obtain a clearer picture of the activities of its top nuclear lab and senior scientists. In fall 2003, Pakistani investigators traveled to Iran, Dubai, Vienna, and Libya to investigate U.S. and IAEA complaints against Khan. They discovered that the complaints were borne out by evidence.

Since the fall of 2003, Khan and his close associates' movements have been restricted. While Khan himself has been placed under informal house arrest, his aides were subjected to what Pakistani government

spokesmen politely describe as “debriefing sessions.” In late January 2004, the government ultimately stripped Khan of his cabinet rank and fired him from his position as Senior Advisor to the Chief Executive. As part of a deal, Khan made a public apology on television before the Pakistani nation. In that apology, he admitted to personal failings, accepted responsibility for all past proliferation activities, and absolved past and present Pakistani state authorities of any complicity in his acts. In return, the cabinet of Prime Minister Zafarullah Khan Jamali granted Khan a conditional pardon. However, Khan's senior aides remain in custody, and the government has not made up its mind on whether to press formal charges against them for violating the state's national secrets or to pardon them.

Although the Pakistani government has distanced itself from Khan's activities, many analysts find it difficult to believe that a diversion of such massive scale and scope over a period of nearly two decades could have occurred without the knowledge of the Pakistani government. Evidently, Khan made nuclear transfers to Iran under the rubric of a secret peaceful nuclear cooperation agreement that the two countries signed in the mid-1980s. The historical record shows that former Pakistani president, the late General Zia-ul-Haq, was aware of Iran's interest in purchasing Pakistani enrichment technology that would enable it to enrich uranium to weapons grade. The record is equally clear that retired General Mirza Aslam Beg, who succeeded Zia as Army Chief of Staff, toyed with the idea of nuclear technology sales to finance Pakistan's defense budget. Khan also reportedly informed Beg of the equipment sales to Iran. However, Beg insists that Khan had assured him at the time that the equipment being sold was outmoded, old, and disused, and would not enable Tehran to enrich uranium in the near term. Similarly, the Musharraf government has never admitted to Nodong missile imports from North Korea or explained how it cobbled together the resources to pay for them. There is also the possibility that the Pakistani military approved transfers of a limited scope and nature to Iran and North Korea, but that Khan and his associates abused the authority granted them to make unauthorized sales of goods and services and reap huge personal financial rewards in the process.

Pact Allows U.S. to Search Liberian Vessels

On February 11, 2004, Liberia and the United States signed an agreement allowing U.S. forces to board and search any ship sailing under the Liberian flag suspected of transporting weapons of mass destruction, their delivery systems, or related materials. [1] Washington hailed the pact as a “landmark” achievement in its drive to crack-down on the maritime transport of WMD. Liberia is the world's second largest ship registry, with over 2,000 vessels flying under its flag. [2] Liberian-registered ships are viewed as particularly susceptible to targeting by smugglers, specifically terrorist organizations such as al-Qaeda, because the security measures provided by Liberian law are relatively relaxed compared with those of other nations. [3]

Under the pact, the U.S. would be required to contact the Liberian shipping registry two hours before boarding a vessel. Typically, under international law and in the absence of such an agreement, a state seeking to interdict an illicit shipment is required to work through diplomatic channels of the country of registry before legally boarding and searching a ship. [4]

State Department Spokesman Richard Boucher hailed the agreement—the first of its kind—as a “tangible example of nonproliferation cooperation.” Boucher added that the U.S. is seeking similar agreements with other nations, but did not identify governments with whom negotiations are currently underway. [3]

Sources: [1] “Liberia, U.S. Sign Ship Pact on Arms,” *Seattle Times*, 13 February, 2004; [2] “Liberia, U.S. Sign ‘Landmark’ Pact to Permit Search of Mass Destruction Weapons,” *AllAfrica.com*, 17 February, 2004; [3] Edward Harris, “Pact with Liberia Gives U.S. Sailors Search Rights over Thousands of Ships at Sea,” Associated Press, February 13, 2004; [4] “Pact Lets U.S. Search Liberia-Flagged Ships for WMDs,” *CNN*, February 13, 2004.

Export Controls In Focus

New Developments in Japan's Export Control Policy

By Katsuhisa Furukawa

Since the early 1990s, Japanese export control authorities have detected (and prevented) several attempts by Japanese companies to illicitly export WMD related materials to North Korea. In response to these incidents, Japan has taken steps to strengthen its domestic export control systems and promote international cooperation, with a view to constructing an Asian network to curb the proliferation of WMD and their delivery systems.

On the domestic side, the Japanese Ministry of Economy, Trade, and Industry (METI) introduced "catch-all" controls in April 2002. Since then, the Japanese government has reviewed its control lists and increased the number of items subject to export controls. As of March 30, 2004, METI's control list contains 36 items. [1] METI has also reviewed and enlarged its list of foreign companies and organizations that are suspected of involvement in the development of WMD. The number of foreign companies and organizations on this list was expanded from 80 to 129 in April 2003, and then to 160 in April 2004.

In a further effort to strengthen export controls, METI began a program that encourages private companies in Japan to adopt and effectively enforce internal export control compliance programs. Currently, about 1,100 companies have submitted compliance programs, and on January 9, 2004, METI released a list of 225 companies that had appropriate compliance programs as of that date, including Toyota Motor Corporation and Mitsubishi Corporation. [2] METI intends to increase the number of companies with compliance programs to 2,000 in order to cover all Japanese corporations that trade in sensitive materials. METI has provided guidelines for self-management of export control compliance, and has asked private companies voluntarily to improve their capabilities to enforce export control. [3] METI has also asked these corporations' foreign subsidiaries to strengthen their internal export control systems. [4] METI has been providing technical assistance for small- to medium-sized companies to promote the adoption of an internal export control management system.

The Japanese government has also begun to strengthen its institutional capabilities in order to promote a more effective export control policy, establishing a new post in METI in charge of export controls and increasing the number of relevant staff members. [5] Export control-related authorities within the Japanese government have strengthened cooperation and coordination with custom and intelligence officials. [6] The Japanese government is also conducting more aggressive investigations into trading companies suspected of violating export control laws. There has been a notable rise in investigations into suspected companies. Whereas in the past two decades these types of investigations have occurred very rarely, at least three instances occurred in quick succession in 2003 alone. [6]

On the international front, Japan has been intensifying cooperation with Asian countries, aimed at forging an Asian network for nonproliferation. Originally, Japan's impetus for creating such a network was driven by the necessity to stop the outflow of WMD-related materials to North Korea. In the 1990s, after the Japanese government realized that North Korea had used China as a transit point for secret imports of commodities and materials from Japan for WMD production, Tokyo began to enforce more stringent controls on its exports to China. To circumvent these controls, North Korea began to use transit points in Southeast Asian countries. In order to stop the transfers of sensitive commodities and materials to North Korea, Japan began assisting other Asian countries in strengthening their domestic export control systems. Tokyo has given special emphasis to aiding Southeast Asian countries, many of which have underdeveloped export control systems. Japan has already taken a number of steps to enhance bilateral, regional, and global nonproliferation cooperation. These steps include the following activities:

- Since 1993, Japan has arranged export control seminars for Asian countries aimed at enhancing regional awareness of the importance of export controls. Since 1999, Japan has organized training seminars for relevant Asian officials to provide them with professional and technical expertise in the area of export controls. [7]

- Japan has initiated new multilateral initiatives for nonproliferation, including the Asian Senior-Level Talks on Non-Proliferation and the Asian Export Control Dialogue. During the next conference of the Asian Export Control Dialogue (scheduled to take place in Tokyo in May 2004), the Japanese government hopes to establish a new Asian principle of export controls, jointly with other participating countries. This principle, if adopted, is expected to set a new standard of export controls for other countries in Asia.[8]
- Japan announced a new initiative to conduct seminars for ASEAN members to provide practical training in interdicting and inspecting suspect cargo ships and airplanes at seaports and airports.
- Regarding bilateral initiatives, Japan and Singapore signed an agreement on export control cooperation on April 22, 2004. A similar bilateral agreement is expected to be concluded between Japan and Hong Kong in mid-May 2004. These bilateral agreements will include plans to set up liaison offices in these countries and regions, as well as allowing both parties to monitor suspicious exports. [9] In the medium- to long-term, Japan intends to construct a network of export control cooperative agreements. [10] Japan has also held bilateral export control discussions with China, and has collaborated with the United States to arrange export control workshops in Singapore, Hong Kong, and China. [11]
- Beginning in April 2004, the Japanese government plans to link the contents of Official Development Assistance (ODA) to developing Asian nations to the strictness of their export control policies. (*See relevant article on Japan's ODA on page 8 of this issue.*)
- In close coordination with the United States, Japan is promoting the Proliferation Security Initiative among other Asian countries. Japan also made significant efforts to persuade the United States to allow the participation of France and Germany in the PSI. [12]

While export controls in Japan are generally being strengthened, Japan has announced its intention to loosen certain aspects of its current export control system, particularly with regard to cooperation with the United States on missile defense. Japanese Prime Minister Junichiro Koizumi said in January 2004 that the Japanese government might partially lift its ban on arms exports to advance U.S.-Japan cooperation in the joint development of missile defense programs. [13] Subsequently, on March 30, 2004, a subcommittee on National Defense Policy of the ruling Liberal Democratic Party (LDP) issued a new proposal for Japan's defense policy that entailed amending Japan's traditional principle that bans arms export, so as to promote defense cooperation with the United States and other Western countries. While the projected areas of defense cooperation include not only missile defense but also other advanced military technologies, the proposal emphasizes the importance of avoiding a situation where such an amendment might provoke or prolong international conflict. This proposal will likely influence the government's review of Japan's traditional policy banning arms exports. A final decision on this proposal is still pending.

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Special Report

Foreign Assistance and Procurement for the North Korean Nuclear Program

By Daniel A. Pinkston

For decades, the Democratic People's Republic of Korea (DPRK or North Korea) has received foreign assistance for its nuclear programs. The most important component of any nuclear program is human resources, and North Korea began to send students to the Soviet Union as early as 1949 for training in nuclear science. [1] In the 1950s, the DPRK expanded its program for sending students to the USSR, and Pyongyang increased the number of institutions designed to support an indigenous nuclear program.

In terms of procurement, the DPRK has imported nuclear components and materials from abroad while implementing an aggressive import-substitution program. [2] North Korea has legitimate interests in nuclear technology for medicine, agriculture, and energy, but the DPRK leadership probably became interested in military applications at the earliest stages of the country's nuclear development program. Some analysts argue that nuclear weapons were the primary motivation for Pyongyang's acquisition of nuclear technology.

North Korea has pursued both the plutonium and the highly enriched uranium paths to the bomb. North Korea is at different developmental stages for its plutonium and uranium programs, and this has implications for export controls and nonproliferation policy. The DPRK is now sufficiently advanced in some technologies that Pyongyang's potential nuclear exports will have to be addressed to prevent horizontal proliferation. Given North Korea's exports of ballistic missiles, its economic difficulties, and foreign exchange shortages, many analysts are concerned that Pyongyang might also export nuclear materials or technologies.

The Plutonium Program

The Soviet Union supplied North Korea with a small research reactor (the IRT-2000) in the early 1960s, and North Korean engineers expanded the reactor in the early 1970s. The IRT-2000 reactor is not significant in terms of producing fissile material for a nuclear arsenal, but it has provided an opportunity for North Korean scientists and engineers to gain knowledge and experience in nuclear technologies.

The DPRK is estimated to have about four million tons of natural uranium deposits, [3] and the country has all the facilities for a complete nuclear cycle. In the 1960s, the USSR provided hot cells, and by the early 1970s, North Korean engineers had acquired the knowledge to use the hot cells to extract plutonium from spent fuel. In 1979 or 1980, North Korea began construction of its 5MW(e) nuclear reactor in Yongbyon-kun, and reports indicate that North Korea built the reactor without foreign assistance. One theory is that Ch'oe Hak Kun, the DPRK representative to the International Atomic Energy Agency (IAEA) in the mid-1970s, copied information in the IAEA library about nuclear reactor design and subsequently provided information for the design of North Korea's own gas-graphite reactors. [4]

During the 1990s, Dr. Abdul Qadeer Khan, the "father of Pakistan's nuclear bomb," reportedly visited North Korea at least thirteen times. Pakistan's Khan Research Laboratories have been responsible for the development of Pakistan's liquid-fueled ballistic missiles, and North Korean exports of the Nodong (Ghauri) to Pakistan have been well documented. However, reports have now emerged that indicate Khan's visits to the DPRK were also related to nuclear cooperation. In February 2004, Khan confessed that he had sold North Korea nuclear technology and equipment for enriching uranium, and in April 2004 it was reported that Khan viewed three "nuclear devices" around 1998-1999. [5] If the reports of Khan's claims are true, this raises the question of cooperation on warhead design. There is also speculation that Pakistan tested a North Korean plutonium bomb during its series of nuclear tests in May 1998. [6]

The Uranium Enrichment Program

In the late 1990s, evidence began to emerge that Pyongyang had acquired materials and technology to produce highly enriched uranium (HEU), which can also be used for the fissile material in nuclear weapons. In the summer of 2002, U.S. intelligence discovered North Korean procurement activities to support the construction of a uranium enrichment facility. [7] However, Pyongyang's efforts to establish an HEU capability could have begun much earlier. In the late 1980s, North Korea acquired dual-use equipment and technologies that could be used for uranium metal processing and applied to uranium enrichment. [8] According to recent press reports, Dr. A. Q. Khan "began dealing with North Korea on the sale of HEU-related equipment as early as the late 1980s. However, Khan has stated that he did not begin major shipments to North Korea until the late 1990s." [9]

North Korea's uranium enrichment program poses a number of challenges for international security and export controls. First, compared to the facilities in a plutonium-based program, uranium enrichment facilities are easier to conceal, especially in North Korea, which has thousands of underground tunnels. [10] Second, past interdiction and export control efforts have exposed some North Korean procurement attempts, but it is very difficult to know what has already slipped through to the DPRK since many items were shipped by front companies through third countries before finally arriving in North Korea. [11] Southeast Asia appears to be problematic as a transshipment point given that most Southeast Asian countries are not considered nuclear suppliers, and these countries lack the resources and institutions for strict export control enforcement. This could explain why the Khan network selected the Malaysian firm Scomi Precision Engineering (SCOPE) to produce components for the Libyan HEU program.

Estimates vary on how soon the DPRK could begin operating a uranium enrichment plant, but according to one U.S. official, "they've pretty much bought everything on the list [for a gas-centrifuge HEU plant], with the possible exception of a few components." [12] On the other hand, some analysts estimate that North Korea could not produce significant quantities of weapons-grade HEU until the end of the decade. [13] In April 2003, Egyptian customs officials intercepted a boat carrying 22 tons of 6061-T6 aluminum tubing from Germany with a final destination of North Korea. The aluminum tubing would likely have been used for a pilot cascade of about 100-200 gas centrifuges, which indicates North Korea is probably not yet ready to begin operation of a large-scale plant. [14]

In sum, accurate estimates are hard to obtain because technology transfers are difficult to track and the DPRK has developed machine tool and chemical sectors that can readily absorb foreign technology. [15] If North Korea establishes a uranium enrichment plant, it appears Pyongyang will be able to produce the stock of uranium hexafluoride (UF₆) gas to feed the cascades of centrifuges. North Korea has reportedly established a facility to produce UF₆ at the Yongbyon nuclear complex, and Pyongyang should have no technical problems producing enough for a large-scale uranium enrichment facility. [16]

Six-Party Talks and Export Controls

When National Defense Commission Chairman Kim Jong Il visited China during April 19-21, 2004, Kim reportedly told Chinese President Hu Jintao that "the DPRK side will continue to take a patient and flexible manner and actively participate in the six-party talks process, and make its own contributions to the progress of the talks." [17] North Korea has declared that it is committed to a nuclear-free Korean peninsula, but it is unclear how this will be achieved. The United States is insisting on the "complete, verifiable and irreversible dismantlement (CVID)" of the North Korean nuclear program, but American negotiators have not yet explained the details of CVID to North Korean officials.

North Korea initially offered to completely abandon all of its nuclear activities, but later declared that it would retain the civilian component of its nuclear program in order to meet domestic energy demands. The type of nuclear infrastructure that remains in North Korea would affect the type of required export controls. Furthermore, questions remain over the costs and funding of dismantlement, and the type of verification that will be required for a non-nuclear DPRK. It is safe to assume that CVID would include North Korea's return to the NPT, but it could also mean Pyongyang's accepting monitoring under the IAEA's Additional Protocol (INFCIRC/540), as well as implementing the North-South "Joint Declaration on the Denuclearization of the Korean Peninsula," which provides for a bilateral inspection regime.

Whether the DPRK returns to the NPT or not, the country will have to be considered a potential source of nuclear technology and materials for other nations and for even non-state actors. Neither the Agreed Framework nor the Korean Peninsula Energy Development Organization (KEDO) addressed this issue because North Korea has usually been considered a recipient of nuclear materials and know-how. However, in November 2003, there were reports that eighty Burmese military officers traveled to North Korea to study nuclear technology. [18] Burmese officials have denied the claims, but the visits followed reports of possible North Korean missile sales to Burma. [19]

North Korea is not a member of the Missile Technology Control Regime (MTCR), and claims its missile exports are legitimate business transactions that do not violate any international laws or treaties. As North Korea has withdrawn from the NPT, it could make similar claims about any nuclear exports or transactions. If diplomacy fails to resolve the current nuclear crisis, containment and interdiction under programs such as the Proliferation Security Initiative will likely be the main implements to disrupt the flow of WMD related materials and technologies to and from North Korea. However, any diplomatic settlement should include North Korea's cooperation in export control regimes.

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