

**Acquisition of Technology
Relating to Weapons of Mass Destruction
and Advanced Conventional Munitions,
1 January to 31 December 2005**

Acquisition by Country

As required by Section 721 of the FY 1997 Intelligence Authorization Act, the following are country summaries of acquisition activities (solicitations, negotiations, contracts, and deliveries) related to weapons of mass destruction (WMD) and advanced conventional weapons (ACW) that occurred from 1 January through 31 December 2005. This report focuses on key countries of concern that we assess are seeking WMD capabilities.

Iran

We assess that in 2005, Iran continued its indigenous nuclear, chemical and probable biological warfare, long-range ballistic missile, and advanced conventional weapons (ACW) programs. Iran sought foreign materials, training, equipment, and know-how during 2005 focused particularly on entities in China, North Korea, Russia, and Europe.

Nuclear. We remain concerned that Tehran may have a clandestine nuclear weapons program, contrary to its obligations as a Party to the Nuclear Non-Proliferation Treaty (NPT). During 2005, Iran continued to pursue an indigenous nuclear fuel cycle, which it asserts is necessary for its civilian nuclear program, but the International Atomic Energy Agency (IAEA) continued to have many outstanding questions and has been unable to conclude that there are no undeclared nuclear materials or activities in Iran. International scrutiny and IAEA inspections and safeguards will most likely prevent Tehran from using facilities declared to the IAEA directly for weapons purposes as long as Iran remains a Party to the NPT. However, Iran could use the same technology at other, covert locations for military applications.

Iran continued in 2005 to use its civilian nuclear energy program to justify its efforts to either indigenously establish or otherwise acquire the entire nuclear fuel cycle. Iran claims that this fuel cycle would be used to produce fuel for its nuclear power program, which currently is limited to the Bushehr Nuclear Power Plant, a 1000-MW light-water reactor that is not yet operational. Although Russia has pledged to provide the fuel throughout the operating lifetime of the Bushehr reactor and has negotiated with Iran to take back the irradiated spent fuel, Iran argues that it needs to produce its own fuel to ensure a future supply for its nuclear power program. Iran continued construction of a Fuel Manufacturing Plant (FMP) in Esfahan that it declared to the IAEA would provide fuel for Bushehr as well as for the 40-megawatt heavy-water research reactor under construction at Arak. The Arak reactor, once operational, would provide spent fuel from which Iran might reprocess weapons-grade plutonium. During August 2005, Iran removed IAEA seals and resumed uranium conversion activities at the Uranium Conversion Facility (UCF) in Esfahan.

Ballistic Missile. Ballistic missile-related assistance from entities in China, North Korea, and Russia over the years has helped Iran move toward its goal of becoming self-sufficient in the production of ballistic missiles. We believe that such assistance continued during 2005 to include equipment, technology, and expertise. Iran's ballistic missile inventory in 2005 was among the largest in the Middle East and included some Shahab-3 medium-range ballistic missiles (MRBMs) and a few hundred short-range ballistic missiles (SRBMs)—including the Shahab-1 (Scud B), Shahab-2 (Scud C), and Tondar 69 (CSS-8)—as well as a variety of large unguided rockets. Already producing the 1,300-km-range Shahab-3 MRBMs, Iran announced that it has developed a 2,000-km-range variant of this missile. Iranian public statements also indicate that its solid-propellant technology is maturing. Solid-propellant ballistic missiles have operational advantages over Iran's existing liquid-propellant systems because they are already fueled and can be readied for launch in a shorter time. Iran in May 2005 publicly claimed it was testing a solid rocket motor, possibly for a missile with a longer range. Iran also has stated that it plans to use its ballistic missiles to develop space launch vehicles to place domestically produced satellites into space. We assess Iran genuinely aspires to access space; however, technologies related to space launch vehicles have direct application to long-range ballistic missiles that we also assess Iran seeks.

Chemical. Iran is a Party to the Chemical Weapons Convention (CWC). Nevertheless, during the reporting period Tehran continued to seek production technology, training, and expertise from foreign entities that could advance its assessed chemical warfare (CW) program.

Biological. Iran also is a Party to the Biological Weapons Convention (BWC). As of 2005, the status of its biotechnology infrastructure indicated that at a minimum, Iran probably had the capability to produce at least small quantities of biological warfare (BW) agents for offensive purposes. Iran continued to seek dual-use biotechnology materials, equipment, and expertise that are consistent with its growing legitimate biotechnology industry but could benefit Tehran's assessed probable BW program.

Advanced Conventional Weapons. In 2005, Iran continued to seek and acquire conventional weapons and production technologies, primarily from Russia and China. Tehran also sought high-quality products, particularly weapons components and dual-use items, or products that proved difficult to acquire through normal governmental channels.

Libya

On 19 December 2003, the Libyan Government announced its intention to eliminate its nuclear and chemical weapons programs and long-range missiles. In 2005, Libya continued to cooperate with experts from the US and UK, who were investigating Tripoli's past WMD-related activities. No efforts to acquire technology for WMD purposes were identified. Libya still maintains a program for developing missiles that fall below the Missile Technology Control Regime (MTCR) Category I limit of being able to deliver a 500-kg payload to a range of 300 km. During 2005, Libya submitted plans for the destruction of its CW agent stockpile and destroyed the precursors and the specialized chemical production equipment that had been removed from the Pharma 150 chemical weapons production facility.

North Korea

Nuclear. During 2005, North Korea continued its nuclear weapons program and its participation in the Six-Party Talks. In February 2005, North Korea announced that it had manufactured nuclear weapons. In May, Pyongyang announced the unloading of the 5 MWe reactor as a measure to bolster its nuclear arsenal. The North informed US visitors in October that the reprocessing of this spent fuel had been completed.

- In the 19 September 2005 Joint Statement of the fourth round of the Six-Party Talks, North Korea committed to abandoning all nuclear weapons and existing nuclear programs and returning, at an early date, to the NPT and to IAEA safeguards.

Ballistic Missile. North Korea is nearly self-sufficient in developing and producing ballistic missiles, and continues to procure needed raw materials and components from various foreign sources. In 2005, North Korea continued to abide by its voluntary moratorium on long-range missile flight tests adopted in 1998 and reaffirmed in May 2004, although Pyongyang in March 2005 announced in a Foreign Ministry statement that it was no longer bound by the moratorium.

Chemical. Pyongyang has not signed the CWC, and North Korean firms during the reporting period sought dual-use materials that could be applicable to the production of CW agents. In 2005, the United States and its allies intercepted two deliveries bound for North Korea containing materials that could be used to make CW agents.

Biological. North Korea is a Party to the BWC. Pyongyang's resources presently include a rudimentary biotechnology infrastructure. North Korea has the scientists and facilities for producing biological products and microorganisms, and has the ability to produce traditional infectious BW agents or toxins. North Korea produces conventional munitions that could be used to deliver BW agents. In 2005, North Korea requested, but was subsequently denied, a preventive vaccine manufacturing facility from South Korea.

Syria

Nuclear. Syria—an NPT Party with full-scope IAEA safeguards—has nuclear research facilities at Dayr Al Hajar and Dubaya. In 2005, Syria continued to develop its civilian nuclear infrastructure and research capabilities. We continue to monitor Syrian nuclear intentions with concern.

Ballistic Missile. During 2005, Damascus continued to seek help from abroad to establish a solid-propellant rocket motor development and production capability. Syria's liquid-propellant missile program continued to depend on essential foreign equipment and assistance—primarily from North Korean entities. Damascus also continued to manufacture liquid-propellant Scud

missiles. In addition, Syria was developing longer-range Scuds, such as the Scud D and possibly other variants, with assistance from North Korea and Iran.

Chemical and Biological. Syria continued to seek dual-use technology from foreign sources during the reporting period. Damascus already held a stockpile of the nerve agent sarin, but apparently has tried to develop a more toxic and persistent nerve agent. We assess that Syria remains dependent on foreign sources for key elements of its CW program, including precursor chemicals. During 2005, Syria probably also continued to develop a BW capability. Syria has signed but not ratified the BWC and has not acceded to the CWC.

Chemical, Biological, Radiological, and Nuclear Terrorism

A wide array of reporting in 2005 indicated continued interest by al-Qa'ida and other terrorist groups in developing chemical and biological capabilities for use in attacks against Western targets, especially in Iraq and Afghanistan. Rhetoric from these groups continued to focus on the need for spectacular attacks, but actual attempts were few during this time period and consisted of small-scale attacks using commercially available toxic industrial chemicals. In addition, Al-Qa'ida and other terrorist groups maintained a steady interest in acquiring radiological or nuclear material.

Chemical. During 2005, al-Qa'ida in Iraq attempted to improve its chemical capabilities in cooperation with other Iraq-based terrorist groups, and anti-Coalition insurgents were blamed for one poisoning. Other international terrorist groups showed active interest in developing a crude chemical attack capability focused on commercially available chemicals, and jihadist websites continued to espouse the use of chemicals in attacks against the West. Historically, al-Qa'ida has maintained a steady effort to develop a capability to use chemicals in attacks, but in 2005 there was no reporting associated with such pursuits beyond some possible chemical-related training in Pakistan.

- In May 2005, Iraqi insurgents reportedly injected watermelons with common chemicals and distributed them to Iraqi soldiers south of Mosul. Some soldiers became ill but there were no reported fatalities.

Biological. The Intelligence Community received no reliable reporting that suggests al-Qa'ida maintained an active biological weapons effort in 2005. The IC judges, however, that based on the group's longstanding interest in acquiring WMD for mass casualty attacks against the West and previous biological production efforts, it is unlikely that the current leadership will permanently abandon this option. Reports of various credibility indicated that other terrorist groups had a continued interest through 2005 in the use of "poisons"—predominantly plant toxins such as ricin.

Nuclear and Radiological. In 2005, al-Qa'ida continued to demonstrate an interest in the acquisition of radiological material for use in the development of improvised weapons. The group has also shown interest in the acquisition of nuclear weapons and nuclear expertise. There were no indications of acquisition or development efforts by other terrorist groups.

Nuclear attack scenarios remained a topic of jihadist rhetoric on Internet websites in 2005 and the Intelligence Community continued to receive a steady stream of nuclear and radiological threat reporting.

Key Suppliers

China

Nuclear. China's record is strongest with respect to nuclear nonproliferation, as Beijing has largely curtailed government-sanctioned assistance to most countries. China in late 2003 applied for membership in the Nuclear Suppliers Group (NSG) and became a member at the NSG Plenary in 2004. As an NSG member, China is committed to implementing the NSG's policy of full scope safeguards as a condition of nuclear supply to non-nuclear weapons states. However, China has told the NSG that Beijing intends to "grandfather" certain contracts with safeguarded nuclear facilities in Pakistan, which does not have full-scope safeguards.

Ballistic Missile. In October 1994, China pledged not to sell MTCR Category I ground-to-ground missiles, and in November 2000 pledged not to assist any country in any way in the development of MTCR Category I ballistic missiles. China's ballistic missile-related export control record in 2005, however, remained uneven.

The Chinese Government continued in 2005 to take steps to improve its export control record, including seeking foreign assistance with its nonproliferation efforts. Despite these efforts, in 2005, Chinese entities continued to support ballistic missile programs in Pakistan, Iran, and North Korea. Earlier Chinese-entity assistance helped Pakistan achieve domestic serial production of solid-propellant SRBMs and supported Pakistan's development of solid-propellant MRBMs. It also helped Iran move toward its goal of becoming self-sufficient in the production of ballistic missiles.

Chemical. Reporting during 2005 showed that Chinese firms continued to provide dual-use chemical production equipment and technology to Iran.

Advanced Conventional Weapons. During 2005, China remained a primary supplier of advanced conventional weapons to Pakistan and Iran. Although Pakistan still represents China's most important regional partner in military technology cooperation, Iran was gaining ground in this area and was producing the Chinese-origin C802 antiship missiles. China in 2005 continued assisting Pakistan in joint development of a new state-of-the-art fighter aircraft, the JF-17.

North Korea

Nuclear. We remain concerned about North Korea's potential for exporting nuclear materials or technology. At the April 2003 trilateral talks in Beijing, North Korea privately threatened to

export nuclear weapons. During the third round of Six-Party Talks on the North Korean nuclear issue in June 2004, Pyongyang included a ban on nuclear transfers in its nuclear freeze proposal. In April 2005, North Korea told a US academic that it could transfer nuclear weapons to terrorists if driven into a corner. IAEA inspectors in May 2004 recovered two tons of uranium hexafluoride from Libya that is believed to have originated in North Korea.

Ballistic Missile. North Korea has demonstrated a willingness to sell complete ballistic missile systems, missile components, and missile production capabilities that have enabled other states to acquire longer-range capabilities earlier than would otherwise have been possible and to acquire the basis for domestic development efforts. Pyongyang has attached high priority to the development and sale of ballistic missiles, equipment, and related technology as a major source of hard currency, which supported ongoing missile development and production.

Russia

Nuclear. Russia is the key supplier of nuclear technology to a number of countries, much of which is for civilian nuclear programs. Most recipients pose little proliferation threat, but some pose greater concern because the Russian assistance could be used in the recipient's nuclear weapons program directly—as in the case of China—or could be diverted to nuclear weapons programs.

Russia continued work on the Bushehr nuclear reactor in Iran, and in February 2005 signed an agreement for the return of spent fuel from Bushehr to Russia.

China remains Russia's largest purchaser of nuclear-related equipment. The Russian nuclear industry is currently constructing two nuclear power reactors worth over \$3 billion at China's Tianwan nuclear power plant, as well as an experimental fast reactor outside of Beijing, according to press reporting.

Russia was India's greatest foreign provider of nuclear assistance in 2005. Russia continued work on a nuclear power station in Kudankulam pursuant to a Russian-Indian contract signed on 6 October 2001. This contract called for Russia to install two nuclear power reactors at the Kudankulam station, which reportedly will be under IAEA safeguards. In late 2005, Russia worked out details of a contract with India to supply low-enriched uranium fuel for the two safeguarded nuclear power reactors at Tarapur. In addition, Russia continued to be the main supplier of technology and equipment to India's naval nuclear propulsion programs.

Ballistic Missile. Russian entities have supplied a variety of ballistic missile-related goods and technical know-how to China, Iran, India, and North Korea. Russia continued to market the Iskander-E short-range ballistic missile in 2005.

Chemical and Biological. In 2005, countries of concern continued to contact Russian entities for dual-use chemical precursors and equipment. Such entities also remained a source of dual-use biotechnology equipment and related expertise. Russia's well-known biological and chemical expertise may make it an attractive target for countries seeking assistance that could be applied to chemical or biological warfare programs.

Advanced Conventional Weapons. Russia continued to be a major supplier of ACW to India in 2005. Russian-Indian joint venture projects included advanced multi-role combat aircraft, the BrahMos family of cruise missiles, upgrading Kilo-class submarines to fire advanced cruise missiles, leasing an Akula-class submarine, and development of a new ultra-long-range air-to-air missile.

In 2005, Russia was also a major supplier of ACW to China. In December, Russia signed a contract to supply China 150 AL-31F jet engines, which will be installed on Su-27SKM fighters assembled in China under license. Under another contract, signed in May, Russia will supply spare parts for Su-27SK and Su-30MK2 fighter engines. Also in December, Russia delivered the first Project 956EM destroyer to the Chinese Navy.

During 2005, Russia was negotiating the sale of the Strelets vehicle-mounted surface-to-air missile to Syria.