

**Unclassified Report to Congress  
on the Acquisition of Technology  
Relating to Weapons of Mass Destruction  
and Advanced Conventional Munitions,  
1 January-31 December 2004**

The Deputy Director of National Intelligence for Analysis hereby submits this report in response to a congressionally directed action in Section 721 of the FY 1997 Intelligence Authorization Act, which requires:

**“(a) Reports**

The Director of Central Intelligence shall submit to Congress an annual report on -

- (1) the acquisition by foreign countries during the preceding 6 months of dual-use and other technology useful for the development or production of weapons of mass destruction (including nuclear weapons, chemical weapons, and biological weapons) and advanced conventional munitions; and
- (2) trends in the acquisition of such technology by such countries.

**(b) Submittal dates**

- (1) The report required by subsection (a) of this section shall be submitted each year to the congressional intelligence committees and the congressional leadership on an annual basis on the dates provided in section 415b of this title.
- (2) In this subsection:
  - (A) The term “congressional intelligence committees” has the meaning given that term in section 401a of this title.
  - (B) The term “congressional leadership” means the Speaker and the minority leader of the House of Representatives and the majority leader and the minority leader of the Senate.

**(c) Form of reports**

Each report submitted under subsection (a) of this section shall be submitted in unclassified form, but may include a classified annex.”

At the Director, Central Intelligence Agency’s request, the Weapons Intelligence, Nonproliferation, and Arms Control Center drafted this report and coordinated it within the Intelligence Community (IC). The National Intelligence Council assisted with the review and coordination. As directed by Section 721, subsection (c) of the Act, this report is unclassified, with a classified annex. It does not present the details of the IC’s assessments of weapons of mass destruction and advanced conventional munitions programs that are available in other classified reports and in-depth briefings for the Congress.

## 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 2004. This report focuses on key countries of concern that we assess are seeking WMD capabilities.*

### Iran

We assess that in 2004, Iran continued its indigenous nuclear, chemical, and biological weapons; long-range ballistic missile; and advanced conventional weapons (ACW) programs. To this end, Iran sought foreign materials, training, equipment, and know-how during 2004 focused particularly on entities in China, North Korea, Russia, and Europe.

**Nuclear.** We remain concerned that Tehran may have a clandestine nuclear weapons program, in contradiction to its obligations as a party to the Nuclear Non-Proliferation Treaty (NPT). During 2004, Iran continued to pursue an indigenous nuclear fuel cycle ostensibly for civilian purposes but with clear weapons potential. International scrutiny and International Atomic Energy Agency (IAEA) inspections and safeguards will most likely prevent Tehran from using facilities declared to the IAEA directly for its weapons program 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 continues to use its civilian nuclear energy program to justify its efforts to establish domestically or otherwise acquire the entire nuclear fuel cycle. Iran claims that this fuel cycle would be used to produce fuel for nuclear power reactors, such as the 1,000-megawatt light-water reactor at the southern port city of Bushehr. Although Russia has pledged to provide the fuel throughout the operating lifetime of the Bushehr reactor and was negotiating in 2004 with Iran to take back the irradiated spent fuel, Iran argues that it needs to produce its own fuel because past international pressure has led states to reduce nuclear cooperation with Iran, reducing the credibility of such promises.

During late 2004, Iran finally agreed to temporarily freeze its uranium enrichment activities. Tehran negotiated with France, Germany, and the UK—known collectively as the EU-3—on the future of its nuclear program and the nature of "objective guarantees" that would ensure nuclear resources are not diverted to a weapons program.

The IAEA in 2004 was able to resolve several outstanding issues related to Iran's nuclear program, including details of Iran's laser enrichment program and uranium conversion experiments. Some unresolved issues remained, however, including the origins of highly enriched uranium contamination found in Iran, the extent of Iran's centrifuge program, and the timing of plutonium separation experiments.

**Ballistic Missile.** Ballistic missile-related cooperation 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 2004 to include equipment, technology, and expertise. Iran's ballistic missile inventory in 2004 was among the largest in the Middle East and included some 1,300-km-range 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 Scud SRBMs, Iran announced that it had begun production of the Shahab-3 MRBM and a new solid-propellant SRBM, the Fateh-110. In addition, Iran publicly acknowledged the development of follow-on versions of the Shahab-3. It originally said that another version, the Shahab-4, was a more capable ballistic missile than its predecessor but later characterized it as solely a space launch vehicle with no military applications.

Iran claimed to have conducted a successful test launch of the Shahab-3 on August 11, 2004.

**Chemical.** Iran is a party to the Chemical Weapons Convention (CWC). Nevertheless, during the reporting period it continued to seek production technology, training, and expertise from foreign entities that could further Tehran's efforts to achieve an indigenous capability to produce nerve agents.

**Biological.** As of 2004, the status of Iran's biotechnology infrastructure indicated that at a minimum, Iran probably had the capability to produce at least small quantities of BW agents for offensive purposes. Iran continued to seek dual-use biotechnology materials, equipment, and expertise that is consistent with its growing legitimate biotechnology industry but could benefit Tehran's BW program.

**Advanced Conventional Weapons.** In 2004, 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. International investigations of Libya's WMD-related activities continued through 2004. Teams of experts from the US and UK traveled to Libya to receive detailed presentations and to visit a number of Libyan facilities. Experts were shown facilities and equipment and were told of Libyan efforts to develop weapons capabilities. The US and UK removed key weapons-related assets from Libya, expanded technical talks with Libyan weapons experts, and gained increased access to Libyan weapons facilities to verify Libyan declarations. These efforts have yielded major results.

**Nuclear.** Libya admitted to nuclear fuel-cycle projects that were ultimately intended to support a nuclear weapons program, including developing the capability for uranium conversion and enrichment. A Pakistani general in early 2004 acknowledged that A.Q. Khan had provided nuclear weapon-related assistance to Libya. US-UK teams were given access to key sites connected to Libya's nuclear activities, met with Libyan officials, and examined a large amount

of specialized nuclear equipment. In January and March 2004, the US removed over 500 metric tons of materials and equipment, including uranium hexafluoride, centrifuge components, a uranium conversion facility, and other materials. Also in March, Libya sent highly enriched uranium reactor fuel from its Tajura Nuclear Research Center to Russia and made plans to eventually convert the Tajura reactor to operate on low-enriched uranium. Libya also signed an Additional Protocol to its IAEA safeguards agreement and committed to acting as if the protocol were in force as of December 2003 pending formal entry into force.

***Ballistic Missile.*** Libya provided extensive information on its Scud missile inventory, its efforts to develop longer-range missiles, and the assistance it obtained from North Korea and other sources. 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.

***Chemical.*** Libya revealed a significant quantity of sulfur mustard agent that was produced at the former large-scale chemical weapons production facility, Pharma 150, near Rabta more than a decade ago, as well as aerial bombs designed to be filled with sulfur mustard agent. Libya also revealed equipment in storage that could be used to outfit a second chemical weapons production facility and dual-use chemical precursors that could be used to produce mustard and nerve agent. During 2004, Libya acceded to the Chemical Weapons Convention, destroyed over 3,500 aerial chemical bombs, and requested assistance in destroying agent stockpiles and approval to convert Pharma 150 to pharmaceutical production.

***Biological.*** Libya disclosed past intentions to acquire equipment and develop capabilities related to biological warfare, but it remained unclear if those activities were offensive or defensive in nature. At the expert teams' request, Libya provided access to a number of civilian medical-, bio-technical-, and agricultural-related research centers and scientists that had "dual-use" potential to support BW-related work.

## **North Korea**

***Nuclear.*** During 2004, North Korea continued to delay the six-party talks and warned that it would "bolster its nuclear deterrent force both in quality and quantity" if the United States did not drop its hostile policy toward the North.

- In late 2003, North Korea announced that it had completed the reprocessing of spent fuel previously under IAEA safeguards and would use the derived plutonium (an estimated 25-30 kilograms) to increase the size of its nuclear deterrent force. Pyongyang also indicated at the time that it plans to reprocess more spent fuel from the five megawatt-electric (5-MWe) reactor when they deem it necessary.

***Ballistic Missile.*** North Korea is nearly self-sufficient in developing and producing ballistic missiles, yet continues to procure needed raw materials and components from various foreign sources. In 2004, North Korea continued to abide by its voluntary moratorium on flight tests adopted in 1998 and reaffirmed in May a pledge made in September 2002 to extend the

moratorium beyond 2003. The multiple-stage Taepo Dong-2—potentially capable of reaching parts of the United States with a nuclear-weapon-sized payload—may be ready for flight-testing.

**Chemical.** During 2004, most of North Korea's chemical-related activity involved the procurement of the dual-use chemical sodium cyanide. We believe that most, if not all, of this chemical was for legitimate gold or zinc mining and production.

**Biological.** North Korea acceded to the Biological and Toxin Weapons Convention in 1987 but continues to pursue BW capabilities. North Korea has the scientists and facilities for producing biological products and microorganisms, and has the ability to produce traditional infectious biological warfare agents or toxins. Pyongyang's resources presently include a rudimentary biotechnology infrastructure. In 2004, Pyongyang acquired dual-use bio-technical equipment, supplies, and reagents that could be used to support a BW program. North Korea possesses a conventional munitions production infrastructure that could be used to weaponize BW agents.

## Syria

**Nuclear.** Syria—an NPT signatory with full-scope IAEA safeguards—has nuclear research facilities at Dayr Al Hajar and Dubaya. In 2004 Syria continued to develop civilian nuclear capabilities, including uranium extraction technology and hot cell facilities, which may also be potentially applicable to a weapons program. Pakistani investigators in late January 2004 said they had “confirmation” of an IAEA allegation that A.Q. Khan offered nuclear technology and hardware to Syria, according to Pakistani press, and we are concerned that expertise or technology could have been transferred. We continue to monitor Syrian nuclear intentions with concern.

**Ballistic Missile.** During 2004, 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 missile programs, such as a 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 2004 Syria probably also continued to develop a BW capability.

## Chemical, Biological, Radiological, and Nuclear Terrorism

A wide variety of reporting suggests that international mujahidin and terrorist organizations remain interested in conducting small-scale attacks, primarily against Coalition forces in Afghanistan and Iraq, utilizing improvised delivery means and easily produced or obtained

chemicals, toxins, or radiological substances. Although there were no confirmed CBRN-related terrorist attacks in 2004, extremists continued to acquire precursors, which are readily available from commercial, industrial, and scientific sources. In addition, al-Qa'ida has had a longstanding interest in nuclear or radiological materials.

***Nuclear and Radiological.*** In 2004, the IC continued to see indications that al-Qa'ida would like to acquire a nuclear or radiological capability. Information obtained in the summer of 2004 suggested that al-Qa'ida had researched the construction and possible use of a radiological dispersal device (RDD). No specific operational plans for such an attack were uncovered. In early 2004, however, individuals associated with a plot in the UK attempted to purchase what they believed to be radiological materials. UK officials disrupted the plot in the spring of 2004. In addition, British authorities announced the August arrest of members of an Islamic terrorist cell in the UK that may have attempted to produce an RDD using a radioactive isotope of americium taken from smoke detectors. The knowledge base and competence of this cell was low.

***Chemical.*** A steady stream of reporting in 2004 showed the ongoing proliferation of information on chemical agents and dissemination methods, as well as an increase in the incidents of chemical-related activity in areas of heavy jihadist activity, such as Iraq, Afghanistan, and Pakistan. The majority of these incidents involved toxic industrial chemicals (TICs), such as cyanide and pesticides intended to contaminate food and water supplies or assassinate individuals, or the crude modification of conventional weapons that could be used to deliver toxic chemicals against Coalition forces. No chemical attacks were documented in 2004, but a volume of intelligence reporting suggests that the threat of chemical terrorism—particularly small-scale attacks—is increasing.

- Information about chemical devices and recipes, and widely circulated mujahidin poisons training manuals, are easily accessible on the Internet.
- Varying quantities of chemicals and paraphernalia indicative of extremist intent to construct chemical devices and/or perpetrate unspecified chemical attacks were recovered in 2004.
- A group of Iraq-based insurgents connected to the Jaish Mohammad—dubbed the al-Abud network—focused their efforts on producing nerve and blister agents, which require significantly greater technical and scientific expertise than weaponizing TICs. Before being disrupted in 2004, the group knew the process for making a nerve agent and had made limited progress toward producing a blister agent for use in crudely modified conventional mortar rounds against Coalition forces.
- There is no reporting to indicate that terrorist groups received chemical agents, weapons, or designs from a foreign government sponsor last year. Reporting does indicate, however, that groups may have acquired chemicals from unknown foreign suppliers.

***Biological.*** Reporting on proliferation of biological weapons and related materials to and among terrorist organizations during 2004 was primarily limited to interest in crude methods for producing and disseminating toxins—such as ricin—and clarification of historical terrorist

biological efforts. Despite a lack of corroborated reporting on plans for a major terrorist biological attack, or an actual event, the ricin hits in the US Senate in February 2004 serve as a reminder that biological agents—at least on a small scale—are within the reach of some non-state actors.

Reporting in 2004 did not provide any insight into a current biological weapons effort from al-Qa‘ida. However, we judge the group remains interested in using these weapons in attacks against US interests—historically a high-priority endeavor—despite setbacks encountered because of military activities in Afghanistan and the Federally Administered Tribal Area since 2001.

Al-Qa‘ida-associated operatives in 2004 continued to train in basic ricin preparation techniques and at least brainstormed ways to use it in small scale attacks, although we have no specific information on terrorist plots to use ricin in attacks.

In 2004, we received multiple disparate reports that *mujahidin* and insurgents in rural areas along the Pakistan-Afghanistan border were attempting to conduct attacks using “anthrax.” The description of the substance allegedly in possession of these individuals was generally more consistent with a chemical-based contact poison than anthrax, and it appeared that many *mujahidin* in the region used the term “anthrax” as a catch-all phrase to describe any poison, chemical, or biological agent.

## 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 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” contracts with Pakistan’s safeguarded nuclear facilities as Pakistan does not have full-scope safeguards.

**Ballistic Missile.** China applied to join but was not yet accepted as a member of the MTCR in 2004. 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 the development of ballistic missiles that can be used to deliver nuclear weapons. The Chinese Government continued in 2004 to take steps to educate firms and authorities on missile-related export regulations and to improve enforcement of its missile-related export controls. For example, in January 2004, Beijing promulgated an export-licensing catalog of sensitive items and technologies to help customs officials identify items of proliferation concern and the Ministry of Commerce announced in May 2004 that it had fined two Chinese companies for violating the controls.

Despite these efforts, in 2004 Chinese entities continued to work with Pakistan and Iran on ballistic missile-related projects and firms in China provided dual-use missile-related items, raw materials, or assistance to Libya and North Korea. Chinese entity assistance has helped Pakistan achieve domestic serial production of solid-propellant SRBMs and has supported Pakistan's development of solid-propellant MRBMs. Chinese-entity assistance also helped Iran move toward its goal of becoming self-sufficient in the production of ballistic missiles.

**Chemical.** Reporting during 2004 showed that Chinese firms continued to provide dual-use chemical production equipment and technology to Iran.

**Advanced Conventional Weapons.** During 2004, 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. In 2004, Iran began to produce the Chinese-origin C802 antiship missiles. As of November 2004, China had completed technical negotiations with Pakistan on the sale of four F22P frigates. China also was assisting Pakistan in joint development of a new state-of-the-art fighter aircraft, the Thunder 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.

IAEA inspectors in May 2004 recovered two tons of uranium hexafluoride from Libya that was linked to the DPRK.

**Ballistic Missile.** North Korea has demonstrated a willingness to sell complete ballistic missile systems and components 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. During 2004, North Korea continued to export ballistic missile-related equipment, components, materials, and technical expertise to the Middle East and North Africa. In the past, Pyongyang 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 either directly aids the recipient's nuclear weapons program—as in the case of China—or risks diversion to nuclear weapons programs.



Throughout 2004, Russia continued its nuclear assistance relationship with Iran, and expressed intentions to expand that support. Russian officials supported construction contract proposals for a second reactor at Bushehr and for the sale of additional reactors with the provision that those projects be placed under IAEA control. The Russian government cut back on nuclear fuel-cycle cooperation with Iran and supported diplomatic efforts to persuade Iran to stop its pursuit of sensitive fuel-cycle capabilities. Russia and Iran, in October 2004, announced finalization of an agreement for the return of spent fuel from the Bushehr nuclear power plant to Russia. The agreement was signed in February 2005.

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 in Guangzhou Province, according to press reporting.

Russia was India's greatest foreign provider of nuclear assistance in 2004. 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 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 2004 as fully compliant with the MTCR.

***Chemical and Biological.*** In 2004, 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.*** In January 2004, Russia signed a landmark agreement worth approximately 1.5 to 3.0 billion dollars to sell the Admiral Gorshkov aircraft carrier and associated equipment to India. The deal included at least 16 MiG-29K maritime fighter aircraft and eight Ka-27 and Ka-31 naval helicopters. Follow-on contracts could include port infrastructure and 30 additional MiG-29s. Negotiations may also have included the purchase of three more frigates plus more diesel submarines, modernized T-72 tanks, and MiG-27 fighters. Also in January 2004, Russia announced plans to move forward with joint-development projects for new weapon systems. Russian-Indian joint venture projects included advanced multi-role combat aircraft, the BrahMos family of cruise missiles, and a new ultra-long-range air-to-air missile.

- Russia played heavily in the Israel-India sale of airborne early warning systems announced in March 2004. Russia will provide the three IL-76 airliner platforms for the systems.

- On 28 November 2004, the Indian Air Force took delivery of the first Su-30MKI fighters built under Russian license. Under this agreement 140 such fighters would be assembled in India.
- On 2 December 2004, Russia agreed to deliver Tu-22M3 long-range strategic bombers to India in the future.

Throughout 2004, Russia, France, and Israel supplied technologies and weapon systems for the Indian Advanced Technology Vehicle (ATV), a nuclear-powered attack submarine to be armed with conventional torpedoes and cruise missiles for anti-ship strike and land attack. A submarine-capable, vertical launch version of the BrahMos is being developed for the ATV as well.

In December 2004, Russia agreed to sell China the latest S300PMU2 surface-to-air missile system and a new batch of SU-30MK fighter aircraft. In that same month, Russian and Chinese defense ministers discussed licensed assembly in China of Su-27 SK aircraft and construction of warships for the Chinese Navy.

During 2004 Russia was negotiating the sale of Igla-S SA-24 surface to air missiles to Syria.

---