

Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 July Through 31 December 1999

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The Director of Central Intelligence (DCI) hereby submits this report in response to a Congressionally directed action in Section 721 of the FY 97 Intelligence Authorization Act, which requires:

"(a) Not later than 6 months after the date of the enactment of this Act, and every 6 months thereafter, the Director of Central Intelligence shall submit to Congress a 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."

At the DCI's request, the DCI Nonproliferation Center (NPC) drafted this report and coordinated it throughout the Intelligence Community. As directed by Section 721, subsection (b) of the Act, it is unclassified. As such, the report does not present the details of the Intelligence Community's assessments of weapons of mass destruction and advanced conventional munitions programs that are available in other classified reports and briefings for the Congress.

[Acquisition by Country:](#)

As required by Section 721 of the FY 97 Intelligence Authorization Act, the following are summaries by country of acquisition activities (solicitations, negotiations, contracts, and deliveries) related to weapons of mass destruction (WMD) and advanced conventional weapons (ACW) that occurred from 1 July through 31 December 1999. We excluded countries that already have substantial WMD programs, such as China and Russia, as well as countries that demonstrated little WMD acquisition activity of concern.

[Iran](#)

Iran remains one of the most active countries seeking to acquire WMD and ACW technology from abroad. In doing so, Tehran is attempting to develop an indigenous capability to produce various types of weapons—nuclear, chemical, and biological—and their delivery systems. During the reporting period, the evidence indicates increased reflections of Iranian efforts to acquire WMD- and

ACW- related equipment, materials, and technology primarily on entities in Russia, China, North Korea and Western Europe.

For the second half of 1999, entities in Russia, North Korea, and China continued to supply the largest amount of ballistic missile-related goods, technology, and expertise to Iran. Tehran is using this assistance to support current production programs and to achieve its goal of becoming self-sufficient in the production of ballistic missiles. Iran already is producing Scud short-range ballistic missiles (SRBMs) and has built and publicly displayed prototypes for the Shahab-3 medium-range ballistic missile (MRBM), which had its initial flight test in July 1998. In addition, Iran's Defense Minister last year publicly acknowledged the development of the Shahab-4, originally calling it a more capable ballistic missile than the Shahab-3, but later categorizing it as solely a space launch vehicle with no military applications. Iran's Defense Minister also has publicly mentioned plans for a "Shahab 5." Such statements, made against the backdrop of sustained cooperation with Russian, North Korean, and Chinese entities, strongly suggest that Tehran intends to develop a longer-range ballistic missile capability in the near future.

For the reporting period, Tehran expanded its efforts to seek considerable dual-use biotechnical materials, equipment, and expertise from abroad—primarily from entities in Russia and Western Europe—ostensibly for civilian uses. Iran began a biological warfare (BW) program during the Iran-Iraq war, and it may have some limited capability for BW deployment. Outside assistance is both important and difficult to prevent, given the dual-use nature of the materials, the equipment being sought, and the many legitimate end uses for these items.

Iran, a Chemical Weapons Convention (CWC) party, already has manufactured and stockpiled chemical weapons, including blister, blood, and choking agents and the bombs and artillery shells for delivering them. During the second half of 1999, Tehran continued to seek production technology, training, expertise, and chemicals that could be used as precursor agents in its chemical warfare (CW) program from entities in Russia and China. It also acquired or attempted to acquire indirectly through intermediaries in other countries equipment and material that could be used to create a more advanced and self-sufficient CW infrastructure.

Iran sought nuclear-related equipment, material, and technical expertise from a variety of sources, especially in Russia, during the second half of 1999. Work continues on the construction of a 1,000-megawatt nuclear power reactor in Bushehr, Iran, that will be subject to International Atomic Energy Agency (IAEA) safeguards. In addition, Russian entities continued to interact with Iranian research centers on various activities. These projects will help Iran augment its nuclear technology infrastructure, which in turn would be useful in supporting

nuclear weapons research and development. The expertise and technology gained, along with the commercial channels and contacts established—even from cooperation that appears strictly civilian in nature—could be used to advance Iran's nuclear weapons research and developmental program.

Beginning in January 1998, the Russian Government took a number of steps to increase its oversight of entities involved in dealings with Iran and other states of proliferation concern. In 1999, it pushed a new export control law through the Duma. Russian firms, however, faced economic pressures to circumvent these controls and did so in some cases. The Russian Government, moreover, failed in some cases regarding Iran to enforce its export controls. Following repeated warnings, the US Government in January 1998 and January 1999 imposed administrative measures against Russian entities that had engaged in nuclear- and missile-related cooperation with Iran. The measures imposed on these and other Russian entities (which were penalized in 1998) remain in effect, although sanctions against two entities—Polyus and Inor—are being lifted.

China pledged in October 1997 not to engage in any new nuclear cooperation with Iran but said it would complete cooperation on two ongoing nuclear projects, a small research reactor and a zirconium production facility at Esfahan that Iran will use to produce cladding for reactor fuel. The pledge appears to be holding. As a party to the Nuclear Nonproliferation Treaty (NPT), Iran is required to apply IAEA safeguards to nuclear fuel, but safeguards are not required for the zirconium plant or its products.

Iran claims that it is attempting to establish a complete nuclear fuel cycle for its civilian energy program. In that guise, it seeks to obtain whole facilities, such as a uranium conversion facility, that, in fact, could be used in any number of ways in support of efforts to produce fissile material needed for a nuclear weapon. Despite international efforts to curtail the flow of critical technologies and equipment, Tehran continues to seek fissile material and technology for weapons development and has set up an elaborate system of military and civilian organizations to support its effort.

On the ACW side, Iran (which has acknowledged a need for Western military equipment and spare parts) continues to acquire Western equipment, such as attack helicopters, but also is developing indigenous production capabilities with assistance from countries such as Russia, China, and North Korea. Indigenous efforts involve such systems as tanks, TOW missiles, fighter aircraft, Chinese-designed SAMs and anti-ship missiles, and attack helicopters.

[Iraq](#)

Since Operation Desert Fox in December 1998, Baghdad has refused to allow United Nations inspectors into Iraq as required by Security Council Resolution 687. Although UN Security Council Resolution (UNSCR) 1284, adopted in December 1999, established a follow-on inspection regime to the United Nations Special Commission on Iraq (UNSCOM) in the form of the United Nations Monitoring, Verification, and Inspection Committee (UNMOVIC), there have been no UN inspections during this reporting period. Moreover, the automated video monitoring system installed by the UN at known and suspect WMD facilities in Iraq has been dismantled by the Iraqis. Having lost this on-the-ground access, it is difficult for the UN or the US to accurately assess the current state of Iraq's WMD programs.

Since the Gulf war, Iraq has rebuilt key portions of its chemical production infrastructure for industrial and commercial use, as well as its missile production facilities. It has attempted to purchase numerous dual-use items for, or under the guise of, legitimate civilian use. This equipment—in principle subject to UN scrutiny—also could be diverted for WMD purposes. Since the suspension of UN inspections in December 1998, the risk of diversion has increased.

Following Desert Fox, Baghdad again instituted a reconstruction effort on those facilities destroyed by the US bombing, to include several critical missile production complexes and former dual-use CW production facilities. In addition, it appears to be installing or repairing dual-use equipment at CW-related facilities. Some of these facilities could be converted fairly quickly for production of CW agents.

UNSCOM reported to the Security Council in December 1998 that Iraq continued to withhold information related to its CW and BW programs. For example, Baghdad seized from UNSCOM inspectors an Air Force document discovered by UNSCOM that indicated that Iraq had not consumed as many CW munitions during the Iran-Iraq War in the 1980s as had been declared by Baghdad. This discrepancy indicates that Iraq may have an additional 6,000 CW munitions hidden.

We do not have any direct evidence that Iraq has used the period since Desert Fox to reconstitute its WMD programs, although given its past behavior, this type of activity must be regarded as likely. We assess that since the suspension of UN inspections in December of 1998, Baghdad has had the capability to reinitiate both its CW and BW programs within a few weeks to months, but without an inspection monitoring program, it is difficult to determine if Iraq has done so. We know, however, that Iraq has continued to work on its unmanned aerial vehicle (UAV) program, which involves converting L-29 jet trainer aircraft originally acquired from

Eastern Europe. These modified and refurbished L-29s are believed to be intended for delivery of chemical or biological agents.

Iraq continues to pursue development of two SRBM systems which are not prohibited by the United Nations: the liquid-propellant Al-Samoud, and the solid-propellant Ababil-100. The Al-Samoud is essentially a scaled-down Scud, and the program allows Baghdad to develop technological improvements that could be applied to a longer range missile program. We believe that the Al-Samoud missile, as designed, is capable of exceeding the UN-permitted 150-km-range restriction with a potential operational range of about 180 kilometers. Personnel previously involved with the Condor II/Badr-2000 missile—which was largely destroyed during the Gulf war and eliminated by UNSCOM—are working on the Ababil-100 program. If economic sanctions against Iraq were lifted, Baghdad probably would attempt to convert these efforts into longer range missile systems, regardless of continuing UN monitoring and continuing restrictions on WMD and long-range missile programs.

[North Korea](#)

P'yongyang continues to acquire raw materials from out-of-country entities to produce WMD and ballistic missiles. During the reporting period, there were increased reflections of North Korean procurement of raw materials and components for its ballistic missile programs from various foreign sources, especially through firms in China. North Korea produces and is capable of using a wide variety of chemical and possibly biological agents, as well as their delivery means.

During the second half of 1999, Pyongyang sought to procure technology worldwide that could have applications in its nuclear program, but we do not know of any procurement directly linked to the nuclear weapons program. We assess that North Korea has produced enough plutonium for at least one, and possibly two, nuclear weapons. The United States and North Korea are nearing completion on the joint project of canning spent fuel from the Yongbyon complex for long-term storage and ultimate shipment out of the North in accordance with the 1994 Agreed Framework. That reactor fuel contains enough plutonium for several more weapons.

P'yongyang continues to seek conventional weapons via the gray market. In 1999, for example, North Korea acquired MiG-21 fighter aircraft from Kazakhstan.

[Libya](#)

Libya has continued its efforts to obtain ballistic missile-related equipment, materials, technology, and expertise from foreign sources. One example is the attempt last year to ship Scud-related parts as "auto parts" from a firm in Taiwan to Libya which were intercepted in the UK. Outside assistance is critical to its ballistic missile development programs, but Libya's current capability remains limited to its aging Scud B missiles. We expect that the suspension of UN sanctions last year will allow Libya to expand its procurement effort.

Libya remains heavily dependent on foreign suppliers for precursor chemicals and other key CW-related equipment. Following the suspension of UN sanctions in April 1999, it wasted no time in re-establishing contacts with sources of expertise, parts, and precursor chemicals abroad, primarily in Western Europe. Clearly, Tripoli has not given up its goal of establishing its own offensive CW capability and continues to pursue an indigenous production capability for the weapons.

Libya continues to develop its nascent and still rudimentary nuclear research and development program but still requires significant foreign assistance to advance to a nuclear weapons option. In the latter half of 1999, Tripoli and Moscow resumed discussions on cooperation at the Tajura Nuclear Research Center and on a potential power reactor deal. Should this civil-sector work come to fruition, Libya could gain opportunities to conduct weapons related R&D.

In the past, Libya has sought to obtain major weapon systems, spare parts, and other support for its military forces from traditional sources in the former Soviet Union (FSU) and Eastern Europe, as well as from Iran. During the reporting period, Libya actively assessed both acquisition and repair/upgrade options not previously available, and ACW supplier countries openly offered to negotiate arms deals.

Syria

Syria sought CW-related precursors and expertise from foreign sources during the reporting period. Damascus already has a stockpile of the nerve agent sarin and apparently is trying to develop more toxic and persistent nerve agents. Syria remains dependent on foreign sources for key elements of its CW program, including precursor chemicals and key production equipment.

During the second half of 1999, Damascus continued work on establishing a solid-propellant rocket motor development and production capability with help from outside countries. Foreign equipment and assistance to its liquid-propellant missile program, primarily from North Korean entities, but also from firms in Russia, also have been and will continue to be essential for Syria's effort. Damascus also

continued its efforts to assemble—probably with considerable North Korean assistance—liquid-fueled Scud C missiles.

As to Syria's embryonic nuclear research and development program, we will continue to monitor the potential for this program to expand. Moscow and Damascus agreed in 1999 to cooperate on peaceful uses of nuclear energy in a wide area of disciplines.

In addition, sales of ACW to Syria continued, albeit at a lesser pace, during this reporting period. The vast majority of its arsenal consists of weapons from the FSU. Russia in particular wants to restore its predominant position as the key supplier of arms to Damascus. Syria purchased from Russia anti-tank guided munitions, tanks, and missile production capability, according to Russian and Syrian announcements.

[Sudan](#)

During the reporting period, Sudan sought to acquire a variety of military equipment from various sources. Khartoum is seeking older, less expensive weapons that nonetheless are advanced compared with the capabilities of the weapons possessed by its opponents and their supporters in neighboring countries in the long-running civil war.

In the WMD arena, Sudan has been developing the capability to produce chemical weapons for many years. In this pursuit, it has obtained help from entities in other countries, principally Iraq. Given its history in developing CW and its close relationship with Iraq, Sudan may be interested in a BW program as well.

[India](#)

While striving to achieve independence from foreign suppliers, India's ballistic missile programs still benefited from the acquisition of foreign equipment and technology. India sought items for these programs during the reporting period primarily from Russia and Western Europe. New Delhi successfully flight-tested its newest MRBM, the Agni-2, in April 1999 after months of preparations and continued apace with its SRBM program.

India continues to pursue the development of nuclear weapons, and its underground nuclear tests in May 1998 were a significant milestone. The acquisition of foreign equipment could benefit New Delhi in its efforts to develop and produce more sophisticated nuclear weapons. India obtained some foreign nuclear-related assistance during the second half of 1999 from a variety of

sources worldwide, including in Russia and Western Europe.

India's ACW acquisition efforts during this reporting period focused on Russian-provided aircraft: Russia was in the process of upgrading older MiG-21 fighters with more current aircraft capabilities, leased India an AWACS aircraft, and delivered several new SU-30 fighters during the reporting period. India and Russia also seriously discussed the leasing of several long-range bombers, which would provide significantly longer-range aircraft bombing capability.

[Pakistan](#)

Chinese entities provided increased assistance to Pakistan's ballistic missile program during the second half of 1999. North Korea continued to provide important assistance as well. Such assistance is critical for Islamabad's efforts to produce ballistic missiles. In April 1998, for example, Pakistan flight-tested the Ghauri MRBM, which is based on North Korea's No Dong missile. As a result, the US imposed sanctions against Pakistani and North Korean entities in April 1998 for their role in transferring Missile Technology Control Regime Category I ballistic missile-related technology. In April 1999, Islamabad flight-tested another Ghauri MRBM and the Shaheen-1 SRBM and can be expected to respond to another successful Indian missile test (e.g., Agni-II or Prithvi-II) with a new test flight of a Ghauri or Shaheen missile.

Pakistan continued to acquire nuclear-related and dual-use equipment and materials from various sources—principally in Western Europe—during the second half of 1999. Islamabad has a well-developed nuclear weapons program, as evidenced by its first nuclear weapons tests in late May 1998. Acquisition of nuclear-related goods from foreign sources will be important if Pakistan chooses to develop more advanced nuclear weapons. China, which has provided extensive support in the past to Islamabad's WMD programs, in May 1996 promised to stop assistance to unsafeguarded nuclear facilities—but we cannot rule out ongoing contacts.

On ACW, Pakistan purchased fighter aircraft and anti-ship missiles from China. France delivered the last two of four submarines contracted and continued to deliver Mirage aircraft.

[Egypt](#)

Egypt continues its effort to develop and produce ballistic missiles with the assistance of North Korea. This activity is part of a long-running program of ballistic missile cooperation between these two countries.

Key Suppliers:

Russia

Russian entities during the reporting period continued to supply a variety of ballistic missile-related goods and technical know-how to countries such as Iran, India, and Libya. Iran's earlier success in gaining technology and materials from Russian entities accelerated Iranian development of the Shahab-3 MRBM, which was first flight-tested in July 1998. Russian entities during the second six months of 1999 have provided substantial missile-related technology, training, and expertise to Iran that almost certainly will continue to accelerate Iranian efforts to develop new ballistic missile systems.

During the second half of 1999, Russia also remained a key supplier for civilian nuclear programs in Iran, primarily focused on the Bushehr Nuclear Power Plant project. With respect to Iran's nuclear infrastructure, Russian assistance enhances Iran's ability to support a nuclear weapons development effort. By its very nature, even the transfer of civilian technology may be of use in Iran's nuclear weapons program. We remain concerned that Tehran is seeking more than a buildup of its civilian infrastructure, and the IC will be closely monitoring the relationship with Moscow for any direct assistance in support of a military program. In addition, Russia supplied India with material for its civilian nuclear program during this reporting period.

Russian entities remain a significant source of biotechnology and chemicals for Iran. Russia's world-leading expertise in biological and chemical weapons would make it an attractive target for Iranians seeking technical information and training on BW and CW agent production processes.

Russia (along with its sister republics in the FSU) also remains an important source of conventional weapons and spare parts for Iran, which is seeking to upgrade and replace its existing conventional weapons inventories.

Following intense and continuing engagement with the US, Russian officials took some positive steps to strengthen the legal basis of export controls. President Yel'tsin in July 1999 signed a federal export control law, which formally makes WMD-related transfers a violation of law and codifies several existing decrees—including catch-all controls—yet may lessen punishment for violators. Russian export enforcement and prosecution still remains weak, however. The export law is still awaiting completion of implementing decrees and its legal status is unclear. Public comments by the head of Russia's security council indicate that

Russia obtained only three convictions for export control violations involving WMD and missile technology during 1998-99.

Nonetheless, the Russian government's commitment, willingness, and ability to curb proliferation-related transfers remain uncertain. Moreover, economic conditions in Russia continued to deteriorate, putting more pressure on Russian entities to circumvent export controls. Despite some examples of restraint, Russian businesses continue to be major suppliers of WMD equipment, materials, and technology to Iran. Specifically, Russia continues to provide Iran with nuclear technology that could be applied to Iran's weapons program. Monitoring Russian proliferation behavior, therefore, will remain a very high priority.

[North Korea](#)

Throughout the second half of 1999, North Korea continued to export significant ballistic missile-related equipment and missile components, materials, and technical expertise to countries in the Middle East, South Asia, and North Africa. P'yongyang attaches a high priority to the development and sale of ballistic missiles, equipment, and related technology. Exports of ballistic missiles and related technology are one of the North's major sources of hard currency, which fuel continued missile development and production.

[China](#)

The Chinese have taken a very narrow interpretation of their nonproliferation commitment and in the case of the MTCR do not accept the key annex.

Chinese missile-related technical assistance to Pakistan increased during this reporting period. In addition, firms in China provided missile-related items, raw materials, and/or assistance to several countries of proliferation concern—such as Iran, North Korea, and Libya.

Chinese entities have provided extensive support in the past to Pakistan's nuclear programs. In May 1996, Beijing promised to stop assistance to unsafeguarded nuclear facilities, but we cannot preclude ongoing contacts. China's involvement with Pakistan will continue to be monitored closely.

China's 1997 pledge not to engage in any new nuclear cooperation with Iran has apparently held, but work associated with two remaining nuclear projects—a small research reactor and a zirconium production facility—continues. The Intelligence Community will continue to monitor carefully Chinese nuclear cooperation with Iran.

Prior to the reporting period, Chinese firms had supplied CW-related production equipment and technology to Iran. The US sanctions imposed in May 1997 on seven Chinese entities for knowingly and materially contributing to Iran's CW program remain in effect. Evidence during the current reporting period suggests Iran continues to seek such assistance from Chinese entities, but it is unclear to what extent these efforts have succeeded. In June 1998, China announced that it had expanded its chemical export controls to include 10 of the 20 Australia Group chemicals not listed on the CWC schedules.

Western Countries

As was the case in 1998, entities in Western countries in 1999 were not as important as sources for WMD-related goods and materials as in past years—with the exceptions of Iran and Libya, where entities in Western European countries in particular remain significant suppliers for their WMD programs. Increasingly rigorous and effective export controls and cooperation among supplier countries have led the other foreign WMD programs to look elsewhere for many controlled dual-use goods. Machine tools, spare parts for dual-use equipment, and widely available materials, scientific equipment, and specialty metals were the most common items sought. In addition, several Western countries announced their willingness to negotiate ACW sales to Libya.

Trends

As in previous reports, countries determined to maintain WMD and missile programs over the long term have been placing significant emphasis on insulating their programs against interdiction and disruption, and trying to reduce their dependence on imports by developing indigenous production capabilities. Although these capabilities may not always be a good substitute for foreign imports—particularly for more advanced technologies—in many cases they may prove to be adequate. In addition, as their domestic capabilities grow, traditional recipients of WMD and missile technology could emerge as new suppliers of technology and expertise. Many of these countries—such as Iran and Pakistan—do not adhere to the export restraints embodied in supplier groups such as the Nuclear Suppliers Group (NSG) and the Missile Technology Control Regime (MTCR).

On the ACW side, notwithstanding a trend toward developing capabilities for indigenous production, many countries are buying both production rights and after-sale assistance. They also are pursuing upgrades, which tend to be cheaper and often circumvent Wassenaar Arrangement and/or US legislative constraints. In

addition, some countries are acquiring a small number of high-technology systems for key military units.

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