

Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January Through 30 June 2000

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Scope Note

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—chemical, biological, and nuclear—and their delivery systems. During the reporting period, the evidence indicates reflections of determined Iranian efforts to acquire WMD- and ACW-related equipment, materials, and technology focused primarily on entities in Russia, China, North Korea, and Western Europe.

Iran, a Chemical Weapons Convention (CWC) party, already has manufactured and stockpiled several thousand tons of chemical weapons, including blister, blood, and choking agents, and the bombs and artillery shells for delivering them. During the first half of 2000, Tehran continued to seek production technology, training, expertise, equipment, and chemicals that could be used as precursor agents in its chemical warfare (CW) program from entities in Russia and China.

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. We judge that this equipment and know-how could be applied to Iran's biological warfare (BW) program. Iran probably began its offensive 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 sought nuclear-related equipment, material, and technical expertise from a variety of sources, especially in Russia. Work continues on the construction of a 1,000-megawatt nuclear power reactor at Bushehr 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 development 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 to enforce its export controls in some cases regarding Iran.

China pledged in October 1997 not to engage in any new nuclear cooperation with Iran but said it would complete cooperation on two nuclear projects: a small research reactor and a zirconium production facility at Esfahan that Iran will use to produce cladding for reactor fuel. 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 fuel-cycle capabilities to support its civilian energy program. In that guise, it seeks to obtain turnkey facilities, such as a uranium conversion facility that, in fact, could be used in any number of ways to support fissile material production needed for a nuclear weapon. We suspect that Tehran most likely is interested in acquiring foreign fissile material and technology for weapons development as part of its overall nuclear weapons program.

During the first half of 2000, 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). In addition, Iran's Defense Minister in 1999 publicly acknowledged the development of a 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 a "Shahab 5," although he said that development had not yet begun. 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.

Iran continues to acquire conventional weapons and production technologies from Russia and China. During the first half of 2000, Iran received five Mi-171 utility helicopters from Russia under a 1999 contract, and it began licensed production of Russian Konkurs (AT-5) antitank guided missiles. Iran also claims to be producing a new manportable surface-to-air missile known as Misagh-1, which resembles China's QW-1 MANPAD system. Tehran also has been able to keep operational at least part of its existing fleet of Western-origin aircraft and helicopters supplied before the 1979 Iranian Revolution and continues to develop limited capabilities to produce armor, artillery, tactical missiles, munitions, and aircraft with foreign assistance.

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. In spite of ongoing UN efforts to establish a follow-on inspection regime comprising the UN Monitoring, Verification, and Inspection Commission (UNMOVIC) and the IAEA's Iraq Action Team, no UN inspections occurred during this reporting period. Moreover, the automated video monitoring system installed by the UN at known and suspect WMD facilities in Iraq is no longer operating. Having lost this on-the-ground access, it is more difficult for the UN or the US to accurately assess the current state of Iraq's WMD programs.

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. Without an inspection monitoring program, however, it is more difficult to determine if Iraq has done so.

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, including several critical missile production complexes and former dual-use CW production facilities. In addition, Iraq 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 also continued to withhold information related to its CW program. 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 hidden an additional 6,000 CW munitions.

In 1995, Iraq admitted to having an offensive BW program and submitted the first in a series of Full, Final, and Complete Disclosures (FFCDs) that were supposed to reveal the full scope of its BW program. According to UNSCOM, these disclosures are incomplete and filled with inaccuracies. Since the full scope and nature of Iraq's BW program was not verified, UNSCOM assessed that Iraq continues to maintain a knowledge base and industrial infrastructure that could be used to produce quickly a large amount of BW agents at any time, if needed.

Iraq has continued working on its L-29 unmanned aerial vehicle (UAV) program, which involves converting L-29 jet trainer aircraft originally acquired from Eastern Europe. It is believed that Iraq may have been conducting flights of the L-29, possibly to test system improvements or to train new pilots. These refurbished trainer aircraft are believed to have been modified for delivery of chemical or, more likely, biological warfare agents.

We believe that Iraq has probably continued low-level theoretical R&D associated with its nuclear program. A sufficient source of fissile material remains Iraq's most significant obstacle to being able to produce a nuclear weapon.

Iraq continues to pursue development of SRBM systems that are not prohibited by the United Nations and may be expanding to longer range systems. Authorized pursuit of UN-permitted missiles continues to allow Baghdad to develop technological improvements and infrastructure that could be applied to a longer-range missile program. We believe that development of the liquid propellant Al-Samoud SRBM probably is maturing and that a low-level operational capability could be achieved in the near term. The solid-propellant missile development program may now be receiving a higher priority, and development of the Ababil-100 SRBM and possibly longer range systems may be moving ahead rapidly. If economic sanctions against Iraq were lifted, Baghdad probably would increase its attempts to acquire missile-related items from foreign sources, regardless of any future UN monitoring and continuing restrictions on long-range ballistic missile programs. Iraq probably retains a small, covert force of Scud-type missiles.

North Korea

P'yongyang continues to acquire raw materials from out-of-country entities needed for its WMD and ballistic missile programs. During this time frame, North Korea continued procurement of raw materials and components for its ballistic missile programs from various foreign sources, especially through firms in China. We

assess that North Korea is capable of producing and delivering via munitions a wide variety of chemical and biological agents.

During the first half of 2000, P'yongyang 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.

North Korea continues to seek conventional arms. It signed a contract with Russia during this reporting period.

Libya

Libya has continued its efforts to obtain ballistic missile-related equipment, materials, technology, and expertise from foreign sources. Outside assistance is critical to its ballistic missile development programs, and the suspension of UN sanctions last year has allowed Tripoli to expand its procurement effort. Libya's current capability remains limited to its aging Scud B missiles, but with continued foreign assistance it may achieve an MRBM capability—a long-desired goal.

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, Tripoli reestablished contacts with sources of expertise, parts, and precursor chemicals abroad, primarily in Western Europe. Libya still appears to have a goal of establishing an offensive CW capability and an indigenous production capability for weapons. Evidence suggests Libya also is seeking to acquire the capability to develop and produce BW agents.

Libya continues to develop its nascent nuclear research and development program but still requires significant foreign assistance to advance to a nuclear weapons option. The suspension of sanctions has accelerated the pace of procurement efforts in Libya's drive to rejuvenate its ostensibly civilian nuclear program. In early 2000, for example, Tripoli and Moscow renewed talks on cooperation at the Tajura Nuclear Research Center and discussed a potential power reactor deal. Should such civil-sector work come to fruition, Libya could gain opportunities to conduct weapons-related R&D.

Following the suspension of UN sanctions, Libya has negotiated deals—reported to be worth up to \$100 million, according to Russian press—with Russian firms for conventional weapons, munitions, and upgrades and refurbishment for its existing inventory of Soviet-era weapons.

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 it would appear that Syria 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. It is highly probable that Syria also is developing an offensive BW capability.

We will continue to monitor the potential for Syria's embryonic nuclear research and development program to expand.

During the first half of 2000, 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, 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.

Syria continues to acquire ACW—mainly from Russia and other FSU suppliers—although at a reduced level from the early 1990s. During the past few years, Syria has received Kornet-E (AT-14), Metis-M (AT-13), Konkurs (AT-5), and Bastion-M (AT-10B) antitank guided missiles, RPG-29 rocket launchers, and small arms, according to Russian press reports. Damascus has expressed interest in acquiring Russian Su-27 and MiG-29 fighters and air defense systems, but its outstanding debt to Moscow and inability to fund large purchases have hampered negotiations, according to press reports.

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 chemical weapons and its close relationship with Iraq, Sudan may be interested in a BW program as well.

India

India continues its nuclear weapons development program, for which 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 assistance for its civilian nuclear power program during the first half of 2000, primarily from Russia.

India continues to rely on foreign assistance for key missile and dual-use

technologies, where it still lacks engineering or production expertise in ballistic missile development. Entities in Russia and Western Europe remained the primary conduits of missile-related technology transfers during the first half of 2000. New Delhi flight-tested three short-range ballistic missiles between January and June 2000—the Prithvi-II in February and June, and the Dhanush in April.

India continues an across-the-board modernization of its armed forces through ACW, mostly from Russia, although many of its key programs have been plagued by delays. During the reporting period, New Delhi continued negotiations with Moscow for 310 T-90S main battle tanks, Su-30 fighter aircraft production, A-50 Airborne Early Warning and Control (AWACS) aircraft, Tu-22M Backfire maritime strike bombers, and an aircraft carrier, according to press reports. India also continues to explore options for leasing or purchasing several AWACS systems from other entities. India has also received its first delivery of Russian Krasnopol laser-guided artillery rounds to be used in its Swedish-built FH-77 155-mm howitzers, negotiated the purchase of unmanned aerial vehicles from Israel, and considered offers for jet trainer aircraft from France and the United Kingdom.

Pakistan

Chinese entities continued to provide significant assistance to Pakistan's ballistic missile program during the first half of 2000. With Chinese assistance, Pakistan is rapidly moving toward serial production of solid-propellant SRBMs. Pakistan's development of the two-stage Shaheen-II MRBM also requires continued Chinese assistance. The impact of North Korea's assistance throughout the reporting period is less clear.

Pakistan continued to acquire nuclear-related and dual-use equipment and materials from various sources—principally in Western Europe. 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 remain important if Pakistan chooses to develop more advanced nuclear weapons. China, which has provided extensive support in the past to Islamabad's nuclear weapons and ballistic missile programs, in May 1996 pledged that it would not provide assistance to unsafeguarded nuclear facilities in any state, including Pakistan. We cannot rule out, however, some continued contacts between Chinese entities and entities involved in Pakistan's nuclear weapons development.

Pakistan continues to rely on China and France for its ACW requirements. Pakistan received eight upgraded Mirage III/V fighters from France and continued negotiations to purchase an additional 50 F-7 fighters from China.

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

Despite overall improvements in Russia's economy, the state-run defense and nuclear industries remain strapped for funds, even as Moscow looks to them for badly needed foreign exchange through exports. We remain very concerned about the nonproliferation implications of such sales in several areas. Monitoring Russian proliferation behavior, therefore, will remain a very high priority.

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, China, 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 first six months of 2000 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.

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 Intelligence Community will be closely monitoring the relationship with Moscow for any direct assistance in support of a military program.

In January, Russia's cabinet approved a draft cooperative program with Syria that included civil use of nuclear power. Broader access to Russian scientists could provide opportunities to solicit fissile material production expertise if Syria decided to pursue a nuclear weapons option. In addition, Russia supplied India with material for its civilian nuclear program during this reporting period. President Putin in May amended the presidential decree on nuclear exports to allow the export in exceptional cases of nuclear materials, technology, and equipment to countries that do not have full-scope IAEA safeguards, according to press reports. The move could clear the way for expanding nuclear exports to certain countries that do not have full-scope safeguards, such as India.

During the first half of 2000, Russian entities remained a significant source of dual-use biotechnology, chemicals, production technology, and equipment for Iran. Russia's biological and chemical expertise make it an attractive target for Iranians seeking technical information and training on BW-and CW-agent production processes.

Russia continues to be a major supplier of conventional arms. It is the primary source of ACW for China and India, it continues to supply ACW to Iran and Syria, and it has negotiated new contracts with Libya and North Korea, according to press

reports.

The Russian Government's commitment, willingness, and ability to curb proliferation-related transfers remain uncertain. The export control bureaucracy was reorganized again as part of President Putin's broader government reorganization in May. The Federal Service for Currency and Export Controls (VEK) was abolished and its functions assumed by a new department in the Ministry of Economic Development and Trade. VEK had been tasked with drafting the implementing decrees for Russia's July 1999 export control law; the status of these decrees is not known. Export enforcement continues to need improvement. In February 2000, Sergey Ivanov, Secretary of Russia's Security Council, said that during 1998-99 the government had obtained convictions for unauthorized technology transfers in only three cases. The Russian press has reported on cases where advanced equipment is simply described as something else in the export documentation and is exported. Enterprises sometimes falsely declare goods just to avoid government taxes.

North Korea

Throughout the first half of 2000, 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

China

During this reporting period, the Chinese have continued to take a very narrow interpretation of their bilateral nonproliferation commitments with the United States. In the case of missile-related transfers, Beijing has repeatedly pledged not to sell Missile Technology Control Regime (MTCR) Category I systems but has not recognized the regime's key technology annex. China is not a member of the MTCR.

Chinese missile-related technical assistance to Pakistan continued to be substantial during this reporting period. With Chinese assistance, Pakistan is rapidly moving toward serial production of solid-propellant SRBMs. Pakistan's development of the two-stage Shaheen-II MRBM also requires continued Chinese assistance. In addition, firms in China provided missile-related items, raw materials, and/or assistance to several other countries of proliferation concern—such as Iran, North Korea, and Libya.

Chinese entities have provided extensive support in the past to Pakistan's safeguarded and unsafeguarded nuclear programs. In May 1996, Beijing pledged that it would not provide assistance to unsafeguarded nuclear facilities. We cannot rule out some continued contacts between Chinese entities and entities associated with Pakistan's nuclear weapons program. China's involvement with Pakistan will

continue to be monitored closely.

With regard to Iran, China confirmed that work associated with two remaining nuclear projects—a small research reactor and a zirconium production facility—would continue until the projects were completed. 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 shows 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 CWC-based 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 and 1999, entities in Western countries in 2000 were not as important as sources for WMD-related goods and materials as in past years. However, Iran and Libya continue to recruit entities in Western Europe to provide needed acquisitions 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, as well as 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 India, Iran and Pakistan—do not adhere to the export restraints embodied in such supplier groups as the Nuclear Suppliers Group and the Missile Technology Control Regime.

Some countries of proliferation concern are continuing efforts to develop indigenous designs for advanced conventional weapons and expand production capabilities, although most of these programs usually rely heavily on foreign technical assistance. Many of these countries—unable to obtain newer or more advanced

arms—are pursuing upgrade programs for existing inventories.

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