Unclassified Report to Congress
on the Acquisition of Technology
Relating to Weapons of Mass Destruction
and Advanced Conventional Munitions,
Covering 1 January to 31 December 2011

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

"(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 Representative 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."

The National Intelligence Council coordinated this report within the Intelligence Community (IC). As directed by Section 721, subsection (c) of the Act, this report is unclassified. 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 briefings for the Congress.

I. Acquisition by Country

As required by Section 721 of the Fiscal Year 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 2011. This report focuses on key countries that we assess are developing capabilities applicable to WMD.

Iran

Nuclear

During the reporting period, Iran continued to expand its nuclear infrastructure and continued uranium enrichment and activities related to its heavy water research reactor, despite multiple United Nations Security Council Resolutions since late 2006 and most recently in June 2010 calling for the suspension of those activities. Although Iran made progress in expanding its nuclear infrastructure during 2011, some obstacles slowed progress during this period.

- In 2011, Iran continued to make progress enriching uranium at the underground cascade halls at Natanz with first-generation centrifuges, and in testing and operating advanced centrifuges at the Natanz pilot plant. As of early November, Iran had produced about 4,900 kilograms of low-enriched uranium hexafluoride ($LEUF_6$) gas product at Natanz, compared to about 3,200 kilograms by November 2010 and 1,800 kilograms of $LEUF_6$ in November 2009. Iran's holdings as of November 2011 include about 4,150 kg of 3.5 percent $LEUF_6$ and about 80 kg of 20-percent enriched UF_6. Between August 2010 and November 2011, Iran decreased the number of installed centrifuges from about 8,900 to about 8,000, but the number reported to be operating is around 6,200, up from about 3,800 in August 2010.

- Iran has installed centrifuges at the underground Fordow Fuel Enrichment Plant near Qom and initiated production of near-20 percent enriched uranium there. Iran has declared it plans to use Fordow for both production of enriched material as well as centrifuge research and development.

- Iran in 2011 continued construction of the IR-40 Heavy Water Research Reactor and it claims it will attempt to commence operations there by the end of 2013.

- Iran in 2011 commenced low-level reactor operations at the Bushehr Nuclear Power Plant but has not yet operated it at full power.

- Iran's Uranium Conversion Facility (UCF) at Esfahan shut down for maintenance in August 2009 and Iran had postponed UF_6 production as of early November 2011.

International Atomic Energy Agency Director General reports to the Board of Governors indicate Iran has almost exhausted its imported stockpile of yellowcake.

Ballistic Missiles

Iran has continued to develop its ballistic missile program, which it views as its primary deterrent. Iran is fielding increased numbers of short- and medium-range ballistic missiles (SRBMs, MRBMs) and we judge Tehran will continue to work on producing more capable MRBMs and developing space launch vehicles, which incorporate technology directly applicable to longer-range missile systems. Iran's ballistic missile inventory is one of the largest in the Middle East.

- Iran as of 2011 continues to develop an anti-ship variant of its Fateh-110 SRBM called the Kalij Fars, which would represent an additional Iranian threat to military and commercial vessels in the Persian Gulf and Gulf of Oman.

- An Aerospace Division commander in the Islamic Revolutionary Guard Corps in early 2011 announced Iran had launched two long-range ballistic missiles into the Indian Ocean. However, the official did not provide further detail on the types of missiles.

- In late May 2011, Iran's defense minister claimed that the new Qiyam-1 SRBM cuts down on launch preparation timelines and reduces detection to anti-missile systems, according to press reports.

- Iran in late June and early July launched a series of missiles and rockets as part of its Noble Prophet VI military exercise, including Shahab-1/2 SRBMs, a Shahab-3 MRBM, and Zelzal rockets. Iran also publicized its underground ballistic missile launch silos that it claims are less vulnerable to attack.

As early as 2005, Iran stated its intentions to send its own satellites into orbit. As of January 2008, Tehran reportedly had allocated $250 million to build and purchase satellites. Iran announced it would launch four more satellites by 2010 to improve land and mobile telephone communications.

- Iran in mid-June 2011 launched the Rasad satellite on board a Safir space launch vehicle (SLV), which was the same type SLV used to launch the Omid satellite in February 2009, according to press reports.

- In October 2011 Iran announced it would launch the Fajr satellite into space by 2012, along with other announcements related to advances in their space program.

- In mid-August 2008, Iran first launched the Safir, carrying the Omid satellite. Iran claimed the launch a success; however US officials believed the vehicle did not successfully complete its mission.

- In February 2010, Iran displayed a much larger space launch vehicle dubbed the Simorgh, as well as its first stage clustered engines. Iran claims the Simorgh can launch a 100kg satellite into a 500km orbit, according to press reports.

Iran continued to move toward self-sufficiency in the production of ballistic missiles, but almost certainly remains dependent on foreign suppliers for some key missile components. Entities in China and Russia along with North Korea are among likely suppliers. Iran has also marketed at least one ballistic missile system for export.

Chemical and Biological

We assess that Iran maintains the capability to produce chemical warfare (CW) agents and conducts research that may have offensive applications. Tehran continues to seek dual-use technologies that could advance its capability to produce CW agents. We judge that Iran is capable of weaponizing CW agents in a variety of delivery systems.

Iran probably has the capability to produce some biological warfare (BW) agents for offensive purposes, if it made the decision to do so. We assess that Iran has previously conducted offensive BW agent research and development. Iran continues to expand its biotechnology infrastructure and seek dual-use technologies that could be used for BW.

North Korea

Nuclear

In February 2007, North Korea agreed as part of the Six-Party Talks to "shut down and seal for the purposes of eventual abandonment the Yongbyon nuclear facility, including the reprocessing facility" as part of the Initial Actions for the Implementation of the Joint Statement of September 2005. In mid-July 2007, North Korean officials shut down the Yongbyon 5-megawatt electric (MWe) nuclear reactor, and placed the Yongbyon spent-fuel reprocessing facility, the Yongbyon nuclear fuel fabrication plant, and two unfinished nuclear reactors under IAEA monitoring. In return, the other five Parties agreed to cooperate in economic, energy, and humanitarian assistance to the DPRK, including the provision of assistance up to the equivalent of 1 million tons of heavy fuel oil during the period of Initial Actions and the next phase.

In the Second-Phase Actions Agreement, signed October 3, 2007, Pyongyang committed to disable the 5MWe reactor, the reprocessing facility, and the fuel fabrication plant by December 31, 2007 in exchange for a US commitment to begin the

process of removing the designation of the DPRK as a state sponsor of terrorism and to advance the processing of terminating the application of the Trading with the Enemy Act, in parallel with the DPRK's Second Phase actions. In November 2007, a team of US Department of Energy officials began overseeing disablement activities, including the unloading of reactor fuel rods at Yongbyon. In April 2009, North Korea informed the US and IAEA officials at Yongbyon that they were to depart at the earliest possible time and that North Korea planned to reactivate its nuclear facilities and reprocess the spent fuel removed from the reactor. In September 2009, North Korea announced that reprocessing of the spent fuel rods was in the final stages and that the recovered plutonium was being weaponized.

North Korean nuclear test activity in 2006 and 2009 strengthens our assessment that the North has produced nuclear weapons.

In June 2009, North Korea announced that it had begun uranium enrichment work at a test stage and was developing technology to produce fuel for a light-water reactor. In September 2009, North Korea reported that its uranium enrichment work had entered into the completion phase. In November 2010, North Korea revealed a claimed 2,000 centrifuge uranium enrichment facility to an unofficial US delegation visiting the Yongbyon Nuclear Research Center and stated it would produce low-enriched uranium to fuel a planned light-water reactor under construction at Yongbyon. In late 2011, North Korea stated the facility is producing uranium enriched up to 3.5 percent in uranium-235.

Ballistic Missile

North Korea continues to pursue the development, production, and deployment of ballistic missiles with increasing range and sophistication. It continues to procure needed raw materials and components from various foreign sources to support its missile industry.

- North Korea has not launched its Taepo Dong 2 space launch vehicle or any other longer range space or missile system since July 2009.

- North Korea continues to develop mobile short-range and longer-range ballistic missiles.

Chemical and Biological

We assess that North Korea has had a longstanding CW program. We judge Pyongyang possesses a stockpile of agents.

North Korea has a biotechnology infrastructure that could support the production of various BW agents. We judge that North Korea possesses a conventional munitions production infrastructure that could be used to weaponize BW agents.

Syria

Nuclear

Syria—despite being a Nuclear Non-Proliferation Treaty Party with full-scope IAEA safeguards—was engaged for more than a decade in a covert nuclear program with North Korean assistance. The program involved construction of a nuclear reactor at Al Kibar without informing the IAEA and while taking measures to preserve the site's secrecy. We assess the reactor would have been capable of producing plutonium for nuclear weapons. The reactor was destroyed in September 2007, before it became operational, and Syria went to great lengths to try to eradicate evidence of its existence and remains generally uncooperative with the IAEA investigation. The covert nature of the program, the characteristics of the reactor, and Syria's extreme efforts to deny and destroy evidence of the reactor after its destruction are inconsistent with peaceful nuclear applications.

IAEA inspectors in June 2008 took environmental samples at the Al Kibar site. The IAEA reported to the November 2008 Board of Governors that analysis of the Al Kibar environmental samples revealed a significant number of chemically processed natural uranium particles. The report also noted the Agency's assessment that the features of the Al Kibar building were similar to what may be found in connection with a reactor site, but stated that the IAEA could not exclude the possibility that the building was intended for non-nuclear use.

The IAEA reported to the June 2011 Board of Governors that it is "very likely" that the building destroyed at the Al Kibar site was a nuclear reactor that should have been declared to the Agency. The Board of Governors found Syria in non-compliance with IAEA Safeguards Agreement and reported the finding to the UN Security Council and General Assembly. The IAEA is continuing its investigation of Syria's nuclear file.

Ballistic Missile

Syria possesses a large ballistic missile force that includes liquid-propellant Scud SRBMs and Scud-class variants such as Scud C and D. Syria also fields the SS-21 solid-propellant SRBM. Syria remains dependent on foreign suppliers such as North Korea and Iran for some key ballistic missile technology; however, Syria has growing domestic capabilities and poses the risk of missile proliferation

Chemical and Biological

Syria continued to seek dual-use technology from foreign sources during the reporting period. Syria has had a CW program for many years and has a stockpile of CW agents, which can be delivered by aerial bombs, ballistic missiles, and artillery rockets. We assess that Syria remains dependent on foreign sources for key elements of its CW program, including precursor chemicals.

Syria's biotechnical infrastructure is capable of supporting BW agent development.

II. Chemical, Biological, Radiological, and Nuclear Terrorism

Several terrorist groups, particularly al-Qa'ida and al-Qa'ida in the Arabian Peninsula, probably remain interested in chemical, biological, radiological, and nuclear (CBRN) capabilities, but not necessarily in all four of those capabilities. A number of the 33 US Department of State-designated foreign terrorist organizations worldwide have previously expressed interest in one or more of these capabilities, mostly focusing on low-level chemicals and toxins. Some terrorist groups see employing (CBRN) materials as a high-impact option for achieving their goals, as even if they do not produce many casualties they would have a psychological impact. We believe some of these terrorists aim to use these agents against Western targets, especially in Iraq and Afghanistan. We continue to be concerned about al-Qa'ida's intent to conduct unconventional attacks against the United States. While counterterrorism actions have disrupted al-Qa'ida's near-term efforts to develop a sophisticated CBRN attack capability, we judge the group is still intent on its acquisition.

III. Key Suppliers

North Korea and entities in Russia and China continue to sell technologies and components in the Middle East and South Asia that are dual use and could support WMD and missile programs. North Korea is among the world's leading suppliers of ballistic missiles and related technologies. Chinese companies have been associated with nuclear and missile programs in Pakistan and missile programs in Iran.

The problem of secondary proliferation continues to expand, as more countries that previously imported weapons and technologies begin indigenous production and export of those systems. As their domestic capabilities grow, traditional recipients of WMD and missile technology also are capable of supplying technology and expertise. In addition, independent companies, scientists, and engineers may provide WMD- and missile-related assistance.

China

Chinese entities—including private and state-owned firms—continue to engage in WMD-related proliferation activities. The United States in recent years has imposed sanctions on several Chinese companies for sales of WMD- and ballistic missile-related technologies to states of concern. Although China has export control legislation that largely mirrors Missile Technology Control Regime (MTCR) controls, enforcement continues to fall short. Chinese entities—primarily private companies and individuals—continue to supply a variety of missile-related items to multiple customers, including Iran and Pakistan.

China continues to offer for sale SRBMs that fall below the 300-kilometer range/500 kilogram payload threshold for MTCR Category I systems. China's state-owned export firms remained a primary supplier of advanced conventional weapons to Pakistan, which still represents China's most important partner in military technology cooperation.

North Korea

North Korea remains committed to selling missiles and related technologies to foreign customers. Over the years, it has exported ballistic missile-related equipment, components, materials, technical expertise, and/or full missile systems to countries in the Middle East, South Asia, and North Africa. 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.

North Korea's relationships with Iran and Syria remain strong and we assess North Korea continues to seek new customers and reengage with previous customers. North Korea provided assistance to Syria's covert nuclear effort starting in the late 1990s and retains the potential for exporting nuclear materials or technology.

Russia

Russian entities remain key suppliers of nuclear equipment and technology to many civilian nuclear programs. Russia continues to provide assistance to Iran's civilian nuclear power program, by providing IAEA—safeguarded nuclear fuel and expertise to enable completion of Iran's Bushehr Nuclear Power Plant.

- Russia has been the primary provider of assistance to India's civilian nuclear programs. Russia has constructed two 1,000-megawatt light water nuclear reactors at Kudankulam.

China remains one of Russia's largest customers for nuclear-related equipment. Russia and China in 2010 signed several contracts related to the planned construction of the third and fourth reactors at China's Russian-designed Tianwan nuclear power plant. Russian entities also remained a source of dual-use biotechnology equipment and related expertise.