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Notes

¹ Each of the goals is explored in further detail at the official website of the UN Millennium Development Goals: <<http://www.un.org/millenniumgoals/>>.

¹ The majority of goals established set forth the year 2015 as the deadline for fulfilling these commitments. Kirby, Alexis. World 'going too slow on poverty.' BBC News Online. January 15, 2004, <<http://news.bbc.co.uk/2/hi/science/nature/3397393.stm>>.

¹ The 2006 Global Governance Initiative *Annual Report*, available at <http://www.weforum.org/pdf/Initiatives/GGI_Report06.pdf>.

¹ World Economic Forum. Global Governance Initiative <<http://www.weforum.org/en/initiatives/globalgovernance/index.htm>>.

¹ The 2006 Global Governance Initiative *Annual Report*.

¹ "Proliferation of illicit small arms leads to culture of violence and impunity – Annan," UN News Service, available at GlobalSecurity.org, <<http://www.globalsecurity.org/military/library/news/2006/06/mil-060626-unnews01.htm>>.

¹ The revelation that dual-use goods could be exploited for non-peaceful purposes crystallized in large part due to two separate incidents in the late 1980s/early 1990s. First, in the late 1980s, it was discovered that companies across the world (from Belgium, France, Denmark, West Germany, Hungary, Italy, Japan, Switzerland, the United Kingdom, the United States, Yugoslavia, China and Thailand) supplied Libya with materials, technology, technical expertise, and contractor services for its chemical weapons program. West German companies such as Imhausen-Chemie were deemed the primary suppliers since 1980 and thus West Germany received the most criticism for supporting Libya's chemical weapons program. See <http://www.nti.org/e_research/profiles/Libya/3944.html>. Second, following the 1991 Gulf War, inspections by the International Atomic Energy Agency and the UN Special Commission on Iraq "uncovered a long-standing and determined clandestine nuclear weapons program" originally based on the acquisition of a nuclear fuel cycle that "focused on the foreign acquisition of complete nuclear facilities with training in their use conducted in the supplier country" (http://www.armscontrol.org/act/1998_10/daoc98.asp). Furthermore, prior to the Gulf War, A.Q. Khan offered Iraq "project designs for a nuclear bomb and to provide assistance in enriching uranium and building a nuclear weapon" in October 1990 (http://www.armscontrol.org/act/1998_10/daoc98.asp).

¹ Gardner (1994) defines nuclear dual-use products as "items, materials, or technologies that can be used in nuclear as well as nonnuclear endeavors. Their possible use in nonnuclear endeavors makes these items difficult to regulate." See Gary T. Gardner. *Nuclear Nonproliferation: A Primer*. Lynne Rienner, 1994.

¹ While it is known that Dr. Khan's network operated extensively throughout much of Western Europe, the full extent of the network is not known. It has been confirmed that Khan's Western European network involved companies within the United Kingdom (engineers procuring sensitive items), the Netherlands (centrifuge designs and contact information for over 100 companies producing sensitive dual-use items from the Dutch partner in Urenco, a European uranium enrichment consortium), Germany (suppliers of vacuum pumps for Pakistan's nuclear program), Italy (producers of furnaces for Libya's uranium enrichment plant), and Spain (producers of two specialized lathes for an enrichment plant). See *Time Magazine*, "Khan's Dangerous Game." <<http://www.time.com/time/covers/1101050214/map/>>.

¹ Albright, David and Corey Hinderstein. "Unraveling the A.Q. Khan and Future Proliferation Networks." *The Washington Quarterly*, Spring 2005, <http://www.twq.com/05spring/docs/05spring_albright.pdf>.

¹ Clary, Christopher. *A.Q. Khan and the Limits of the Non-proliferation Regime*. The 2005 NPT Review Conference. <<http://www.unidir.org/pdf/articles/pdf-art2188.pdf>>.

¹ Carnegie Endowment for International Peace. *A.Q. Khan Nuclear Chronology*. Issue Brief. Vol. VIII, No. 8. September 7, 2005. <http://www.carnegieendowment.org/static/npp/Khan_Chronology.pdf>.

¹ Carnegie Endowment for International Peace. *A.Q. Khan Nuclear Chronology*. Issue Brief. Vol. VIII, No. 8. September 7, 2005. <http://www.carnegieendowment.org/static/npp/Khan_Chronology.pdf>.

¹ Patrick E. Tyler and David E. Sanger, "Pakistan Called Libyan's Source of Atom Design," *New York Times*, January 6, 2004.

¹ Moises Naim. *Illicit*. Doubleday, New York, 2005, p. 9.

¹ Indeed, this has happened on several occasions. On September 29, 2004, the *Federal Registrar* of the U.S. Department of State noted that the Belarusian firm *Belvneshpromservice* was sanctioned by the United States for “illicit” activity. The company argued that its compliance with all relevant Belarusian and international export control regulations made the transfer legitimate by domestic and international standards. The United States claimed the firm violated Section 2 of the U.S.’s Iran Nonproliferation Act of 2000, which “provides for penalties on entities for the transfer to Iran since January 1, 1999, of equipment and technology controlled under multilateral export control lists [...] or otherwise having the potential to make a material contribution to the development of weapons of mass destruction (WMD) or cruise or ballistic missile systems.” Therefore, even though this Belarusian firm complied with its national standards, it was still held accountable to the regulations set forth for its American counterparts and sanctioned for violating U.S. regulations.

The same law was applied to the Ukrainian firm *Zaporizhzhya* Regional Foreign Economic Association. The Ukrainian Ministry of Foreign Affairs declared that “the economic cooperation between Ukraine and Iran is carried out in compliance with international law as well as Ukraine’s international export control commitments.” The Ukrainian company director dismissed the United States’ accusation and accused the United States of engaging in unfair competition for Iran’s high-technology market. He stated that the company intended to continue cooperating with Iran. See *NIS Export Control Observer*. No. 21, Oct. 2004, available at http://64.233.187.104/search?q=cache:joULNtOcVJAJ:cns.miiis.edu/pubs/nisexcon/pdfs/ob_0410e.pdf+cns+Belvneshpromservice&hl=en&gl=us&ct=clnk&cd=2.

¹ Moises Naim. *Illicit*, p. 8.

¹ Text available at United Nations Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing the United Nations Convention against Transnational Organized Crime, http://untreaty.un.org/English/notpubl/18-12_c_E.pdf.

¹ Original text in Article 3, Section (e), available at http://untreaty.un.org/English/notpubl/18-12_c_E.pdf.

¹ Existing treaties and obligations include the Nuclear Non-Proliferation Treaty (NPT), Chemical Weapons Convention (CWC), and the Biological and Toxic Weapons Convention (BTWC). See Gahlaut, Seema, et al. “Roadmap to Reform: Creating a New Multilateral Export Control Regime.” Athens, Georgia: Center for International Trade and Security, p. 5

¹ More information on the multilateral export control regimes is available at <http://www.bis.doc.gov/policiesandregulations/multilateralexportregimes.htm>.

¹ Each multilateral export control arrangement website provides information on domestic implementation of the regime’s standards and bylaws: the Nuclear Suppliers Group <http://www.nsg-online.org/>, the Australia Group http://www.australiagroup.net/index_en.htm, the Missile Technology Control Regime <http://www.mtcr.info/>, and the Wassenaar Arrangement <http://www.wassenaar.org/>.

¹ Nuclear Suppliers Group website, <http://www.nuclearsuppliersgroup.org/>.

¹ The two sets of NSG guidelines are “Guidelines for Nuclear Transfers (INFCIRC/254, Part 1)” and “Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software, and Related Technology (INFCIRC/254, Part 2).” See Nuclear Suppliers Group website, <http://www.nuclearsuppliersgroup.org/guide.htm>.

¹ Nuclear Suppliers Group website <http://www.nuclearsuppliersgroup.org/guide.htm>.

¹ Article IV, Section 1 of the Nuclear NonProliferation Treaty states that “Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination...,” available at http://www.nti.org/e_research/official_docs/inventory/pdfs/aptnpt.pdf.

¹ “The Wrath of Khan: How A.Q. Khan made Pakistan a nuclear power – and showed that the spread of atomic weapons can’t be stopped,” *The Atlantic Monthly*, November 2005, <http://web.ebscohost.com/ehost/pdf?vid=4&hid=111&sid=3d5f5e57-26db-4415-ad29-656ce9c5be30%40sessionmgr104>.

¹ Security Today: Challenges and Opportunities. Nobel Laureate Lecture, Biozentrum, University of Basel 14 February 2007 <http://www.iaea.org/NewsCenter/Statements/2007/ebsp2007n003.html>.

¹ Leonard Weiss, « Turning a Blind Eye Again ? The Khan Network’s History and Lessons for U.S. Policy, » *Arms Control Today*, March 2005. http://www.armscontrol.org/act/2005_03/Weiss.asp.

¹ Albright, David and Corey Hinderstein. “Unraveling the A.Q. Khan and Future Proliferation Networks.”

¹ Albright, David and Corey Hinderstein. “Unraveling the A.Q. Khan and Future Proliferation Networks.”

¹Germany (ranked 5th - \$2.585 trillion), UK (ranked 6th - \$1.903 trillion), France (ranked 7th - \$1.871 trillion), Italy (ranked 8th - \$1.727 trillion), Spain (ranked 13th - \$1.07 trillion). See CIA World Factbook, <<https://www.cia.gov/cia/publications/factbook/index.html>>.

¹ Eurostat, available at <http://europa.eu/abc/keyfigures/index_en.htm>.

¹ Germany (ranked 1st - \$1,133,000,000,000 in exports), France (ranked 5th - \$490,000,000,000 in exports), UK (ranked 6th - \$468,800,000,000 in exports), Italy (ranked 7th - \$450,100,000,000 in exports), Netherlands (ranked 8th - \$413,800,000,000 in exports), Belgium (ranked 12th - \$335,300,000,000 in exports), Spain (ranked 16th - \$222,100,000,000 in exports). See CIA World Factbook, <<https://www.cia.gov/cia/publications/factbook/rankorder/2078rank.html>>.

¹ Germany (ranked 2nd - \$916,400,000,000 in imports), UK (ranked 4th - \$603,000,000,000 in imports), France (ranked 5th - \$529,100,000,000 in imports) Italy (ranked 7th - \$445,600,000,000 in imports), Netherlands (ranked 8th - \$373,800,000,000 in imports), Belgium (ranked 10th - \$333,500,000,000 in imports), Spain (ranked 12th - \$324,400,000,000 in imports). See CIA World Factbook, <<https://www.cia.gov/cia/publications/factbook/rankorder/2087rank.html>>.

¹ Federation of American Scientists, *International Crime Threat Assessment, December 2000*, Chapter 1:

“Criminal groups have taken advantage of the high volume of legitimate trade to smuggle drugs, arms, and other contraband across national boundaries,” <<http://www.fas.org/irp/threat/pub45270chap1.html>>.

¹ CIA World Factbook – European Union, <<https://www.cia.gov/cia/publications/factbook/geos/ee.html>>.

¹ For a complete list of import and export commodities, see CIA World Factbook: European Union, <<https://www.cia.gov/cia/publications/factbook/print/ee.html>>.

¹ For an entire list, see CIA World Factbook Field Listing - Coastline, <<https://www.cia.gov/cia/publications/factbook/fields/2060.html>>.

¹ For example, the Greek Isles comprise more than 1400 islands alone. See CIA World Factbook Field Listing - Coastline, <<http://www.greeka.com/greece-islands.htm>>. The rest of the countries vary in the number of islands they possess.

¹ Those ports are: Antwerp (Belgium), Barcelona (Spain), Bremen (Germany), Copenhagen (Denmark), Hamburg (Germany), Helsinki (Finland), Las Palmas (Canary Islands, Spain), Le Havre (France), Lisbon (Portugal), London (UK), Marseille (France), Naples (Italy), Piraeus (Greece), Rotterdam (Netherlands), Stockholm (Sweden). The United States, an area of more than twice the physical size of the EU, has only eleven major ports. See CIA World Factbook – European Union, <<https://www.cia.gov/cia/publications/factbook/geos/ee.html>>.

¹ For complete list, see CIA World Factbook: Rank Order, Railways, <<https://www.cia.gov/cia/publications/factbook/rankorder/2121rank.html>>.

¹ For complete list, see CIA World Factbook: Rank Order, Airports, <<https://www.cia.gov/cia/publications/factbook/rankorder/2053rank.html>>.

¹ For complete list, see CIA World Factbook: Rank Order, Roadways, <<https://www.cia.gov/cia/publications/factbook/rankorder/2085rank.html>>.

¹ It is important to note that the European Union is in the process of creating a Europe-wide air traffic control system labeled the “Single European Sky,” a development that could potentially deter illicit traffickers seeking to subversively carry out their activities. Eurocontrol – The Single European Sky, <http://www.eurocontrol.int/ses/public/standard_page/sk_ses.html>.

¹ Although the International Atomic Energy Agency (IAEA) maintains an Illicit Trafficking Database, it consists only of cases involving nuclear and radiological materials, not dual-use goods. See the IAEA Illicit Trafficking Database at <http://www.iaea.org/NewsCenter/Features/RadSources/PDF/itdb_31122004.pdf>. Furthermore, the Monterrey Institute for International Studies also maintains a nuclear trafficking database, but it too does not include nuclear dual-use equipment and technology. Database at <<http://www.nti.org/db/nistraff/>>.

¹ For a complete list of sources, see Appendix I.

¹ 1540 Committee, National Reports, “Letter dated 28 October 2004 from the Permanent Representative of the Netherlands to the United Nations addressed to the Chairman of the Committee,”

S/AC.33/2004/(02)/48, p. 14,

<<http://daccessdds.un.org/doc/UNDOC/GEN/N04/611/48/PDF/N0461148.pdf?OpenElement>>.

¹ Official Journal of the European Communities, Council Joint Action of 22 June 2000 concerning the control of technical assistance related to certain military end-uses, Council Regulation (EC) No 1334/2000, June 30, 2000, p. 13, <http://consilium.europa.eu/uedocs/cmsUpload/1_15920000630en02160217.pdf>.

¹ Ibid., Article 6, p. 2

¹ Ibid., Article 14, p. 3

¹ Ibid., Chapter III, Article IV, p. 5.

¹ For the entire Community Customs Code, see <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992R2913:EN:HTML>>.

¹ “Community Customs Code,” Activities of the European Union Summaries of Legislation, December 16, 2005 <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992R2913:EN:HTML>>.

¹ Schengen Visa Website, <<http://www.eurovisa.info/>>.

¹ “Impact Assessment Study on possible options for the modification of the EU regime on export control of dual-use goods and technologies,” Interexport Management Systems Ltd., February 13, 2006, <http://trade.ec.europa.eu/doclib/docs/2006/april/tradoc_127589.2.pdf>.

¹ Ibid.

¹ Matthew Fuhrmann, “Industry and Nonproliferation: Don’t Neglect the First Line of Defence,” *Disarmament Diplomacy* Issue No. 82 (Spring 2006), <<http://www.acronym.org.uk/dd/dd82/82mcf.htm>>.

¹ Official Journal of the European Communities, Council Joint Action of 22 June 2000 concerning the control of technical assistance related to certain military end-uses, Council Regulation (EC) No 1334/2000, June 30, 2000, p. 4, <http://consilium.europa.eu/uedocs/cmsUpload/1_15920000630en02160217.pdf>.

¹ “Impact Assessment Study on possible options for the modification of the EU regime on export control of dual-use goods and technologies,” Interexport Management Systems Ltd., February 13, 2006, <http://trade.ec.europa.eu/doclib/docs/2006/april/tradoc_127589.2.pdf>.

¹ Ibid.

¹ Ibid.

¹ Ibid.

¹ “A.Q. Khan Nuclear Chronology,” Carnegie Endowment for International Peace Issue Brief. Vol. VIII, No. 8. (September 7, 2005),

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¹ This article describes the exposure of the *BBC China* en route to Libya that exposed the A.Q. Khan Network to the public. Powell, Bill, and Tim McGirk, “The Man Who Sold the Bomb,” *Time*, Vol. 165, Issue 7, pp. 22 – 30, 2005, <<http://www.time.com/time/archive/preview/0,10987,1025193,00.html>>.

¹ David Albright and Corey Hinderstein. “Unraveling the A.Q. Khan and Future Proliferation Networks,” *The Washington Quarterly*, Spring 2005, <http://www.twq.com/05spring/docs/05spring_albright.pdf>.

¹ The *International Export Control Observer* (<<http://www.cns.miis.edu/nis-excon>>), the *NIS Export Control Observer* (<<http://cns.miis.edu/pubs/observer/index.htm>>), and the *Asian Export Control Observer* (<<http://cns.miis.edu/pubs/observer/asian/index.htm>>) are three publications disseminated by the Monterey Institute for International Studies.

¹ The Center for Nonproliferation Study’s *NIS Export Control Observer*, *International Export Control Observer*, and *Asian Export Control Observer* were the source for 16 cases of illicit trade, 84.21% of all cases.