North Korea Biological Chronology

This annotated chronology is based on the data sources that follow each entry. Public sources often provide conflicting information on classified military programs. In some cases we are unable to resolve these discrepancies, in others we have deliberately refrained from doing so to highlight the potential influence of false or misleading information as it appeared over time. In many cases, we are unable to independently verify claims. Hence in reviewing this chronology, readers should take into account the credibility of the sources employed here.

Inclusion in this chronology does not necessarily indicate that a particular development is of direct or indirect proliferation significance. Some entries provide international or domestic context for technological development and national policymaking. Moreover, some entries may refer to developments with positive consequences for nonproliferation.

2012-1960's

April 2012
According to a report by South Korea’s Ministry of National Defense entitled “Research on Verification Measures for North Korea’s Biological Weapons,” North Korea is capable of equipping its field artilleries, rocket launchers and mortars with biological weapons. The ministry assesses that anthrax, botulinum toxins, and smallpox pathogens are most likely to be weaponized. North Korea established the chemical defense brigade and platoon under the guidance of the Nuclear Chemical Defense Bureau. The official release date of the report is unknown.

31 December 2011
An unclassified U.S. National Intelligence report claims that “North Korea has a biotechnology infrastructure that could support the production of various BW agents.” The report also includes that North Korea possesses “dual-use facilities, as well as munitions industry” that are capable of weaponizing biological agents. Jagang Province is cited in the report as the main area for manufacturing biological and chemical weapons.


31 December 2010
South Korea’s Ministry of National Defense releases its biennial white paper, which assesses that North Korea can “independently cultivate and produce biological weapons, including anthrax, smallpox, and cholera.”

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5 October 2009
Rep. Kim Ock-lee of the Grand National Party, citing a Ministry of Defense report, claims that North Korea possesses “13 types of viruses and germs.” These pathogens can cause diseases such as “cholera, pest, yellow fever, smallpox, eruptive typhus, typhoid fever and dysentery.” North Korea denies possessing any biological weapons.

24 July 2009
In an interview with Al Jazeera, North Korean defector Im Chun Yong claims that North Korea tested biological weapons on “mentally or physically deficient children” before his escape in 1999.

Previously, North Korean defector Yi Sun Ok made similar claims, saying that the state “has been using political prisoners and children as experimental test subjects,” after her defection in 1995. Another person who defected in 1994, Ahn Myong Chol, testified that Yoduk concentration camp has a human experimentation facility in its complex. According to Ahn, biological and chemical weapons are made in this facility. North Korea denies possessing chemical or biological weapons.

31 May 2008
At a regional defense forum hosted by the UK-based International Institute for Strategic Studies, South Korea’s defense minister stated that North Korea “continues to develop weapons of mass destruction such as nuclear, chemical, and biological weapons and missiles,” and that this poses a serious security threat to South Korea and other countries in the region.

11 January 2007
In testimony before the U.S. Senate, Lieutenant General Michael Maples, Director of the U.S. Defense Intelligence Agency, reaffirms U.S. suspicions regarding North Korea’s weapons of mass destruction programs. With respect to biological weapons, Maples stated, "North Korea’s resources include a biotechnical infrastructure that could support the production of various biological agents."

14 September 2007
The U.S. Department of State releases the 2007 International Religious Freedom Report, which cited unconfirmed reports that North Korean prisoners detained for their religious beliefs may have been made human subjects for chemical and biological agent testing by the North Korean government. The report further notes that these allegations are very difficult to verify independently. Previous editions of the International Religious Freedom

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Report contain similar language.

27 November 2007
A Taiwanese official announced that an investigation was underway on the Yicheng Company, a Taiwanese trading firm, on suspicion it had illegally exported an industrial filtering device to North Korea via China. The filtering device could be used in plutonium extraction and chemical and biological weapons manufacture.

17 February 2006
Japanese police raided about 10 locations, including the offices of the Tokyo-based trading company Seishin Soji and the home of its president, on suspicion that the company illegally exported a freeze dryer to North Korea in September 2002. A freeze dryer is a dual-use item which may be used to preserve bacteria and produce biological weapons, and its export therefore would require a license from the Japanese Ministry of Economy, Trade and Industry.

15 July 2006
Following North Korea's 5 July 2006 test launchings of seven missiles, including a long-range Taepodong-2 missile, the UN Security Council unanimously passes Resolution 1695 condemning the launchings and imposing sanctions on the country. The resolution requires UN member states to "prevent missile and missile-related items, materials, goods and technology being transferred to DPRK's missile of WMD programs." The resolution also requires states to prevent the transfer of financial resources "in relation to DPRK's missile or WMD programs." North Korea immediately rejected the resolution.

10 August 2006
Japanese police arrest the former president of the Japanese trading firm Meisho Yoko. The man, Kim Yong Gun, is suspected of arranging the illegal 2002 export of a freeze dryer from Japan to North Korea via a Taiwanese intermediary trading firm in violation of Japanese export control laws. The freeze dryer could be used to manufacture biological weapons. According to Japanese police, Kim admitted to the crime.

14 October 2006
In response to North Korea's 6 October 2006 test of a nuclear device, the United Nations Security Council (UNSC) issues UNSC Resolution 1718. The resolution demands North Korea "abandon all other existing weapons of mass destruction and ballistic missile programme in a complete, verifiable and irreversible manner." The resolution imposed a series of sanctions on North Korea to inhibit its weapons programs and pressure the regime to comply

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with UNSC demands.

4 November 2006
According to a Tokyo newspaper report, North Korea utilized its financial holdings at Banco Delta Asia, a Macao-based bank, to pay for a Japanese freeze dryer which it received in 2002 from Japan in an illegal export operation. The freeze dryer is a dual-use item that could be used to produce biological weapons. The U.S. government had identified Banco Delta Asia's relationship with North Korea as enabling North Korea's counterfeiting and money laundering activities, and imposed sanctions on the bank in September 2005, which pressured the bank to freeze roughly $24 million in North Korean assets.


20 November 2006
In an address to the Sixth Biological Weapons Convention (BWC) Review Conference, U.S. Assistant Secretary of State John C. Rood accuses North Korea of supporting terrorism and violating its BWC obligations.


December 2006
In its 2006 Defense White Paper, the South Korean Ministry of Defense stated with respect to North Korea's chemical and biological weapons programs "that North Korea has been producing poison gas and biological weapons since the 1980s. It is believed that 2,500 to 5,000 tons of a variety of agents including nerve agents remain stored in a number of facilities...and that North Korea is able to produce biological weapons such as the bacteria of anthrax, smallpox, and cholera."


4 February 2005
In its 2004 National Defense White Paper, South Korea analyzed the military capabilities of North Korea. With respect to chemical and biological weapons, the report states that North Korea currently appeared to have "approximately 2,500 to 5,000 tons of poisonous agents—nerve agents, blister agents, blood agents, nausea-producing gas, and tear gas produced at several chemical plants," further noted that North Korea "is capable of self-reliantly culturing and producing biological weapons such as anthrax, smallpox, and cholera."


17 September 2004
A Western journalist is allowed to visit several of North Korea's biotechnology laboratories in July 2004. According to his account, North Korean scientists are attempting to master advanced biotechnology techniques, including genetic engineering and somatic cloning. Some of the activities underway, such as the isolation of tetrodotoxin, a powerful neurotoxin produced by pufferfish, could potentially be employed in an offensive biological weapons

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program. However, the reporter observed that the biological research was carried out "in largely antiquated and poorly supplied facilities." In addition, some of the claims made by North Korean scientists, including the ability to clone rabbits from somatic cells, have not been independently confirmed.


29 January 2003
In a radio broadcast, North Korea accuses the U.S. military of having used biological warfare agents, including the causative agents of plague, cholera, and typhoid, against North Korea in January 1952. The broadcast further claimed that the United States is developing new biological agents. No evidence to support the claims was provided.


18 May 2003
According to Japanese public safety and customs authorities, six Japanese trading companies associated with North Korean residents living in Japan received orders from North Korea since the late 1990s for products that could be used in the production of missiles and weapons of mass destruction, including chemical and biological weapons. Among the materials ordered were gas chromatography analyzers, vacuum freeze dryers, constant temperature incubation tanks, and stainless steels.

—"Six Japanese Firms Received Orders for WMD-Related Materials from DPRK," Sankei Shimbun (Tokyo), 19 May 2003, OSC Document JPP20030520000099.

4 June 2003
In testimony before the International Relations Committee of the U.S. House of Representatives, John R. Bolton, Under Secretary of State for Arms Control and International Security, characterized North Korea's programs in weapons of mass destruction and missile production as "a grave threat to regional and global security and a major challenge to the international nonproliferation regime." With respect to North Korea's BW program, Bolton stated, "the United States believes North Korea has a dedicated, national-level effort to achieve a biological weapons capability in violation of the BWC."


December 2003
In an unclassified report to the US Congress, the Director of Central Intelligence (DCI) assesses that North Korea has "pursued BW capabilities since the 1960s." The report also states that North Korea secured dual-use materials for its BW program, and may have BW agents and weapons ready to use.


5 March 2002
General Thomas A. Schwartz, Commander in Chief of U.S. forces in Korea, testifies before the U.S. Senate. According to Gen. Schwartz: "North Korea has the capability to develop, produce and weaponize biological warfare agents. They can deploy missiles with chemical warheads and potentially have the ability to weaponize biological agents for missile delivery."

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6 May 2002
John R. Bolton, U.S. Under Secretary of State for Arms Control and International Security, describes North Korea's biological weapons capabilities before a speech to the Heritage Foundation in Washington, D.C. According to Mr. Bolton:

"North Korea has a dedicated, national-level effort to achieve a BW capability and has developed and produced, and may have weaponized, BW agents in violation of the [Biological and Toxin Weapons] Convention. Despite the fact that its citizens are starving, the leadership in Pyongyang has spent large sums of money to acquire the resources, including a biotechnology infrastructure, capable of producing infectious agents, toxins, and other crude biological weapons. It likely has the capability to produce sufficient quantities of biological agents for military purposes within weeks of deciding to do so, and has a variety of means at its disposal for delivering these deadly weapons."

29 August 2002
In Seoul, John Bolton, U.S. Under Secretary of State for Arms Control and International Security, says that there is "little doubt that North Korea has a chemical weapons program and "one of the most robust offensive bioweapons programs on earth."

February 2001
A Japanese report claimed there were "biological and chemical weapons production facilities in Hamhung and Chongju in addition to a central biological research institute, and it was confirmed that these production facilities are capable of producing and preserving more than one ton of about 15 types of bacteria per year such as cholera, anthrax bacillus, and spotted fever [i.e., typhus]."  

September 2001
North Korea is believed to have stockpiled biological and chemical weapons under the auspices of a program run by the Nuclear-Chemical Defense Bureau that was founded in 1981.

18 October 2001
The DPRK claims that Japan, under the pretense of building defenses against chemical warfare, is in fact "making preparations for biological and chemical warfare."

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29 October 2001
P’yongyang’s Korean Central Broadcasting Station reports on past CBW research conducted in the United States, saying that "this shows how much the US warmongers have run amok recklessly to develop biochemical weapons.

19 November 2001
According to undersecretary of state for arms control and international security, John R. Bolton, North Korea is among the states actively developing a program for biological weapons. Speaking before the Fifth Review Conference of the Biological Weapons Convention (BWC), Bolton states that North Korea has an ongoing program to weaponize biological agents at a national level. He believes that if the national authorities decided, the country could produce enough biological agents for conducting military operations within a matter of weeks.

20 November 2001
ROK Defense Minister Kim Dong Shin tells the South Korean parliament that the DPRK possesses BW agents smallpox and anthrax, as well as the capability to use them as weapons.
—Yonhap broadcast in English, transcribed in FBIS Document KPP20011120000003.

28 November 2001
South Korean military sources indicate that North Korea possesses 13 different types of BW agents, including the causative agents in anthrax, smallpox, cholera, plague, and typhus.

May 2000
(Unclassified briefing, USFK J-2): "North Korea has the capability to develop, produce, and weaponize biological agents, to include bacterial spores causing anthrax and smallpox and bacteria causing plague and cholera."

July 2000
South Korean press reported that North Korean Special Forces training included "...spreading horrifying skin diseases via toilet seats in public restrooms, including restrooms in expressway stations, subway stations, and railway stations; bacteriological warfare by disguising bacteria as a livestock epidemic; spreading contagious diseases using drinking water sources; and spreading chemical and bacteriological weapons via winds blowing to the south and balloons. However, it appears that Reconnaissance Bureau combatants are not subject to this training at present."

South Korean Ministry of National Defense, 1999 defense white paper, reports that "By 1980, [the DPRK] had succeeded in its experiments in bacteria and virus cultivation for biological weapons, and by the late 1980s

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completed live experiments with such weapons."

March 1999
Citing a book published in 1998, alleging the United States used BW in the Korean War, North Korea’s UN Ambassador Li Hyong Chol urges the UN Security Council to 'make an issue of the United States' use of biological and chemical weapons and large-scale massacres and abuse of the UN name (during the Korean War) in order to prevent their recurrence.'

13 June 1999
The New York Times reports that North Korean soldiers, according to a "Soviet defector," had been recently vaccinated against smallpox. This raises the possibility that North Korea has kept smallpox virus, and may have developed it into a biological weapon.

October 1999
South Korea's Defense Ministry acknowledges that it had previously "underestimated North Korea's chemical and biological threat," warning that the DPRK now possesses "10 different kinds of weapons, including anthrax."

October 1999
Report to the US House of Representatives states that "The DPRK BW effort is believed to have focuses on the traditional agents: plague, typhoid, cholera, anthrax, smallpox, yellow fever, botulinum toxin, and hemorrhagic fevers. There are no reliable public estimates of the DPRK's BW agent or munitions stockpile...It is generally assumed that, to the extent capable, the DPRK would seek to provide BW munitions for the same range of weapons as it does with chemical weapons."

October 1999
Quoting the South Korean Ministry of National Defense, ROK parliamentary representative Lim Bok Kin claims that North Korea is able to produce 1,000 tons of anthrax bacteria per year, and half of Seoul's population could be injured or killed with 10kg of anthrax bacteria.

1998
Book published by two North American authors alleged that the United States employed biological weapons in the Korean War.

6 March 1998
US Undersecretary of Defense Walter B. Slocombe states that North Korea is "working on acquiring nuclear,

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chemical and biological weapons capability that poses a threat to Japan."

1997
North Korean defector Hwang Jang Yop tells the media that North Korea has an offensive BW program.

May 1994
Citing an unidentified source, a report by the US Defense Intelligence Agency claims that Russia had sent smallpox virus to North Korea and Iraq, sometime in the late 1980s or early 1990s. No other nations were mentioned.

9 June 1994
It is reported that organizations directly under the DPRK Nuclear and Chemical Defense Bureau are "cultivating infectious agents, such as cholera, bubonic plague, anthrax, and contagious hemorrhagic fever [this may be reference to the Korean Hemorrhagic fever]."

May 1993
Bermudez reports that the North Korean BW program has "focused on 13 different strains of bacteria including 'Yersinia pestis, Bacillus anthracis, Vibrio cholerae 01, Salmonella typhi, and Clostridium botulinum.' South Korean sources suggest that the DPRK has even conducted biological weapons experiments on human subjects (i.e., political dissidents and other 'impure' elements)."

28 September 1993
North Korea denies allegations of ongoing BW activity: "The South Korean authorities blared that the North has not only produced chemical weapons but even produced 'viruses like cholera and [plague] for germ weapons' and 'made living-body tests.' Their unfounded, malicious propaganda well knows how doggedly they are trying to do harm to the DPRK."

3 October 1993
In a further denial of possessing chemical or biological weapons, the Northern chair of the North-South Joint Military Committee, Kim Kwang Chin, issues the following on the DPRK Korean Central Broadcasting Network: "...the South Korean ruling bunch made an erroneous judgment. Being the direct victim of chemical and germ weapons, we opposed the development, production, and stockpiling of these weapons and strongly demanded their destruction."

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24 October 1992
The South Korean Agency for National Security Planning reports that "North Korea has produced 13 types of pathogens including anthrax, [plague], cholera and typhoid at such facilities as the Workers Party's Central Biology Research Institute, the Preventive Military Medical Unit, and the [February] 25th Plant in Ch'ŏngju, North Pyŏngan Province since the 1980s." The Agency also reports that "Considering the North is able to produce 200 tons of gelatin yearly, a substance used in culturing germs (and 2 percent of gelatin is required in germ culture), North Korea has the capacity to produce 1,000 tons of biological weapons per year. [The latter is in reference to the agar plant imported from former East Germany in 1984, at least according to reports.] Furthermore, at a time of war, it could use other facilities such as the Sunchŏn Vinalon Plant, the [Aoji-ri] Chemical Plant, the Yongsŏng Beer Plant, and the Heosan Beer Plant for the production of biological weapons."

1990s
The DPRK's National Defense Research Institute and Medical Academy (NDRIMA) is reported to have researched pathogens such as anthrax, bubonic plague, and cholera.

1980s
Actual production of BW agents, including the causative bacteria in cholera, typhoid (typhus?) and anthrax is reported to have begun.

1984
Kim Il Sung visits former East Germany, from which loans and a turnkey plant for agar (growth media) are procured for North Korea

1970s
Construction is completed of an underground BW research and development facility, probably in Onjong-ri (온종리), Sŏngch'ŏn County (성천군), South P'yŏngan province. This reported site for research, development, and testing of BW agents uses laboratory animals, specifically rodents (rats and rabbits).

1968
The DPRK allegedly imports bacteria cultures, including Bacillus anthracis(anthrax), Yersinia pestis (plague) and Vibrio cholerae (cholera), presumably from culture collections in Japan.

Early 1960s
Kim Il Sung orders the "concentrated development of biological weapons," noting that BW would be "most
effective in war in the future."