

Chapter 1. Biological Weapons Convention (BWC)

Chapter 2. Chemical Weapons Convention (CWC)

Section 1. Overview

Section 2. Organization for the Prohibition of Chemical Weapons (OPCW)

Section 3. Old chemical weapons and abandoned chemical weapons

The use of chemical and biological weapons has a relatively long history. With the development of science and industry, study and research on poisonous chemical and biological agents advanced, which also enabled study and development of their use in warfare.

The first large - scale use of chemical weapons occurred during the First World War: more than 1.3 million victims were injured or killed, 100,000 of which were killed due to chemical weapons. The possession and development of chemical weapons continued in the hands of some countries even after World War I, but the horrendous effect of such weapons was widely recognized by the international community, and the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (hereinafter referred to as the Geneva Protocol concerning the Use of Prohibited Gases) was signed in 1925 as the first international convention to control chemical and biological weapons. While the use of these chemical and biological weapons in warfare was prohibited by the Geneva Protocol concerning the Use of Prohibited Gases, the ban of the production and possession of these weapons in peacetime were not stipulated in this protocol.

A resolution to condemn the use of chemical and biological weapons was adopted at the 21st UN General Assembly in 1966 and a report was submitted by UN Secretary - General U Thant, entitled "Chemical and Bacteriological Weapons and the Impact of the Use Thereof" in 1969. Such movements led to active discussions about the importance of banning these weapons at the Committee on Disarmament and the United Nations. As a result, international efforts were focused on establishing an international convention for the control of production and possession of these weapons in peacetime. The convention was originally aimed at prohibiting both chemical and biological weapons. However, eventually the convention on the prohibition of biological weapons was drafted first for the reason that this was considered relatively simple, and the convention on the prohibition of chemical weapons came after. As a result, the Biological Weapons Convention (BWC) entered into force in 1975, and the Chemical Weapons Convention (CWC) entered into force in 1997.

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## Chapter 1. Biological Weapons Convention (BWC)

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### 1. Background and outline of the Biological Weapons Convention (BWC)

After discussions at the Conference of the Committee on Disarmament in response to, amongst other things, the report by the UN Secretary - General, in 1971 the Conference drafted the Biological Weapons Convention (formerly entitled "Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction") . The Convention was opened for signature in April 1972 after the adoption of a resolution at the 26th UN General Assembly, and entered into force in March 1975.

The BWC is a unique international legal framework for comprehensively regulating biological weapons. As of August 2007, the number of States Parties to the Convention is 159, with 15 Signatories.

### 2. Ratification of the BWC by Japan

Japan ratified the BWC in June 1982. Prior to this, Japan enacted the Law on Implementing the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC Implementing Law) to completely prohibit, with panel provisions, the production, possession, transfer and acquisition of biological and toxin weapons. In addition, before concluding the International Convention for the Suppression of Terrorist Bombings in December 2001, Japan amended the BWC Implementing Law in December 2001 to criminalize the use of biological and toxin weapons as well as the discharge of biological agents and toxins. The amendment also applies penalties to offenses committed outside Japan.

### 3. Issues of the BWC and efforts for strengthening the BWC

The Convention comprehensively prohibits the development, production, stockpiling, and possession of biological weapons in war and in peace. However, unlike the Chemical Weapons Convention, the BWC does not contain effective mechanisms for verifying that States Parties are complying with the provisions of the Convention. Therefore, it has long been discussed how the Convention can be strengthened.

At the Third Review Conference (1991, a Review Conference is convened every five years), it was decided that a Group of Governmental Experts would be established to examine the means to strengthen the Convention. And at the Special Conference of States Parties to the BWC (1994), convened in response to the report by the Group, it was then decided to consider "appropriate measures, including possible verification measures" (BWC Verification Protocol) with the aim of introducing a means of verification. However, negotiations stalled because of the difficulty, among other things, of verifying compliance with regard to biological weapons, since the evidence of biological agent use is easily destroyed by sterilization. At the Fifth Review Conference convened in November 2001, the State Parties reached no consensus and eventually the negotiations on the Verification Protocol were "halted."

On the other hand, as evidenced by a series of reports of the UNSCOM/UNMOVIC that Iraq had a sophisticated offensive biological weapons program since before the Gulf War, and possessed biological agents such as botulinum toxin and anthrax, research and development on biological weapons by states remained a threat to international peace. In recent years, the

international community has become increasingly aware of terrorist activities using dangerous biological agents (bioterrorism) as a real and imminent danger, in the wake of the development of botulinum toxin and anthrax by Aum Shinrikyo in 1995 and the anthrax scare in the United States in 2001.

Amid such a sense of crisis, the Fifth Review Conference was resumed in November 2002, and a three - year program of work to strengthen the Convention was adopted unanimously. With a view toward the Sixth Review Conference in 2006, it was decided that States Parties would hold in Geneva annual Meetings of States Parties (MSP) and Meetings of Experts in preparation for the MSPs to discuss and promote common understanding and effective action on, in a sequential manner, the following five areas for strengthening the Convention.

[Five areas for strengthening the Convention]

- (1) The adoption of necessary national measures to implement the prohibitions set forth in the Convention, including the enactment of penal legislation;
- (2) National mechanisms to establish and maintain the security and oversight of pathogenic microorganisms and toxins;
- (3) Enhancing international capabilities for responding to, investigating and mitigating the effects of cases of alleged use of biological or toxin weapons or suspicious outbreaks of disease;
- (4) Strengthening and broadening national and international institutional efforts and existing mechanisms for the surveillance, detection, diagnosis and combating of infectious diseases affecting humans, animals, and plants; and
- (5) The content, promulgation, and adoption of a codes of conduct for scientists.

At the Sixth Review Conference (November to December 2006), States Parties reviewed the operation of the Convention in a comprehensive manner on the basis of past discussions and reconfirmed the significance of the BWC under the current international situation. States Parties agreed to continue to hold Meetings of Experts and Meetings of States Parties every year until the Seventh Review Conference (2011) in order to discuss the strengthening of respective countries' domestic legislation, measures to ensure safety and security of pathogens, mutual support among States Parties, and collaboration with international organizations. Furthermore, a decision was made on new measures including the establishment of the Implementation Support Unit (ISU) that holds the function of the Secretariat, and it was highly expected that such progress would rationalize information sharing among States Parties and promote approaches to States not party aiming for further universalization of the Convention.

[Topics to be discussed at annual meetings up until 2011]

- (1) Ways and means to enhance national implementation, including enforcement of national legislation, strengthening of national institutions and coordination among national law enforcement institutions. (2007);
- (2) Regional and sub-regional cooperation on implementation of the Convention. (2007);
- (3) National, regional and international measures to improve biosafety and biosecurity, including laboratory safety and security of pathogens and toxins. (2008);
- (4) Oversight, education, awareness raising, and adoption and/or development of codes of conduct with the aim of preventing the misuse of bio-science and bio-technology with the potential of use for purposes prohibited by the Convention. (2008);
- (5) Promoting capacity building in the fields of disease surveillance, detection, diagnosis, and containment of infectious disease to enhance international cooperation in biological sciences and technology for peaceful purposes. (2009); and
- (6) Provision of assistance and coordination with relevant organizations upon the request by any State Party in the case of alleged use of biological or toxin weapons, including improving national capabilities for disease surveillance, detection and diagnosis and public health systems. (2010).

#### 4. Japan's efforts

Japan hosted the BWC Tokyo Seminar in February 2006. Through reviewing the operation of the major provisions and discussing concrete future measures for strengthening the BWC with Japanese and foreign experts, Japan actively contributed to the deliberations at the Sixth Review Conference. Moreover, Japan has also contributed to regional enhancement of response capabilities against bioterrorism. In July 2007, Japan jointly held a seminar in Malaysia on "the Prevention and Crisis Management of Chemical and Biological Terrorism" to share knowledge with other Asian nations about the assessment of terrorist - related threats by experts from Japan, the United States, Australia and the WHO, and appropriate measures such as detection and identification of pathogens, information sharing as well as decontamination, etc.

##### (Reference)

Biological weapons refer to weapons intended to inflict harm on humans, animals and plants by the use of biological agents such as the smallpox virus, cholera bacteria, anthrax, and botulinum toxin, etc., or other organisms that possess or transmit such agents. The characteristics of biological weapons are the following:

- 1) it is difficult to distinguish whether an outbreak of infectious disease is natural or deliberate;
- 2) once used, the effects of BW can spread widely and persist for an extended period due to the infectious nature of some agents;
- 3) it is difficult to locate the site of development and production because the evidence is easily destroyed by disinfectants.

## Chapter 2. Chemical Weapons Convention (CWC)

### Section 1. Overview

#### 1. Background and outline of the Chemical Weapons Convention (CWC)

The discussions on the prohibition of chemical weapons took place at the Committee on Disarmament during the 1970s. An Ad Hoc Working Group on Chemical Weapons was established at the Conference of the Committee on Disarmament in the 1980s (renamed the Geneva Conference on Disarmament in 1984) and full - fledged negotiations to ban chemical weapons commenced in 1984. The negotiations for the prohibition of chemical weapons gained momentum for early conclusion, owing to the use of chemical weapons during the Iran - Iraq War and to the start of the Gulf War. The draft of the Chemical Weapons Convention (Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction: CWC) was adopted at the Conference on Disarmament in 1992. The Convention was then opened for signature in 1993 and entered into force in April 1997.

The CWC comprehensively prohibits the development, production and stockpiling of chemical weapons, such as sarin, and also obliges the States Parties to destroy all of their chemical weapons within a fixed period of time (in principle, within 10 years after entry into force of the CWC, i.e. by April 2007). The CWC is the first convention which not only completely bans an entire category of weapons of mass destruction and obliges its destruction, but also provides an effective verification system as a means to ensure compliance with the obligations of the Convention, thus it has a great significance in the history of disarmament treaties. The States Parties are required to submit declarations to and accept inspections by the Organization for the Prohibition of Chemical Weapons (OPCW; See Section 2 below) for not only chemical weapons (including old chemical weapons produced before 1946 which can no longer be used as chemical weapons) or those directly related to chemical weapons, such as chemical weapons production facilities (past and present), but also private plants and research institutions that are using chemicals for peaceful purposes, many of which are convertible to chemical weapons .

#### 2. Ratification of the CWC by Japan

Japan ratified the Chemical Weapons Convention in September 1995. Japan enacted the "Act on Prohibition of Chemical Weapons and Control, etc. of Specific Chemicals (Chemical Weapons Prohibition Act)" and has prohibited the use, production and transfer of chemical weapons by penal provisions in order to ensure its compliance with the CWC. Regarding chemicals that can be used for chemical weapons, the obligation to obtain permission from the Minister of Economy, Trade and Industry has been added by this Act. In December 2001, prior to the conclusion of the "International Convention for the Suppression of Terrorist Bombings," the above Chemical Weapons Prohibition Act was amended to include the offense of discharging toxic chemicals or chemicals having similar toxic properties. This Act also covers such crimes outside Japan, as subject of punishment. The sarin gas attacks on the Tokyo Subway in March 1995 raised awareness of the threat of chemical weapons, which stimulated Japan for the early ratification of the Convention.

Japan, the world's leading chemical industrial country, submitted its initial declarations including on its chemical industry - related facilities to the OPCW at the time of the entry into force of the CWC in April

1997, and also submits annual declarations of about 500 facilities/plant sites to the OPCW every year. The OPCW dispatches inspection teams to the declared facilities. Japan has already accepted 74 industry inspections as of the end of 2007 and all of the inspections were completed without any problem. "Satian No.7" (Note: facility of the Aum Shinrikyo sect), which had been a plant to produce sarin that was used for the sarin gas attacks on the Tokyo Subway in March 1995, was declared to the OPCW by the Japanese Government as a chemical weapons production facility. The facility was destroyed in December 1998 under the supervision of inspectors dispatched from the OPCW.

### 3. Issues of the CWC and efforts of the international community

The CWC welcomed its ten - year anniversary in April 2007 since its entry into force. While facing some challenges, it has shown progress in various aspects.

The number of the States Parties to the Convention reached 183 (as of January 2008), but North Korea, Myanmar and some Middle Eastern nations have yet to adhere to the Convention. So the major task is to further promote the universality by encouraging them to accede to the Convention. On the other hand, approximately only 40% of the States Parties have enacted comprehensive national legislation at present, through prohibiting the use and development of chemical weapons by penal legislation. Under the circumstances, a terrorist group could attempt to develop or acquire chemical weapons in the territory of a State not a Party to the CWC or of a State Party that has not yet enacted its national legislation to control chemicals. Today the use of chemical weapons by terrorist groups or non - state actors has become an imminent threat. Hence promotion of the universality of the CWC and strengthening of national implementation measures are a task of paramount importance for the international security.

The importance of these issues was stressed at the First CWC Review Conference in April 2003, which led to the formulation of the Action Plan for the Universality of the CWC and the Action Plan on the Implementation of Article VII Obligations (National Implementation). Follow - up measures have been taken regularly since then.

Regarding the destruction of chemical weapons, which is one of the major pillars of the CWC, nearly 35% of declared chemical weapons stockpiles has already been destroyed (as of September 2007). The deadline for destruction of chemical weapons possessed by the State Parties such as the United States and Russia was extended from April 2007 to 2012. In July 2007, the Republic of Albania became the first States Party that has completed the destruction of all of its chemical weapons stockpiles.

Steady progress can also be observed in regional cooperation for promoting implementation of national obligations under the CWC. In the Asian Region, the First Regional Meeting of National Authorities of States Parties in Asia was held in Singapore in October 2003, followed by the meetings in China (September 2004), Iran (September 2005), Indonesia (September 2006) and Qatar (September 2007). Participating States Parties, including Japan, actively exchanged opinions about their experiences regarding national implementation of the CWC.

### 4. Japan's efforts

In order to enhance the effectiveness of the CWC, Japan actively participates in the efforts of the international community. It also harnesses its own approaches to States not Party to the Convention and provides support for establishing legislation for national implementation in particular within the Asian Region. Specifically, Japan has dispatched experts to workshops for national implementation and universality of the CWC hosted by the OPCW Technical Secretariat, and also hosted by itself the Seminar for

ASEAN Members for the Universality of the CWC (March 2002, in Tokyo and Kyoto) and the Seminar on Prevention and Crisis Management of Chemical and Biological Terrorism (in Malaysia and Tokyo in turn for five years since 2003). In 2007, Japan, in cooperation with Australia and the OPCW Technical Secretariat, hosted workshops for enhancing national implementation measures of the CWC in Indonesia and the Philippines. In these workshops, Japan introduced its own experiences in implementing the CWC and explained the development of its national implementation system with a view to promoting the enhancement of national implementation measures in other States Parties. Japan also invites two officials from developing countries in Asia every year since 2004, under the Association Programme of the OPCW, to provide them with training in the Japanese chemical industry.

(Reference) Types of Chemical Weapons

Chemical weapons are relatively easily produced in laboratories or chemical factories, etc. Toxic chemicals that have been developed as chemical weapons thus far are roughly divided into blood agents, such as cyanogen chloride, which inhibit the intake of oxygen into the blood and thereby cause the loss of body function; an asphyxiant called phosgene, which damages bronchi and lungs and thereby causes choking; blister agents such as mustard, which cause serious inflammation of the skin and the respiratory system; and nerve agents such as sarin, which inhibit neuro transmission and thereby cause muscle fasciculation and breathing problems. Nerve agents have the highest lethality among them.



The Industry Workshop on Implementing Chemical Weapons Convention in the Philippines

## Section 2. Organization for the Prohibition of Chemical Weapons (OPCW)

The Organization for the Prohibition of Chemical Weapons (OPCW) was established, with the main mission to verify the implementation of the CWC, in The Hague, the Netherlands, based on the CWC that entered into force in April 1997. More than 3,000 on-site inspections have been carried out during ten years since its foundation. They are mainly composed of on-site inspections of storage and destruction facilities of chemical weapons declared by the possessor states such as the United States and Russia, and on-site inspections of facilities and plant sites dealing with specific chemicals that have been declared to the OPCW by the State Parties with chemical industries. The latter is commonly called "industrial inspection"



and its objective is to confirm the absence of clandestine development or production of chemical weapons under the disguise of the chemical industry. Under the CWC, States Parties to the Convention have the right to request a challenge inspection, which is conducted to clarify non-compliance concerns at all facilities or locations of any other State Party to the Convention. The challenge inspection is groundbreaking in terms of allowing inspections at non-declared facilities or locations, but it has never been requested since the entry into force of the CWC.

The OPCW is composed of the Conference of the States Parties, which is the general assembly of the States Parties that is convened once per year, the Executive Council which consists of 41 representative States Parties (including Japan) from each regional group and are usually convened four times a year, and the Technical Secretariat. The Technical Secretariat comprises about 520 officials, of which about 280 are engaged in verification and inspection. The OPCW actively promotes cooperation among the States Parties by organizing seminars and training courses for universality, national implementation support and protection against chemical weapons, etc.

Japan is the second largest contributor to the OPCW budget after the United States and has built a close cooperative relationship with the OPCW. Japan offers officials with expertise from the Self-Defense Forces and the Ministry of Economy, Trade and Industry to the Technical Secretariat. In August 2007, OPCW Director General Pfirter made his second visit to Japan, following the first one in 2003. In addition to opinions exchanges with top officials of related ministers, he delivered the keynote speech at the Special Session for the Tenth Anniversary of the CWC at the 19th UN Conference on Disarmament and also made a speech at the Center for the Promotion of Disarmament and Non-Proliferation (CPCNP) of the Japan Institute of International Affairs. Through these two speeches, Director General Pfirter promoted understanding among citizens of the importance of the CWC, the OPCW's roles and issues to be addressed in the future.



OPCW Director General Pfirter at the United Nations Conference on Disarmament in Sapporo

### Section 3. Old chemical weapons and abandoned chemical weapons

#### 1. Abandoned chemical weapons in China

The issue of abandoned chemical weapons in China is derived from the chemical weapons that were brought into China and left by the former Japanese army before the end of the Second World War. Both Japan and China are States Parties to the CWC, and Japan is obliged to destroy these Abandoned Chemical Weapons (ACWs) with the entry into force of the CWC. The CWC stipulates that an Abandoning State Party shall provide all necessary financial, technical, expert, facility as well as other resources to destroy the ACWs and that a Territorial State Party shall provide appropriate cooperation. In May 1997, Japan submitted to the OPCW a declaration on the ACWs based on the results of a number of joint on - site investigations, and has complemented or revised it as necessary since then. Inspection by the OPCW to confirm the contents of the submitted declaration have been conducted 21 times (at 33 sites in total) up until present. Most of the ACWs are thought to still be buried under the soil or water, mainly in the Haerba - ling District, Jilin Province, and there is a possibility that more ACWs will be discovered in other areas as well. So, the joint on - site investigations, excavation and recovery by Japan and China are ongoing. Approximately 42,000 ACWs have been excavated and recovered thus far (as of September 2007).

In order to deal with the destruction of the ACWs, by the Government as a whole, the Prime Minister's Office (renamed the Cabinet Office after the reorganization of ministries and agencies in January 2001) was assigned by a Cabinet decision of March 1999 to take charge of the destruction process of ACWs, and the ACW Office was set up in the Prime Minister's Office in April 1999. The Governments of Japan and China came to a common understanding on the basic framework for the destruction of the ACWs and signed a memorandum (entitled the "Memorandum between the Government of Japan and the Government of the People's Republic of China on the Destruction of Abandoned Chemical Weapons in China") in July 1999. The excavation and recovery operations have been carried out by government officials including self - defense officials seconded to the Cabinet Office, and private sector experts, with the cooperation of the Chinese Government.

The destruction of ACWs is an extremely difficult task that requires full attention to the security and environment as well as to the compliance with Chinese laws in disposing a large amount of deteriorated chemical weapons that had been buried under the soil or water over many years. Therefore, Japan and China jointly requested a five - year extension of the deadline and the request was approved by the OPCW Executive Council in 2006. At the same time, with regard to the Haerba - ling District, Jilin Province, where the largest amount of ACWs (provisionally estimated to be 300 - 400 thousand) are buried, Japan and China diligently had consultations on relevant issues such as destruction technology, locations and basic structures of facilities. The Japan - China Joint Organization was established in April 2007 as in the implementing body of the Haerba - ling Project. Furthermore, at the Japan - China summit meeting in April 2007, Japan announced the introduction of the mobile destruction facilities to accelerate the destruction of ACWs already excavated and recovered and China welcomed it. At present, preparation is underway for the early commencement of destruction through the mobile destruction facilities. In this way, Japan has made utmost efforts toward completion of the ACW Project in accordance with the Convention and has carried out extensive research and consultations closely together with China.



Small circles show locations of on-site inspection of ACWs (as of May 2007)



Buried ACWs in the Haerba-ling District, China

## 2. Destruction of old chemical weapons in Japan (OCW)

Japan has also been faithfully implementing the obligation to destroy old chemical weapons left in Japan by the former Japanese army, pursuant to the provisions of the CWC, and has cooperated with the OPCW for its verification and inspection activities. Examples of old chemical weapons that Japan has declared to the OPCW and has disposed are as follows:

- Lake Kussharo, Hokkaido (26 chemical weapons were found in the lakebed in October 1996.)
- Ohkunoshima Island, Hiroshima (Nine suspicious items considered as "Large Red Gas Canisters" were discovered at the site of repair work for old - raid shelters in March 1999.)
- Kanda Port, Fukuoka (Suspicious items that seem to be bombs of the former Japanese army have been found several times since November 2000.)
- The construction site of Sagami Expressway in Kanagawa (Beer bottles containing mustard gas and suspicious items were found at the construction site in September 2002.)
- Hiratsuka - City, Kanagawa (Spherical glass bottles containing hydrogen cyanide (prussic acid) were found at a construction site in April 2003.)



Inspection by the OPCW inspection team at Kanda Port, Fukuoka Prefecture (2007)