Chapter Two: Norms against Biological Weapons

Instead of peace, the end of the Cold War introduced the world to several new types of conflicts. Dominant new categories of rogue states and non-state actors were added to international relations discourses. During the period 1989-2000, there were 111 armed conflicts, the vast majority of which have been characterized as new wars, taking place within the borders of westphalian states (Wood 2001: 7). Especially, the emergence of terrorism as a tool has transformed the complexity and dynamics of the concept of security in the post-cold war era. Despite numerous failed efforts to establish peace, the idea of conflict prevention has gained increased international attention. Inherent in the idea of conflict prevention are prescriptive and proscriptive elements that identify rights and obligations to settle conflict peacefully and to prevent the outbreak of violence (Ibid). Norms both strengthen and provide a guide to all these operative regulations.

What are International Norms?

Common definitions of norms are based on ideal behavior, prescription, and shared expectations. A primary element in a conceptualization of norms as standards of behavior. Norms are perceived as creating regularity and consistency of behavior. Gurowitz, defines norms as a “result from common practices among states” (Gurowitz 1999: 417). Similarly Krasner defines norm as “standards of behavior defined in terms of rights and obligations” (Krasner 1986: 186). But according to Tunkin, sometimes norms may be created as a consequence of only one precedent (Tunkin 1974: 13-14).

These definitions, while focusing on regularities in behavior and normal practices, tend to overlook the prescriptive aspect of norms. For the normal to become normative, a feeling of obligation needs to be added, and for that the behavior must be driven by norms according to Florini (Florini 1996: 364). In this sense norms are general prescriptions of behavior. Hedley Bull’s notion of rules is similar to the prescriptive character of norms, and he asserts that rules are general imperative
principles, which require or authorize persons, groups or states to behave in prescribed ways. Most norms stipulate conditions under which behaviors are allowed or not. A very important element common to the conceptualization of norms is shared collective expectations (Bull 1977: 6, 13).

Functions of Norms

Norms are typically portrayed as regulating, enabling or constituting actors. Ruggie (1998: 31) believes that Norms are understood to constitute interests and thereby enable actors to undertake certain actions. Norms are also seen as regulative and constitutive. Regulative norms are those that are thought to influence international relations by prescribing, proscribing and by ordering behavior that have gained a great deal of scholarly attention according to Krasner (1986: 186). These norms operate like standards that specify the proper enactment of an already defined identity and establish rights and obligations.

Norms can become important when the normative principle they reflect presents actors with alternative political strategies to reach their goals. Clearly, norms not only regulate behavior, but also constitute the interest and identity of the actor, thus having “constitutive effects” (Katzenstein 1996: 5). Constitutive norms create categories of action, and in the long run they create new actors. It is not only norms that will affect states adoption of means, but their identity will also determine which means are acceptable (Jepperson 1996: 33).

Over time, constitutive and regulative norms may become settled norms institutionalized into the everyday practices and interactions in the international community. Settled norms can therefore be considered as action guiding devices, instructional units directing the behavior of actors and identifying commonly accepted notions of best practices (Florini 1996: 365). By encouraging special functions and recurrent practices, norms facilitate coordination of action.
Evolution of Norms

A number of ideas have emerged on the international arena in response to the demands that something must be done to establish international peace. In the light of the new space created by the changed concepts of peace and security, a broad range of old and new ideas of international peace and security compete for influence, while others might coexist and jointly enhance international security.

Some ideas that appeared during the Cold War to prevent small scale conflicts escalating into superpower tensions are now reinterpreted in light of changing conceptualizations of peace and security (Wood 2001: 21). Others surfaced in the aftermath of the Cold War to face the new security challenges of a changing world. Thus, conflict prevention is only one of a multitude of ideas in the contemporary idea complex relating to the maintenance of international peace and security. The idea of peace building for instance, was one of the ideas that surfaced in the aftermath of the Cold War as a response to the urgent problems of how to deal with the new wars. Peace building was initially a post-conflict term as it referred to “actions to identify and support structures, which will tend to strengthen and solidify peace in order to avoid relapse into conflict”. (Report of the Secretary General: 1992:23) It involved helping those countries that have recovered from civil war by economic and social reconstruction. In A Supplement to an Agenda for Peace, peace building was defined by its activities and objectives rather than by its sequencing in a process of conflict management, and it came to be defined as assisting the establishment of indigenous capacity to resolve conflict peacefully. (Report of the Secretary General: 1995) Formal and informal institutions of civil society were the targets for external peace building support, and the issues involved were fundamentally political in nature.

This changed concepts of the scope and nature of security allowed for the emergence of rivaling ideas concerning peace and security. Within the particular understandings of security, such as collective security, common security, comprehensive security, cooperative security, and most recently human security, which
influenced security and peace discourses in recent decades, a space was created for new ideas.

Collective security is a traditional concept enshrined in the UN Charter. This refers to a particular security community where all members renounce the use of force among themselves, and agree to come to the aid of any member state attacked by a "defector from the ranks" or from outside (Evans 1993: 16).

Common security is an alternative vision that was articulated in the Palme Commission Report in 1982, and by the late 1980s it was one of the mainstream foreign policy concepts in Europe (Evans 1993: 16). Common security was yet a Cold War concept, which transformed the initial arms control idea of stabilizing strategic deterrence through cooperative measures into a concept transcending the notion of national security. The central idea is that lasting security rests on a commitment to joint survival, and taking into consideration the legitimate security concerns of others. Its emphasis on force structures in a bipolar world makes it difficult to apply to contemporary small scale internal wars (Ibid: 17).

The end of the Cold War resulted in number of proposals and statements that called for shifting the definition of international security. Comprehensive security and cooperative security convey the idea that security is multi-dimensional in character. These broad notions of security include not only political and diplomatic disputes, but also economic underdevelopment, trade disputes, unregulated population flows, refugee problems, environmental degradation, human rights abuses, trafficking in humans, drugs and small arms, child soldiers and the economic agendas of civil wars (Farber and Gowa 1995: 123).

Those in and around the UN voiced the concept of human security, suggesting that what matters is the security of peoples and individuals and not of states and territories. It is pointed out that states are often a source of insecurity rather than protection, and domestic rather than interstate conflicts are a greater threat to most individuals' security in today's world. Clearly, the working definition of international
security is expanding to more fully include individuals and identity-based groups residing within states (Bjorkdahl 2002: 42). All this has clearly expanded the domain of defining “norms”.

Institutionalization of Norms

After establishing a norm that has prevailed, the next step is the institutionalization of norms. Institutionalization is the process through which an unsettled norm becomes settled and embedded into the normative structure. A settled norm can redefine existing normative structures, have powerful constitutive effects, and, thereby, introduce practices not previously considered relevant or efficient. However, it may be difficult to determine how a norm becomes settled if one’s study is limited to studying norm-induced practices only (Evans and Davies 1999: 365). To study the process of institutionalization, we need to trace the rhetoric surrounding practices, organizational and procedural reforms and changes in policies and programs to discover if the unsettled norm is becoming reflected in the organization’s infrastructure (Ibid: 366).

International organizations are, therefore viewed as playing an important role in the path leading from unsettled to settled norm. Institutionalization into the normative structure of an organization illustrates that once a norm is embedded in the structure, a space is opened up for international organizations to promote the norm and ensure adherence to the said norm (Ward 2000: 15).

There are a number of conductive factors that may contribute to facilitating institutionalization. Thomas Ward identifies the organizational infrastructure, the operating procedures, leadership acceptance, and the accumulation of knowledge in pockets of the bureaucracy as factors facilitating norm institutionalization (Ward 2000: 15).
Development of Norm: From Objectives to Programmes / Policies

Institutionalization, however, requires the transformation of the objective into practical policies. To have an impact on the policy outcome, the norm needs to be entrenched in the policies and programs of organizations. Successful institutionalization of a norm will therefore, be reflected in programs or policies, adapted or developed in response to the new norm (Ruggie 1996: 104). The norm can be institutionalized either through integrating it into existing policies and programs or by transforming the existing policies and programs.

The institutionalization of certain norms like conflict prevention has implications across different sectors like political, economic and social, and levels like global, regional, national or local along which institutions are usually organized. Therefore, for many organizations, the process of norm institutionalization means a great organizational challenge in addition to the political challenge.

Institutionalization of a norm pertaining to conflict prevention beyond general global support has been proved difficult to achieve. A gap has been identified between the global support, on the one hand and the organizational support and supportive practices on the other (Ruggie 1996: 104). Due to this gap, complete enforcement of a norm is very hard to achieve and still debatable.

In the case of norms against biological weapons, while there has been a strong track record of the general global support for a taboo, it is only recent year that has witnessed serious preventive efforts undertaken by the UN, the EU and other international organizations, individually or collectively to prevent the outbreak, escalation and any possibility of their use. But still there are hindrances in the way of achieving a globally verified and effective regime against them. So an embedded norm against bioweapons remains still work in progress.
Development of Norm: Geneva Protocol and BTWC

Before World War I, use of biological agents in warfare was infrequent. It was limited to measures designed to gain an immediate advantage over an enemy: the poisoning of wells, the wastes into besieged cities, and the use of infected blankets and so on. It is almost impossible to determine the military significance or actual effectiveness of these operations, which were designed to harass or weaken an opponent. Since recorded incidents of biological warfare are few and far between and since most of them took place before the rise of nation-state, it is impossible to fathom those decision-making processes so as to characterize them as state policy as a result, for large part of history we also cannot find any major efforts in the evolution of international norms against bioweapons.

Up till 1914 the norm against the use of bio-weapons had continued to be driven by customary law, reinforced by the writings of few international jurists. These were codified in The Hague Conventions of 1899 and 1907 (SIPRI 1971: 214). Socially, however, the prohibition was well understood. It was also soon embodied into the codes adopted by the military staffs of the major nations. The introduction of chemical warfare against military forces in World War I, in contravention of the Hague Convention of 1899 prohibiting the use of asphyxiating and deleterious projectiles charged with gas, had a major effect on subsequent disarmament and arms control efforts (SIPRI 1971: 214).

During the inter war period (1919-1939), the prohibition against the use of poisonous weapons, chemical and bacteriological, was strengthened by the widespread adoption of the 1925 Geneva protocol which outlawed 'the use in war of asphyxiating or poisonous or other gases and of bacteriological methods of warfare' (Sims 2001: 104). By 1939, the major powers except Japan and US had ratified the Geneva Protocol: Germany, Italy and Poland without reservations; France, the UK and the USSR with stipulations reserving the right of retaliation and confining the pledge of 'no first use' to the parties to the protocol. US policy was implicitly bound by the international norm against the first use of bio-weapons and by the opposition of the
executive branch to initiation of chemical and biological warfare. Japan that initially supported a total ban on chemical and biological weapons had left the League of Nations in 1933 as it moved towards increasing militarization including development of bioweapons. (SIPRI 1991: 35).

Since the Geneva protocol was a contract, violation by one party automatically made the other party free from any obligation to that commitment. This underlying condition was emphasized at the beginning of World War II. At the time France and the UK reconfirmed their intention of abiding by the protocol while emphasizing that their restraint was conditioned upon reciprocity (Geissler 1999: 256). The German government also confirmed that it would also adhere to the Geneva Protocol as long as its enemies would. Afterwards, the strength of the protocol was reinforced by the addition of a prohibition against bioweapons to the original proposed text of the protocol that confined itself to the chemical weapons. This moral and diplomatic stricture was reinforced by other factors, personal, organizational, political and technical (Geissler 1999: 259).

In the inter-war and World War II period, due to the anxiety regarding bioweapons, a situation of mirror image occurred. What one nation pursued was paralleled by its enemy. Fears were mainly based on recognized vulnerability to bioweapons attack. The initial steps for the norms building against bio-weapons by the major World War II players was the result of the intelligence perceptions (Ruggie 1996: 143). The British, Canadian, French, Soviet and US efforts were inspired by the belief that other countries, notably Germany, were engaged in bioweapons proliferation. So these countries found it necessary to build a retaliatory capability. Similarly, Germany was also found equally concerned regarding the bio-weapons preparations by its opponents (SIPRI 1999: 564).

Fear of the bioweapons capabilities of one’s potential opponents sparked the majority of the national programs in the World War II period, but once the program was started, it had its own momentum. When the feasibility of the external threat was accepted, the development of organizations, facilities and programs started (SIPRI
1971: 226). These developments were encouraged by prominent political, military and technological efforts by their concerned constituencies. At the same time, this also accelerated efforts by other political, military and technological constituencies that vied for norm building against bioweapons. Initially there were three main factors that inspired norms building against bio-weapons. First a perceived threat, second recognition of national vulnerability to biological attack and the threat that bioweapon use was feasible, and third, the internal political force which encouraged and supported national biological and toxin warfare program.

The BTWC Regime:

The Biological and Toxic Weapons Convention (BTWC) was negotiated between 1969 and 1971 at the Conference of the Committee on Disarmament (CCD) in Geneva. The BTWC was opened for signature on 10 April 1972 and entered into force on 26 March 1975. The development, production and stockpiling of chemical and biological weapons were completely outlawed by the Convention, to which more than hundred states are party, including all five permanent members of the United Nations Security Council. (See Annexure II)

Article I of the BTWC specifies that states parties cannot acquire or retain biological weapons under any circumstances. The core prohibition is reinforced by the requirement in Article II to destroy or divert all bioweapons to peaceful uses and by the non-proliferation provision of Article III. Article IV obliges States Parties to transform these obligations into national laws and regulations so that the prohibitions also become applicable to natural and legal persons. It also specifies that the state party to the BTWC must adopt national legislative measures to prevent the misuse of biology and biotechnology for hostile purposes. Under Article V parties may consult and cooperate with each other to resolve an issue or may undertake to resolve the concern through appropriate international procedures within the framework of the United Nations and in accordance with its Charter.
Under Article VI, any state party finding another state party acting in breach of the Convention may lodge a complaint with the United Nations Security Council. States Parties will cooperate in carrying out any investigation the Security Council may initiate on the basis of the complaint. The Security Council will inform States Parties of the results of the investigation. In Article VII, States Parties undertake, if requested, to assist any Party which the Security Council decides has been exposed to danger as a result of violation of the Convention. Article VIII specifies that nothing in the Convention limit or detract from obligations assumed under the Geneva Protocol.

Article IX commits States Parties to continue negotiations in good faith towards a chemical weapons convention. Article X gives the parties the right to participate in the fullest possible exchange of equipment, materials, and scientific and technological information of relevance to the convention for peaceful purposes and encourages the parties to facilitate such exchanges. In Article XII, provision is made for a conference of States Parties to the Convention to review the operation of the Convention to assure that the purposes of the Convention are being comprehended.

However, even after all the possible amendments to reinforce the BTWC in its successive review conferences, it still seems a long way to achieve the goal to create a full proof globally verifiable regime against bio-weapons over time several of its weaknesses have come to light.

Weaknesses and Shortcomings

At the most visible level, the BTWC lacks much in the way of enforcement measures, and it has been widely violated in practice. Another major problem with the treaty is its ambiguity on the issues of legality of biological agents. If they were not used as weapons, and were used with the consent of the country in which the bioagents were dispersed, that would be perfectly legal under BTWC. However, as with the use of “nonlethal” chemical agents by US in Vietnam, critics are quick to point out that a limited use of bioagents could set a dangerous precedent for the future (Lundin 1992: 74).
In the light of Cold War experience, development of norms against bioweapons had emphasized that any employment of unconventional arms could cause threatening consequences. Therefore it was also assured that any such use, if detected, would carry a high risk of political and military sanction not only from the target state itself but also the international community as a whole.

Developments since the end of cold war have suggested that past restraints may be fading and that interest in the acquisition and use of bioweapons may be on the rise. This is especially because of the rise of rogue states and non-state actors who remain convinced of bioweapons being poor man’s WMD. This has also triggered response from other state actors that have also been fascinated by easier flow of technologies. The past decade itself has witnessed a steady rise in the number of nations suspected of possessing or of actively seeking a bioweapon capability. Indeed, since the BTWC entered into force, states suspected of possessing bioweapons programs have increased more. The UN now lists a dozen nations believed to possess or to be actively pursuing a bioweapon program despite of the fact that many of those suspected are parties to the BTWC. Some of these nations occupy regions marked by a long history of tension and armed conflict which may include states like Pakistan, China, Iraq, Iran, Egypt, Libya, North Korea and Syria (See Table 2.1).

Table 2.1 CBW Capacity and Treaty Status of Various Countries

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>BIOLOGICAL WEAPONS CAPACITY</th>
<th>CHEMICAL WEAPON CAPACITY</th>
<th>TRATY STATUS</th>
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<tbody>
<tr>
<td>CHINA</td>
<td>Possibly maintains some elements of biological weapons program before joining the BTWC. Existing infrastructure would allow it to develop, produce and weaponize agents. Potential delivery systems including cruise missiles, fighters, bombers, helicopters, artillery, rockets, mortars and sprayers.</td>
<td>Has an advanced Chemical Weapons Program, including a variety of agents. Researching more advanced agents. Delivery Systems include artillery, rockets, mortars, landmines, aerial bombs, sprayers and short and medium range missiles.</td>
<td>Geneva Protocol: Acceded 8/24/29. BTWC Acceded 11/15/84 CWC: Signed 1/13/93 ratified 4/25/97</td>
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<tr>
<td>Country</td>
<td>Activities/Programs</td>
<td>Compliance</td>
<td>Notes</td>
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<tr>
<td>CUBA</td>
<td>Has at least a limited biological weapon research and development effort</td>
<td>None</td>
<td>Geneva Protocol: Acceded 6/24/66. BTWC Acceded 4/12/72 ratified 4/21/76 CWC: Signed 1/13/93 ratified 4/29/97</td>
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<tr>
<td>INDIA</td>
<td>Has a biodefence research program. Existing infrastructure suitable for research and developing pathogens. Potential delivery systems include short-range, anti-ship cruise missiles, short-range, air-launched tactical missiles, fighter aircraft, artillery, and rockets.</td>
<td>Declared in June 1997 that it possessed a chemical weapons stockpile. Has begun to destroy its chemical weapons stockpile under the CWC. Its industry will retain the ability to produce agent precursors-chemicals that can be used in chemical weapons production.</td>
<td>Geneva Protocol: Signed 6/17/25 Ratified: 4/9/30 BTWC: Signed: 1/15/73 ratified: 7/15/74 CWC: Signed: 1/14/93 Ratified: 9</td>
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<tr>
<td>Country</td>
<td>Description</td>
<td>Geneva Protocol</td>
<td>BTWC</td>
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<td>IRAQ</td>
<td>Possesses an active and capable biological weapon program. Declared in 1995 that it had produced approximately 30,000 litres of bulk biological agents or filled munitions including anthrax, botulinum toxins and aflatoxins. Also admitted that it had filled missile warheads and aerial bombs with agent and had deployed biological munitions during the Persian gulf war. The United Nations believes that Iraq had produced three to four times more agents than it declared. Iraq is also thought to have conducted research on other agents and toxins. Questions remain about the scope of Iraq’s program and what parts of the program Iraq has destroyed or currently retains. The United States strongly suspects that it has reconstituted its program since UN inspectors left Iraq in 1998 and is concerned that Baghdad is producing agents. Could be improving its agent research and development capabilities. Means of delivery may include short-range, anti-ship cruise missiles, short range ballistic missiles, short range air launched tactical missiles, fighter aircraft, helicopters, artillery, rockets and unmanned aerial vehicles.</td>
<td>Possess extensive program before the Persian Gulf war under which it produced and stockpiled mustard, tabun, sarin and VX. Delivered chemical agents against Iranian forces during the Iran-Iraq war using aerial bombs, artillery, rocket launchers, tactical rockets and helicopters mounted sprayers. Also used chemical weapons against its own Kurdish population in 1988. Program was largely dismantled by UN weapons inspectors in 1990s but Iraq retains some chemical weapon and has begun reconstituting its chemical infrastructure since inspectors left the country in 1998. Could resume agent production within few weeks and months but would need foreign assistance to completely restore its production capabilities to pre-Persian Gulf war levels. Same potential delivery systems as for biological weapons.</td>
<td>Geneva Protocol: Acceded: 9/8/31</td>
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<tr>
<td>ISRAEL</td>
<td>Possibly has a biological weapons research effort.</td>
<td>Possibly has a chemical weapons program.</td>
<td>Geneva Protocol: Acceded: 2.20/69</td>
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<tr>
<td>Country</td>
<td>Research and Development</td>
<td>Chemical Weapons</td>
<td>Biological Weapons</td>
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<td><strong>LIBYA</strong></td>
<td>Has a research and development program and may be able to produce small amounts of agent. Likely in need of foreign assistance to advance program further. Potential delivery vehicles include short-range, anti-ship cruise missiles, air-launched tactical missiles, fighter aircrafts, bombers, artillery, helicopters and rockets.</td>
<td>Produced mustard and nerve agent before 1990. Still has some elements of its chemical weapons program and is working to re-establish its chemical weapons capabilities which had been limited by UN sanctions from 1992 to 1999. Is pursuing an indigenous production capability but is highly depended on foreign suppliers. Attempted to use chemical weapons against Chadian troops in 1987. Same potential delivery systems as for the biological weapons.</td>
<td>Geneva Protocol Acceded: 12/29/71 BTWC: acceded: 1/19/82 CWC: has not signed.</td>
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<td><strong>NORTH KOREA</strong></td>
<td>Has developed and produced weaponized biological agents. May have biological weapons available for use.</td>
<td>Believed to possess stockpile of chemical weapons including nerve, blister, choking and blood agents. Delivery vehicles include ballistic missiles, artillery and aircraft.</td>
<td>Geneva Protocol Acceded: 1/4/89 BTWC: acceded: 3/13/87 CWC: has not signed.</td>
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<td><strong>RUSSIA</strong></td>
<td>Despite having ratified the BTWC in 1975, it maintained a large biological weapons effort. Russia publicly acknowledged this program in 1992 and said that it had been halted. Agents weaponized included tularemia, typhus, Q fever,</td>
<td>Has started destroying its chemical weapons under the CWC but is not expected to complete destruction until at least 2012. Potential delivery vehicles include</td>
<td>Geneva Protocol Acceded: 4/5/28 BTWC: Signed: 4/10/72 ratified: 3/26/75 CWC: Signed: 1/13/93 Ratified: 11/5/97.</td>
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smallpox, plague, anthrax, Venezuelan equine encephalitis, glanders, brucellosis and malburg. Researched numerous other agents and toxins that can attack humans, plants and livestock. Posses a defensive research program. Some elements of the Russian program may remain intact and could support agent and delivery vehicle production. The US has received unconfirmed reports of continued offensive activities. US has serious concerns about the status of the weapons program inherited from the Soviet Union and remaining weapons capabilities. Potential delivery vehicles include fighter aircraft, artillery, rockets, helicopters, short-range ballistic missiles and cruise missiles. The former Soviet program planned to deliver certain agents such as smallpox, anthrax and plague.

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<tbody>
<tr>
<td>SOUTH KOREA</td>
<td>None</td>
<td></td>
<td>4/10/72</td>
<td>6/25/87</td>
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<tr>
<td></td>
<td>Possesses a chemical weapon stockpile and is destroying it under the CWC.</td>
<td></td>
<td>CWC: Signed: 1/14/93</td>
<td>Ratified: 4/28/97</td>
</tr>
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<td>SUDAN</td>
<td>May be interested in developing a biological weapon program.</td>
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<tr>
<td></td>
<td>Is developing the ability to produce chemical weapons. Has received Iraqi assistance.</td>
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SOUTH KOREA Possesses a chemical weapon stockpile and is destroying it under the CWC.

Geneva Protocol Acceded: 1/4/89
BTWC: Signed: 4/10/72
Ratified: 6/25/87
CWC: Signed: 1/14/93
Ratified: 4/28/97

SUDAN

May be interested in developing a biological weapon program.

Is developing the ability to produce chemical weapons. Has received Iraqi assistance.

Geneva Protocol Acceded: 12/17/80
BTWC: has not Signed.
CWC: Acceded: 5/24/99
<table>
<thead>
<tr>
<th>Country</th>
<th>Status and Actions</th>
<th>Possession and Efforts</th>
<th>Treaties and Agreements</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYRIA</td>
<td>Has a biological weapons program in the research and development stage and may be capable of producing a small amount of the agent. No major weaponization effort is likely underway. Cannot manufacture significant numbers of weapons without major foreign assistance. Potential delivery vehicles include fighter aircrafts, helicopters, artillery, short-range, anti-ship cruise missiles, short-range, air-launched tactical missiles and rockets.</td>
<td>Possesses sarin which it can deliver by an aircraft or ballistic missile and is working on other chemical agents also. Need foreign assistance.</td>
<td>Geneva Protocol Acceded: 12/17/68 BTWC: Signed: 4/14/72 CWC: has not signed.</td>
</tr>
<tr>
<td>TAIWAN</td>
<td>Has upgraded its biotechnology capabilities but is unclear whether it is conducting illicit activities.</td>
<td>May have chemical weapons.</td>
<td>Geneva has not signed. BTWC: pledged to adhere to it. CWC: pledged to adhere to it.</td>
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(Sources: Sunshine Organization website, Encyclopedia Wikipedia website and Encyclopedia Britannica)

Worries over the proliferation of bioweapon to non-state actors and terrorist groups have partially become more acute since the terrorist attacks of 9/11 and rise of Al Qaeda. Not only have recent events prompted speculation over the prospect of more assaults involving organizations and individuals capable of producing their own indigenous bioweapon, but also attacks by groups gaining access to such capabilities via state sponsors.
In fact the biggest challenge for BTWC are the non-state actors. Today the worst threats of use of bioweapons come from these non-state actors. Developments on the international stage, therefore, suggest that the BTWC regime may be at increasing risk. The terrorist attacks against New York and Washington on September 11, 2001, the threat of use of the biological agent anthrax against US citizens, and suspicions that a growing number of state and non-state actors are actively seeking or in fact, already possess bioweapon capability are the major reason for heightened concerns about the dangers associated with the bioweapons.

The latest technological developments in biotechnology may soon increase both the possibility with which such weapons may be acquired as well as their military utility only compounds such fears. Unfortunately, the structural weaknesses in the regime have shown that it is ill-equipped to deal with such challenges. However, recent international efforts to strengthen especially the verification mechanism of the regime governing biological and toxin weapons have yielded little progress.

Not only the attempts to achieve a globally acceptable verification protocol for the BTWC have been suspended, but a broad consensus over alternative ideas and approaches has yet to emerge. In fact, current divisions over appropriate strategy have yielded the first premature adjournment of a BTWC Review Conference in the regime’s history in July 2001. (Rissanen Jenni, the Acronym Institute Website 2002) The overall result is a seeming lack of acceptable means to strengthen the regime at the very point when the security challenges it faces appear to be most pressing.

There are many other crucial weaknesses in the regime. Most significant is the fact the BTWC lacks the means required to effectively insure mandatory verification of compliance to its provisions. Consultation mechanisms and complaints procedures are weak. Support structure and budget necessary for enforcement and inspections is absent. And provisions for the investigation of suspected violations are highly dependent on the political pressure groups. While parties may petition the UN Security Council to investigate cases of suspected non-compliance (Article VI), the veto power
possessed by permanent members provides them the final decision taking authority (Woodwell 1994: 47).

The verification dilemma is compounded by the character of biological and toxin agents themselves. Unlike chemical weapons that often require a very huge quantity for their development, militarily significant quantities of biological and toxin agent can be produced in miniscale facilities. As such, they can be easily built and also easily concealed.

Further, many agents possess dual use in application, i.e. possessing both offensive military and well as defensive and peaceful civilian applications. However, the ability to decisively distinguish between possessions and use for legitimate defensive or peaceful civilian purposes and offensive military programmes is almost impossible (Woodwell1994: 35). Often, legitimate biodefence programs and advanced pharmaceutical facilities have capabilities similar to those that would be found at offensive bioweapons sites like special ventilation systems, sterilization and decontamination practices and special production equipment. And at times, offensive potentials can be generated from defensive bioweapons research.

As there is no practical means to distinguish between offensive and defensive programmes, the application of the BTWC’s definition of permitted and prohibited activity turns largely on perceptions and judgments about intent. Consequently, the accurate assessment of compliance is rendered problematic. In fact, such uncertainties can generate a tendency to judge threats based less on a scientific evaluation of the facts of a particular case than on the broader realities of international politics. With few clear guidelines and procedures, issues of compliance become highly politicized and standards of evidence for compliance vary based on identities of states.

Many other problems exist as well. Notwithstanding the BTWC’s call for parties to enact national legislation to insure that activities banned under its provisions are prohibited and prevented on their territory or anywhere under their jurisdiction remains, vague terminology and has yielded multiple interpretations of the actions.
required. Few member states have actually enacted measures imposing criminal penalties on individuals engaging in illicit bioweapons activities (Zilinskas 2001: 155). Beyond this, the Convention offers no provisions or guidance on initiating sanctions, penalties or on the policing measures that could be considered or applied in the event of BTWC violation.

Efforts to rectify such shortcomings have a long history. At the second and third Review Conferences in 1986 and 1991 respectively for instance, member states adopted a series of politically binding confidence-building measures as a means of promoting transparency and enhancing faith in compliance with the BTWC. These included exchanges of information on vaccine production plants, past activities related to bioweapon, national bio-defence programmes and unusual outbreaks of disease. Beyond this, reviews have been used to insure that the Convention's language and terminology is sufficiently broad to maintain its prohibitions in the wake of ongoing technological innovation (Ibid: 158).

As a result of these efforts, some beneficial changes have occurred in the convention but they have fallen short of eliminating existing problems. Certainly, the development of CBMs has increased information flows and has come up with some useful data like the information about past offensive and defensive capabilities of certain state parties. But this kind of reporting has generally been avoided. From 1987 to 1995, only 70 of the then 139 member states of the BTWC submitted data declarations, and only 11 took part in all rounds of the information exchange (Tucker 2002: 72). Beyond this, the information provided in returns has often been inaccurate and incomplete.

The utility of export controls has also been but limited. Those seeking bioweapons can breach the norm by using trans-shipment points and shell companies or by trading with countries that are not members of the group. Today the technology transport can be done through Internet and putting a check on such transfer is almost impossible.
Finally, and notwithstanding the fact that the regime itself is widely recognized and generally well respected, participation within it remains far from universal. With regard to the BTWC, nearly 50 states have yet to ratify or accede. And most importantly, 31 states in all have yet even to sign (Pearson 2002: 24). Such developments argue strongly for a reexamination and reassessment of the regime as well as the means required to strengthen it. In the absence of sound alternatives and strategies aimed at moving the regime forward, not only will its credibility and effectiveness suffer, but the threat that bioweapons pose may also increase.

The perceived threats working as a major hindrance against the global norm building against bioweapons also have linkage with nuclear weapons. BTWC’s verification problems, for instance, also emanate from regional rivals known or suspected of possessing nuclear weapons. Indeed, such realities not only generate hesitancy toward active and full participation in the norm building against bioweapons but also have led to contentions that any such participation must be preceded by elimination of all weapons of mass destruction (Zilinskas 2001: 26-27). The practical result is inertia as well as a more general concern among observers that BTWC norm building against beyond those very states suspected of posing the greatest bioweapon threat.

Because of the increasing risks to the threats of bioterrorism and development of new bio weapons, and the dilemma of dual use technologies, site verification of facilities, data collection and proper monitoring activities could be necessary. However, biotechnological institutes and companies are concerned of the potential risks of transfer of confidential biotechnological data and other important genetic engineering technologies, their compliance with the BTWC is very important. Their role in creating appropriate verification measures is an essential element in the strengthening of the convention.

However, we cannot bind terrorist organizations in norms against bio weapons but state governments and various research and development institutes could come together to strengthen the importance and authority in the outright banning of the
production, stockpiling and manufacture of bio weapons. The increasing threat of use of bio weapons emphasizes the growing need for the development of a stringent verification protocol that deters and discourages any violation of the Convention against bio weapons.

Clearly, the BTWC regime governing biological and toxin weapons is under growing scrutiny. While many of its shortcomings are not new, latest technologies, involvement of non-state actors and their ingenuity in their warfighting are combining to highlight its weaknesses and the dangers they represent in a manner not previously experienced. Circumstances have also combined to insure that the political capacity to substantially improve the regime has declined at the very time when significant reforms are needed the most. The increasing threat of terrorism has presented a new challenge for the regime to present a potential defence against bioweapons.

Developing an effective and globally acceptable strategy for strengthening the norm under such conditions presents serious difficult. In the light of all these facts, we have to find other potential and substantial ways to create a strong defence against bio-weapons and so it leads us to move towards the world of new technologies. The next chapter will analyzes accordingly new technologies which can be used both in as well against bio-weapons.