

Focus: On Chemical Weapons

Focus is written primarily for secondary school students.

"The story they told we could not believe; we put it down to their terror-stricken imaginings — a greenish grey cloud had swept down upon them, turning yellow as it travelled over the country, blasting everything it touched, shrivelling up the vegetation...[the soldiers] were blinded, coughing, chests heaving, faces an ugly purple colour — lips speechless with agony, and behind them in the gas choked trenches we learned that they had left hundreds of dead and dying comrades...It was the most fiendishly wicked thing I have ever seen."¹

This account of the German use of chlorine against French troops at Ypres in April 1915 provides a graphic description of the horror of chemical warfare. Canadian soldiers came under chemical attack in that same German offensive, as well as several other times during World War I. Driven by this memory, Canada has long been working with other countries to achieve a complete ban on chemical weapons. The negotiators have finally succeeded. By the time you read these words, Canada will have put its signature to a treaty that aims at ridding the world of this category of weapons forever.

Chemical Weapons

Chemical weapons (CW) are weapons that achieve their effect through use of a toxic agent derived from chemical substances. In other words, they are poisons. The chemical agent may take the form of a gas, aerosol, liquid or solid. It can enter the human body in several ways: by being inhaled through the nose and mouth, by being absorbed through the skin, or by being consumed as a contaminant on food.

Not all chemical weapons are lethal. Some can be used to temporarily disable troops but do not usually have long-lasting effects. Others — like chlorine, described above — can cause rapid death, depending on the dose.

Chemical agents can be delivered to their targets by ground, air or naval weapons. Examples of delivery systems include missiles, aerial bombs, grenades, artillery shells, mines and mortar bombs. CW can be used in many weather conditions, at

any time of day or night, and in any location. However, weather conditions and location affect how well CW work. Wind is the most important factor because it determines how long an airborne agent will stay in the target area. Temperature, rain and humidity can also affect the behaviour of chemical agents.

CW Use

CW can be used to harass the enemy, to cause casualties, or to deny the use of terrain to an enemy. While some CW remain in the air for only a few seconds before dispersing, others, such as mustard gas, can contaminate an area for weeks at a time. CW may also be acquired in the belief that they act as a deterrent, or threat, against the potential use of CW or other powerful weapons by a rival country. Whether in fact they do so is a question open to debate.

Chemical weapons were used widely in World War I, resulting in over one million injuries and over 90,000 deaths. Since 1918, there have been numerous reports of the use of CW in various conflicts. The main documented events are the use of mustard gas by Italy in Ethiopia in 1936, the use of mustard gas and other agents by Japan against the Chinese in World War II, and the use of mustard gas by Egypt in Yemen in the early 1960s. Iraq used several chemical agents, particularly mustard gas and nerve gas, during the Iran-Iraq War in the 1980s. Many other accusations of CW use have been made but not confirmed. It is possible that accusations of CW use are sometimes made for political purposes.

The fact that CW have not been used more often is due in part to public revulsion against these weapons, which makes leaders reluctant to authorize their use. There are also legal constraints on CW use. In response to the horrors of World War I, states signed an agreement in 1925 called the Geneva Protocol, which bans the use of chemical weapons in war. Over 125 countries, including Canada, are parties to this treaty.

The rarity of CW use is also due to the fact that it is hard to create an effective CW military capability. While CW are easier to make than nuclear weapons, producing large quantities requires materials

and technologies that are not always readily available, even in advanced industrialized countries. Although there are thousands of natural and synthetic chemicals, fewer than 100 have been developed for chemical warfare and even fewer used. In the field, CW require special operational skills, for which troops must be trained. Also, the vulnerability of CW to factors such as weather means it is hard to predict the outcome of CW use.

To defend against CW use, a soldier can wear a mask and respirator and special protective clothing. It is harder to protect the general population. This means that CW are often feared as a terror weapon, which could be used against civilians. For example, many people worried that Iraq might use CW in its Scud missile attacks on Israel and Saudi Arabia during the 1991 Gulf War.

CW Possession

The US, the former USSR and Iraq are the only countries that have said they possess chemical weapons. In 1990, the US and the USSR agreed between themselves to stop producing CW and to destroy their CW stockpiles. It is often reported in the media that perhaps another 15 to 20 countries either have CW or are trying to acquire them. Canada does not possess CW, although it does undertake research on how to defend against CW.

CW Control

Although the 1925 Geneva Protocol bans the use of CW, it does not prohibit the stockpiling, development and production of these weapons. This means that states have been able to legally develop and build these weapons and to equip their armed forces with them.

In September 1992, negotiators completed a treaty that seeks to close this option. When the new Chemical Weapons Convention (CWC) is ratified and enters into force, states that are parties will be required to destroy any CW they possess and to undertake never to acquire CW. Since CW are not easily identifiable from a distance (e.g., from surveillance satellites), the CWC contains very strict provisions for checking that states are living up to their obligations under the Convention.