

this definition deals primarily with lethal agents and would not include some of the materials such as harrassing agents and antiplant agents which many States feel are types of chemical weapons which should not be used in combat situations. In this way the Australian definition may have been too narrow for a comprehensive ban.

Unquestionably the final definition chosen and what it will include must be negotiated, however to facilitate these negotiations perhaps a more comprehensive definition could be considered. Some countries, most notably Belgium in CD/94 and Sweden in CD/97 have recently attempted such a definition. Our own attempt might be expressed as follows: A chemical weapon is a weapon which incorporates a chemical mixture and is designed to achieve military objectives in warfare through its toxicological action on biological systems.

This would include effects on plant and animal systems as well as man himself. Toxicology in this context is taken in the broad sense of any toxicological response of which lethality is but one example. Thus both physical and metal incapacitation, irritancy and detrimental effects on plants would be included as well as other effects which may become threats in the future such as genetic alteration, human pheromones, or even the use of chemicals for torture, truth serums and mind control.

This definition would not include weapons which produce physical effects and may be used in other types of warfare including for example high explosives, rocket fuels, smokes and flame warfare agents.

The identification of "single purpose agents" within this definition is perhaps the easiest as there is little doubt of their lethal effect on humans and they have no other use than military for which they may be mass produced. Controversy however arises when attempts are made to generalize the scope of this category through the use of a toxicity criterion. Various figures have been suggested that are meant to ensure that all known and likely single purpose agents are included. Canada itself attempted such a definition as far back as 1973 in CCD/414. More recently the USA and USSR suggested figures in their joint statement of August 1979 (CD/48) and others were proposed by several experts during the informal session on 24 June. It should be recognized that whatever figures are chosen, exceptions will soon be found. Some toxic substances will be found that lie below the line yet have no obvious use other than in chemical weapons and as soon as it is declared that a substance above the line is a single purpose agent and subject to a total ban, someone will devise a commercial use for the material. The only solution to this situation is to choose a reasonable set of figures and to provide within the convention a mechanism, such as an annex, to set forth a list of exceptions. These are materials to be banned which are found to fall outside the normal toxicity limits of the single purpose category. A second list might be included of materials falling within the scope of the single purpose category which are allowed to be manufactured for certain peaceful purposes for which they have been found useful. The ability to deal with these situations as they arise must be included in the verification control functions of the convention.

For the purpose of establishing the normal limits of a single purpose agent category, the figures suggested within the joint statement of the USA and USSR of August 1979 (CD/48) would appear to be satisfactory.